

238.9 457.9 458.0 449.1 390.3 1154.8 1788.3 1496.1 Current Liab. Fix. Chg. Cov. 743% 768% 775% Past Past Est'd '14-'16

**ANNUAL RATES** 10 Yrs. -4.0% 5 Yrs. -4.5% of change (per sh) to '20-'22 Revenues 2.0% 'Cash Flow" 4.5% 6.0% 2.5% 5.0% 8.0% 3.5% 4.5% Earnings 6.0% 6.5% Dividends 5.5% 3.5% 5.0% Book Value

Other

Fiscal Year Ends	QUAR1 Dec.31	ERLY RE\ Mar.31	/ENUES (\$ Jun.30	mill.) A Sep.30	Full Fiscal Year
2014	1255.1	1964.3	942.7	778.8	4940.9
2015	1258.8	1540.1	686.4	656.8	4142.1
2016	906.2	1132.3	632.9	678.5	3349.9
2017	780.2	988.2	600	651.6	3020
2018	800	1030	640	680	3150
Fiscal	EAR	NINGS PE	R SHARE	ABE	_Full _
Year Ends	Dec.31	Mar.31	Jun.30	Sep.30	Fiscal Year
2014	.95	1.38	.45	.23	2.96
2015	.96	1.35	.55	.23	3.09
2016	1.00	1.38	.69	.33	3.38
2017	1.08	1.52	.71	.34	3.65
2018	1.13	1.51	.76	.40	3.80
Cal-	QUAR	TERLY DIV	IDENDS P	AID c■	Full
endar	Mar.31	Jun.30	Sep.30	Dec.31	Year
2013	.35	.35	.35	.37	1.42
2014	.37	.37	.37	.39	1.50
2015	.39	.39	.39	.42	1.59
2016	.42	.42	.42	.45	1.71
2017	.45	.45			

sion, Colorado-Kansas Division, and Kentucky/Mid-States Division. Gas sales breakdown for fiscal 2016: 67%, residential; 28%, com-

performed Energy earnings-wise, through the first half of fiscal 2017 (concludes September 30th), compared to the same period a year earlier. That was due primarily to the bread-and-butter natural gas distribution division, which benefited from higher rates, mainly in the Mid-Tex, Louisiana, and Mississippi units. Another plus there was customer growth across the Mid-Tex and Tennessee service areas. Meanwhile, results of the pipeline and storage business were boosted by higher revenue from the Gas Reliability Infrastructure Program (GRIP) filings approved in fiscal 2016. At this juncture, share net stands to rise roughly 8%, to \$3.65. Concerning fiscal 2018, the bottom line may well increase an additional 4% or so, to \$3.80 a share, if operating margins expand further.

Financial ' rating The Strength remains solid, at 'A'. Through the second quarter, cash and equivalents stood at around \$45 million. Moreover, long-term debt was at a manageable 37.6% of total capital, and short-term obligations did not present a major obstacle. Lastly, the Dallas-headquartered firm has over \$1.5 Lincoln Centre, Suite 1800, 5430 LBJ Freeway, Dallas, Texas 75240. Telephone: 972-934-9227. Internet: www.atmosenergy.com.

billion of capacity under short-term credit facilities and is able to issue up to \$2.4 billion in common stock and/or debt securities. All things considered, strong and steady operations have created resources quite sufficient to meet working capital, capital spending, and other cash requirements. Acquisitions are a possibility, although they are not incorporated into our figures because of size and timing factors.

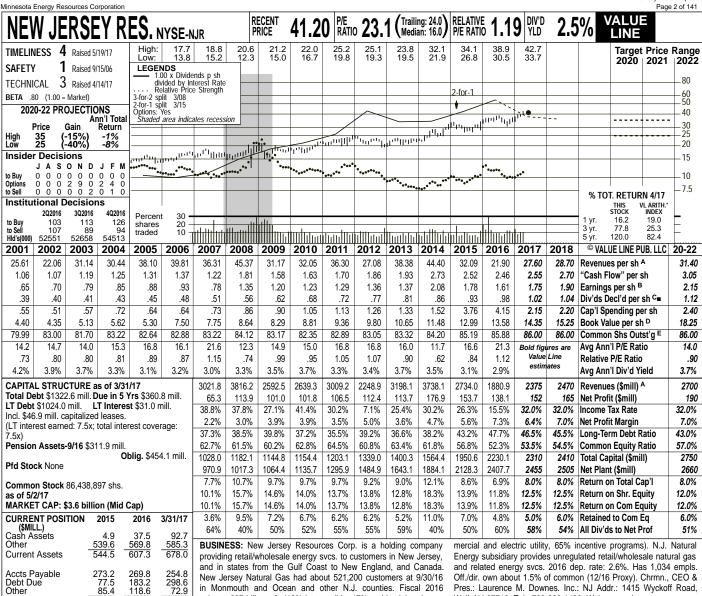
The equity has been trading at record heights in recent months. We think that price movement stems largely from the company's healthy profits thus far in fiscal 2017. What's more, long-term capital appreciation potential is respectable, relative to the Value Line median. Note, also, the solid, well-covered dividend plus prospects for future hikes in the payout. Other mentionable characteristics include the 1 (Highest) Safety rank, good mark for Price Stability, and below-market Beta coefficient. Indeed, various types of investors might want to take a look. But for now, Atmos Energy shares are only Average (3) for Timeliness Frederick L. Harris, III June 2. 2017

(A) Fiscal year ends Sept. 30th. (B) Diluted Next egs. rpt. due early Aug. shrs. Excl. nonrec. items: '07, d2¢; '09, 12¢; '10, 5¢; '11, (1¢). Excludes discontinued operations: '11, 10¢; '12, 27¢; '13, 14¢; '17, 13¢.

(C) Dividends historically paid in early March, June, Sept., and Dec. ■ Div. reinvestment plan. Direct stock purchase plan avail.

(D) In millions. (E) Qtrs may not add due to change in shrs outstanding.

Company's Financial Strength Stock's Price Stability Price Growth Persistence 95 80 **Earnings Predictability** 



and in states from the Gulf Coast to New England, and Canada. New Jersey Natural Gas had about 521,200 customers at 9/30/16 in Monmouth and Ocean and other N.J. counties. Fiscal 2016 volume: 337 bill. cu. ft. (18% interruptible, 17% residential and com-

and related energy svcs. 2016 dep. rate: 2.6%. Has 1,034 empls. Off./dir. own about 1.5% of common (12/16 Proxy). Chrmn., CEO & Pres.: Laurence M. Downes. Inc.: NJ Addr.: 1415 Wyckoff Road, Wall, NJ 07719. Tel.: 732-938-1480. Web: www.njresources.com.

Past ANNUAL RATES Past Est'd '14-'16 to '20-'22 of change (per sh) 5 Yrs. -1.0% 7.0% .5% 3.0% 9.5% 7.5% 8.0% 3.0% 7.5% 7.5% 6.5% 7.5% 3.5% 6.5%

571 6

750%

85 4

436 1

750%

Current Liab

Fix. Chg. Cov.

Revenues "Cash Flow"

Dividends Book Value

Earnings

298.6

626.3

750%

Fiscal Year Ends	QUART Dec.31	ERLY REV Mar.31	'ENUES (\$ Jun.30	mill.) A Sep.30	Full Fiscal Year
2014	878.4	1579.6	688.3	591.9	3738.1
2015	824.1	1013.1	458.5	438.3	2734.0
2016	444.3	574.2	393.2	469.2	1880.9
2017	541.0	733.5	510	590.5	2375
2018	565	760	535	610	2470
Fiscal	EAF	RNINGS PE	R SHARE	AB	<u>F</u> ull .
Year Ends	Dec.31	Mar.31	Jun.30	Sep.30	Fiscal Year
2014	.47	1.79	.05	d.23	2.08
2015	.65	1.16	.03	d.06	1.78
2016	.58	.91	.13	d.02	1.61
2017	.40	1.21	.15	d.01	1.75
2018	.43	1.24	.19	.04	1.90
Cal-	QUAR	TERLY DIV	IDENDS PA	/ID c∎	Full
endar	Mar.31	Jun.30	Sep.30	Dec.31	Year
2013		.20	.20	.20	.60
2014	.21	.21	.21	.23	.86
2015	.23	.23	.23	.24	.93
2016	.24	.24	.24	.255	.98
2017	.255	.255			

Since our March review, shares of New Jersey Resources have trended **higher.** Indeed, over that time frame, the stock's price advanced almost 6.5%. This came after the company posted better-than-expected fiscal second-quarter financial results (ended March 31st).

Second-quarter revenues climbed about 28%, on a year-over-year basis, to \$733.5 million. This was supported by rising contributions from both the utility and nonutility segments that experienced 22% and 32% upticks in volumes for that period. The New Jersey Natural Gas (NJNG) regulated utility division added 4,130 new customers during the first half of this year. At this pace, management anticipates seeing roughly 9,000 new and conversion customers in fiscal 2017 alone. Much of its service territory is still feeling the residual impacts from Superstorm Sandy, which hit the East Coast quite hard. On the upside, many customers that are still rebuilding or without power, are expected to come back on line this year. On the margin front, total expenses declined 260 basis points as a function of the top line. Combined, these factors drove

the bottom line 33% higher, to \$1.21 a share, besting our call of \$0.95.

As a result, we have raised our outlook for this year by \$0.20, to \$1.75 a share. This would represent an annual profit increase of about 9%. New customer accounts at the NJNG division ought to be a primary contributing factor here. Elsewhere, the NJR Clean Energy Ventures, Energy Services, Midstream, and Home Service departments have all been regisand Home tering greater net financial earnings, and we look for this trend to persist. Finally, NJR has numerous capital growth projects in the works. Some include updating older infrastructure to boost system integrity, while others are focused on clean energy investments. The regulated utility alone has \$700 million in capex planned over the next three years. These efforts are anticipated to bring in 26,000-28,000 new accounts through 2019, which augurs well for top- and bottom-line growth.

At the recent quotation, these shares do not stand out. They are untimely. have a so-so yield for a utility, and lack 3to 5-year appreciation potential.

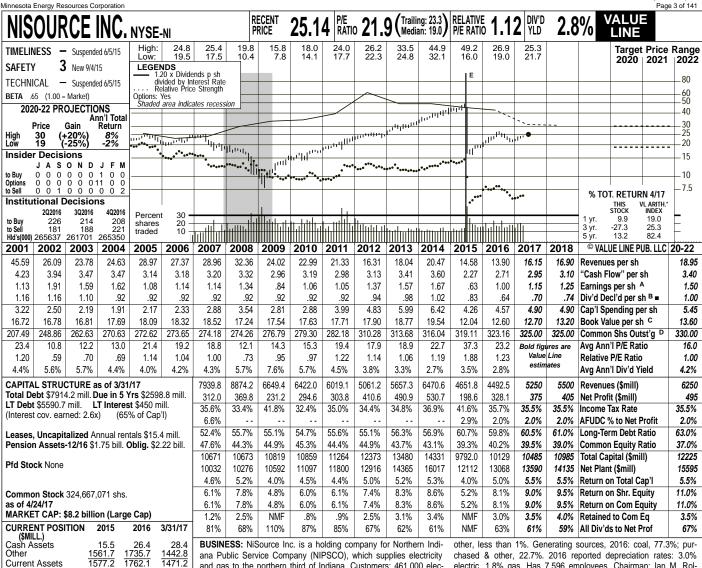
Bryan J. Fong June 2, 2017

(A) Fiscal year ends Sept. 30th.
(B) Diluted earnings. Qtly egs may not sum to total due to change in shares outstanding. Next earnings report due late July.

(C) Dividends historically paid in early Jan., April, July, and October. 1Q '13 div'd paid in 4Q '12. ■ Dividend reinvestment plan available

million, \$5.13/share. **(E)** In millions, adjusted for splits.

Company's Financial Strength Stock's Price Stability A+ 80 Price Growth Persistence **Earnings Predictability** 55



ana Public Service Company (NIPSCO), which supplies electricity and gas to the northern third of Indiana. Customers: 461,000 electric in Indiana, 3.4 million gas in Indiana, Ohio, Pennsylvania, Kentucky, Virginia, Maryland, Massachusetts through its Columbia subsidiaries. Revenue breakdown, 2016: electrical, 34%; gas, 66%;

chased & other, 22.7%. 2016 reported depreciation rates: 3.0% electric, 1.8% gas. Has 7,596 employees. Chairman: Ian M. Rolland. President & Chief Executive Officer: Robert C. Skaggs, Jr. Incorporated: Indiana. Address: 801 East 86th Ave., Merrillville, Indiana 46410. Telephone: 877-647-5990. Internet: www.nisource.com.

Other Current Liab. 2657.5 3452.2 3664.1 210% 245% 260% Fix. Chg. Cov Past Est'd '14-'16 ANNUAL RATES Past to '20-'22 of change (per sh) 10 Yrs. 5 Yrs. -6.5% -1.5% 2.5% -2.0% -5.0% -1.5% 2.5% 3.0% Revenues "Cash Flow" Earnings Dividends -1.5% -1.0% 5.5% 3.0% Book Value -3.5% -1.5%

433.4

1001.1

539.4

1851.1

461.6

2323.5

Accts Payable Debt Due

Cal- endar	QUAR Mar.31	RTERLY RE Jun.30	VENUES Sep.30		Full Year
2014	2320.5	1335.1	1123.9	1691.1	6470.6
2015	1852.2	884.6	817.2	1097.8	4651.8
2016	1436.6	897.6	861.3	1297.0	4492.5
2017	1598.6	1000	1000	1651.4	5250
2018	1750	1000	1050	1700	5500
Cal-	E/	ARNINGS F	PER SHAR	ΕA	Full
endar	Mar.31	Jun.30	Sep.30	Dec.31	Year
2014	.85	.25	.10	.49	1.67
2015	.61	d.23	.05	.20	.63
2016	.58	.09	.07	.27	1.01
2017	.65	.10	.10	.30	1.15
2018	.65	.10	.10	.40	1.25
Cal-	QUAR	TERLY DIV	IDENDS P	AID B =	Full
endar	Mar.31	Jun.30	Sep.30	Dec.31	Year
2013	.24	.24	.25	.25	.98
2014	.25	.25	.26	.26	1.02
2015	.26	.26	.155	.155	.83
2016	.155	.155	.165	.165	.64
2017	.175	.175			

NiSource reported solid first-quarter **results.** Revenues increased to nearly \$1.6 billion, as better rates cases across the company's service areas occurred. Positive regulatory outcomes helped to improve infrastructure spending. However, slightly warmer weather held back throughput a bit. Though administrative expenses increased, better operational margins allowed earnings per share to rise to \$0.65. As the company plans to invest between \$1.6 billion and \$1.7 billion in 2017, we think earnings per share will be \$1.15.

Rates cases should define top-line outcomes in the years ahead. Regulatory approval in Virginia was achieved in the first quarter, which allows for a \$28.5 million annual revenue increase. In addition, it received approvals of tracker updates in Massachusetts and Ohio. NiSource has filed for new rates in Maryland, a longterm infrastructure plan in Ohio, and continued electric transmission and environmental investment in Indiana. The company expects to invest between \$1.6 billion and \$1.8 billion a year, as it has identified \$30 billion in long-term investment opportunities. These should help earnings

grow between 5% and 7% annually out to the 2020-2022 period. With that in mind, we think the company will post earnings of \$1.25 a share in 2018, and \$1.50 a share in the 2020-2022 period.

The balance sheet remains a concern. Though the company was able to lower interest expense through the successful rollout of debt, this appears likely to be a short-lived phenomenon. The debt total may well increase to pay for capital expenditures, and interest rates will probably be higher over the coming years, causing a drag on earnings growth. Still, this may be somewhat offset by a high portion of the debt being at fixed rates.

Shares of NiSource are not ranked for Timeliness due to the spinoff of Columbia Pipeline Group. They offer little investment appeal, as they are trading within our long-term Target Price Range. The yield remains low when compared to others in the industry, and risk exists here due to the company's some-what leveraged financial position. Longterm investors would be best served waiting for a dip in price.

(A) Dil. EPS. Excl. nonrec. gains (losses): '05, (4¢); gains (losses) on disc. ops.: '05, 10¢; '06, (11¢); '07, 3¢; '08, (\$1.14); '15, (30¢). Next

sum to total due to rounding. (B) Div'ds historically paid in mid-Feb., May, Aug., Nov. ■ Div'd reinv. avail. (C) Incl. intang in '16: \$1933.4 million,

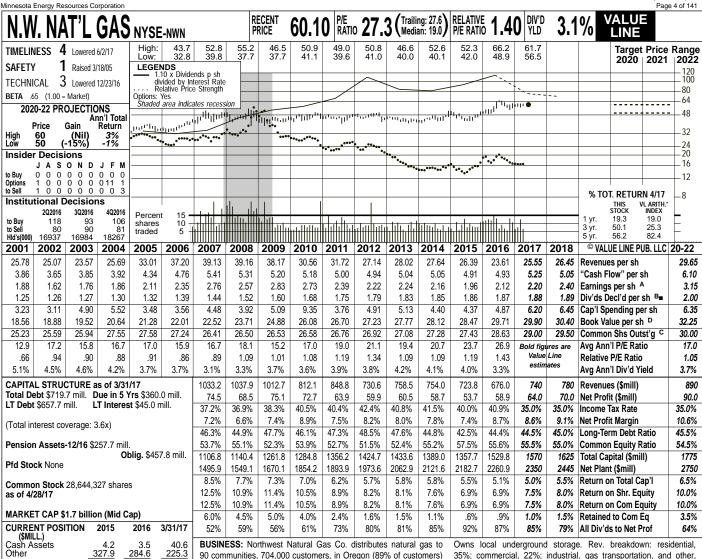
\$5.98/sh

(D) In mill.
(E) Spun off Columbia Pipeline Group (7/15)

John E. Seibert III

Company's Financial Strength Stock's Price Stability B+ 90 Price Growth Persistence NMF **Earnings Predictability** 45

June 2, 2017



90 communities, 704,000 customers, in Oregon (89% of customers) and in southwest Washington state. Principal cities served: Portland and Eugene, OR; Vancouver, WA. Service area population: 2.5 mill. (77% in OR). Company buys gas supply from Canadian and U.S. producers; has transportation rights on Northwest Pipeline system.

35%; commercial, 22%; industrial, gas transportation, and other, 43%. Employs 1,092. BlackRock Inc. owns 11.9% of shares; officers and directors, 1.5% (4/17 proxy). CEO: Gregg S. Kantor. Inc.: Oregon. Address: 220 NW 2nd Ave., Portland, OR 97209. Telephone: 503-226-4211. Internet: www.nwnatural.com

300% 390% 360% Fix. Chg. Cov Past Est'd '14-'16 ANNUAL RATES Past to '20-'22 of change (per sh) 10 Yrs. 5 Yrs. -5.0% 2.5% 3.5% Revenues "Cash Flow" 1.5% -.5% -4.5% 2.0% Dividends Book Value 3.0% 2.0% 2.0%

OHADTEDLY DEVENUES (\$ mill)

332.1

73.2 295.0

109.5

477.7

288.1

85.7

93.3

274.5

265.9

73.2 62.0

235.0

**Current Assets** 

Accts Payable Debt Due

Current Liab.

Other

Cal-	QUAK	Full				
endar	Mar.31	Jun.30	Sep.30	Dec.31	Year	
2014	293.4	133.1	87.2	240.3	754.0	
2015	261.7	138.3	93.1	230.7	723.8	
2016	255.5	99.2	87.7	233.5	676.0	
2017	297.3	105	95.0	242.7	740	
2018	305	120	105	250	780	
Cal-	EA	RNINGS F	ER SHAR	A	Full	
endar	Mar.31	Jun.30	Sep.30	Dec.31	Year	
2014	1.40	.04	d.32	1.04	2.16	
2015	1.04	.08	d.24	1.08	1.96	
2016	1.33	.07	d.29	1.00	2.12	
2017	1.40	.05	d.30	1.05	2.20	
2018	1.40	.10	d.25	1.15	2.40	
Cal-	QUAR	UARTERLY DIVIDENDS PAID B =				
endar	Mar.31	Jun.30	Sep.30	Dec.31	Year	
2013	.455	.455	.455	.460	1.83	
2014	.460	.460	.460	.465	1.85	
2015	.465	.465	.465	.4675	1.86	
2016	.4675	.4675	.4675	.470	1.87	
2017	.470	.470				

Northwest Natural Gas saw improvement in the first quarter. Revenues expanded due to cooler temperatures and higher amounts of natural gas being put through. This allowed for better gross profitability, though this was somwhat offset by higher maintenance costs and increased depreciation expense. Earnings per share rose to \$1.40 despite a higher share count. However, aside from the seasonal impact of warmer weather, we expect an increase in capital invesments to pressure results in the near term. Thus, we've lowered our share-net estimate by \$0.15, to \$2.20.

hetter Portland-area economy should benefit near-term results. Employment trends in Portland are favorable, while customer growth continues to happen in the service territory, as more housing is added. The company should benefit from higher incomes in the area, too. In fact, it is earmarking \$25 million in capital expenditures to improve its system to include high-pressure distribution lines, which should allow for more throughput.

The Mist facility appears to be on track. Northwest will spend between \$80 million and \$90 million this year to build

the facility to store around 2.5 billion cubic feet of natural gas for no-notice service to Portland General Electric. This is expected to cost around \$128 million in total capital expenditures, and will probably be in service by the winter of 2018. This should drive up usage significantly and, hence, help contribute to the bottom line. We think the company will earn \$2.40 in 2018, and \$3.15 by the 2020-2022 period.

The balance sheet is in fairly good shape. Debt currently makes up only about 45% of total capital, and interest expense remains manageable. Still, given the possibility of rising interest rates and the likelihood of Northwest taking on debt to fund capital projects, interest expense may

well edge up in the years ahead.

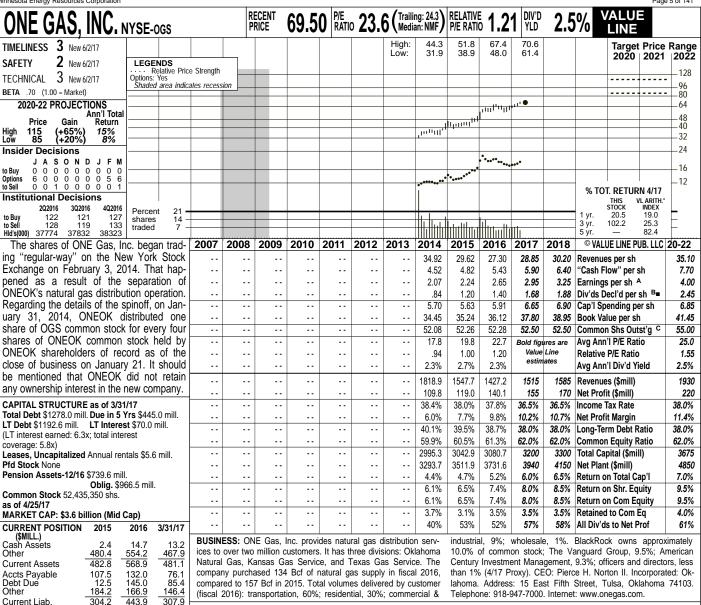
These untimely shares are not enticing at present. They are trading at the high end of our long-term Target Price Range, and the yield does not stand out when compared to its recent past, while payout growth is likely to be slow. As these shares appear to be fully valued, long-term investors would be best served waiting for a dip in price. *John E. Seibert III* 

June 2, 2017

(A) Diluted earnings per share. Excludes non-recurring items: '06, (\$0.06); '08, (\$0.03); '09, 6¢; May not sum due to rounding. Next earnings report due in early August.

(B) Dividends historically paid in mid-February, (D) Includes intangibles. In 2016: \$357.5 mil-May, August, and November. Dividend reinvestment plan available.

Company's Financial Strength Stock's Price Stability 95 Price Growth Persistence 20 **Earnings Predictability** 85



670%

Kansas, and Texas.

Past Est'd '14-'16 5 Yrs. to '20-'22 2.5% 7.5% 9.5% 13.5% 3.0%

QUARTERLY REVENUES (\$ mill.) endar Mar.31 Jun.30 Sep.30 Dec.31 Year 2014 766.2 296.8 241.5 514.4 1818.9 256.8 225.2 389.2 2015 676.5 1547.7 245.9 440.7 2016 508.4 232.2 1427.2 2017 5504 260 245 4596 1515 570 275 1585 2018 260 480 EARNINGS PER SHARE A Calendar Mar.31 Jun.30 Sep.30 Dec.31 Year 2014 1.13 .18 .09 .67 2.07 .23 .74 2.24 2015 1.13 .14 .38 .80 2.65 2016 1.22 .25 .32 2017 1.34 .44 .85 2.95 1.42 .50 .92 3.25 2018 .41 QUARTERLY DIVIDENDS PAID B. Calendar Mar.31 Jun.30 Sep.30 Dec.31 Year 2013 2014 .28 .28 .28 .30 .30 .30 .30 2015 1.20 .35 2016 .35 .35 .35 1.40 2017 .42

624%

10 Yrs.

685%

Fix. Chg. Cov.

of change (per sh)

Revenues

Earnings

Dividends

Book Value

'Cash Flow'

ANNUAL RATES

We welcome ONE Gas, Inc. to Value Line Investment Survey. The Oklahoma-headquartered company vides natural gas distribution services to more than two million customers, including transportation (comprising the biggest portion of total volumes delivered), residential, and commercial & industrial. Operations are concentrated in Oklahoma,

Since January 1, 2017, a new accounting standard for share-based compensation was adopted. This resulted in a \$5.2 million tax benefit (equivalent to \$0.10 a share) in the first quarter. However, we excluded that number from our presentation because of its nonrecurring nature.

This year's capital expenditures are anticipated to be roughly \$350 million. (That would be some 13% higher than the 2016 level.) More than 70% of the budget is devoted to system integrity and pipeline replacement projects. Management expects that amount to be in the \$350 million to \$380 million range each year from 2017 to 2021. It seems that corporate finances are more than adequate to make those initiatives possible.

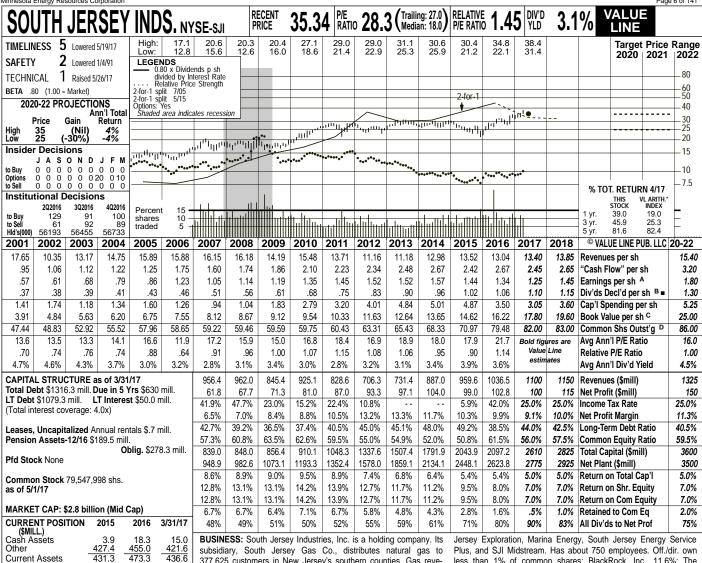
The quarterly dividend was hiked 20%, to \$0.42 a share. Furthermore, we look for steady annual increases in the distribution out to 2020-2022. Our projections indicate that the payout ratio during that period will lie between 60% and 65%, which seems reasonable. But the yield is not spectacular, when measured against the average of all the other companies within *Value Line's* Natural Gas Utility universe.

These shares have gained some steam over the past several months. We believe that price movement reflects investor confidence surrounding ONE Gas' 2017 earnings prospects. Indeed, that's supported by the healthy first-quarter performance, given such contributors as new rates in Texas and Kansas, plus the favorable effect of weather-normalization mechanisms. What's more, the equity has some upside left. Finally, note the 2 (Above Average) Safety rank and lowerthan-market Beta coefficient.

For now, though, the Timeliness rank is pegged at 3 (Average). Frederick L. Harris, III June 2. 2017

June, Sept., and Dec. ■ Dividend reinvestment (A) Diluted shrs. Excludes nonrecurring gain: plan. Direct stock purchase plan. **(C)** In millions. Q1 2017, \$0.10. Next earnings report due early

B++ Company's Financial Strength Stock's Price Stability Price Growth Persistence 85 NMF **Earnings Predictability** NMF



subsidiary, South Jersey Gas Co., distributes natural gas to 377,625 customers in New Jersey's southern counties. Gas revenue mix '16: residential, 42%; commercial, 21%; cogeneration and electric generation, 16%; industrial, 21%. Non-utility operations include: South Jersey Energy, South Jersey Resources Group, South

Plus, and SJI Midstream. Has about 750 employees. Off./dir. own less than 1% of common shares; BlackRock, Inc., 11.6%; The Vanguard Group, Inc., 9.0% (3/17 proxy). Pres. & CEO: Michael J. Renna. Inc.: NJ. Address: 1 South Jersey Plaza, Folsom, NJ 08037. Tel.: 609-561-9000. Internet: www.sjindustries.com.

Fix. Chg. Cov.	496%	602	2% 597%
ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '14-'16 to '20-'22
Revenues "Cash Flow" Earnings Dividends	-1.5% 6.5% 4.0% 9.0%	-2.0% 4.5% 1.5% 8.5%	3.5% 3.5% 4.0%
Book Value	8.0%	9.0%	9.0%

186.4 461.2

832.5

243.7 528.0

180.9

272.7 237.0 171.3

681.0

Accts Payable Debt Due

Current Liab.

Other

Cal- endar	QUAR Mar.31	TERLY RE Jun.30	VENUES (Sep.30	\$ mill.) Dec.31	Full Year
2014	350.2	133.3	122.4	281.1	887.0
2015	383.0	177.7	141.1	257.8	959.6
2016	333.0	154.4	219.1	330.0	1036.5
2017	425.8	165	200	309.2	1100
2018	415	180	225	330	1150
Cal-	EA	RNINGS P	ER SHAR	A	Full
endar	Mar.31	Jun.30	Sep.30	Dec.31	Year
2014	1.01	.15	d.05	.47	1.57
2015	.86	.03	d.07	.62	1.44
2016	.75	.12	.05	.42	1.34
2017	.72	.05	.02	.46	1.25
2018	.78	.10	.03	.54	1.45
Cal-	QUAR	TERLY DIV	IDENDS P	AID B■	Full
endar	Mar.31	Jun.30	Sep.30	Dec.31	Year
2013		.222	.222	.458	.90
2014		.237	.237	.488	.96
2015		.251	.251	.515	1.02
2016		.264	.264	.536	1.06
2017		.273			

Industries South Jersev reported mixed results for the first quarter. The top line advanced nearly 28%, year to year. Earnings at the regulated utility business increased at a moderate pace. (from other Conversion activity sources to natural gas) continues to drive customer additions here, and infrastructure investment has also been important. But the wholesale commodity business was hurt by a lack of pricing volatility due warmer-than-normal temperatures. Moreover, the absence of investment tax credits from solar development hurt performance at SJ Energy Services. Overall, were up economic earnings slightly, though the per-share figure of \$0.72 was somewhat lower due to a larger share count. GAAP earnings per share of \$0.47 came in well below the prior-year tally of \$0.95. This was partly due to a charge of \$26.4 million (\$0.33 a share) related to an unfavorable verdict in United States District Court stemming from a dispute with a supplier over gas costs. The company plans to appeal this ruling. Looking forward, bottom-line comparisons will likely

remain unfavorable in the second and

third quarters.

Long-term prospects appear brighter. The company continues to shift its focus in order to emphasize its regulated and contracted businesses that are expected to drive bottom-line gains in the years ahead. Utility earnings ought to further benefit from growth in the customer base and investment in infrastructure. Meantime, additional fuel supply management contracts ought to drive performance at SJ Energy Group. Healthy solar production and an aggressive hedging strategy will probably benefit results at SJ Energy Services.

Subscribers should probably remain on the sidelines for the time being. The stock is untimely. Moreover, longterm total return potential is subpar from the recent quotation. However, a selloff some time in the future may offer conservative, income-seeking accounts a better entry point. Moderate dividend growth will likely continue in the coming years. South Jersey earns good marks for Safety, Financial Strength, Price Stability, and Earnings Predictability. average here, as well. Volatility is below Michael Napoli, CFA June 2, 2017

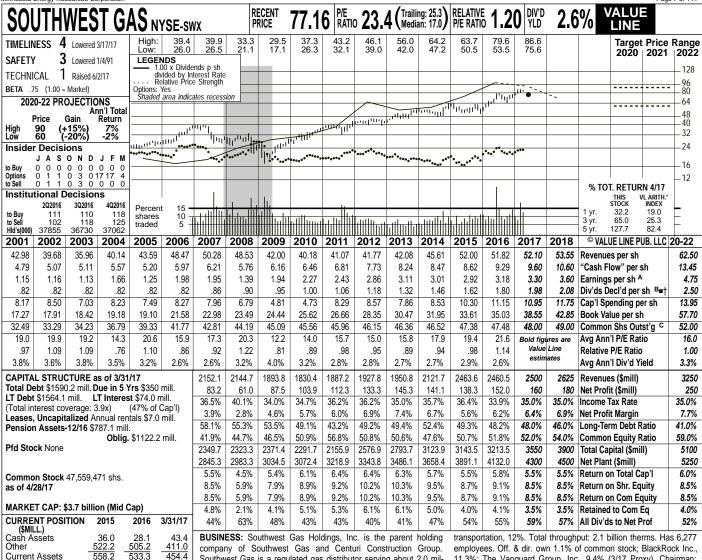
(A) Based on economic egs. from 2007 onward. GAAP EPS: '08, \$1.29; '09, \$0.97; '10, \$1.11; '11, \$1.49; '12, \$1.49; '13, \$1.28; '14, \$1.46; '15, \$1.52; '16, \$1.56. Excl. nonrecur.

gain (loss): '08, \$0.16; '09, (\$0.22); '10, (\$0.24); '11, \$0.04; '12, (\$0.03); '13, (\$0.24); '14, (\$0.11); '15, \$0.08; '16, \$0.22, Egs. may

due early August. **(B)** Div'ds paid early April, July, Oct., and late Dec. **Div.** reinvest. plan avail. **(C)** Incl. reg. assets. In 2016: \$410.7 not sum due to change in shares. Next egs. rpt. | mill., \$5.17 per shr. (D) In mill., adj. for split.

Company's Financial Strength Stock's Price Stability 85 Price Growth Persistence **Earnings Predictability** 

75



company of Southwest Gas and Centuri Construction Group. Southwest Gas is a regulated gas distributor serving about 2.0 million customers in sections of Arizona, Nevada, and California. Centuri provides construction services, 2016 margin mix; residential and small commercial, 85%; large commercial and industrial, 3%;

Shares of Southwest Gas Holdings

have come off a high-water mark in

recent months, following a sharp rally

that began last October. The company

reported lackluster results for the March

quarter. Revenues and share earnings

were no match for the prior-year figures.

Centuri Construction Group got off to a

rough start this year, owing to poor

initiated temporary work stoppage, and

this business posted a greater deficit for the period. Utility revenues declined

roughly 12%, though earnings were only

slightly lower than the prior-year figure.

customer-

weather conditions and a

employees. Off. & dir. own 1.1% of common stock; BlackRock Inc., 11.3%; The Vanguard Group, Inc., 9.4% (3/17 Proxy). Chairman: Michael J. Melarkey. President & CEO: John Hester. Inc.: CA. Addr.: 5241 Spring Mountain Road, Las Vegas, Nevada 89193. Telephone: 702-876-7237. Internet: www.swgas.com.

Current Liab. 535.0 628.4 496.8 401% 401% 377% Fix. Chg. Cov Past Est'd '14-'16 ANNUAL RATES Past to '20-'22 of change (per sh) 10 Yrs. 5 Yrs. 1.0% 4.5% 4.0% 6.5% 4.0% 7.5% Revenues "Cash Flow" Earnings Dividends 6.5% 7.0% 6.5% 10.0% Book Value 5.5% 9.5%

164.9 37.5

533.3

184.7

50.1

454.4

134.2 26.1

**Current Assets** 

Accts Payable Debt Due

Other

Cal-	QUAR Mar.31	TERLY RE Jun.30	VENUES (	\$ mill.) Dec.31	Full
endar					Year
2014	608.4	453.1	432.5	627.7	2121.7
2015	734.2	538.6	505.4	685.4	2463.6
2016	731.2	547.8	540.0	641.5	2460.5
2017	654.7	565	560	720.3	2500
2018	690	600	585	750	2625
Cal-	EAF	RNINGS PE	R SHARE	A D	Full
endar	Mar.31	Jun.30	Sep.30	Dec.31	Year
2014	1.51	.21	.04	1.25	3.01
2015	1.53	.10	d.10	1.38	2.92
2016	1.58	.19	.05	1.36	3.18
2017	1.45	.22	.10	1.53	3,30
2018	1.60	.27	.13	1.60	3.60
Cal-	QUAR1	ERLY DIV	IDENDS PA	\ID B <b>=</b> †	Full
endar	Mar.31	Jun.30	Sep.30	Dec.31	Year
2013	.295	.330	.330	.330	1.29
2014	.330	.365	.365	.365	1.43
2015	.365	.405	.405	.405	1.58
2016	.405	.450	.450	.450	1.76
2017	.450	.495			
l	ı				I

Customer growth has remained positive here, with 30,000 net new accounts added over the past 12 months. The board has increased the dividend **by 10%.** Starting with the June payout, the quarterly dividend is now \$0.495. The dividend should continue to increase at a good pace in the coming years.

The Arizona general rate case has been settled. The Arizona Corporation Commission has approved the settlement, effective April 1st. This provides for a revenue increase of \$16 million and a decline

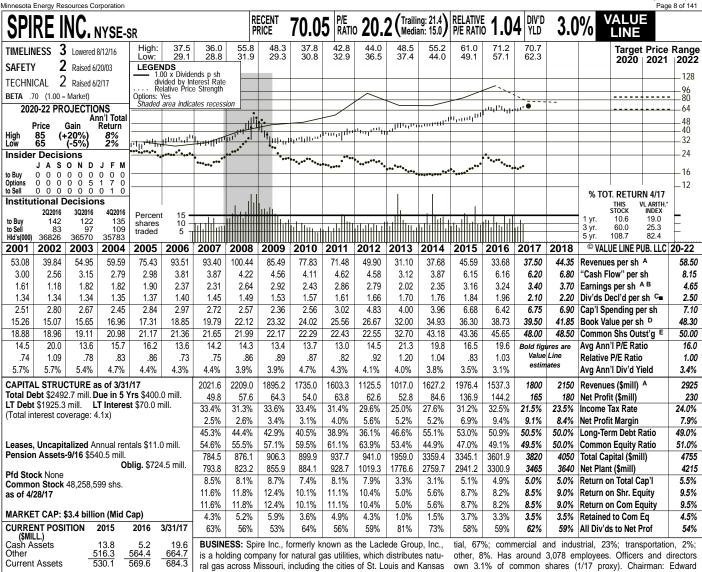
in depreciation of \$45 million over the following 12 months, as well as infrastructure replacement mechanisms, a property tax tracker, and the continuation of a decoupled rate design.

We anticipate better results going forward. The natural gas business should continue to benefit from customer growth, expansion projects, rate relief, and infrastructure tracker mechanisms. Elsewhere, we expect healthy improvement from Centuri in the seasonally stronger warmer months. Looking further out, this operation ought to benefit from the ongoing need to replace aging infrastructure.

This stock is untimely. Long-term appreciation potential is limited, as the shares presently trade well within our Target Price Range. Growth in the payout has been healthy over the past decade, though the dividend yield remains unim-pressive for a utility. But Southwest Gas does earn favorable marks for Price Stability, Growth Persistence, and Earnings Predictability. A pullback in the stock price some time in the future may offer conservative investors a better entry point. Michael Napoli, CFA June 2, 2017

(A) Diluted earnings. Excl. nonrec. gains (losses): '02, (10¢); '05, (11¢); '06, 7¢. Next egs. report due early August. (B) Dividends historically paid early March, June, September, and December. ■† Div'd reinvestment and stock purchase plan avail. (C) In millions. (D) Totals may not sum due to rounding.

Company's Financial Strength Stock's Price Stability B++ 85 Price Growth Persistence **Earnings Predictability** 90



City. Has roughly 1.6 million customers. Acquired Missouri Gas 9/13, Alabama Gas Co 9/14. Utility therms sold and transported in fiscal 2016: 2.6 bill. Revenue mix for regulated operations: residen-

Glotzbach; CEO: Suzanne Sitherwood. Inc.: Missouri. Address: 700 Market Street, St. Louis, Missouri 63101. Telephone: 314-342-0500. Internet: www.thelacledegroup.com.

365% 366% 411% Fix. Chg. Cov. ANNUAL RATES Past Past Est'd '14-'16 10 Yrs. of change (per sh) 5 Yrs. -13.0% to '20-'22 -6.5% 5.5% 3.5% 7.0% 7.0% 8.0% Revenues "Cash Flow" 4.0% 1.5% Earnings Dividends Book Value 5.0% 4.5%

146.5

418.0 289.3

853.8

210.9

648.7

1161 3

218.6

567.4 229.3

1015.3

Accts Pavable

Current Liab.

Debt Due Other

Fiscal Year Ends	QUAR1 Dec.31	TERLY REV Mar.31	/ENUES (\$ Jun.30	mill.) <sup>A</sup> Sep.30	Full Fiscal Year
2014	468.6	694.5	241.8	222.3	1627.2
2015	619.6	877.4	275.2	204.2	1976.4
2016	399.4	609.3	249.3	279.3	1537.3
2017	495.1	663.4	280	361.5	1800
2018	600	800	300	450	2150
Fiscal	EARI	NINGS PEI	R SHARE	ABF	<u>F</u> ull .
Year Ends	Dec.31	Mar.31	Jun.30	Sep.30	Fiscal Year
2014	1.09	1.59	.33	d.35	2.35
2015	1.09	2.18	.32	d.43	3.16
2016	1.08	2.31	.24	d.31	3.24
2017	.99	2.36	.30	d.25	3.40
2018	1.05	2.55	.35	d.25	3.70
Cal-	QUART	ERLY DIV	IDENDS PA	/ID c∎	Full
endar	Mar.31	Jun.30	Sep.30	Dec.31	Year
2013	.425	.425	.425	.425	1.70
2014	.44	.44	.44	.44	1.76
2015	.46	.46	.46	.46	1.84
2016	.49	.49	.49	.49	1.96
2017	525	525			

Spire reported an improvement in fiscal second quarter results (ended March 31st). Revenues rose to \$663.4 million, aided by contributions from acquisitions, but partially offset by higher temperatures in the region. Better fixedcost coverage allowed for improved operating margins. However, higher interest expense and an increased share count led earnings per share to rise modestly to \$2.36. Though we expect the company to achieve better fiscal second-half results, we lowered our 2017 share-net estimate by a dime to \$3.40, given the weak firstquarter showing.

The company is integrating its acquisitions. Cost controls and infrastructure upgrades are being implemented in the Mobile Gas and Willmut Gas coverage area. These will produce better system reliability and give the bottom line a lift near term. Too, the company is working on separating the IT platform, which should allow for back-end synergies.

Rate cases were approved in Missouri as part of the Infrastructure System Replacement Surcharge (ISRS). The company will receive increases of \$3 mil-

lion each for Laclede Gas and Missouri Gas, which should help boost the top line, and cause recoveries to be higher for infrastructure replacement. These new rates took effect on June 1st.

The Spire STL Pipeline appears to be on track. The company filed an amendment in April, which changes the route over the last six miles, and will allow for fewer disruptions and lower upgrading costs. It will likely be in service by fiscal 2019 and cost between \$190 million and \$210 million in capital expenditures. The pipeline will permit cheaper natural gas to flow into the coverage area. Once in service, it should add to profits, as pipelines generally have higher allowable rates.

Shares of Spire are neutrally ranked for Timeliness. These shares are trading within our long-term Target Price Range, but offer a well-covered dividend with ample room for growth. The balance sheet remains in solid condition, and the stock has an Above Average mark for Safety (2). Still, we think that long-term income investors would do well to wait for a dip in price.

John E. Seibert III June 2, 2017

(A) Fiscal year ends Sept. 30th. (B) Based on diluted shares outstanding. Excludes nonrecurring loss: '06, 7¢. Excludes gain from discontinued operations: '08, 94¢. Next earnings report

deferred charges. In '16: \$607.3 mill.

due late July. **(C)** Dividends historically paid in early January, April, July, and October. **Divident of the property of the** 

Company's Financial Strength Stock's Price Stability 100 Price Growth Persistence **Earnings Predictability** 85

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S&P 500

Finance Home

2,470.38 -1.72 (-0.07%) Dow 30

**Events** 

21,891.12 +60.81 (+0.28%) Nasdaq 6,348.12 -26.55 (-0.42%)

Technology

-

< :

(•) US Markets are closed

The Final Round

Summary

Dow poised for new record high

Dund Live at 3:55 p.m. ET

Originals

# Atmos Energy Corporation (ATO)

NYSE - Nasdaq Real Time Price. Currency in USD

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Quote Lookup

**86.73** +0.16 (+0.18%)

Conversations

**86.76** 0.03 (0.03%)

Financials

**Options** 

Holders

Historical Data

Analysts

After hours: -

Profile

Statistics

People also watch WGL PNY VVC NWN NJR

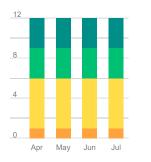
				Currency in USD
Earnings Estimate	Current Qtr. (Jun 2017)	Next Qtr. (Sep 2017)	Current Year (2017)	Next Year (2018)
No. of Analysts	9	8	13	13
Avg. Estimate	0.66	0.35	3.6	3.82
Low Estimate	0.63	0.3	3.45	3.63
High Estimate	0.69	0.4	3.66	3.99
Year Ago EPS	0.67	0.39	3.37	3.6

Revenue Estimate	Current Qtr. (Jun 2017)	Next Qtr. (Sep 2017)	Current Year (2017)	Next Year (2018)
No. of Analysts	4	3	7	7
Avg. Estimate	560.04M	502.67M	3.02B	3.36B
Low Estimate	474.81M	447.9M	2.65B	3.1B
High Estimate	630M	545.22M	3.71B	3.83B
Year Ago Sales	632.92M	678.52M	3.35B	3.02B
Sales Growth (year/est)	-11.50%	-25.90%	-9.90%	11.30%

Earnings History	6/29/2016	9/29/2016	12/30/2016	3/30/2017
EPS Est.	0.59	0.32	1.04	1.42
EPS Actual	0.67	0.39	1.08	1.52
Difference	0.08	0.07	0.04	0.1
Surprise %	13.60%	21.90%	3.80%	7.00%

EPS Trend		Cur	rent Qtr. (Jun 2	017)	Next Qtr. (Sep 2	2017)	Current Year (2017)	Next \	Year (2018)
Home	Mail	Flickr	Tumblr	News	Sports	Finance	Celebrity	Answers	Groups

## Recommendation Trends >



Strong Buy
Buy
Hold
Underperform
Sell

# Recommendation Rating >



# Analyst Price Targets (10) >

#### Average 83.40



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60 Days Ago			Personal Finance		echnology Mark	kets	Industries	My Scr		ly Portfolio			
		0.66	3 0	.37	3.59	9	3.8	_		<u> </u>	,		
90 Days Ago		0.68	3 0	.37	3.55	5	3.77		Initiated	BB&T Capi Buy	tal Mkts:	to	3/30/2016
EPS Revisions	Current	t Qtr. (Jun 2017	) Next Qtr. (Sep 20	017)	Current Year (2017	')	Next Year (2018)	1	Downgrade	Morgan Sta Overweight Weight		-	3/18/2016
Up Last 7 Days		N/A	<b>A</b> 1	N/A	N/A	Ą	N/A	1	Downgrade	Barclays: E Underweigl		ght to	1/11/2016
Up Last 30 Days		2	2	1	1	1	2	1	Downgrade	Argus: Buy	to Hold		8/28/2009
Down Last 30 Days		N/A	1	1	1	1	N/A						
Down Last 90 Days		N/A	<b>\</b>	N/A	N/A	A	N/A						
										Yahoo Small	Business		
Growth Estimates		ATO	) Indu	ıstry	Secto	or	S&P 500		Data Dis	sclaimer He	lp Sugge	estions	;
Current Qtr.		-1.50%	, 5	N/A	N/A	A	0.18		Privacy Al	oout Our Ads	Terms (	(Updat	ed)
Next Qtr.		-10.30%	,	N/A	N/A	A	0.23		<ul><li>Yahoo</li><li>An Oa</li></ul>	Finance th brand	¥	f	t
Current Year		6.80%	b l	N/A	N/A	Ą	0.08						
Next Year		6.10%	b l	N/A	N/A	A	0.11						
Next 5 Years (per annum)		7.00%	, )	N/A	N/A	A	0.10						
Past 5 Years (per annum)		17.70%	, l	N/A	N/A	Ą	N/A						

12/30/2016

0.61

0.46

-0.15

-24.60%

Current Year (2017)

3/30/2017

1 21

0.21

21.00%

Next Year (2018)

6/29/2016

0.14

0.13

-0.01

-7.10%

Current Otr. (Jun 2017)

9/29/2016

0.01

-0.02

-0.03

-300.00%

Next Qtr. (Sep 2017)

**Earnings History** 

EPS Est.

**EPS Actual** 

Difference

Surprise %

**EPS Trend** 

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lome Originals Events Personal Finance Technology Markets Industries My Screeners	Originals Events F	inance Home (
g ··· ···		,
go 0.13 0.1 1.7 1.83	0.13	Days Ago
sions Current Qtr. (Jun 2017) Next Qtr. (Sep 2017) Current Year (2017) Next Year (2018)	Current Qtr. (Jun 2017)	S Revisions
Days N/A N/A N/A N/A	N/A	Last 7 Days
Days N/A N/A 1 2	N/A	Last 30 Days
t 30 Days N/A N/A N/A N/A	N/A	wn Last 30 Days
t 90 Days N/A N/A N/A N/A	N/A	own Last 90 Days
stimates NJR Industry Sector S&P 500	NJR	wth Estimates
tr76.90% N/A N/A 0.18	-76.90%	rent Qtr.
300.00% N/A N/A 0.23	300.00%	t Qtr.
ear 7.50% N/A N/A 0.08	7.50%	rent Year
7.50% N/A N/A 0.11	7.50%	kt Year
ars (per 6.00% N/A N/A 0.10	6.00%	kt 5 Years (per num)
ars (per 11.51% N/A N/A N/A	11.51%	t 5 Years (per um)

21,891.19

+60.88 (+0.28%)

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2,470.32

-1.78 (-0.07%)

Dow poised for new record high

Round Live at 3:55 p.m. ET

NiSource Inc. (NI) Add to watchlist Quote Lookup NYSE - Nasdaq Real Time Price. Currency in USD

6,348.12

-26.55 (-0.42%)

**26.06** -0.01 (-0.04%) **26.06** 0.00 (0.00%)

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At close: 3:59PM EDT	•	А	fter hours: 4	:03PM EDT	,				PNW PEG CNP GAS PCG
Summary Cor	nversations	Statistics	Profile	Financials	Options	Holders	Historical Data	Analysts	
							Currency in USD		
Earnings Estimate	Current	Qtr. (Jun 2017)	Next Q	tr. (Sep 2017)	Current Year	(2017)	Next Year (2018)		
No. of Analysts		10		9		15	17		
Avg. Estimate		0.1		0.07		1.18	1.25		
Low Estimate		0.09		0.06		1.15	1.23		
High Estimate		0.12		0.1		1.21	1.28		
Year Ago EPS		0.08		0.06		1.09	1.18		
Revenue Estimate	Current	Qtr. (Jun 2017)	Next Q	tr. (Sep 2017)	Current Year	(2017)	Next Year (2018)		
No. of Analysts		7		6		10	10		Yahoo Small Business
Avg. Estimate		944.89M		921.4M		4.8B	5.03B		ta Disclaimer Help Suggestions
Low Estimate		911M		890.5M		4.69B	4.83B		y About Our Ads Terms (Updated)
High Estimate		1B		1B		4.99B	5.35B		rahoo Finance an Oath brand <b>y f t</b>
Year Ago Sales		893M		853.9M		4.49B	4.8B		
Sales Growth (year/e	est)	5.80%		7.90%	(	6.90%	4.70%		
Earnings History		6/29/2016		9/29/2016	12/3	0/2016	3/30/2017		
EPS Est.		0.07		0.07		0.34	0.67		
EPS Actual		0.08		0.06		0.33	0.71		
Difference		0.01		-0.01		-0.01	0.04		
Surprise %		14.30%		-14.30%	-2	2.90%	6.00%		
EPS Trend	Current	Qtr. (Jun 2017)	Next Q	tr. (Sep 2017)	Current Year	(2017)	Next Year (2018)		

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ays Ago		0.11	0.07	1.16	1.24	
S Revisions	Curre	nt Qtr. (Jun 2017)	Next Qtr. (Sep 2017)	Current Year (2017)	Next Year (2018)	
Last 7 Days		1	N/A	. 1	N/A	
Last 30 Days		1	N/A	. 2	1	
own Last 30 Days		N/A	N/A	N/A	N/A	
own Last 90 Days		N/A	N/A	N/A	N/A	
rowth Estimates		N	Industry	Sector	S&P 500	
urrent Qtr.		25.00%	N/A	N/A	0.18	
ext Qtr.		16.70%	N/A	N/A	0.23	
urrent Year		8.30%	N/A	N/A	0.08	
ext Year		5.90%	N/A	N/A	0.11	
ext 5 Years (per inum)		7.49%	N/A	. N/A	0.10	
ast 5 Years (per nnum)		-6.89%	N/A	N/A	N/A	

0.07

0.01

16.70%

Current Otr. (Jun 2017)

-0.29

0.05

14.70%

Next Qtr. (Sep 2017)

1

-0.04

-3.80%

Current Year (2017)

14

N/A

N/A

Next Year (2018)

**EPS Actual** 

Difference

Surprise %

**EPS Trend** 

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90 Days Ago		0.05	-0.3	2.16	2.3		
EPS Revisions	Current Qtr. (Jun	2017) Ne	ext Qtr. (Sep 2017)	Current Year (2017)	Next Year (2018)		
Up Last 7 Days		N/A	N/A	N/A	N/A		
Up Last 30 Days		N/A	N/A	N/A	N/A		
Down Last 30 Days	:	N/A	N/A	N/A	N/A		
Down Last 90 Days		N/A	N/A	N/A	N/A		
Growth Estimates		NWN	Industry	Sector	S&P 500		
Current Qtr.	-28.	.60%	N/A	N/A	0.18		
Next Qtr.	-6.	90%	N/A	N/A	0.23		
Current Year	-0.	.90%	N/A	N/A	0.08		
Next Year	5.	.50%	N/A	N/A	0.11		
Next 5 Years (per annum)	4.	.00%	N/A	N/A	0.10		
Past 5 Years (per annum)	11.	.43%	N/A	N/A	N/A		

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The Final

-1.79 (-0.07%)

Dow poised for new record high

+60.81 (+0.28%)

Round Live at 3:55 p.m. ET

ONE Gas, Inc. (OGS)

NYSE - Nasdaq Real Time Price. Currency in USD

Add to watchlist Quote Lookup

**72.79** +0.04 (+0.05%)

**72.78** -0.01 (-0.01%)

-26.55 (-0.42%)

After hours: 4:03PM EDT

People also watch OKE OGE NWE NJR SWX

At close: 3:59PM EDT		After hours: 4:03PM EDT			OKE OGE NWE NJR SWX
Summary Convers	sations Statistics	Profile Financials	Options Holde	rs Historical Data	Analysts
				Currency in USD	
Earnings Estimate	Current Qtr. (Jun 2017)	Next Qtr. (Sep 2017)	Current Year (2017)	Next Year (2018)	
No. of Analysts	8	8	7	10	
Avg. Estimate	0.42	0.28	2.97	3.11	
Low Estimate	0.4	0.25	2.95	3.05	
High Estimate	0.47	0.29	3	3.16	
Year Ago EPS	0.38	0.24	2.65	2.97	
Revenue Estimate	Current Qtr. (Jun 2017)	Next Qtr. (Sep 2017)	Current Year (2017)	Next Year (2018)	
No. of Analysts	4	4	8	8	Yahoo Small Business
Avg. Estimate	257.88M	233.94M	1.54B	1.58B	Data Disclaimer Help Suggestions Privacy About Our Ads Terms (Updated)
Low Estimate	236.75M	213.68M	1.47B	1.48B	
High Estimate	278.2M	248.3M	1.72B	1.76B	<ul><li>Yahoo Finance</li><li>An Oath brand</li><li>f t</li></ul>
Year Ago Sales	245.92M	232.19M	1.43B	1.54B	
Sales Growth (year/est)	4.90%	0.80%	7.70%	2.70%	
Earnings History	6/29/2016	9/29/2016	12/30/2016	3/30/2017	
EPS Est.	0.31	0.19	0.8	1.35	
EPS Actual	0.38	0.24	0.8	1.34	
Difference	0.07	0.05	N/A	-0.01	
Surprise %	22.60%	26.30%	N/A	-0.70%	
EPS Trend	Current Qtr. (Jun 2017)	Next Qtr. (Sep 2017)	Current Year (2017)	Next Year (2018)	

Docket No. G011/GR-17-563 Bulkley Work Papers Page 18 of 141

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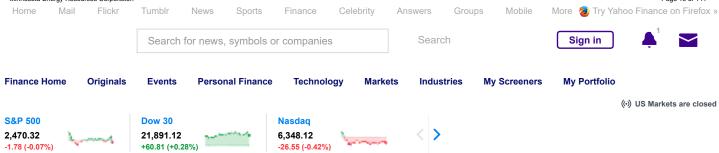
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Finance Home	Originals	Events	Personal Finance	Technology Mai	kets Industries	My Screeners	My Portf
90 Days Ago		0.43					
EPS Revisions	Curre	nt Qtr. (Jun 2017)	Next Qtr. (Sep 2017)	Current Year (201	7) Next Year (2018)	)	
Jp Last 7 Days		N/A	N/A	N	'A N/A	4	
Jp Last 30 Days		N/A	. 1		1 2	2	
Down Last 30 Days		N/A	N/A	N	'A N/A	4	
Down Last 90 Days		N/A	N/A	N	A N/A	<b>A</b>	
Growth Estimates		OGS	Industry	Sect	or S&P 500	)	
Current Qtr.		10.50%	N/A	N	'A 0.18	3	
Next Qtr.		16.70%	N/A	N/	'A 0.23	3	
Current Year		12.10%	N/A	N/	A 0.08	3	
Next Year		4.70%	N/A	N/	'A 0.11	I	
Next 5 Years (per annum)		5.50%	N/A	N	'A 0.10	)	
Past 5 Years (per annum)		31.26%	N/A	N	A N/A	4	



The Final Round

Dow poised for new record high

Round Live at 3:55 p.m. ET

# South Jersey Industries, Inc. (SJI)

NYSE - Nasdaq Real Time Price. Currency in USD

☆ Add to watchlist
Quote Lookup

**33.96** +0.18 (+0.53%)

**33.97** 0.01 (0.03%)

After hours: 4:03PM EDT

People also watch NJR SWX WGL NWN PNY

Summary Conver	rsations Statistics	Profile Financials	Options Holder	s Historical Data	Analysts
				Currency in USD	
Earnings Estimate	Current Qtr. (Jun 2017)	Next Qtr. (Sep 2017)	Current Year (2017)	Next Year (2018)	
No. of Analysts	8	7	8	8	
vg. Estimate	0.05	0.01	1.19	1.47	
ow Estimate	-0.03	-0.04	1.16	1.33	
igh Estimate	0.08	0.09	1.25	1.61	
⁄ear Ago EPS	0.12	0.05	1.34	1.19	
Revenue Estimate	Current Qtr. (Jun 2017)	Next Qtr. (Sep 2017)	Current Year (2017)	Next Year (2018)	
lo. of Analysts	3	2	4	4	Yahoo Small Business
vg. Estimate	173.2M	187.1M	1.11B	1.15B	Data Disclaimer Help Suggestions
ow Estimate	160.6M	150.2M	1.02B	979.9M	Privacy About Our Ads Terms (Updated)
ligh Estimate	184M	224M	1.16B	1.23B	<ul><li>Yahoo Finance</li><li>An Oath brand</li><li>f t</li></ul>
ear Ago Sales	154.4M	219.08M	1.04B	1.11B	
Sales Growth (year/est)	12.20%	-14.60%	7.20%	3.30%	
arnings History	6/29/2016	9/29/2016	12/30/2016	3/30/2017	
PS Est.	0.14	-0.1	0.41	0.78	
PS Actual	0.12	0.05	0.42	0.72	
Difference	-0.02	0.15	0.01	-0.06	
Surprise %	-14.30%	150.00%	2.40%	-7.70%	

Current Year (2017)

Next Year (2018)

Current Qtr. (Jun 2017)

Next Qtr. (Sep 2017)

**EPS Trend** 

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Finance Home	Originals	Events	Personal Finance	Technology	Markets	Industries	My Screeners	My Portfoli
90 Days Ago		0.07			1.35	1.54		
EPS Revisions	Curre	nt Qtr. (Jun 2017)	Next Qtr. (Sep 2017)	) Current Ye	ear (2017)	Next Year (2018)	)	
Up Last 7 Days		1	N/A		N/A	N/A		
Up Last 30 Days		2	2 N/A		N/A	1		
Down Last 30 Days		1	1		1	2		
Down Last 90 Days		N/A	N/A		N/A	N/A	- -	
Growth Estimates		SJ	l Industry	,	Sector	S&P 500	)	
Current Qtr.		-58.30%	N/A		N/A	0.18	-	
Next Qtr.		-80.00%	N/A		N/A	0.23	- }	
Current Year		-11.20%	N/A		N/A	0.08	-	
Next Year		23.50%	N/A		N/A	0.11		
Next 5 Years (per annum)		6.00%	N/A		N/A	0.10	-	
Past 5 Years (per annum)		-2.37%	N/A		N/A	N/A	- -	

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The Final Round

Dow poised for new record high

Live at 3:55 p.m. ET

# Southwest Gas Holdings, Inc. (SWX)

NYSE - Nasdaq Real Time Price. Currency in USD

☆ Add to watchlist

Quote Lookup

**80.11** -0.20 (-0.25%) At close: 3:59PM EDT

80.10 -0.01 (-0.01%) After hours: 4:03PM EDT

People also watch SJI NJR WGL NWN PNY

Summary Conv	versations Statistics	Profile Financials	Options Holders	s Historical Data	Analysts
Earnings Estimate	Current Qtr. (Jun 2017)	Next Qtr. (Sep 2017)	Current Year (2017)	Currency in USD  Next Year (2018)	
No. of Analysts	5	4	7	7	
Avg. Estimate	0.27	0.11	3.38	3.62	
Low Estimate	0.18	0.08	3.34	3.53	
High Estimate	0.31	0.14	3.45	3.68	
Year Ago EPS	0.19	0.05	3.18	3.38	
Revenue Estimate	Current Qtr. (Jun 2017)	Next Qtr. (Sep 2017)	Current Year (2017)	Next Year (2018)	Yahoo Small Business
No. of Analysts	2	2	2	2	Talloo Siliali Dusiliess
Avg. Estimate	288.96M	226.24M	1.37B	1.44B	Data Disclaimer Help Suggestions
Low Estimate	286M	222.1M	1.36B	1.39B	Privacy About Our Ads Terms (Updated)
High Estimate	291.91M	230.37M	1.38B	1.49B	<ul><li>Yahoo Finance</li><li>An Oath brand</li><li>f t</li></ul>
Year Ago Sales	547.75M	539.97M	2.46B	1.37B	
Sales Growth (year/es	t) -47.20%	-58.10%	-44.50%	5.60%	
Earnings History	6/29/2016	9/29/2016	12/30/2016	3/30/2017	
EPS Est.	0.18	0.01	1.35	1.65	
EPS Actual	0.19	0.05	1.36	1.45	
Difference	0.01	0.04	0.01	-0.2	
Surprise %	5.60%	400.00%	0.70%	-12.10%	
EPS Trend	Current Qtr. (Jun 2017)	Next Qtr. (Sep 2017)	Current Year (2017)	Next Year (2018)	

# SWX 80.11 -0.20 -0.25% : Southwest Gas Holdings, Inc. - Yahoo Finance

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Finance Home	Originals Events	Personal Finance	Technology Marke	ts Industries	My Screeners My Por
90 Days Ago	0.	22 0.09	3.42	3.64	
EPS Revisions	Current Qtr. (Jun 20	17) Next Qtr. (Sep 2017)	Current Year (2017)	Next Year (2018)	
Jp Last 7 Days	N	I/A 1	1	1	
Jp Last 30 Days		1 2	! 1	1	
Down Last 30 Days	N	I/A N/A	N/A	N/A	
Down Last 90 Days	N	I/A N/A	N/A	N/A	
Growth Estimates	SI	VX Industry	y Sector	S&P 500	
Current Qtr.	42.10	0% N/A	N/A	0.18	
Next Qtr.	120.00	0% N/A	N/A	0.23	
Current Year	6.30	0% N/A	N/A	0.08	
Next Year	7.10	0% N/A	N/A	0.11	
Next 5 Years (per annum)	4.00	)% N/A	N/A	0.10	
Past 5 Years (per annum)	-2.85	5% N/A	N/A	N/A	

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The Final Round

Dow poised for new record high

Live at 3:55 p.m. ET

Spire Inc. (SR) ☆ Add to watchlist Quote Lookup NYSE - Nasdaq Real Time Price. Currency in USD

**72.55** +0.05 (+0.07%) **72.60** 0.05 (0.07%)

People also watch

At close: 3:59PM EDT	7.03 (+0.07 70)	After hours: 4:02PM EDT	.07 70)		People also watch SRT SXI SJI EBF SMP
Summary Con	versations Statistics	Profile Financials	Options Holde	rs Historical Data	Analysts
				Currency in USD	
Earnings Estimate	Current Qtr. (Jun 2017)	Next Qtr. (Sep 2017)	Current Year (2017)	Next Year (2018)	
No. of Analysts	11	8	11	11	
Avg. Estimate	0.39	-0.27	3.53	3.66	
Low Estimate	0.33	-0.33	3.51	3.49	
High Estimate	0.45	-0.23	3.55	3.75	
Year Ago EPS	0.33	-0.32	3.42	3.53	
Revenue Estimate	Current Qtr. (Jun 2017)	Next Qtr. (Sep 2017)	Current Year (2017)	Next Year (2018)	
No. of Analysts	5	4	8	9	Yahoo Small Business
Avg. Estimate	295.64M	269.2M	1.76B	1.81B	Data Disclaimer Help Suggestions
Low Estimate	260.64M	229.91M	1.65B	1.66B	Privacy About Our Ads Terms (Updated)
High Estimate	336M	309.61M	2.08B	2.13B	<ul><li>Yahoo Finance</li><li>An Oath brand</li><li>f</li><li>t</li></ul>
Year Ago Sales	249.3M	279.3M	1.54B	1.76B	
Sales Growth (year/es	st) 18.60%	-3.60%	14.80%	2.80%	
Earnings History	6/29/2016	9/29/2016	12/30/2016	3/30/2017	
EPS Est.	0.27	-0.32	1.07	2.37	
EPS Actual	0.33	-0.32	1.04	2.38	
Difference	0.06	N/A	-0.03	0.01	
Surprise %	22.20%	N/A	-2.80%	0.40%	

Current Year (2017)

Next Year (2018)

Next Qtr. (Sep 2017)

Current Qtr. (Jun 2017)

**EPS Trend** 

# SR 72.55 0.05 0.07% : Spire Inc. - Yahoo Finance

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Finance Home	Originals	Events	Personal Finance	03	arkets	Industries	My Screeners	My Portfolio
90 Days Ago		0.39			.52	3.67		
EPS Revisions	Current	t Qtr. (Jun 2017)	Next Qtr. (Sep 2017)	Current Year (20	017)	Next Year (2018)		
Up Last 7 Days		N/A	N/A	. 1	N/A	1		
Up Last 30 Days		1	N/A		1	1		
Down Last 30 Days		N/A	N/A		N/A	N/A		
Down Last 90 Days		N/A	N/A		N/A	N/A		
Growth Estimates		SR	Industry	. Se	ector	S&P 500		
Current Qtr.		18.20%	N/A		N/A	0.18		
Next Qtr.		15.60%	N/A		N/A	0.23		
Current Year		3.20%	N/A	, 1	N/A	0.08		
Next Year		3.70%	N/A		N/A	0.11		
Next 5 Years (per annum)		3.95%	N/A	. 1	N/A	0.10		
Past 5 Years (per annum)		7.64%	N/A		N/A	N/A		

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Q

\*AMC8/2/17

0.66

0.66

7.04%

1.91

4.55%

3.59

3.79

3.67

24.10

S&P

NA

NA

22.70

7.40

2.80

NA

NA

19.00

Buy 2

Snapshot

Top 36%(96 out of 265)

Top 44% (7 out of 16)

Snapshot

90,00

00.88

86,00

84.00

82,00

80.00

78.00

**Next Year** 

(9/2018)

3.25B

3.44B

3.13B

2.78B

16.99%

Next Year

(9/2018)

3.79

3.87

3.87

3.70

3.59

5.46%

**Next Year** (9/2018)

0

1

1

0

0

0

**Next Year** 

(9/2018)

3.79

3.79

3.77

3.77

3.76

**Next Year** 

(9/2018)

3.85

3.79

1.58%

NA

NA

0.08

13,62%

Average Surprise

8

3

© quotemedia.com

**Current Year** 

(9/2017)

2.78B

2.85B

2.65B

-999.00M

378.25%

Current Year

(9/2017)

3.59

3.60

3.66

3.52

3.37

6.60%

**Current Year** 

(9/2017)

0

1

1

0

0

0

**Current Year** 

(9/2017)

3.59

3.59

3.58

3.58

3.54

Current Year

(9/2017)

3.65

3.59

1.67%

\*BMO = Before Market Open \*AMC = After Market Close

IND

NA

NA

6.50

9.00

-1.00

7.50

20.40

2.72

ATO

-2.09

-13.75

6.60

5.50

8.30

7.00

24.10

3.44

Jul

Interactive Chart | Fundamental Charts

**Current Qtr** 

(6/2017)

596.52M

629.73M

563.30M

-999.00M

159.71%

Current Qtr

(6/2017)

0.66

0.64

0.69

0.63

0.67

-2.09%

Current Qtr

(6/2017)

0

1

1

0

0

0

Current Qtr

(6/2017)

0.66

0.66

0.65

0.66

0.68

Current Qtr

(6/2017)

0.69

0.66

4.55%

Quarter Ending

(9/2016)

0.40

0.31

0.09

29.03%

Quarter Ending

(12/2016)

1.08

1.03

0.05

4.85%

5

Next Qtr

(9/2017)

514.90M

514.90M

514.90M

0.00M

**Next Qtr** 

(9/2017)

0.34

2

NA.

0.35

0.34

0.40

-13.75%

Next Qtr

(9/2017)

0

0

0

0

1

1

Next Qtr

(9/2017)

0.34

0.34

0.35

0.35

0.35

Next Qtr

(9/2017)

0.34

0.34

0.00%

Quarter Ending

(6/2016)

0.67

0.59

0.08

13.56%

NA.

Jun

In 3 Months

In a Month

In a Week

Quote or Search

Zacks Research

**Detailed Estimates** 

Atmos Energy Corporation (ATO) (Real Time Quote from BATS)

\$86.74 USD +0.23 (0.27%) Updated Jul 31, 2017 03:58 PM ET

After-Market. \$86.74 0.00 (0.00%) 7:00 PM ET

Zacks Rank: 0

2-Buy

Style Scores: 0

C Value | B Growth | D Momentum | C VGM

Industry Rank: 0 Top 36%(96 out of 265) Industry: Utility - Gas Distribution

Atmos Energy Corporation (ATO) Quote Overview » Estimates » Atmos Energy Corporation (ATO) Detailed Estimates

Detailed Estimates

Enter Symbol

Next Report Date

Current Quarter

Estimates

(

🚖 Trades from 👣

**EPS Last Quarter** 

Last EPS Surprise

ABR

Earnings ESP 0 Current Year

Next Year EPS (TTM) P/E (F1)

**Growth Estimates** Current Qtr (06/2017) Next Qtr (09/2017)

Current Year (09/2017) Next Year (09/2018) Past 5 Years Next 5 Years PE PEG Ratio

Learn More About Estimate Research See Brokerage Recommendations See Earnings Report Transcript

**Premium Research for ATO** Zacks Industry Rank 0 Zacks Sector Rank Style Scores 0 Value: C | Growth: B | Momentum: D | VGM: C

Research Report for ATO 0 ( = Change in last 30 days) Niew All Zacks Rank #1 Strong Buys

Learn to Profit from the Zacks Rank More Premium Research » Research for ATO

**Chart for ATO** Charts for ATO

May July 31, 2017

Predict to see real-time community sentiment ATO Atmos Energy Co... Predicting consolutes acceptance of PredictWallStreet's terms of use. Sales Estimates

Tuesday

Zacks Consensus Estimate

# of Estimates



Most Recent Consensus **High Estimate** Low Estimate Year ago EPS Year over Year Growth Est. Agreement - Estimate Revisions 0

Up Last 30 Days Up Last 60 Days Down Last 7 Days Down Last 30 Days Down Last 60 Days Magnitude - Consensus Estimate Trend

Up Last 7 Days

30 Days Ago 60 Days Ago 90 Days Ago Upside - Most Accurate Estimate Versus Zacks Consensus 0 Most Accurate Estimate

Current

7 Days Ago

Zacks Consensus Estimate

Earnings ESP 1

Surprise - Reported Earnings History ® Reported Estimate Difference

Surprise

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**BUSINESS** 

BBB Rating: A+ **ACCREDITED** as of 7/31/2017 Click for Profile Copyright 2017 Zacks Investment Research At the center of everything we do is a strong commitment to independent research and sharing its profitable discoveries with investors. This dedication to giving investors a trading advantage led to the creation of our proven Zacks Rank stock-rating system. Since 1988 it has more than doubled the S&P 500 with an average gain of +25% per year. These returns cover a period from 1988-2016. Zacks Rank stock-rating system returns are computed monthly based on the beginning of the month and end of the month Zacks Rank stock prices plus any dividends received during that particular month. A simple, equally-weighted average return of all Zacks Rank stocks is calculated to determine the monthly return. The monthly returns are then compounded to arrive at the annual return. Only Zacks Rank stocks included in Zacks hypothetical portfolios at the beginning of each month are included in the return calculations. Zack Ranks stocks of which no month-end price was available, pricing information was not collected, or for cert

Real time prices by BATS. Delayed quotes by Sungard.

Quarter Ending

(3/2017)

1.52

1.42

0.10

7.04%

Quarterly Estimates By Analyst

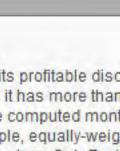
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Annual Estimates By Analyst

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can, and often do, change throughout the month. Certain Zacks rtain other reasons have been excluded from these return calcul	Rank sto
es delayed.	

ocks for Visit performance for information about the performance numbers displayed above. Visit www.zacksdata.com to get our data and content for your mobile app or website. NYSE and AMEX data is at least 20 minutes delayed. NASDAQ data is at least 15 minute

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Quote or Search

Zacks Research

Detailed Estimates

(Real Time Quote from BATS) \$42.15 USD

NewJersey Resources Corporation (NJR)

Updated Jul 31, 2017 03:58 PM ET After-Market. \$42.15 0.00 (0.00%) 7:00 PM ET

+0.08 (0.18%)

Zacks Rank: 0

2-Buy

Style Scores: 0

D Value | F Growth | F Momentum | F VGM

Top 36%(96 out of 265) Industry: Utility - Gas Distribution

Industry Rank: 0

NewJersey Resources Corporation (NJR) Quote Overview » Estimates » NewJersey Resources Corporation (NJR) Detailed Estimates Detailed Estimates

Enter Symbol

Next Report Date

Estimates

(4)

View All Zacks #1 Ranked Stocks

🖄 Trades from 🛐

Current Quarter **EPS Last Quarter** 

Last EPS Surprise

ABR

Earnings ESP 0 Current Year Next Year

EPS (TTM)

Next Qtr (09/2017)

Current Year (09/2017)

Next Year (09/2018)

P/E (F1) **Growth Estimates** Current Qtr (06/2017)

Past 5 Years Next 5 Years PE PEG Ratio Learn More About Estimate Research

See Brokerage Recommendations

Niew All Zacks Rank #1 Strong Buys

See Earnings Report Transcript **Premium Research for NJR** Zacks Rank ①

Zacks Industry Rank 0 Zacks Sector Rank Style Scores 0

Value: D | Growth: F | Momentum: F | VGM: F Research Report for NJR 0 ( = Change in last 30 days)

Learn to Profit from the Zacks Rank More Premium Research » Research for NJR

Chart for NJR Charts for NJR

May July 31, 2017

NJR Newjersey Resou... Predicting consolutes acceptance of PredictWalStreet's terms of use. Sales Estimates Zacks Consensus Estimate

# of Estimates High Estimate Low Estimate Year ago Sales Year over Year Growth Est. **Earnings Estimates** 

Zacks Consensus Estimate # of Estimates Most Recent Consensus **High Estimate** Low Estimate Year ago EPS Year over Year Growth Est.

Agreement - Estimate Revisions 0

Up Last 7 Days Up Last 30 Days Up Last 60 Days Down Last 7 Days Down Last 30 Days Down Last 60 Days

Magnitude - Consensus Estimate Trend Current 7 Days Ago 30 Days Ago

60 Days Ago

90 Days Ago

Upside - Most Accurate Estimate Versus Zacks Consensus 0 Most Accurate Estimate Zacks Consensus Estimate Earnings ESP 1

Reported

Estimate

Difference

Surprise

Annual Estimates By Analyst Zacks Premium Subscription Required Learn more

Quarterly Estimates By Analyst

Zacks Premium Subscription Required Learn more

Surprise - Reported Earnings History 0

Quarter Ending

(3/2017)

1.20

1.00

0.20

20.00%

BBB Rating: A+ **ACCREDITED** as of 7/31/2017 **BUSINESS** Click for Profile

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Real time prices by BATS. Delayed quotes by Sungard.

month Zacks Rank stock prices plus any dividends received during that particular month. A simple, equally-weighted average return of all Zacks Rank stocks is calculated to Visit performance for information about the performance numbers displayed above.

Visit www.zacksdata.com to get our data and content for your mobile app or website. NYSE and AMEX data is at least 20 minutes delayed. NASDAQ data is at least 15 minutes delayed.

0.01 0.01 20.00% 2.88

Q

\*BM08/2/17

700.00%

1.73

22.70

7.40

2.80

NA

19.00

1.85 1.77 24.31 \*BMO = Before Market Open \*AMC = After Market Close S&P NA NA

IND

NA

NA

6.50

9.00

-1.00

7.50

20.40

2.72

NJR

-89.23

516.67

7.50

7.00

4.60

6.00

24.31

4.05

Jul

Interactive Chart | Fundamental Charts

Current Qtr

(6/2017)

421.65M

422.00M

421.30M

393.21M

7.23%

Current Qtr

(6/2017)

0.01

0.08

0.09

-0.16

0.13

-89.23%

Current Qtr

(6/2017)

0

0

0

0

0

0

Current Qtr

(6/2017)

0.01

0.01

0.00

0.00

0.09

Current Qtr

(6/2017)

0.08

0.01

Quarter Ending

(9/2016)

-0.02

0.00

-0.02

NA

700.00%

Quarter Ending

(12/2016)

0.46

0.59

-0.13

-22.03%

5

Next Qtr

(9/2017)

487.40M

491.00M

483.80M

469.24M

3.87%

**Next Qtr** 

(9/2017)

0.08

0.14

0.23

-0.03

-0.02

516.67%

Next Qtr

(9/2017)

0

0

0

0

0

0

Next Qtr

(9/2017)

0.08

0.08

0.08

0.08

0.15

Next Qtr

(9/2017)

0.08

0.08

0.00%

Quarter Ending

(6/2016)

0.13

0.15

-0.02

-13.33%

3

Jun

In 3 Months

Predict to see real-time community sentiment

In a Week

In a Month

Tuesday

NA ▼ Buy 2

Top 36%(96 out of 265)

Top 44% (7 out of 16)

Snapshot

Snapshot

44.00 43.00 42.00 41,00

40,00

39.00

38.00

**Next Year** 

(9/2018)

2.16B

2.27B

1.95B

2.09B

3.21%

Next Year

(9/2018)

1.85

1.83

1.90

1.83

1.73

7.02%

**Next Year** 

(9/2018)

0

0

0

0

0

0

**Next Year** 

(9/2018)

1.85

1.85

1.86

1.86

1.84

**Next Year** 

(9/2018)

1.83

1.85

-1.08%

Average Surprise

NA

NA

0.01

-5.12%

7

3

© quotemedia.com

**Current Year** 

(9/2017)

2.09B

2.19B

1.91B

1.88B

11.20%

**Current Year** 

(9/2017)

1.73

1.72

1.76

1.70

1.61

7.45%

**Current Year** 

(9/2017)

0

0

1

0

0

0

Current Year

(9/2017)

1.73

1.73

1.73

1.73

1.70

Current Year

(9/2017)

1.73

1.73

0.00%

7

YAHOO! msn Market atch Forbes INVESTORS.com

determine the monthly return. The monthly returns are then compounded to arrive at the annual return. Only Zacks Rank stocks included in Zacks hypothetical portfolios at the beginning of each month are included in the return calculations. Zack Ranks stocks can, and often do, change throughout the month. Certain Zacks Rank stocks for which no month-end price was available, pricing information was not collected, or for certain other reasons have been excluded from these return calculations.

Docket No. G011/GR-17-563 Bulkley Work Papers Menu

Q

\*BMO8/2/17

0.10

0.10

0.00%

2.30

10.00%

1.18

1.25

1.12

22.09

S&P

NA

NA

22.70

7.40

2.80

NA

NA

19.00

A Buy 2

Top 41%(108 out of 265)

27.00

26.00

25.00

24.00

23.00

**Next Year** 

(12/2018)

4.90B

4.97B

4.83B

4.78B

2.63%

Next Year

(12/2018)

1.25

1.25

1.28

1.22

1.18

5.81%

**Next Year** 

(12/2018)

0

1

1

0

0

0

**Next Year** 

(12/2018)

1.25

1.25

1.25

1.25

1.24

**Next Year** 

(12/2018)

1.25

1.25

NA

NA

-0.01

-3,41%

0.00%

Average Surprise

7

2

© quotemedia.com

**Current Year** 

(12/2017)

4.78B

4.78B

4.77B

4.49B

6.33%

Current Year

(12/2017)

1.18

1.19

1.21

1.16

1.08

9.26%

Current Year

(12/2017)

0

0

0

0

0

0

Current Year

(12/2017)

1.18

1.18

1.18

1.18

1.17

**Current Year** 

(12/2017)

1.19

1.18

0.85%

7

# Quote or Search

Zacks Research

Detailed Estimates

NiSource, Inc (NI)

(Real Time Quote from BATS)

\$26.07 USD +0.01 (0.04%)

Updated Jul 31, 2017 03:58 PM ET After-Market. \$26.07 0.00 (0.00%) 7:00 PM ET

Zacks Rank: 0

2-Buy

Add To Portfolio

Style Scores: 0

B Value | B Growth | F Momentum | B VGM

Top 41%(108 out of 265)

Industry Rank: 0

Industry: Utility - Electric Power

Enter Symbol

Next Report Date

Current Quarter

Estimates

**Detailed Estimates** 

(

**EPS Last Quarter** 

Last EPS Surprise

ABR

Earnings ESP 0

Current Year Next Year

EPS (TTM) P/E (F1)

**Growth Estimates** Current Qtr (06/2017) Next Qtr (09/2017)

Current Year (12/2017) Next Year (12/2018) Past 5 Years Next 5 Years PE

PEG Ratio

Learn More About Estimate Research See Brokerage Recommendations See Earnings Report Transcript **Premium Research for NI** 

Zacks Industry Rank Zacks Sector Rank Style Scores 0

Value: B | Growth: B | Momentum: F | VGM: B Research Reports for NI ( = Change in last 30 days) View All Zacks Rank #1 Strong Buys

Learn to Profit from the Zacks Rank More Premium Research » Research for NI Chart for NI

Charts for NI

May July 31, 2017

NI Nisource Inc Predicting consolutes acceptance of PredictWallStreet's terms of use.

**Earnings Estimates** Zacks Consensus Estimate # of Estimates

Down Last 7 Days Down Last 30 Days Down Last 60 Days Magnitude - Consensus Estimate Trend 0

Current 7 Days Ago 30 Days Ago 60 Days Ago 90 Days Ago Upside - Most Accurate Estimate Versus Zacks Consensus 0

Most Accurate Estimate

Earnings ESP 1

Reported

Estimate

Difference

Quick Links

M RNINGSTAR

Zacks Research is Reported On:

Surprise

Zacks Consensus Estimate

BBB Rating: A+ **ACCREDITED** as of 7/31/2017 BUSINESS Click for Profile Copyright 2017 Zacks Investment Research At the center of everything we do is a strong commitment to independent research and sharing trading advantage led to the creation of our proven Zacks Rank stock-rating system. Since 198 year. These returns cover a period from 1988-2016. Zacks Rank stock-rating system returns at month Zacks Rank stock prices plus any dividends received during that particular month. A sin determine the monthly return. The monthly returns are then compounded to arrive at the annual the beginning of each month are included in the return calculations. Zack Ranks stocks can, a

View All Zacks #1 Ranked Stocks 🚖 Trades from 🚺 NiSource, Inc (NI) Quote Overview » Estimates » NiSource, Inc (NI) Detailed Estimates

NI 20.00 NA

\*BMO = Before Market Open \*AMC = After Market Close 9.30 5.80 -3.90

8.10 1.60 6.50 6.20 22.09 17.90 3.39 2.89

IND

NA

NA

5.00

Top 44% (7 out of 16) Analyst | Snapshot Analyst Snapshot

Interactive Chart | Fundamental Charts

Current Qtr

(6/2017)

934.95M

958.60M

911.30M

897.60M

4.16%

Current Qtr

(6/2017)

0.10

0.11

0.11

0.09

0.08

20.00%

Current Qtr

(6/2017)

0

0

0

0

0

Current Qtr

(6/2017)

0.10

0.10

0.09

0.10

0.11

Current Qtr

(6/2017)

0.11

0.10

Quarter Ending

(9/2016)

0.06

0.08

-0.02

-25.00%

10.00%

5

Next Qtr

(9/2017)

929.60M

929.60M

929.60M

861.30M

7.93%

Next Qtr

(9/2017)

NA.

0

NA

NA.

NA.

0.06

NA.

**Next Qtr** 

(9/2017)

0

0

0

0

0

**Next Qtr** 

(9/2017)

NA

NA

0.10

0.10

0.10

Next Qtr

(9/2017)

NA.

NA

Quarter Ending

(6/2016)

0.08

0.07

0.01

14.29%

0.00%

Jul

Sales Estimates Zacks Consensus Estimate # of Estimates High Estimate Low Estimate Year ago Sales Year over Year Growth Est.

Predict to see real-time community sentiment

In a Week

In a Month

Tuesday

Jun

In 3 Months

Most Recent Consensus High Estimate Low Estimate Year ago EPS Year over Year Growth Est. Agreement - Estimate Revisions 0

Up Last 7 Days Up Last 30 Days Up Last 60 Days

Surprise - Reported Earnings History ®

Annual Estimates By Analyst

Zacks Premium Subscription Required Learn more

Quarter Ending

(3/2017)

0.65

0.65

0.00

0.00%

YAHOO! msn Market Watch NASDAD Forbes

Quarter Ending

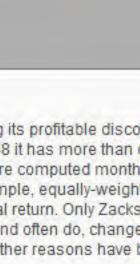
(12/2016)

0.33

0.34

-0.01

-2.94%



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At the center of everything we do is a strong commitment to independent research and sharing its profitable discontrading advantage led to the creation of our proven Zacks Rank stock-rating system. Since 1988 it has more than every these returns cover a period from 1988-2016. Zacks Rank stock-rating system returns are computed month month Zacks Rank stock prices plus any dividends received during that particular month. A simple, equally-weigh determine the monthly return. The monthly returns are then compounded to arrive at the annual return. Only Zacks the beginning of each month are included in the return calculations. Zack Ranks stocks can, and often do, change which no month-end price was available, pricing information was not collected, or for certain other reasons have to
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Visit www.zacksdata.com to get our data and content for your mobile app or website.

coveries with investors. This dedication to giving investors a doubled the S&P 500 with an average gain of +25% per thly based on the beginning of the month and end of the hted average return of all Zacks Rank stocks is calculated to s Rank stocks included in Zacks hypothetical portfolios at

ge throughout the month. Certain Zacks Rank stocks for been excluded from these return calculations.

Visit www.zacksdata.com to get our data and content for your mobile app or website. Real time prices by BATS. Delayed quotes by Sungard. NYSE and AMEX data is at least 20 minutes delayed. NASDAQ data is at least 15 minutes delayed. Northwest Natural Gas Company (NWN)

Quote or Search

Zacks Research

**Detailed Estimates** 

(Real Time Quote from BATS)

Updated Jul 31, 2017 03:58 PM ET

After-Market. \$63.10 0.00 (0.00%) 7:00 PM ET

3-Hold

C Value | B Growth | C Momentum | B VGM

\$63.10 USD

Zacks Rank: 0

Style Scores: 0

Industry Rank: 0

Top 36%(96 out of 265)

Industry: Utility - Gas Distribution

**Detailed Estimates** 

Enter Symbol

Next Report Date

Current Quarter

Past 5 Years

Next 5 Years

Estimates

+0.18 (0.28%)

Next Otr

Jul

Interactive Chart | Fundamental Charts

Current Qtr

M

NA

NA

NA

NA

99.18M

Current Qtr

(6/2017)

0.06

0.06

0.08

0.05

0.07

-9.52%

Current Qtr

(6/2017)

0

0

0

0

0

0

Current Qtr

(6/2017)

0.06

0.06

0.06

0.06

0.08

Current Qtr

(6/2017)

0.06

0.06

Quarter Ending

(9/2016)

-0.29

-0.29

0.00

0.00%

0.00%

3

Next Qtr (9/2017) 0 0

0

0

0

0

(9/2017)

-0.30

-0.30

-0.30

-0.30

-0.31

Next Qtr

(9/2017)

-0.30

-0.30

0.00%

Quarter Ending

(6/2016)

0.07

0.08

-0.01

-12.50%

Next Qtr

NA

NA.

NA

NA

NA.

87.73M

**Next Qtr** 

(9/2017)

-0.30

-0.30

-0.30

-0.30

-0.29

-3.45%

1

0 0 **Current Year Next Year** (12/2017)(12/2018)2.17

Quarter Ending Quarter Ending (3/2017)(12/2016) Reported 1.40 1.00 1.04 Estimate 1.41 -0.04Difference -0.01

Zacks Research is Reported On:

Quick Links

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Zacks Premium Subscription Required Learn more

Annual Estimates By Analyst

M RNINGSTAR BBB Rating: A+ **ACCREDITED** as of 7/31/2017 **BUSINESS** Click for Profile

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NYSE and AMEX data is at least 20 minutes delayed. NASDAQ data is at least 15 minutes delayed.

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Northwest Natural Gas Company (NWN) Quote Overview » Estimates » Northwest Natural Gas Company (NWN) Detailed Estimates Q

IND

NA

NA

6.50

9.00

-1.00

7.50

20.40

2.72

-1.10

5.40

-2.90

4.30

29.03

6.70

\*BMO8/2/17

0.06

0.06

3.88

0.00%

2.17

2.28

2.18

29.03

S&P

NA

NA

22.70

7.40

2.80

NA

NA

19.00

▼ Hold 3

Snapshot

Top 36%(96 out of 265)

Top 44% (7 out of 16)

Snapshot

66,00

64,00

62.00

60.00

58.00

56,00

**Next Year** 

(12/2018)

713.00M

713.00M

713.00M

690.00M

3.33%

**Next Year** 

(12/2018)

2.28

2.23

2.30

2.23

2.17

5.38%

**Next Year** (12/2018)

0

0

0

0

0

0

2.28

2.28

2.29

2.29

2.30

Next Year

(12/2018)

2.23

2.28

-2.19%

Average Surprise

NA

NA

-0.02

-4.27%

6

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**Current Year** 

(12/2017)

690.00M

690.00M

690.00M

675.97M

2.08%

**Current Year** 

(12/2017)

2.17

6

NA

2.20

2.15

2.19

-1.07%

**Current Year** 

(12/2017)

0

0

0

0

2.17

2.17

2.17

2.16

**Current Year** 

(12/2017)

2.17

2.17

0.00%

-0.71%

Docket No. G011/GR-17-563 Bulkley Work Papers

Menu

**EPS Last Quarter** 

Last EPS Surprise ABR

Earnings ESP 0

Current Year

Next Year EPS (TTM) P/E (F1) \*BMO = Before Market Open \*AMC = After Market Close

**Growth Estimates** NWN -9.52 Current Qtr (06/2017) -3.45

Next Qtr (09/2017) Current Year (12/2017) Next Year (12/2018)

PE PEG Ratio Learn More About Estimate Research See Brokerage Recommendations See Earnings Report Transcript

Zacks Rank ① Zacks Industry Rank 0 Zacks Sector Rank Style Scores 0

Research Report for NWN 0

( = Change in last 30 days)

**Premium Research for NWN** 

Value: C | Growth: B | Momentum: C | VGM: B

Niew All Zacks Rank #1 Strong Buys Learn to Profit from the Zacks Rank More Premium Research »

Research for NWN 0

**Chart for NWN** 

May

Charts for NWN

July 31, 2017 Predict to see real-time community sentiment Tuesday In a Week In a Month In 3 Months NWN Northwest Natur...

Predicting consolutes acceptance of PredictWalStreet's terms of use.

Jun

Zacks Consensus Estimate # of Estimates Most Recent Consensus

Sales Estimates

Zacks Consensus Estimate

Year over Year Growth Est.

**Earnings Estimates** 

# of Estimates

High Estimate

Low Estimate

Year ago Sales

Up Last 7 Days

Up Last 30 Days

Up Last 60 Days

Down Last 7 Days

Down Last 30 Days

Down Last 60 Days

7 Days Ago

30 Days Ago

60 Days Ago

90 Days Ago

Earnings ESP 1

**High Estimate** Low Estimate Year ago EPS Year over Year Growth Est. Agreement - Estimate Revisions 0

Magnitude - Consensus Estimate Trend Current

Upside - Most Accurate Estimate Versus Zacks Consensus 0 Most Accurate Estimate Zacks Consensus Estimate

Surprise - Reported Earnings History 0

-0.71% -3.85% Surprise Quarterly Estimates By Analyst

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which no month-end price was available, pricing information was not collected, or for certain other reasons have been excluded from these return calculations. Visit performance for information about the performance numbers displayed above. Visit www.zacksdata.com to get our data and content for your mobile app or website. Real time prices by BATS. Delayed quotes by Sungard.

trading advantage led to the creation of our proven Zacks Rank stock-rating system. Since 1988 it has more than doubled the S&P 500 with an average gain of +25% per year. These returns cover a period from 1988-2016. Zacks Rank stock-rating system returns are computed monthly based on the beginning of the month and end of the month Zacks Rank stock prices plus any dividends received during that particular month. A simple, equally-weighted average return of all Zacks Rank stocks is calculated to determine the monthly return. The monthly returns are then compounded to arrive at the annual return. Only Zacks Rank stocks included in Zacks hypothetical portfolios at the beginning of each month are included in the return calculations. Zack Ranks stocks can, and often do, change throughout the month. Certain Zacks Rank stocks for

Quote or Search

Zacks Research

Detailed Estimates

(Delayed Data from NYSE)

\$73.95 USD

Zacks Rank: 0

Style Scores: 0

Industry Rank: 0

Top 35%(93 out of 265)

Industry: Utility - Gas Distribution

**Detailed Estimates** 

Enter Symbol

Next Report Date

**Current Quarter** 

**EPS Last Quarter** 

Last EPS Surprise

Earnings ESP (1)

Current Year

Next Year

EPS (TTM)

**Growth Estimates** 

Next Qtr (12/2017)

Current Qtr (09/2017)

Current Year (12/2017)

Learn More About Estimate Research

Premium Research for OGS

Value: C | Growth: C | Momentum: F | VGM: D

See Brokerage Recommendations

See Earnings Report Transcript

Next Year (12/2018)

Past 5 Years

Next 5 Years

PEG Ratio

Zacks Rank

Style Scores

Zacks Industry Rank

Zacks Sector Rank

Research Report for OGS 0

( = Change in last 30 days)

More Premium Research »

Research for OGS 0

Chart for OGS

May

OGS

Sales Estimates

Zacks Consensus Estimate

Year over Year Growth Est.

Zacks Consensus Estimate

Most Recent Consensus

Year over Year Growth Est.

Agreement - Estimate Revisions ()

Magnitude - Consensus Estimate Trend 0

Surprise - Reported Earnings History

Quarterly Estimates By Analyst

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Zacks Premium Subscription Required Learn more

Annual Estimates By Analyst

Quarter Ending

(6/2017)

0.39

0.42

-0.03

-7.14%

Market Vatch

Visit performance for information about the performance numbers displayed above.

BBB Rating: A+

as of 8/1/2017

Click for Profile

MASUAG

At the center of everything we do is a strong commitment to independent research and sharing its profitable discoveries with investors. This dedication to giving investors a trading advantage led to the creation of our proven Zacks Rank stock-rating system. Since 1988 it has more than doubled the S&P 500 with an average gain of +25% per year. These returns cover a period from 1988-2016. Zacks Rank stock-rating system returns are computed monthly based on the beginning of the month and end of the month Zacks Rank stock prices plus any dividends received during that particular month. A simple, equally-weighted average return of all Zacks Rank stocks is calculated to determine the monthly return. The monthly returns are then compounded to arrive at the annual return. Only Zacks Rank stocks

included in Zacks hypothetical portfolios at the beginning of each month are included in the return calculations. Zack Ranks stocks can, and often do, change throughout the month. Certain Zacks Rank stocks for which no month-end price was available, pricing information was not collected, or for certain other reasons

Upside - Most Accurate Estimate Versus Zacks Consensus 0

# of Estimates

**High Estimate** 

Low Estimate

Year ago EPS

Up Last 7 Days

Up Last 30 Days

Up Last 60 Days

Down Last 7 Days

Down Last 30 Days

Down Last 60 Days

Current

7 Days Ago

30 Days Ago

60 Days Ago

90 Days Ago

Most Accurate Estimate

Earnings ESP ()

Reported

Estimate

Difference

Surprise

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Zacks Research is Reported On:

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BUSINESS

Zacks Consensus Estimate

**Earnings Estimates** 

# of Estimates

High Estimate

Low Estimate

Year ago Sales

Inc.

Niew All Zacks Rank #1 Strong Buys

Learn to Profit from the Zacks Rank

Charts for OGS

August 1, 2017

Predict to see real-time community sentiment

Predicting conditiules acceptance of FredictVAdStreet's terms of use

Wednesday In a Week

Jun

In 3 Months

In a Month

PE

P/E (F1)

ABR

Estimates

+1.17 (1.61%)

ONE Gas, Inc. (OGS)

Updated Aug 1, 2017 04:02 PM ET

2-Buy

C Value | C Growth | F Momentum | D VGM

(

ONE Gas, Inc. (OGS) Quote Overview » Estimates » ONE Gas, Inc. (OGS) Detailed Estimates

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Trades from

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Docket No. G011/GR-17-563 Bulkley Work Papers

Q

10/30/17

0.26

0.42

3.21

7.69%

2.99

3.11

2.87

24.37

S&P

NA

NA

22.70

7.40

2.80

NA

NA

18.90

A Buy 2

Snapshot

Top 35%(93 out of 265)

Top 31% (5 out of 16)

Snapshot

76.00

74.00

72,00

70.00

68,00

66,00

**Next Year** 

(12/2018)

1.55B

1.60B

1.50B

1.51B

2.55%

**Next Year** 

(12/2018)

3.11

10

3.10

3.20

3.05

2.99

4.25%

**Next Year** 

(12/2018)

0

2

2

0

0

**Next Year** 

(12/2018)

3.11

3.11

3.10

3.10

3.10

**Next Year** 

(12/2018)

3.11

3.11

0.00%

Average Surprise

NA

NA

0.03

6.91%

5

Aug

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**Current Year** 

(12/2017)

1.51B

1.59B

1.47B

1.43B

6.07%

**Current Year** 

(12/2017)

2.99

10

3.06

3.06

2.90

2.65

12.68%

**Current Year** 

(12/2017)

0

1

1

0

0

0

**Current Year** 

(12/2017)

2.99

2.99

2.98

2.98

2.97

**Current Year** 

(12/2017)

3.06

2.99

2.34%

Quarter Ending

(9/2016)

0.24

0.19

0.05

26.32%

5

-7.14%

Menu

OGS

6.94

10.83

12.70

4.30

NA

5.50

24.37

4.41

Jul

**Next Qtr** 

(12/2017)

447.80M

452.60M

443.00M

440.75M

1.60%

**Next Qtr** 

(12/2017)

0.89

0.25

0.92

0.84

0.80

10.83%

**Next Qtr** 

(12/2017)

0

0

0

0

1

1

**Next Qtr** 

(12/2017)

0.89

0.89

0.89

0.89

0.89

Next Qtr

(12/2017)

0.84

0.89

-5.62%

3

2

Interactive Chart | Fundamental Charts

Current Qtr

(9/2017)

241.85M

248.30M

235.40M

232.19M

Current Qtr

(9/2017)

0.26

0.40

0.28

0.24

0.24

6.94%

Current Qtr

(9/2017)

0

0

0

0

1

1

Current Qtr

(9/2017)

0.26

0.26

0.27

0.27

0.27

Current Qtr

(9/2017)

0.28

0.26

7.69%

Quarter Ending

(12/2016)

0.80

0.78

0.02

INVESTORS.com

2.56%

Quarter Ending

(3/2017)

1.44

1.36

0.08

5.88%

3

4.16%

2

IND

NA

NA

6.50

9.00

-1.00

7.50

20.10

2.68

Visit www.zacksdata.com to get our data and content for your mobile app or website. Real time prices by BATS. Delayed quotes by Sungard. NYSE and AMEX data is at least 20 minutes delayed. NASDAQ data is at least 15 minutes delayed.

have been excluded from these return calculations.

Docket No. G011/GR-17-563 Bulkley Work Papers Menu

Q

8/3/17

0.04

0.04

2.57

-11.11%

50.00%

1.20

1.47

1.31

28.23

S&P

NA

NA

22.70

7.40

2.80

NA

NA

19.00

▲ Hold 3

Snapshot

Top 36%(96 out of 265)

Top 44% (7 out of 16)

Snapshot 😸

38.00

37,00

36.00

35.00

34.00

33,00

32.00

**Next Year** 

(12/2018)

1.20B

1.23B

1.15B

1.14B

5.39%

**Next Year** 

(12/2018)

1.47

1.47

1.60

1.33

1.20

22.84%

**Next Year** (12/2018)

0

1

1

0

1

1

**Next Year** (12/2018)

1.47

1.47

1.50

1.50

1.55

Next Year (12/2018)

1.42

1.47

-3.40%

Average Surprise

NA

NA.

0.02

31.33%

6

3

© quotemedia.com

**Current Year** 

(12/2017)

1.14B

1.16B

1.12B

1.04B

10.15%

**Current Year** 

(12/2017)

1.20

1.20

1.25

1.17

1.34

-10.70%

**Current Year** 

(12/2017)

0

0

0

0

0

0

**Current Year** 

(12/2017)

1.20

1.20

1.20

1.20

1.36

**Current Year** 

(12/2017)

1.20

1.20

0.00%

6

3

**Next Qtr** 

(9/2017)

224.00M

224.00M

224.00M

219.08M

2.24%

**Next Qtr** 

(9/2017)

0.03

0.09

0.09

-0.03

0.05

-40.00%

Next Qtr

(9/2017)

0

0

0

0

1

**Next Qtr** 

(9/2017)

0.03

0.03

0.03

0.03

0.06

3

1

Quote or Search

Zacks Research

Detailed Estimates

(Real Time Quote from BATS) \$33.97 USD

South Jersey Industries, Inc. (SJI)

After-Market: \$33.97 0.00 (0.00%) 7:00 PM ET

+0.19 (0.56%)

Updated Jul 31, 2017 03:58 PM ET

Zacks Rank: 0

3-Hold

Style Scores: 0

C Value | B Growth | C Momentum | B VGM

Industry Rank: 0 Top 36%(96 out of 265)

Industry: Utility - Gas Distribution

South Jersey Industries, Inc. (SJI) Quote Overview » Estimates » South Jersey Industries, Inc. (SJI) Detailed Estimates

**Detailed Estimates** 

Enter Symbol

Next Report Date

Current Quarter

Estimates

(

View All Zacks #1 Ranked Stocks

🚖 Trades from 🛐

**EPS Last Quarter** 

Last EPS Surprise ABR

Earnings ESP 0

Current Year Next Year EPS (TTM)

P/E (F1)

**Growth Estimates** 

Current Qtr (06/2017) Next Qtr (09/2017) Current Year (12/2017) Next Year (12/2018)

Past 5 Years Next 5 Years PE PEG Ratio Learn More About Estimate Research

See Brokerage Recommendations See Earnings Report Transcript

Premium Research for SJI Zacks Rank Zacks Industry Rank Zacks Sector Rank Style Scores 0

Value: C | Growth: B | Momentum: C | VGM: B

Research Report for SJI ( = Change in last 30 days) Niew All Zacks Rank #1 Strong Buys Learn to Profit from the Zacks Rank More Premium Research »

Research for SJI Chart for SJI Charts for SJI

May

SJI South

Jersey In...

**Sales Estimates** 

Zacks Consensus Estimate

Year over Year Growth Est.

**Earnings Estimates** 

# of Estimates

High Estimate

Low Estimate

Year ago Sales

July 31, 2017

Tuesday

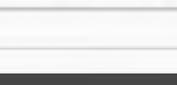
Predict to see real-time community sentiment

In a Week

Predicting contributes acceptance of PredictWatErrears terms of use

In a Month

Zacks Consensus Estimate



Add To Portfolio

Sign In

SJI

-63.33

-40.00

-10.70

22.80

-1.40

10.00

28.23

2.82

IND

NA

NA

6.50

9.00

-1.00

7.50

20.40

2.72

Current Qtr

(6/2017)

179.63M

184.26M

175,00M

154.40M

16.34%

Current Qtr

(6/2017)

0.04

0.06

0.08

-0.03

0.12

-63.33%

Current Qtr

(6/2017)

0

2

2

0

0

0

Current Qtr

(6/2017)

0.04

0.04

0.01

0.01

0.02

Current Qtr

(6/2017)

0.06

0.04

Quarter Ending

(9/2016)

0.05

-0.12

0.17

141.67%

50.00%

Quarter Ending

(12/2016)

0.42

0.41

0.01

2.44%

5

2

Interactive Chart | Fundamental Charts

Jun

In 3 Months

Jul

# of Estimates Most Recent Consensus High Estimate Low Estimate Year ago EPS Year over Year Growth Est.

Agreement - Estimate Revisions 0 Up Last 7 Days Up Last 30 Days Up Last 60 Days Down Last 7 Days Down Last 30 Days Down Last 60 Days

Magnitude - Consensus Estimate Trend @

Surprise - Reported Earnings History 0

Upside - Most Accurate Estimate Versus Zacks Consensus 0

Quarter Ending

(3/2017)

0.72

0.81

-0.09

-11.11%

Current 7 Days Ago 30 Days Ago 60 Days Ago 90 Days Ago

Most Accurate Estimate

Earnings ESP 1

Reported

Estimate

Difference

Surprise

Zacks Consensus Estimate

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Zacks Research is Reported On:

Quarterly Estimates By Analyst

Market Watch Residence Fordes YAHOO! msn M RNINGSTAR **BBB Rating: A+ ACCREDITED** as of 7/31/2017 BUSINESS Click for Profile

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NYSE and AMEX data is at least 20 minutes delayed. NASDAQ data is at least 15 minutes delayed.

determine the monthly return. The monthly returns are then compounded to arrive at the annual return. Only Zacks Rank stocks included in Zacks hypothetical portfolios at the beginning of each month are included in the return calculations. Zack Ranks stocks can, and often do, change throughout the month. Certain Zacks Rank stocks for which no month-end price was available, pricing information was not collected, or for certain other reasons have been excluded from these return calculations. Visit performance for information about the performance numbers displayed above. Visit www.zacksdata.com to get our data and content for your mobile app or website. Real time prices by BATS. Delayed quotes by Sungard.

At the center of everything we do is a strong commitment to independent research and sharing its profitable discoveries with investors. This dedication to giving investors a trading advantage led to the creation of our proven Zacks Rank stock-rating system. Since 1988 it has more than doubled the S&P 500 with an average gain of +25% per year. These returns cover a period from 1988-2016. Zacks Rank stock-rating system returns are computed monthly based on the beginning of the month and end of the

month Zacks Rank stock prices plus any dividends received during that particular month. A simple, equally-weighted average return of all Zacks Rank stocks is calculated to

**Next Qtr** (9/2017)0.03 0.03 0.00% Quarter Ending (6/2016)

0.12

0.13

-0.01

-7.69%

Docket No. G011/GR-17-563 Bulkley Work Papers Menu

Q

8/14/17

0.28

0.28

2.67

-3.57%

3.38

3.61

3.01

23.76

S&P

NA

NA

22.70

7.40

2.80

NA

NA

19.00

▲ Sell 4

Snapshot

Top 36%(96 out of 265)

Top 44% (7 out of 16)

Snapshot 😹

85.00

82,50

80.00

77,50

75.00

72,50

70.00

**Next Year** 

(12/2018)

2.68B

2.73B

2.62B

2.58B

3.92%

**Next Year** 

(12/2018)

3.61

3.61

3.66

3.55

3.38

6.92%

**Next Year** (12/2018)

0

0

0

0

1

2

**Next Year** (12/2018)

3.61

3.61

3.62

3.64

3.66

Next Year

(12/2018)

3.61

3.61

0.00%

Average Surprise

NA

NA.

-0.04

-26.00%

5

2

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**Current Year** 

(12/2017)

2.58B

2.64B

2.52B

2.46B

4.72%

**Current Year** 

(12/2017)

3.38

3.34

3.45

3.34

3.18

6.29%

**Current Year** 

(12/2017)

0

0

0

0

1

2

**Current Year** 

(12/2017)

3.38

3.38

3.40

3.40

3.41

**Current Year** 

(12/2017)

3.34

3.38

-1.18%

5

2

-11.04%

Quote or Search

Zacks Research

**Detailed Estimates** 

(Real Time Quote from BATS)

\$80.10 USD -0.22 (-0.27%)

Southwest Gas Corporation (SWX)

Updated Jul 31, 2017 03:58 PM ET After-Market: \$80.10 0.00 (0.00%) 7:00 PM ET

Zacks Rank: 0

4-Sell

Add To Portfolio

Style Scores: 0 B Value | B Growth | A Momentum | A VGM

Industry: Utility - Gas Distribution

Industry Rank: 0 Top 36%(96 out of 265)

Southwest Gas Corporation (SWX) Quote Overview » Estimates » Southwest Gas Corporation (SWX) Detailed Estimates **Detailed Estimates** 

Enter Symbol

Next Report Date

Estimates

SWX

46.05

NA

6.30

6.90

5.30

5.00

23.76

4.80

Jul

Interactive Chart | Fundamental Charts

Current Qtr

(6/2017)

588.70M

588.70M

588.70M

547.75M

7.48%

Current Qtr

(6/2017)

0.28

0.26

0.31

0.26

0.19

46.05%

Current Qtr

(6/2017)

0

1

1

0

0

0

Current Qtr

(6/2017)

0.28

0.28

0.25

0.25

0.19

Current Qtr

(6/2017)

0.27

0.28

Quarter Ending

(9/2016)

0.00

0.01

-0.01

-100.00%

-3.57%

Quarter Ending

(12/2016)

1.37

1.35

0.02

1.48%

**Next Qtr** 

(9/2017)

573.80M

573.80M

573,80M

539.97M

6.27%

**Next Qtr** 

(9/2017)

0.14

0.14

0.14

0.14

0.00

NA

Next Qtr

(9/2017)

0

1

1

0

0

0

**Next Qtr** 

(9/2017)

0.14

0.14

0.13

0.13

0.13

**Next Qtr** 

(9/2017)

0.14

0.14

0.00%

Quarter Ending

(6/2016)

0.19

0.18

0.01

5.56%

1

Jun

In 3 Months

Predict to see real-time community sentiment

In a Week

In a Month

Tuesday

IND

NA

NA

6.50

9.00

-1.00

7.50

20.40

2.72

View All Zacks #1 Ranked Stocks

🚖 Trades from 🚺

Current Quarter **EPS Last Quarter** 

Last EPS Surprise

ABR

Earnings ESP 1

Current Year

Next Year EPS (TTM) P/E (F1)

**Growth Estimates** Current Qtr (06/2017) Next Qtr (09/2017)

Current Year (12/2017)

Next Year (12/2018) Past 5 Years Next 5 Years PE

PEG Ratio Learn More About Estimate Research See Brokerage Recommendations See Earnings Report Transcript

Premium Research for SWX Zacks Rank

Zacks Industry Rank Zacks Sector Rank 0 Style Scores

Value: B | Growth: B | Momentum: A | VGM: A Research Report for SWX 0 ( = Change in last 30 days) Niew All Zacks Rank #1 Strong Buys

Learn to Profit from the Zacks Rank More Premium Research » Research for SWX

Chart for SWX Charts for SWX

May July 31, 2017

Predicting contributes acceptance of PredictWatErree's temps of use **Sales Estimates** Zacks Consensus Estimate # of Estimates High Estimate

SWX Southwest Gas H ....

Year over Year Growth Est. **Earnings Estimates** Zacks Consensus Estimate # of Estimates Most Recent Consensus

High Estimate

Low Estimate

Up Last 30 Days

Low Estimate

Year ago Sales

Year ago EPS Year over Year Growth Est. Agreement - Estimate Revisions 0 Up Last 7 Days

Up Last 60 Days Down Last 7 Days Down Last 30 Days Down Last 60 Days Magnitude - Consensus Estimate Trend @

Current

7 Days Ago

30 Days Ago

Earnings ESP 1

Reported

Estimate

Difference

Surprise

60 Days Ago 90 Days Ago Upside - Most Accurate Estimate Versus Zacks Consensus 0 Most Accurate Estimate Zacks Consensus Estimate

Zacks Premium Subscription Required Learn more Annual Estimates By Analyst Zacks Premium Subscription Required Learn more

Quick Links

Zacks Research is Reported On:

Quarterly Estimates By Analyst

Surprise - Reported Earnings History 0

Quarter Ending

(3/2017)

1.45

1.63

-0.18

-11.04%

Market Watch RASEAS FOTDES YAHOO! msn M RNINGSTAR **BBB Rating: A+** ACCREDITED as of 7/31/2017 BUSINESS Click for Profile

Real time prices by BATS. Delayed quotes by Sungard.

Copyright 2017 Zacks Investment Research At the center of everything we do is a strong commitment to independent research and sharing its profitable discoveries with investors. This dedication to giving investors a trading advantage led to the creation of our proven Zacks Rank stock-rating system. Since 1988 it has more than doubled the S&P 500 with an average gain of +25% per year. These returns cover a period from 1988-2016. Zacks Rank stock-rating system returns are computed monthly based on the beginning of the month and end of the month Zacks Rank stock prices plus any dividends received during that particular month. A simple, equally-weighted average return of all Zacks Rank stocks is calculated to determine the monthly return. The monthly returns are then compounded to arrive at the annual return. Only Zacks Rank stocks included in Zacks hypothetical portfolios at the beginning of each month are included in the return calculations. Zack Ranks stocks can, and often do, change throughout the month. Certain Zacks Rank stocks for which no month-end price was available, pricing information was not collected, or for certain other reasons have been excluded from these return calculations.

Visit performance for information about the performance numbers displayed above.

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Docket No. G011/GR-17-563 Bulkley Work Papers

Menu

Q

\*BMO8/2/17

0.39

0.39

0.42%

2.48

2.56%

3.53

3.66

3.43

20.56

S&P

NA

NA

22.70

7.40

2.80

NA

NA

19.00

▼ Hold 3

Snapshot

Top 36%(96 out of 265)

Top 44% (7 out of 16)

Snapshot

74.00

72.00

70.00

68.00

66.00

**Next Year** 

(9/2018)

1.74B

1.83B

1.66B

1.70B

2.34%

Next Year

(9/2018)

3.66

10

3.75

3.75

3.49

3.53

3.66%

**Next Year** (9/2018)

0

0

0

0

1

**Next Year** (9/2018)

3.66

3.66

3.65

3.65

3.65

**Next Year** 

(9/2018)

3.62

3.66

-1.09%

Average Surprise

NA

NA

0.01

4.15%

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**Current Year** 

(9/2017)

1.70B

1.72B

1.65B

1.54B

10.52%

Current Year

(9/2017)

3.53

10

3.52

3.55

3.50

3.42

3.10%

**Current Year** 

(9/2017)

0

1

1

0

0

0

**Current Year** 

(9/2017)

3.53

3.53

3.53

3.52

3.52

Current Year

(9/2017)

3.53

3.53

0.00%

\*BMO = Before Market Open \*AMC = After Market Close

IND

NA

NA

6.50

9.00

-1.00

7.50

20.40

2.72

SR

19.19

10.94

3.10

3.70

4.80

4.40

20.56

4.68

Jul

Interactive Chart | Fundamental Charts

**Current Qtr** 

(6/2017)

300.96M

315.30M

286.61M

249.30M

20.72%

Current Qtr

(6/2017)

0.39

0.36

0.43

0.33

0.33

19.19%

Current Qtr

(6/2017)

0

1

1

0

0

0

Current Qtr

(6/2017)

0.39

0.39

0.39

0.39

0.41

Current Qtr

(6/2017)

0.40

0.39

2.56%

Quarter Ending

(9/2016)

-0.32

-0.31

-0.01

-3.23%

Quarter Ending

(12/2016)

1.04

1.07

-0.03

-2.80%

6

Next Qtr

(9/2017)

237.29M

237.29M

237.29M

279.30M

-15.04%

**Next Qtr** 

(9/2017)

-0.29

-0.28

-0.23

-0.33

-0.32

10.94%

Next Qtr

(9/2017)

0

0

0

0

1

1

Next Qtr

(9/2017)

-0.29

-0.29

-0.27

-0.27

-0.30

Next Qtr

(9/2017)

-0.31

-0.29

-6.90%

Quarter Ending

(6/2016)

0.33

0.27

0.06

22.22%

Quote or Search

Detailed Estimates Spire Inc. (SR)

(Real Time Quote from BATS) \$72.58 USD +0.10 (0.14%)

Zacks Research

Updated Jul 31, 2017 03:58 PM ET

After-Market. \$72.58 0.00 (0.00%) 7:00 PM ET

Zacks Rank: 0

3-Hold

Style Scores: 0

C Value | C Growth | B Momentum | B VGM Industry Rank: 0

Industry: Utility - Gas Distribution

Top 36%(96 out of 265)

**Detailed Estimates** 

Enter Symbol Estimates

(

Next Report Date Current Quarter

**EPS Last Quarter** Last EPS Surprise

ABR

Earnings ESP 0

Current Year Next Year EPS (TTM)

Current Year (09/2017)

Next Year (09/2018)

PE

Zacks Industry Rank 0 Zacks Sector Rank

More Premium Research »

May July 31, 2017 Predict to see real-time community sentiment

# of Estimates Most Recent Consensus **High Estimate** Low Estimate Year ago EPS Year over Year Growth Est.

Up Last 30 Days Up Last 60 Days Down Last 7 Days Down Last 30 Days Down Last 60 Days

Current 7 Days Ago 30 Days Ago 60 Days Ago 90 Days Ago

Surprise - Reported Earnings History 0 Reported Estimate Difference

Surprise

**ACCREDITED** as of 7/31/2017 **BUSINESS** Click for Profile trading advantage led to the creation of our proven Zacks Rank stock-rating system. Since 1988 it has more than doubled the S&P 500 with an average gain of +25% per year. These returns month Zacks Rank determine the mont the beginning of each which no month-end Visit performance for Visit www.zacksdat

Quick Links

Zacks Research is Reported On:

🝂 Trades from 🚺 Spire Inc. (SR) Quote Overview » Estimates » Spire Inc. (SR) Detailed Estimates

View All Zacks #1 Ranked Stocks

Past 5 Years Next 5 Years Learn More About Estimate Research See Brokerage Recommendations See Earnings Report Transcript Premium Research for SR

Value: C | Growth: C | Momentum: B | VGM: B Research Report for SR 0 ( = Change in last 30 days) Niew All Zacks Rank #1 Strong Buys Learn to Profit from the Zacks Rank

Research for SR 0 Chart for SR Charts for SR

Tuesday In a Week SR Spire Inc. Predicting consolutes acceptance of PredictWallStreet's terms of use. Sales Estimates

Year over Year Growth Est. **Earnings Estimates** Zacks Consensus Estimate

Agreement - Estimate Revisions 0 Up Last 7 Days

Magnitude - Consensus Estimate Trend

Zacks Consensus Estimate

Earnings ESP 1

Upside - Most Accurate Estimate Versus Zacks Consensus 0 Most Accurate Estimate

Quarterly Estimates By Analyst Zacks Premium Subscription Required Learn more Annual Estimates By Analyst

Zacks Premium Subscription Required Learn more

Quarter Ending

(3/2017)

2.38

2.37

0.01

0.42%

YAHOO! msn Market Watch MASUA Forbes

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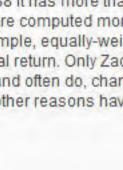
stock prices plus any dividends receive thly return. The monthly returns are ther ch month are included in the return cal d price was available, pricing information
or information about the performance n
ta.com to get our data and content for y
DATO Deleved evetes by Conseed

P/E (F1) **Growth Estimates** Current Qtr (06/2017) Next Qtr (09/2017)

PEG Ratio

Style Scores 0





period from 1988-2016. Zacks Rank stock-rating system returns are computed monthly based on the beginning of the month and end of the ed during that particular month. A simple, equally-weighted average return of all Zacks Rank stocks is calculated to n compounded to arrive at the annual return. Only Zacks Rank stocks included in Zacks hypothetical portfolios at Iculations. Zack Ranks stocks can, and often do, change throughout the month. Certain Zacks Rank stocks for ion was not collected, or for certain other reasons have been excluded from these return calculations.

# of Estimates **High Estimate** Low Estimate Year ago Sales

your mobile app or website.

Zacks Consensus Estimate

In a Month

Jun

In 3 Months

numbers displayed above. NYSE and AMEX data is at least 20 minutes delayed. NASDAQ data is at least 15 minutes delayed.

Real time prices by BATS. Delayed quotes by Sungard.

# **Integrys Holding 424B5 11/20/2003**

**Section 1: 424B5 (424B5)** 

QuickLinks -- Click here to rapidly navigate through this document

Filed Pursuant to Rule 424(b)(5) Registration No. 333-104787

SUBJECT TO COMPLETION—NOVEMBER 13, 2003

PROSPECTUS SUPPLEMENT (To Prospectus Dated September 8, 2003)

# 3,500,000 Shares WPS RESOURCES CORPORATION Common Stock



WPS Resources Corporation is selling 3,500,000 shares of common stock. Our common stock is listed on the New York Stock Exchange under the symbol "WPS." On November 19, 2003, the last sale price of our common stock, as reported in the New York Stock Exchange Composite Transactions, was \$43.92 per share.

See "Risk Factors" beginning on page S-7 for a discussion of certain risk factors that prospective investors should consider before investing in our common stock.

	P	er Share	 Total
Public Offering Price	\$	43.000	\$ 150,500,000
Underwriting Commission	\$	1.505	\$ 5,267,500
Proceeds, before expenses, to WPS Resources	\$	41.495	\$ 145,232,500

The underwriters may also purchase up to an additional 525,000 shares at the public offering price, less the underwriting commission, within 30 days from the date of this prospectus supplement to cover over-allotments.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy of this prospectus supplement or the accompanying prospectus. Any representation to the contrary is a criminal offense.

We expect certificates for the shares of common stock to be ready for delivery on or about November 24, 2003.

A.G. Edwards & Sons, Inc.

Robert W. Baird & Co.

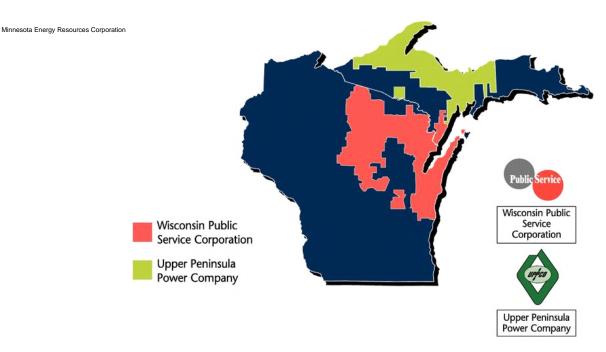
Edward D. Jones & Co., L.P.

The Williams Capital Group, L.P.

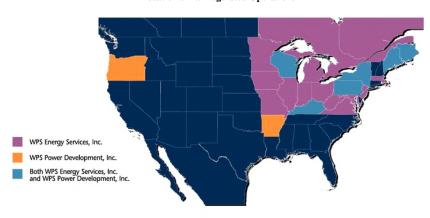
The date of this prospectus supplement is November 19, 2003.

WPS Resources' Subsidiaries

Markets Served by Regulated Utilities



## **Location of Nonregulated Operations**







# IMPORTANT NOTICE ABOUT INFORMATION IN THIS PROSPECTUS SUPPLEMENT AND THE ACCOMPANYING PROSPECTUS

You should rely only on the information contained in this prospectus supplement, the accompanying prospectus and the documents we have incorporated by reference. We have not authorized anyone to provide you with different information. We are not making an offer of the shares of common stock in any state which does not permit their offer or sale. You should not assume that the information provided by this prospectus supplement or the accompanying prospectus, as well as the information we have previously filed with the Securities and Exchange Commission that we incorporate by reference, is accurate as of any date other than the date thereof. If information in this prospectus supplement updates information in the accompanying prospectus, this prospectus supplement will apply and will supersede that information in the prospectus. For purposes of this prospectus supplement and the accompanying prospectus, unless the context otherwise indicates, when we refer to "us," "we," "our," "ours," or the "Company" we are describing WPS Resources Corporation, together with its subsidiaries.

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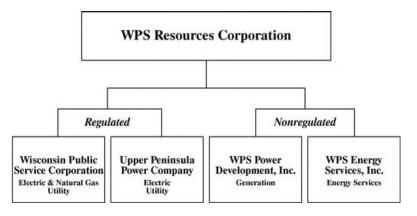
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## SUMMARY

This summary provides an overview of WPS Resources and its subsidiaries and certain key aspects of the offering. This summary is not complete and does not contain all of the information you should consider before purchasing our common stock. Before purchasing our common stock, you should read carefully all of the information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus, including the "Risk Factors" section.

#### The Company

WPS Resources, based in Green Bay, Wisconsin, was incorporated in Wisconsin in 1993 as a holding company for regulated utility and nonregulated business units. Our principal subsidiary is Wisconsin Public Service Corporation, a regulated electric and natural gas utility that generates and distributes energy in northeastern Wisconsin and an adjacent portion of the Upper Peninsula of Michigan. Our other major subsidiaries include Upper Peninsula Power Company, a regulated electric utility operating in the northern half of Michigan's Upper Peninsula, and two nonregulated subsidiaries, WPS Power Development, Inc. and WPS Energy Services, Inc.



Approximate percentages of our consolidated net income for the twelve months ended September 30, 2003 and consolidated assets at September 30, 2003 attributable to WPS Resources, as a holding company, and its principal operating subsidiaries are:

	Twelve Months Ended September 30, 2003	At September 30, 2003
	Percent of Net Income	Percent of Assets*
Wisconsin Public Service Corporation	77%	60%
Upper Peninsula Power Company	7%	4%
WPS Energy Services, Inc.	25%	26%
WPS Power Development, Inc.	4%	10%
WPS Resources Corporation	(13)%	2%

<sup>\*</sup>The percentages above do not total 100% due to the inclusion of intercompany transactions related to purchases and sales of power and natural gas between subsidiaries.

Our principal executive offices are located at 700 North Adams Street, P.O. Box 19001, Green Bay, Wisconsin 54307. Our telephone number is (920) 433-4901.

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# Wisconsin Public Service Corporation

Wisconsin Public Service, which began operations in 1883, is a regulated electric and natural gas utility serving an approximate 11,000 square mile service territory in northeastern Wisconsin and an adjacent portion of the Upper Peninsula of Michigan. At December 31, 2002, Wisconsin Public Service served 407,696 electric retail customers and 295,816 natural gas retail customers. Wholesale electric service is provided to various customers, including municipal utilities, electric cooperatives, energy marketers, other investor-owned utilities, and municipal joint action agencies.

Upper Peninsula Power, established in 1884, is a regulated utility providing electric service to an approximate 4,500 square mile area of Michigan's Upper Peninsula. At December 31, 2002, Upper Peninsula Power provided retail electric service to 50,770 customers and wholesale electric service to 437 customers. Total 2002 revenues consisted of 89% retail sales and 11% wholesale sales

WPS Energy Services, Inc.

WPS Energy Services, established in 1994, is a nonregulated indirect subsidiary of WPS Resources. WPS Energy Services provides energy and related products and services in the nonregulated energy market throughout the Midwest and northeastern United States and in the adjacent provinces of Canada. WPS Energy Services had revenues of \$362.8 million in 2002 and assets of \$877.2 million at December 31, 2002.

WPS Power Development, Inc.

WPS Power Development, established in 1995, is also a nonregulated indirect subsidiary of WPS Resources. WPS Power Development owns and/or operates, through its subsidiaries, electric generation facilities in Wisconsin, Maine, Pennsylvania, New York, and New Brunswick, Canada, a 23.3% interest in a synthetic fuel processing facility located in Kentucky, and steam production facilities located in Arkansas and Oregon. WPS Power Development had revenues of \$145.2 million in 2002 and assets of \$358.1 million at December 31, 2002

# Recent Developments

Sunbury Generation Plant

On October 24, 2003, WPS Power Development announced that it had signed a definitive agreement to sell its Sunbury generation plant (located near the town of Shamokin Dam in Pennsylvania) to Duquesne Power, L.P., a subsidiary of Duquesne Light Holdings. Based on the terms of the asset sales agreement, the sale price is anticipated to be approximately \$120 million for the plant, emission allowances, fuel, and spare parts inventory. WPS Power Development financed Sunbury with equity from WPS Resources and debt financing, including nonrecourse debt and a related interest rate swap, from a group of banks. Upon closing of the sale and settlement of financing arrangements, WPS Power Development anticipates the transaction will reduce after tax income approximately \$4 million at the time of closing. The amount of the loss will be affected by several factors, including: the timing of the sale, interest rates at the time of closing, which will impact the settlement of the interest rate swap, and the cost of a forward supply contract to supply WPS Power Development's current out-take contract with a third party. The out-take contract is related to this plant and expires in December 2004. Subject to approval by the Pennsylvania Public Utility Commission of Duquesne Light Company's Provider of Last Resort plan and other typical regulatory approvals, the transaction is anticipated to close in the summer of 2004. See "Risk Factors" for a discussion of certain risks associated with the operation and sale of the Sunbury generation plant.

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#### Kewaunee Nuclear Power Plant

On November 7, 2003, Wisconsin Public Service and Wisconsin Power and Light Company (a subsidiary of Alliant Energy Corporation) announced that they had signed a definitive agreement to sell the jointly-owned Kewaunee Nuclear Power Plant to a subsidiary of Dominion Resources, Inc. Wisconsin Public Service is a 59% owner of the Kewaunee plant. The sale is subject to approvals from various regulatory agencies including the Public Service Commission of Wisconsin, the Federal Energy Regulatory Commission and the Nuclear Regulatory Commission. Subject to the timing of the receipt of regulatory approvals, the transaction is expected to close in the fall of 2004.

Wisconsin Public Service anticipates that its share of the proceeds from the sale will be approximately \$130 million in cash, based on a November 1, 2004 closing date. The cash proceeds from the sale are expected to slightly exceed the carrying value of the Wisconsin Public Service assets being sold. Wisconsin Public Service will request deferral of most of this gain and related costs from the Public Service Commission of Wisconsin. Dominion will assume the liabilities for decommissioning of the Kewaunee plant in exchange for Wisconsin Public Service's qualified decommissioning trust assets (approximately \$251 million pretax value at November 7, 2003). Wisconsin Public Service's non-qualified decommissioning trust assets (approximately \$108 million pretax value at November 7, 2003) are not included in the sale and will be retained by Wisconsin Public Service pending a regulatory treatment decision from the Public Service Commission of Wisconsin. Wisconsin Public Service expects that most of the gain on the sale of the plant assets and the related non-qualified decommissioning trust assets will be returned to customers under future rate orders. As a result, Wisconsin Public Service does not anticipate any material impact on net income from this transaction.

In conjunction with the sale, Wisconsin Public Service will enter into a power purchase agreement with Dominion to purchase capacity and energy through the original license term of 2013. This agreement will allow Wisconsin Public Service to purchase capacity and energy equivalent to the amount that it would have received from the plant had it maintained its current ownership interest. The power purchase agreement also requires regulatory approval.

IRS Announcements Regarding Section 29 Tax Credits for Synthetic Fuels

Through an affiliate of WPS Power Development, WPS Resources owns a partial interest in a synthetic fuel production facility located in Kentucky and receives tax credits pursuant to Section 29 of the Internal Revenue Code based on sales to unaffiliated third-party purchasers of synthetic fuel produced from coal.

On June 27, 2003, the Internal Revenue Service announced that it had reason to question the scientific validity of certain test procedures and results that have been presented by certain taxpayers to qualify for Section 29 tax credits and also announced that it was reviewing information regarding these test procedures and practices.

On August 1, 2003, the Internal Revenue Service notified WPS Resources that its synthetic fuel affiliate is under review for the 2001 tax period as a result of the June Internal Revenue Service announcement. In addition, the Internal Revenue Service informed WPS Resources that it may reexamine the 2000 tax period depending upon the results of the review of 2001. Previously, the Internal Revenue Service had informed the WPS Resources affiliate that its 1999 and 2000 returns had been examined and accepted as filed. It is not known when the audit will be completed.

On October 29, 2003, the Internal Revenue Service announced that the test procedures and results used by taxpayers are scientifically valid if the procedures are applied in a consistent and unbiased manner. WPS Resources believes that such requirement is met for the facility. The Internal Revenue Service also announced that it plans to issue guidelines regarding future sampling and quality control procedures, testing intervals and record keeping requirements with respect to tests for significant

Nine Months Ended

A Month of the Senate Committee on Governmental Affairs initiated an investigation of the Senate Committee on Governmental Affairs initiated an investigation of "potential abuses of tax credits for producers of synthetic fuel under Section 29." It is not known if and when such investigation will be completed and what impact, if any, such investigation may have on the Internal Revenue Service announcement of the same date.

WPS Resources continues to believe the facility has been operated in compliance with the private letter rulings and Section 29 of the Code. See "Risk Factors" for a discussion of certain risks associated with Section 29 tax credits.

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# Summary Consolidated Financial Information (Amounts in millions, except per share amounts)

The following table sets forth selected financial information for WPS Resources and its subsidiaries on a consolidated basis. You should read the following table in conjunction with the consolidated financial statements and notes included in our Current Report on Form 8-K dated August 1, 2003 (which presents our reclassified financial statements in accordance with requirements of Emerging Issues Task Force Issue No. 02-03) and in our Quarterly Report on Form 10-Q for the quarter ended September 30, 2003, both of which are incorporated by reference into this prospectus supplement and the accompanying prospectus. The data presented for the years ended December 31 is derived from audited financial statements.

		Year	s Ended December	31,			Nine Mon Septem		ed
	2000		2001		2002		2002		2003
							(unau	dited)	
Income Statement Data:									
Operating revenues	\$ 1,174.4	\$	1,431.8		1,547.6	\$	1,108.7	\$	3,277.4
Operating income	\$ 110.2	\$	107.3		151.1	\$	116.7	\$	112.1
Income available for common shareholders	\$ 67.0	\$	77.6		109.4	\$	80.2	\$	69.8
Average number of shares of common stock outstanding	26.5		28.2		31.7		31.7		32.5
Basic earnings per average share of common stock (1)	\$ 2.53	\$	2.75		3.45	\$	2.53	\$	2.15
Diluted earnings per average share of common stock (1)	\$ 2.53	\$	2.74		3.42	\$	2.52	\$	2.14
Dividends per share of common stock	\$ 2.04	\$	2.08 At Decer		2.12	\$	1.585 At Septem	\$ nber 30,	2.16
	-		2001		2002		2002		2003
						-	(unaudi	ited)	
							(	,	
Balance Sheet Data: Total assets		\$	2,870.0	\$	3,207.9	\$	2,894.0	\$	3,779.1
		Þ	1,463.6	Э	1,610.2	Þ	1,585.2	Þ	2,018.4
Property, plant & equipment, net Capitalization:			1,403.0		1,010.2		1,383.2		2,018.4
Long-term capital lease obligation, including current portion			73.0		_		72.4		_
Long-term debt, including current portion			711.4		895.5		707.6		819.6
Company obligated mandatorily redeemable trust preferred securities of subsidiary trust			50.0		50.0		50.0		50.0
Preferred stock of subsidiary with no mandatory redemption			51.1		51.1		51.1		51.1
Common stock equity	,		715.9		782.8		765.5		810.5
Total capitalization	5	\$	1,601.4	\$	1,779.4	\$	1,646.6	\$	1,731.2
					At Septeml	per 30,	2003		
				Actual			Pro Forn	ıa(2)	
Capitalization:			Amount		Percent		Amount	1	Percent
					(unau	dited)			
Long-term debt, including current portion			\$	819.6	479	% \$	819.6		45%
Company obligated mandatorily redeemable trust preferred							_		_
securities of subsidiary trust				50.0	39		0.0		0%
Preferred stock of subsidiary with no mandatory redemption				51.1	39		51.1		3%
Common stock equity				810.5	479	% —	955.7	_	52%
Total capitalization			\$ 1	,731.2	1009	% \$	1,826.4		100%

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<sup>(1)</sup> The basic and diluted earnings per average share of common stock for the nine months ended September 30, 2003 include \$0.10 for the impact of a cumulative effect of changes in accounting principles. On January 1, 2003, WPS Resources adopted Emerging Issues Task Force Issue No. 02-03, "Issues Involved in Accounting for Derivative Contracts Held for Trading Purposes and Contracts Involved in Energy Trading and Risk Management Activities," and Statement of Financial Accounting Standards No. 143, "Accounting for Asset Retirement Obligations." The adoption of these standards resulted in a consolidated positive after-tax cumulative effect of changes in accounting principles of \$3.2 million.

(2) The "Pro Forma" column reflects the estimated net proceeds from the issuance of 3,500,000 shares of common stock offered by this prospectus supplementally work Papers Minnesota Energy Resources Corporation accompanying prospectus, but does not include the net proceeds from the issuance of up to 525,000 shares of common stock issuable upon the exercise of the underwriters' over-allotment option. The "Pro Forma" column also gives effect to the use of a portion of the net proceeds from this offering to retire the company obligated mandatorily redeemable trust preferred securities of subsidiary trust included in the table.

As previously announced, Wisconsin Public Service intends to issue long-term debt of up to \$150 million in the fourth quarter of 2003, of which \$50 million is currently expected to be used to refund existing long-term debt. The size and timing of the debt offering are dependent on business needs and refinancing opportunities.

# The Offering

Issuer	WPS Resources Corporation
Securities Offered	3,500,000 shares of common stock
Number of Shares of Common Stock Outstanding after the Offering (1)	36,187,543
Current Common Stock Dividend Rate	\$0.545 per quarter
Next Dividend Record Date	November 28, 2003
Range of High and Low Sales Prices per Share of Common Stock (January 1, 2003 through	
November 19, 2003)	\$45.31 — \$36.80
New York Stock Exchange Listing Symbol	WPS
Use of Proceeds	To retire up to \$50 million of trust preferred securities, to reduce short-term debt, to fund equity contributions to subsidiary companies and for general corporate purposes

- (1) The number of shares of common stock outstanding after the offering is based on 32,687,543 shares outstanding as of November 19, 2003. The number of shares of common stock offered and to be outstanding after this offering does not include:
  - 525,000 additional shares of common stock that the underwriters have an option to purchase from us within 30 days of the date of this prospectus supplement; and
  - shares issuable upon the exercise of outstanding stock options held by our employees, executive officers and directors.

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#### RISK FACTORS

You should carefully consider the following risk factors, as well as the other information included or incorporated by reference in this prospectus supplement and the accompanying prospectus, before making an investment in our common stock. The following risk factors update and replace in their entirety the risk factors incorporated by reference in the accompanying prospectus. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known or that we currently believe to be immaterial may also adversely affect us.

#### IRS Audit-Synthetic Fuel Production Facility

We have significantly reduced our consolidated federal income tax liability for the past three years through tax credits available to us under Section 29 of the Internal Revenue Code for the production and sale of solid synthetic fuel from coal. We have not fully utilized Section 29 tax credits previously available to us. As a result, in order to maximize the value of our synthetic fuel production facility, we have reduced our interest in the facility from 67% to 23% through sales to third parties. Our ability to fully utilize the Section 29 tax credits that remain available to us in connection with our remaining interest in the facility will depend on whether the amount of our federal income tax liability is sufficient to permit the use of such credits. The Internal Revenue Service strictly enforces compliance with all of the technical requirements of Section 29. Section 29 tax credits are currently scheduled to expire at the end of 2007.

On June 27, 2003, the Internal Revenue Service announced that it had reason to question the scientific validity of certain test procedures and results that have been presented by certain taxpayers to qualify for Section 29 tax credits. The Internal Revenue Service also announced that it was reviewing information regarding these test procedures and practices.

On August 1, 2003, WPS Resources received notice from the Internal Revenue Service that the WPS Resources' affiliate through which it holds an ownership interest in a synthetic fuel facility is under review for the 2001 tax period as a result of the June Internal Revenue Service announcement. The Internal Revenue Service also notified WPS Resources that, depending upon the review of the affiliate's 2001 tax return, the Internal Revenue Service might reexamine the affiliate's 2000 tax return. At this time, WPS Resources' management cannot predict the outcome of the Internal Revenue Service's review, when the review will be completed or the ultimate impact, if any, of the review on WPS Resources.

We have recorded approximately \$78 million of Section 29 tax credits as reductions of income tax expense from the project's inception in June 1998 through September 30, 2003. As a result of alternative minimum tax rules, about \$51 million has been carried forward as a deferred tax asset as of September 30, 2003. Future payments under one of the agreements covering the sale of a portion of our interest in the facility are contingent on the facility's continued production of synthetic fuel. Any disallowance of some or all of those tax credits would materially affect our tax obligations and may also result in a reduction of the level of synthetic fuel production at the facility, thus reducing the likelihood and amount of future payments under that agreement. Future tax legislation and Internal Revenue Service review may also affect the value of the credits and of our share of the facility.

#### Clean Air Act Enforcement Initiative

In November 1999, the United States Environmental Protection Agency (which we refer to as the "EPA") announced the commencement of a Clean Air Act enforcement initiative targeting the utility industry, resulting in the issuance of several notices of violation/findings of violation and the filing of lawsuits against other unaffiliated utilities. In these enforcement proceedings, the EPA claims that the utilities made modifications to the coal-fired boilers and related equipment at the utilities' electric generating stations without first obtaining appropriate permits under the EPA's pre-construction permit

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program and without installing appropriate air pollution control equipment. In addition, the EPA is also claiming, in certain situations, that there were violations of the Clean Air Act's "new source performance standards." In response to this initiative, several utilities have elected to settle with the EPA, while others are in litigation. In general, those utilities that have settled have entered into consent decrees which require the companies to pay fines and penalties, undertake supplemental environmental projects and either upgrade or replace pollution controls at existing generating units or shut down existing units, and replace these units with new electric generating facilities. The fines and penalties (including the capital costs of supplemental environmental projects) associated with these settlements have ranged between \$7 million and \$30 million.

At various times in 2000, 2001 and 2002, we received requests from the EPA for information and documents relating to work performed on our coal-fired boilers located at the Pulliam and Weston electric generating stations, as well as our Columbia generating station (a facility located in Portage, Wisconsin jointly owned by Wisconsin Power and Light Company, Madison Gas and Electric Company, and us), and at various times we have filed responses to those requests. Depending upon the results of the EPA's review of the information, the EPA may seek additional information from us and/or third parties who have information relating to the boilers, close out the investigation, or issue a "notice of violation" or "finding of violation" asserting that a violation of the Clean Air Act occurred. If the federal government decided to bring a claim against us and if it were determined by a court that historic projects at the Pulliam, Weston or Columbia electric generating stations required either a state or federal Clean Air Act permit, we may, under the applicable statutes, be required to:

- · shut down any unit found to be operating in non-compliance,
- install additional pollution control equipment,
- pay a fine, and/or
- conduct a supplemental environmental project in order to resolve any such claim.

#### **Sunbury Generation Plant**

On October 24, 2003, WPS Power Development announced that it had signed a definitive agreement to sell its Sunbury generation plant to Duquesne Power, L.P., a subsidiary of Duquesne Light Holdings. We cannot assure you that the transaction will be consummated. For additional information, see "Summary—Recent Developments."

WPS Power Development will continue to operate the plant until the sale is completed. As a result of plant performance issues in the past, the plant has incurred outages for maintenance and repair during which it has been unable to operate at full generating capacity. During such outages, the plant fulfills its contractual commitments by purchasing replacement power in the open market as needed. If Sunbury is required to fulfill interim contractual obligations through the purchase of replacement power prior to the closing, WPS Power Development may experience higher purchased power expenses. In addition, plant outages prior to the closing may require increased capital expenditures or higher maintenance and repair expenses.

The amount of the loss incurred in connection with the sale will be affected by several factors, including: the timing of the sale, interest rates at the time of closing, which will impact the settlement of the interest rate swap, and the cost of a forward supply contract to supply WPS Power Development's current out-take contract with a third party. The out-take contract is related to this plant and expires in December 2004.

Sunbury operates in the PJM Interconnection area, which has been experiencing depressed prices as a result of overcapacity. If market prices for capacity continue at current low levels, margins will continue to be negatively affected.

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### **Increasingly Competitive and Changing Industry**

The regulated energy industry has been undergoing dramatic structural change for several years, ranging from increasing competitive pressure on electric and natural gas utility companies to proposals for deregulation. Increased competition from alternative energy sources already provide utility customers with more energy options than in the past. Deregulation could change the rate structure of the regulated utility industry from a system promoting energy reliability through a system of reasonable cost recovery to a total market based rate structure which puts the recovery of costs of generation facilities more at risk. Increased competition may create greater risks to the stability of utility earnings generally and may in the future reduce our utility earnings from retail electric and natural gas sales. While the future of deregulation in the utility industry and its impact on our future is uncertain, change is evident. At the present time, Wisconsin has not adopted legislation or regulations that would allow customers to choose their electric supplier. All Michigan electric customers were able to choose their electric generation suppliers beginning January 1, 2002 as a result of the Customer Choice Act.

To the extent competitive pressures increase and the pricing and sale of electricity assumes more of the characteristics of a commodity business, the economics of our business may come under increasing pressure. In addition, regulatory changes may increase access to electric transmission grids by utility and nonutility purchasers and sellers of electricity, thus potentially resulting in a significant number of additional competitors in wholesale power generation.

# Availability of Suitable Projects for Purchase or Development

Our strategy for the growth of our nonregulated generation business depends partially upon our ability to identify and complete acquisitions and development projects at appropriate prices. There can be no assurance that the projects we have acquired to date or projects that we may acquire in the future will perform as expected or that the returns from those projects will support the indebtedness incurred to acquire them or the capital expenditures needed to maintain or develop them. In addition, many of our competitors are seeking opportunities to acquire or develop energy assets. This competition may adversely affect our ability to make investments or acquisitions.

# Changes in State and Federal Regulatory Policy and Authorized Rates of Utility Subsidiaries

The Public Service Commission of Wisconsin regulates Wisconsin Public Service's retail utility rates in the State of Wisconsin, including Wisconsin Public Service's permitted ratio of debt-to-equity and allowed return on equity. Wisconsin Public Service is generally required to file a rate case with the Public Service Commission of Wisconsin every two years based on a forward-looking test year period. The Michigan Public Service Commission regulates the retail utility rates in the State of Michigan of both Wisconsin Public Service and Upper Peninsula Power. The Federal Energy Regulatory Commission also regulates wholesale rates and other issues affecting Wisconsin Public Service and Upper Peninsula Power. Over time there may be substantial changes in the regulatory environment in any or all of these jurisdictions, and any changes could have an adverse effect on the revenues and income of our utility subsidiaries.

### Ability to Sell Electricity Generated from our Nonregulated Facilities at Market Prices

The Federal Energy Regulatory Commission has authorized us to sell generation from our nonregulated facilities at market prices. The Federal Energy Regulatory Commission retains the authority to modify or withdraw our market based rate authority. If the Federal Energy Regulatory Commission determines that the market is not workably competitive, that we possess market power or that we are not charging just and reasonable rates, then the Federal Energy Regulatory Commission may require us to sell power at a price based upon the costs we incur in producing the power. Our

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revenues and profit margins will be negatively affected by any reduction by the Federal Energy Regulatory Commission of the rates we may receive.

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If Minasket Theree & Control of the Cost of production at our nonregulated facilities, these units may be temporarily shut down and alternative softeness found to meet energy commitments.

#### Increases in Costs of Nonregulated Fuel and Purchased Power

Our nonregulated subsidiaries, WPS Power Development and WPS Energy Services, may experience increased expenses, including interest costs and uncollectibles, higher working capital requirements and possibly some reduction in volumes sold as a result of any increase in the cost of fuel or purchased power.

# Safe Operation, Maintenance and Decommissioning of our Share of our Generating Facilities

Wisconsin Public Service owns and operates coal, nuclear, hydro, natural gas and other fueled generating facilities. We are liable for the maintenance and safe operation of these facilities. We are also responsible for the costs to remove these plants from service and reclaim the sites upon decommissioning of any of these plants.

#### Compliance with Existing and New Environmental Laws and Regulations

We are subject to extensive environmental regulations in connection with the ongoing conduct of our business and to civil and criminal liability for failure to comply with these regulations. We are also generally responsible for all on site liabilities associated with the environmental condition of our power generation facilities, former manufactured gas plant sites and other facilities which we have previously owned and/or operated or currently own and/or operate regardless of when the liabilities arose and whether they are currently known or unknown.

The application of current and future federal and state environmental restrictions may limit, prevent or substantially increase the cost of the operation of generation facilities and may require substantial investments in new equipment at existing installations. Such restrictions may require substantial additional investments for new projects and may delay or prevent completion of projects.

#### Limitations on Access to the Revenues and Assets of our Subsidiaries

In general, any claim of WPS Resources against the assets of its subsidiaries is subject to the prior rights of the creditors of those subsidiaries. In addition, the Wisconsin public utility holding company law prohibits public utility subsidiaries from making loans to, or pledging their credit for, nonutility members of a Wisconsin public utility holding company system, including the holding company.

Orders of the Public Service Commission of Wisconsin limit the amount of ordinary dividends that Wisconsin Public Service may pay to WPS Resources to 109% of the prior year's dividend and require that the debt-to-equity ratio of Wisconsin Public Service, as calculated by the Public Service Commission of Wisconsin, remain within a range of 54% to 58%. The articles of incorporation of Wisconsin Public Service also limit the amount of dividends it may pay on its common stock if its common stock and common stock surplus account are less than 25% of its total capitalization. Bond indenture provisions currently limit the amount of dividends which may be paid by Upper Peninsula Power to WPS Resources.

Substantially all of the physical assets of Wisconsin Public Service and Upper Peninsula Power secure outstanding bond issues of Wisconsin Public Service and Upper Peninsula Power. Some of the

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generating assets of WPS Power Development's subsidiaries have been mortgaged to secure acquisition financing.

# Wisconsin Public Utility Holding Company Law

The Wisconsin public utility holding company law precludes the acquisition of 10% or more of the voting shares of a holding company of a Wisconsin public utility unless the Public Service Commission of Wisconsin has first determined that the acquisition is in the best interests of utility consumers, investors and the public. Those interests may, to some extent, be mutually exclusive. This provision and other requirements of the Wisconsin public utility holding company law may delay, or reduce the likelihood of, a sale or change of control of WPS Resources, thus reducing the likelihood that shareholders will receive a takeover premium for their shares.

# Provisions in our Articles of Incorporation, Bylaws and the Wisconsin Business Corporation Law and our Shareholder Rights Plan

Our articles of incorporation, bylaws and shareholder rights plan, as well as provisions of the Wisconsin Business Corporation Law, contain provisions that could delay or prevent a change of control or changes in our management that a shareholder might consider favorable and may prevent you from receiving a takeover premium for your shares.

The WPS Resources articles of incorporation and bylaws provide for a classified Board of Directors. The Board consists of three classes of directors each composed of 3 directors. All directors are elected for a three-year term with the terms of one class of directors expiring and up for re-election each year. These provisions can be amended, altered, changed or repealed only by the affirmative vote of shareholders possessing at least 75% of the voting power of the then outstanding shares of all classes of stock possessing voting rights.

The shareholder rights plan provides all shareholders with one right for each share of WPS Resources common stock they own. These rights may be redeemed or, under certain circumstances, exchanged for shares of WPS Resources common stock as provided in the Rights Agreement, dated as of December 12, 1996, as amended. All rights will expire on December 11, 2006.

The rights are not presently exercisable. They will become exercisable ten days after any person or group of affiliated or associated persons acquires 15% or more of our common stock or ten business days (subject to extension) after a person or group of affiliated or associated persons announces a tender offer for 15% or more of our common stock. Each right will entitle the holder to purchase one share of our authorized but unissued common stock at an exercise price of \$85. Upon the acquisition by any person or group of affiliated or associated persons of 15% or more of our common stock, each right, other than the rights held by an acquiring party, will entitle the holder to purchase, at the exercise price, shares of common stock having a market price of two times the exercise price. Rights associated with shares held by a person or group of affiliated or associated persons acquiring 15% or more of our stock will be null and void.

The rights will have the effect of diluting the ownership interest of any person or group attempting to acquire a substantial interest in WPS Resources, unless our Board of Directors agrees to redeem the rights in order to permit the acquisition. As a result, the rights may substantially reduce the likelihood of a change in control of WPS Resources that is not approved by our Board.

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#### Minnesota Energy Resources Corporation

Except for historical data and statements of current fact, the information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus constitutes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933. Any references to plans, goals, beliefs or expectations in respect to future events and conditions or to estimates are forward-looking statements. Although we believe that statements of our expectations are based on reasonable assumptions, forward-looking statements are inherently uncertain and subject to risks and should be viewed with caution. Actual results or experience could differ materially from the forward-looking statements as a result of many factors. Forward-looking statements included or incorporated in this prospectus supplement and the accompanying prospectus include, but are not limited to statements regarding:

- · expectations regarding future revenues or expenses,
- estimated future capital expenditures,
- · expected costs of purchased power in the future,
- · costs of decommissioning generation facilities,
- recovery of deferred costs,
- · future cleanup costs associated with manufactured gas plant sites and
- statements in Management's Discussion and Analysis of Financial Condition and Results of Operations regarding trends or estimates, incorporated by reference from our annual report on Form 10-K for the year ended December 31, 2002, our Current Report on Form 8-K dated August 1, 2003 and quarterly reports on Form 10-Q for the quarters ended March 31, 2003, June 30, 2003, and September 30, 2003.

We cannot predict the course of future events or anticipate the interaction of multiple factors beyond our control and their effect on revenues, project timing and costs. Some risk factors that could cause results different from any forward-looking statement include those described in the Risk Factors section of this prospectus supplement and the accompanying prospectus and the following:

- · General economic, business, and regulatory conditions
- · Legislative and regulatory initiatives regarding deregulation and restructuring of the utility industry which could affect costs and investment recovery
- State and federal rate regulation, including the inability to obtain necessary regulatory approvals
- Changes in generally accepted accounting principles
- Growth and competition and the extent and timing of new business development in the markets of subsidiary companies
- The performance of projects undertaken or acquired by subsidiary companies
- · Business combinations among our competitors and customers
- Energy supply and demand
- Financial market conditions, including availability, terms, and use of capital
- Nuclear and environmental issues
- Weather and other natural phenomena
- · Commodity price and interest rate risk
- Counter-party credit risk
- Federal and state tax policies
- · Acts of terrorism or war

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# USE OF PROCEEDS

The information in this section supplements the information in the "Use of Proceeds" section beginning on page 5 of the accompanying prospectus. Please read these two sections together.

We will add the net proceeds from the sale of our common stock to our general funds. We expect to use our general funds to retire up to \$50 million of trust preferred securities, to reduce short-term debt, to fund equity contributions to subsidiary companies and for general corporate purposes. On November 19, 2003, WPS Resources had an aggregate of approximately \$145 million of short-term borrowings, which had maturities of up to 30 days and had a weighted average annual interest rate of 1.14%.

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#### UNDERWRITING

Subject to the terms and conditions set forth in the underwriting agreement, we have agreed to sell to each of the underwriters named below, and each of the underwriters has severally agreed to purchase, the number of shares of our common stock set forth opposite the name of each underwriter.

Minnesota Energy Resources Corporation

A.G. Edwards & Sons, Inc.	1,925,000
Robert W. Baird & Co. Incorporated	525,000
Edward D. Jones & Co., L.P.	525,000
The Williams Capital Group, L.P.	525,000
Total	3,500,000

Under the terms and conditions of the underwriting agreement, the underwriters have agreed to take and pay for all the shares of common stock offered by this prospectus supplement and prospectus, if any are taken.

The underwriters are offering the shares of our common stock, subject to prior sale, when, as and if issued to and accepted by them, subject to conditions contained in the underwriting agreement. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act of 1933, or to contribute to payments the underwriters may be required to make in respect of those liabilities.

Over-allotment Option. We have granted an option to the underwriters to purchase up to an aggregate of 525,000 additional shares of our common stock at the public offering price less the underwriting discount. The underwriters may exercise this option for 30 days from the date of this prospectus supplement solely to cover any over-allotments. If the underwriters exercise this option, each underwriter will be obligated, subject to the conditions contained in the underwriting agreement, to purchase a number of additional shares of our common stock proportionate to the number initially purchased by that underwriter as reflected in the above table.

Offering Price, Concessions and Reallowances. The underwriters have advised us that they propose initially to offer the shares of our common stock to the public offering price on the cover page of this prospectus supplement and to certain securities dealers at that price less a concession not in excess of \$0.90 per share. The underwriters may allow and such dealers may reallow, a discount not in excess of \$0.10 per share to other dealers. After we release the shares of common stock for sale to the public, the underwriters may vary the offering price and other selling terms from time to time.

*Price Stabilization and Short Positions.* In connection with this offering, the rules of the Securities and Exchange Commission permit the underwriters to engage in transactions that stabilize the price of the common stock. Those transactions may consist of bids or purchases for the purpose of pegging, fixing or maintaining the price of the common stock.

If the underwriters create a short position in the common stock in connection with the offering (i.e., if they sell more shares than are listed on the cover of this prospectus supplement), the underwriters may reduce that short position by purchasing shares in the open market. The underwriters may also elect to reduce any short position by exercising all or part of the over-allotment option

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described above. Purchases of the common stock to stabilize its price or to reduce a short position may cause the price of the common stock to be higher than it might be in the absence of those purchases.

Neither the underwriters nor we make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of the common stock. In addition, neither the underwriters nor we make any representation that the underwriters will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

Restrictions on Sales of Similar Securities. We have agreed that, for 90 days after the date of this prospectus supplement, we will not directly or indirectly sell, offer or enter into an agreement to sell, grant any option for the sale of, or otherwise dispose of any shares of our common stock or securities convertible into, or exercisable for, shares of our common stock, except for securities offered and sold under our Stock Investment Plan, our employee or director benefit or compensation plans and this prospectus supplement and the accompanying prospectus, unless we have first obtained the written consent of the underwriters. We have also agreed not to file during that period, without the prior written consent of the underwriters, a registration statement with the Securities and Exchange Commission relating to the sale of shares of our common stock or securities convertible into, or exercisable for, shares of our common stock, except for any registration statement related to our Stock Investment Plan or our employee or director benefit or compensation plans.

Other Relationships. Certain of the underwriters and their affiliates have engaged and in the future may engage in investment banking transactions with, and provide services to, WPS Resources or its subsidiaries in the ordinary course of business.

#### LEGAL MATTERS

Our counsel, Foley & Lardner, Milwaukee, Wisconsin, will issue its opinion as to the validity of the shares of common stock being issued. Schiff Hardin & Waite, Washington, D.C., will issue an opinion for the underwriters as to certain matters relating to the offering of the shares of common stock.

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# **PROSPECTUS**

# WPS RESOURCES CORPORATION

700 North Adams Street P.O. Box 19001 Green Bay, Wisconsin 54307-9001 \$350,000,000 Minnesota Energy Resources Corporation

# DEBT SECURITIES COMMON STOCK COMMON STOCK PURCHASE RIGHTS

We may offer these securities in amounts, at prices and on terms determined at the time of offering. We will provide specific terms of these securities in supplements to this prospectus. Our common stock is traded on the New York Stock Exchange under the symbol "WPS".

You should read this prospectus and any supplement carefully before you invest.

See "Risk Factors" on page 5 for a discussion of certain risks that prospective investors should consider before investing in our securities.

These securities have not been approved by the Securities and Exchange Commission or any state securities commission, nor have these organizations determined that this prospectus is accurate or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is September 8, 2003.

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This prospectus is a part of the registration statement that we filed with the Securities and Exchange Commission. You should read this prospectus together with the more detailed information regarding our company, our securities and our financial statements and notes to those statements that appear elsewhere in this prospectus or that we incorporate in this prospectus by reference.

You should rely on the information contained in, or incorporated by reference in, this prospectus and in any accompanying prospectus supplement. We have not authorized anyone to provide you with information different from that contained in, or incorporated by reference in, this prospectus or any prospectus supplement. You should not assume that the information in this prospectus or any prospectus supplement is accurate as of any date other than the date on the front of the prospectus or prospectus supplement, as applicable.

# SUMMARY

This summary highlights selected information from this document and may not contain all of the information that is important to you. To understand the terms of our securities, you should carefully read this document with the attached prospectus supplement. Together these documents will give the specific terms of the securities we are offering. You should also read the documents we have incorporated by reference into this prospectus for information on us and our financial statements.

# The Securities We May Offer

This prospectus is part of a registration statement (No. 333-104787) that we filed with the Securities and Exchange Commission utilizing a "shelf" registration process. Under this shelf process, we may offer from time to time up to \$350,000,000 of the following securities: debt securities and common stock with associated common stock purchase rights. This prospectus provides you with a general description of the securities we may offer. Each time we offer securities, we will provide you with a prospectus supplement that will describe the specific amounts, prices and terms of the securities being offered. The prospectus supplement may also add, update or change information contained in this prospectus.

#### **Debt Securities**

We may offer unsecured general obligations of our company, which may be senior or subordinated. We will refer to the senior debt securities and the subordinated debt securities together in this prospectus as the "debt securities". The senior debt securities will have the same rank as all of our other unsecured, unsubordinated debt. The subordinated debt securities will be entitled to payment only after payment on our senior indebtedness. Senior indebtedness includes all indebtedness for money borrowed by us, except our currently outstanding junior subordinated deferrable interest debentures due 2038 and any indebtedness issued in the future that is stated to be not superior to, or to have the same rank as, the subordinated debt securities. Currently, we may not issue indebtedness that ranks junior to our junior subordinated deferrable interest debentures due 2038.

Claims of creditors and any preferred shareholders of each of our subsidiaries will have priority with respect to the assets and earnings of such subsidiaries over the claims of our creditors. The debt securities therefore will be effectively subordinated to creditors, including holders of secured indebtedness, and preferred shareholders of our subsidiaries.

The senior debt securities will be issued under an indenture between us and U.S. Bank National Association, formerly known as Firstar Bank, National Association. We may amend or supplement the indenture from time to time. The subordinated debt securities will be issued under an indenture between us and the trustee we name in a prospectus supplement. We encourage you to read the indentures, which are exhibits to this registration statement (as incorporated by reference), and our recent periodic and current reports that we file with the Securities and Exchange Commission.

# Summary of Material Indenture Provisions that Apply to Senior and Subordinated Debt Securities

Neither indenture limits the amount of debt that we may incur. In addition, neither indenture provides holders with any protection should there be a recapitalization or restructuring

The indentures allow us to merge or consolidate with another company, or to sell all or most of our assets to another company. If these events occur, the other company will be required to assume our responsibilities relating to the debt securities, and we will be released from all liabilities and obligations.

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The indentures provide that holders of a majority of the outstanding principal amount of any series of debt securities may vote to change our obligations or your rights concerning that series. However, to change the amount or timing of payments of principal or interest or other payments for a series of debt securities, every holder in the series must consent.

We may discharge our obligations under the indenture relating to the senior or subordinated debt securities by depositing with the trustee sufficient funds or government obligations to pay the senior or subordinated debt securities when due.

EVENTS OF DEFAULT. Each indenture provides that the following are events of default:

- If we do not pay interest for 30 days after its due date.
- If we do not pay principal or premium when due.
- · If we continue to breach a covenant in the debt securities of the series or in the applicable indenture respecting that series for 60 days after notice.
- If we enter bankruptcy or become insolvent.

If an event of default occurs with respect to any series of debt securities, the trustee or holders of 25% of the outstanding principal amount of that series may declare the principal amount of the series immediately payable. However, holders of a majority of the principal amount may rescind this action. If the event of default is due to our bankruptcy or insolvency, the outstanding principal amount of all the debt securities will become immediately payable, without any action on the part of the trustees or the holders of the debt securities.

#### Summary of Material Indenture Provisions that Apply Only to Senior Debt Securities

Under the senior indenture, our failure to pay when due, subject to any applicable grace period, any principal of, or interest on, any indebtedness for borrowed money incurred or guaranteed by us in the aggregate principal amount of at least \$50,000,000 constitutes an event of default.

The senior indenture requires us, so long as any senior debt securities are outstanding:

- to own all of the outstanding shares of voting common stock of Wisconsin Public Service Corporation unless we transfer the shares pursuant to our merger or consolidation or sale of substantially all of our properties.
- not to pledge or grant a security interest or permit any pledge, security interest or other lien upon any common stock of any of our subsidiaries owned directly or
  indirectly by us to secure indebtedness for money borrowed without securing the senior debt securities equally and ratably with the other secured indebtedness except
  for:
  - pledges, security interests or encumbrances created to secure the purchase price of the common stock of our subsidiaries,
  - liens and security interests existing at the time of our acquisition of the shares or
  - any extension or renewal of any permitted pledge, security interest or encumbrance.

# Summary of Material Indenture Provisions that Apply Only to Subordinated Debt Securities

The subordinated debt securities will be subordinated to all senior indebtedness. In addition, as previously noted under "Debt Securities", claims of the creditors and preferred shareholders of each of our subsidiaries will have priority with respect to that subsidiary's assets and earnings over the claims of our creditors, including holders of the subordinated debt securities. The subordinated debt securities, therefore, will be effectively subordinated to creditors and preferred shareholders of our subsidiaries.

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#### Common Stock

We may offer shares of our common stock, par value \$1.00 per share. Holders of our common stock are entitled to receive dividends when and if declared by the Board of Directors. Each holder of our common stock is entitled to one vote per share. The holders of our common stock have no preemptive rights or cumulative voting rights. Our restated articles of incorporation do not presently authorize our company to issue preferred stock or other stock having rights prior to those of the holders of our common stock.

Each share of our common stock will have an associated right to purchase one share of our common stock at an exercise price of \$85 per share. The rights are not presently exercisable. Under certain circumstances, however, each right will entitle the holder to purchase at the exercise price our common stock having a market value of twice the exercise price. See "DESCRIPTION OF COMMON STOCK—Pre-emptive Rights; Common Stock Purchase Rights" in this prospectus.

# **Ratios of Earnings to Fixed Charges**

The ratio of earnings to fixed charges for each of the periods indicated are as follows:

	2002	2001	2000	1999	1998
Ratio of earnings to fixed charges	2.9	2.1	2.1	2.8	2.8

YEAR ENDED DECEMBER 31.

We have computed the ratio of earnings to fixed charges by dividing earnings, which includes income before taxes and fixed charges, by fixed charges. This calculation excludes the effects of accounting changes which have been made over time. "Fixed charges" consist of (1) interest on debt and a portion of rentals determined to be representative of interest

and (2) the preferred stock dividend requirements of our subsidiaries. The preferred stock dividend requirements of our subsidiaries were assumed to be equal to the preferred stock dividend requirements of our subsidiaries were assumed to be equal to the preferred stock dividend requirements of our subsidiaries were assumed to be equal to the preferred stock dividend requirements of our subsidiaries were assumed to be equal to the preferred stock dividend requirements of our subsidiaries were assumed to be equal to the preferred stock dividend requirements of our subsidiaries were assumed to be equal to the preferred stock dividend requirements of our subsidiaries were assumed to be equal to the preferred stock dividend requirements of our subsidiaries.

#### Where You Can Find More Information

We file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission. We also filed a Registration Statement on Form S-3, including exhibits, under the Securities Act of 1933 with respect to the securities offered by this prospectus. This prospectus is a part of that registration statement, but does not contain all of the information included in the registration statement or the exhibits to the registration statement. You may read and copy the registration statement and any other document we file at the Commission's public reference room at 450 Fifth Street, N.W., Washington, D.C., 20549. Please call the Commission at 1-800-SEC-0330 for further information on the public reference rooms. Our Securities and Exchange Commission filings are also available to the public at the Commission's web site at http://www.sec.gov or on our website located at http://www.wpsr.com.

The Securities and Exchange Commission allows us to "incorporate by reference" into this prospectus the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus, and later information that we file with the Commission will automatically update and supersede this information. We incorporate by reference the documents listed below and

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any future filings made with the Securities and Exchange Commission under Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 until our offering is completed:

- Annual Report on Form 10-K for the year ended December 31, 2002 (as updated by the Current Report on Form 8-K dated August 1, 2003);
- ii. Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2003;
- iii. Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2003;
- iv. Current Report on Form 8-K dated August 1, 2003;
- v. Current Report on Form 8-K dated May 14, 2003;
- vi. Description of Common Stock contained in Registration Statement on Form 8-B filed on June 1, 1994; and
- vii. Description of Common Stock Purchase Rights contained in Registration Statement on Form 8-A filed on December 13, 1996.

You may request a copy of these filings, at no cost, by writing to or telephoning us at our principal executive offices:

WPS Resources Corporation Attn: Secretary 700 North Adams Street P.O. Box 19001 Green Bay, Wisconsin 54307-9001 (920) 433-1727

You should rely only on the information incorporated by reference or provided in this prospectus or any prospectus supplement. We have not authorized anyone else to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus or any prospectus supplement is accurate as of any date other than the date on the front of the prospectus or the prospectus supplement.

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# RISK FACTORS

You should carefully consider the risk factors discussed under the caption "Risk Factors," beginning on page 24, in our Annual Report on Form 10-K for the year ended December 31, 2002, as filed with the SEC on March 10, 2003 (such risk factors may from time to time be amended, supplemented or superseded by other filings that we make with the SEC in the future), which we have incorporated by reference herein, and the risk factors discussed in any other documents incorporated by reference herein (such risk factors may from time to time be amended, supplemented or superseded by other filings that we make with the SEC in the future). In addition, if required or advisable, the prospectus supplement applicable to the securities we offer will contain a discussion of the risks applicable to an investment in WPS Resources Corporation and to the particular types of securities that we are offering under that prospectus supplement.

# THE COMPANY

We are a holding company, based in Green Bay, Wisconsin. Our principal subsidiary is Wisconsin Public Service Corporation, a regulated electric and natural gas utility that generates and distributes energy in northeastern Wisconsin and an adjacent portion of Michigan. Our other major subsidiaries include Upper Peninsula Power Company, a regulated electric utility operating in the northern half of Michigan's Upper Peninsula, and two nonregulated subsidiaries, WPS Power Development, Inc., and WPS Energy Services, Inc. WPS Power Development, Inc., develops, owns and operates nonregulated electric generation facilities and steam production facilities in various locations in the United States and New Brunswick, Canada, as well as a portion of a synthetic fuel processing facility. WPS Energy Services, Inc., provides energy and related products and services in the nonregulated energy market in the northeast quadrant of the United States and Canada.

In 2002, our regulated operations contributed \$79.4 million to our net income and our two nonregulated subsidiaries contributed \$35.0 million to our net income. WPS Resources' operations as a holding company, the operations of WPS Resources Capital Corporation, an intermediate holding company for our nonregulated subsidiaries, and the non-utility operations of Wisconsin Public Service and Upper Peninsula Power as a whole experienced a net loss of \$5.0 million in 2002. Our executive offices are at 700 North Adams Street, P.O. Box 19001, Green Bay, Wisconsin 54307. Our telephone number is (920) 433-4901.

#### USE OF PROCEEDS

### DESCRIPTION OF THE DEBT SECURITIES

The following description of the material terms of the debt securities sets forth general terms that may apply to the debt securities. The particular terms of any series of debt securities will be described in the prospectus supplement relating to those debt securities.

The debt securities will be either our senior debt securities or our subordinated debt securities. The senior debt securities will be issued under an indenture dated as of October 1, 1999 between us and U.S. Bank National Association (f/k/a Firstar Bank, National Association), Saint Paul, Minnesota, as trustee. This indenture is referred to as the "senior indenture". The subordinated debt securities will be issued under an indenture to be entered into between us and the trustee named in a prospectus supplement. This indenture is referred to as the "subordinated indenture". This prospectus refers to the senior indenture and the subordinated indenture together as the "indentures".

The following is a summary of all of the material terms of the indentures. Copies of the entire indentures are filed as exhibits to the registration statement of which this prospectus is a part. Section references below are to the section in the applicable indenture. The referenced sections of the indentures are incorporated by reference.

#### General

Neither indenture limits the amount of debt securities that we may issue. Each indenture provides that debt securities may be issued up to the principal amount authorized by us from time to time. The senior debt securities will be unsecured and will have the same rank as all of our other unsecured and unsubordinated debt. The subordinated debt securities will be unsecured and will be subordinated and junior to all senior indebtedness.

The debt securities may be issued in one or more separate series of senior debt securities or subordinated debt securities. The prospectus supplement relating to the particular series of debt securities being offered will specify the particular amounts, prices and terms of those debt securities. These terms may include:

- the title of the debt securities;
- any limit on the aggregate principal amount of the debt securities of the series;
- the date on which the debt securities will mature;
- the interest rate or rates, or the method of determining those rates;
- the date from which interest will accrue or the method for determining such date;
- the interest payment dates and the regular record dates;
- the places where payments may be made;
- any mandatory or optional redemption provisions;
- any sinking fund or analogous provisions;
- · the portion of principal amount of the debt security payable upon acceleration of maturity if other than the full principal amount;
- any additions to the events of default or covenants included in the indenture under which the debt securities are issued, as described in this prospectus;
- if other than U.S. dollars, the currency or currencies, or units based on or related to currencies, in which payments on the debt securities will be payable;
- whether the debt securities will be issued in the form of a global security; and

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any other specific terms of the debt securities.

The debt securities will be registered debt securities and, unless otherwise specified in the prospectus supplement, will be payable in U.S. dollars in denominations of \$1,000 or an integral multiple of \$1,000. (Sections 2.01 and 3.01)

Some of the debt securities may be issued as original issue discount debt securities. Original issue discount securities bear no interest or bear interest at below-market rates and will be sold at a discount below their stated principal amount. The applicable prospectus supplement will also contain any special tax, accounting or other information relating to original issue discount securities or to other kinds of debt securities that may be offered, including debt securities linked to an index or payable in currencies other than U.S. dollars.

# Exchange, Registration and Transfer

Debt securities may be transferred or exchanged at the corporate trust office of the security registrar or at any other office or agency maintained by us for those purposes. Except as otherwise described in a prospectus supplement, no service charge will be payable upon the transfer or exchange of debt securities, except for any applicable tax or governmental charge. (Section 3.05) The designated security registrar for the senior debt securities is U.S. Bank National Association, Corporate Trust Services, 180 East Fifth Street, Suite 200, SPTF 0210, Saint Paul, MN 55101. The security registrar for the subordinated debt securities will be designated in a prospectus supplement.

In the event of any redemption of any series of debt securities, we will not be required to:

- 1. issue, register the transfer of, or exchange, debt securities of any series between the opening of business 15 business days before the date of the mailing of the notice of redemption of the debt securities of that series to be redeemed and the close of business on the date of mailing of the relevant notice of redemption; or
- 2. register the transfer of, or exchange, any debt security selected for redemption, in whole or in part, except the unredeemed portion of any debt security being redeemed in

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part. (Section 3.05) Minnesota Energy Resources Corporation

# **Payment And Paying Agent**

We will pay principal, interest and any premium on debt securities which are not global securities at the office of the paying agent. We will make payment of interest on the debt securities which are not global securities by check mailed to the persons in whose names the debt securities are registered on days specified in the indentures or the applicable prospectus supplement. We will also make payments by wire transfer to a U.S. bank designated by a holder of debt securities in an aggregate principal amount of at least \$10,000,000, all of which have the same interest payment dates, upon receipt of a written request from the holder, on or before the record date for the payment, designating the account to which the payment is to be made. (Section 2.05)

If any amount payable on any debt security remains unclaimed at the end of two years after the amount became due and payable, the paying agent will release any unclaimed amounts to us, and the holder of the debt security will look only to us for payment. (Section 10.07)

The paying agent for the senior debt securities is U.S. Bank National Association, Corporate Trust Services, 180 East Fifth Street, Suite 200, SPTF 0210, Saint Paul, MN 55101. The paying agent for the subordinated debt securities will be designated in the applicable prospectus supplement.

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# **Book-Entry Securities**

We may initially issue the debt securities of any series in the form of one or more global securities under a book-entry only system operated by a securities depositary. Unless otherwise specified in the applicable prospectus supplement, The Depository Trust Company ("DTC"), New York, New York, will act as securities depositary for each series of debt securities that are issued as fully-registered securities. The indenture trustee will register in the name of Cede & Co. (DTC's partnership nominee) (or such other nominee as may be requested by an authorized representative of DTC) those securities for which DTC is acting as depositary. Individual purchases of book-entry interests in any of the debt securities will be made in book-entry form. So long as Cede & Co., as nominee of DTC, or another nominee of DTC is the securityholder, references in this prospectus to holders of the debt securities or registered owners will mean Cede & Co. or another nominee of DTC, rather than the owners of beneficial ownership interests in the debt securities.

DTC is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds securities that its direct participants deposit with DTC. DTC also facilitates the settlement among DTC participants of securities transactions such as transfers and pledges of deposited securities through electronic computerized book-entry changes in accounts of DTC direct participants, thereby eliminating the need for physical movement of securities certificates. DTC direct participants include securities brokers and dealers, banks, trust companies, clearing corporations and certain other organizations. DTC is owned by a number of the DTC direct participants and by the New York Stock Exchange, Inc., the American Stock Exchange, Inc., and the National Association of Securities Dealers, Inc. Access to the DTC system is also available to others, such as securities brokers and dealers, banks and trust companies that clear through or maintain a custodial relationship with a DTC direct participant, either directly or indirectly. The rules applicable to DTC and its participants are on file with the Securities and Exchange Commission.

Anyone desiring to purchase debt securities under the DTC system must make these purchases by or through DTC direct participants which will receive a credit for the debt securities on DTC's records. The direct and indirect participants will in turn record the ownership interest of each actual purchaser of the debt securities on the records of the direct or indirect participant. DTC will not provide beneficial owners of the debt securities with written confirmations of their purchases. Owners of book-entry interests should receive from the direct or indirect participant written confirmations of their purchases providing details of the beneficial owners transactions, as well as periodic statements of their holdings. DTC direct and indirect participants are to effect transfers of beneficial ownership interests by entries made on the books of the DTC direct or indirect participants acting on behalf of the beneficial owners. Owners of beneficial interests in the debt securities will not receive or be entitled to receive certificates representing their ownership interests in the debt securities, except as described below upon the discontinuance of the use of the book-entry system.

Principal and the redemption price of, and interest payments on the debt securities held by or on behalf of DTC as depositary will be made to Cede & Co., as nominee of DTC (or to such other nominee as may be requested by an authorized representative of DTC). DTC's practice is to credit the accounts of DTC direct participants upon DTC's receipt from the issuer or trustee of funds and corresponding detail information on a payment date in accordance with their respective holdings shown on the records of DTC. Payments by DTC direct and indirect participants to owners of beneficial ownership interests in the debt securities will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such DTC direct or indirect participant and not of DTC, the indenture trustee or us, subject to any statutory or regulatory requirements as may be in

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effect from time to time. DTC is responsible for disbursing such payments to the appropriate DTC direct participants, and those DTC direct participants, and any indirect participants, are in turn responsible for disbursing the payment to the owners of beneficial ownership interests.

To facilitate subsequent transfers, the indenture trustee will register all debt securities which DTC direct participants deposit with DTC in the name of DTC's partnership nominee, Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC). The deposit of debt securities with DTC and their registration in the name of Cede & Co. effect no change in beneficial ownership. DTC has no knowledge of the actual beneficial owners of the debt securities; DTC's records reflect only the identity of the DTC direct participants to whose accounts the debt securities are credited, which may or may not be the beneficial owners. The participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to DTC direct participants, by direct participants to indirect participants, and by direct participants and indirect participants to beneficial owners of debt securities will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time.

The indenture trustees will send redemption notices to DTC. If we are redeeming less than all of the debt securities within an issue, DTC's practice is to determine by lot the amount of the interest of each direct participant in such issue to be redeemed.

Neither DTC nor Cede & Co. or any other nominees of DTC will consent or vote with respect to the debt securities. Under its usual procedures, DTC will mail an omnibus proxy to us as soon as possible after the record date. The omnibus proxy assigns the consenting or voting rights of Cede & Co. or other nominee of DTC to those DTC direct participants to whose accounts the debt securities are credited on the record date (identified in a listing attached to the omnibus proxy).

DTC may discontinue providing its services as debt securities depositary with respect to the debt securities at any time by giving reasonable notice to us or the indenture trustee. Under these circumstances, in the event that a successor securities depositary is not obtained, debt security certificates are required to be printed and delivered.

We may decide to discontinue use of the system of book-entry transfers through DTC (or a successor securities depositary). In that event, we will cause debt security certificates

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to be printed and delivered.

Minnesota Energy Resources Corporation

The information in this section concerning DTC and DTC's book-entry system has been obtained from sources that we believe to be reliable, but neither we, the indenture trustees nor any underwriter takes any responsibility for the accuracy of the description of DTC's business organization and procedures.

Neither we nor the trustees under the indentures will have any responsibility or obligation to any DTC direct or indirect participant or any owner of a book-entry interest or any other person not shown on the registration books of the trustees as being a holder of the debt securities with respect to: (1) any debt securities; (2) the accuracy of any records maintained by DTC or any DTC direct or indirect participant; (3) the payment by DTC or any DTC direct or indirect participant of any amount due to any owner of a book-entry interest in respect of the principal or redemption price of or interest on the debt securities; (4) the delivery by DTC or any DTC direct or indirect participant of any notice to any owner of a book-entry interest which is required or permitted under the terms of the indentures to be given to holders of the debt securities; (5) the selection of the owners of a book-entry interest to receive payment in the event of any partial redemption of any senior debt securities; or (6) any consent given or other action taken by DTC or its nominee as holder of the debt securities.

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# Limitation On Merger, Consolidation And Certain Sales Of Assets

We may, without the consent of the holders of the debt securities, merge into or consolidate with any other corporation, or convey or transfer all or substantially all of our properties and assets to another person provided that:

- the successor is a corporation;
- 2. the successor expressly assumes on the same terms and conditions all the obligations under the debt securities and the indentures;
- 3. immediately after giving effect to the transaction, there is no default under the applicable indenture; and
- 4. we deliver to the trustees a certificate and an opinion of counsel stating that the transaction complies with the indentures. (Sections 8.01 and 8.02)

The remaining or acquiring corporation will take over all of our rights and obligations under the indentures. (Section 8.03)

There is inherent uncertainty in the phrase "all or substantially all." This uncertainty may make it difficult for holders of the debt securities to (1) determine whether our covenant relating to consolidation, merger and sale of our properties and assets to another person has been breached, (2) declare an event of default and (3) exercise their acceleration rights. Further, interpretation of this phrase as it relates to any transfer of our properties and assets will be governed by applicable law and will be dependent upon the particular facts and circumstances. In the event the holders of the debt securities attempt to exercise their rights under the indenture following the occurrence of a particular transfer or series of transfers that they believe constitutes a transfer of "all or substantially all."

#### Satisfaction And Discharge; Defeasance

We may be discharged from our obligations on the debt securities of any series that have matured or will mature or be redeemed within one year if we deposit with the trustee enough cash to pay all the principal, interest and any premium due to the stated maturity date or redemption date of the debt securities. (Section 4.01)

Each indenture contains a provision that permits either (1) our discharge from all of our obligations with respect to any series of debt securities then outstanding other than our obligations relating to temporary securities issued for the debt securities (Section 3.04), registration of transfer and exchange of the debt securities (Section 3.05), replacement of mutilated, destroyed, lost or stolen debt securities (Section 3.06), maintenance of paying agencies (Section 10.02) and holding money for payment in trust (Section 10.07); or (2) our release from our obligations under covenants respecting any series of debt securities and from the consequences of an event of default resulting from the breach of those covenants other than our obligations relating to temporary securities issued for the debt securities (Section 3.04), registration of transfer and exchange of the debt securities (Section 3.05), replacement of mutilated, destroyed, lost or stolen debt securities (Section 3.06), the order in which money collected is applied (Section 5.06), the restoration of rights and remedies (Section 5.09), the resignation and removal of the trustee and the appointment of a successor (Section 6.10), the payment of principal and interest (Section 10.01), maintenance of paying agencies (Section 10.02) and holding money for payment in trust (Section 10.07).

To exercise either of these two options, we must deposit in trust with the trustee enough money to pay in full the principal, interest and premium on the series of debt securities. This amount may be made in cash and/or U.S. government obligations. (Sections 13.02 and 13.03) As a condition to

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exercising either of the above options, we must deliver to the trustee a ruling directed to the trustee from the Internal Revenue Service or an opinion of counsel based on an Internal Revenue Service Ruling or a change in applicable federal income tax law since the date of the indenture, in each case to the effect that the holders of the debt securities will not recognize income, gain or loss for Federal income tax purposes as a result of the action and will be subject to Federal income tax on the same amount, in the same manner and at the same times as would have been the case if the action had not taken place. (Section 13.04)

If we exercise either of these options, the holders of the debt securities of the series affected will be entitled to receive, solely from the trust fund, payments of principal, interest and premium on the debt securities and will not be entitled to any of the other benefits of the indenture, except for limited provisions including our obligations respecting registration of transfer and exchange of debt securities, replacement of lost, stolen or mutilated debt securities, maintenance of paying agencies and holding moneys for payment in trust. (Sections 13.02 and 13.03)

#### **Events Of Default, Notice And Waiver**

Each indenture defines an event of default with respect to any series of debt securities as one or more of the following events:

- our failure to pay interest on any debt security for 30 days after it is due;
- our failure to pay the principal or any premium on any debt securities when due;
- our failure to perform any other covenant in the debt securities of the series or in the applicable indenture with respect to debt securities of that series for 60 days after being given notice of the failure; and
- our entering into bankruptcy or becoming insolvent.

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Minnesota Energy Resources Corporation

In addition, under the senior indenture our failure to pay when due, subject to any applicable grace period, any principal of, or interest on, any indebtedness for borrowed money incurred or guaranteed by us in the aggregate principal amount of at least \$50,000,000 constitutes an event of default under the senior indenture. Under each indenture, failure to observe or perform an obligation like replacing mutilated, lost or stolen debt securities of a particular series is an event of default for that series only and not for any other series of debt securities. This is in contrast to defaulting on the payment of interest or principal on a particular series of debt securities, which is an event of default for all other series of debt securities. (Section 5.01)

Each indenture requires the trustee to give the holders of a series of debt securities notice of a default with respect to that series within 30 days unless the default is cured or waived. However, the trustee may withhold this notice if it determines in good faith that it is in the interest of those holders. The trustee may not, however, withhold this notice in the case of a payment default. (Section 6.02)

Other than the duty to act with the required standard of care during an event of default, a trustee is not obligated to exercise any of its rights or powers under either indenture at the request or direction of any of the holders of debt securities, unless the holders have offered to the trustee security or indemnity to its reasonable satisfaction against the potential costs, expenses and liabilities of complying with such request or direction. (Section 6.03) Generally, the holders of a majority in principal amount of outstanding debt securities of any series may direct the time, method and place of conducting any proceeding for any remedy available to the trustee, or exercising any trust or other power conferred on the trustee. (Section 5.12)

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Under each indenture, if an event of default with respect to any series of debt securities (other than due to events of bankruptcy, insolvency or reorganization) occurs, the trustee or the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series, by notice in writing to us and to the trustee, may declare the unpaid principal of and accrued interest on all the debt securities of that series to be due and payable immediately and, upon any such declaration, the debt securities of that series will become immediately due and payable.

Under each indenture, if an event of default occurs due to bankruptcy, insolvency or reorganization, all unpaid principal of and accrued interest on the outstanding debt securities of any series will become immediately due and payable without any declaration or other act on the part of the trustee or any holder of any debt security of that series. (Section 5.02)

Under each indenture, the holders of not less than a majority of the principal amount of the outstanding debt securities of any series may rescind a declaration of acceleration and its consequences with respect to the debt securities of a series if:

- all existing events of default, other than the nonpayment of principal of and interest on the debt securities of that series that have become due solely as a result of such declaration of acceleration, have been cured or waived;
- to the extent lawful, interest on overdue interest and on overdue principal that has become due otherwise than by reason of such acceleration has been paid;
- the rescission would not conflict with any judgment or decree of a court of competent jurisdiction; and
- all amounts due to the trustee under the indenture have been paid. (Section 5.02)

Each indenture requires us to file annually with the trustee a certificate of our principal executive, financial or accounting officer as to the knowledge of the officer of our compliance with all conditions and covenants under the indenture. (Section 7.04)

## **Modification of the Indentures**

Together with the trustee, we may modify the indentures without the consent of the holders for limited purposes, including adding covenants or events of default, establishing forms or terms of debt securities, curing ambiguities and making certain other changes which do not adversely affect the holders in any material respect. (Section 9.01)

Together with the trustee, we may make modifications and amendments to each indenture with the consent of the holders of a majority in principal amount of the outstanding debt securities of all affected series. However, without the consent of each affected holder, no modification may:

- change the stated maturity or interest payment date of any debt security;
- reduce the principal, premium (if any) or rate of interest on any debt security;
- change any place of payment or the currency in which any debt security is payable;
- impair the right to enforce any payment after the stated maturity, payment, or redemption date;
- reduce the percentage of holders of outstanding debt securities of any series required to consent to any modification, amendment or waiver under the indenture;
- change the redemption provisions of the indenture in a manner adverse to a holder; or
- change the provisions of the indenture which relate to its modification or amendment. (Section 9.02)

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# Governing Law

The indentures and the debt securities will be governed by, and construed under, the laws of the State of Wisconsin.

# **Concerning The Trustees**

We may from time to time enter into arms length transactions and maintain customary banking relationships with the trustee under the senior indenture or the trustee under the subordinated indenture, including but not limited to, maintaining lines of credit, borrowing money, maintaining checking account services and other treasury, depository and cash management services.

# Senior Debt Securities Minnesota Energy Resources Corporation

The senior debt securities will be unsecured and will rank equally with the \$150,000,000 principal amount 7.00% Senior Notes due November 1, 2009, and \$100,000,000 principal amount of 5.375% Senior Notes Due December 1, 2012, presently outstanding under the senior indenture and with all of our other unsecured and non-subordinated debt. In the event we are unable or unwilling to satisfy our obligations under the senior indenture (due to insolvency or otherwise) and our debt holders attempt to obtain satisfaction from our subsidiaries of our subsidiaries over the claims of our senior debt holders.

Our failure to pay when due, subject to any applicable grace period, any principal of, or interest on, any indebtedness for borrowed money incurred or guaranteed by us in the aggregate principal amount of at least \$50,000,000 constitutes an event of default under the senior indenture.

We agree in the senior indenture that so long as any senior debt securities are outstanding, we will own, directly or indirectly, all of the shares of voting common stock of Wisconsin Public Service Corporation now or hereafter issued and outstanding, unless we transfer or sell these shares in a transaction which complies with the provisions of the senior indenture relating to our merger, consolidation or sale of substantially all of our properties. See "Limitation on Merger, Consolidation and Certain Sales of Assets" in this prospectus. (Section 10.08)

We agree in the senior indenture that so long as any senior debt securities are outstanding, we will not pledge or grant a security interest in, or permit any pledge, security interest or other lien upon, any common stock of any of our subsidiaries owned directly or indirectly by us to secure any indebtedness for money borrowed, without making effective provision to secure the senior debt securities equally and ratably with the other indebtedness and any other indebtedness similarly entitled to be equally and ratably secured. This restriction will not apply, however, to (1) the creation or existence of any pledge, security interest, or encumbrance upon any of the common stock of our subsidiaries (A) created at the time of our acquisition of the common stock or within one year after our acquisition of the common stock to secure all or a portion of the purchase price for the common stock or (B) existing on the common stock at the time of our acquisition of it, or (2) any extension, renewal or refunding of any pledge, security interest, or encumbrance described in clause (1). (Section 10.09)

#### **Subordinated Debt Securities**

The subordinated debt securities will be unsecured. The subordinated debt securities will be subordinate in right of payment to all senior indebtedness. (Section 14.01 of Subordinated Indenture) In addition, claims of our subsidiaries' creditors and preferred shareholders will have priority with respect to the assets and earnings of the subsidiaries over the claims of our creditors, including holders of the subordinated debt securities, even though those obligations may not constitute senior

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indebtedness. The subordinated debt securities, therefore, will be effectively subordinated to creditors, including trade creditors, and preferred shareholders of our subsidiaries.

The subordinated indenture defines "senior indebtedness" to mean the principal of, premium, if any, and interest on:

- · all of our indebtedness for money borrowed;
- indebtedness evidenced by securities, debentures, bonds or other similar instruments issued by us;
- all of our capital lease obligations;
- all of our obligations issued or assumed as the deferred purchase price of property, all of our conditional sales contracts and all of our obligations under any title
  retention agreements (but excluding trade accounts payable arising in the ordinary course of business);
- all of our obligations for reimbursement on any letter of credit, banker's acceptance, security purchase facility or similar credit transaction;
- · all obligations of the types previously described of other persons for the payment of which we are responsible or liable as obligor, guarantor or otherwise; and
- all obligations of the types previously described of other persons secured by any lien on any of our property, whether or not such obligation is assumed by us.

However, the term "senior indebtedness" will not include:

- our 7.00% Junior Subordinated Deferrable Interest Debentures due 2038;
- · any indebtedness which is by its terms subordinated to, or pari passu with, the subordinated debt securities; or
- any of our obligations to any of our affiliates.

There is no limitation under either indenture on our ability to issue additional senior indebtedness. The senior debt securities constitute senior indebtedness under the subordinated indenture. The subordinated debt securities will rank equally with our other subordinated indebtedness.

Under the subordinated indenture, no payment may be made on the subordinated debt securities, including any redemption or sinking fund payment if:

- any of our senior indebtedness has not been paid when due and any applicable grace period has ended and the default has not been cured or waived or ceased to exist, or
- the maturity of any senior indebtedness has been and remains accelerated as a result of a default.

In the event that we pay or distribute our assets to creditors upon any dissolution, winding-up, liquidation or reorganization of us, whether voluntary or involuntary, the holders of senior indebtedness will be entitled to receive payment in full of the senior indebtedness before the holders of subordinated debt securities are entitled to receive or retain any payment. Until the senior indebtedness is paid in full, any payment or distribution to which holders of subordinated debt securities would be entitled but for the subordination provisions of the subordinated indenture will be made to holders of the senior indebtedness. (Section 14.03 of Subordinated Indenture) If a distribution is made to holders of subordinated debt securities that, due to the subordination provisions, should not have been made to them, those holders of subordinated debt securities are required to pay it over to the holders of the senior indebtedness or their representatives or trustees, as their interests may appear. (Section 14.03 of Subordinated Indenture)

As a result of the subordination provisions contained in the subordinated indenture, in the event of our insolvency, our creditors who are holders of senior indebtedness may recover more, ratably, than the holders of subordinated debt securities.

Minnesota Energy Resources Corporation

#### DESCRIPTION OF COMMON STOCK

The following description of our common stock summarizes all of the material terms and provisions of our common stock. Our restated articles of incorporation and rights agreement are filed as exhibits to the registration statement of which this prospectus is a part and are incorporated by reference into this prospectus.

#### General

We are authorized to issue up to 200,000,000 shares of capital stock consisting of one class only, designated as "common stock" with a par value of \$1.00 per share. As of August 29, 2003, 32,524,201 shares of our common stock were issued and outstanding.

The outstanding shares of our common stock are, and any additional shares which we may offer will be, listed on the New York Stock Exchange under the symbol "WPS."

#### **Dividend And Liquidation Rights**

All shares of our common stock will participate equally with respect to dividends and rank equally upon liquidation, subject to the rights of holders of any prior ranking stock which our shareholders may authorize in the future. In the event of our liquidation, dissolution or winding up, the owners of our common stock are entitled to receive pro rata the assets and funds remaining after satisfaction of all of our creditors and payment of all amounts to which owners of prior ranking stock, if any, then outstanding may be entitled.

### **Voting Rights**

Except as otherwise described in the immediately following paragraphs and under "Certain Statutory and Other Provisions" below, every holder of our common stock has one vote for each share.

Our shareholders do not have cumulative voting rights. As a result, the holders of shares entitled to exercise more than 50% of the voting power of shares entitled to vote, represented at a meeting at which a majority of the shares entitled to vote is represented, are entitled to elect all of the directors to be elected at the meeting. Under our restated articles of incorporation and by-laws, our board of directors is divided into three classes. One class is elected each year for a three-year term.

#### Provisions of Our Restated Articles of Incorporation with Possible Anti-takeover Effects

In addition to the provisions of our restated articles of incorporation and by-laws dividing our board of directors into three classes, certain other provisions of our restated articles of incorporation may have the effect of delaying, deferring or preventing a change in control of our company.

Article 5 of our restated articles of incorporation provides that, subject to the exception discussed below, a director may be removed only for cause by the affirmative vote of shareholders possessing a majority of the voting power of the then outstanding shares of voting stock. As defined in article 5, "cause" exists only if the director whose removal is proposed has been convicted of a felony by a court of competent jurisdiction and such conviction is no longer subject to direct appeal or such director has been adjudged to be liable for negligence or misconduct in the performance of his duty to us in a matter which has a materially adverse effect on our business, and such adjudication is no longer subject to direct appeal. Article 5 also provides for the removal of a director by the shareholders without cause when such removal is recommended by the "requisite vote" of the directors and approved by the affirmative vote of shareholders possessing a majority of the voting power of the then outstanding shares of voting stock. Our restated articles of incorporation define the term "requisite vote" as the affirmative vote of at least two-thirds of the directors then in office plus one director. Unless "cause" is established or removal is recommended by the requisite vote of the directors, a director may not be

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removed from office even if shareholders possessing a majority of the voting power favor such action. Additionally, pursuant to article 5, vacancies on our board of directors, including those resulting from the removal of a director, may be filled for the unexpired portion of the director's term by the majority vote of the remaining members of the board.

Article 5 of our restated articles of incorporation provides that those sections of Article III of our by-laws which set forth the general powers, number, qualifications and classification of directors may be amended or repealed only by the affirmative vote of shareholders possessing at least 75% of the voting power of the then outstanding shares of our common stock generally possessing voting rights in the election of directors, or by the requisite vote of the directors. Article 5 of our articles provides that article 5 may itself be amended or repealed only by the affirmative vote of shareholders possessing at least 75% of the voting power of the then outstanding shares of our common stock generally possessing voting rights in the election of directors.

# Statutory Provisions with Possible Anti-takeover Effects

Section 180.1150 of the Wisconsin Business Corporation Law provides that the voting power of shares of a "resident domestic corporation," which includes our company, which are held by any person holding in excess of 20% of the voting power in the election of directors of the issuing public corporation's shares shall be limited to 10% of the full voting power of such excess shares. This statutory voting restriction will not apply to shares acquired directly from us, to shares acquired in a transaction incident to which our shareholders vote to restore the full voting power of such shares, either before or after the acquisition of the shares, and under certain other circumstances.

Except as may otherwise be provided by law, the required affirmative vote of shareholders of a Wisconsin corporation for certain significant corporate actions, including a merger or share exchange with another corporation, sale of all or substantially all of the corporate property and assets, or voluntary liquidation, is a majority of all the votes entitled to be cast on the transaction by each voting group of outstanding shares entitled to vote on the transaction. Sections 180.1130 through 180.1134 of the Wisconsin Business Corporation Law provide generally that, in addition to the vote otherwise required by law or the restated articles of incorporation of a "resident domestic corporation," business combinations must be approved by (a) the holders of at least 80% of the votes entitled to be cast and (b) two-thirds of the votes entitled to be cast by the corporation's outstanding voting shares owned by persons other than a "significant shareholder" who is a party to the transaction or an affiliate or associate of such significant shareholder unless the business combination satisfies certain adequacy-of-price standards intended to provide a fair price for shares held by disinterested shareholders. In general, these adequacy-of-price standards provide that the abovereferenced vote does not apply if (1) the aggregate amount of the cash and the market value as of the valuation date of consideration other than cash to be received per share by shareholders of the resident domestic corporation in the business combination is at least equal to the highest of (a) the highest per share price received by any person selling common shares of the same class or series from the significant shareholder whether in the transaction in which the person became a significant shareholder or within the two years before the date of the business combination, (b) the market value per share of the same class or series on the date of the commencement of a tender offer initiated by the significant shareholder, on the date on which the person became a significant shareholder or on the date of the first public announcement of the proposed business combination, whichever is higher, or (c) the highest preferential amount per share to which the holder of shares of the class or series of shares is entitled in a voluntary or involuntary liquidation or dissolution of the resident domestic corporation and (2) the consideration to be received by holders of a class or series of outstanding shares is to be in cash or in the same form as the significant shareholder has previously paid for shares of the same class or series. Section 180.1130 defines "business combination" to include, subject to certain exceptions, a merger or share exchange of the resident domestic corporation or any of its subsidiaries with, or the sale or other

disposition of substantially all assets of the resident domestic corporation to, any significant shareholder or affiliate thereof. The statute defines "significant shareholder" generally to mean a person that is the beneficial owner of 10% or more of the voting power of the outstanding voting shares of the resident domestic corporation.

Sections 180.1140 through 180.1145 of the Wisconsin Business Corporation Law provides that a "resident domestic corporation," which includes our company, may not engage in a "business combination" with an "interested stockholder" within three years after the date on which the interested stockholder acquired his or her 10% or greater interest, unless the corporation's board of directors approved the business combination, or the acquisition of the 10% or greater interest, before the stock acquisition date. The statute defines "interested stockholder" as a person beneficially owning 10% or more of the aggregate voting power of the stock of such corporation. If the interested stockholder fails to obtain such approval by the board of directors, then even after the three-year period, the interested stockholder may complete a business combination with the corporation only with the approval of the holders of a majority of the voting stock not beneficially owned by the interested stockholder, unless the combination satisfies certain adequacy-of-price standards intended to provide a fair price for shares held by non-interested shareholders.

Section 196.795 of the Wisconsin statutes applies to holding companies of Wisconsin public utilities, i.e., companies owning beneficially 5% or more of the voting securities of entities owning, operating, managing or controlling a plant or equipment in the state of Wisconsin for the production, transmission, delivery or furnishing of heat, light, water or power directly or indirectly to or for the public. The statute states that no person may hold or acquire directly or indirectly more than 10% of the outstanding voting securities of a public utility holding company with the unconditional power to vote such securities unless the Public Service Commission of Wisconsin determines, after investigation and an opportunity for hearing, that such holding or acquisition is in the best interests of utility customers, investors and the public. Section 196.795 of the Wisconsin statutes applies to our company.

The sections of the Wisconsin law described in the preceding paragraphs and certain provisions of our articles and by-laws, could have the effect, among others, of discouraging takeover proposals for our company or impeding a business combination between us and one of our major shareholders.

#### Preemptive Rights; Common Stock Purchase Rights

No holder of our common stock has any preemptive or subscription rights to acquire shares of our common stock except for the common stock purchase rights attached to each share of our common stock.

On December 12, 1996, our board of directors approved the issuance to shareholders as of December 16, 1996, of a dividend of one right for each outstanding share of our common stock. Rights also attach to shares of our common stock issued after that date. A right will attach to each share of our common stock which we may offer pursuant to this prospectus and a prospectus supplement. These rights are not presently exercisable, but ten days after a person or group acquires 15% or more of our common stock or ten business days (subject to extension) after a person or group announces a tender offer to acquire at least 15% of our common stock, the rights will become exercisable. These rights will each holder of our common stock to purchase one share of our authorized but unissued common stock for each right. The exercise price of each right is \$85. Upon the acquisition by any person or group of 15% or more of our common stock, each right, other than rights held by an acquiring party, will entitle the holder to purchase, at the exercise price, shares of our common stock having a market value of two times the exercise price. The agreement setting forth the terms of the rights excludes from its effect the inadvertent acquisition of 15% or more of our common stock, provided there is prompt divestment to less than 15%. We may redeem the rights or may, under certain circumstances, exchange the rights for shares of our common stock, all as provided and subject to the

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limitations set forth in the agreement setting forth the terms of the rights; otherwise, such rights expire on December 11, 2006.

The rights have anti-takeover effects. The rights will cause substantial dilution to a person who attempts to acquire control of our company without the prior approval of our board of directors. The rights will not affect a transaction approved by our board of directors, because our board has the power to redeem the rights in connection with a transaction that it approves.

#### Conversion Rights, Redemption Provisions and Sinking Fund Provisions.

Our common stock is not convertible, is not redeemable and has no sinking fund.

# Liability to Further Calls or to Assessment

The shares of our common stock which we may offer pursuant to this prospectus and a prospectus supplement will, upon payment of the purchase price, be fully-paid and non-assessable by us, except for certain statutory personal liability which may be imposed upon shareholders under Section 180.0622(2)(b) of the Wisconsin Business Corporation Law. The substantially identical predecessor to that statute has been judicially interpreted to mean that shareholders of a Wisconsin corporation are subject to personal liability, up to an amount equal to the consideration for which their shares were issued (instead of the aggregate par value in the case of shares with par value, as the statute states), for all debts owing to employees of the corporation for services performed for the corporation, but not exceeding six months service in any one case.

# Restriction on Dividends Payable by Wisconsin Public Service Corporation

We are a holding company, and our ability to pay dividends is largely dependent upon the ability of our subsidiaries to pay dividends to us. The Public Service Commission of Wisconsin has by order restricted our principal subsidiary Wisconsin Public Service Corporation to paying normal dividends on its common stock of no more than 109% of the previous year's common stock dividend. The Public Service Commission of Wisconsin also requires Wisconsin Public Service Corporation to maintain a capital structure (i.e., the percentages by which each of common stock, preferred stock and debt constitute the total capital invested in a utility) which has a common equity range of 54% to 58%. Each of these limitations may be modified by a future order of the Public Service Commission of Wisconsin. Our right to receive dividends on the common stock of Wisconsin Public Service Corporation is also subject to the prior rights of that corporation's preferred shareholders and to provisions in that corporation's restated articles of incorporation. The provisions in the restated articles of Wisconsin Public Service Corporation provide (1) that if Wisconsin Public Service Corporation's "capitalization ratio" (namely, the ratio of the capital represented by Wisconsin Public Service Corporation's common stock, including premiums on such common stock, plus the surplus accounts of Wisconsin Public Service Corporation to the total capital and surplus accounts of Wisconsin Public Service Corporation is 25% or greater, then it may not make any dividend payments that would reduce the capitalization ratio below 25% unless there is no breach of (2) or (3) below; (2) that if the capitalization ratio is 20% or more, but less than 25%, then Wisconsin Public Service Corporation may make dividend payments that do not exceed 75% of its prior twelve month net income; or (3) that if the capitalization ratio is less than 20%, then Wisconsin Public Service Corporation may make dividend payments that do not exceed 50% of its prior twelve month net income

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- · through underwriters,
- through agents, or
- directly to a limited number of institutional purchasers or to a single purchaser.

As required by applicable law, these underwriters or agents will be registered broker-dealers or associated persons of registered broker-dealers acting in that capacity. We will describe the plan of distribution for any particular offering of the securities in the corresponding prospectus supplement, in accordance with applicable law.

The prospectus supplement will set forth the terms of the offering of the securities, including the following:

- the name or names of any underwriters;
- the purchase price and the proceeds we will receive from the sale;
- · any underwriting discounts and other items constituting underwriters' compensation;
- any initial public offering price and any discounts or concessions allowed or reallowed or paid to dealers; and
- any securities exchanges on which the securities of the series may be listed.

If underwriters are used in the sale, the securities will be acquired by the underwriters for their own account and may be resold from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. The securities may be either offered to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate. The obligations of the underwriters to purchase securities will be subject to conditions precedent and the underwriters will be obligated to purchase all the securities of a series if any are purchased. Any initial public offering price and any discounts or concessions allowed or reallowed or paid to dealers may be changed from time to time.

We may sell Securities directly or through agents designated by us from time to time. The applicable prospectus supplement will name any agent involved in the offer or sale of the securities, and will set forth any commissions payable by us to that agent. Unless otherwise indicated in the prospectus supplement, any agent will be acting on a best efforts basis for the period of its appointment.

Agents and underwriters may be entitled to indemnification by us against civil liabilities arising out of this prospectus, including liabilities under the Securities Act of 1933, or to contribution with respect to payments which the agents or underwriters may be required to make relating to those liabilities. Agents and underwriters may be customers of, engage in transactions with, or perform services for, us in the ordinary course of business.

Each series of debt securities will be a new issue of securities with no established trading market. Any underwriter may make a market in the securities, but will not be obligated to do so and may discontinue any market making at any time without notice. No assurance can be given as to the liquidity of the trading market for any securities.

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# LEGAL MATTERS

Foley & Lardner, 777 East Wisconsin Avenue, Milwaukee, Wisconsin 53202, our counsel, will pass upon the validity of the debt securities and common stock with attached common stock purchase rights offered pursuant to this prospectus and the prospectus supplements.

# **EXPERTS**

The financial statements as of the years ended December 31, 2002 and 2001 and for each of the three years in the period ended December 31, 2002 and the related financial statement schedules incorporated in this prospectus in the registration statement by reference from our Current Report on Form 8-K dated August 1, 2003 (which report expresses an unqualified opinion and includes an explanatory paragraph relating to the adoption of EITF Issue 02-03, "Issues Involved in Accounting for Derivative Contracts Held for Trading Purposes and Contracts Involved in Energy Trading and Risk Management Activities") have been audited by Deloitte & Touche LLP, independent auditors, as stated in their report, which is incorporated herein by reference and have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

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3,500,000 Shares

# WPS RESOURCES CORPORATION

**Common Stock** 



# A.G. Edwards & Sons, Inc.

# Robert W. Baird & Co.

# Edward D. Jones & Co., L.P.

The Williams Capital Group, L.P.

The date of this prospectus supplement is November 19, 2003.

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# Integrys Holding 424B5 11/16/2005

**Section 1: 424B5 (424B5)** 

QuickLinks -- Click here to rapidly navigate through this document

Filed pursuant to Rule 424B5 File No. 333-124446

PROSPECTUS SUPPLEMENT (To Prospectus Dated June 8, 2005)

4,600,000 shares



# WPS RESOURCES CORPORATION

# Common shares

We are selling 1.9 million shares of our common stock. J.P. Morgan Securities Inc. or one of its affiliates is, at our request, borrowing and selling 2.7 million shares of our common stock in connection with a forward sale agreement between us and an affiliate of J.P. Morgan Securities Inc., whom we refer to as the forward purchaser.

We will not receive any proceeds from the sale of shares of common stock by the forward purchaser. We expect to settle the forward sale agreement and receive proceeds, subject to certain adjustments, from the sale of those shares only upon future stock settlements of the forward sale agreement on a date or dates specified by us within approximately one year from the date of this prospectus supplement. If we elect to settle the forward sale agreement in cash, we may not receive any proceeds or we may owe cash to the forward purchaser. See "Underwriting—Forward sale agreement".

Our common stock is listed on the New York Stock Exchange under the symbol "WPS". On November 15, 2005, the last sale price of our common stock, as reported in the New York Stock Exchange, was \$53.70 per share.

	Per Share	Total
Public Offering Price	\$ 53.700	\$ 247,020,000
Underwriting discounts and commissions	\$ 1.745	\$ 8,027,000
Proceeds to us, before expenses <sup>(1)</sup>	\$ 51.955	\$ 238,993,000

<sup>(1)</sup> We will receive estimated net proceeds, before expenses, of \$98,714,500 upon settlement of our offering of common stock and expect to receive the proceeds upon physical settlement of the forward sale agreement, subject to certain adjustments pursuant to the forward sale agreement, which will be within approximately one year from the date of this prospectus supplement. For purposes of calculating the aggregate net proceeds, we have assumed that the forward sale agreement is physically settled based upon the aggregate initial forward sale price of \$51.955. See "Underwriting—Forward sale agreement".

We have granted the underwriters an option to purchase up to an additional 690,000 shares of our common stock at the public offering price, less the underwriting discounts and commissions, within 30 days from the date of this prospectus supplement to cover over-allotments.

See "Risk factors" beginning on page S-9 for a discussion of certain risk factors that prospective investors should consider before investing in our common stock.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy of this prospectus supplement or the accompanying prospectus. Any representation to the contrary is a criminal offense.

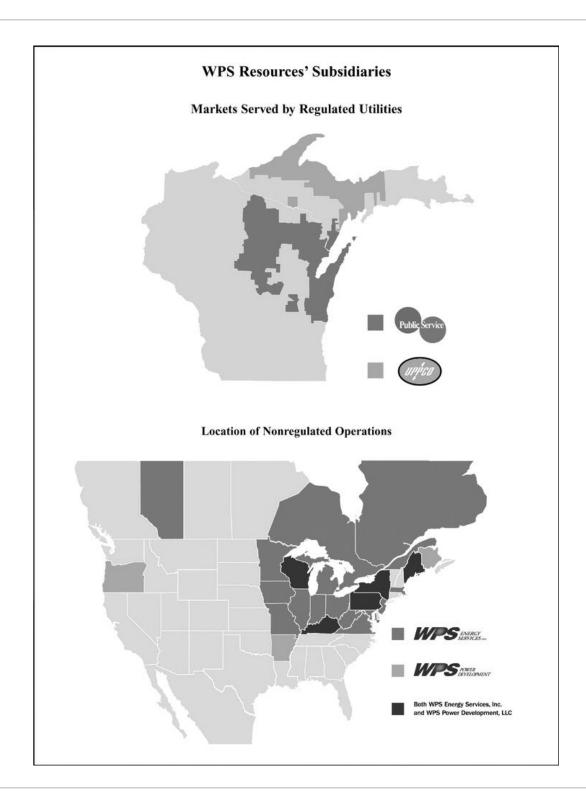
The underwriters expect to deliver the shares of common stock to purchasers on or about November 21, 2005.

Joint Book-Running Managers

JPMorgan
Sole Structuring Agent

**Banc of America Securities LLC** 

The date of this prospectus supplement is November 15, 2005.



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# Important notice about information in this prospectus supplement and the accompanying prospectus

You should rely only on the information contained in this prospectus supplement, the accompanying prospectus and the documents we have incorporated by reference. We have not authorized anyone to provide you with different information. We are not making an offer of the shares of common stock in any state which does not permit their offer or sale. You should not assume that the information provided by this prospectus supplement or the accompanying prospectus, or the information we have previously filed with the Securities and Exchange Commission that we incorporate by reference, is accurate as of any date other than the date thereof. If information in this prospectus supplement updates information in the accompanying prospectus, this prospectus supplement will apply and will supersede that information in the prospectus. For purposes of this prospectus supplement and the accompanying prospectus, unless the context otherwise indicates, when we refer to "us," "we," "our," "ours," or the "Company" we are describing WPS Resources Corporation, including, as appropriate, its subsidiaries.

**Summary** 

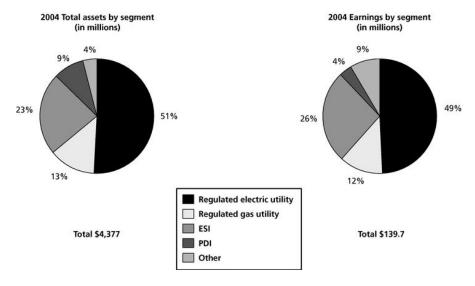
i

This summary provides an overview of the Company and its subsidiaries and certain key aspects of the offering. This summary is not complete and does not contain all of the information you should consider before purchasing our common stock. Before purchasing our common stock, you should read carefully all of the information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus, including the "Risk factors" section.

#### The Company

We are based in Green Bay, Wisconsin and were incorporated in Wisconsin in 1993 as a holding company for regulated utility and nonregulated business units. Our principal subsidiaries are Wisconsin Public Service Corporation ("WPSC"), a regulated electric and natural gas utility that generates and distributes energy in northeastern Wisconsin and an adjacent portion of the Upper Peninsula of Michigan; Upper Peninsula Power Company ("UPPCO"), a regulated electric utility operating in the northern half of Michigan's Upper Peninsula; WPS Energy Services, Inc. ("ESI"), a nonregulated energy marketing and services company; WPS Power Development, LLC ("PDI"), a nonregulated electric generation company; and WPS Investments, LLC, a nonregulated company that holds, as its primary assets, our ownership interests in American Transmission Company, LLC and Guardian Pipeline, LLC. We recently agreed to purchase the regulated Minnesota and Michigan natural gas distribution operations of Aquila, Inc., a Kansas City-based energy holding company. The details of the pending Aquila acquisitions are discussed below in the "Recent developments" section of this prospectus supplement summary.

Percentages of our consolidated earnings for the year ended December 31, 2004 and total assets as of December 31, 2004, by segment, are presented below:



Our principal executive offices are located at 700 North Adams Street, P.O. Box 19001, Green Bay, Wisconsin 54307-9001. Our telephone number is (800) 450-7260.

Pending acquisition of Aquila's Minnesota and Michigan natural gas distribution operations

On September 21, 2005, two newly formed, wholly owned, direct subsidiaries of the Company, WPS Minnesota Utilities, Inc. and WPS Michigan Utilities, Inc., each entered into an Asset Purchase Agreement with Aquila, Inc. to collectively acquire Aquila's natural gas distribution operations in Minnesota and Michigan for approximately \$558 million subject to certain closing and post-closing adjustments, including net plant and certain working capital adjustments. Each transaction requires the approval of the regulatory commission of the state in which the assets are located and is also subject to certain other customary conditions and approvals. On November 10, 2005, the Michigan Public Service Commission approved the acquisition of the Michigan natural gas distribution operations by WPS Michigan Utilities, Inc. We expect that all conditions precedent to closing, including final resolution of regulatory proceedings, can be met so that closing on both transactions can occur within the first six months of 2006.

We believe that these acquisitions will:

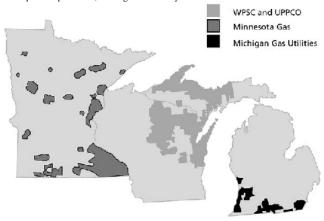
- significantly increase our regulated operations in growing markets;
- complement our existing Midwest business from a geographical and operational standpoint;
- generate a significant source of stable earnings; and
- · improve operational efficiency and reliability, benefiting customers in the communities we serve.

The Minnesota natural gas assets provide gas distribution service to about 200,000 customers throughout the state in 165 cities and communities including Grand Rapids, Pine City, Rochester and Dakota County. Annual natural gas throughput is approximately 76.1 billion cubic feet per year, roughly equal to that of our existing regulated natural gas operations. The Minnesota natural gas distribution operations operate under a cost-of-service environment, and are currently allowed an 11.71% authorized return on equity on a 50% equity component of the regulatory capital structure.

The Michigan natural gas assets provide gas distribution service to about 161,000 customers, mainly in southern Michigan in 147 cities and communities including Otsego, Grand Haven and Monroe. Annual natural gas throughput is approximately 36 billion cubic feet per year. Like the Minnesota assets, the Michigan assets also operate under a cost-of-service environment and are currently allowed an 11.4% authorized return on equity on a 45% equity component of the regulatory capital structure.

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Upon completion of the Aquila acquisitions, our regulated utility markets will consist of the following service territories:



Assuming we had purchased Aquila's Minnesota and Michigan natural gas distribution operations as of December 31, 2004, our regulated gas utilities would have served roughly 666,000 natural gas customers with annual natural gas throughput of 189 billion cubic feet. After taking into account WPSC's and UPPCO's existing 473,000 electric customers, we would have served over 1,139,000 regulated gas and electric customers.

# **Business overview**

Wisconsin Public Service Corporation

WPSC is a regulated electric and natural gas utility serving an 11,000 square mile service territory in northeastern Wisconsin and an adjacent portion of the Upper Peninsula of Michigan. It began operations in 1883. At December 31, 2004, WPSC served 421,159 retail electric customers and 305,648 retail natural gas customers. WPSC provides wholesale electric service to various customers, including municipal utilities, electric cooperatives, energy marketers, other investor-owned utilities and municipal joint action agencies. Total revenues in 2004 consisted of 87% retail sales and 13% wholesale sales.

As of December 31, 2004, WPSC owned electric generation facilities with a total rated capacity of approximately 2,200 MW. In 2005, WPSC sold its interest in the Kewaunee nuclear power plant. Based on our percentage ownership of the Kewaunee nuclear power plant, our portion of the total plant capacity was approximately 338 MW. We have contracted for the same portion of total plant capacity from the Kewaunee nuclear power plant under a purchase power agreement through 2013. WPSC also owned 122 electric distribution substations and 20,897 miles of electric distribution lines. Natural gas properties included approximately 7,483 miles of natural gas main, 86 gate and city regulator stations and 284,104 lateral services.

UPPCO is a regulated electric utility serving a 4,500 square mile area of Michigan's Upper Peninsula. It began operations in 1884. At December 31, 2004, UPPCO provided great in the service to 51,905 customers and wholesale electric service to 36 customers. Total revenues in 2004 consisted of 83% retail sales and 17% wholesale sales.

At December 31, 2004, UPPCO owned electric generation facilities with a total rated capacity of approximately 80 MW and 3,070 miles of electric distribution lines.

WPS Energy Services, Inc.

ESI is a nonregulated indirect subsidiary that offers nonregulated natural gas, electric and alternate fuel supplies, as well as energy management and consulting services, to retail and wholesale customers primarily in the northeastern quadrant of the United States and eastern portions of Canada. It was established in 1994. Most of its revenues are derived from sales of electricity and natural gas. ESI had net income of \$36.7 million in 2004 and assets of \$1.0 billion at December 31, 2004.

WPS Power Development, LLC

PDI is a nonregulated indirect subsidiary that owns and operates generation facilities in the United States and Canada and sells energy and capacity primarily to or through ESI. It was established in 1995. PDI currently owns, directly or through its subsidiaries, 830 MW of electric generation capacity in Wisconsin, Maine, Pennsylvania and New York in the United States and New Brunswick in Canada; a 23.3% interest in a synthetic fuel processing facility located in Kentucky; and steam production facilities located in Arkansas and Oregon. PDI had net income of \$5.0 million in 2004 and assets of \$380.5 million at December 31, 2004.

WPS Investments, LLC

WPS Investments is a nonregulated subsidiary that holds our 28.2% interest in American Transmission Company, LLC and 33.3% interest in Guardian Pipeline, LLC. It was established in 2000. American Transmission Company, LLC is a multi-state transmission-only utility providing electric transmission service in an area from the Upper Peninsula of Michigan throughout the eastern half of Wisconsin and into portions of Illinois. American Transmission Company, LLC has 8,900 miles of high-voltage transmission lines and 460 substations which provide communities with access to local and regional energy sources. Guardian Pipeline, LLC owns and operates a 142-mile, 36-inch gas transmission pipeline extending from Joliet, Illinois to Ixonia, Wisconsin.

Since December 31, 2004, WPS Investments' ownership interest in American Transmission Company, LLC has increased from 22.6% to 28.2% at September 30, 2005, and will continue to increase as WPS Investments continues to fund the construction of the Wausau, Wisconsin to Duluth, Minnesota transmission line and receive equity interest in American Transmission Company, LLC as consideration for such funding. Allete, Inc. has an option to fund a portion of this line and intends to fund \$60 million by the end of 2006. This would ultimately reduce the amount of additional equity that we have the right to acquire in American Transmission Company, LLC.

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#### Our strategy

The primary focus of our business plan is the creation of long-term value for our shareholders (through growth, operational excellence and asset management) and the continued emphasis on reliable, competitively priced and environmentally sound energy services for our customers. We seek a complementary portfolio of utility and nonregulated growth, but we are focusing on regulated growth. The essential components of our business plan are as follows:

Maintain a strong utility base

WPSC is expanding its generation fleet in order to meet growing electric demand and ensure the continued reliability of energy services. Construction is in-process on the 500 MW, coal-fired Weston 4 base-load power plant near Wausau, Wisconsin. In 2004, WPSC entered into an agreement with Dairyland Power Cooperative that allows Dairyland Power Cooperative to acquire a 30% undivided interest in the Weston 4 electric generation plant. WPSC anticipates closing on the agreement with Dairyland Power Cooperative by the end of 2005, at which time Dairyland Power Cooperative will remit payment to WPSC in an amount equal to 30% of the total costs already incurred by WPSC related to Weston 4 and thereafter will fund 30% of the future costs of Weston 4's construction, operation (including administrative and indirect costs), and fuel and maintenance costs.

We are currently seeking to expand our utility base through the acquisition of Aquila's natural gas distribution operations. See "Recent developments."

In 2004, WPSC signed power sales contracts with Consolidated Water Power through December 31, 2017, and Wisconsin Public Power Inc. through April 30, 2021, to support growth beyond the normal utility growth rate.

Strategically grow nonregulated businesses

ESI seeks to grow its electric and natural gas business, targeting growth in the northeastern United States and adjacent portions of Canada (through strategic acquisitions, market penetration of existing businesses and new product offerings), the areas in which ESI has the most market expertise. The acquisition of Advantage Energy in July 2004 provided ESI with enhanced opportunities to compete in the New York market and had a positive impact on ESI's margin in the first nine months of 2005. PDI focuses on optimizing the operational efficiency of its existing portfolio of assets, pursuing compatible power development projects and acquiring generation assets that strategically fit with ESI's customer base and market expertise.

Integrate resources to provide operational excellence

We are committed to integrating the resources of our business units (in accordance with any applicable regulatory restrictions) by leveraging their individual capabilities and expertise across the Company. Since August 2004, we have had one executive management team overseeing the operations of both ESI and PDI. ESI manages the operation of PDI's merchant generation fleet to reduce market price risk through the use of various financial instruments (such as forwards, futures, options and swaps) to provide more predictable revenues and margin. ESI also locks in future fuel costs for the period of fixed sales agreements, thereby locking in future margins.

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Place strong emphasis on asset management

Under our asset management strategy, we seek to acquire and dispose of assets in a manner that enhances our earnings capability. We seek to acquire assets that compliment our existing businesses and strategy, such as the acquisition of the natural gas distribution operations of Aquila and the acquisition of Advantage Energy.

Minnesota Energy Resources Corporation
Our asset management strategy also calls for the evaluation and disposition of assets, including plants and entire business units, that are no longer required for operations, and the redeployment of these proceeds into more profitable investments. An example of this strategy is the sale of Sunbury's allocated emission allowances completed in May 2005 for \$109.9 million. The sale of the emission allowances enabled Sunbury to eliminate its non-recourse debt obligation, and provided PDI with more time to consider various alternatives for the Sunbury plant. WPSC also sold its interest in the Kewaunee nuclear power plant in July 2005 allowing it to transfer financial and operational risk from its electric customers and our shareholders to a subsidiary of Dominion Resources, Inc., to achieve greater certainty of future energy costs through a purchase power agreement, and to return the non-qualified decommissioning funds to electric customers. The proceeds from the sale have been redeployed to fund the construction of other utility projects such as the Weston 4 generation facility.

Focus on maintaining a strong investment grade profile and high level of liquidity

Our senior unsecured debt ratings are "A" from Standard & Poor's Rating Group and "A1" from Moody's Investor Services, Inc. With the announcement of our proposed acquisition of Aquila's Minnesota and Michigan natural gas distribution operations, S&P placed our credit ratings on CreditWatch with negative implications and Moody's affirmed our ratings but changed its rating outlook from stable to negative. WPSC's senior secured debt ratings are "A+" from Standard & Poor's Rating Group and "Aa2" from Moody's Investor Services, Inc. We will continue to combine a disciplined approach to capital spending with our continuous focus on improving operating margins to optimize our cash flow generation. Additionally, we seek to maintain our credit ratios at levels that support our current credit ratings and allow us to respond to the capital needs of our operating businesses.

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# **Summary consolidated financial information**

The following table sets forth our selected financial information on a consolidated basis. You should read the following table in conjunction with the consolidated financial statements and notes included in our Annual Report on Form 10-K for the year ended December 31, 2004, as updated by our Current Report on Form 8-K dated August 25, 2005, and in our Quarterly Report on Form 10-Q for the quarter ended September 30, 2005, all of which are incorporated by reference into this prospectus supplement and the accompanying prospectus. The data presented for the years ended December 31 is derived from audited financial statements. Amounts presented are in millions, except per share amounts.

	N	line Months Ended September 30,		Years E	Ended December 31,
	2005	2004	2004	2003	2002
	(unaudit	ed)			
Income Statement Data:					
Operating revenues	\$4,571.7	\$3,538.4	\$4,950.8	\$4,402.5	\$1.548.3
Operating income	\$172.2	\$126.3	\$169.0	\$114.2	\$151.1
Income available for common shareholders	\$138.0	\$82.0	\$139.7	\$94.7	\$109.4
Average number of shares of common stock outstanding	38.0	37.2	37.4	33.0	31.7
Basic earnings per average share of common stock	\$3.63	\$2.20	\$3.74	\$2.87	\$3.45
Diluted earnings per average share of common stock	\$3.60	\$2.19	\$3.72	\$2.85	\$3.42
Dividends per share of common stock	\$1.68	\$1.65	\$2.20	\$2.16	\$2.12
	_	2005	At September 30,	2004	At December 31,
		2005	2004	2004	2003
		(unaudit	ed)		
Balance Sheet Data:					
Total assets		\$5,478.5	\$4,334.8	\$4,376.8	\$4,296.5
Property, plant & equipment, net Capitalization:		2,056.0	2,001.2 <sup>(1)</sup>	2,076.5	1,900.2
Long-term debt, including current portion		873.3	875.1	872.4	928.5
Note payable to deferred stock trust				0,=	51.5
Preferred stock of subsidiary with no mandatory redemption		51.1	51.1	51.1	51.1
Common stockholders' equity		1,165.4	1,055.7	1,091.8	1,003.2
Total capitalization		\$2,089.8	\$1,981.9	\$2,015.3	\$2,034.3

(1) Includes the assets of Sunbury, which as of September 30, 2004 were included in assets held for sale

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# The offering

Minnesota Energy Resources Corporation	Page 61 of 141
Common stock offered by us	1.9 million shares
Common stock offered by the forward purchaser	2.7 million shares
Common stock outstanding after this offering, but excluding any shares of	
common stock to be issued upon settlement of the forward sale agreement(1)	39,994,761 shares
Common stock outstanding assuming physical settlement of the forward sale	
agreement <sup>(1)</sup>	42,694,761 shares
Current Common Stock Dividend Rate	\$0.565 per quarter
Range of High and Low Sales Prices per Share of Common Stock (January 1, 2005	
through November 15, 2005)	\$60.00 - \$47.67
New York Stock Exchange Symbol	WPS
Use of Proceeds	We will use the net proceeds that we receive from the sale of common stock offered by us to reduce short-term debt, to fund equity to subsidiary companies and for general corporate purposes.
Use of Proceeds upon physical settlement of the forward sale agreement	We will use any net proceeds that we receive upon physical settlement of the forward sale agreement to partially finance our proposed acquisition of the Minnesota and Michigan natural gas distribution operations of Aquila and for general corporate purposes. For more information, see "Recent developments" and "Use of proceeds."

- (1) The number of shares of common stock outstanding (a) after the offering, but excluding any shares of common stock to be issued upon physical settlement of the forward sale agreement and (b) after the offering and physical settlement of the forward sale agreement is based on 38,094,761 shares outstanding as of October 31, 2005. The number of shares of common stock offered and to be outstanding does not include:
  - 690,000 additional shares of common stock that the underwriters have an option to purchase from us within 30 days of the date of this prospectus supplement; and
  - · shares issued under our Stock Investment Plan or our employee or director benefit or compensation plans after October 31, 2005

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### Risk factors

You should carefully consider the following risk factors, as well as the other information included or incorporated by reference in this prospectus supplement and the accompanying prospectus, before making an investment in our common stock. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known or that we currently believe to be immaterial may also adversely affect us.

We may not successfully integrate pending or future acquisitions into our operations or otherwise achieve the anticipated benefits of those acquisitions.

As part of our growth strategy, we continue to pursue a disciplined acquisition strategy. While we expect to identify cost savings and growth opportunities before we acquire companies or assets, we may not be able to achieve these anticipated benefits due to, among other things:

- delays or difficulties in completing the integration of acquired companies or assets;
- higher than expected costs or a need to allocate additional resources to manage unexpected operating difficulties;
- parameters imposed or delays caused by regulatory agencies;
- reliance on inaccurate assumptions in evaluating the expected benefits of a given acquisition;
- inability to retain key employees or customers of acquired companies; and
- assumption of liabilities not identified in the due diligence process.

These risks apply to our pending acquisition of Aquila's Minnesota and Michigan natural gas distribution operations.

#### We may not complete construction projects within estimated project costs.

WPSC is currently in the process of constructing the 500 MW Weston 4 base-load generation facility at an estimated cost of \$779 million (including the unit trains). It is also considering the possible construction of an additional generation facility in the future, which is not yet sited. These and other projects also may be subject to joint ownership or operation agreements, completion of which will impact estimated project costs.

These are very large and complex construction projects, subject to numerous unpredictable events that could affect our ability to timely complete construction of these projects within estimated costs. We may not be able to meet these construction estimates due to, among other things:

- fluctuating or unanticipated construction costs;
- supply delays;
- legal claims; and
- environmental regulation.

# We may not utilize Section 29 synthetic fuel production tax credits.

We have significantly reduced our consolidated federal income tax liability for the past several years through tax credits available to us under Section 29 of the Internal Revenue Code for the production and sale of solid synthetic fuel from coal. We have not fully utilized Section 29 tax credits previously available to us. Our ability to fully utilize the Section 29 tax credits available to us in connection with our interest in the production facility will depend on whether the amount of our federal taxable income and related income tax liability is sufficient to permit

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Any disallowance of some or all of those tax credits would materially affect our tax obligations and may also result in a reduction of the level of synthetic fuel producing the likelihood and amount of future payments from other participants in the project. Future tax legislation and Internal Revenue Service review may also affect the value of the credits and of our share of the facility. At this time, we cannot predict the potential for or the outcome of any Internal Revenue Service review.

#### We may not earn Section 29 synthetic fuel production tax credits or match related hedge earnings to production due to increasing oil prices.

The Internal Revenue Code provides section 29 tax credits based on the price of oil. As the price of oil rises above certain thresholds, the allowable credit decreases. If the price of oil rises high enough, the credit is eliminated. In order to manage exposure to the risk that an increase in oil prices could reduce or eliminate the recognizable amount of Section 29 credits, PDI has entered into a series of derivative contracts (options) covering a specified number of barrels of oil. These derivatives mitigate Section 29 tax credit exposure related to rising oil prices in 2005, 2006 and 2007. However, the accounting period in which gains on these hedge agreements are recognized may not coincide with the accounting period projected for recognition of tax credits. As a result, if the price of oil rises above the Internal Revenue Code thresholds, income may be recognized in periods other than the period for which the section 29 tax credits are projected.

#### Our operations are subject to risks beyond our control, including but not limited to weather, terrorist attacks or related acts of war.

Our revenues are affected by the demand for electricity and natural gas. That demand can vary greatly based upon:

- · weather conditions, seasonality and temperature extremes;
- fluctuations in economic activity and growth in our regulated service areas, as well as the northeast quadrant of the United States and adjacent portion of Canada; and
- the amount of additional energy available from current or new competitors.

Weather conditions directly influence the demand for electricity and natural gas and affect the price of energy commodities.

In addition, the cost of repairing damage to our facilities due to storms, natural disasters, wars, terrorist acts and other catastrophic events, in excess of reserves established for such repairs, may adversely impact our results of operations, financial condition and cash flows. The occurrence or risk of occurrence of future terrorist activity and the high cost or potential unavailability of insurance to cover such terrorist activity may impact our results of operations and financial condition in unpredictable ways. These actions could also result in disruptions of power and fuel markets. In addition, our natural gas distribution system and pipelines could be directly or indirectly harmed by future terrorist activity.

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#### Costs of environmental compliance, liabilities, fines, penalties and litigation could exceed our estimates.

Compliance with current and future federal and state environmental laws and regulations may result in increased capital, operating and other costs, including remediation and containment expenses and monitoring obligations. Management cannot predict with certainty the amount and timing of all future expenditures (including the potential or magnitude of fines or penalties) related to environmental matters because of the difficulty of estimating clean-up and compliance costs, and the possibility that changes will be made to the current environmental laws and regulations. Any future changes in the interpretation of the Clean Air Act's New Source Review provisions could potentially increase our operating and maintenance costs substantially.

On March 15, 2005, the United States Environmental Protection Agency adopted the Clean Air Mercury Rule, which is intended to reduce mercury emissions from coal-fired generation plants. The United States Environmental Protection Agency has also issued the Clean Air Interstate Rule requiring reductions of sulfur dioxide and nitrogen oxide emissions. In addition, the possibility exists of future regulation of greenhouse gases emitted from generation facilities. We cannot be certain how these rules will affect us. There is also uncertainty in quantifying liabilities under environmental laws that impose joint and several liabilities on all potentially responsible parties.

Citizen groups that feel there are compliance issues not sufficiently enforced by environmental regulatory agencies may bring citizen enforcement actions against us. Such actions could seek penalties, injunctive relief and costs of litigation. The Sierra Club and Clean Wisconsin recently filed a complaint in the United States District Court, Eastern District of Wisconsin, claiming that WPSC's Pulliam facility violated provisions of its air permit.

In 2004, the Sierra Club filed a petition challenging the air permit related to the Weston 4 electric generation plant currently under construction. A decision on the suit is anticipated in January 2006. If the decision requires modifications to the air permit, construction delays and/or increased construction costs could result.

# Any change in our ability to sell electricity generated from our nonregulated facilities at market based rates may impact earnings.

The Federal Energy Regulatory Commission has authorized us to sell generation from our nonregulated facilities at market prices. The Federal Energy Regulatory Commission retains the authority to modify or withdraw our market based rate authority. If the Federal Energy Regulatory Commission determines that the market is not workably competitive, that we possess market power or that we are not charging just and reasonable rates, it may require our nonregulated subsidiaries to sell power at a price based upon the costs incurred in producing the power. Our revenues and profit margins may be negatively affected by any reduction by the Federal Energy Regulatory Commission of the rates we may receive.

# Fluctuating commodity prices may reduce regulated and nonregulated energy margins.

Our regulated energy margins are directly affected by commodity costs related to coal, natural gas and other fuels used in the electric generation process. The commodity price of market purchases of electricity also directly affects our regulated energy margins.

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Higher commodity prices will increase energy prices and may impact customer demand for energy in the nonregulated market and increase counter party risk. This may stress margins at our nonregulated subsidiaries.

PDI and ESI may experience increased expenses, including interest costs and uncollectibles, higher working capital requirements and possibly some reduction in volumes sold as a result of any increase in the cost of fuel or purchased power. If market prices for electric energy decline below the cost of production at our nonregulated facilities, these units may be temporarily shut down and alternative sources of energy found to meet energy commitments.

We are subject to changes in government regulation, which may have a negative impact on our business, financial position and results of operations.

Docket No. G011/GR-17-563

We are subject to comprehensive regulation by several federal and state regulatory agencies, which significantly influences our operating environment and may affected with the recover costs from utility customers. In particular, the Public Service Commission of Wisconsin, Michigan Public Service Commission, Federal Energy Regulatory Commission, Securities and Exchange Commission, United States Environmental Protection Agency, and the Wisconsin Department of Natural Resources regulate many aspects of our utility operations, including siting and construction of facilities, conditions of service, the issuance of securities, and the rates that we can charge customers. We are required to have numerous permits, approvals and certificates from these agencies to operate our business. Our acquisition of Aquila's natural gas distribution operations in Minnesota and Michigan is subject to the approval of the regulatory commission of each state in which the assets are located.

The rates our regulated utilities are allowed to charge for their retail and wholesale services are some of the most important items influencing our business, financial position, results of operations and liquidity. WPSC currently has an application filed with the Public Service Commission of Wisconsin for increases in retail electric and natural gas rates. A decision on the application is expected to be effective January 1, 2006.

We are unable to predict the impact on our business and operating results from the future regulatory activities of any of these agencies. Changes in regulations or the imposition of additional regulations may require us to incur additional expenses or change business operations, which may have an adverse impact on our results of operations. In addition, federal regulatory reforms may produce unexpected changes and costs in the public utility industry.

#### We are subject to provisions that can limit merger and acquisition opportunities for our shareholders.

The Wisconsin Public Utility Holding Company Law precludes the acquisition of 10% or more of the voting shares of a holding company of a Wisconsin public utility unless the Public Service Commission of Wisconsin has first determined that the acquisition is in the best interests of utility consumers, investors and the public. Those interests may, to some extent, be mutually exclusive. This provision and other requirements of the Wisconsin Public Utility Holding Company Law may delay, or reduce the likelihood of, a sale or change of control of the Company, thus reducing the likelihood that shareholders will receive a takeover premium for their shares.

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Provisions of our articles of incorporation and bylaws may delay or frustrate the removal of incumbent directors and may prevent or delay a merger, tender offer or proxy contest involving our company that is not approved by our board of directors, even if the shareholders believe that such events may be beneficial to their interests. In addition, our shareholder rights plan may have anti-takeover effects by delaying, deferring or preventing an unsolicited acquisition proposal not approved by our board of directors, even if the shareholders believe that the proposal may be beneficial to their interests. Further, the Wisconsin Business Corporation Law contains provisions that may have the effect of delaying or making more difficult attempts by others to obtain control of our company without the approval of our board of directors.

For further information please see the following sections of the accompanying prospectus: "Description of common stock—Provisions of our restated articles of incorporation with possible anti-takeover effects"; "Description of common stock—Statutory provisions with possible anti-takeover effects"; and "Description of common stock—Preemptive rights; common stock purchase rights".

#### A reduction in our credit ratings could materially and adversely affect our business, financial position, results of operations and liquidity.

We cannot be sure that any of our credit ratings will remain in effect for any given period of time or that a credit rating will not be lowered by a rating agency if, in its judgment, circumstances in the future so warrant. Any downgrade could:

- increase our borrowing costs;
- require us to pay a higher interest rate in future financings and possibly reduce the potential pool of creditors;
- increase our borrowing costs under certain of our existing credit facilities;
- limit our access to the commercial paper market; and
- limit the availability of adequate credit support for ESI's operations.

#### Actual results could differ from estimates used to prepare our financial statements.

In preparing the financial statements in accordance with generally accepted accounting principles, management must often make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, expenses and related disclosures at the date of the financial statements and during the reporting period. Some of those judgments can be subjective and complex, and actual results could differ from those estimates. For more information about these estimates and assumptions, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies" in our Current Report on Form 8-K dated August 25, 2005, which revises certain financial statements and related disclosures for all periods presented in our 2004 Annual Report on Form 10-K for the year ended December 31, 2004. The Form 8-K and Form 10-K are both incorporated by reference in this prospectus supplement and the accompanying prospectus.

## The use of derivative instruments could result in financial losses and liquidity constraints.

We use derivative instruments, including futures, forwards, options and swaps, to manage our commodity and financial market risks. In addition, we purchase and sell commodity-based contracts in the natural gas and electric energy markets for trading purposes. In the future, we could recognize financial losses on these contracts as a result of volatility in the market values

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of the underlying commodities or if a counterparty fails to perform under a contract. In the absence of actively quoted market prices and pricing information from external sources, the valuation of these contracts involves management's judgment or use of estimates. As a result, changes in the underlying assumptions or use of alternative valuation methods could affect the reported fair value of these contracts.

For additional information concerning derivatives and commodity-based trading contracts, see Note 3—"Risk Management Activities" in our Current Report on Form 8-K dated August 25, 2005, which revises certain financial statements and related disclosures for all periods presented in our 2004 Annual Report on Form 10-K for the year ended December 31, 2004. The Form 8-K and Form 10-K are both incorporated by reference in this prospectus supplement and the accompanying prospectus.

# We may issue additional shares of common stock and thereby materially and adversely affect the price of our common stock.

Other than for a period of 90 days following this offering, we are generally not restricted from issuing additional common stock. See "Underwriting—Restrictions on sales of similar securities". We issue new shares on a regular basis under our Stock Investment Program. If we issue additional shares of common stock, it may materially and adversely affect the price

of our common stock.
Minnesota Energy Resources Corporation

#### Settlement provisions contained in the forward sale agreement subject us to certain risks.

The forward purchaser will have the right to accelerate the forward sale agreement and require us to settle on a date specified by the forward purchaser if (1) in its reasonable judgment, it is unable to continue to borrow a number of shares of our common stock equal to the number of shares to be delivered by us under the physical settlement of the forward sale agreement, (2) we declare any dividend or distribution on shares of our common stock payable in (i) cash in excess of the specified amount, (ii) securities of another company, or (iii) any other type of securities (other than our common stock), rights, warrants or other assets for payment at less than the prevailing market price, as determined in the forward purchaser's judgment, (3) our board of directors votes to approve a merger of the Company or takeover of the Company or other similar transactions that would require our stockholders to exchange their shares for cash, securities or other property, (4) we announce or disclose any repurchase of our common stock that alone, or in aggregate with other repurchases, would result in the amount of shares underlying the forward sale agreement exceeding a certain threshold or (5) certain other events of default or termination events occur, including, among other things, any material misrepresentation made in connection with entering into the forward sale agreement, our filing for bankruptcy or the delisting of our common stock from the New York Stock Exchange. The forward purchaser's decision to exercise its right to require us to settle the forward sale agreement will be made irrespective of our need for capital. In such cases, we could be required to issue and deliver common stock under the terms of the physical settlement provisions of the forward sale agreement irrespective of the status of the Aquila acquisitions or any other capital needs, which would result in dilution to our earnings per share and return on equity. In addition, upon certain events of bankruptcy, insolvency or reorganization relating to

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The forward sale agreement will settle approximately one year following the date of this prospectus supplement and may be settled earlier at our option. The forward sale agreement will be physically settled, unless we elect to settle such forward sale agreement in cash. If we decide to physically settle the forward sale agreement, delivery of our shares on any physical settlement of a forward sale agreement will result in dilution to our earnings per share and return on equity. If we elect cash settlement for all or a portion of the shares of common stock included in the forward sale agreement, we would expect the forward purchaser to repurchase a number of shares equal to the portion for which we elect cash settlement in order to cover its obligation to return the shares of our common stock it has borrowed in connection with sales of our common stock under this prospectus supplement. If the market value of our common stock at the time of the repurchase is above the forward price, we would pay the forward purchaser under the forward sale agreement an amount in cash equal to the difference. Thus, we would be responsible for a potentially substantial cash payment. See "Underwriting—Forward sale agreement" for information on the forward sale agreement.

In addition, the purchase of our common stock by the forward purchaser to unwind its hedge position could cause the price of our common stock to increase over time, thereby increasing the amount of cash we would owe to the forward purchaser upon a cash settlement of the forward sale agreement.

In case of our bankruptcy or insolvency, the forward sale agreement will automatically terminate, and we would not receive the expected proceeds from the sale of our shares.

If we file for or consent to a proceeding seeking a judgment in bankruptcy or insolvency or any other relief under any bankruptcy or insolvency law or other similar law affecting creditors' rights, or we or a regulatory authority with jurisdiction over us present a petition for our winding-up or liquidation and we consent to such a petition, the forward sale agreement will terminate. If the forward sale agreement so terminates, we would not be obligated to deliver to the forward purchaser any shares not previously delivered, and the forward purchaser would be discharged from their obligation to pay the settlement price in respect of any shares not previously settled. Therefore, to the extent that there are any shares with respect to which the forward sale agreement has not been settled at the time of the commencement of any bankruptcy or insolvency proceedings, we would not receive the settlement price in respect of those shares.

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# **Forward-looking statements**

Except for historical data and statements of current fact, the information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus constitutes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Any references to plans, goals, beliefs or expectations in respect to future events and conditions or to estimates are forward-looking statements. Although we believe that statements of our expectations are based on reasonable assumptions, forward-looking statements are inherently uncertain and subject to risks and should be viewed with caution. Actual results or experience could differ materially from the forward-looking statements as a result of many factors.

In addition to statements regarding trends or estimates in Management's Discussion and Analysis of Financial Condition and Results of Operations included in our Form 10-Ks and Form 10-Qs, forward-looking statements included or incorporated in this prospectus supplement include, but are not limited to, statements regarding future:

- revenues or expenses,
- capital expenditure projections, and
- financing sources.

Forward-looking statements involve a number of risks and uncertainties. There are many factors that could cause actual results to differ materially from those expressed or implied in this prospectus supplement. Some risk factors that could cause results different from any forward-looking statement include those described in the "Risk factors" section of this prospectus supplement. Other factors include:

- · receipt of required regulatory approvals for the acquisition of the Minnesota and Michigan natural gas distribution operations from Aquila;
- resolution of pending and future rate cases and negotiations (including the recovery of deferred costs) and other regulatory decisions regarding WPSC and UPPCO;
- the impact of recent and future federal and state regulatory changes, including legislative and regulatory initiatives regarding deregulation and restructuring of the electric utility industry, changes in environmental, tax, and other laws and regulations to which we and our subsidiaries are subject, as well as changes in application of existing laws and regulations;
- current and future litigation, regulatory investigations, proceedings or inquiries, including manufactured gas plant site cleanup and pending Environmental Protection Agency investigations of WPSC's generation facilities;
- resolution of audits by the Internal Revenue Service and various state revenue agencies;
- the effects, extent, and timing of additional competition in the markets in which our subsidiaries operate;
- the impact of fluctuations in commodity prices, interest rates, and customer demand;
- available sources and costs of fuels and purchased power;
- ability to control costs (including costs of decommissioning generation facilities);
- · investment performance of employee benefit plans;
- advances in technology;

- the performance of projects undertaken by nonregulated businesses and the success of efforts to invest in and develop new opportunities;
- potential business strategies, including acquisitions or dispositions of assets or businesses, which cannot be assured to be completed (such as the acquisition of the Minnesota and Michigan natural gas distribution operations from Aquila, construction of the Weston 4 generation plant, and construction of the Wausau, Wisconsin, to Duluth, Minnesota, transmission line):
- the direct or indirect effect resulting from terrorist incidents or responses to such incidents;
- · financial market conditions and the results of financing efforts, including credit ratings and risks associated with commodity prices, interest rates, and counterparty credit;
  - weather and other natural phenomena; and
- the effect of accounting pronouncements issued periodically by standard-setting bodies.

Except to the extent required by the federal securities laws, we undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise after the date of this prospectus supplement.

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# Use of proceeds

The information in this section supplements the information in the "Use of proceeds" section beginning on page 5 of the accompanying prospectus. Please read these two sections together.

We estimate that we will receive net proceeds of \$98,714,500 from the sale of common stock offered by us upon settlement of this offering (\$134,563,450 if the over-allotment option is exercised in full), after deducting the underwriting discount and estimated offering expenses payable by us. We will add the net proceeds from the sale of our common stock offered by us to our general funds. We expect to use our general funds to reduce short-term debt, to fund equity to subsidiary companies and for general corporate purposes. On September 30, 2005, we had approximately \$138 million of commercial paper borrowings, which had maturities of up to 30 days and had a weighted average annual interest rate of 3.95%.

We will not receive any proceeds from the sale of shares of common stock by the forward purchaser. Assuming physical settlement of the forward sale agreement and an initial forward sale price of \$51.955 per share, we expect to receive net proceeds of \$140,278,500, subject to certain adjustments pursuant to the forward sale agreement, upon settlement of the forward sale agreement, which will be within approximately one year from the date of this prospectus supplement. We will use the net proceeds that we receive upon settlement of the forward sale agreement to partially finance our proposed acquisition of the Minnesota and Michigan natural gas distribution operations of Aquila and for general corporate purposes. If, however, we elect to cash settle the forward sale agreement, we would expect to receive an amount of proceeds that is significantly lower than the estimate included in this section or we may not receive any proceeds.

Before the issuance of shares of our common stock upon settlement of the forward sale agreement, the forward sale agreement will be reflected in our diluted earnings per share calculations using the treasury stock method. Under this method, the number of shares of our common stock used in calculating diluted earnings per share is deemed to be increased by the excess, if any, of the number of shares that would be issued upon physical settlement of the forward sale agreement over the number of shares that could be purchased by us in the market (based on the average market price during the period) using the proceeds receivable upon settlement (based on the adjusted forward sale price at the end of the reporting period).

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# Price range of common stock and dividends

Our common stock is listed on the New York Stock Exchange under the symbol "WPS". On November 15, 2005, the last sale price of our common stock, as reported in the New York Stock Exchange, was \$53.70 per share. The following table sets forth, for the periods indicated, the cash dividend that we have paid on our common stock and the range of high and low sale prices for our common stock.

		Price Range	
Share Data	Dividends — Per Share	High	Low
2005			
3rd Quarter	\$0.565	\$60.00	\$54.50
2nd Quarter	0.555	56.90	51.11
1st Quarter	0.555	54.90	47.67
2004			
4th Quarter	\$0.555	\$50.53	\$45.35
3rd Quarter	0.555	48.81	44.85
2nd Quarter	0.545	48.70	43.50
1st Quarter	0.545	48.93	44.99
Total	\$2.200		
2003			
4th Quarter	\$0.545	\$46.80	\$40.94
3rd Quarter	0.545	41.60	38.28
2nd Quarter	0.535	44.28	39.53

1st Quarter Energy Resources Corporation	0.535	41.18	36.80
Total	\$2.160		

As of September 30, 2005, there were 20,838 common stock shareholders of record.

We and WPSC have had 47 consecutive years of dividend increases and have paid cash dividends for 65 consecutive years. All shares of our common stock will participate equally with respect to dividends. As a holding company, our ability to pay dividends is largely dependent upon the ability of our subsidiaries to pay dividends to us. See "Description of common stock—Restriction on dividends payable by Wisconsin Public Service Corporation" on page 19 of the accompanying prospectus.

On October 13, 2005, our board of directors declared a quarterly dividend of \$0.565 per share of our common stock. The dividend will be paid December 20, 2005 to shareholders of record at the close of business on November 30, 2005.

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# Capitalization

The following table sets forth our capitalization at September 30, 2005. The "Pro Forma" column reflects the estimated net proceeds from the issuance of 1.9 million shares of common stock offered by this prospectus supplement and the accompanying prospectus, before expenses, and excludes the estimated net proceeds from physical settlement of the forward sale agreement, as this could occur up to approximately one year from the date of this prospectus supplement. It also does not include the net proceeds from the issuance of up to 690,000 shares of common stock issuable upon the exercise of the underwriters' over-allotment option. You should read the information in this table along with the financial information included or incorporated by reference into this prospectus supplement and the accompanying prospectus.

At September 30, 2005 (in millions)			Pro Forma		
	Amount	Percent	Amount	Percent	
	(unaudited)				
Capitalization:					
Long-term debt, including current portion	\$873.3	41.8%	\$873.3	39.9%	
Preferred stock of subsidiary with no mandatory redemption	51.1	2.4%	51.1	2.3%	
Common stockholders' equity	1,165.4	55.8%	1,264.1	57.8%	
Total capitalization	\$2,089.8	100%	\$2,188.5	100.0%	

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# **Underwriting**

In this offering, subject to the terms and conditions set forth in the underwriting agreement, we are selling 1.9 million shares of our common stock and the forward purchaser is, at our request, borrowing and selling 2.7 million shares of our common stock in connection with the execution of the forward sale agreement between us and the forward purchaser.

J.P. Morgan Securities Inc. and Banc of America Securities LLC are acting as representatives of each of the underwriters named below. Subject to the terms and conditions set forth in the underwriting agreement, dated November 15, 2005, among us, the forward purchaser and the underwriters, we and the forward purchaser have agreed to sell to the underwriters, and the underwriters have severally agreed to purchase from us and the forward purchaser, the number of shares listed opposite their names below.

Name	Number of Shares
J.P. Morgan Securities Inc.	2,792,200
Banc of America Securities LLC	1,421,400
A.G. Edwards & Sons, Inc.	230,000
Edward D. Jones & Co., L.P.	156,400
Total	4,600,000

The underwriters have agreed to purchase all of the shares of our common stock to be sold under the underwriting agreement, if any of these shares are purchased.

The underwriters are offering the shares of our common stock, subject to prior sale, when, as and if issued to and accepted by them, subject to conditions contained in the underwriting agreement. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act of 1933, or to contribute to payments the underwriters may be required to make in respect of those liabilities.

Forward sale agreement. We have entered into a forward sale agreement on the date of this prospectus supplement with an affiliate of J.P. Morgan Securities Inc., as the forward purchaser, relating to an aggregate of 2.7 million shares of our common stock. In connection with the execution of the forward sale agreement and at our request, J.P. Morgan Securities Inc., as agent for its affiliate, is borrowing and selling in this offering 2.7 million shares of our common stock. If the forward purchaser or its affiliate is unable to borrow and

deliver for sale on the anticipated closing date of the offering all of the shares of our common stock to which the forward sale agreement relates or if the forward purchase the forward purchase determines, in its sole reasonable judgment, that it is either impracticable to do so or that it is unable to borrow, at a cost not greater than a specified amount per share, and it is either impracticable to do so or that it is unable to borrow, at a cost not greater than a specified amount per share, and it is either impracticable to do so or that it is unable to borrow, at a cost not greater than a specified amount per share, and it is either impracticable to do so or that it is unable to borrow, at a cost not greater than a specified amount per share share for sale on the anticipated closing date of the offering all of the shares of our common stock to which the forward sale agreement relates, then the number of shares of our common stock to which the forward sale agreement relates will be reduced to the number that the forward purchaser or its affiliate can so borrow and deliver at such a cost. Under any such circumstance, the commitments of the underwriters to purchase shares of our common stock, as described above, will be reduced pro rata to reflect the reduction in the number of shares, unless we elect to issue directly to the

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underwriters all or a portion of the number of shares not borrowed and delivered by the forward purchaser. The representatives of the underwriters will have the right to postpone the closing date for one day to effect any necessary changes to the documents or arrangements.

Prior to settlement under the forward sale agreement, the forward purchaser will utilize the aggregate net proceeds from the sale of the borrowed shares of our common stock sold in this offering as cash collateral for the borrowing of shares described above. We will receive an amount equal to the net proceeds from the sale of the borrowed shares of our common stock sold in this offering, subject to certain provisions of the forward sale agreement, from the forward purchaser upon physical settlement of the forward sale agreement. We will only receive such proceeds if we elect to physically settle the forward sale agreement.

The forward sale agreement provides for settlement on a settlement date or dates to be specified at our discretion within approximately one year from the date of this prospectus supplement. On a settlement date, if we decide to physically settle a forward sale agreement, we will issue shares of our common stock to the forward purchaser at the then-applicable forward price. The forward sale price will initially be \$\$1.955 per share, which is the public offering price of our shares of common stock less the underwriting discount. The forward sale agreement provides that the initial forward sale price will be subject to increase based on a floating interest factor equal to the federal funds rate, less a spread, and will be subject to decrease by \$0.565 on November 30, 2005, \$0.565 on February 28, 2006, \$0.565 on May 31, 2006 and \$0.575 on August 31, 2006. The forward sale price will also be subject to decrease if the cost to the forward purchaser of borrowing our common stock exceeds a specified amount. If the federal funds rate is less than the spread on any day, the interest factor will result in a daily reduction of the forward sale price. As of the date of this prospectus supplement, the federal funds rate was greater than the spread. Because the quarterly adjustments are expected to be larger than the cumulative effect of the interest factor, we expect the cumulative net effect of these adjustments to result in a decrease in the forward sale price over time.

Before the issuance of our common stock upon physical settlement of the forward sale agreement, the forward sale agreement will be reflected in our diluted earnings per share calculations using the treasury stock method. Under this method, the number of shares of our common stock used in calculating diluted earnings per share is deemed to be increased by the excess, if any, of the number of shares that would be issued upon physical settlement of the forward sale agreement over the number of shares that could be purchased by us in the market (based on the average market price during the period) using the proceeds receivable upon settlement (based on the adjusted forward sale price at the end of the reporting period). Consequently, we anticipate there will be no dilutive effect on our earnings per share except during periods when the average market price of our common stock is above the per share adjusted forward sale price, which is initially \$51.955 (equal to the per share proceeds, before expenses, to us, as set forth in the table on the cover of this prospectus supplement), subject to increase based on a floating interest factor equal to the federal funds rate, less a spread and less the quarterly adjustments.

Except under limited circumstances described below, we have the right to elect physical stock, or cash settlements under the forward sale agreement. Although we expect to settle entirely by the delivery of shares of our common stock, we may elect cash settlement for all or a portion of our obligations if we conclude that it is in our interest to cash settle. For example,

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we may conclude that it is in our interest to cash settle if one or both of our planned acquisitions fails to close and we have no current use for all or a portion of the net proceeds. In the event that we elect to cash settle, the settlement amount will be equal to (1) (a) the agreed forward sale price minus (b) the average volume weighted price calculated within certain parameters of Rule 10b-18 under the Securities Exchange Act of 1934, as amended, during the period in which the forward purchaser closes out its trading activities related to the forward sale agreement and (c) any scheduled decrease in the forward sale price per share occurring during such period; multiplied by (2) the number of shares being settled. If this settlement amount is a positive number, the forward purchaser will pay us that amount. If this settlement amount is a negative number, we will pay the forward purchaser the absolute value of that amount. We would expect the forward purchaser or its affiliate to purchase shares of our common stock in secondary market transactions for delivery to stock lenders in order to close out its short position. The purchase of our common stock by the forward purchaser could cause the price of our common stock to increase over time, thereby increasing the amount of shares or cash we owe to the forward purchaser.

The forward purchaser will have the right to accelerate the forward sale agreement and require us to settle on a date specified by the forward purchaser if (1) in its reasonable judgment, it is unable to continue to borrow a number of shares of our common stock equal to the number of shares to be delivered by us under physical settlement of the forward sale agreement, (2) we declare any dividend or distribution on shares of our common stock payable in (a) cash in excess of the specified amount, (b) securities of another company, or (c) any other type of securities (other than our common stock), rights, warrants or other assets for payment at less than the prevailing market price, as determined in the forward purchaser's judgment, (3) our board of directors votes to approve a merger or takeover of the Company or other similar transactions that would require our stockholders to exchange their shares for cash, securities or other property, (4) we announce or disclose any repurchase of our common stock that alone, or in aggregate with other repurchases, would result in the amount of shares underlying the forward sale agreement exceeding a certain threshold or (5) certain other events of default or termination events occur, including, among other things, any material misrepresentation made in connection with entering into the forward sale agreement, our filing for bankruptcy or the delisting of our common stock from the New York Stock Exchange. The forward purchaser's decision to exercise its right to require us to settle the forward sale agreement will be made irrespective of our need for capital. In such cases, we could be required to issue and deliver common stock under physical settlement of the forward sale agreement irrespective of the status of the Aquila acquisitions or any other capital needs which would result in dilution to our earnings per share and return on equity. In addition, upon certain events of bankruptcy, insolvency or reorganization relating to us, the forward sale agreement will terminate with

Over-allotment option. In connection with the shares that are being offered, we granted the underwriters an option to purchase up to an additional 690,000 shares of our common stock at the public offering price, less the underwriting discounts and commissions, within 30 days from the date of this prospectus supplement to cover over-allotments. If the underwriters exercise this option, each underwriter will be obligated, subject to the conditions contained in the underwriting agreement, to purchase a number of additional shares of our common stock

Offering price\_concessions and reallowances. The underwriters have advised us that they propose initially to offer the shares of our common stock to the public all proposes of the public all proposes of the propose of the cover page of this prospectus supplement and to certain securities dealers at that price less a concession not in excess of \$1.05 per share. The underwriters may allow and such dealers may reallow, a discount not in excess of \$0.10 per share to other dealers. After we release the shares of common stock for sale to the public, the underwriters may vary the offering price and other selling terms from time to time.

Electronic prospectus delivery. A prospectus supplement and accompanying prospectus in electronic format may be made available on the websites maintained by one or more of the underwriters or selling group members, if any, participating in the offering. The representatives may agree to allocate a number of shares of our common stock to underwriters for sale to their online brokerage account holders. The representatives will allocate shares of our common stock to underwriters that may make Internet distributions on the same basis as other allocations. Other than the prospectus supplement and prospectus in electronic format, the information on any of these websites and any other information contained on a website maintained by an underwriter or selling group member is not part of this prospectus supplement or prospectus.

Price stabilization, short positions and penalty bids. In connection with this offering, the underwriters may engage in stabilizing transactions, which involve making bids for, purchasing and selling shares of common stock in the open market for the purpose of preventing or retarding a decline in the market price of the common stock while this offering is in progress. These stabilizing transactions may include making short sales of the common stock, which involves the sale by the underwriters of a greater number of shares of common stock than they are required to purchase in this offering, and purchasing shares of common stock on the open market to cover positions created by short sales. Short sales may be "covered" shorts, which are short positions in an amount not greater than the underwriters' over-allotment option referred to above, or may be "naked" shorts, which are short positions in excess of that amount. The underwriters may close out any covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market compared to the price at which they may purchase additional shares pursuant to the over-allotment option. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of our common stock in the open market after pricing that could adversely affect investors who purchase in the offering. To the extent that the underwriters create a naked short position, they will purchase shares in the open market to cover the position.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter repays to the other underwriters a portion of the underwriting discount received by it because the representatives have repurchased shares sold by or for the account of such underwriter in stabilizing or short covering transactions.

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Purchases to cover a short position and stabilizing transactions may have the effect of preventing or retarding a decline in the market price of the common stock and, together with the imposition of a penalty bid, may stabilize, maintain or otherwise affect the market price of the common stock. As a result, the price of the common stock may be higher that the price that otherwise might exist in the open market. If these activities are commenced, they may be discontinued at any time. These transactions may be effected on the New York Stock Exchange, in the over-the-counter market, or otherwise.

Restrictions on sales of similar securities. We have agreed that, for a period of 90 days after the date of this prospectus supplement, without the prior written consent of the underwriters, we will not, and we will not permit and will obtain the agreement of our executive officers and directors not to, (1) offer, pledge, announce the intention to sell, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock, or any securities convertible or exchangeable for our common stock (including, without limitation, common stock which may be deemed to be beneficially owned by such directors or executive officers in accordance with the rules and regulations of the SEC and securities which may be issued upon exercise of a stock option or warrant) or (2) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of our common stock, whether such transaction is to be settled by the delivery of common stock, such other securities, in cash, or otherwise, except for the issuance or sale of common stock or such securities (a) in this offering, (b) to the forward purchaser under the forward sale agreement, or (c) under our Stock Investment Plan or any of our existing employee or director benefit or compensation plans. Notwithstanding the foregoing, our officers and directors, taken as a group, may transfer or sell up to an aggregate of 200,000 shares of our common stock within this 90-day period without regard to these restrictions.

Passive market making. In connection with this offering, the underwriters and selling group members may engage in passive market making transactions in the common stock on the New York Stock Exchange in accordance with Rule 103 of Regulation M under the Exchange Act during a period before the commencement of offers or sales of common stock and extending through the completion of distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. If, however, all independent bids are lowered below the passive market maker's bid, that bid must then be lowered when specified purchase limits are exceeded.

No public offering outside of the United States. No action has been or will be taken in any jurisdiction (except in the United States) that would permit a public offering of the shares of our common stock, or the possession, circulation or distribution of this prospectus supplement or the accompanying prospectus or any other material relating to us or the shares of our common stock in any jurisdiction where action for that purpose is required. Accordingly, the shares of our common stock offered by this prospectus supplement and the accompanying prospectus may not be offered or sold, directly or indirectly, and this prospectus supplement, the accompanying prospectus and any other offering material or advertisements in connection with the shares of our common stock may not be distributed or published, in or from any country or jurisdiction except in compliance with any applicable rules and regulations of any such country or jurisdiction.

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Other relationships. Certain of the underwriters and their affiliates have engaged and in the future may engage in investment banking transactions with, and provide services to, us or our subsidiaries in the ordinary course of business. Affiliates of J.P. Morgan Securities Inc. and Banc of America Securities LLC, the joint book-running managers for this offering, are lenders under our revolving credit facilities. As discussed above, an affiliate of J.P. Morgan Securities Inc. has entered into a forward sale agreement with us, as described above under "Forward sale agreement." J.P. Morgan Securities Inc. also acted as exclusive financial adviser to us and provided a fairness opinion in connection with the pending acquisition of the Minnesota and Michigan natural gas distribution operations from Aquila.

In addition, because certain net proceeds from the sale of common stock may be paid to affiliates of an underwriter, this offering is being conducted pursuant to Rules 2710(h) and 2720 of the National Association of Securities Dealers, Inc.

# **Legal matters**

Our counsel, Foley & Lardner LLP, Milwaukee, Wisconsin, will issue its opinion as to the validity of the shares of common stock being issued. Schiff Hardin LLP, Washington, D.C., will issue an opinion for the underwriters as to certain matters relating to the offering of the shares of common stock.

The consolidated financial statements, the related financial statement schedules, and management's report on the effectiveness of internal control over financial reportings, the related financial statement schedules, and management's report on the effectiveness of internal control over financial reportings, the related financial reporting from the Company's Annual Report on Form 10-K for the year ended December 31, 2004, as updated by the Company's Current Report on Form 8-K dated August 25, 2005, have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their reports (which reports (1) express an unqualified opinion on the consolidated financial statements and financial statement schedules and include an explanatory paragraph relating to the adoption of new accounting principles, (2) express an unqualified opinion on management's assessment regarding the effectiveness of internal control over financial reporting, and (3) express an unqualified opinion on the effectiveness of internal control over financial reporting), which are incorporated herein by reference and have been so incorporated in reliance upon the reports of such firm given upon their authority as experts in accounting and auditing.

# Where you can find more information

We file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission. We also filed a Registration Statement on Form S-3, including exhibits, under the Securities Act of 1933 with respect to the securities offered by this prospectus supplement. This prospectus supplement is a part of that registration statement, but does not contain all of the information included in the registration statement or the exhibits to the registration statement. You may read and copy the registration statement and any other document we file at the Commission's public reference room at 450 Fifth Street, N.W., Washington, D.C., 20549. Please call the Commission at 1-800-SEC-0330 for further information on the public reference room. Our Securities and Exchange Commission filings are also

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available to the public at the Commission's web site at http://www.sec.gov or on our website located at http://www.wpsr.com.

The Securities and Exchange Commission allows us to "incorporate by reference" into this prospectus supplement the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus, and later information that we file with the Commission will automatically update and supersede this information. We incorporate by reference the documents listed below that we have previously filed with the Commission

SEC Filings

Date Filed

Annual Description Forms 10 V for the constraint of Describes 21 2004 and dated by Compatibility Forms of Forms 9 V dated Account 25 2005	
Annual Report on Form 10-K for the year ended December 31, 2004, as updated by Current Report on Form 8-K dated August 25, 2005	
(filed with the Commission on August 26, 2005)	March 9, 2005
Quarterly Report on Form 10-Q for the quarter ended March 31, 2005, as updated by Current Report on Form 8-K dated August 25, 2005	
(filed with the Commission on August 26, 2005)	May 5, 2005
Quarterly Report on Form 10-Q for the quarter ended June 30, 2005	August 4, 2005
Quarterly Report on Form 10-Q for the quarter ended September 30, 2005	November 3, 2005
Current Report on Form 8-K dated February 9, 2005	February 15, 2005
Current Report on Form 8-K dated May 19, 2005	May 20, 2005
Current Report on Form 8-K dated May 19, 2005	May 25, 2005
Current Report on Form 8-K dated June 2, 2005	June 8, 2005
Current Report on Form 8-K dated August 25, 2005, updating Annual Report on Form 10-K for the year ended December 31, 2004 (filed	
with the Commission on March 9, 2005) and Quarterly Report on Form 10-Q for the quarter ended March 31, 2005 (filed with the	
Commission on May 5, 2005)	August 26, 2005
Current Report on Form 8-K dated September 15, 2005	September 20, 2005
Current Report on Form 8-K dated September 21, 2005	September 27, 2005
Description of Common Stock contained in Registration Statement on Form 8-B	June 1, 1994
Description of Common Stock Purchase Rights contained in Registration Statement on Form 8-A	December 13, 1996

You may request a copy of these filings, at no cost, by writing to or telephoning us at our principal executive offices:

WPS Resources Corporation Attn: Secretary 700 North Adams Street P.O. Box 19001 Green Bay, Wisconsin 54307-9001 (800) 450-7260

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PROSPECTUS

WPS RESOURCES CORPORATION 700 North Adams Street P.O. Box 19001 Green Bay, Wisconsin 54307-9001

\$450,000,000

DEBT SECURITIES COMMON STOCK COMMON STOCK PURCHASE RIGHTS

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Minnesota Energy Resources Corporation

We may offer these securities in amounts, at prices and on terms determined at the time of offering. We will provide specific terms of these securities in supplements to this prospectus. Our common stock is traded on the New York Stock Exchange under the symbol "WPS".

You should read this prospectus and any supplement carefully before you invest.

See "Risk factors" in the accompanying prospectus supplement or in such other document we refer you to in the accompanying prospectus supplement for a discussion of certain risks that prospective investors should consider before investing in our securities.

These securities have not been approved by the Securities and Exchange Commission or any state securities commission, nor have these organizations determined that this prospectus is accurate or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is June 8, 2005.

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This prospectus is a part of the registration statement that we filed with the Securities and Exchange Commission. You should read this prospectus together with the more detailed information regarding our company, our securities and our financial statements and notes to those statements that appear elsewhere in this prospectus or that we incorporate in this prospectus by reference.

You should rely on the information contained in, or incorporated by reference in, this prospectus and in any accompanying prospectus supplement. We have not authorized anyone to provide you with information different from that contained in, or incorporated by reference in, this prospectus or any prospectus supplement. You should not assume that the information in this prospectus or any prospectus supplement is accurate as of any date other than the date on the front of the prospectus or prospectus supplement, as applicable.

# Summary

This summary highlights selected information from this prospectus and may not contain all of the information that is important to you. You should carefully read this prospectus together with any accompanying prospectus supplement to understand the terms of our securities. Together these documents will give the specific terms of the securities we are offering. You should also read the documents we have incorporated by reference into this prospectus or any accompanying prospectus supplement for information on us and our financial statements.

# The securities we may offer

This prospectus is part of a registration statement (No. 333-124446) that we filed with the Securities and Exchange Commission utilizing a "shelf" registration process. Under this shelf registration process, we may offer from time to time up to \$450,000,000 of the following securities: debt securities and common stock with associated common stock purchase rights. This prospectus provides you with a general description of the securities we may offer. Each time we offer securities, we will provide you with a prospectus supplement that will describe the specific amounts, prices and terms of the securities being offered. The prospectus supplement may also add, update or change information contained in this prospectus.

# **Debt securities**

We may offer unsecured general obligations of our company, which may be senior or subordinated. We will refer to the senior debt securities and the subordinated debt securities together in this prospectus as the "debt securities." The senior debt securities will have the same rank as all of our other unsecured, unsubordinated debt. The subordinated debt securities will be entitled to payment only after payment on our senior indebtedness. Senior indebtedness includes all indebtedness for money borrowed by us, except any indebtedness issued in the future that is stated to be not superior to, or to have the same rank as, the subordinated debt securities.

Claims of creditors and any preferred shareholders of each of our subsidiaries will have priority with respect to the assets and earnings of such subsidiaries over the claims of our creditors. The debt securities therefore will be effectively subordinated to creditors, including holders of secured indebtedness, and preferred shareholders of our subsidiaries.

The senior debt securities will be issued under an indenture between us and U.S. Bank National Association, formerly known as Firstar Bank, National Association. We may amend or supplement the indenture from time to time. The subordinated debt securities will be issued under an indenture between us and the trustee we name in a prospectus supplement. We encourage you to read the indentures, which are exhibits to this registration statement (as incorporated by reference), and our recent periodic and current reports that we file with the Securities and Exchange Commission.

### Summary of material indenture provisions that apply to senior and subordinated debt securities

Neither indenture limits the amount of debt that we may incur. In addition, neither indenture provides holders with any protection should there be a recapitalization or restructuring involving our company.

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The indentures allow us to merge or consolidate with another company, or to sell all or most of our assets to another company. If these events occur, the other company will be required to assume our responsibilities relating to the debt securities, and we will be released from all liabilities and obligations relating to the debt securities.

The indentures provide that holders of a majority of the outstanding principal amount of any series of debt securities generally may vote to change our obligations or your rights concerning that series. However, to change the amount or timing of payments of principal or interest or other payments for a series of debt securities, every holder in the series must consent.

We may discharge our obligations under either indenture by depositing with the trustee sufficient funds or government obligations to pay the senior or subordinated debt securities, as applicable, when due.

EVENTS OF DEFAULT. Each indenture provides that the following are events of default:

- if we do not pay interest for 30 days after its due date.
- if we do not pay principal or premium when due.
- if we continue to breach a covenant in the debt securities of the series or in the applicable indenture respecting that series for 60 days after notice.
- if we enter bankruptcy or become insolvent.

If an event of default occurs with respect to any series of debt securities, the trustee or holders of 25% of the outstanding principal amount of that series may declare the principal amount of the series immediately payable. However, holders of a majority of the principal amount may rescind this action. If the event of default is due to our bankruptcy or insolvency, the outstanding principal amount of all the debt securities will become immediately payable, without any action on the part of the trustees or the holders of the debt securities.

# Summary of material indenture provisions that apply only to senior debt securities

Under the senior indenture, our failure to pay when due, subject to any applicable grace period, any principal of, or interest on, any indebtedness for borrowed money incurred or guaranteed by us in the aggregate principal amount of at least \$50,000,000 constitutes an event of default.

The senior indenture requires us, so long as any senior debt securities are outstanding:

- to own all of the outstanding shares of voting common stock of Wisconsin Public Service Corporation unless we transfer the shares pursuant to our merger or consolidation or sale of substantially all of our properties.
- not to pledge or grant a security interest or permit any pledge, security interest or other lien upon any common stock of any of our subsidiaries owned directly or indirectly by us to secure indebtedness for money borrowed without securing the senior debt securities equally and ratably with the other secured indebtedness except for:
  - · pledges, security interests or encumbrances created to secure the purchase price of the common stock of our subsidiaries,

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- liens and security interests existing at the time of our acquisition of the shares or
- any extension or renewal of any permitted pledge, security interest or encumbrance.

#### Summary of material indenture provisions that apply only to subordinated debt securities

The subordinated debt securities will be subordinated to all senior indebtedness. In addition, as previously noted under "Debt Securities", claims of the creditors and preferred shareholders of each of our subsidiaries will have priority with respect to that subsidiary's assets and earnings over the claims of our creditors, including holders of the subordinated debt securities. The subordinated debt securities, therefore, will be effectively subordinated to creditors and preferred shareholders of our subsidiaries.

# Common stock (with associated common stock purchase rights)

We may offer shares of our common stock, par value \$1.00 per share. Holders of our common stock are entitled to receive dividends when and if declared by our Board of Directors. Each holder of our common stock is entitled to one vote per share. The holders of our common stock have no preemptive rights or cumulative voting rights. Our restated articles of incorporation do not presently authorize our company to issue preferred stock or other stock having rights prior to those of the holders of our common stock.

Each share of our common stock will have an associated right to purchase one share of our common stock at an exercise price of \$85 per share. The rights are not presently exercisable. Under certain circumstances, however, each right will entitle the holder to purchase at the exercise price our common stock having a market value of twice the exercise price. See "DESCRIPTION OF COMMON STOCK—Pre-emptive Rights; Common Stock Purchase Rights" in this prospectus.

# Ratios of earnings to fixed charges

The ratio of earnings to fixed charges for each of the periods indicated are as follows:

Year ended December 31,	2004	2003	2002	2001	2000
Ratio of earnings to fixed charges	3.4	2.7	3.0	2.1	2.1

We have computed the ratio of earnings to fixed charges by dividing earnings, which includes income before taxes and fixed charges, by fixed charges. This calculation excludes the

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effects of accounting schanges which have been made over time. "Fixed charges" consist of (1) interest on debt and a portion of rentals determined to be representative of interest and (2) the preferred stock dividend requirements of our subsidiaries. The preferred stock dividend requirements of our subsidiaries were assumed to be equal to the pre-tax earnings that would be required to cover such dividend requirements based on our effective income tax rates (excluding the impact of tax credits) for the respective periods.

# Where you can find more information

We file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission. We also filed a Registration Statement on Form S-3,

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including exhibits, under the Securities Act of 1933 with respect to the securities offered by this prospectus. This prospectus is a part of that registration statement, but does not contain all of the information included in the registration statement or the exhibits to the registration statement. You may read and copy the registration statement and any other document we file at the Commission's public reference room at 450 Fifth Street, N.W., Washington, D.C., 20549. Please call the Commission at 1-800-SEC-0330 for further information on the public reference room. Our Securities and Exchange Commission filings are also available to the public at the Commission's web site at http://www.sec.gov or on our website located at http://www.wpsr.com.

The Securities and Exchange Commission allows us to "incorporate by reference" into this prospectus the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus, and later information that we file with the Commission will automatically update and supersede this information. We incorporate by reference the documents listed below and any future filings made with the Securities and Exchange Commission under Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 until our offering is completed:

- i. Annual Report on Form 10-K for the year ended December 31, 2004;
- ii. Quarterly Report on Form 10-Q for the quarter ended March 31, 2005;
- iii. Current Report on Form 8-K dated February 9, 2005, which was filed on February 15, 2005;
- iv. Current Report on Form 8-K dated May 19, 2005, which was filed on May 20, 2005;
- v. Current Report on Form 8-K dated May 19, 2005, which was filed on May 25, 2005;
- vi. Description of Common Stock contained in Registration Statement on Form 8-B filed on June 1, 1994; and
- vii. Description of Common Stock Purchase Rights contained in Registration Statement on Form 8-A filed on December 13, 1996.

You may request a copy of these filings, at no cost, by writing to or telephoning us at our principal executive offices:

WPS Resources Corporation Attn: Secretary 700 North Adams Street P.O. Box 19001 Green Bay, Wisconsin 54307-9001 (920) 433-1727

You should rely only on the information incorporated by reference or provided in this prospectus or any prospectus supplement. We have not authorized anyone else to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus or any prospectus supplement is accurate as of any date other than the date on the front of the prospectus or the prospectus supplement.

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# The Company

We are a holding company, based in Green Bay, Wisconsin. Our principal subsidiary is Wisconsin Public Service Corporation, a regulated electric and natural gas utility that generates and distributes energy in northeastern Wisconsin and an adjacent portion of Michigan. Our other major subsidiaries include Upper Peninsula Power Company, a regulated electric utility operating in the northern half of Michigan's Upper Peninsula, and two nonregulated subsidiaries, WPS Energy Services, Inc. and WPS Power Development, LLC. WPS Energy Services, Inc., provides energy and related products and services in the nonregulated energy market in the northeast quadrant of the United States and eastern portions of Canada. WPS Power Development, LLC, a subsidiary of WPS Energy Services, develops, owns and operates nonregulated electric generation facilities and steam production facilities in various locations in the United States and New Brunswick, Canada, as well as a portion of a synthetic fuel processing facility.

# Use of proceeds

Unless otherwise specified in the accompanying prospectus supplement, we will use the net proceeds we receive from the sale of the securities offered by this prospectus and the accompanying prospectus supplement for general corporate purposes of the company and our subsidiaries. General corporate purposes may include providing operating funds for our subsidiaries, financing capital asset acquisitions by our subsidiaries and the repayment of debt and investments in or extensions of credit to our subsidiaries. We may invest the net proceeds temporarily or apply the net proceeds to repay short-term debt until we use the net proceeds for one of these stated purposes.

# Description of the debt securities

The following description of the material terms of the debt securities sets forth general terms that may apply to the debt securities. The particular terms of any series of debt securities will be described in the prospectus supplement relating to those debt securities.

The debt securities will be either our senior debt securities or our subordinated debt securities. The senior debt securities will be issued under an indenture dated as of October 1, 1999

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between he and U.S. Bank National Association (f/k/a Firstar Bank, National Association), Saint Paul, Minnesota, as trustee. This indenture is referred to as the "senior green to be entered into between us and the trustee named in a prospectus supplement. This indenture is referred to as the "subordinated indenture." This prospectus refers to the senior indenture and the subordinated indenture together as the "indentures."

The following is a summary of all of the material terms of the indentures. Copies of the entire indentures are filed as exhibits to the registration statement of which this prospectus is a part. Section references below are to the section in the applicable indenture. The referenced sections of the indentures are incorporated by reference.

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### General

Neither indenture limits the amount of debt securities that we may issue. Each indenture provides that debt securities may be issued up to the principal amount authorized by us from time to time. The senior debt securities will be unsecured and will have the same rank as all of our other unsecured and unsubordinated debt. The subordinated debt securities will be unsecured and will be subordinated and junior to all senior indebtedness.

The debt securities may be issued in one or more separate series of senior debt securities or subordinated debt securities. The prospectus supplement relating to the particular series of debt securities being offered will specify the particular amounts, prices and terms of those debt securities. These terms may include:

- the title of the debt securities;
- any limit on the aggregate principal amount of the debt securities of the series;
- the date on which the debt securities will mature;
- the interest rate or rates, or the method of determining those rates;
- the date from which interest will accrue or the method for determining such date;
- the interest payment dates and the regular record dates;
- the places where payments may be made;
- · any mandatory or optional redemption provisions;
- any sinking fund or analogous provisions;
- · the portion of principal amount of the debt security payable upon acceleration of maturity if other than the full principal amount;
- any additions to the events of default or covenants included in the indenture under which the debt securities are issued, as described in this prospectus;
  - if other than U.S. dollars, the currency or currencies, or units based on or related to currencies, in which payments on the debt securities will be payable;
- whether the debt securities will be issued in the form of a global security; and
- any other specific terms of the debt securities.

The debt securities will be registered debt securities and, unless otherwise specified in the prospectus supplement, will be payable in U.S. dollars in denominations of \$1,000 or an integral multiple of \$1,000. (Sections 2.01 and 3.01)

Some of the debt securities may be issued as original issue discount debt securities. Original issue discount securities bear no interest or bear interest at below-market rates and will be sold at a discount below their stated principal amount. The accompanying prospectus supplement will also contain any special tax, accounting or other information relating to original issue discount securities or to other kinds of debt securities that may be offered, including debt securities linked to an index or payable in currencies other than U.S. dollars.

### Exchange, registration and transfer

Debt securities may be transferred or exchanged at the corporate trust office of the security registrar or at any other office or agency maintained by us for those purposes. Except as otherwise described in a prospectus supplement, no service charge will be payable upon the transfer or exchange of debt securities, except for any applicable tax or governmental charge. (Section 3.05) The designated security registrar for the senior debt securities is U.S. Bank

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National Association, Corporate Trust Services, 60 Livingston Avenue, Saint Paul, MN 55107. The security registrar for the subordinated debt securities will be designated in a prospectus supplement.

In the event of any redemption of any series of debt securities, we will not be required to:

- 1. issue, register the transfer, or exchange, of debt securities of any series between the opening of business 15 business days before the date of the mailing of the notice of redemption of the debt securities of that series to be redeemed and the close of business on the date of mailing of the relevant notice of redemption; or
- 2. register the transfer of, or exchange, any debt security selected for redemption, in whole or in part, except the unredeemed portion of any debt security being redeemed in part. (Section 3.05)

### Payment and paying agent

We will pay principal, interest and any premium on debt securities which are not global securities at the office of the paying agent. We will make payment of interest on the debt securities which are not global securities by check mailed to the persons in whose names the debt securities are registered on days specified in the indentures or the accompanying prospectus supplement. We will also make payments by wire transfer to a U.S. bank designated by a holder of debt securities in an aggregate principal amount of at least \$10,000,000, all of which have the same interest payment dates, upon receipt of a written request from the holder, on or before the record date for the payment, designating the account to which the payment is to be made. (Section 2.05)

If any amount payable on any debt security remains unclaimed at the end of two years after the amount became due and payable, the paying agent will release any unclaimed amounts to us, and the holder of the debt security will look only to us for payment. (Section 10.07)

The paying agent for the senior debt securities is U.S. Bank National Association, Corporate Trust Services, 180 East Fifth Street, Suite 200, SPTF 0210, Saint Paul, MN 55101. The paying agent for the subordinated debt securities will be designated in the accompanying prospectus supplement.

### Book entry securities Corporation

We may initially issue the debt securities of any series in the form of one or more global securities under a book-entry only system operated by a securities depositary. Unless otherwise specified in the accompanying prospectus supplement, The Depository Trust Company ("DTC"), New York, New York, will act as securities depositary for each series of debt securities that are issued as fully-registered securities. The indenture trustee will register in the name of Cede & Co. (DTC's partnership nominee) (or such other nominee as may be requested by an authorized representative of DTC) those securities for which DTC is acting as depositary. Individual purchases of book-entry interests in any of the debt securities will be made in book-entry form. So long as Cede & Co., as nominee of DTC, or another nominee of DTC is the securityholder, references in this prospectus to holders of the debt securities or registered owners will mean Cede & Co. or another nominee of DTC, rather than the owners of beneficial ownership interests in the debt securities.

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DTC is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds securities that its direct participants deposit with DTC. DTC also facilitates the settlement among DTC participants of securities transactions such as transfers and pledges of deposited securities through electronic computerized book-entry changes in accounts of DTC direct participants, thereby eliminating the need for physical movement of securities certificates. DTC direct participants include securities brokers and dealers, banks, trust companies, clearing corporations and certain other organizations. DTC is owned by a number of the DTC direct participants and by the New York Stock Exchange, Inc., the American Stock Exchange, Inc., and the National Association of Securities Dealers, Inc. Access to the DTC system is also available to others, such as securities brokers and dealers, banks and trust companies that clear through or maintain a custodial relationship with a DTC direct participant, either directly or indirectly. The rules applicable to DTC and its participants are on file with the Securities and Exchange Commission.

Anyone desiring to purchase debt securities under the DTC system must make these purchases by or through DTC direct participants which will receive a credit for the debt securities on DTC's records. The direct and indirect participants will in turn record the ownership interest of each actual purchaser of the debt securities on the records of the direct or indirect participant. DTC will not provide beneficial owners of the debt securities with written confirmations of their purchases. Owners of book-entry interests should receive from the direct or indirect participant written confirmations of their purchases providing details of the beneficial owners transactions, as well as periodic statements of their holdings. DTC direct and indirect participants are to effect transfers of beneficial ownership interests by entries made on the books of the DTC direct or indirect participants acting on behalf of the beneficial owners. Owners of beneficial interests in the debt securities will not receive or be entitled to receive certificates representing their ownership interests in the debt securities, except as described below upon the discontinuance of the use of the book-entry system.

Principal and the redemption price of, and interest payments on the debt securities held by or on behalf of DTC as depositary will be made to Cede & Co., as nominee of DTC (or to such other nominee as may be requested by an authorized representative of DTC). DTC's practice is to credit the accounts of DTC direct participants upon DTC's receipt from the issuer or trustee of funds and corresponding detail information on a payment date in accordance with their respective holdings shown on the records of DTC. Payments by DTC direct and indirect participants to owners of beneficial ownership interests in the debt securities will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such DTC direct or indirect participant and not of DTC, the indenture trustee or us, subject to any statutory or regulatory requirements as may be in effect from time to time. DTC is responsible for disbursing such payments to the appropriate DTC direct participants, and those DTC direct participants, and any indirect participants, are in turn responsible for disbursing the payment to the owners of beneficial ownership interests.

To facilitate subsequent transfers, the indenture trustee will register all debt securities which DTC direct participants deposit with DTC in the name of DTC's partnership nominee,

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Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC). The deposit of debt securities with DTC and their registration in the name of Cede & Co. effect no change in beneficial ownership. DTC has no knowledge of the actual beneficial owners of the debt securities; DTC's records reflect only the identity of the DTC direct participants to whose accounts the debt securities are credited, which may or may not be the beneficial owners. The participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to DTC direct participants, by direct participants to indirect participants, and by direct participants and indirect participants to beneficial owners of debt securities will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time.

The indenture trustees will send redemption notices to DTC. If we are redeeming less than all of the debt securities within an issue, DTC's practice is to determine by lot the amount of the interest of each direct participant in such issue to be redeemed.

Neither DTC nor Cede & Co. or any other nominees of DTC will consent or vote with respect to the debt securities. Under its usual procedures, DTC will mail an omnibus proxy to us as soon as possible after the record date. The omnibus proxy assigns the consenting or voting rights of Cede & Co. or other nominee of DTC to those DTC direct participants to whose accounts the debt securities are credited on the record date (identified in a listing attached to the omnibus proxy).

DTC may discontinue providing its services as debt securities depositary with respect to the debt securities at any time by giving reasonable notice to us or the indenture trustee. Under these circumstances, in the event that a successor securities depositary is not obtained, debt security certificates are required to be printed and delivered.

We may decide to discontinue use of the system of book-entry transfers through DTC (or a successor securities depositary). In that event, we will cause debt security certificates to be printed and delivered.

The information in this section concerning DTC and DTC's book-entry system has been obtained from sources that we believe to be reliable, but neither we, the indenture trustees nor any underwriter takes any responsibility for the accuracy of the description of DTC's business organization and procedures.

Neither we nor the trustees under the indentures will have any responsibility or obligation to any DTC direct or indirect participant or any owner of a book-entry interest or any other person not shown on the registration books of the trustees as being a holder of the debt securities with respect to: (1) any debt securities; (2) the accuracy of any records maintained by DTC or any DTC direct or indirect participant; (3) the payment by DTC or any DTC direct or indirect participant of any amount due to any owner of a book-entry interest in respect of the principal or redemption price of or interest on the debt securities; (4) the delivery by DTC or any DTC direct or indirect participant of any notice to any owner of a book-entry interest which is required or permitted under the terms of the indentures to be given to holders of the debt securities; (5) the selection of the owners of a book-entry interest to receive payment in the event of any partial redemption of any senior debt securities; or (6) any consent given or other action taken by DTC or its nominee as holder of the debt securities.

Minnesota Energy Resources Corporation

### Limitation on merger, consolidation and certain sales of assets

We may, without the consent of the holders of the debt securities, merge into or consolidate with any other corporation, or convey or transfer all or substantially all of our properties and assets to another person provided that:

- the successor is a corporation;
- 2. the successor expressly assumes on the same terms and conditions all the obligations under the debt securities and the indentures;
- 3. immediately after giving effect to the transaction, there is no default under the applicable indenture; and
- 4. we deliver to the trustees a certificate and an opinion of counsel stating that the transaction complies with the indentures. (Sections 8.01 and 8.02)

The remaining or acquiring corporation will take over all of our rights and obligations under the indentures. (Section 8.03)

There is inherent uncertainty in the phrase "all or substantially all." This uncertainty may make it difficult for holders of the debt securities to (1) determine whether our covenant relating to consolidation, merger and sale of our properties and assets to another person has been breached, (2) declare an event of default and (3) exercise their acceleration rights. Further, interpretation of this phrase as it relates to any transfer of our properties and assets will be governed by applicable law and will be dependent upon the particular facts and circumstances. In the event the holders of the debt securities attempt to exercise their rights under the indenture following the occurrence of a particular transfer or series of transfers that they believe constitutes a transfer of "all or substantially all." of our properties and assets and we contest such exercise, we cannot provide any assurance as to how a court would interpret the phrase "all or substantially all."

### Satisfaction and discharge; defeasance

We may be discharged from our obligations on the debt securities of any series that have matured or will mature or be redeemed within one year if we deposit with the trustee enough cash to pay all the principal, interest and any premium due to the stated maturity date or redemption date of the debt securities. (Section 4.01)

Each indenture contains a provision that permits either (1) our discharge from all of our obligations with respect to any series of debt securities then outstanding other than our obligations relating to temporary securities issued for the debt securities (Section 3.04), registration of transfer and exchange of the debt securities (Section 3.05), replacement of mutilated, destroyed, lost or stolen debt securities (Section 3.06), maintenance of paying agencies (Section 10.02) and holding money for payment in trust (Section 10.07); or (2) our release from our obligations under covenants respecting any series of debt securities and from the consequences of an event of default resulting from the breach of those covenants other than our obligations relating to temporary securities issued for the debt securities (Section 3.04), registration of transfer and exchange of the debt securities (Section 3.05), replacement of mutilated, destroyed, lost or stolen debt securities (Section 3.06), the order in which money collected is applied (Section 5.06), the restoration of rights and remedies

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(Section 5.09), the resignation and removal of the trustee and the appointment of a successor (Section 6.10), the payment of principal and interest (Section 10.01), maintenance of paying agencies (Section 10.02) and holding money for payment in trust (Section 10.07).

To exercise either of these two options, we must deposit in trust with the trustee enough money to pay in full the principal, interest and premium on the series of debt securities. This amount may be made in cash and/or U.S. government obligations. (Sections 13.02 and 13.03) As a condition to exercising either of the above options, we must deliver to the trustee a ruling directed to the trustee from the Internal Revenue Service or an opinion of counsel based on an Internal Revenue Service Ruling or a change in applicable federal income tax law since the date of the indenture, in each case to the effect that the holders of the debt securities will not recognize income, gain or loss for Federal income tax purposes as a result of the action and will be subject to Federal income tax on the same amount, in the same manner and at the same times as would have been the case if the action had not taken place. (Section 13.04)

If we exercise either of these options, the holders of the debt securities of the series affected will be entitled to receive, solely from the trust fund, payments of principal, interest and premium on the debt securities and will not be entitled to any of the other benefits of the indenture, except for limited provisions including our obligations respecting registration of transfer and exchange of debt securities, replacement of lost, stolen or mutilated debt securities, maintenance of paying agencies and holding moneys for payment in trust. (Sections 13.02 and 13.03)

### Events of default, notice and waiver

Each indenture defines an event of default with respect to any series of debt securities as one or more of the following events:

- our failure to pay interest on any debt security for 30 days after it is due;
- our failure to pay the principal or any premium on any debt securities when due;
- our failure to perform any other covenant in the debt securities of the series or in the applicable indenture with respect to debt securities of that series for 60 days after being given notice of the failure; and
- our entering into bankruptcy or becoming insolvent.

In addition, under the senior indenture our failure to pay when due, subject to any applicable grace period, any principal of, or interest on, any indebtedness for borrowed money incurred or guaranteed by us in the aggregate principal amount of at least \$50,000,000 constitutes an event of default under the senior indenture. Under each indenture, failure to observe or perform an obligation like replacing mutilated, lost or stolen debt securities of a particular series is an event of default for that series only and not for any other series of debt securities. This is in contrast to defaulting on the payment of interest or principal on a particular series of debt securities, which is an event of default for all other series of debt securities. (Section 5.01)

Each indenture requires the trustee to give the holders of a series of debt securities notice of a default with respect to that series within 30 days unless the default is cured or waived. However, the trustee may withhold this notice if it determines in good faith that it is in the interest of those holders. The trustee may not, however, withhold this notice in the case of a payment default. (Section 6.02)

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Other than the duty to act with the required standard of care during an event of default, a trustee is not obligated to exercise any of its rights or powers under either indenture at the request or direction of any of the holders of debt securities, unless the holders have offered to the trustee security or indemnity to its reasonable satisfaction against the potential costs, expenses and liabilities of complying with such request or direction. (Section 6.03) Generally, the holders of a majority in principal amount of outstanding debt securities of any series may direct the time, method and place of conducting any proceeding for any remedy available to the trustee, or exercising any trust or other power conferred on the trustee. (Section 5.12)

Under each indenture, if an event of default with respect to any series of debt securities (other than due to events of bankruptcy, insolvency or reorganization) occurs, the trustee or the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series, by notice in writing to us and to the trustee, may declare the unpaid principal of and accrued interest on all the debt securities of that series to be due and payable immediately and, upon any such declaration, the debt securities of that series will become immediately due and payable.

Under each indenture, if an event of default occurs due to bankruptcy, insolvency or reorganization, all unpaid principal of and accrued interest on the outstanding debt securities of any series will become immediately due and payable without any declaration or other act on the part of the trustee or any holder of any debt security of that series. (Section 5.02)

Under each indenture, the holders of not less than a majority of the principal amount of the outstanding debt securities of any series may rescind a declaration of acceleration and its consequences with respect to the debt securities of a series if:

- all existing events of default, other than the nonpayment of principal of and interest on the debt securities of that series that have become due solely as a result of such declaration of acceleration, have been cured or waived;
- to the extent lawful, interest on overdue interest and on overdue principal that has become due otherwise than by reason of such acceleration has been paid;
- · the rescission would not conflict with any judgment or decree of a court of competent jurisdiction; and
- all amounts due to the trustee under the indenture have been paid. (Section 5.02)

Each indenture requires us to file annually with the trustee a certificate of our principal executive, financial or accounting officer as to the knowledge of the officer of our compliance with all conditions and covenants under the indenture. (Section 7.04)

### **Modification of the indentures**

Together with the trustee, we may modify the indentures without the consent of the holders for limited purposes, including adding covenants or events of default, establishing forms or terms of debt securities, curing ambiguities and making certain other changes which do not adversely affect the holders in any material respect. (Section 9.01)

Together with the trustee, we may make modifications and amendments to each indenture with the consent of the holders of a majority in principal amount of the outstanding debt

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securities of all affected series. However, without the consent of each affected holder, no modification may:

- · change the stated maturity or interest payment date of any debt security;
- reduce the principal, premium (if any) or rate of interest on any debt security;
- change any place of payment or the currency in which any debt security is payable;
- impair the right to enforce any payment after the stated maturity, payment, or redemption date;
- · reduce the percentage of holders of outstanding debt securities of any series required to consent to any modification, amendment or waiver under the indenture;
- change the redemption provisions of the indenture in a manner adverse to a holder; or
- change the provisions of the indenture which relate to its modification or amendment. (Section 9.02)

### Governing law

The indentures and the debt securities will be governed by, and construed under, the laws of the State of Wisconsin.

### **Concerning the trustees**

We may from time to time enter into arms length transactions and maintain customary banking relationships with the trustee under the senior indenture or the trustee under the subordinated indenture, including but not limited to, maintaining lines of credit, borrowing money, maintaining checking account services and other treasury, depository and cash management services.

### Senior debt securities

The senior debt securities will be unsecured and will rank equally with the \$150,000,000 principal amount 7.00% Senior Notes due November 1, 2009, and \$100,000,000 principal amount of 5.375% Senior Notes Due December 1, 2012, presently outstanding under the senior indenture and with all of our other unsecured and non-subordinated debt. In the event we are unable or unwilling to satisfy our obligations under the senior indenture (due to insolvency or otherwise) and our debt holders attempt to obtain satisfaction from our subsidiaries, claims of our subsidiaries' creditors and preferred shareholders will have priority with respect to the assets and earnings of the subsidiaries over the claims of our senior debt holders.

Our failure to pay when due, subject to any applicable grace period, any principal of, or interest on, any indebtedness for borrowed money incurred or guaranteed by us in the aggregate principal amount of at least \$50,000,000 constitutes an event of default under the senior indenture.

We agree in the senior indenture that so long as any senior debt securities are outstanding, we will own, directly or indirectly, all of the shares of voting common stock of Wisconsin Public Service Corporation now or hereafter issued and outstanding, unless we transfer or sell these shares in a transaction which complies with the provisions of the senior indenture relating to our merger, consolidation or sale of substantially all of our properties. See "Limitation on Merger, Consolidation and Certain Sales of Assets" in this prospectus. (Section 10.08 of the Senior Indenture)

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We agree in the senior indenture that so long as any senior debt securities are outstanding, we will not pledge or grant a security interest in, or permit any pledge, security interest or other lien upon, any common stock of any of our subsidiaries owned directly or indirectly by us to secure any indebtedness for money borrowed, without making effective provision to secure the senior debt securities equally and ratably with the other indebtedness and any other indebtedness similarly entitled to be equally and ratably secured. This restriction will not apply, however, to (1) the creation or existence of any pledge, security interest, or encumbrance upon any of the common stock of our subsidiaries (A) created at the time of our acquisition of the common stock or within one year after our acquisition of the common stock to secure all or a portion of the purchase price for the common stock or (B) existing on the common stock at the time of our acquisition of it, or (2) any extension, renewal or refunding of any pledge, security interest, or encumbrance described in clause (1). (Section 10.09 of the Senior Indenture)

### **Subordinated debt securities**

The subordinated debt securities will be unsecured. The subordinated debt securities will be subordinate in right of payment to all senior indebtedness. (Section 14.01 of Subordinated Indenture) In addition, claims of our subsidiaries' creditors and preferred shareholders will have priority with respect to the assets and earnings of the subsidiaries over the claims of our creditors, including holders of the subordinated debt securities, even though those obligations may not constitute senior indebtedness. The subordinated debt securities, therefore, will be effectively subordinated to creditors, including trade creditors, and preferred shareholders of our subsidiaries.

The subordinated indenture defines "senior indebtedness" to mean the principal of, premium, if any, and interest on:

- all of our indebtedness for money borrowed;
- · indebtedness evidenced by securities, debentures, bonds or other similar instruments issued by us;
- all of our capital lease obligations;
- all of our obligations issued or assumed as the deferred purchase price of property, all of our conditional sales contracts and all of our obligations under any title retention agreements (but excluding trade accounts payable arising in the ordinary course of business);
- all of our obligations for reimbursement on any letter of credit, banker's acceptance, security purchase facility or similar credit transaction;
- all obligations of the types previously described of other persons for the payment of which we are responsible or liable as obligor, guarantor or otherwise; and
- · all obligations of the types previously described of other persons secured by any lien on any of our property, whether or not such obligation is assumed by us.
- However, the term "senior indebtedness" will not include:
  - · any indebtedness which is by its terms subordinated to, or pari passu with, the subordinated debt securities; or
  - · any of our obligations to any of our affiliates.

There is no limitation under either indenture on our ability to issue additional senior indebtedness. The senior debt securities constitute senior indebtedness under the subordinated

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indenture. The subordinated debt securities will rank equally with our other subordinated indebtedness.

Under the subordinated indenture, no payment may be made on the subordinated debt securities, including any redemption or sinking fund payment if:

- any of our senior indebtedness has not been paid when due and any applicable grace period has ended and the default has not been cured or waived or ceased to exist, or
- the maturity of any senior indebtedness has been and remains accelerated as a result of a default.

In the event that we pay or distribute our assets to creditors upon any dissolution, winding-up, liquidation or reorganization of us, whether voluntary or involuntary, the holders of senior indebtedness will be entitled to receive payment in full of the senior indebtedness before the holders of subordinated debt securities are entitled to receive or retain any payment. Until the senior indebtedness is paid in full, any payment or distribution to which holders of subordinated debt securities would be entitled but for the subordination provisions of the subordinated indenture will be made to holders of the senior indebtedness. (Section 14.03 of Subordinated Indenture) If a distribution is made to holders of subordinated debt securities that, due to the subordination provisions, should not have been made to them, those holders of subordinated debt securities are required to pay it over to the holders of the senior indebtedness or their representatives or trustees, as their interests may appear. (Section 14.03 of Subordinated Indenture)

As a result of the subordination provisions contained in the subordinated indenture, in the event of our insolvency, our creditors who are holders of senior indebtedness may recover more, ratably, than the holders of subordinated debt securities.

Claims of creditors and any preferred shareholders of each of our subsidiaries will have priority with respect to the assets and earnings of such subsidiaries over the claims of our creditors. The subordinated debt securities therefore will be effectively subordinated to creditors, including holders of secured indebtedness, and preferred shareholders of our subsidiaries.

### **Description of common stock**

The following description of our common stock summarizes all of the material terms and provisions of our common stock. Our restated articles of incorporation and rights agreement are filed as exhibits to the registration statement of which this prospectus is a part and are incorporated by reference into this prospectus.

### General

We are authorized to issue up to 200,000,000 shares of capital stock consisting of one class only, designated as "common stock" with a par value of \$1.00 per share. As of April 30, 2005, 37,819,990 shares of our common stock were issued and outstanding.

The outstanding shares of our common stock are, and any additional shares which we may offer will be, listed on the New York Stock Exchange under the symbol "WPS."

All shares of our common steek will participate equally with respect to dividends and rank equally upon liquidation, subject to the rights of holders of any prior ranking sipper with our shareholders may authorize in the future. In the event of our liquidation, dissolution or winding up, the owners of our common stock are entitled to receive pro rata the assets and funds remaining after satisfaction of all of our creditors and payment of all amounts to which owners of prior ranking stock, if any, then outstanding may be entitled.

### Voting rights

Except as otherwise described in the immediately following paragraphs and under "Certain Statutory and Other Provisions" below, every holder of our common stock has one vote for each share

Our shareholders do not have cumulative voting rights. As a result, the holders of shares entitled to exercise more than 50% of the voting power of shares entitled to vote, represented at a meeting at which a majority of the shares entitled to vote is represented, are entitled to elect all of the directors to be elected at the meeting. Under our restated articles of incorporation and by-laws, our board of directors is divided into three classes. One class is elected each year for a three-year term.

### Provisions of our restated articles of incorporation with possible anti-takeover effects

In addition to the provisions of our restated articles of incorporation and by-laws dividing our board of directors into three classes, certain other provisions of our restated articles of incorporation may have the effect of delaying, deferring or preventing a change in control of our company.

Article 5 of our restated articles of incorporation provides that, subject to the exception discussed below, a director may be removed only for cause by the affirmative vote of shareholders possessing a majority of the voting power of the then outstanding shares of voting stock. As defined in article 5, "cause" exists only if the director whose removal is proposed has been convicted of a felony by a court of competent jurisdiction and such conviction is no longer subject to direct appeal or such director has been adjudged to be liable for negligence or misconduct in the performance of his duty to us in a matter which has a materially adverse effect on our business, and such adjudication is no longer subject to direct appeal. Article 5 also provides for the removal of a director by the shareholders without cause when such removal is recommended by the "requisite vote" of the directors and approved by the affirmative vote of shareholders possessing a majority of the voting power of the then outstanding shares of voting stock. Our restated articles of incorporation define the term "requisite vote" as the affirmative vote of at least two-thirds of the directors then in office plus one director. Unless "cause" is established or removal is recommended by the requisite vote of the directors, a director may not be removed from office even if shareholders possessing a majority of the voting power favor such action. Additionally, pursuant to article 5, vacancies on our board of directors, including those resulting from the removal of a director, may be filled for the unexpired portion of the director's term by the majority vote of the remaining members of the board.

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Article 5 of our restated articles of incorporation provides that those sections of Article III of our by-laws which set forth the general powers, number, qualifications and classification of directors may be amended or repealed only by the affirmative vote of shareholders possessing at least 75% of the voting power of the then outstanding shares of our common stock generally possessing voting rights in the election of directors, or by the requisite vote of the directors. Article 5 of our articles provides that article 5 may itself be amended or repealed only by the affirmative vote of shareholders possessing at least 75% of the voting power of the then outstanding shares of our common stock generally possessing voting rights in the election of directors.

### Statutory provisions with possible anti-takeover effects

Section 180.1150 of the Wisconsin Business Corporation Law provides that the voting power of shares of a "resident domestic corporation," which includes our company, which are held by any person holding in excess of 20% of the voting power in the election of directors of the issuing public corporation's shares shall be limited to 10% of the full voting power of such excess shares. This statutory voting restriction will not apply to shares acquired directly from us, to shares acquired in a transaction incident to which our shareholders vote to restore the full voting power of such shares, either before or after the acquisition of the shares, and under certain other circumstances.

Except as may otherwise be provided by law, the required affirmative vote of shareholders of a Wisconsin corporation for certain significant corporate actions, including a merger or share exchange with another corporation, sale of all or substantially all of the corporate property and assets, or voluntary liquidation, is a majority of all the votes entitled to be cast on the transaction by each voting group of outstanding shares entitled to vote on the transaction. Sections 180.1130 through 180.1134 of the Wisconsin Business Corporation Law provide generally that, in addition to the vote otherwise required by law or the restated articles of incorporation of a "resident domestic corporation," business combinations must be approved by (a) the holders of at least 80% of the votes entitled to be cast and (b) two-thirds of the votes entitled to be cast by the corporation's outstanding voting shares owned by persons other than a "significant shareholder" who is a party to the transaction or an affiliate or associate of such significant shareholder unless the business combination satisfies certain adequacy-of-price standards intended to provide a fair price for shares held by disinterested shareholders. In general, these adequacy-of-price standards provide that the above-referenced vote does not apply if (1) the aggregate amount of the cash and the market value as of the valuation date of consideration other than cash to be received per share by shareholders of the resident domestic corporation in the business combination is at least equal to the highest of (a) the highest per share price received by any person selling common shares of the same class or series from the significant shareholder whether in the transaction in which the person became a significant shareholder or within the two years before the date of the business combination, (b) the market value per share of the same class or series on the date of the commencement of a tender offer initiated by the significant shareholder, on the date on which the person

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cash or in the same form as the significant shareholder has previously paid for shares of the same class or series. Section 180.1130 defines "business combination" to include, subject to certain exceptions, a merger or share exchange of the resident domestic corporation or any of its subsidiaries with, or the sale or other disposition of substantially all assets of the resident domestic corporation to, any significant shareholder or affiliate thereof. The statute defines "significant shareholder" generally to mean a person that is the beneficial owner of 10% or more of the voting power of the outstanding voting shares of the resident domestic corporation.

Sections 180.1140 through 180.1145 of the Wisconsin Business Corporation Law provides that a "resident domestic corporation," which includes our company, may not engage in a "business combination" with an "interested stockholder" within three years after the date on which the interested stockholder acquired his or her 10% or greater interest, unless the corporation's board of directors approved the business combination, or the acquisition of the 10% or greater interest, before the stock acquisition date. The statute defines "interested stockholder" as a person beneficially owning 10% or more of the aggregate voting power of the stock of such corporation. If the interested stockholder fails to obtain such approval by the board of directors, then even after the three-year period, the interested stockholder may complete a business combination with the corporation only with the approval of the holders of a majority of the voting stock not beneficially owned by the interested stockholder, unless the combination satisfies certain adequacy-of-price standards intended to provide a fair price for shares held by non-interested shareholders.

Section 196.795 of the Wisconsin statutes applies to holding companies of Wisconsin public utilities, i.e., companies owning beneficially 5% or more of the voting by the page of the voting of the voting by the page of the voting of the voting by the page of the voting of the voting by the page of the voting by the voting of the voting by the vo

The sections of the Wisconsin law described in the preceding paragraphs and certain provisions of our articles and by-laws, could have the effect, among others, of discouraging takeover proposals for our company or impeding a business combination between us and one of our major shareholders.

### Preemptive rights; common stock purchase rights

No holder of our common stock has any preemptive or subscription rights to acquire shares of our common stock except for the common stock purchase rights attached to each share of our common stock.

On December 12, 1996, our board of directors approved the issuance to shareholders as of December 16, 1996, of a dividend of one right for each outstanding share of our common stock. Rights also attach to shares of our common stock issued after that date. A right will attach to each share of our common stock which we may offer pursuant to this prospectus and

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a prospectus supplement. These rights are not presently exercisable, but ten days after a person or group acquires 15% or more of our common stock or ten business days (subject to extension) after a person or group announces a tender offer to acquire at least 15% of our common stock, the rights will become exercisable. These rights will entitle each holder of our common stock to purchase one share of our authorized but unissued common stock for each right. The exercise price of each right is \$85. Upon the acquisition by any person or group of 15% or more of our common stock, each right, other than rights held by an acquiring party, will entitle the holder to purchase, at the exercise price, shares of our common stock having a market value of two times the exercise price. The agreement setting forth the terms of the rights excludes from its effect the inadvertent acquisition of 15% or more of our common stock, provided there is prompt divestment to less than 15%. We may redeem the rights or may, under certain circumstances, exchange the rights for shares of our common stock, all as provided and subject to the limitations set forth in the agreement setting forth the terms of the rights; otherwise, such rights expire on December 11, 2006.

The rights have anti-takeover effects. The rights will cause substantial dilution to a person who attempts to acquire control of our company without the prior approval of our board of directors. The rights will not affect a transaction approved by our board of directors, because our board has the power to redeem the rights in connection with a transaction that it approves.

### Conversion rights, redemption provisions and sinking fund provisions

Our common stock is not convertible, is not redeemable and has no sinking fund.

### Liability to further calls or to assessment

The shares of our common stock which we may offer pursuant to this prospectus and a prospectus supplement will, upon payment of the purchase price, be fully paid and nonassessable, except with respect to wage claims of, or other debts owing to, our employees for services performed, but not exceeding six months' service in any one case, as provided in Section 180.0622(2)(b) of the Wisconsin Business Corporation Law. The substantially identical predecessor to that statute has been judicially interpreted to mean that shareholders of a Wisconsin corporation, like us, are subject to such personal liability, up to an amount equal to the consideration for which their shares were issued, rather than, as that statute states, the aggregate par value of the shares owned by them (which, for us, is \$1.00 per share). As of the date of this prospectus, there are no material employment claims outstanding against us.

### Restriction on dividends payable by Wisconsin Public Service Corporation

We are a holding company, and our ability to pay dividends is largely dependent upon the ability of our subsidiaries to pay dividends to us. The Public Service Commission of Wisconsin has by order restricted our principal subsidiary Wisconsin Public Service Corporation to paying normal dividends on its common stock of no more than 109% of the previous year's common stock dividend. The Public Service Commission of Wisconsin also requires Wisconsin Public Service Corporation to maintain a capital structure (i.e., the percentages by which each of common stock, preferred stock and debt constitute the total capital invested in a utility) which has a common equity range of 54% to 58%. Each of these limitations may be modified by a future order of the Public Service Commission of Wisconsin. Our right to receive dividends on

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the common stock of Wisconsin Public Service Corporation is also subject to the prior rights of that corporation's preferred shareholders and to provisions in that corporation's restated articles of incorporation. The provisions in the restated articles of Wisconsin Public Service Corporation provide (1) that if Wisconsin Public Service Corporation's "capitalization ratio" (namely, the ratio of the capital represented by Wisconsin Public Service Corporation's common stock, including premiums on such common stock, plus the surplus accounts of Wisconsin Public Service Corporation to the total capital and surplus accounts of Wisconsin Public Service Corporation is 25% or greater, then it may not make any dividend payments that would reduce the capitalization ratio below 25% unless there is no breach of (2) or (3) below; (2) that if the capitalization ratio is 20% or more, but less than 25%, then Wisconsin Public Service Corporation may make dividend payments that do not exceed 75% of its prior twelve month net income; or (3) that if the capitalization ratio is less than 20%, then Wisconsin Public Service Corporation may make dividend payments that do not exceed 50% of its prior twelve month net income.

### Plan of distribution

We may sell the securities:

- · through underwriters,
- through agents, or
- directly to a limited number of institutional purchasers or to a single purchaser.

In addition, we may enter into derivative transactions with third parties (including the writing of options), or sell securities not covered by this prospectus to third parties in privately

negotiated transactions. If the accompanying prospectus supplement indicates, in connection with those derivatives, the third parties may, pursuant to this prospective with the prospective supplement, sell securities covered by this prospectus and the accompanying prospectus supplement, including in short sale transactions. If so, the third parties may use securities pledged by us or borrowed from us or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from us in settlement of those derivatives to close out any related open borrowings of stock, and may use securities received from us in settlement of those derivatives to close out any related open borrowings of stock. The third parties in such sale transactions will be underwriters and, if not identified in this prospectus, will be identified in the accompanying prospectus supplement (or a post-effective amendment). We may also loan or pledge securities covered by this prospectus and the accompanying prospectus supplement to financial institutions or other third parties, who may sell the loaned securities or, in an event of default in the case of a pledge, sell the pledged securities pursuant to this prospectus and the accompanying prospectus supplement. Such financial institution or third party may transfer its short position to investors in our securities or in connection with a simultaneous offering of other securities offered by this prospectus or otherwise.

As required by applicable law, any underwriters or agents will be registered broker-dealers or associated persons of registered broker-dealers acting in that capacity. We will describe the plan of distribution for any particular offering of the securities in the corresponding prospectus supplement, in accordance with applicable law.

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The accompanying prospectus supplement will set forth the terms of the offering of the securities, including the following:

- · the name or names of any underwriters;
- the purchase price and the proceeds we will receive from the sale;
- any underwriting discounts and other items constituting underwriters' compensation;
- · any initial public offering price and any discounts or concessions allowed or reallowed or paid to dealers; and
- any securities exchanges on which the securities of the series may be listed.

If underwriters are used in the sale, the securities will be acquired by the underwriters for their own account and may be resold from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. The securities may be either offered to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate. The obligations of the underwriters to purchase securities will be subject to conditions precedent and the underwriters will be obligated to purchase all the securities of a series if any are purchased. Any initial public offering price and any discounts or concessions allowed or reallowed or paid to dealers may be changed from time to time.

We may engage one or more entities to act as underwriters for an offering from time to time of our common stock in one or more placements. Any such entity would agree to use its commercially reasonable efforts, consistent with its normal trading and sales practices, to try to sell such shares on the terms of such placement (i.e., number of shares of common stock, minimum price for sales of such stock). Such entity could make sales in privately negotiated transactions or through any other method permitted by law, including sales deemed to be an "at the market" offering as defined in Rule 415 promulgated under the Securities Act, including sales made directly on the New York Stock Exchange, the existing trading market for our common stock, or sales made to or through a market maker other than on an exchange. At-the-market offerings may not exceed 10% of the aggregate market value of our outstanding voting securities held by non-affiliates on a date within 60 days prior to the filing of the registration statement of which this prospectus is a part.

We may sell Securities directly or through agents designated by us from time to time. The accompanying prospectus supplement will name any agent involved in the offer or sale of the securities, and will set forth any commissions payable by us to that agent. Unless otherwise indicated in the accompanying prospectus supplement, any agent will be acting on a best efforts basis for the period of its appointment.

Agents and underwriters may be entitled to indemnification by us against civil liabilities arising out of this prospectus, including liabilities under the Securities Act of 1933, or to contribution with respect to payments which the agents or underwriters may be required to make relating to those liabilities. Agents and underwriters may be customers of, engage in transactions with, or perform services for, us in the ordinary course of business.

Each series of debt securities will be a new issue of securities with no established trading market. Any underwriter may make a market in the securities, but will not be obligated to do so and may discontinue any market making at any time without notice. No assurance can be given as to the liquidity of the trading market for any securities.

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### Legal matters

Foley & Lardner LLP, 777 East Wisconsin Avenue, Milwaukee, Wisconsin 53202, our counsel, will pass upon the validity of the debt securities and common stock with attached common stock purchase rights offered pursuant to this prospectus and the prospectus supplements.

### **Experts**

The consolidated financial statements, the related financial statement schedules, and management's report on the effectiveness of internal control over financial reporting incorporated in this prospectus by reference from the Company's Annual Report on Form 10-K for the year ended December 31, 2004, have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their reports (which reports (1) express an unqualified opinion on the consolidated financial statements and financial statement schedules and include an explanatory paragraph relating to the adoption of new accounting principles, (2) express an unqualified opinion on management's assessment regarding the effectiveness of internal control over financial reporting, and (3) express an unqualified opinion on the effectiveness of internal control over financial reporting, which are incorporated herein by reference and have been so incorporated in reliance upon the reports of such firm given upon their authority as experts in accounting and auditing.

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### Common shares

## **Prospectus supplement**

**JPMorgan** Sole Structuring Agent **Banc of America Securities LLC** 

A.G. Edwards **Edward Jones** 

The date of this prospectus supplement is November 15, 2005.

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# Blue Chip Financial Forecasts®

**Top Analysts' Forecasts Of U.S. And Foreign Interest Rates, Currency Values And The Factors That Influence Them** 

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## BLUE CHIP FINANCIAL FORECASTS®

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## FOMC On Track To Announce Balance Sheet "Normalization" In September

**Domestic Commentary** As expected by our panelists, the Federal Reserve's Open Market Committee (FOMC) voted unanimously to leave interest rates unchanged at its July 25<sup>th</sup>-26<sup>th</sup> meeting, maintaining its target range for the federal funds rate at 1.00%-1.25%. However, the policy statement noted that the FOMC expected to start shrinking its \$4 billion-plus balance sheet "relatively soon", a phrase previously used by the FOMC to indicate action at the next meeting. This aligns with the thinking of a great majority of our panelists. In response to a special question asked of the panelists during this month's July 24<sup>th</sup>-25<sup>th</sup> survey, a bit more than 90% said they expected the FOMC to announce the beginning of the roll-off of the Fed's balance sheet at the September 19<sup>th</sup>-20<sup>th</sup> meeting.

According to the "dot plot" issued in conjunction with the FOMC's June meeting, policymakers anticipated one more 25 basis point interest rate hike in 2017. That conforms with the thinking of most of our panelists. None, however, think the FOMC will hike interest rates at its September meeting, and only a couple anticipate a hike at the October 31<sup>st</sup>-November 1<sup>st</sup> meeting. Instead, a bit more than 85% of those responding said they believe the next quarter-point interest rate increase from the FOMC will not come until policymakers' December 12<sup>th</sup>-13<sup>th</sup> meeting, after the Fed has started the process of shrinking its balance sheet. The remainder of our panelists predicts that the next hike in rates will not occur until the FOMC's March 20<sup>th</sup>-21<sup>st</sup> 2018 meeting or sometime thereafter. There was little change over the past month in our panelists' expectations about how much the FOMC would likely raise interest rates in 2018. A bit less than 5.0% predict only one 25-basis-point increase next year, 22.0% foresee 50 basis points of tightening, 46.3% anticipate 75 basis points of increases, and 26.8% of the panelists responding believe that the FOMC will hike rates by 100 basis points in 2018. The latter prediction matches the median projection contained in the June "dot plot".

There were relatively few changes in the FOMCs July policy statement compared to the one issued in conjunction with the June meeting. The July statement noted that the "labor market had continued to strengthen and that economic activity has been rising moderately so far this year. Job gains have been solid, on average, since the beginning of the year, and the unemployment rate has declined. Household spending and business fixed investment have continued to expand." In the June statement, job gains were said to have moderated.

On inflation, the July statement read "On a 12-month basis, overall inflation and the measure excluding food and energy prices have declined and are running below 2 percent." This represented a somewhat greater acknowledgement of the pullback in most measures of the y/y change in inflation since earlier this year. The statement went on to say "Inflation on a 12-month basis is expected to remain somewhat below 2 percent in the near term but to stabilize around the Committee's 2 percent objective over the medium term." The language in the July policy statement on market- and survey-based inflation expectations was unchanged from June.

As for when the Fed will begin to shrink the size of its balance sheet, the July statement said "The Committee expects to begin implementing its balance sheet normalization program relatively soon, provided that the economy evolves broadly as anticipated." The June statement had simply said that the normalization process was expected to start "this year". The shift in phrases from "this year" to "relatively soon" heightened expectations that the FOMC is likely to move at its next meeting in September. Adding to this speculation is the fact that the FOMC moved to the "relative soon" language despite its expectation that inflation is likely to "remain somewhat below" the FOMC's 2 percent objective in the near term. Indeed, the trajectory of inflation over the next few months is likely to have a greater impact on when the next rate hike occurs than when the Fed begins to shrink its balance sheet. Comments by Fed Chair Janet Yellen at the upcoming

Jackson Hole conference on August 24h-26<sup>th</sup> may provide greater clarity on whether or not the FOMC will announce the commencement of the balance sheet roll off process at its September meeting.

As detailed by the FOMC in June, the balance sheet normalization process will involve the proceeds from maturing assets being reinvested only to the extent that they exceed gradually rising caps, with the cap on proceeds from U.S. Treasury securities to rise in \$6 billion increments until reaching \$30 billion per month and the cap on proceeds from mortgage-backed securities to rise in \$4 billion increments until it reaches \$20 billion per month. Unspecified, however, was what the FOMC sees as the eventual "equilibrium" level of its balance sheet.

So far this year, a decline in the value of the U.S. dollar and rise in domestic equity prices has essentially offset the interest rate increases enacted by the FOMC leaving most measures of overall financial conditions in the economy little changed. Whether the initiation of the balance sheet normalization produces a negligible, profound, or something in between impact on financial conditions remains an open question to many market participants.

A potential complicating factor for the Fed as it moves forward with its plan to normalize the balance sheet and further hike interest rates is Congressional action or inaction on the budget and the debt ceiling. Congress needs to pass a budget by the end of September to avoid a government shutdown. As for the debt ceiling, Treasury Secretary Steven Mnuchin currently says his department is already employing emergency measures that should last through the end of September. Thereafter, the risk of default would loom, threatening turmoil in financial markets.

This month's consensus still forecasts real GDP growth of 2.4% (saar) Q3 and 2.3% in Q4 of this year. That would follow growth of 2.6% (saar) in Q2, according to the first estimate from the Bureau of Economic Analysis, and downwardly-revised growth of 1.2% in Q1. In 2018, real GDP is forecast bu the consensus to grow 2.3% (saar) in Q1, 2.4% in Q2, 2.3% in Q3, and 2.2% in Q4. The Q2 and Q4 2018 forecasts fell 0.1 of a percentage point over the past month. While forecasts of quarterly growth rates in 2018 have slipped a bit over the past couple of months, the consensus continues to foresee above-trend growth sufficient enough to drive the unemployment rate below what the Fed and most analysts assume is its non-inflationary rate.

Consensus forecasts of inflation in Q3 2017 fell again this month. However, both the GDP price index and the Consumer Price Index (CPI) still are expected to rebound from the depressed annual rates of change witnessed in Q2. A further pickup is anticipated in Q4 of this year. Indeed, consensus forecasts for both the CPI and the GDP price index from Q4 2017 through Q4 2018 went unchanged this month, with annual increases running at a slightly better than 2.0% clip.

Consensus Forecast The consensus predicts real GDP will continue to grow at an above trend rate slightly in excess of 2.0% through the end of next year, dropping the unemployment rate below its cyclical low of 4.3%. Inflation will rebound from its recent softness, increasing toward the Fed's 2.0% target over the medium term. The FOMC will announce the start of its balance sheet normalization at the September 19<sup>th</sup>-20<sup>th</sup> meeting and hike interest rates by another quarter point at its December 12<sup>th</sup>-13<sup>th</sup> meeting. An additional 75 basis points of rate hikes are expected in 2018. The trade-weighted value of the U.S. dollar is expected to rebound modestly over the next few quarters as the FOMC raises interest rates (see page 2).

**Special Questions** Consensus odds of corporate or individual tax cut legislation being approved by Congress this year have dropped to the mid-30% level. The consensus puts the odds of a recession next year at 21.8%. Nearly 87% of the panelists say the FOMC should take the asset prices into account when formulating policy (*see page 14*)

### ■ BLUE CHIP FINANCIAL FORECASTS ■ AUGUST 1, 2017

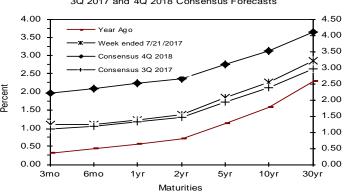
### Consensus Forecasts Of U.S. Interest Rates And Key Assumptions<sup>1</sup>

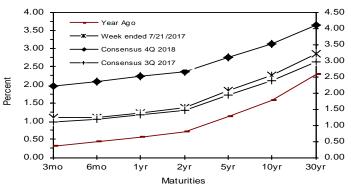
				Histor	y				Cons	ensus l	Forecas	sts-Qua	arterly	Avg.
	Av	erage For	Week End	ding	Ave	erage For	Month	Latest Qtr	3Q	4Q	1Q	2Q	<b>3Q</b>	4Q
Interest Rates	<u>July 21</u>	July 14	July 7	June 30	<u>Jun</u>	May	<u>Apr</u>	2Q 2017	<b>2017</b>	<b>2017</b>	2018	2018	2018	2018
Federal Funds Rate	1.16	1.16	1.12	1.16	1.03	0.90	0.90	0.94	1.2	1.3	1.5	1.6	1.8	2.0
Prime Rate	4.25	4.25	4.25	4.25	4.13	4.00	4.00	4.04	4.3	4.4	4.5	4.7	4.9	5.1
LIBOR, 3-mo.	1.31	1.30	1.30	1.30	1.26	1.18	1.16	1.20	1.4	1.5	1.7	1.9	2.1	2.3
Commercial Paper, 1-mo.	1.11	1.10	1.09	1.06	1.00	0.84	0.83	0.89	1.2	1.3	1.5	1.7	1.9	2.1
Treasury bill, 3-mo.	1.11	1.05	1.05	1.02	1.00	0.90	0.81	0.90	1.1	1.2	1.4	1.6	1.8	2.0
Treasury bill, 6-mo.	1.11	1.13	1.14	1.13	1.11	1.03	0.95	1.03	1.2	1.3	1.5	1.7	1.9	2.1
Treasury bill, 1 yr.	1.22	1.22	1.23	1.22	1.20	1.12	1.04	1.12	1.3	1.5	1.7	1.9	2.1	2.2
Treasury note, 2 yr.	1.36	1.37	1.41	1.37	1.33	1.31	1.24	1.29	1.5	1.6	1.8	2.0	2.2	2.3
Treasury note, 5 yr.	1.83	1.90	1.94	1.83	1.77	1.85	1.83	1.82	1.9	2.1	2.3	2.4	2.6	2.7
Treasury note, 10 yr.	2.27	2.35	2.36	2.23	2.19	2.31	2.30	2.27	2.4	2.6	2.7	2.9	3.0	3.1
Treasury note, 30 yr.	2.85	2.91	2.89	2.78	2.81	2.97	2.94	2.91	3.0	3.1	3.3	3.4	3.6	3.7
Corporate Aaa bond	3.75	3.84	3.85	3.76	3.81	3.99	4.00	3.93	3.9	4.1	4.3	4.5	4.7	4.8
Corporate Baa bond	4.34	4.44	4.44	4.34	4.39	4.57	4.60	4.52	4.6	4.8	5.0	5.1	5.4	5.5
State & Local bonds	3.41	3.46	3.47	3.40	3.37	3.51	3.55	3.48	3.6	3.8	4.0	4.1	4.3	4.4
Home mortgage rate	3.96	4.03	3.96	3.88	3.90	4.01	4.05	3.99	4.1	4.2	4.4	4.6	4.7	4.8
				Histor	y				Co	nsenst	ıs Fore	casts-Q	)uartei	ly
	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Key Assumptions	2015	2015	2016	2016	2016	2016	2017	2017	2017	2017	2018	2018	2018	2018
Major Currency Index	91.8	93.1	93.3	89.6	90.3	93.7	94.4	93.0	90.9	90.9	91.1	91.6	91.4	91.4
Real GDP	1.6	0.5	0.6	2.2	2.8	1.8	1.2	2.6	2.4	2.3	2.3	2.4	2.3	2.2
GDP Price Index	1.4	0.8	0.3	2.4	1.4	2.0	2.0	1.0	1.7	2.0	2.1	2.1	2.1	2.2
Consumer Price Index	1.5	0.4	0.1	2.3	1.8	3.0	3.1	-0.3	1.6	2.2	2.3	2.2	2.2	2.4

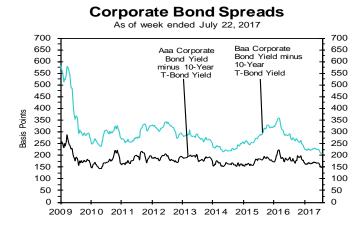
Forecasts for interest rates and the Federal Reserve's Major Currency Index represent averages for the quarter. Forecasts for Real GDP, GDP Price Index and Consumer Price Index are seasonally-adjusted annual rates of change (saar). Individual panel members' forecasts are on pages 4 through 9. Historical data: Treasury rates from the Federal Reserve Board's H.15; AAA-AA and A-BBB corporate bond yields from Bank of America-Merrill Lynch and are 15+ years, yield to maturity; State and local bond yields from Bank of America-Merrill Lynch, A-rated, yield to maturity; Mortgage rates from Freddie Mac, 30-year, fixed; LIBOR quotes from Intercontinental Exchange. All interest rate data is sourced from Haver Analytics. Historical data for Fed's Major Currency Index is from FRSR H.10. Historical data for Real GDP and GDP Chained Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index (CPI) history is from the Department of Labor's Bureau of Labor Statistics (BLS).

### Week ended July 22, 2017 and Year Ago vs. 3Q 2017 and 4Q 2018 Consensus Forecasts Year Ago Week ended 7/21/2017

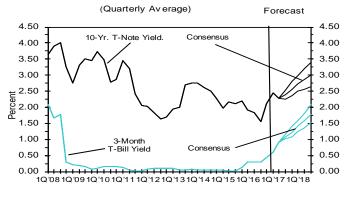
U.S. Treasury Yield Curve







### U.S. 3-Mo. T-Bills & 10-Yr. T-Note Yield



### U.S. Treasury Yield Curve



Eurozone

		3-1410	mun muc	i est ixat	cs	
		History		Cons	ensus For	recasts
		Month	Year	Mon	ths From	Now:
	Latest:	Ago:	Ago:	3	6	12
U.S.	1.32	1.29	0.70	1.51	1.88	2.16
Japan	-0.01	0.00	-0.03	0.03	0.03	0.04
U.K.	0.32	0.32	0.55	0.33	0.36	0.43
Switzerland	-0.73	-0.73	-0.76	-0.75	-0.75	-0.75
Canada	1.20	0.85	0.81	0.98	1.08	1.30
Australia	1.87	1.94	2.23	1.60	1.60	1.70

Latest:	Ago:	Ago:	3	6	12
1.32	1.29	0.70	1.51	1.88	2.16
-0.01	0.00	-0.03	0.03	0.03	0.04
0.32	0.32	0.55	0.33	0.36	0.43
-0.73	-0.73	-0.76	-0.75	-0.75	-0.75
1.20	0.85	0.81	0.98	1.08	1.30
1.87	1.94	2.23	1.60	1.60	1.70
-0.33	-0.33	-0.30	-0.33	-0.32	-0.26

-----3-Month Interest Rates<sup>1</sup>-----

10-Yr.	<b>Government Bond</b>	Yields <sup>2</sup> -

		-History		Cons	ensus For	recasts
		Month	Year	Mon	ths From	Now:
	Latest:	Ago:	Ago:	3	6	12
U.S.	2.32	2.16	1.55	2.48	2.63	4.97
Germany	0.55	0.26	-0.01	0.55	0.62	0.81
Japan	0.07	0.04	-0.22	0.06	0.08	0.10
U.K.	1.21	1.07	0.98	1.34	1.49	1.71
France	0.81	0.61	0.21	0.97	0.99	1.18
Italy	2.12	1.90	1.25	2.27	2.43	2.44
Switzerland	0.04	-0.15	-0.55	0.04	0.14	0.26
Canada	1.97	1.49	1.12	1.95	2.10	2.37
Australia	2.68	2.39	1.92	2.75	2.82	2.96
Spain	1.59	1.38	1.19	1.76	1.85	1.96

-----Foreign Exchange Rates<sup>1</sup>-----

			0	- 0		
		-History-		Cons	ensus For	ecasts
		Month	Year	Mon	ths From	Now:
	Latest:	Ago:	Ago:	3	6	12
U.S.	88.639	91.925	91.783	91.3	91.2	90.3
Japan	111.18	111.26	106.22	113.0	114.3	115.6
U.K.	1.2968	1.2727	1.3091	1.29	1.30	1.31
Switzerland	0.9468	0.9692	0.9888	0.97	0.97	0.96
Canada	1.2545	1.3263	1.3178	1.30	1.30	1.28
Australia	0.7911	0.7578	0.7453	0.75	0.75	0.76
Euro	1.1655	1.1196	1.0968	1.13	1.13	1.15

	3-Mo	nsensus nth Rates J.S. Rate		10-Y	sensus ear Gov't rs. U.S. Yie	ld
	Now	In 12 Mo.		Now	In 12	
Japan	-1.33	-2.13	Germany	-1.77	-2.04	
U.K.	-1.00	-1.74	Japan	-2.25	-2.76	
Switzerland	-2.05	-2.91	U.K.	-1.11	-1.14	
Canada	-0.12	-0.86	France	-1.51	-1.67	
Australia	0.55	-0.46	Italy	-0.20	-0.42	
Eurozone	-1.65	-2.42	Switzerland	-2.28	-2.60	
			Canada	-0.35	-0.49	
			Australia	0.36	0.11	
			Spain	-0.73	-0.89	

Forecasts of panel members are on pages 10 and 11. Definitions of variables are as follows: <sup>1</sup>Three month rate on interest-earning money market deposits denominated in selected currencies. <sup>2</sup>Government bonds are yields to maturity. Foreign exchange rate forecasts for U.K., Australia and the Euro are U.S. dollars per currency unit. For the U.S dollar, forecasts are of the U.S. Federal Reserve Board's Major Currency Index.

International Commentary The U.S. greenback continued its swoon in July with the dollar index falling to 13-month lows. The downdraft has resulted from fading prospects for U.S. fiscal stimulus and tax reform and more recently by expectations that the FOMC will not hike rates again until December and somewhat more hawkish stances by aother major central banks. Shorting the dollar, however, has become a very crowded trade, causing some market participants to predict it may be due for at least a meaningful, near-term bounce higher. Moreover, the consensus thinks dollar bearishness has been overdone, and that the greenback may work its way higher over the next year and a half as the FOMC continues to normalize interest rates at a faster pace than its counterparts.

The ECB left interest rates unchanged at its July 20th meeting, reiterating that it expects rates will be held at present levels for an extended period and well past the conclusion of its asset purchase program that currently involves monthly purchases of 60 billion euros until the end of December. During the post-meeting press conference, ECB President Draghi sounded less hawkish than in late June when he noted at a conference in Portugal that "deflationary forces had been replaced by inflationary ones." Indeed, he said at the ECB's July press conference that a very substantial degree of monetary policy accommodation is still needed. However, he added that policymakers this fall will discuss what they intend to do with the asset purchase program beyond December. Many analysts hope for some hints of that decision when Draghi speaks at the Jackson Hole conference in late August. Real GDP growth in the Eurozone probably grew at a near 3.0% clip (q/q,saar) in Q2, but inflation remains well short of the ECB's near 2.0% target.

Odds of a hike in interest rates by the Bank of England's Monetary Policy Committee at its August 3<sup>rd</sup> meeting fell over the past month. At its June meeting, markets were shocked when three of the the eight voting MPC members voted in favor of an immediate hike in rates. However, conflicting signals on the economy since then, coupled with dovish comments from Mark Carney have undercut expectations of an August hike. While inflation unexpectedly fell in June it still is running well above the BoE's 2.0% target and the unemployment rate is at its lowest in 40 years. However, wage growth is tepid, as is business investment and exports. On top of everything else, there remains considerable concern about the potential economic and financial impact of Britain's exit from the Eurozone. Real GDP increased only 0.3% (q/q) in Q2, leaving the economy growing in the first half of this year at its slowest pace since 2012.

The Bank of Canada raised its policy rate by 25 basis points to 0.75% on July 12<sup>th</sup>, marking the first increase in seven years. According to the bank the move was justified because a significant amount of slack had been absorbed and the output gap is expected to close by the end of this year. The BoC raised its forecast of real GDP growth this year to 2.8% from 2.6% and its estimate of 2018 growth from 1.9% to 2.0%. Real GDP in Q2 likely grew about 3.0% (q/q,saar) following a well-above trend rate increase of 3.7% in Q1. Inflation currently remains below the BoC's 2.0% target, but a further 25 basis point rate increase this fall is likely, according to most analysts.

At its July 20<sup>th</sup> meeting, the Bank of Japan left its key interest rate at a minus 0.1% and its asset purchase program unaltered. It also maintained its target of around zero for 10-year JGBs. It reiterated its inflation target of 2.0%, but in a surprise move lowered its inflation forecasts and upped its real GDP forecasts for this year and next. Real GDP grew 1.0% (q/q,saar) in Q1 of this year - the fourth consecutive increase - but likely grew at double that pace in O2. Minutes of the BoJ's June meeting indicated a spirited discussion of how much to share with the public about the banks eventual exit from its superaccommodative monetary policy for fear of upsetting markets.

The Reserve Bank of Australia left policy unchanged in July, but minutes of the meeting were more hawkish then expected, lifting rates and the dollar (see pages 10-11 for individual panelists' forecasts).

### 4 ■ BLUE CHIP FINANCIAL FORECASTS ■ AUGUST 1, 2017

# Third Quarter 2017 Interest Rate Forecasts

Purple   P							Perc	ent Per A	nnum A	verage F	or Quarter	·					Avg. For	(Q-	Q % Chanç	ge)
Paralle Members Paralle Member	Blue Chip																	,	•	
Part	Financial Forecasts	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	A.	B.	C.	D.
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Wells Fingo	Chase Wealth Management	1.2	4.3 L	1.3	1.2	1.1	1.2	1.3	1.4	1.4 L	2.3	2.8 L	3.8	4.3 L	3.4 L	3.9	92.0	2.0	2.0	2.1
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Common intelligence Unit   12	AIG																			
Second   S	Amherst Pierpont Securities	1.2	4.3 L	1.3	1.2	1.1	1.2	1.3	1.4	1.9	2.4	3.0	3.8	4.5	3.6		90.5	3.1	2.0	1.3
Modely Analysis   12	Economist Intelligence Unit	1.2	4.3 L	1.3	1.2	1.2 H	1.1	1.2 L	1.4	1.8	2.3	2.8 L			na	3.9	na	1.8	na	
Somurias Romines, Inc.  12 43 L 13 na na na na na na na 1,6 2,0 25 3,0 41 47 na 41 na na 2,0 20 10 14 na somuria Seguina Financial Corporation  12 43 L 14 na	Georgia State University																			
Regions Financial Corporation   12   43 L   14   12   12 H   12   13   14   19   24   29   42   48   39 H   40   902   25   19   14   17   18   18   19   23   29   18   18   18   18   18   18   18   1	Moody's Analytics																			
Socies Generale  12																				
Jawa Capital Markitas America  12	•																			
Definicial Rássoc.  12 43 L 14, 12 11, 12 13, 14, 19 24, 29, 38, 45, 36, 41, 902, 24, 18, 28 18 28 18 25 26 10 3 10 10 10 10 10 10 10 10 10 10 10 10 10																				
AUFG Linion Bank  12	DePrince & Assoc.																			2.6 H
SLC Financial Economics	DS Economics					1.0														
Wells Capital Management	MUFG Union Bank	1.2	4.3 L	1.4	1.2	1.1	1.2	1.5	1.5	2.0	2.4	3.0	3.8	4.4	3.6	4.1	90.0	2.9	1.9	1.7
Retion Economics   1,1   L   4,3   L   1,3   1,2   1,1   1,2   1,3   1,5   2,0   2,4   3,0   3,8   4,5   3,5   3,9   93,0   3,1   1,2   1,0    Sank of Afraerica Merrill Lynch   1,1   L   na   1,4   na   1,1   na   na   1,5   2,1   2,6   3,1   na   na   na   na   na   na   2,3   1,8   1,6    MoC Capital Markets   1,1   L   4,3   L   1,3   na   1,0   1,1   1,2   1,3   1,4   1,9   2,4   2,8   L   na   na   na   4,1   90,2   2,1   1,4   1,4    Sometica Bank   1,1   L   4,3   L   1,3   na   1,0   1,1   1	GLC Financial Economics	1.1 L	4.3 L	1.4	1.2	1.1	1.1	1.2 L	1.4	1.9	2.3	2.9	3.7 L	4.3	3.4 L	4.0	90.3	2.9	2.3	2.4
Sank of America Merilla Lynch  1.1 L  1. a  1.4 na  1.1 na  1.1 na  1.1 na  1.1 na  1.1 na  1.2 na  1.1 l  1.2 na  1.1 l  1.2 na  1.3 na  1.1 na  1.4 l  1.2 na  1.4 l  1.3 na  1.1 l  1.2 l  1.3 na  1.1 l  1.4 l  1.5 l  1.5 l  1.6 l  1.7 l  1.6 l  1.7 l  1.8	Wells Capital Management																			
3MO Capital Markets   1.1   L   4.3   L   1.3   na   1.1   1.2   1.3   1.4   2.0   2.4   2.9   na   na   na   4.1   90.2   2.1   1.4   1.4    Domerica Bank   1.1   L   4.3   L   1.3   na   1.0   1.1   1.2   L   1.4   1.9   2.4   2.8   L   na   na   na   4.0   na   3.2   1.9   1.0    Salodiman Sachs & Co.   1.1   L   na   1.4   na   1.0   na   na   1.5   2.1   2.5   2.9   na   na   na   4.4   na   2.5   1.3   1.1    Significanci Mare   1.1   L   4.3   L   na   na   1.0   na   na   1.5   2.1   2.5   2.9   na   na   na   na   4.4   na   2.5   1.3   1.1    Significanci Markets & Company   1.1   L   4.3   L   1.4   1.1   L   1.1   1.3   1.4   1.5   2.1   2.5   2.9   3.9   4.6   3.4   L   4.0   92.1   2.4   1.4   1.7    Modoris Sagita & Company   1.1   L   4.3   L   1.4   1.1   L   1.1   1.3   1.4   1.9   2.3   2.9   3.9   4.4   3.4   L   4.0   89.7   2.4   1.4   1.7    Modoris Sagita & Company   1.1   L   4.3   L   1.4   1.1   L   1.3   1.4   1.9   2.3   2.9   3.9   4.4   3.4   L   4.0   89.7   2.4   1.4   1.7    Modoris Sagita & Company   1.1   L   4.3   L   1.4   1.1   L   1.3   1.4   1.9   2.3   2.9   3.9   4.4   3.4   L   4.0   89.7   2.4   1.7   1.1    Modoris Sagita & Company   1.1   L   4.3   L   4.1   L   1.1   1.2   1.3   1.4   1.9   2.3   2.9   3.9   4.4   3.4   L   4.0   89.7   2.4   1.7   1.1    Modoris Sagita & Company   1.1   L   4.3   L   4.1   L   1.1   1.2   1.3   1.5   2.0   2.4   2.9   3.9   3.9   4.6   3.4   L   4.0   89.7   2.4   1.7   1.1    Modoris Sagita & Company   1.1   L   4.3   L   4.1   L   1.1   1.2   1.3   1.5   2.0   2.4   2.9   3.9   3.9   4.4   3.4   L   4.0   8.9   3.3   1.1   1.1    Modoris Sagita & Company   1.1   L   4.3   L   4.1   L   1.1   1.2   1.3   1.5   2.0   2.4   2.9   3.9   3.9   4.4   3.4   4.4   4.9   3.8   4.8   3.7   4.1   3.8   4.8   3.8																				
Comerica Bank 1.1 L 4.3 L 1.3 na 1.0 1.1 1.2 L 1.4 1.9 2.4 2.8 L na na na 4.0 na 3.2 1.9 1.0 cannie Mae 1.1 L 4.3 L na na 1.1 1.1 1.1 1.3 1.4 1.9 2.3 2.9 na na na na 4.0 na 1.9 1.3 1.3 1.3 1.1 1.1 1.3 1.4 1.9 2.3 2.9 na na na na 4.0 na 1.9 1.3 1.3 1.1 1.1 1.1 1.3 1.4 1.9 2.3 2.9 na na na na 4.0 na 1.9 1.3 1.3 1.1 1.1 1.1 1.3 1.4 1.5 1.9 2.3 2.9 na na na na 4.0 na 1.2 1.3 1.1 1.1 1.3 1.4 1.5 1.9 1.0 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1	•																			
From the Male	•																			
Soldman Sachs & Co.  1.1 L na 1.4 na 1.0 na na 1.5 2.1 2.5 2.9 na na na na 4.4 na 2.5 1.3 1.1 11 11 11 1.4 3 L na na 1.0 1.2 1.3 1.6 2.0 2.4 3.0 na na na na na na na 2.3 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	Fannie Mae																			
Comis, Sayles & Company Outline Outline Sayles & Company Outline Sayles	Goldman Sachs & Co.																			
Mody's Capital Markets Group  1.1 L 4.3 L 1.3 1.2 1.1 1.2 1.3 1.4 1.9 2.3 2.9 3.9 4.4 3.4 L 4.0 89.7 2.4 1.7 1.1 1.2 1.1 1.2 1.3 1.4 1.8 2.2 L 2.9 na na na na 3.8 L 90.5 2.1 1.1 1.5 1.1 1.2 1.3 1.4 1.8 2.2 L 2.9 na na na na 3.8 L 90.5 2.1 1.1 1.5 1.6 1.1 1.8 1.2 1.3 1.4 1.8 2.2 L 2.9 na na na na 3.8 L 90.5 1.3 3.9 H 1.1 1.8 1.2 1.3 1.5 1.2 0.2 2.4 2.9 na	High Frequency Economics	1.1 L	4.3 L	na	na	1.0	1.2	1.3	1.6	2.0	2.4	3.0	na	na	na	na	na	2.3	2.0	2.0
Oxford Economics	Loomis, Sayles & Company	1.1 L	4.3 L	1.4	1.1 L	1.1	1.3	1.4	1.5	1.9	2.3	2.9	3.9	4.6	3.4 L	4.0	92.1	2.4	1.4	1.7
PNC Financial Services Corp.  1.1 L 4.3 L 1.4 na 1.1 1.2 1.3 1.5 2.0 2.4 3.0 na 4.6 3.7 4.1 na	Moody's Capital Markets Group	1.1 L	4.3 L		1.2				1.4				3.9	4.4	3.4 L					
RBC Capital Markets																				
S&P Global	•																			
The Northern Trust Company 1.1 L 4.3 L 1.4 1.1 L 1.1 1.2 1.3 1.5 2.0 2.4 3.1 3.8 4.6 3.5 4.1 na 1.8 1.0 1.2  Barclays Capital 1.1 L 4.3 L 1.4 na 1.3 na 1.4 na 1.5 na 1.6 2.0 2.4 3.0 na 1.7 na 1.8 1.0 1.2  Barclays Capital 1.1 L 1.4 na 1.3 na 1.4 na 1.5 na 1.5 na 1.6 2.0 2.4 3.0 na 1.7 na 1.8 na	•																			
Barclays Capital 1.1 L 4.3 L 1.4 na																				
BNP Paribas Americas  1.1 L  1.0  1.0  1.0  1.0  1.0  1.0  1.0  1.	. ,																			
Cycledata Corp.  1.1 L 4.3 L 1.4 1.2 1.1 1.2 1.3 1.5 2.0 2.4 2.8 L 3.8 4.5 3.5 3.9 92.0 2.2 2.0 2.0 Natl Assn. of Realtors  1.1 L 4.3 L 1.4 1.2 1.1 1.2 1.3 1.5 1.9 2.4 2.9 3.8 4.4 3.5 4.0 na 2.4 1.9 2.1 2.1 2.1 2.1 2.1 2.5 3.1 3.9 4.6 3.6 4.1 90.9 2.4 1.7 1.6 Natl Assn. of Realtors  1.2 4.3 1.4 1.2 1.1 1.2 1.3 1.5 1.9 2.4 3.0 3.9 4.6 3.6 4.1 90.9 2.4 1.7 1.6 Natl Assn. of Realtors  Top 10 Avg. 1.2 4.3 1.4 1.2 1.1 1.2 1.3 1.5 1.9 2.4 3.0 3.9 4.6 3.6 4.1 90.9 2.4 1.7 1.6 Natl Assn. of Realtors  Top 10 Avg. 1.2 4.3 1.5 1.2 1.2 1.3 1.4 1.6 2.0 2.5 3.2 4.1 4.8 3.7 4.2 92.1 3.0 2.2 2.3 Natl Assn. of Realtors  Bottom 10 Avg. 1.1 4.3 1.3 1.1 1.0 1.1 1.2 1.4 1.8 2.3 2.8 3.8 4.4 3.4 3.9 89.8 1.8 1.1 1.0 July Consensus 1.2 4.3 1.4 1.2 1.1 1.2 1.3 1.5 2.0 2.4 3.0 4.0 4.7 3.7 4.1 92.8 2.4 1.9 1.9 Natl Assn. of Freezasts Changed From A Month Ago:  Down 9 5 15 9 9 11 14 21 16 14 21 15 20 14 13 20 12 16 25 Same 31 23 9 11 15 14 14 17 18 18 13 7 6 4 13 3 24 19 11 Up 5 10 13 5 14 10 7 7 7 11 13 10 4 2 4 10 0 0 9 8 9	BNP Paribas Americas																			
August Consensus  1.1 L 4.3 L 1.4 1.2 1.1 1.2 1.3 1.5 1.9 2.4 2.9 3.8 4.4 3.5 4.0 na 2.4 1.9 2.1 2.6 H  August Consensus  1.2 4.3 1.4 1.2 1.1 1.2 1.3 1.5 1.9 2.4 3.0 3.9 4.6 3.9 H 4.2 91.6 2.2 2.1 2.6 H  August Consensus  1.2 4.3 1.4 1.2 1.1 1.2 1.3 1.5 1.9 2.4 3.0 3.9 4.6 3.6 4.1 90.9 2.4 1.7 1.6  Top 10 Avg. 1.2 4.3 1.5 1.2 1.2 1.3 1.4 1.6 2.0 2.5 3.2 4.1 4.8 3.7 4.2 92.1 3.0 2.2 2.3 Bottom 10 Avg. 1.1 4.3 1.3 1.1 1.0 1.1 1.2 1.4 1.8 2.3 2.8 3.8 4.4 3.4 3.9 89.8 1.8 1.1 1.0 July Consensus  1.2 4.3 1.4 1.2 1.1 1.2 1.3 1.5 2.0 2.4 3.0 4.0 4.7 3.7 4.1 92.8 2.4 1.9 1.9 Number of Forecasts Changed From A Month Ago:  Down 9 5 15 9 9 11 14 21 16 14 21 15 20 14 13 20 12 16 25 Same 31 23 9 11 15 14 14 17 18 18 13 7 6 4 13 3 24 19 11 Up 5 10 13 5 10 13 5 14 10 7 7 11 13 10 4 2 4 10 0 9 9 8 9	RidgeWorth Investments	1.1 L	4.3 L	1.4	1.1 L	1.0	1.1	1.2 L	1.4	2.0	2.4	3.1	3.9	4.6	3.6	4.2	93.5 H	2.4	2.1	0.0 L
August Consensus 1.2 4.3 1.4 1.2 1.1 1.2 1.3 1.5 1.9 2.4 3.0 3.9 4.6 3.9 H 4.2 91.6 2.2 2.1 2.6 H  August Consensus 1.2 4.3 1.4 1.2 1.1 1.2 1.3 1.5 1.9 2.4 3.0 3.9 4.6 3.6 4.1 90.9 2.4 1.7 1.6  Top 10 Avg. 1.2 4.3 1.5 1.2 1.2 1.3 1.4 1.6 2.0 2.5 3.2 4.1 4.8 3.7 4.2 92.1 3.0 2.2 2.3  Bottom 10 Avg. 1.1 4.3 1.3 1.1 1.0 1.1 1.2 1.4 1.8 2.3 2.8 3.8 4.4 3.4 3.9 89.8 1.8 1.1 1.0  July Consensus 1.2 4.3 1.4 1.2 1.1 1.2 1.3 1.5 2.0 2.4 3.0 4.0 4.7 3.7 4.1 92.8 2.4 1.9 1.9  Number of Forecasts Changed From A Month Ago:  Down 9 5 15 9 9 11 14 21 16 14 21 15 20 14 13 20 12 16 25  Same 31 23 9 11 15 14 14 17 18 18 18 13 7 6 4 13 3 24 19 11  Up 5 10 13 5 14 10 7 7 11 13 10 4 2 4 10 0 9 9 8 9	Cycledata Corp.				1.2	1.1	1.2	1.3	1.5	2.0	2.4	2.8 L	3.8	4.5	3.5	3.9	92.0	2.2	2.0	2.0
August Consensus 1.2 4.3 1.4 1.2 1.1 1.2 1.3 1.5 1.9 2.4 3.0 3.9 4.6 3.6 4.1 90.9 2.4 1.7 1.6  Top 10 Avg. 1.2 4.3 1.5 1.2 1.2 1.3 1.4 1.6 2.0 2.5 3.2 4.1 4.8 3.7 4.2 92.1 3.0 2.2 2.3  Bottom 10 Avg. 1.1 4.3 1.3 1.1 1.0 1.1 1.2 1.4 1.8 2.3 2.8 3.8 4.4 3.4 3.9 89.8 1.8 1.1 1.0  July Consensus 1.2 4.3 1.4 1.2 1.1 1.2 1.3 1.5 2.0 2.4 3.0 4.0 4.7 3.7 4.1 92.8 2.4 1.9 1.9  Number of Forecasts Changed From A Month Ago:  Down 9 5 15 9 9 11 14 21 16 14 21 15 20 14 13 20 12 16 25  Same 31 23 9 11 15 14 14 17 18 18 18 13 7 6 4 13 3 24 19 11  Up 5 10 13 5 14 10 7 7 11 13 10 4 2 4 10 0 9 9 8 9	Nat'l Assn. of Realtors																			
Top 10 Avg. 1.2 4.3 1.5 1.2 1.2 1.3 1.4 1.6 2.0 2.5 3.2 4.1 4.8 3.7 4.2 92.1 3.0 2.2 2.3 Bottom 10 Avg. 1.1 4.3 1.3 1.1 1.0 1.1 1.2 1.4 1.8 2.3 2.8 3.8 4.4 3.4 3.9 89.8 1.8 1.1 1.0 July Consensus 1.2 4.3 1.4 1.2 1.1 1.2 1.3 1.5 2.0 2.4 3.0 4.0 4.7 3.7 4.1 92.8 2.4 1.9 1.9 Number of Forecasts Changed From A Month Ago:    Down 9 5 15 9 9 11 14 21 16 14 21 15 20 14 13 20 12 16 25 Same 31 23 9 11 15 14 14 17 18 18 18 13 7 6 4 13 3 24 19 11 Up 5 10 13 5 14 10 7 7 11 13 10 4 2 4 10 0 9 8 9	RDQ	1.1 L	4.3 L	1.5	1.1 L	1.2 H	1.4 H	1.5	1.6	2.1	2.5	3.1	3.9	4.6	3.9 H	4.2	91.6	2.2	2.1	2.6 H
Bottom 10 Avg. 1.1 4.3 1.3 1.1 1.0 1.1 1.2 1.4 1.8 2.3 2.8 3.8 4.4 3.4 3.9 89.8 1.8 1.1 1.0 1.0 July Consensus 1.2 4.3 1.4 1.2 1.1 1.2 1.3 1.5 2.0 2.4 3.0 4.0 4.7 3.7 4.1 92.8 2.4 1.9 1.9 Number of Forecasts Changed From A Month Ago:    Down 9 5 15 9 9 11 14 21 16 14 21 15 20 14 13 20 12 16 25	August Consensus	1.2	4.3	1.4	1.2	1.1	1.2	1.3	1.5	1.9	2.4	3.0	3.9	4.6	3.6	4.1	90.9	2.4	1.7	1.6
Bottom 10 Avg. 1.1 4.3 1.3 1.1 1.0 1.1 1.2 1.4 1.8 2.3 2.8 3.8 4.4 3.4 3.9 89.8 1.8 1.1 1.0 1.0 July Consensus 1.2 4.3 1.4 1.2 1.1 1.2 1.3 1.5 2.0 2.4 3.0 4.0 4.7 3.7 4.1 92.8 2.4 1.9 1.9 Number of Forecasts Changed From A Month Ago:    Down 9 5 15 9 9 11 14 21 16 14 21 15 20 14 13 20 12 16 25	Top 10 Ava	1.2	4.3	1.5	1.2	1.2	1.3	1.4	1.6	2.0	2.5	3.2	4.1	4.8	3.7	4.2	92.1	3.0	2.2	2.3
July Consensus       1.2       4.3       1.4       1.2       1.1       1.2       1.3       1.5       2.0       2.4       3.0       4.0       4.7       3.7       4.1       92.8       2.4       1.9       1.9         Number of Forecasts Changed From A Month Ago:         Down       9       5       15       9       9       11       14       21       16       14       21       15       20       14       13       20       12       16       25         Same       31       23       9       11       15       14       14       17       18       18       13       7       6       4       13       3       24       19       11         Up       5       10       13       5       14       10       7       7       11       13       10       4       2       4       10       0       9       8       9																				
Number of Forecasts Changed From A Month Ago:    Down   9   5   15   9   9   11   14   21   16   14   21   15   20   14   13   20   12   16   25	•																			
Down 9 5 15 9 9 11 14 21 16 14 21 15 20 14 13 20 12 16 25  Same 31 23 9 11 15 14 14 17 18 18 13 7 6 4 13 3 24 19 11  Up 5 10 13 5 14 10 7 7 11 13 10 4 2 4 10 0 9 8 9	•			1.4	1.2	1.1	1.2	1.3	1.5	2.0	2.4	3.0	4.0	4.7	3.7	4.1	92.8	2.4	1.9	1.9
Same 31 23 9 11 15 14 14 17 18 18 13 7 6 4 13 3 24 19 11 Up 5 10 13 5 14 10 7 7 11 13 10 4 2 4 10 0 9 8 9	<del>-</del>																			
Up 5 10 13 5 14 10 7 7 11 13 10 4 2 4 10 0 9 8 9	Down	9	5	15	9	9	11	14	21	16	14	21	15	20	14	13	20	12	16	25
·	Same	31	23	9	11	15	14	14	17	18	18	13	7	6	4	13	3	24	19	11
·	Up	5	10	13	5	14	10	7	7	11	13	10	4	2	4	10	0	9	8	9
Diffusion Index 46 % 57 % 47 % 42 % 57 % 49 % 40 % 34 % 44 % 49 % 38 % 29 % 18 % 27 % 46 % 7 % 1 47 % 41 % 32 %	Diffusion Index	46 %	57 %	47 %	42 %	57 %	49 %	40 %	34 %	44 %	49 %	38 %	29 %	18 %	27 %	46 %	7 %	47 %	41 %	32 %

# Fourth Quarter 2017 Interest Rate Forecasts

																· · ·		1	
Plus Chin							ent Per A	nnum A			ſ <b></b>					Avg. For		Q % Chang	
Blue Chip Financial Forecasts	1	2	3	nort- rerrr 1	۰ 5	6	7	8	intermed	diate-Term 10	 11	12	Long- 13	14	 15	Qtr A.	В.	(SAAR) C.	D.
Panel Members	Federal	Prime	LIBOR	Com.	Treas.		Treas.	Treas.	Treas.	Treas.	Treas.	Aaa	Baa	State &	Home	Fed's Major	В.	GDP	Cons.
T dilot monibolo	Funds	Bank	Rate	Paper	Bills	Bills	Bills	Notes	Notes	Notes	Bond	Corp.	Corp.	Local	Mtg.	Currency	Real	Price	Price
	Rate	Rate	3-Mo.	1-Mo.	3-Mo.	6-Mo.	1-Yr.	2-Yr.	5-Yr.	10-Yr.	30-Yr.	Bond	Bond	Bonds	Rate	\$ Index	GDP	Index	Index
Scotiabank Group	1.5 H	4.5	na	na	1.3	na	na	1.7	2.1	2.5	3.2	na	na	na	na	na	2.2	2.0	1.8
Swiss Re	1.5 H	4.6 H	1.8 H	1.5 H	1.4	1.6 H	1.8 H	2.1 H	2.3	2.7	3.6	4.5	5.5	na	4.6	na	2.2	2.8	3.8 H
Chmura Economics & Analytics	1.5 H	4.5	1.7	1.5	1.4	1.5	1.6	1.8	2.3	2.7	3.2	na	na	na	4.3	na	2.5	2.2	1.5
Moody's Analytics	1.4	4.5	1.6	1.3	0.9 L	1.0 L	1.3 L	1.5	2.3	3.0 H	3.8 H	5.1 H	6.1 H	4.1	4.6	na	3.0	3.0 H	2.1
Nomura Securities, Inc.	1.4	4.5	1.6	na	na	na	na	1.6	2.1	2.6	3.1	4.2	4.8	na	4.3	na	2.2	1.9	2.4
Chase Wealth Management MUFG Union Bank	1.4	4.5 4.5	1.5 1.6	1.4 1.5	1.3 1.4	1.4 1.5	1.5 1.8 H	1.6 1.8	1.6 L 2.3	2.5 2.7	3.0 3.2	4.0 4.0	4.5 L	3.6 3.9	4.1 4.4	92.1 88.0 L	2.1 2.8	2.3 2.0	2.2 2.4
Naroff Economic Advisors	1.4 1.4	4.5	1.5	1.4	1.4	1.4	1.6 FI	1.0	2.3	2.7	3.1	4.0	4.6 4.9	3.8	4.4	91.0	2.8	2.4	2.4
Bank of America Merrill Lynch	1.4	na	1.6	na	1.3	na	na	1.6	2.2	2.9	3.2	na	na	na	na	na	2.3	1.8	1.7
J.P. Morgan Chase	1.4	na	1.4	na	na	na	na	1.7	2.2	2.5	3.1	na	na	na	na	na	1.8	2.2	2.5
MacroFin Analytics	1.4	4.5	1.6	1.4	1.4	1.4	1.4	1.6	2.0	2.5	3.2	4.0	4.5 L	3.8	4.3	91.0	2.1	2.0	2.1
Barclays Capital	1.4	4.5	1.7	na	na	na	na	1.8	2.1	2.4	3.0	na	na	na	na	na	2.0	2.4	2.7
Stone Harbor Investment Partners	1.4	4.5	1.7	1.5	1.2	1.3	1.4	1.5	2.2	2.6	3.1	4.3	4.9	na	4.4	89.0	2.6	1.5	2.2
DePrince & Associates	1.3	4.3 L	1.7	1.4	1.3	1.4	1.5	1.7	2.2	2.6	3.1	4.1	5.0	3.9	4.3	89.9	2.5	1.9	2.5
Loomis, Sayles & Company	1.3	4.4	1.6	1.3	1.2	1.4	1.7	1.8	2.1	2.5	3.0	4.2	4.9	3.5	4.1	92.4	2.1	1.6	2.0
IHS Markit	1.3	4.3 L	1.5	na	1.2	1.4	1.5	1.6	2.2	2.7	3.4	4.2	4.9	4.1	4.3	na	2.6	2.3	2.1
Goldman Sachs & Co.	1.3	na	1.6	na	1.2	na	na	1.7	2.3	2.7	3.1	na	na	na	4.5	na	2.3	2.1	2.3
RBC Capital Markets AIG	1.3 1.2	na na	na na	na na	na 1.8 H	na 1.5	na 1.7	1.7 1.8	2.2 2.2	2.6 2.5	3.1 3.1	na na	na 4.6	na na	na 4.2	na na	2.5 2.2	1.5 1.4 L	1.8 1.5
NatWest Markets	1.2	4.3 L	1.6	1.3	1.3	1.5	1.7	1.6	2.0	2.4	3.1	3.8 L	4.5 L	3.7	4.1	91.0	2.4	1.9	2.3
Action Economics	1.2	4.3 L	1.4	1.2 L	1.2	1.3	1.5	1.8	2.3	2.7	3.3	3.9	4.6	3.8	4.1	89.7	2.7	2.4	2.8
BMO Capital Markets	1.2	4.3 L	1.4	na	1.1	1.2	1.4	1.6	2.1	2.5	3.0	na	na	na	4.1	91.0	2.5	2.0	2.4
Economist Intelligence Unit	1.2	4.3 L	1.4	1.2 L	1.2	1.2	1.3 L	1.4 L	1.9	2.3 L	2.9	na	na	na	4.0	na	2.1	na	2.2
GLC Financial Economics	1.2	4.3 L	1.5	1.2 L	1.1	1.2	1.3 L	1.5	2.0	2.5	3.1	4.0	4.7	3.7	4.1	91.0	2.9	2.1	2.5
Regions Financial Corporation	1.2	4.3 L	1.5	1.4	1.2	1.3	1.5	1.6	2.0	2.5	3.1	4.3	4.9	4.1	4.2	90.9	2.2	1.8	1.7
RidgeWorth Investments	1.2	4.3 L	1.5	1.2 L	1.1	1.2	1.3 L	1.5	2.1	2.6	3.3	4.1	4.8	3.9	4.3	93.0	2.4	2.2	1.4 L
Wells Capital Management	1.2	4.3 L	1.4	1.3	1.3	1.2	1.4	1.6	2.1	2.7	3.3	4.2	4.9	4.2	4.4	89.2	2.5	2.1	2.5
Amherst Pierpont Securities	1.2	4.3 L	1.5	1.2 L	1.2	1.3	1.4	1.7	2.2	2.7	3.3	4.2	4.9	4.0	4.4	91.0	3.1 H	2.2	3.0
Daiwa Capital Markets America	1.2	4.3 L	1.5	1.3	1.2	1.3	1.4	1.6	2.0	2.4	3.0	3.9	4.5 L	na	4.2	91.0	2.3	2.0	2.1
DS Economics	1.2 1.2	4.3 L	1.4	1.2 L	1.0	1.4	1.6	1.8	2.1	2.5	3.0	4.0	4.6	3.7	3.9 L	89.9	1.6	1.6	1.7
Nat'l Assn. of Realtors RDQ Economics	1.2	4.3 L 4.3 L	1.5 1.7	1.3 1.3	1.2 1.4	1.4 1.6 H	1.5 1.7	1.7 1.8	2.1 2.3	2.5 2.8	3.0 3.4	3.9 4.2	4.5 L 4.8	3.6 4.4 H	4.2 4.5	na 93.0	2.2 2.2	2.2 2.1	2.3 2.2
Wells Fargo	1.2	4.3 L	1.3 L	1.2 L	1.3	1.3	1.7 1.3 L	1.6	2.1	2.4	2.9	3.8 L	4.5	3.5	4.1	89.5	2.3	2.0	2.3
S&P Global	1.2	4.3 L	1.6	na	1.1	1.2	1.4	1.7	2.1	2.5	3.2	na -	na	na	4.3	92.2	2.4	2.1	2.0
The Northern Trust Company	1.2	4.3 L	1.5	1.2 L	1.2	1.3	1.5	1.7	2.2	2.6	3.3	4.0	5.0	3.8	4.2	na	2.0	1.8	1.9
Comerica Bank	1.2	4.3 L	1.4	na	1.1	1.2	1.3 L	1.5	1.9	2.4	2.8 L	na	na	na	4.0	na	2.9	2.0	2.5
Fannie Mae	1.2	4.3 L	na	na	1.1	1.2	1.4	1.5	1.9	2.3 L	2.9	na	na	na	4.0	na	2.0	1.6	1.8
High Frequency Economics	1.2	4.3 L	na	na	1.2	1.4	1.6	1.9	2.3	2.7	3.3	na	na	na	na	na	2.3	2.2	2.2
Moody's Capital Markets Group	1.2	4.3 L	1.4	1.3	1.2	1.2	1.4	1.5	2.0	2.4	3.0	4.0	4.5 L	3.4 L	4.1	90.0	2.1	1.8	1.5
PNC Financial Services Corp.	1.2	4.3 L	1.5	na	1.2	1.4	1.5	1.6	2.1	2.6	3.2	na	4.8	3.6	4.3	93.5 H	2.3	2.0	1.9
Georgia State University	1.2	4.3 L	na	na	1.0	1.2	1.4	1.6	2.5 H	3.0 H	3.5	4.6	5.4	na	4.7 H		1.1 L	2.3	1.9
Societe Generale	1.2	4.3 L	na 1.4	na	na 1 1	na 12	na 1.4	1.5	2.0	2.4	3.0	na	na	na	na	na	2.2	2.4	2.2
Oxford Economics BNP Paribas Americas	1.1 L 1.1 L	na na	1.4 1.6	na na	1.1 na	1.2 na	1.4 na	1.6 1.7	1.9 2.3	2.3 L 2.7	2.9 na	na na	na na	na na	3.9 L na	90.0 na	2.5 2.6	1.9 na	2.0 2.8
Cycledata Corp.	1.1 L		1.4	1.2 L		1.2	1.3 L		2.0	2.7	2.9	4.0	11a 4.7	3.6	4.0	92.0	2.0	2.0	2.0
Gyordala Gorp.	1.1 -	7.0 L	1.7	1.2 L	1	1.2	1.0 L	1.0	2.0	2.0	2.0	7.0	7.7	0.0	7.0	32.0	2.2	2.0	2.1
August Consensus	1.3	4.4	1.5	1.3	1.2	1.3	1.5	1.6	2.1	2.6	3.1	4.1	4.8	3.8	4.2	90.9	2.3	2.0	2.2
Top 10 Avg.	1.4	4.5	1.7	1.4	1.4	1.5	1.7	1.8	2.3	2.8	3.4	4.4	5.1	4.0	4.5	92.1	2.8	2.5	2.8
Bottom 10 Avg.	1.2	4.3	1.4	1.2	1.1	1.2	1.3	1.5	1.9	2.4	2.9	3.9	4.5	3.6	4.0	89.6	1.9	1.6	1.6
, and the second																			
July Consensus	1.3	4.4	1.5	1.3	1.2	1.3	1.5	1.7	2.1	2.6	3.2	4.2	4.9	3.9	4.3	93.3	2.3	2.0	2.2
Number of Forecasts Changed From	n A Month A	lgo:																	
Down	9	9	15	13	10	12	14	18	15	15	16	12	17	10	15	21	11	9	13
Same	32	24	14	10	18	18	16	22	18	18	16	9	5	8	12	3	25	26	21
Up	4	5	9	3	11	6	6	5	12	12	12	6	7	6	10	0	9	8	10
Diffusion Index	44 %	45 %	42 %	31 %	51 %	42 %	39 %	36 %	47 %	47 %	45 %	39 %	33 %	42 %	43 %	_	48 %	49 %	47 %
Dillusion index	77 /0	FU /0	r∠ /0	J 1 /0	J 1 /0	r <u>r</u> /0	JJ /0	JU /0	F1 /0	T1 /U	TU /0	JJ /0	JU /0	r_ /0	±∪ /0	U /0	/U /U	ru /0	T1 /0

# First Quarter 2018 Interest Rate Forecasts

						Perce	ent Per Ar	num A	verage Fo	r Quarter						Avg. For	(Q-	Q % Chanç	ge)
Blue Chip			Sh	ort-Term-					Intermed	liate-Term	)		Long-	Term		Qtr		(SAAR)	
Financial Forecasts	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Α.	B.	C.	D.
Panel Members	Federal	Prime	LIBOR	Com.	Treas.		Treas.	Treas.	Treas.	Treas.	Treas.	Aaa	Baa	State &	Home	Fed's Major		GDP	Cons.
	Funds	Bank	Rate	Paper	Bills	Bills	Bills	Notes	Notes	Notes	Bond	Corp.	Corp.	Local	Mtg.	Currency	Real	Price	Price
2 : 2	Rate	Rate	3-Mo.	1-Mo.	3-Mo.	6-Mo.	1-Yr.	2-Yr.	5-Yr.	10-Yr.	30-Yr.	Bond	Bond	Bonds	Rate	\$ Index	GDP	Index	Index
Swiss Re Naroff Economic Advisors	1.8 H 1.7	4.9 H 4.8	2.0 H 1.7	1.8 H 1.7	1.7 H 1.7 H	1.9 H 1.8	2.1 H 1.9	2.3 H 2.2	2.5 2.5	2.8 2.8	3.7 3.5	4.6 4.4	5.5 5.1	na 4.1	4.9 4.5	na 90.0	2.1 3.1 H	3.3 H 2.6	3.3 H 2.7
Chmura Economics & Analytics	1.7	4.8	1.9	1.7	1.6	1.7	1.8	2.0	2.6 H	3.0	3.5	na	na	na	4.6	na	2.7	2.3	2.1
Nomura Securities, Inc.	1.7	4.8	1.8	na	na	na	na	1.8	2.3	2.7	3.2	4.3	4.9	na	4.4	na	2.1	2.0	2.2
Bank of America Merrill Lynch	1.6	na	1.9	na	1.6	na	na	1.7	2.3	2.9	3.3	na	na	na	na	na	1.5	1.8	1.8
MacroFin Analytics	1.6	4.7	1.8	1.6	1.6	1.6	1.7	1.9	2.3	2.8	3.4	4.2	4.7	4.0	4.5	91.5	2.0	2.1	2.2
Barclays Capital	1.6	4.8	1.9	na	na	na	na	2.0	2.2	2.5	3.1	na	na	na	na	na	2.0	2.3	2.5
MUFG Union Bank	1.6	4.8	1.9	1.7	1.6	1.7	2.1 H	2.0	2.4	2.8	3.4	4.2	4.8	4.0	4.5	86.0 L	2.9	2.1	3.1
DePrince & Assoc.	1.6	4.6	2.0	1.7	1.6	1.6	1.9	2.0	2.4	2.8	3.2	4.4	5.4	4.2	4.5	90.6	2.7	2.1	2.5
Daiwa Capital Markets America	1.5	4.7	1.8	1.6	1.5	1.6	1.7	1.8	2.2	2.6	3.1	4.1	4.7	na	4.4	92.0	2.2	2.2	2.3
Goldman Sachs & Co. IHS Markit	1.5 1.5	na 4.5	1.8 1.6	na na	1.4 1.4	na 1.6	na 1.7	1.9 1.8	2.5 2.4	2.8 3.0	3.1 3.6	na 4.5	na 5.3	na 4.4	4.7 4.7	na	2.3 2.8	2.0 2.3	2.2 1.7
J.P. Morgan Chase	1.5	na	1.6	na	na	na	na	1.8	2.3	2.7	3.2	na	na	na	na	na na	1.8	2.3	2.4
RBC Capital Markets	1.5	na	na	na	na	na	na	2.0	2.4	2.8	3.2	na	na	na	na	na	2.5	2.0	2.9
Scotiabank Group	1.5	4.5	na	na	1.3	na	na	1.8	2.3	2.7	3.4	na	na	na	na	na	2.1	2.0	1.8
Amherst Pierpont Securities	1.5	4.6	1.7	1.6	1.5	1.6	1.8	1.9	2.5	3.0	3.6	4.5	5.3	4.3	4.7	92.0	2.8	2.4	3.1
NatWest Markets	1.5	4.6	1.8	1.5	1.5	1.7	2.0	1.9	2.2	2.6	3.4	3.9 L	4.5 L	4.0	4.3	93.0	2.9	1.9	2.4
Action Economics	1.5	4.6	1.5	1.5	1.5	1.6	1.8	2.0	2.5	2.9	3.5	4.1	4.6	3.9	4.2	89.6	2.0	1.9	2.5
Economist Intelligence Unit	1.5	4.5	1.6	1.4	1.4	1.4	1.5	1.7	2.1	2.6	3.1	na	na	na	4.2	na	2.0	na	2.2
Loomis, Sayles & Company	1.5	4.6	1.8	1.5	1.4	1.6	1.9	2.0	2.3	2.6	3.0	4.3	5.0	3.6	4.2	92.4	2.5	2.0	2.1
Regions Financial Corporation	1.4	4.4	1.6	1.5	1.4	1.5	1.7	1.8	2.2	2.7	3.3	4.4	5.1	4.2	4.4	91.8	2.5	1.7	2.0
DS Economics Comerica Bank	1.4 1.4	4.5 4.5	1.5 L 1.7	1.4 na	1.2 1.3	1.6 1.4	1.8 1.5	2.0 1.7	2.3 2.2	2.6 2.6	3.2 3.1	4.2	4.7	3.9	4.1 4.2	90.7	1.9 2.7	1.9 2.0	1.9 2.2
High Frequency Economics	1.4	4.5	na	na	1.5	1.6	1.8	2.1	2.5	2.9	3.5	na na	na na	na na	na	na na	2.8	2.5	2.5
AIG	1.4	na	na	na	1.3	1.7	1.9	2.0	2.4	2.6	3.3	na	4.7	na	4.3	na	1.7	1.4	1.2 L
Moody's Analytics	1.4	4.5	1.6	1.3 L	0.9 L	1.0 L	1.3 L	1.5 L	2.3	3.0	3.8	5.1	6.1 H	4.1	4.6	na	3.0	3.0	2.1
Chase Wealth Management	1.4	4.5	1.5 L	1.4	1.3	1.4	1.5	1.6	1.6 L	2.5	3.0	4.0	4.5 L	3.6	4.1	92.2	1.0 L	2.2	2.3
Nat'l Assn. of Realtors	1.4	4.5	1.7	1.5	1.4	1.6	1.7	1.9	2.3	2.7	3.2	4.1	4.7	3.8	4.3	na	2.0	2.3	2.3
RDQ Economics	1.4	4.5	1.9	1.5	1.5	1.8	2.0	2.1	2.6 H	3.1	3.7	4.5	5.1	4.8 H	4.8	94.2 H	2.2	2.2	2.3
RidgeWorth Investments	1.4	4.5	1.7	1.4	1.3	1.4	1.5	1.7	2.3	2.8	3.5	4.3	5.0	4.2	4.6	92.5	2.4	2.3	1.6
Societe Generale	1.4	4.5	na	na	na	na	na	1.7	2.1	2.5	3.1	na	na	na	na	na	2.3	2.5	2.6
Wells Fargo BMO Capital Markets	1.4 1.4	4.5 4.4	1.5 L 1.6	1.3 L na	1.4 1.3	1.4 1.4	1.5 1.6	1.8 1.8	2.3 2.2	2.6 2.5	3.1 3.0	4.0 na	4.7 na	3.6 na	4.3 4.2	88.5 92.0	2.5 1.8	2.0 2.3	2.3 2.7
Fannie Mae	1.4	4.5	na	na	1.3	1.4	1.5	1.6	2.0	2.4	2.9 L	na	na	na	4.1	na	1.8	2.0	1.9
GLC Financial Economics	1.4	4.5	1.6	1.4	1.3	1.4	1.5	1.7	2.3	2.8	3.4	4.5	5.2	4.1	4.6	91.9	2.8	2.0	2.3
Moody's Capital Markets Group	1.4	4.5	1.6	1.5	1.4	1.4	1.5	1.6	2.1	2.5	3.1	4.1	4.6	3.5 L	4.2	89.8	2.4	1.9	2.8
PNC Financial Services Corp.	1.4	4.5	1.7	na	1.3	1.5	1.6	1.8	2.2	2.8	3.4	na	4.9	3.6	4.4	93.3	2.1	2.1	2.4
S&P Global	1.4	4.6	2.0	na	1.3	1.5	1.6	1.8	2.2	2.6	3.2	na	na	na	4.4	91.8	2.5	1.9	2.3
The Northern Trust Company	1.4	4.5	1.7	1.4	1.4	1.5	1.7	2.0	2.4	2.8	3.6	4.3	5.2	4.1	4.4	na	2.0	1.9	2.0
Wells Capital Management	1.4	4.5	1.6	1.5	1.5	1.5	1.7	1.8	2.3	2.9	3.5	4.4	5.1	4.3	4.6	89.6	2.7	2.3	2.6
BNP Paribas Americas Stone Harbor Investment Partners	1.4 1.4	na 4.5	1.9 1.6	na 1.5	na 1.3	na 1.4	na 1.5	1.9 1.6	2.6 H 2.2	3.1 2.6	na 3.2	na 4.3	na 4.9	na na	na 4.4	na 90.0	2.7 2.2	na 1.8	2.1 2.2
Oxford Economics	1.4	na	1.6	na	1.3	1.4	1.5	1.7	2.2	2.0 2.3 L	3.2 2.9 L	na	na	na	4.4 4.0 L	89.6	2.2	1.6	2.2
Cycledata Corp.	1.4 1.3 L			1.4	1.3	1.4	1.5	1.7	2.2	2.7	3.2	4.3	5.0	3.9	4.3	92.0	2.0	2.1	2.2
Georgia State University	1.3 L	4.3 L	na	na	1.1	1.3	1.5	1.7	2.5	3.2 H	3.9 H	5.3 H		na	5.1 H		2.5	1.1 L	1.4
August Consensus	1.5	4.5	1.7	1.5	1.4	1.5	1.7	1.8	2.3	2.7	3.3	4.3	5.0	4.0	4.4	91.1	2.3	2.1	2.3
Top 10 Avg.	1.6	4.7	1.9	1.6	1.6	1.7	1.9	2.1	2.5	3.0	3.6	4.6	5.4	4.3	4.7	92.6	2.9	2.6	2.8
Bottom 10 Avg.	1.4	4.4	1.6	1.4	1.2	1.3	1.5	1.6	2.1	2.5	3.0	4.1	4.7	3.7	4.1	89.4	1.8	1.7	1.7
July Consensus	1.5	4.6	1.7	1.5	1.4	1.5	1.7	1.8	2.3	2.7	3.3	4.4	5.1	4.1	4.5	93.6	2.3	2.1	2.3
Number of Forecasts Changed From																			
Down	5 37	6	13	13	9	9	9	15	11	14	15	12 8	14 9	10 9	13	21 3	8 29	11	15 24
Same Up	37	29 3	17 8	13 1	22 8	23 4	19 8	24 6	23 11	18 13	18 11	8 7	9 6	9	13 11	1	29 8	26 6	6
Diffusion Index	48 %	46 %	43 %	28 %	49 %	43 %	49 %	40 %	50 %	49 %	45 %	41 %	36 %	37 %	47 %	10 %	50 %	44 %	40 %

## **Second Quarter 2018**

### **Interest Rate Forecasts**

						Perc	ent Per A	nnum A	verage F	or Quarter	·					Avg. For	(Q-(	2 % Chan	ge)
Blue Chip			SI	hort-Term					Interme	diate-Term	·		Long-	Term		Qtr		-(SAAR)-	
Financial Forecasts	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	A.	B.	C.	D.
Panel Members	Federal	Prime	LIBOR	Com.	Treas.		Treas.	Treas.	Treas.	Treas.	Treas.	Aaa	Baa	State &	Home	Fed's Major		GDP	Cons.
	Funds Rate	Bank Rate	Rate 3-Mo.	Paper 1-Mo.	Bills 3-Mo.	Bills 6-Mo.	Bills 1-Yr.	Notes 2-Yr.	Notes 5-Yr.	Notes 10-Yr.	Bond 30-Yr.	Corp. Bond	Corp. Bond	Local	Mtg. Rate	Currency \$ Index	Real GDP	Price Index	Price
Swiss Re	2.0 H	5.1 H	2.3 H	2.1 H	2.0 H	2.1 H	2.4 H	2.6 H	2.7	3.0	3.9	4.7	5.7	Bonds	4.9	na na	2.1	0.3 L	Index 1.3
Chmura Economics & Analytics	1.9	5.0	2.2	2.0	1.8	2.0	2.4	2.3	2.7 2.9 H	3.3 H	3.8	na	na	na	4.9	97.8 H	3.4 H	2.3	1.8
Bank of America Merrill Lynch	1.9	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	2.3	1.8	2.2
Barclays	1.9	5.0	2.1	na	na	na	na	2.0	2.3	2.5	3.1	na	na	na	na	na	2.5	2.2	2.2
MacroFin Analytics	1.9	4.9	2.0	1.9	1.8	1.9	1.9	2.1	2.5	3.0	3.7	4.4	4.9	4.2	4.8	92.0	2.0	2.2	2.2
MUFG Union Bank	1.9	5.0	2.1	1.9	1.9	2.0	2.3	2.2	2.6	3.0	3.6	4.3	5.1	4.1	4.6	85.0 L	3.0	2.8 H	2.6
Naroff Economic Advisors	1.8	5.0	1.9	2.0	1.9	2.0	2.3	2.4	2.9	3.3 H	3.9	4.7	3.4 L	4.3	5.0	89.0	2.3	2.5	2.9
Daiwa Capital Markets America	1.8	4.9	2.0	1.8	1.7	1.9	2.0	2.1	2.4	2.8	3.2	4.3	4.9	na	4.6	93.0	2.0	2.3	2.4
Goldman Sachs & Co.	1.8	na	2.1	na	1.7	na	na	2.1	2.7	3.0	3.2	na	na	na	4.8	na	2.0	2.0	2.1
RBC Capital Markets Scotiabank Group	1.8 1.8	na 4.8	na na	na na	na 1.6	na na	na na	2.2 1.9	2.6 2.4	2.9 2.9	3.4 3.4	na na	na na	na na	na na	na na	3.3 2.1	1.4 2.0	0.9 2.2
NatWest Markets	1.7	4.8	2.0	1.8	1.8	2.0	2.2	2.1	2.5	2.8	3.5	4.1	4.7	4.1	4.4	95.0	3.2	1.4	0.8 L
DS Economics	1.7	4.8	1.7	1.8	1.5	1.9	2.0	2.1	2.4	2.7	3.4	4.4	4.8	4.0	4.3	91.5	2.0	2.0	2.0
Moody's Analytics	1.7	4.8	1.9	1.6	1.2 L	1.3 L	1.5 L	1.8	2.6	3.3 H	4.0 H	5.3 H	6.3 H	4.2	4.8	na	2.9	2.8	2.3
Regions Financial Corporation	1.7	4.7	1.9	1.7	1.6	1.7	2.0	2.0	2.4	2.9	3.5	4.6	5.2	4.4	4.6	92.7	2.4	2.0	2.1
Action Economics	1.7	4.8	1.8	1.7	1.7	1.8	2.0	2.2	2.6	3.0	3.6	4.2	4.7	4.0	4.4	89.8	2.8	2.8 H	2.2
DePrince & Assoc.	1.7	4.7	2.1	1.8	1.7	1.8	2.1	2.2	2.6	3.0	3.4	4.6	5.7	4.4	4.7	91.2	2.7	2.2	2.5
Loomis, Sayles & Company	1.7	4.8	2.0	1.7	1.6	1.8	2.1	2.3	2.6	2.8	3.1	4.5	5.2	3.8	4.4	92.4	2.4	2.0	2.1
Nat'l Assn. of Realtors	1.7	4.8	1.9	1.7	1.6	1.8	1.9	2.1	2.5	2.9	3.3	4.3	4.9	4.0	4.5	na	2.2	2.3	2.3
RDQ Economics	1.7	4.8	2.2	1.8	1.8	2.1 H	2.2	2.3	2.8	3.3 H	3.8	4.7	5.3	4.9 H	5.0	94.9	2.0	2.2	2.3
Amherst Pierpont Securities	1.7	4.8	2.0	1.8	1.7	1.9	2.0	2.2	2.8	3.2	3.9	4.8	5.6	4.5	5.0	93.0	3.0	2.3	3.2 H
Societe Generale	1.7	4.8	na	na	na	na	na	1.8	2.2	2.6	3.2	na	na	na	na	na	2.2	1.9	2.0
High Frequency Economics	1.7	4.8	na	na	1.7	1.9	2.1	2.2	2.6	3.0	3.6	na	na	na	na	na	2.8	2.6	2.6
Economist Intelligence Unit	1.7	4.7	1.8	1.6	1.6	1.6	1.7	1.9	2.3	2.8	3.3	na	na	na	4.4	na	2.8	na	2.3
Nomura Securities, Inc.	1.7	4.8	1.8	na	na	na	na	1.9	2.3	2.7	3.2	4.3	4.9	na	4.4	na	1.9	1.9	2.2
Comerica Bank	1.6	4.7	1.9	na	1.5	1.6	1.7	2.0	2.4 2.4	2.8 2.7	3.3	na	na	na	4.5	na	2.7 1.8 L	2.0 2.1	2.0 2.4
J.P. Morgan Chase BNP Paribas Americas	1.6 1.6	na na	1.7 2.0	na na	na na	na na	na na	1.9 2.1	2.4	3.2	3.2 na	na na	na na	na na	na na	na na	2.6	na na	2.4
Stone Harbor Investment Partners	1.6	4.8	1.9	1.6	1.5	1.6	1.7	1.8	2.4	2.8	3.3	4.5	5.1	na	4.6	91.0	1.9	1.9	2.3
IHS Markit	1.5	4.5	1.7	na	1.5	1.7	1.9	2.0	2.5	3.0	3.7	4.8	5.6	4.6	4.8	na	2.7	2.3	1.7
Chase Wealth Management	1.5	4.5	1.6	1.5	1.4	1.5	1.6	1.7	1.7 L	2.6	3.1	4.1	4.6	3.7	4.2	92.4	2.4	2.3	2.4
Georgia State University	1.5	4.5	na	na	1.5	1.7	1.9	2.1	2.8	3.3 H	3.9	5.3	6.2	na	5.3 H	na	2.9	1.3	2.5
AIG	1.5	na	na	na	1.4	1.8	2.1	2.2	2.6	2.8	3.4	na	4.9	na	4.4	na	1.9	1.7	1.7
RidgeWorth Investments	1.5	4.6	1.9	1.5	1.4	1.5	1.6	1.8	2.4	2.9	3.6	4.4	5.1	4.3	4.6	92.0	2.4	2.3	1.6
BMO Capital Markets	1.5	4.5	1.7	na	1.4	1.5	1.7	2.0	2.3	2.6	3.0	na	na	na	4.2	92.6	2.2	1.8	2.0
S&P Global	1.5	4.6	2.0	na	1.4	1.5	1.7	1.9	2.3	2.7	3.3	na	na	na	4.4	91.4	2.0	2.4	2.1
Wells Capital Management	1.5	4.6	1.7	1.6	1.6	1.5	1.7	1.9	2.4	3.0	3.7	4.6	5.4	4.5	4.6	89.8	2.4	2.4	2.7
The Northern Trust Company	1.4	4.6	1.7	1.4 L	1.5	1.6	1.8	2.1	2.6	3.1	3.9	4.7	5.6	4.4	4.7	na	1.9	2.2	2.2
Fannie Mae	1.4	4.5	na	na	1.5	1.5	1.5	1.6	2.1	2.4 L	2.9 L	na	na	na	4.1	na	2.0	2.2	1.9
GLC Financial Economics  Moody's Capital Markets Group	1.4	4.5 4.5	1.6	1.4 L	1.3	1.4	1.5 L	1.7	2.3	2.9 2.4	3.6 3.0	4.9 4.0 L	5.7	4.5 3.5 L	4.9 4.1	92.0 90.0	2.9 2.0	1.3	2.4 2.5
Oxford Economics	1.4 1.4	na	1.8 1.7	1.5 na	1.4 1.4	1.5 1.5	1.5 L 1.6	1.6 L 1.7	2.0 2.0	2.4 2.4 L	3.0	na na	4.6 na	na	4.1 4.0 L	89.3	2.3	1.9 1.8	2.0
PNC Financial Services Corp.	1.4	4.5	1.8	na	1.5	1.7	1.7	1.9	2.3	2.4 L	3.5	na	4.9	3.6	4.0 L	93.3	2.9	2.1	2.4
Wells Fargo	1.4	4.5		1.4 L		1.5	1.6	1.9	2.4	2.7	3.1	4.1	4.8	3.7	4.4	86.8	2.6	2.1	2.3
Cycledata Corp.	1.3 L	4.3 L	1.6	1.4 L	1.3	1.4	1.5 L	1.7	2.2	2.7	3.2	4.3	5.0	3.9	4.3	92.0	2.1	2.1	2.3
August Consensus	1.6	4.7	1.9	1.7	1.6	1.7	1.9	2.0	2.4	2.9	3.4	4.5	5.1	4.1	4.6	91.6	2.4	2.1	2.2
Top 10 Avg.	1.8	4.9	2.1	1.9	1.8	2.0	2.2	2.3	2.7	3.2	3.8	4.8	5.7	4.5	4.9	93.7	3.0	2.5	2.6
Bottom 10 Avg.	1.4	4.5	1.6	1.5	1.4	1.5	1.6	1.7	2.1	2.6	3.1	4.2	4.6	3.8	4.2	89.3	1.9	1.5	1.6
July Consensus	1.7	4.7	1.9	1.7	1.6	1.7	1.9	2.0	2.5	2.9	3.5	4.6	5.3	4.2	4.6	93.5	2.5	2.1	2.2
Number of Forecasts Changed Fron	n A Month	Ago:																	
Down	6	8	13	9	9	7	10	14	11	12	14	11	15	10	11	19	12	10	19
Same	33	29	17	13	22	21	20	23	22	20	18	9	7	10	15	6	25	24	22
Up	6	1	6	4	7	8	6	6	10	11	10	7	6	3	11	0	8	9	4
•																			
Diffusion Index	50 %	41 %	40 %	40 %	47 %	51 %	44 %	41 %	49 %	49 %	45 %	43 %	34 %	35 %	50 %	12 %	46 %	49 %	33 %

# Third Quarter 2018 Interest Rate Forecasts

						Perc	ent Per A	nnum A	verage F	or Quarter	·					Avg. For	(Q-	Q % Chan	ne)
Blue Chip			SI						•		·					Qtr	•	(SAAR)-	
Financial Forecasts	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	A.	B.	C.	D.
Panel Members	Federal	Prime	LIBOR	Com.	Treas.	Treas.	Treas.	Treas.	Treas.	Treas.	Treas.	Aaa	Baa	State &	Home	Fed's Major		GDP	Cons.
	Funds	Bank	Rate	Paper	Bills	Bills	Bills	Notes	Notes	Notes	Bond	Corp.	Corp.	Local	Mtg.	Currency	Real	Price	Price
	Rate	Rate	3-Mo.	1-Mo.	3-Mo.	6-Mo.	1-Yr.	2-Yr.	5-Yr.	10-Yr.	30-Yr.	Bond	Bond	Bonds	Rate	\$ Index	GDP	Index	Index
Swiss Re	2.3 H	5.4 H	2.5 H	2.3 H	2.2 H	2.4 H	2.6 H	2.8 H	2.9	3.2	4.0	4.9	5.8	na	5.1	na	2.2	0.6 L	1.6 L
Chmura Economics & Analytics	2.2	5.3 5.1	2.5 H	2.2	2.0	2.2	2.4 2.6 H	2.6	3.1	3.5	4.1	na	na	na	5.1	na	3.3 H	1.8	2.1
Naroff Economic Advisors  Bank of America Merrill Lynch	2.2 2.1	na	2.3 na	2.3 H na	2.2 H na	2.4 H na	na	2.6 na	3.2 H na	3.5 na	4.1 na	5.1 na	5.8 na	4.6 na	5.2 na	88.0 na	1.6 L 2.3	2.3 1.8	2.6 1.7
MacroFin Analytics	2.1	5.2	2.3	2.1	2.1	2.1	2.2	2.3	2.7	3.2	3.9	4.7	5.2	4.5	5.0	92.5	1.8	2.2	2.3
MUFG Union Bank	2.1	5.3	2.4	2.2	2.2	2.3	2.6 H	2.5	2.8	3.2	3.7	4.4	5.2	4.2	4.8	84.0 L	3.1	2.1	2.7
Daiwa Capital Markets America	2.0	5.2	2.3	2.1	2.0	2.1	2.2	2.3	2.6	2.9	3.4	4.4	5.0	na	4.8	93.0	1.8	2.3	2.5
Goldman Sachs	2.0	na	2.3	na	1.9	na	na	2.4	2.8	3.1	3.3	na	na	na	4.9	na	2.0	2.0	2.1
RBC Capital Markets	2.0	na	na	na	na	na	na	2.5	2.8	3.1	3.5	na	na	na	na	na	3.2	1.7	2.6
Moody's Analytics	2.0	5.1	2.1	1.9	1.5	1.6	1.8	1.9	2.8	3.6 H	4.2 H	5.5	6.5	4.4	5.1	na	2.0	2.4	2.7
NatWest Markets	2.0	5.1	2.3	2.0	2.1	2.3	2.5	2.3	2.7	3.0	3.7	4.3	4.9	4.3	4.6	98.0 H	3.2	1.8	1.9
Action Economics	2.0	5.1	2.0	2.0	2.0	2.2	2.3	2.4	2.7	3.0	3.6	4.3	4.8	4.0	4.5	90.0	2.9	2.0	2.3
DePrince & Associates DS Economics	2.0 1.9	5.0 5.0	2.3 2.3	2.1	2.0 1.7	2.0 2.2	2.4 2.4	2.5 2.6	2.9 2.7	3.2 3.0	3.5 3.6	4.9 4.6	6.0 5.0	4.6 4.2	5.0 4.4	92.0 92.5	2.6 2.2	2.2 2.2	2.5 1.9
Loomis, Sayles & Company	1.9	5.0	2.3	1.9	1.7	2.1	2.3	2.4	2.8	3.0	3.3	4.7	5.4	4.0	4.6	92.3	2.2	2.2	2.1
Amherst Pierpont Securities	1.9	5.1	2.2	2.0	1.9	2.1	2.3	2.5	3.0	3.3	4.1	6.0 H	6.8 H	4.7	5.1	94.0	2.8	2.4	3.3 H
High Frequency Economics	1.9	5.0	na	na	2.0	2.1	2.3	2.3	2.7	3.1	3.7	na	na	na	na	na	2.0	2.7 H	2.7
Regions Financial Corporation	1.9	4.9	2.0	1.9	1.8	1.9	2.2	2.2	2.5	3.1	3.7	4.7	5.4	4.5	4.7	92.6	2.2	2.0	2.2
Nomura Securities, Inc.	1.9	5.0	2.1	na	na	na	na	1.9	2.3	2.8	3.3	4.4	5.0	na	4.5	na	1.6 L	1.9	2.2
Nat'l Assn. of Realtors	1.9	5.0	2.1	1.9	1.8	2.0	2.1	2.3	2.7	3.0	3.5	4.5	5.0	4.2	4.7	na	2.1	2.3	2.2
RDQ Economics	1.9	5.0	2.4	2.0	2.1	2.4 H	2.5	2.5	3.0	3.5	3.9	4.9	5.5	5.1 H	5.2	95.1	1.8	2.3	2.4
J.P. Morgan Chase	1.9	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1.8	2.2	2.4
Barclays	1.9	5.0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	3.0	2.1	2.1
BNP Paribas Americas	1.9	na	2.2	na	na	na	na	2.2	2.8	3.3	na	na	na	na	na	na	2.4	na	3.0
Societe Generale Comerica Bank	1.9 1.8	5.0 4.9	na 2.1	na	na 17	na 1 o	na 10	2.0 2.2	2.3 2.6	2.6 3.0	3.2 3.5	na	na	na	na 4.7	na	2.2 2.6	1.9	1.7 2.0
IHS Markit	1.8	4.9	2.1	na na	1.7 1.7	1.8 2.0	1.9 2.2	2.2	2.6	3.2	3.8	na 4.9	na 5.8	na 4.7	4.7 5.0	na na	2.6	1.9 2.1	1.6
Georgia State University	1.8	4.8	na	na	1.7	1.9	2.1	2.4	2.9	3.5	4.1	5.4	6.3	na	5.4 H	na	2.7	2.0	3.0
Scotiabank Group	1.8	4.8	na	na	1.7	na	na	2.0	2.6	3.0	3.5	na	na	na	na	na	2.0	2.0	2.3
BMO Capital Markets	1.7	4.7	1.9	na	1.6	1.7	1.9	2.2	2.5	2.7	3.1	na	na	na	4.3	91.9	2.2	2.1	2.3
S&P Global	1.7	4.8	2.2	na	1.7	1.8	1.9	2.2	2.5	2.8	3.4	na	na	na	4.5	91.4	2.3	2.5	2.1
Wells Capital Management	1.7	4.8	1.9	1.9	1.9	1.9	2.0	2.1	2.6	3.1	3.7	4.7	5.5	4.5	4.7	90.0	2.3	2.6	2.7
Chase Wealth Management	1.7	4.8	1.8	1.7	1.6	1.7	1.8	1.9	1.9 L	2.8	3.3	4.3	4.8	3.9	4.4	92.5	2.2	2.2	2.3
Wells Fargo	1.7	4.8	1.8	1.6	1.5	1.6	1.7	2.0	2.5	2.7	3.2	4.1	4.8	3.8	4.4	85.5	2.7	2.0	2.1
Economist Intelligence Unit	1.7	4.7	1.8	1.7	1.7	1.6	1.7	1.9	2.4	2.8	3.4	na	na	na	4.5	na	2.2	na	2.2
The Northern Trust Company AIG	1.7	4.8	1.9	1.7	1.7	1.8	2.0	2.3	2.8	3.3	4.1	4.9	5.8	4.6	4.9	na	2.0	2.1	2.1
PNC Financial Services Corp.	1.7 1.7	na 4.8	na 2.0	na	1.6 1.7	2.0 1.8	2.3 1.9	2.4	2.7 2.4	2.9 2.9	3.6 3.5	na	5.0 4.9	na 3.6	4.5 4.4	na 93.1	1.8 2.4	1.9 2.1	1.9 2.4
RidgeWorth Investments	1.7	4.8	2.0	na 1.7	1.6	1.7	1.8	2.0	2.4	3.1	3.8	na 4.6	4.9 5.2	3.0 4.7	4.4	91.5	2.4	2.1	1.6
Fannie Mae	1.6	4.8	na	na	1.6	1.5	1.5	1.7	2.1	2.4	2.9 L	na	na	na	4.5 4.1 L	na na	1.9	2.3	1.9
GLC Financial Economics	1.6	4.6	1.9	1.7	1.6	1.6	1.7	1.9	2.6	3.2	3.9	5.2	6.1	4.7	5.3	92.1	2.4	1.4	2.3
Moody's Capital Markets Group	1.6	4.8	2.0	1.8	1.6	1.6	1.6	1.6 L	2.0	2.4 L	2.9 L	4.0 L	4.6 L	3.5 L	4.1	89.0	1.9	1.8	1.9
Oxford Economics	1.6	na	1.9	na	1.6	1.7	1.8	2.0	2.2	2.5	3.1	na	na	na	4.1 L	89.1	2.2	1.9	1.8
Stone Harbor Investment Partners	1.6	4.8	1.8	1.7	1.6	1.7	1.8	1.8	2.4	2.8	3.3	4.5	5.1	na	4.6	92.0	2.0	2.0	2.4
Cycledata Corp.	1.3 L	4.3 L	1.6 L	1.4 L	1.3 L	1.4 L	1.5 L	1.7	2.2	2.7	3.2	4.3	5.0	3.9	4.3	92.0	2.1	2.2	2.4
August Consensus	1.8	4.9	2.1	1.9	1.8	1.9	2.1	2.2	2.6	3.0	3.6	4.7	5.4	4.3	4.7	91.4	2.3	2.1	2.2
Top 10 Avg.	2.1	5.2	2.3	2.1	2.1	2.3	2.5	2.5	2.9	3.4	4.0	5.2	6.0	4.7	5.1	93.6	3.0	2.4	2.8
Bottom 10 Avg.	1.6	4.7	1.8	1.7	1.5	1.6	1.7	1.8	2.2	2.6	3.1	4.3	4.9	3.9	4.3	89.0	1.8	1.7	1.8
July Consensus	1.9	4.9	2.1	1.9	1.8	1.9	2.1	2.2	2.6	3.1	3.6	4.7	5.4	4.3	4.8	93.2	2.3	2.1	2.3
Number of Forecasts Changed Fron	n A Month A	\go:																	
Down	9	8	10	10	10	12	11	12	11	13	15	11	15	8	12	17	12	11	19
Same	32	27	17	11	21	17	17	25	20	18	15	9	8	9	15	5	26	28	22
Up	4	3	8	4	7	7	8	5	11	11	11	6	5	6	10	3	7	4	4
Diffusion Index	44 %		47 %		46 %	43 %	46 %	42 %	50 %	48 %	45 %		32 %		47 %		44 %	42 %	33 %
Diliusion fluex	77 /0	10 /0	17 70	00 /0	10 /0	10 /0	10 /0	14 /0	UU /0	10 /0	10 /0	10 /0	U <u>L</u> /0	10 /0	17 /0	22 /0	1 7 70	12 /0	JU /0

# Fourth Quarter 2018 Interest Rate Forecasts

																Avg. For	,	-Q % Chang	′
Blue Chip	 •												-			Qtr		(SAAR)	
Financial Forecasts	1	2	3	4	5	- 6	7	- 8	9	10	11	12	13	14	15	Α.	B.	C.	D.
Panel Members	Federal	Prime	LIBOR	Com.	Treas.	Treas.	Treas.	Treas.	Treas.	Treas.	Treas.	Aaa	Baa	State &	Home	Fed's Major	Б.,	GDP	Cons.
	Funds Rate	Bank Rate	Rate 3-Mo.	Paper 1-Mo.	Bills 3-Mo.	Bills 6-Mo.	Bills 1-Yr.	Notes 2-Yr.	Notes 5-Yr.	Notes 10-Yr.	Bond 30-Yr.	Corp. Bond	Corp. Bond	Local Bonds	Mtg. Rate	Currency \$ Index	Real GDP	Price Index	Price Index
Swiss Re	2.5 H	5.6 H	2.7	2.5	2.5 H	2.6	2.8	3.0	3.1	3.3	4.2	5.0	5.9	na	5.2	na	2.1	2.8	3.8
Moody's Analytics	2.5 H	5.6 H	2.6	2.3	1.9	2.0	2.2	2.3	3.2	3.9 H	4.5 H	5.7 H	6.7	4.5	5.3	na	2.4	2.7	2.8
Naroff Economic Advisors	2.4	5.4	2.5	2.6 H	2.5 H	2.6	2.9	3.1 H	3.5 H	3.9 H	4.4	5.4	6.1	5.0	5.5	87.5	1.1 L	2.0	2.4
Chmura Economics & Analytics	2.4	5.5	2.7 H	2.5	2.3	2.4	2.6	2.8	3.3	3.6	4.3	na	na	na	5.2	na	3.6 H	2.1	1.8
MacroFin Analytics	2.3	5.4	2.5	2.3	2.3	2.3	2.4	2.5	2.9	3.4	4.1	4.9	5.4	4.7	5.2	93.0	1.7	2.2	2.3
Action Economics	2.3	5.4	2.4	2.3	2.3	2.4	2.5	2.6	2.9	3.1	3.7	4.4	4.9	4.1	4.6	90.2	2.5	2.2	2.3
Goldman Sachs & Co.	2.3	na	2.6	na	2.2	na	na	2.6	3.0	3.2	3.4	na	na	na	5.0	na	2.0	2.0	2.1
MUFG Union Bank	2.3	5.5	2.6	2.4	2.4	2.5	2.9 H	2.7	2.9	3.3	3.9	4.5	5.3	4.2	4.9	82.0 L	3.3	2.1	2.8
RBC Capital Markets	2.3	na	na	na	na	na	na	2.6	2.9	3.3	3.7	na	na	na	na	na	3.1	1.5 L	2.1
NatWest Markets	2.2	5.3	2.5	2.3	2.3	2.5	2.7	2.5	2.8	3.1	3.7	4.4	5.0	4.3	4.7	100.0 H	3.3	2.0	2.1
DePrince & Assoc.	2.2	5.2	2.6	2.4	2.2	2.3	2.7	2.8	3.1	3.4	3.6	5.1	6.2	4.8	5.2	92.7	2.7	2.2	2.4
Nat'l Assn. of Realtors RDQ Economics	2.2 2.2	5.3	2.4 2.7 H	2.1	2.0	2.2 2.7 H	2.3 2.8	2.5	2.9	3.1	3.5	4.5 5.1	5.0 5.7	4.3 5.2 H	4.9 5.4	na 95.1	2.1 1.8	2.2 2.3	2.2 2.4
DS Economics	2.2	5.3 5.2	2.7 H 2.5	2.3 2.3	2.4 1.9	2.7 H 2.4	2.8	2.8 2.7	3.3 2.8	3.7 3.1	4.0 3.7	5.1 4.7	5.7 5.1	5.2 H 4.6	5.4 4.5	95.1 93.4	2.3	2.3	2.4
Amherst Pierpont Securities	2.2	5.2	2.5 2.4	2.3	2.2	2.4	2.5	2.7	3.2	3.1	3.7 4.2	4. <i>1</i> 5.1	5.1 7.0 H	4.6 4.9	4.5 5.3	93.4 95.0	2.8	2.3	3.3
High Frequency Economics	2.2	5.3	na	na	2.2	2.4	2.6	2.4	2.8	3.2	3.7	na	na	na	na	na	2.0	2.4	2.7
Regions Financial Corporation	2.2	5.2	2.2	2.1	2.0	2.1	2.3	2.4	2.7	3.2	3.8	4.9	5.6	4.6	4.9	92.4	2.1	2.1	2.3
Daiwa Capital Markets America	2.2	5.3	2.4	2.2	2.1	2.2	2.3	2.5	2.8	3.1	3.5	4.6	5.2	na	5.0	93.0	1.7	2.4	2.5
Bank of America Merrill Lynch	2.1	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	2.2	1.9	2.0
J.P. Morgan Chase	2.1	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1.8	2.2	2.5
Loomis, Sayles & Company	2.1	5.2	2.5	2.1	2.1	2.3	2.5	2.5	2.8	3.0	3.3	4.7	5.4	4.0	4.6	92.4	2.1	2.4	2.0
Barclays Capital	2.1	5.3	na	na	na	na	na	na	na	na	na	na	na	na	na	na	2.5	2.2	2.2
IHS Markit	2.0	5.1	2.5	na	2.0	2.2	2.4	2.5	2.8	3.4	3.9	5.0	6.1	4.7	5.3	na	2.5	2.0	1.7
Scotiabank Group	2.0	5.0	na	na	1.9	na	na	2.1	2.6	3.0	3.5	na	na	na	na	na	2.0	2.0	2.3
BMO Capital Markets	2.0	5.0	2.2	na	1.8	1.9	2.1	2.3	2.6	2.8	3.2	na	na	na	4.5	91.0	2.1	2.2	2.4
S&P Global	2.0	5.0	2.4	na	1.9	2.1	2.2	2.4	2.6	2.9	3.4	na	na	na	4.7	91.2	1.9	2.1	2.4
Wells Capital Management	2.0	5.1	2.1	2.2	2.1	2.1	2.2	2.3	2.7	3.2	3.8	4.8	5.6	4.5	4.8	90.1	2.2	2.7	2.8
The Northern Trust Company Comerica Bank	1.9 1.9	5.1 5.0	2.2 2.2	1.9 na	2.0 1.8	2.1 1.9	2.3	2.6 2.3	3.0 2.7	3.5 3.1	4.3 3.6	5.1	6.0	4.8	5.1 4.9	na na	2.0 2.5	1.9 1.9	1.9 2.0
PNC Financial Services Corp.	1.9	5.1	2.2	na	1.9	2.1	2.0	2.2	2.5	3.0	3.6	na na	na 5.0	na 3.7	4.5	93.0	2.3	2.1	2.4
Economist Intelligence Unit	1.9	4.9	2.0	1.9	1.9	1.8	1.9	2.1	2.6	3.0	3.6	na	na	na	4.7	na	2.1	na	2.3
Nomura Securities, Inc.	1.9	5.0	2.1	na	na	na	na	2.0	2.5	2.8	3.3	4.4	5.0	na	4.5	na	1.6	1.9	2.2
Wells Fargo	1.9	5.0	2.0	1.8	1.7	1.8	1.9	2.1	2.6	2.8	3.2	4.2	4.9	3.9	4.5	84.3	2.6	2.3	2.1
BNP Paribas Americas	1.9	na	2.4	na	na	na	na	2.4	2.9	3.3	na	na	na	na	na	na	2.3	na	4.1
Stone Harbor Investment Partners	1.9	5.0	2.1	2.0	1.8	1.8	1.9	2.0	2.5	2.9	3.4	4.6	5.2	na	4.7	93.0	2.0	2.0	2.2
Societe Generale	1.8	5.0	na	na	na	na	na	1.8	2.2	2.5	3.1	na	na	na	na	na	1.8	3.2 H	4.3 H
Georgia State University	1.8	4.8	na	na	1.7	1.9	2.1	2.4	3.0	3.7	4.3	5.5	6.5	na	5.6 H	na	2.6	2.1	2.5
AIG	1.7	na	na	na	1.7	2.1	2.4	2.5	2.9	3.0	3.7	na	5.1	na	4.6	na	1.9	2.1	1.9
Chase Wealth Management	1.7	4.8	1.8	1.7	1.6	1.7	1.8	1.9	1.9	2.8	3.3	4.3	4.8	3.9	4.4	92.3	2.0	2.1	2.2
Fannie Mae	1.7	4.8	na 10	na 17	1.5	1.5	1.6	1.8	2.2	2.5	3.0	na 5 2	na	na 4.7	4.1 L	na	1.6	2.4	2.0
GLC Financial Economics RidgeWorth Investments	1.7 1.7	4.7 4.7	1.9 2.0	1.7 1.7	1.6 1.5	1.7 1.7	1.7 1.7	2.0 1.9	2.7 2.7	3.3 3.2	3.9 3.8	5.3 4.7	6.2 5.5	4.7 4.7	5.4 5.0	92.8 89.0	2.3 2.5	1.5 L 2.2	2.0 2.4
Moody's Capital Markets Group	1.6	4.7	2.0	1.7	1.5	1.6	1.7	1.9 1.5 L	1.8 L	3.2 2.4 L	3.6 2.8 L	4.7 4.0 L	5.5 4.5 L	4.7 3.4 L	5.0 4.1 L	88.8	1.6	1.8	2. <del>4</del> 1.4 L
Oxford Economics	1.6	na na	1.9	na	1.6	1.7	1.8	2.0	2.2	2.4 L 2.5	3.1	na na	na na	na	4.1 L	89.0	1.0	1.9	2.2
Cycledata Corp.	1.3 L	4.3 L	1.6 L		1.3 L		1.5 L		2.2	2.7	3.2	4.3	5.0	3.9	4.3	92.0	2.1	2.2	2.4
August Consensus	2.0	5.1	2.3	2.1	2.0	2.1	2.2	2.3	2.7	3.1	3.7	4.8	5.5	4.4	4.8	91.4	2.2	2.2	2.4
Top 10 Avg.	2.3	5.4	2.6	2.4	2.3	2.5	2.7	2.8	3.2	3.6	4.2	5.2	6.2	4.8	5.3	94.1	2.9	2.6	3.2
Bottom 10 Avg.	1.7	4.7	1.9	1.8	1.6	1.7	1.7	1.9	2.3	2.7	3.1	4.4	4.9	4.0	4.3	88.3	1.7	1.8	1.9
July Consensus	2.1	5.1	2.3	2.1	2.0	2.1	2.3	2.4	2.8	3.2	3.7	4.8	5.6	4.4	4.9	92.9	2.3	2.2	2.4
Number of Forecasts Changed From																			
Down	10	8	13	11	11	13	14	14	11	12	14	11	14	8	14	18	13	8	15
Same	33	28	13	13	19	18	20	21	22	19	15	7	8	11	13	5	26	29	23
															-				
Up	2	2	9	2	8	5	2	6	8	10	10	8	6	4	9	2	6	6	7
Diffusion Index	41 %	42 %	44 %	33 %	46 %	39 %	33 %	40 %	46 %	48 %	45 %	44 %	36 %	41 %	43 %	18 %	42 %	48 %	41 %

### International Interest Rate And Foreign Exchange Rate Forecasts

	3 Mo	3 Mo. Interest Rate %				
Blue Chip Forecasters	In 3 Mo.	In 6 Mo.	In 12 Mo.			
Barclays	na	na	na			
BMO Capital Markets	1.30	1.55	1.80			
IHSMarkit	na	na	na			
ING Financial Markets	1.50	1.60	1.80			
Mizuho Research Institute	1.60	1.80	2.30			
Moody's Analytics	na	na	na			
Moody's Capital Markets	na	na	na			
Nomura Securities	na	na	na			
Oxford Economics	na	na	na			
Scotiabank	na	na	na			
Wells Fargo	1.65	2.55	2.75			
August Consensus	1.51	1.88	2.16			
High	1.65	2.55	2.75			
Low	1.30	1.55	1.80			
Last Months Avg.	1.46	1.60	1.94			

	3 Mo. Interest Rate %				
Blue Chip Forecasters	In 3 Mo.	In 6 Mo.	In 12 Mo.		
Barclays	na	na	na		
BMO Capital Markets	0.00	0.00	0.00		
IHSMarkit	na	na	na		
ING Financial Markets	0.05	0.05	0.05		
Mizuho Research Institute	0.06	0.06	0.06		
Moody's Analytics	na	na	na		
Moody's Capital Markets	na	na	na		
Nomura Securities	na	na	na		
Oxford Economics	na	na	na		
Scotiabank	na	na	na		
Wells Fargo	0.00	0.02	0.03		
August Consensus	0.03	0.03	0.04		
High	0.06	0.06	0.06		
Low	0.00	0.00	0.00		
Last Months Avg.	0.03	0.03	0.03		

	3 Mo.	Interest R	ate %
Blue Chip Forecasters	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	na	na	na
BMO Capital Markets	0.30	0.30	0.30
IHSMarkit	na	na	na
ING Financial Markets	0.35	0.40	0.40
Mizuho Research Institute	0.35	0.35	0.35
Moody's Analytics	na	na	na
Moody's Capital Markets	na	na	na
Nomura Securities	na	na	na
Oxford Economics	na	na	na
Scotiabank	na	na	na
Wells Fargo	0.30	0.40	0.65
August Consensus	0.33	0.36	0.43
High	0.35	0.40	0.65
Low	0.30	0.30	0.30
Last Months Avg.	0.32	0.34	0.41

	3 Mo. Interest Rate %			
Blue Chip Forecasters	In 3 Mo.	In 6 Mo.	In 12 Mo.	
Barclays	na	na	na	
BMO Capital Markets	na	na	na	
IHSMarkit	na	na	na	
ING Financial Markets	-0.75	-0.75	-0.75	
Mizuho Research Institute	na	na	na	
Moody's Analytics	na	na	na	
Moody's Capital Markets	na	na	na	
Nomura Securities	na	na	na	
Oxford Economics	na	na	na	
Scotiabank	na	na	na	
Wells Fargo	na	na	na	
August Consensus	-0.75	-0.75	-0.75	
High	-0.75	-0.75	-0.75	
Low	-0.75	-0.75	-0.75	
Last Months Avg.	-0.75	-0.75	-0.75	

	3 Mo. Interest Rate %				
Blue Chip Forecasters	In 3 Mo.	In 6 Mo.	In 12 Mo.		
Barclays	na	na	na		
BMO Capital Markets	na	na	na		
IHSMarkit	na	na	na		
ING Financial Markets	0.80	1.00	1.20		
Mizuho Research Institute	na	na	na		
Moody's Analytics	na	na	na		
Moody's Capital Markets	na	na	na		
Nomura Securities	na	na	na		
Oxford Economics	na	na	na		
Scotiabank	na	na	na		
Wells Fargo	1.15	1.15	1.40		
August Consensus	0.98	1.08	1.30		
High	1.15	1.15	1.40		
Low	0.80	1.00	1.20		
Last Months Avg.	0.87	1.02	1.23		

United States							
	Gov't Bond						
In 3 Mo.	In 6 Mo.	In 12 Mo.					
2.35	2.40	na					
2.40	2.50	2.65					
2.67	2.95	3.22					
2.50	2.70	2.90					
2.40	2.65	2.70					
2.76	3.04	3.60					
2.35	2.45	2.42					
na	na	na					
2.28	2.34	2.50					
2.50	2.70	2.95					
2.55	2.60	2.75					
2.48	2.63	2.85					
2.76	3.04	3.60					
2.28	2.34	2.42					
2.50	2.61	2.82					

Japan								
10 Yr. (	10 Yr. Gov't Bond Yield %							
In 3 Mo.	In 6 Mo.	In 12 Mo.						
0.05	0.05	na						
0.10	0.10	0.10						
na	na	na						
0.00	0.00	0.00						
0.05	0.05	0.05						
0.04	0.07	0.10						
0.10	0.15	0.18						
na	na	na						
0.06	0.06	0.06						
na	na	na						
0.10	0.12	0.20						
0.06	0.08	0.10						
0.10	0.15	0.20						
0.00	0.00	0.00						
0.06	0.08	0.10						

United Kingdom							
10 Y	10 Yr. Gilt Yields %						
In 3 Mo.		In 12 Mo.					
1.20	1.25	na					
1.30	1.60	1.85					
na	na	na					
1.40	1.60	1.80					
1.40	1.40	1.45					
1.41	1.62	2.09					
1.25	1.30	1.28					
na	na	na					
1.50	1.61	1.82					
na	na	na					
1.25	1.50	1.70					
1.34	1.49	1.71					
1.50	1.62	2.09					
1.20	1.25	1.28					
1.29	1.40	1.59					

Switzerland							
10 Yr. 0	10 Yr. Gov't Bond Yield %						
In 3 Mo.	In 6 Mo.	In 12 Mo.					
na	na	na					
na	na	na					
na	na	na					
0.00	0.25	0.40					
na	na	na					
-0.03	0.04	0.18					
0.00	0.03	0.04					
na	na	na					
0.17	0.25	0.40					
na	na	na					
na	na	na					
0.04	0.14	0.26					
0.17	0.25	0.40					
-0.03	0.03	0.04					
-0.01	0.12	0.24					

Canada					
10 Yr. Gov't Bond Yield %					
In 6 Mo.	In 12 Mo.				
na	na				
2.05	2.30				
na	na				
1.80	2.20				
na	na				
2.59	3.25				
2.00	1.95				
na	na				
1.96	2.07				
2.10	2.40				
2.20	2.40				
2.10	2.37				
2.59	3.25				
1.80	1.95				
1.75	1.98				
	Bov't Bond In 6 Mo. na 2.05 na 1.80 na 2.59 2.00 na 1.96 2.20 2.10 2.59 1.80				

Fed's Maj	or Currence	cy \$ Index
In 3 Mo.	In 6 Mo.	In 12 Mo.
na	na	na
90.5	91.8	92.2
na	na	na
93.8	91.8	88.2
92.0	93.0	93.0
na	na	na
90.0	90.0	89.0
na	na	na
90.0	89.6	89.1
na	na	na
na	na	na
91.3	91.2	90.3
93.8	93.0	93.0
90.0	89.6	88.2
93.2	93.6	92.7

	USD/YEN								
In 3 Mo.	In 6 Mo.	In 12 Mo.							
108.0	106.0	na							
115.0	117.0	116.0							
113.9	115.7	119.3							
118.0	120.0	120.0							
113.0	116.0	118.0							
110.0	110.0	110.0							
111.0	112.0	110.0							
118.0	120.0	117.0							
113.5	114.1	115.3							
110.0	112.0	115.0							
na	na	na							
113.0	114.3	115.6							
118.0	120.0	120.0							
108.0	106.0	110.0							
1136	115.0	117 1							

	GBP/USD								
In 3 Mo.	In 6 Mo.	In 12 Mo.							
1.25	1.29	na							
1.31	1.29	1.25							
1.25	1.23	1.25							
1.31	1.35	1.41							
na	na	na							
1.26	1.25	1.24							
1.30	1.31	1.30							
1.34	1.37	1.38							
1.35	1.36	1.37							
1.28	1.28	1.31							
na	na	na							
1.29	1.30	1.31							
1.35	1.37	1.41							
1.25	1.23	1.24							
1.27	1.28	1.30							

USD/CHF							
In 3 Mo.	In 6 Mo.	In 12 Mo.					
1.00	1.01	na					
0.96	0.96	0.99					
0.98	0.99	0.98					
0.96	0.97	0.93					
na	na	na					
1.00	1.01	1.02					
0.95	0.95	0.97					
0.97	0.96	0.94					
0.94	0.93	0.94					
0.97	0.97	0.93					
na	na	na					
0.97	0.97	0.96					
1.00	1.01	1.02					
0.94	0.93	0.93					
0.98	0.99	0.97					

	USD/CAD					
In 3 Mo.	In 6 Mo.	In 12 Mo.				
1.31	1.33	na				
1.29	1.30	1.29				
1.29	1.31	1.29				
1.36	1.34	1.28				
na	na	na				
1.26	1.26	1.24				
1.26	1.27	1.26				
1.36	1.32	1.31				
1.31	1.30	1.30				
1.28	1.28	1.25				
na	na	na				
1.30	1.30	1.28				
1.36	1.34	1.31				
1.26	1.26	1.24				
1.33	1.33	1.30				

## **International Interest Rate And Foreign Exchange Rate Forecasts**

	3 Mo. Interest Rate %						
Blue Chip Forecasters	In 3 Mo.	In 6 Mo.	In 12 Mo.				
Barclays	na	na	na				
BMO Capital Markets	na	na	na				
IHSMarkit	na	na	na				
ING Financial Markets	1.60	1.60	1.70				
Mizuho Research Institute	na	na	na				
Moody's Analytics	na	na	na				
Moody's Capital Markets	na	na	na				
Nomura Securities	na	na	na				
Oxford Economics	na	na	na				
Scotiabank	na	na	na				
Wells Fargo	na	na	na				
August Consensus	1.60	1.60	1.70				
High	1.60	1.60	1.70				
Low	1.60	1.60	1.70				
Last Months Avg.	1.60	1.60	1.70				

10 Yr. (	Gov't Bond	Yield %
In 3 Mo.	In 6 Mo.	In 12 Mo.
na	na	na
na	na	na
na	na	na
2.60	2.80	3.00
na	na	na
2.96	3.07	3.28
2.73	2.69	2.65
na	na	na
2.70	2.71	2.91
na	na	
na	na	
2.75	2.82	2.96
2.96	3.07	3.28
2.60	2.69	2.65
2.60	2.72	2.89

Eurozone

	AUD/AUD							
In 3 Mo.	In 6 Mo.	In 12 Mo.						
0.75	0.75	na						
na	na	na						
0.74	0.73	0.72						
0.73	0.75	0.80						
na	na	na						
0.73	0.73	0.73						
0.78	0.79	0.78						
0.73	0.74	0.77						
0.77	0.76	0.75						
0.75	0.77	0.78						
na	na	na						
0.75	0.75	0.76						
0.78	0.79	0.80						
0.73	0.73	0.72						
0.74	0.74	0.75						

	3 Mo. Interest Rate %					
Blue Chip Forecasters	In 3 Mo.	In 6 Mo.	In 12 Mo.			
Barclays	na	na	na			
BMO Capital Markets	-0.35	-0.35	-0.35			
IHSMarkit	na	na	na			
ING Financial Markets	-0.33	-0.33	-0.33			
Mizuho Research Institute	-0.30	-0.30	-0.30			
Moody's Analytics	na	na	na			
Moody's Capital Markets	na	na	na			
Nomura Securities	na	na	na			
Oxford Economics	na	na	na			
Scotiabank	na	na	na			
Wells Fargo	-0.35	-0.30	-0.05			
August Consensus	-0.33	-0.32	-0.26			
High	-0.30	-0.30	-0.05			
Low	-0.35	-0.35	-0.35			
Last Months Avg.	-0.34	-0.33	-0.28			

	USD/EUR								
In 3 Mo.	In 6 Mo.	In 12 Mo.							
1.10	1.10	na							
1.16	1.13	1.12							
1.11	1.10	1.11							
1.15	1.15	1.20							
1.12	1.13	1.12							
1.08	1.07	1.06							
1.15	1.17	1.15							
1.12	1.15	1.18							
1.17	1.18	1.20							
1.13	1.15	1.20							
na	na	na							
1.13	1.13	1.15							
1.17	1.18	1.20							
1.08	1.07	1.06							
1 1 1	1 10	1 1 2							

	10 Yr. Gov't Bond Yields %											
		Germany	,		France			Italy			Spain	
Blue Chip Forecasters	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	0.45	0.50	na	na	na	na	na	na	na	na	na	na
BMO Capital Markets	0.55	0.85	0.95	na	na	na	na	na	na	na	na	na
ING Financial Markets	0.60	0.40	0.80	1.05	0.90	1.20	2.60	2.70	2.45	1.90	1.85	1.95
Mizuho Research Institute	0.50	0.50	0.55	na	na	na	na	na	na	na	na	na
Moody's Analytics	0.42	0.52	0.80	0.92	1.00	1.21	1.71	1.73	1.90	1.61	1.69	1.91
Moody's Capital Markets	0.55	0.63	0.65	0.81	0.88	0.95	2.11	2.20	2.25	1.53	1.62	1.65
Nomura Securities	na	na	na	na	na	na	na	na	na	na	na	na
Oxford Economics	0.70	0.77	0.93	1.08	1.17	1.37	2.65	3.07	3.15	2.00	2.22	2.33
Wells Fargo	0.60	0.80	1.00	na	na	na	na	na	na	na	na	na
August Consensus	0.55	0.62	0.81	0.97	0.99	1.18	2.27	2.43	2.44	1.76	1.85	1.96
High	0.70	0.85	1.00	1.08	1.17	1.37	2.65	3.07	3.15	2.00	2.22	2.33
Low	0.42	0.40	0.55	0.81	0.88	0.95	1.71	1.73	1.90	1.53	1.62	1.65
Last Months Avg.	0.47	0.53	0.73	0.97	1.03	1.19	2.32	2.46	2.45	1.79	1.90	2.00

	Consensus Forecasts								
	10-year	10-year Bond Yields vs U.S. Yield							
	Current	In 3 Mo.	In 6 Mo.	In 12 Mo.					
Japan	-2.25	-2.41	-2.56	-2.76					
United Kingdom	-1.11	-1.14	-1.15	-1.14					
Switzerland	-2.28	-2.44	-2.49	-2.60					
Canada	-0.35	-0.52	-0.53	-0.49					
Australia	0.36	0.27	0.18	0.11					
Germany	-1.77	-1.93	-2.01	-2.04					
France	-1.51	-1.51	-1.65	-1.67					
Italy	-0.20	-0.21	-0.21	-0.42					
Spain	-0.73	-0.72	-0.79	-0.89					

	Consensus Forecasts 3 Mo. Deposit Rates vs U.S. Rate						
	Current   In 3 Mo.   In 6 Mo.   In 12 Mo.						
Japan	-1.33	-1.49	-1.91	-2.13			
United Kingdom	-1.00	-1.19	-1.51	-1.74			
Switzerland	-2.05	-2.26	-2.63	-2.91			
Canada	-0.12	-0.54	-0.80	-0.86			
Australia	0.55	0.09	-0.28	-0.46			
Eurozone	-1.65	-1.85	-2.20	-2.42			

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## Viewpoints:

### A Sampling of Views on the Economy, Financial Markets and Government Policy Excerpted from Recent Reports Issued by our Blue Chip Panel Members and Others

### **Balance Sheet Normalization On Track For September**

The FOMC emphasized their commitment to proceed with balance sheet normalization while also marking-to-market their views around inflation. The market interpreted the statement to be dovish, but we saw it as neutral. In our view, nothing they said today on inflation is more dovish than the recent comments from Yellen and other Fed officials. We think the Fed will go ahead with B/S normalization in September while the door is left open for a hike in December provided the data are supportive, particularly inflation.

The FOMC made two specific changes: (1) The Committee expects to implement B/S normalization "relatively soon." This was in line with our expectations. (2) The FOMC noted that overall inflation and core measures have declined and are running below 2%. The language was changed to remove "somewhat" below 2% and the mention that inflation has "recently" declined. This shows that Fed officials are acknowledging that underlying inflation has been persistently subdued.

Treasury yields declined up to 5 bps at the front-end and the curve modestly steepened in the aftermath of the FOMC statement. There was little in the statement to signal a more dovish policy stance from the Fed, although the acknowledgement that inflation has been persistently low may suggest less need to hike in the near future. The rate market reaction may also reflect the removal of any expectation for a balance sheet unwind to be announced at this meeting, which would have kept September as a more viable option for an interest rate increase. The market is now pricing in less than a 50% chance of rate hike by December and less than 1 additional rate hike in 2018.

Outside of near-term Fed policy adjustments, we continue to believe that the largest driver for the rates market will not be near-term shifts in the hiking pace, but instead the outlook for the terminal rate. Near-term pessimism on the outlook, guarded optimism on tax reform, and Fed balance sheet unwind leave us believing that the Treasury curve will steepen.

Despite the lack of substantial changes in the statement, USD sold off, with EUR-USD broaching 1.17 with general USD-selling pressure across a wide variety of currencies in G10. But the move has also been consistent with the broader downside for the USD over these past few months, albeit with much of that disappointment stemming both the fading near-term likelihood of fiscal policy and tax reform in the US, as well as the relative newfound hawkishness of other central banks. Still, although there continues to be pressure on any positive dollar sentiment, we continue to hold our constructive USD views given that the FOMC is still on track for normalization. We continue to look for the ECB to taper QE very slowly in relative contrast to likely Fed action later on in the year, both of which should be eventually supportive for the dollar.

Michelle Meyer, Mark Cabana, Joseph Song and Paul Clana, Bank of America-Merrill Lynch, New York, NY

### A Changing World

My how fast the world can change. At the end of June, financial markets were in a tizzy after some rather telling comments made by a number of central bankers while in Sintra, Portugal. Example: ECB President Draghi declared that "All the signs now point to a strengthening and broadening recovery in the euro area" and that "Deflationary forces have been replaced by reflationary ones". Then there was BoE Governor Carney's "Some removal of monetary stimulus is likely to become necessary if the trade-off facing the MPC continues to lessen and the policy decision accordingly becomes more conventional".

Fast forward three weeks. The ECB's Draghi, presiding over the usual press conference following the monetary policy meeting, sounded more

cautious than upbeat. He warned that a very substantial degree of accommodation was still needed, underlying inflation was still subdued and that there were no convincing signs of a pickup. That's not new. What was new was his warning that the last thing the ECB wants is an unwarranted tightening in financial conditions, likely directed at those expecting a taper (a word that was not used during the press conference) this year. Such a tightening would "jeopardize" the process. He did throw out a teaser, however. The central bank would have a multifaceted discussion in September, when they have more information (including new staff projections) in hand. A possible scenario could be a reduction in monthly purchases, but extended into 2018.

The BoE, meantime, is dealing with more of an internal conflict... between its members, its mandate, and the data. Three policymakers wanted to raise rates in June, but were outvoted (barely) by others including Governor Carney. Two weeks later, Mr. Carney gave that shocking comment in Sintra, raising the prospect of an August tightening. Since then, the latest CPI report showed a decline in the annual rate, the first such move since October. Although the Governor shrugged it off, saying that the "big picture" had not changed and that inflation was still above target, the slight cooling in the trend gives policymakers some breathing room. With Brexit talks this week between David "No Notes" Davis and Michel Bernier hitting a snag (can't get past the exit bill), and a number of global banks proving that London is not calling, that cannot be positive for the economy. If this keeps up, the BoE will be taking a pass (as they should) at the August 3rd meeting.

Jennifer Lee, BMO Capital Markets, Toronto, Canada

### **Drivers Of Inflation: Supply vs. Demand Side**

As the FOMC concluded its meeting this week, policymakers are facing a conundrum that must seem all too familiar: below target inflation amid continued tightening in the labor market and steady economic growth. Inflation started the year on a strong note, as the core PCE deflator reached 1.8 percent year-over-year in January, the highest since October 2012. Since then, however, both headline and core inflation have trended lower despite an unemployment rate that is below the median FOMC estimate for the longer run. What is going on?

While economists agree as to why inflations matters, there is less consensus around the drivers of inflation. There are several theories of inflation, and each theory suggests somewhat different drivers. Over the years, different theories have fallen in and out of favor depending on long and short run considerations and how adequately each theory fits with the current inflationary environment. The Phillips Curve relationship is one theory that is often attached to monetary policy decision-making. In short, this theory posits that greater demand drives unemployment lower, and, as the labor market tightens, higher aggregate spending pulls up prices.

The Phillips curve framework famously broke down in the 1970s amid "stagflation," or rising inflation and unemployment. This seemingly paradoxical outcome ignored "cost-push" inflation, or inflation driven by changes on the supply side (in the 1970s, the shock from oil). Cost-push inflation can work in both directions. In the late 1990s, for example, rapid productivity growth and globalization helped keep inflation from surging despite robust economic growth. Real GDP growth averaged 4.7 percent from 1997 to 1999, yet core PCE inflation averaged just 1.4 percent.

One possible explanation for the recent inflation conundrum is that the supply side has taken on a greater role of late. Competitive price pressures in wireless telephone services have been widely noted, as have the ongoing challenges and price wars in the retail and automotive sectors. The oil supply glut has remained in place, and (continued on next page)

## Viewpoints

### A Sampling of Views on the Economy, Financial Markets and Government Policy Excerpted from Recent Reports Issued by our Blue Chip Panel Members and Others

rents are now also decelerating as a surge in the supply of apartments is being delivered to many housing markets.

Furthermore, the demand side drivers of inflation do not operate like a light switch. It may take time for employers to adjust to this new equilibrium of scarce labor and alter wages in a meaningful way that clears the market. Record high job openings and reports that positions are hard to fill provide evidence that employers are working through this disequilibrium now, although structural issues related to the skills gap are likely also at work. For the FOMC, its participants are forced to ask not just how much slack remains in the labor market, but to what extent the demand side is even in the driver's seat in the first place.

John E. Silvia and Michael Pugliese, Wells Fargo Securities, Charlotte, NC

### Don't Let The Money Fool You

Fed officials have expressed a clear intent to begin gradually reducing the size of the Fed's balance sheet. This move will imply a corresponding reduction in the Fed's liabilities— primarily bank reserves. The money multiplier reflects the relation between bank reserves and broader monetary aggregates. Money velocity reflects the relation between broad monetary aggregates and nominal GDP. This note discusses these two concepts—the money multiplier and velocity—and looks at their behavior in recent years.

We conclude that the impending reduction in reserves is unlikely to directly affect bank lending, credit growth, or other financial conditions. However, the reduction of reserves is a byproduct of the Fed removing assets from its balance sheet. It is there that we see financial conditions being impacted: that shedding of duration assets should push up longer-term interest rates, with knock-on effects to other asset prices.

Broad money refers to the assets you and I can use for payments. Prominent examples of broad money aggregates include M1, which is principally currency and checkable deposits, and M2, which is M1 plus savings deposits, retail money funds, and small denomination time deposits. Monetary base refers to the principal liabilities of the central bank—currency and bank reserves. While you and I have access to currency, only commercial banks are allowed to hold reserves. For a given broad money aggregate, the money multiplier is the ratio of that aggregate to the monetary base. For example, the M1 multiplier = M1/monetary base.

When reserve requirements were a binding constraint on bank balance sheets—as was the case several decades ago—then the money multiplier is also the inverse of banks' required reserve ratio. Consider the case where banks are required to hold 10% of deposits as reserves, and then assume the central bank increases reserves by \$100 through the purchase of a security from a bank depositor. The central bank will credit the seller's bank with \$100 of reserves and the bank augments the seller's deposit account by that amount.

Here is where the money multiplier kicks in: since the bank only has to hold \$10 as reserves, it will lend out the other \$90. The loan recipient will deposit the proceeds in her bank, and that bank now has \$90 in new deposits and, after reserving \$9, can lend out the remaining \$81. This process repeats itself until there is \$1000 of new deposits in the banking system. More generally, if we call the required reserve ratio rr, then there are 1/rr new deposit dollars in the banking system for every new dollar of reserves the central bank creates. This is where the name money multiplier comes from: every new dollar of reserves multiplies into 1/rr more deposit dollars.

Reserve requirements haven't changed much in recent years, and yet the multiplier plunged in the aftermath of the expansion of the Fed's balance sheet. The instability of the multiplier demonstrates that the above reasoning is incomplete. Following global trends, reserve requirements in the US have gradually been lowered to the point of being a trivial constraint. In recent decades, bank balance sheets are more likely to face binding constraints with respect to capital ratios.2 In the period of Fed balance sheet expansion, bank deposits grew much more slowly than would have been predicted with a stable money multiplier. Had they grown as fast as predicted with a stable multiplier, capital constraints likely would have been violated. Similarly, if one reasons using a stable multiplier for the period ahead—when reserves are set to shrink— one is likely to predict a contraction in broad money. Instead, we believe the money multiplier will rise as the Fed drains reserves from the banking system-mirroring what happened during balance sheet expansion—but we don't expect any direct effect of this process on money or credit growth. Deposit growth may slow somewhat, but we see this being affected by the usual money demand logic in a rising interest rate environment (as rates go up, so does the opportunity cost of holding wealth in transactional deposits, thereby reducing money demand).

While we don't believe the Fed's balance sheet normalization will affect broad money growth directly, this concern lingers among some. One worry is that this would put downward pressure on inflation. Another concern is that it would put downward pressure on asset prices. We see no evidence to support these concerns. The link between money and inflation had been thought to be governed by the so-called quantity equation: MV=PQ, where M stands for a broad money aggregate such as M2, V is velocity, P is the price level, and Q is real output. Velocity is therefore defined simply as V=PQ/M, or nominal GDP divided by broad money. If V is stable and real output Q is determined by nonmonetary forces, then changes in P would vary in proportion to changes in M.

But V is not stable for a variety of institutional and other reasons. Partly as a result, the quantity theory's forecasting record (here employing the p-star model) has been abysmal, predicting inflation over the last 10 years of 5.0% ar, as opposed to the 1.5% ar actually realized. These empirical failings, along with the lack of micro foundations, are why the quantity equation is now mostly studied in the history of economic ideas. This isn't to deny that monetary policy is ultimately responsible for the rate of inflation, but rather that monetary aggregates such as M1 and M2 are a very imperfect gauges of the degree to which monetary developments are exerting pressure on prices.

Another concern is that elevated growth in broad money has been fueling asset price inflation. Former Executive Board member and first chief economist of the ECB Otmar Issing speculated that excess money growth would "spill over" into asset price inflation.3 When we replicate Issing's methodology, we find no systematic relation between his concept of excess money growth and one popular measure of asset price inflation, the cyclically-adjusted PE ratio for the S&P500.

A similar story arises when one looks at levels. If we take M2 relative to nominal GDP (the inverse of velocity) as a level indicator of excess money, the relation appears to work in the last few years, over history the correlation goes the "wrong" way.

In short, we see little direct link between reserves and broad money, or between broad money and asset price or consumer price inflation. We do see a link between the Fed shedding duration assets and longer-term interest rates. Rising long-term interest rates, of course, could then affect asset prices more generally.

Michael Feroli, JPMorgan Chase Bank, New York, NY

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## **Special Questions:**

1. At which meeting will the Federal Reserve's Open Market Committee NEXT raise interest rates?

(Percentage of those responding)

Sep. 19-20	Oct. 31-Nov. 1	Dec. 12-13	<u>Jan. 30-31</u>	Mar. 20-21	<u>Later</u>
0.0%	2.4%	85.4%	00.0%	9.8%	2.4%

**2. A.** The FOMC has already hiked interest rates by 50 basis points this year. How many ADDITIONAL basis points do you think the FOMC will hike rates by in 2017?

Additional rate hikes in 2017

(percent of those responding)

<u>0 b.p.</u>	<u>25</u>	<u>5 b.p.</u>	<u>50 b.p.</u>
9.8%	8	5.4%	4.9%

**B.** By how many basis points will the FOMC raise interest rates in 2018?

Total basis point increase in interest rates by FOMC in 2018:

(percent of those responding)

0 b.p.	25 b.p.	<u>50 b.p.</u>	75 b.p.	<u>100 b.p.</u>
0.0%	4.9%	22.0%	46.3%	26.8%

3. At which meeting will the Federal Open Market Committee ANNOUNCE the START of its plan to begin shrinking the size of its balance sheet?

(Percentage of those responding)

Sep. 19-20	Oct. 31-Nov. 1	Dec. 12-13	Jan. 30-31	Mar. 20-21	<u>Later</u>
90.2%	4.9%	2.4%	2.4%	0.0%	0.0%

**4.** What are the odds that a U.S. recession will begin during 2017? What about 2018?

(Between 0% and 100%)

Odds of a U.S. recession in:

	<u>2017</u>	<u>2018</u>
Consensus	11.9%	21.8%
Top 10 Average	22.5%	32.5%
Bottom 10 Average	4.3%	12.4%

5. A. What are the odds that Congress will approve corporate tax cut legislation in 2017? If not in 2017 what about in 2018?

(Between 0% and 100%)

Odds of corporate tax cut in:

	<u>2017</u>	<u>2018</u>
Consensus	<del>34.0</del> %	<del>47.5</del> %
Top 10 Average	57.0%	70.5%
Bottom 10 Average	5.3%	17.5%

B. What are the odds that Congress will approve individual tax cut legislation this year? If not in 2017 what about in 2018?

(Between 0% and 100%)

Odds of individual tax cut in: 2017 2018

	<u>2017</u>	<u>2018</u>
Consensus	<del>31.3</del> %	42.6%
Top 10 Average	59.5%	69.5%
Bottom 10 Average	6.0%	12.5%

**6.** The 12-month change in the Personal Consumption Expenditures Price Index stood at 1.4% in May, down from its recent high of 2.1% in February. What will be the December-over-December change in the PCE Price Index in 2017 and 2018?

December-over-December change in the PCE Price Index:

	<u>2017</u>	<u>2018</u>
Consensus	1.6%	2.1%
Top 10 Average	2.0%	2.4%
Bottom 10 Average	1.3%	1.6%

7. Should the FOMC take into account asset prices when formulating monetary policy?

(percent of those responding)

<u>Yes</u>	<u>No</u>
86.8%	13.2%

10-Year Treasury Note Yield (%)

2.09

1.78

1.89

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## Databank:

2017 Historical Data												
Monthly Indicator	Ion	Ech	Mon	A	More	T	11	A 11100	Con	Oat	Nov	Doo
Retail and Food Service Sales (a)	<b>Jan</b> 0.5	-0.2	<u>Mar</u> 0.1	Apr 0.3	-0.1	-0.2	Jly	Aug	Sep	Oct	Nov	Dec
Auto & Light Truck Sales (b)	17.50	-0.2 17.44	16.52	16.82	16.58	-0.2 16.41						
Personal Income (a, current \$)	0.4	0.5	0.2	0.3	0.4	10.41						
Personal Consumption (a, current \$)	0.4	0.3	0.4	0.3	0.1							
Consumer Credit (e)	3.1	5.2	4.7	4.1	5.8							
Consumer Sentiment (U. of Mich.)	98.5	96.3	96.9	97.0	97.1	95.1						
Household Employment (c)	-30	447	472	156	-233	245						
Non-farm Payroll Employment (c)	216	232	50	207	152	222						
Unemployment Rate (%)	4.8	4.7	4.5	4.4	4.3	4.4						
Average Hourly Earnings (All, cur. \$)	26.02	26.10	26.13	26.18	26.21	26.25						
Average Workweek (All, hrs.)	34.4	34.3	34.3	34.5	34.4	34.5						
Industrial Production (d)	0.0	0.4	1.3	1.7	1.9	2.0						
Capacity Utilization (%)	75.7	75.8	75.8	76.4	76.4	76.6						
ISM Manufacturing Index (g)	56.0	57.7	57.2	54.8	54.9	57.8						
ISM Non-Manufacturing Index (g)	56.5	57.6	55.2	57.5	56.9	57.4						
Housing Starts (b)	1.236	1.288	1.189	1.154	1.122	1.215						
Housing Permits (b)	1.300	1.219	1.260	1.228	1.168	1.254						
New Home Sales (1-family, c)	599	615	638	577	605	610						
Construction Expenditures (a)	0.8	1.9	0.3	-0.7	0.0							
Consumer Price Index (nsa., d)	2.5	2.7	2.4	2.2	1.9	1.6						
CPI ex. Food and Energy (nsa., d)	2.3	2.2	2.0	1.9	1.7	1.7						
Producer Price Index (n.s.a., d)	1.7	2.0	2.3	2.5	2.4	2.0						
Durable Goods Orders (a)	2.4	1.4	2.4	-0.8	-0.1	6.5						
Leading Economic Indicators (g)	0.6	0.5	0.4	0.2	0.2	0.6						
Balance of Trade & Services (f)	-48.	-44.9	-45.3	-47.6	-46.5							
Federal Funds Rate (%)	0.65	0.66	0.76	0.90	0.90	1.03						
3-Mo. Treasury Bill Rate (%)	0.51	0.53	0.73	0.80	0.90	1.02						
10-Year Treasury Note Yield (%)	2.43	2.43	2.47	2.30	2.31	2.19						
2016 Historical Data												
Monthly Indicator	Jan	Feb	Mar	Apr	May	Jun	Jly	Aug	Sep	Oct	Nov	Dec
Retail and Food Service Sales (a)	-1.0	0.7	0.0	0.8	0.3	0.8	0.0	-0.1	1.0	0.6	0.1	0.9
Auto & Light Truck Sales (b)	1776			45.04			17.80	16.01		17.04		10.00
	17.76	17.60	16.58	17.34	17.12	16.77	17.00	10.91	17.68	17.94	17.72	18.32
Personal Income (a, current \$)	0.0	17.60 -0.1	16.58 0.3	0.5	17.12 0.3	0.3	0.4	16.91 0.2	17.68 0.4	0.4	17.72 0.2	0.3
Personal Income (a, current \$) Personal Consumption (a, current \$) Consumer Credit (e)	0.0	-0.1	0.3	0.5	0.3	0.3	0.4	0.2	0.4	0.4	0.2	0.3
Personal Consumption (a, current \$)	0.0 0.1	-0.1 0.2	0.3 0.0	0.5 1.1	0.3 0.3	0.3 0.5	0.4 0.4	0.2 0.1	0.4 0.7	0.4 0.5	0.2 0.3	0.3 0.6
Personal Consumption (a, current \$) Consumer Credit (e)	0.0 0.1 4.4	-0.1 0.2 4.4	0.3 0.0 9.9	0.5 1.1 5.7	0.3 0.3 7.5	0.3 0.5 4.8	0.4 0.4 5.8	0.2 0.1 9.0	0.4 0.7 6.9	0.4 0.5 5.2	0.2 0.3 8.3	0.3 0.6 4.5
Personal Consumption (a, current \$) Consumer Credit (e) Consumer Sentiment (U. of Mich.)	0.0 0.1 4.4 92.0	-0.1 0.2 4.4 91.7	0.3 0.0 9.9 91.0	0.5 1.1 5.7 89.0	0.3 0.3 7.5 94.7	0.3 0.5 4.8 93.5	0.4 0.4 5.8 90.0	0.2 0.1 9.0 89.8	0.4 0.7 6.9 91.2	0.4 0.5 5.2 87.2	0.2 0.3 8.3 93.8	0.3 0.6 4.5 98.2
Personal Consumption (a, current \$) Consumer Credit (e) Consumer Sentiment (U. of Mich.) Household Employment (c)	0.0 0.1 4.4 92.0 503	-0.1 0.2 4.4 91.7 510 237 4.9	0.3 0.0 9.9 91.0 258	0.5 1.1 5.7 89.0 -273	0.3 0.3 7.5 94.7 30 43 4.7	0.3 0.5 4.8 93.5 32	0.4 0.4 5.8 90.0 456	0.2 0.1 9.0 89.8 109	0.4 0.7 6.9 91.2 271 249 4.9	0.4 0.5 5.2 87.2 -24	0.2 0.3 8.3 93.8 146	0.3 0.6 4.5 98.2 63
Personal Consumption (a, current \$) Consumer Credit (e) Consumer Sentiment (U. of Mich.) Household Employment (c) Non-Farm Payroll Employment (c) Unemployment Rate (%) Average Hourly Earnings (All, cur. \$)	0.0 0.1 4.4 92.0 503 126 4.9 25.37	-0.1 0.2 4.4 91.7 510 237 4.9 25.38	0.3 0.0 9.9 91.0 258 225 5.0 25.46	0.5 1.1 5.7 89.0 -273 153 5.0 25.54	0.3 0.3 7.5 94.7 30 43 4.7 25.59	0.3 0.5 4.8 93.5 32 297 4.9 25.62	0.4 0.4 5.8 90.0 456 291 4.9 25.71	0.2 0.1 9.0 89.8 109 176 4.9 25.74	0.4 0.7 6.9 91.2 271 249 4.9 25.81	0.4 0.5 5.2 87.2 -24 124 4.8 25.90	0.2 0.3 8.3 93.8 146 164 4.6 25.91	0.3 0.6 4.5 98.2 63 155 4.7 25.97
Personal Consumption (a, current \$) Consumer Credit (e) Consumer Sentiment (U. of Mich.) Household Employment (c) Non-Farm Payroll Employment (c) Unemployment Rate (%) Average Hourly Earnings (All, cur. \$) Average Workweek (All, hrs.)	0.0 0.1 4.4 92.0 503 126 4.9 25.37 34.6	-0.1 0.2 4.4 91.7 510 237 4.9 25.38 34.5	0.3 0.0 9.9 91.0 258 225 5.0 25.46 34.4	0.5 1.1 5.7 89.0 -273 153 5.0 25.54 34.4	0.3 0.3 7.5 94.7 30 43 4.7 25.59 34.4	0.3 0.5 4.8 93.5 32 297 4.9 25.62 34.4	0.4 0.4 5.8 90.0 456 291 4.9 25.71 34.4	0.2 0.1 9.0 89.8 109 176 4.9 25.74 34.3	0.4 0.7 6.9 91.2 271 249 4.9 25.81 34.4	0.4 0.5 5.2 87.2 -24 124 4.8 25.90 34.4	0.2 0.3 8.3 93.8 146 164 4.6 25.91 34.3	0.3 0.6 4.5 98.2 63 155 4.7 25.97 34.4
Personal Consumption (a, current \$) Consumer Credit (e) Consumer Sentiment (U. of Mich.) Household Employment (c) Non-Farm Payroll Employment (c) Unemployment Rate (%) Average Hourly Earnings (All, cur. \$) Average Workweek (All, hrs.) Industrial Production (d)	0.0 0.1 4.4 92.0 503 126 4.9 25.37 34.6 -2.0	-0.1 0.2 4.4 91.7 510 237 4.9 25.38 34.5 -2.0	0.3 0.0 9.9 91.0 258 225 5.0 25.46 34.4 25	0.5 1.1 5.7 89.0 -273 153 5.0 25.54 34.4 -1.7	0.3 0.3 7.5 94.7 30 43 4.7 25.59 34.4 -1.4	0.3 0.5 4.8 93.5 32 297 4.9 25.62 34.4 -0.9	0.4 0.4 5.8 90.0 456 291 4.9 25.71 34.4 -1.2	0.2 0.1 9.0 89.8 109 176 4.9 25.74 34.3 -1.3	0.4 0.7 6.9 91.2 271 249 4.9 25.81 34.4 -1.2	0.4 0.5 5.2 87.2 -24 124 4.8 25.90 34.4 -0.8	0.2 0.3 8.3 93.8 146 164 4.6 25.91 34.3 -0.5	0.3 0.6 4.5 98.2 63 155 4.7 25.97 34.4 0.9
Personal Consumption (a, current \$) Consumer Credit (e) Consumer Sentiment (U. of Mich.) Household Employment (c) Non-Farm Payroll Employment (c) Unemployment Rate (%) Average Hourly Earnings (All, cur. \$) Average Workweek (All, hrs.) Industrial Production (d) Capacity Utilization (%)	0.0 0.1 4.4 92.0 503 126 4.9 25.37 34.6 -2.0 76.1	-0.1 0.2 4.4 91.7 510 237 4.9 25.38 34.5 -2.0 75.9	0.3 0.0 9.9 91.0 258 225 5.0 25.46 34.4 25 75.4	0.5 1.1 5.7 89.0 -273 153 5.0 25.54 34.4 -1.7 75.6	0.3 0.3 7.5 94.7 30 43 4.7 25.59 34.4 -1.4 75.6	0.3 0.5 4.8 93.5 32 297 4.9 25.62 34.4 -0.9 75.8	0.4 0.4 5.8 90.0 456 291 4.9 25.71 34.4 -1.2 75.9	0.2 0.1 9.0 89.8 109 176 4.9 25.74 34.3 -1.3 75.8	0.4 0.7 6.9 91.2 271 249 4.9 25.81 34.4 -1.2 75.6	0.4 0.5 5.2 87.2 -24 124 4.8 25.90 34.4 -0.8 75.7	0.2 0.3 8.3 93.8 146 164 4.6 25.91 34.3 -0.5 75.5	0.3 0.6 4.5 98.2 63 155 4.7 25.97 34.4 0.9 76.0
Personal Consumption (a, current \$) Consumer Credit (e) Consumer Sentiment (U. of Mich.) Household Employment (c) Non-Farm Payroll Employment (c) Unemployment Rate (%) Average Hourly Earnings (All, cur. \$) Average Workweek (All, hrs.) Industrial Production (d) Capacity Utilization (%) ISM Manufacturing Index (g)	0.0 0.1 4.4 92.0 503 126 4.9 25.37 34.6 -2.0 76.1 48.2	-0.1 0.2 4.4 91.7 510 237 4.9 25.38 34.5 -2.0 75.9 49.7	0.3 0.0 9.9 91.0 258 225 5.0 25.46 34.4 25 75.4 51.7	0.5 1.1 5.7 89.0 -273 153 5.0 25.54 34.4 -1.7 75.6 50.7	0.3 0.3 7.5 94.7 30 43 4.7 25.59 34.4 -1.4 75.6 51.0	0.3 0.5 4.8 93.5 32 297 4.9 25.62 34.4 -0.9 75.8 52.8	0.4 0.4 5.8 90.0 456 291 4.9 25.71 34.4 -1.2 75.9 52.3	0.2 0.1 9.0 89.8 109 176 4.9 25.74 34.3 -1.3 75.8 49.4	0.4 0.7 6.9 91.2 271 249 4.9 25.81 34.4 -1.2 75.6 51.7	0.4 0.5 5.2 87.2 -24 124 4.8 25.90 34.4 -0.8 75.7 52.0	0.2 0.3 8.3 93.8 146 164 4.6 25.91 34.3 -0.5 75.5 53.5	0.3 0.6 4.5 98.2 63 155 4.7 25.97 34.4 0.9 76.0 54.5
Personal Consumption (a, current \$) Consumer Credit (e) Consumer Sentiment (U. of Mich.) Household Employment (c) Non-Farm Payroll Employment (c) Unemployment Rate (%) Average Hourly Earnings (All, cur. \$) Average Workweek (All, hrs.) Industrial Production (d) Capacity Utilization (%) ISM Manufacturing Index (g) ISM Non-Manufacturing Index (g)	0.0 0.1 4.4 92.0 503 126 4.9 25.37 34.6 -2.0 76.1 48.2 53.5	-0.1 0.2 4.4 91.7 510 237 4.9 25.38 34.5 -2.0 75.9 49.7 54.3	0.3 0.0 9.9 91.0 258 225 5.0 25.46 34.4 25 75.4 51.7 54.9	0.5 1.1 5.7 89.0 -273 153 5.0 25.54 34.4 -1.7 75.6 50.7 55.7	0.3 0.3 7.5 94.7 30 43 4.7 25.59 34.4 -1.4 75.6 51.0 53.6	0.3 0.5 4.8 93.5 32 297 4.9 25.62 34.4 -0.9 75.8 52.8 56.1	0.4 0.4 5.8 90.0 456 291 4.9 25.71 34.4 -1.2 75.9 52.3 54.9	0.2 0.1 9.0 89.8 109 176 4.9 25.74 34.3 -1.3 75.8 49.4 51.7	0.4 0.7 6.9 91.2 271 249 4.9 25.81 34.4 -1.2 75.6 51.7 56.6	0.4 0.5 5.2 87.2 -24 124 4.8 25.90 34.4 -0.8 75.7 52.0 54.6	0.2 0.3 8.3 93.8 146 164 4.6 25.91 34.3 -0.5 75.5 53.5 56.2	0.3 0.6 4.5 98.2 63 155 4.7 25.97 34.4 0.9 76.0 54.5 56.6
Personal Consumption (a, current \$) Consumer Credit (e) Consumer Sentiment (U. of Mich.) Household Employment (c) Non-Farm Payroll Employment (c) Unemployment Rate (%) Average Hourly Earnings (All, cur. \$) Average Workweek (All, hrs.) Industrial Production (d) Capacity Utilization (%) ISM Manufacturing Index (g) ISM Non-Manufacturing Index (g) Housing Starts (b)	0.0 0.1 4.4 92.0 503 126 4.9 25.37 34.6 -2.0 76.1 48.2 53.5 1.123	-0.1 0.2 4.4 91.7 510 237 4.9 25.38 34.5 -2.0 75.9 49.7 54.3 1.209	0.3 0.0 9.9 91.0 258 225 5.0 25.46 34.4 25 75.4 51.7 54.9 1.128	0.5 1.1 5.7 89.0 -273 153 5.0 25.54 34.4 -1.7 75.6 50.7 55.7 1.164	0.3 0.3 7.5 94.7 30 43 4.7 25.59 34.4 -1.4 75.6 51.0 53.6 1.119	0.3 0.5 4.8 93.5 32 297 4.9 25.62 34.4 -0.9 75.8 52.8 56.1 1.190	0.4 0.4 5.8 90.0 456 291 4.9 25.71 34.4 -1.2 75.9 52.3 54.9 1.223	0.2 0.1 9.0 89.8 109 176 4.9 25.74 34.3 -1.3 75.8 49.4 51.7 1.164	0.4 0.7 6.9 91.2 271 249 4.9 25.81 34.4 -1.2 75.6 51.7 56.6 1.062	0.4 0.5 5.2 87.2 -24 124 4.8 25.90 34.4 -0.8 75.7 52.0 54.6 1.328	0.2 0.3 8.3 93.8 146 164 4.6 25.91 34.3 -0.5 75.5 53.5 56.2 1.149	0.3 0.6 4.5 98.2 63 155 4.7 25.97 34.4 0.9 76.0 54.5 56.6 1.268
Personal Consumption (a, current \$) Consumer Credit (e) Consumer Sentiment (U. of Mich.) Household Employment (c) Non-Farm Payroll Employment (c) Unemployment Rate (%) Average Hourly Earnings (All, cur. \$) Average Workweek (All, hrs.) Industrial Production (d) Capacity Utilization (%) ISM Manufacturing Index (g) ISM Non-Manufacturing Index (g) Housing Starts (b) Housing Permits (b)	0.0 0.1 4.4 92.0 503 126 4.9 25.37 34.6 -2.0 76.1 48.2 53.5 1.123 1.193	-0.1 0.2 4.4 91.7 510 237 4.9 25.38 34.5 -2.0 75.9 49.7 54.3 1.209 1.195	0.3 0.0 9.9 91.0 258 225 5.0 25.46 34.4 25 75.4 51.7 54.9 1.128 1.115	0.5 1.1 5.7 89.0 -273 153 5.0 25.54 34.4 -1.7 75.6 50.7 55.7 1.164 1.163	0.3 0.3 7.5 94.7 30 43 4.7 25.59 34.4 -1.4 75.6 51.0 53.6 1.119 1.178	0.3 0.5 4.8 93.5 32 297 4.9 25.62 34.4 -0.9 75.8 52.8 56.1 1.190 1.193	0.4 0.4 5.8 90.0 456 291 4.9 25.71 34.4 -1.2 75.9 52.3 54.9 1.223 1.175	0.2 0.1 9.0 89.8 109 176 4.9 25.74 34.3 -1.3 75.8 49.4 51.7 1.164 1.200	0.4 0.7 6.9 91.2 271 249 4.9 25.81 34.4 -1.2 75.6 51.7 56.6 1.062 1.270	0.4 0.5 5.2 87.2 -24 124 4.8 25.90 34.4 -0.8 75.7 52.0 54.6 1.328 1.285	0.2 0.3 8.3 93.8 146 164 4.6 25.91 34.3 -0.5 75.5 53.5 56.2 1.149 1.255	0.3 0.6 4.5 98.2 63 155 4.7 25.97 34.4 0.9 76.0 54.5 56.6 1.268 1.266
Personal Consumption (a, current \$) Consumer Credit (e) Consumer Sentiment (U. of Mich.) Household Employment (c) Non-Farm Payroll Employment (c) Unemployment Rate (%) Average Hourly Earnings (All, cur. \$) Average Workweek (All, hrs.) Industrial Production (d) Capacity Utilization (%) ISM Manufacturing Index (g) ISM Non-Manufacturing Index (g) Housing Starts (b) Housing Permits (b) New Home Sales (1-family, c)	0.0 0.1 4.4 92.0 503 126 4.9 25.37 34.6 -2.0 76.1 48.2 53.5 1.123 1.193 520	-0.1 0.2 4.4 91.7 510 237 4.9 25.38 34.5 -2.0 75.9 49.7 54.3 1.209 1.195 525	0.3 0.0 9.9 91.0 258 225 5.0 25.46 34.4 25 75.4 51.7 54.9 1.128 1.115 533	0.5 1.1 5.7 89.0 -273 153 5.0 25.54 34.4 -1.7 75.6 50.7 55.7 1.164 1.163	0.3 0.3 7.5 94.7 30 43 4.7 25.59 34.4 -1.4 75.6 51.0 53.6 1.119 1.178 560	0.3 0.5 4.8 93.5 32 297 4.9 25.62 34.4 -0.9 75.8 52.8 56.1 1.190 1.193 559	0.4 0.4 5.8 90.0 456 291 4.9 25.71 34.4 -1.2 75.9 52.3 54.9 1.223 1.175 627	0.2 0.1 9.0 89.8 109 176 4.9 25.74 34.3 -1.3 75.8 49.4 51.7 1.164 1.200 567	0.4 0.7 6.9 91.2 271 249 4.9 25.81 34.4 -1.2 75.6 51.7 56.6 1.062 1.270 570	0.4 0.5 5.2 87.2 -24 124 4.8 25.90 34.4 -0.8 75.7 52.0 54.6 1.328 1.285 577	0.2 0.3 8.3 93.8 146 164 4.6 25.91 34.3 -0.5 75.5 53.5 56.2 1.149 1.255 579	0.3 0.6 4.5 98.2 63 155 4.7 25.97 34.4 0.9 76.0 54.5 56.6 1.268 1.266 548
Personal Consumption (a, current \$) Consumer Credit (e) Consumer Sentiment (U. of Mich.) Household Employment (c) Non-Farm Payroll Employment (c) Unemployment Rate (%) Average Hourly Earnings (All, cur. \$) Average Workweek (All, hrs.) Industrial Production (d) Capacity Utilization (%) ISM Manufacturing Index (g) ISM Non-Manufacturing Index (g) Housing Starts (b) Housing Permits (b) New Home Sales (1-family, c) Construction Expenditures (a)	0.0 0.1 4.4 92.0 503 126 4.9 25.37 34.6 -2.0 76.1 48.2 53.5 1.123 1.193 520 -0.3	-0.1 0.2 4.4 91.7 510 237 4.9 25.38 34.5 -2.0 75.9 49.7 54.3 1.209 1.195 525 1.4	0.3 0.0 9.9 91.0 258 225 5.0 25.46 34.4 25 75.4 51.7 54.9 1.128 1.115 533 1.6	0.5 1.1 5.7 89.0 -273 153 5.0 25.54 34.4 -1.7 75.6 50.7 55.7 1.164 1.163 566 -2.9	0.3 0.3 7.5 94.7 30 43 4.7 25.59 34.4 -1.4 75.6 51.0 53.6 1.119 1.178 560 0.1	0.3 0.5 4.8 93.5 32 297 4.9 25.62 34.4 -0.9 75.8 52.8 56.1 1.190 1.193 559 0.9	0.4 0.4 5.8 90.0 456 291 4.9 25.71 34.4 -1.2 75.9 52.3 54.9 1.223 1.175 627 0.5	0.2 0.1 9.0 89.8 109 176 4.9 25.74 34.3 -1.3 75.8 49.4 51.7 1.164 1.200 567 0.5	0.4 0.7 6.9 91.2 271 249 4.9 25.81 34.4 -1.2 75.6 51.7 56.6 1.062 1.270 570 -0.2	0.4 0.5 5.2 87.2 -24 124 4.8 25.90 34.4 -0.8 75.7 52.0 54.6 1.328 1.285 577 0.8	0.2 0.3 8.3 93.8 146 164 4.6 25.91 34.3 -0.5 75.5 53.5 56.2 1.149 1.255 579 1.5	0.3 0.6 4.5 98.2 63 155 4.7 25.97 34.4 0.9 76.0 54.5 56.6 1.268 1.266 548 -0.2
Personal Consumption (a, current \$) Consumer Credit (e) Consumer Sentiment (U. of Mich.) Household Employment (c) Non-Farm Payroll Employment (c) Unemployment Rate (%) Average Hourly Earnings (All, cur. \$) Average Workweek (All, hrs.) Industrial Production (d) Capacity Utilization (%) ISM Manufacturing Index (g) ISM Non-Manufacturing Index (g) Housing Starts (b) Housing Permits (b) New Home Sales (1-family, c) Construction Expenditures (a) Consumer Price Index (s.a., d)	0.0 0.1 4.4 92.0 503 126 4.9 25.37 34.6 -2.0 76.1 48.2 53.5 1.123 1.193 520 -0.3 1.4	-0.1 0.2 4.4 91.7 510 237 4.9 25.38 34.5 -2.0 75.9 49.7 54.3 1.209 1.195 525 1.4 1.0	0.3 0.0 9.9 91.0 258 225 5.0 25.46 34.4 25 75.4 51.7 54.9 1.128 1.115 533 1.6 0.9	0.5 1.1 5.7 89.0 -273 153 5.0 25.54 34.4 -1.7 75.6 50.7 55.7 1.164 1.163 566 -2.9	0.3 0.3 7.5 94.7 30 43 4.7 25.59 34.4 -1.4 75.6 51.0 53.6 1.119 1.178 560 0.1 1.0	0.3 0.5 4.8 93.5 32 297 4.9 25.62 34.4 -0.9 75.8 52.8 56.1 1.190 1.193 559 0.9 1.0	0.4 0.4 5.8 90.0 456 291 4.9 25.71 34.4 -1.2 75.9 52.3 54.9 1.223 1.175 627 0.5 0.8	0.2 0.1 9.0 89.8 109 176 4.9 25.74 34.3 -1.3 75.8 49.4 51.7 1.164 1.200 567 0.5 1.1	0.4 0.7 6.9 91.2 271 249 4.9 25.81 34.4 -1.2 75.6 51.7 56.6 1.062 1.270 570 -0.2 1.5	0.4 0.5 5.2 87.2 -24 124 4.8 25.90 34.4 -0.8 75.7 52.0 54.6 1.328 1.285 577 0.8 1.6	0.2 0.3 8.3 93.8 146 164 4.6 25.91 34.3 -0.5 75.5 53.5 56.2 1.149 1.255 579 1.5 1.7	0.3 0.6 4.5 98.2 63 155 4.7 25.97 34.4 0.9 76.0 54.5 56.6 1.268 1.266 548 -0.2 2.1
Personal Consumption (a, current \$) Consumer Credit (e) Consumer Sentiment (U. of Mich.) Household Employment (c) Non-Farm Payroll Employment (c) Unemployment Rate (%) Average Hourly Earnings (All, cur. \$) Average Workweek (All, hrs.) Industrial Production (d) Capacity Utilization (%) ISM Manufacturing Index (g) ISM Non-Manufacturing Index (g) Housing Starts (b) Housing Permits (b) New Home Sales (1-family, c) Construction Expenditures (a) Consumer Price Index (s.a., d) CPI ex. Food and Energy (s.a., d)	0.0 0.1 4.4 92.0 503 126 4.9 25.37 34.6 -2.0 76.1 48.2 53.5 1.123 1.193 520 -0.3 1.4 2.2	-0.1 0.2 4.4 91.7 510 237 4.9 25.38 34.5 -2.0 75.9 49.7 54.3 1.209 1.195 525 1.4 1.0 2.3	0.3 0.0 9.9 91.0 258 225 5.0 25.46 34.4 25 75.4 51.7 54.9 1.128 1.115 533 1.6 0.9 2.2	0.5 1.1 5.7 89.0 -273 153 5.0 25.54 34.4 -1.7 75.6 50.7 55.7 1.164 1.163 566 -2.9 1.1 2.1	0.3 0.3 7.5 94.7 30 43 4.7 25.59 34.4 -1.4 75.6 51.0 53.6 1.119 1.178 560 0.1 1.0 2.2	0.3 0.5 4.8 93.5 32 297 4.9 25.62 34.4 -0.9 75.8 52.8 56.1 1.190 1.193 559 0.9 1.0 2.2	0.4 0.4 5.8 90.0 456 291 4.9 25.71 34.4 -1.2 75.9 52.3 54.9 1.223 1.175 627 0.5 0.8 2.2	0.2 0.1 9.0 89.8 109 176 4.9 25.74 34.3 -1.3 75.8 49.4 51.7 1.164 1.200 567 0.5 1.1 2.3	0.4 0.7 6.9 91.2 271 249 4.9 25.81 34.4 -1.2 75.6 51.7 56.6 1.062 1.270 570 -0.2 1.5 2.2	0.4 0.5 5.2 87.2 -24 124 4.8 25.90 34.4 -0.8 75.7 52.0 54.6 1.328 1.285 577 0.8 1.6 2.1	0.2 0.3 8.3 93.8 146 164 4.6 25.91 34.3 -0.5 75.5 53.5 56.2 1.149 1.255 579 1.5 1.7 2.1	0.3 0.6 4.5 98.2 63 155 4.7 25.97 34.4 0.9 76.0 54.5 56.6 1.268 1.266 548 -0.2 2.1 2.2
Personal Consumption (a, current \$) Consumer Credit (e) Consumer Sentiment (U. of Mich.) Household Employment (c) Non-Farm Payroll Employment (c) Unemployment Rate (%) Average Hourly Earnings (All, cur. \$) Average Workweek (All, hrs.) Industrial Production (d) Capacity Utilization (%) ISM Manufacturing Index (g) ISM Non-Manufacturing Index (g) Housing Starts (b) Housing Permits (b) New Home Sales (1-family, c) Construction Expenditures (a) Consumer Price Index (s.a., d) CPI ex. Food and Energy (s.a., d) Producer Price Index (n.s.a., d)	0.0 0.1 4.4 92.0 503 126 4.9 25.37 34.6 -2.0 76.1 48.2 53.5 1.123 1.193 520 -0.3 1.4 2.2 0.0	-0.1 0.2 4.4 91.7 510 237 4.9 25.38 34.5 -2.0 75.9 49.7 54.3 1.209 1.195 525 1.4 1.0 2.3 0.1	0.3 0.0 9.9 91.0 258 225 5.0 25.46 34.4 25 75.4 51.7 54.9 1.128 1.115 533 1.6 0.9 2.2 -0.1	0.5 1.1 5.7 89.0 -273 153 5.0 25.54 34.4 -1.7 75.6 50.7 55.7 1.164 1.163 566 -2.9 1.1 2.1	0.3 0.3 7.5 94.7 30 43 4.7 25.59 34.4 -1.4 75.6 51.0 53.6 1.119 1.178 560 0.1 1.0 2.2 0.0	0.3 0.5 4.8 93.5 32 297 4.9 25.62 34.4 -0.9 75.8 52.8 56.1 1.190 1.193 559 0.9 1.0 2.2 0.2	0.4 0.4 5.8 90.0 456 291 4.9 25.71 34.4 -1.2 75.9 52.3 54.9 1.223 1.175 627 0.5 0.8 2.2 0.0	0.2 0.1 9.0 89.8 109 176 4.9 25.74 34.3 -1.3 75.8 49.4 51.7 1.164 1.200 567 0.5 1.1 2.3 0.0	0.4 0.7 6.9 91.2 271 249 4.9 25.81 34.4 -1.2 75.6 51.7 56.6 1.062 1.270 570 -0.2 1.5 2.2 0.6	0.4 0.5 5.2 87.2 -24 124 4.8 25.90 34.4 -0.8 75.7 52.0 54.6 1.328 1.285 577 0.8 1.6 2.1 1.1	0.2 0.3 8.3 93.8 146 164 4.6 25.91 34.3 -0.5 75.5 53.5 56.2 1.149 1.255 579 1.5 1.7 2.1 1.3	0.3 0.6 4.5 98.2 63 155 4.7 25.97 34.4 0.9 76.0 54.5 56.6 1.268 1.266 548 -0.2 2.1 2.2 1.7
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(a) month-over-month % change; (b) millions, saar; (c) month-over-month change, thousands; (d) year-over-year % change; (e) annualized % change; (f) \$ billions; (g) level. Most series are subject to frequent government revisions. Use with care.

1.81

1.64

1.50

1.56

1.63

1.76

2.14

2.49

1.81

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### Calendar Of Upcoming Economic Data Releases

Monday	Tuesday	Wednesday	Thursday	Friday
31 Chicago PMI (Jul) Pending Home Sales (Jun) Dallas Fed Manufacturing (Jul)	August 1 Personal Income & Consumption (Jun) IHS-Markit Services PMI (Jul, Final) ISM Manufacturing (PMI (Jul) Construction Spending (Jun) Dallas Fed Services Survey (Jul) Light Vehicle Sales (Jul)	2 ADP Employment (Jul) EIA Crude Oil Stocks Mortgage Applications	3 IHS-Markit Services PMI (Jul, final) ISM Non-Manufacturing (Jul) Factory orders (Jun) Weekly Jobless Claims Weekly Money Supply	4 Employment (Jul) International Trade (Jun)
7 Consumer Credit (Jun) Senior Loan Officer Survey (Q3)	8 NFIB Survey (Jul) JOLTS (Jun)	Productivity and costs (Q2, Preliminary) Wholesale Trade (Jun) EIA Crude Oil Stocks Mortgage Applications	10 Producer Price Index (Jul) Federal Budget (Jul) Weekly Jobless Claims Weekly Money Supply	11 Consumer Price Index (Jul)
14	Empire State Manufacturing (Aug) NAHB Survey (Aug) Retail Sales (Jul) Import Prices (Jul) Business Inventories (Jun) TIC Data (Jun)	16 FOMC Minutes Housing Starts (Jul) Business Leaders Survey (Aug)	17 Industrial Production (Jul) Philadelphia Fed Survey (Aug) Weekly Jobless Claims Weekly Money Supply	18 Consumer Sentiment (Aug, Preliminary, University of Michigan)
21	22 Philadelphia Fed Manufacturing Survey (Aug) FHFA Home Price Index (Jun, Q2) Richmond Fed Survey (Aug)	23 New Home Sales (Jul) EIA Crude Oil Stocks Mortgage Applications	24 Kansas City Fed Survey (Aug) IHS-Markit Manufacturing PMI (Aug, Flash) Existing Home Sales (Jul) Weekly Jobless Claims Weekly Money Supply	25 Durable Goods (Jul)
28 Advance Economic Indicators (Jul) IHS-Markit Services PMI (Aug, flash) Dallas Fed Manufacturing (Aug)	29 Dallas Fed Services Survey (Aug) Consumer Confidence (Aug, Conference Board) Dallas Fed Services (Aug)	30 Real GDP (Q2, Second Estimate) ADP Employment (Aug) EIA Crude Oil Stocks Mortgage Applications	31 Personal Income and Consumption (Jul) Chicago PMI (Aug) Pending Home Sales (Jul) Weekly Jobless Claims Weekly Money Supply	September 1 Employment (Aug) IHS-Markit Manufacturing PMI (Aug, final) ISM Manufacturing (Aug) Construction Spending (Jul) Light Vehicle Sales (Aug) Consumer Sentiment (Sep, Final, University of Michigan)
4 Labor Day U.S. Market Closed	5 Factory Orders (Jul)	6 International Trade (Jul) IHS-Markit Services PMI (Aug, Final) ISM Non-Manufacturing (Aug) QFR (Q2) Beige Book EIA Crude Oil Stocks Mortgage Applications	7 Productivity and costs (Q2, Revised) Quarterly Services Survey (Q2) Weekly Jobless Claims Weekly Money Supply	8 Wholesale Trade (Jul) Consumer Credit (Jul)

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# Blue Chip Financial Forecasts®

**Top Analysts' Forecasts Of U.S. And Foreign Interest Rates, Currency Values And The Factors That Influence Them** 

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p. 1

## BLUE CHIP FINANCIAL FORECASTS®

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## June Rate Hike. Balance Sheet Shrinkage By Year's End

**Domestic Commentary** A bit more than 95% of our panelists predict the Federal Reserve's Open Market Committee (FOMC) will hike its current fed funds rate target range of 0.75% to 1.00% a further 25 basis points at its June  $13^{th}$ - $14^{th}$  meeting, according to a series of special questions asked this month in conjunction with our May  $22^{nd}$ - $23^{rd}$  survey. Moreover, 75% of the panelists foresee an additional 25 basis point increase sometime later this year. As for next year, almost 48% of the panelists expect the FOMC to hike rates by 75 basis points in 2018, 34.1% anticipate 100 basis points of tightening, and 13.6% believe the FOMC will hike rates by only 50 basis points. We saw one panelist predict only one quarter point hike in 2018 and another forecast no increase at all next year.

Fifty percent of the panelists that responded to a special question now forecast that the FOMC will begin a gradual reduction in the size of its balance sheet by the end of 2017. That's up from 41% a month ago. An additional 38.6% of the panelists believe the FOMC will wait until the first half of 2018 to actually begin the process of allowing its balance sheet to shrink in size. The remainder thinks the FOMC will wait until sometime later than that to begin reducing the size of its balance sheet.

The current consensus forecast for the trajectory of rate hikes over the next year and a half roughly conforms to the FOMC "dot plot" of anticipated moves released at the March meeting. However, market participants continue to foresee fewer rate hikes over coming quarters than does the consensus or that implied by the March "dot plot". The fed funds futures market currently puts the odds of a 25 basis point rate hike at the June FOMC meeting at a bit more than 80% and places the odds of a further 25 basis point increase later this year at less than 50%. Moreover, fed funds futures prices currently imply considerably less tightening from the Fed in 2018 than does the current consensus forecast or the current "dot plot".

Minutes of the FOMC's May meeting – released the day after this month's survey was concluded – likely re-enforced consensus expectations of a rate hike at the mid-June meeting. For example, the minutes stated that "Most participants judged that if economic information came in about in line with their expectations, it would soon be appropriate for the Committee to take another step in removing some policy accommodation". The minutes argued that "Although incoming data showed that aggregate spending in the first quarter had been weaker than participants expected, they view the slowing as likely to be transitory". Nonetheless, the minutes included the caveat that "Members generally judged that it would be prudent to await additional evidence indicating that the recent slowing in the pace of economic activity had been transitory before taking another step."

The May minutes may also have moved more of our panelists into the camp expecting the FOMC to begin shrinking its balance sheet later this year. According to the minutes, "Under the staff proposed approach the FOMC would announce a set of gradually increasing caps, or limits, on the dollar amounts of Treasury and agency securities that would be allowed to run off each month, and only the amount of securities repayments that exceeded the caps would be reinvested each month. As the caps increased, reinvestment would decline, and monthly reductions in the Fed's securities holdings would become larger." That caps would be raised every three months until the size of the balance sheet is normalized. The minutes stated that "nearly all" participants agreed on this approach, adding that it likely "would be appropriate to begin reducing the Federal Reserve's securities holding this year." The balance sheet normalization process could always be halted if economic developments dictated the need. Fed Chairman Janet Yellen is likely to discuss this topic during her post-June meeting press conference. However, a start to the normalization process is not now expected until sometime later this year.

FOMC members no doubt are chalking up some portion of the extreme weakness in Q1 real GDP growth to the same sort of "residual seasonality" issues that have plagued Q1 GDP estimates from the Bureau of Economic Analysis (BEA) for more than a decade. According to the BEA's second estimate, real GDP grew an upwardlyrevised 1.2% (saar) in Q1, still soft, but 0.5 of a percentage point faster than the government's first estimate. While nonresidential fixed investment and residential investment registered healthy growth, most analysts were perplexed by the weakness in personal consumption expenditures (PCE) that grew only 0.6% (saar). However, growth in PCE had just come off of posting above-trend growth averaging 3.6% (saar) in the prior three quarters so some pull back was to be expected. On top of that was the unusually warm weather in Q1 that sharply depressed household spending on utility bills and winter wear. Delays in Federal tax refunds resulting from attempts by the Internal Revenue Service to reduce fraud may also have contributed to the softness in PCE growth. Consumer spending on services was further dampened by a sharp contraction in spending by nonprofits serving households. This will likely be reversed in the current quarter. Minutes of the May FOMC meeting explicitly hint of confidence on the part of policymakers that continued strength in job growth, increasing household income, and rising equity markets should lead to a rebound in consumer spending.

The May minutes also noted that inflation had cooled since earlier this year. The year-over-year change in the Consumer Price Index (CPI) eased from 2.5% in January to 2.2% in April, while the y/y change in the core CPI dropped from 2.3% to 1.9% during the same period. We also saw a pullback in the Fed's favor inflation gauge, the PCE price deflator. Again, however, FOMC members thought the slowdown was likely temporary, noting in the minutes that "Most participants viewed the recent softer inflation data as primarily reflecting transitory factors." Contributing to the recent slowdown in inflation have been cheaper wireless telephone plans, softer energy prices, and slower increases in measures of home rental costs.

Our panelists clearly agree that real GDP growth will bounce back from its Q1 weakness. The consensus forecast of growth this quarter rose again this month to stand at 3.1% (saar). That is less than the Atlanta Fed's current GDPNow forecast, but stronger than the New York Fed's current Nowcasting estimate. The consensus continued this month to predict above-trend real GDP growth of 2.4% (saar) in Q3 and Q4 of this year. Also unchanged was the consensus forecast that real GDP would grow 2.4% (saar) in Q1 of next year, at 2.5% in Q2, and 2.4% in Q3. However, we did see consensus forecasts of inflation over coming quarters ease back this month, especially for this quarter and next. Indeed, headline CPI inflation in the current quarter is likely to fall well short of the 3.0% (saar) increases that occurred in Q4 2016 and Q1 of this year. Nonetheless, the consensus continues to foresee consumer price inflation running at a slightly better than 2.0% clip over the remainder of the forecast horizon.

Consensus Forecast Real GDP will grow 3.1% (saar) this quarter and register an above-trend growth rate averaging 2.4% (saar) over the remainder of the forecast horizon. Inflation will dip this quarter but settle in around the Fed's 2.0% target. The FOMC will hike rates by 25 basis points at its mid-June meeting and enact a further 25 basis point increase before the end of this year. An additional 75 to 100 basis points of rate hikes will be enacted in 2018. The Treasury yield curve will flatten a bit over the course of the forecast horizon as short rates rise faster than long-term yields (see page 2).

**Special Questions** On page 14 of this issue are results of our twice-yearly, long-range survey with consensus estimates for the years 2019 through 2023 and averages for the 5-year periods 2019-2023 and 2024-2028 (see page 14)

### ■ BLUE CHIP FINANCIAL FORECASTS ■ JUNE 1, 2017

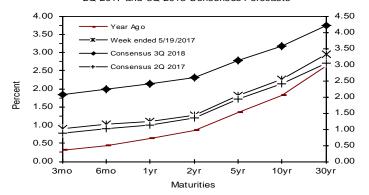
## Consensus Forecasts Of U.S. Interest Rates And Key Assumptions<sup>1</sup>

				Histor		Consensus Forecasts-Quarterly Avg.								
	Av	erage For	Week End	ding	Av	erage For	Month	Latest Qtr	2Q	3Q	4Q	1Q	2Q	3Q
Interest Rates	May 19	May 12	<u>May 5</u>	Apr. 28	Apr.	Mar.	Feb.	1Q 2017	<u>2017</u>	<u>2017</u>	<u>2017</u>	<u>2018</u>	<u>2018</u>	<u>2018</u>
Federal Funds Rate	0.91	0.91	0.88	0.91	0.90	0.76	0.66	0.69	1.0	1.2	1.4	1.5	1.7	1.9
Prime Rate	4.00	4.00	4.00	4.00	4.00	3.85	3.75	3.78	4.1	4.2	4.4	4.6	4.8	5.0
LIBOR, 3-mo.	1.18	1.18	1.18	1.17	1.16	1.13	1.04	1.06	1.2	1.4	1.6	1.8	2.0	2.2
Commercial Paper, 1-mo.	0.84	0.83	0.83	0.83	0.83	0.77	0.61	0.67	1.0	1.2	1.4	1.6	1.8	2.0
Treasury bill, 3-mo.	0.91	0.90	0.85	0.81	0.81	0.73	0.53	0.59	0.9	1.1	1.3	1.4	1.6	1.8
Treasury bill, 6-mo.	1.02	1.03	1.00	0.98	0.95	0.87	0.65	0.71	1.0	1.2	1.4	1.6	1.8	2.0
Treasury bill, 1 yr.	1.10	1.13	1.10	1.06	1.04	1.00	0.82	0.88	1.1	1.4	1.6	1.7	1.9	2.1
Treasury note, 2 yr.	1.28	1.34	1.30	1.27	1.24	1.30	1.20	1.24	1.3	1.6	1.8	1.9	2.1	2.3
Treasury note, 5 yr.	1.81	1.91	1.86	1.83	1.83	2.00	1.91	1.94	1.9	2.2	2.3	2.5	2.6	2.8
Treasury note, 10 yr.	2.27	2.39	2.33	2.31	2.30	2.47	2.43	2.44	2.4	2.6	2.8	2.9	3.1	3.2
Treasury note, 30 yr.	2.94	3.02	2.99	2.96	2.94	3.07	3.04	3.04	3.0	3.2	3.4	3.5	3.6	3.7
Corporate Aaa bond	3.94	4.05	4.03	4.00	4.00	4.13	4.10	4.10	4.0	4.3	4.5	4.6	4.7	4.9
Corporate Baa bond	4.52	4.64	4.62	4.60	4.60	4.71	4.68	4.68	4.7	5.0	5.2	5.3	5.5	5.6
State & Local bonds	3.49	3.55	3.56	3.54	3.55	3.72	3.72	3.71	3.7	3.9	4.1	4.2	4.3	4.4
Home mortgage rate	4.02	4.05	4.02	4.03	4.05	4.20	4.17	4.17	4.1	4.3	4.5	4.6	4.8	4.9
				Histor	y				Co	nsenst	ıs Fore	casts-(	)uartei	rly
	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	<b>3Q</b>
Key Assumptions	<u>2015</u>	<u>2015</u>	<u>2015</u>	2016	<u>2016</u>	2016	<u>2016</u>	<u>2017</u>	2017	2017	2017	2018	2018	2018
Major Currency Index	89.9	91.8	93.1	93.3	89.6	90.3	93.7	94.4	94.0	94.1	94.5	94.6	94.4	94.2
Real GDP	2.6	2.0	0.9	0.8	1.4	3.5	2.1	1.2	3.1	2.4	2.4	2.4	2.5	2.4
GDP Price Index	2.3	1.3	0.8	0.5	2.3	1.4	2.1	2.2	1.5	2.0	2.1	2.2	2.1	2.2
Consumer Price Index	2.4	1.5	0.4	0.1	2.3	1.8	3.0	3.1	1.1	2.2	2.3	2.4	2.2	2.4

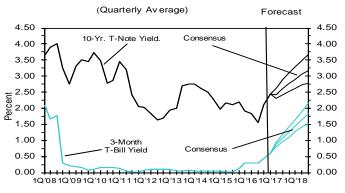
Forecasts for interest rates and the Federal Reserve's Major Currency Index represent averages for the quarter. Forecasts for Real GDP, GDP Price Index and Consumer Price Index are seasonally-adjusted annual rates of change (saar). Individual panel members' forecasts are on pages 4 through 9. Historical data: Treasury rates from the Federal Reserve Board's H.15; AAA-AA and A-BBB corporate bond yields from Bank of America-Merrill Lynch and are 15+ years, yield to maturity; State and local bond yields from Bank of America-Merrill Lynch, A-rated, yield to maturity; Mortgage rates from Freddie Mac, 30-year, fixed; LIBOR quotes from Intercontinental Exchange. All interest rate data is sourced from Haver Analytics. Historical data for Fed's Major Currency Index is from FRSR H.10. Historical data for Real GDP and GDP Chained Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index (CPI) history is from the Department of Labor's Bureau of Labor Statistics (BLS).

### U.S. Treasury Yield Curve

Week ended May 19, 2017 and Year Ago vs. 2Q 2017 and 3Q 2018 Consensus Forecasts

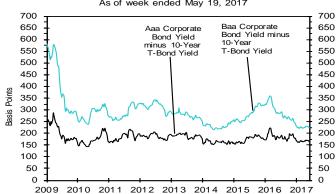


### U.S. 3-Mo. T-Bills & 10-Yr. T-Note Yield



### **Corporate Bond Spreads**

As of week ended May 19, 2017



### U.S. Treasury Yield Curve

As of week May 19, 2017 400 400 350 350 300 300 250 250 200 200 Basis 150 150 10-Year T-Note 100 100 minus 3-Month T-Bill (Constant Maturity Yields) 50 50 2010 2011 2012 2013 2014 2015 2016 2017 2009

		3-Мо	nth Inte	rest Rat	es <sup>1</sup>	
		History		Cons	ensus For	recasts
		Month	Year	Mon	ths From	Now:
	Latest:	Ago:	Ago:	3	6	12
U.S.	1.19	1.17	0.67	1.47	1.56	1.86
Japan	-0.01	0.01	-0.02	0.03	0.03	0.03
U.K.	0.32	0.33	0.57	0.33	0.35	0.43
Switzerland	-0.73	-0.73	-0.73	-0.75	-0.75	-0.75
Canada	0.81	0.87	0.85	0.95	0.98	1.23
Australia	1.90	1.90	2.08	1.60	1.70	2.00
Eurozone	-0.33	-0.33	-0.26	-0.32	-0.32	-0.32

### -----10-Yr. Government Bond Yields<sup>2</sup>-----

		History		Cons	ensus For	recasts
		Month	Year	Mon	ths From	Now:
	Latest:	Ago:	Ago:	3	6	12
U.S.	2.27	2.27	1.88	2.55	2.65	2.84
Germany	0.40	0.36	0.16	0.50	0.55	0.75
Japan	0.05	0.02	-0.10	0.07	0.09	0.10
U.K.	1.11	1.09	1.57	1.38	1.49	1.70
France	0.84	0.83	0.50	1.00	1.04	1.22
Italy	2.13	2.32	1.36	2.36	2.47	2.45
Switzerland	-0.09	-0.08	-0.26	0.00	0.11	0.23
Canada	1.48	1.48	1.39	1.81	1.94	2.19
Australia	2.49	2.63	2.31	2.71	2.76	2.91
Spain	1.60	1.61	1.54	1.75	1.82	1.94

-----Foreign Exchange Rates<sup>1</sup>-----

			0	- 0		
		-History-		Cons	ensus For	ecasts
		Month	Year	Mon	ths From	Now:
	Latest:	Ago:	Ago:	3	6	12
U.S.	92.393	93.975	90.791	94.3	94.8	93.6
Japan	111.47	109.80	110.52	114.5	115.7	117.9
U.K.	1.3018	1.2783	1.4513	1.28	1.28	1.29
Switzerland	0.9754	0.9987	0.9920	1.01	1.01	1.00
Canada	1.3537	1.3502	1.3136	1.36	1.35	1.31
Australia	0.7449	0.7539	0.7215	0.74	0.74	0.75
Euro	1.1190	1.0694	1.1207	1.05	1.05	1.10

	3-Мо	nsensus nth Rates J.S. Rate		10-Y	sensus ear Gov't s. U.S. Yield
	Now	In 12 Mo.		Now	In 12
Japan	-1.20	-1.83	Germany	-1.87	-2.09
U.K.	-0.87	-1.44	Japan	-2.22	-2.74
Switzerland	-1.92	-2.61	U.K.	-1.16	-1.14
Canada	-0.38	-0.64	France	-1.43	-1.63
Australia	0.71	0.14	Italy	-0.14	-0.39
Eurozone	-1.52	-2.18	Switzerland	-2.36	-2.62
			Canada	-0.79	-0.65
			Australia	0.22	0.06
			Spain	-0.67	-0.90

Forecasts of panel members are on pages 10 and 11. Definitions of variables are as follows: <sup>1</sup>Three month rate on interest-earning money market deposits denominated in selected currencies. <sup>2</sup>Government bonds are yields to maturity. Foreign exchange rate forecasts for U.K., Australia and the Euro are U.S. dollars per currency unit. For the U.S dollar, forecasts are of the U.S. Federal Reserve Board's Major Currency Index.

International Commentary With a few exceptions, global financial markets were relatively tame over the past month. Prices in debt markets remained confined to tight ranges, equity markets continued to trend ever higher, and volatility in currency markets was pretty limited as market participants shrugged off geo-political risks that seemed to loom so large earlier this year. Instead, markets tended to focus to signs of improving global economic growth, rising corporate profits, and this year's upturn in inflation. Moreover, markets breathed a big sigh of relief when Emmanuel Macron handily defeated Marine Le Pen for the presidency of France.

There were exceptions, of course. While posting better-than-expected GDP growth in Q1 of this year, domestic demand in China now appears to be slowing in reaction to earlier government efforts to rein in roaring property market prices, skyrocketing debt, and the shadow banking system. Indeed, concerns about the high levels of debt recently prompted Moody's to cut China's credit rating for the first time in almost 30 years. As a consequence, the yuan has weakened further and Chinese equity prices, already under pressure, fell further. In Brazil, renewed political turmoil due to fresh accusations of bribery threatens to leave that nation's economy in recession for a third year.

The Bank of England's Monetary Policy Committee (MPC) left its overnight policy rate at 0.25% on May 11<sup>th</sup> and announced no change to its QE program. The vote was 7-1 with member Kristin Forbes voting in favor of an immediate hike in rates due to rising inflationary pressures. Real GDP grew 1.2% (saar) in Q1, a bit slower than expected and a considerable departure from the 2.0% in Q3 and 2.7% in Q4 of last year. There was a marked slowdown in the service sector due to weakness in retail sales and lodging away from home resulting from higher prices that cut into inflation-adjusted increases. Business services, in contrast, registered healthy growth, and manufacturing growth was strong. A large jump in April retail sales and recent PMI reports offer hope that the pace of GDP growth will pick up in Q2. Consumer price inflation rose to 2.7% (y/y) in April, the highest in almost four year and well above the Bank of England's 2% target. A strong showing by Prime Minister Theresa May's Conservative party in the June 8th elections might move the MPC a bit closer to raising rates, but worries will persist that tough Brexit negotiations will inevitably slow GDP growth more than expected.

The European Central Bank (ECB) kept its main refinancing rate at 0.0% and the rate on the marginal lending facility at 0.25% at its late-April meeting and also maintained its QE program. While no major changes are expected at its June 8<sup>th</sup> meeting, the bank could lift its growth outlook and adopt a more neutral forward guidance about both rates and asset purchases. ECB president Mario Draghi recently defended the bank's plan to leave interest rates unchanged until sometime after the ECB's current asset purchase program is concluded (Currently scheduled for the end of this year). While he acknowledged that the pace of economic growth has picked up this year, citing "an increasingly solid recovery", he noted that underlying inflation is still "subdued". Consumer price inflation is currently running at 1.9% (y/y) in the Eurozone, but core inflation is much softer. Most analysts do not look for any interest rate increases until late 2018.

The Bank of Canada (BoC) left its overnight policy rate at 0.5% on May 24<sup>th</sup>, but the tone of the policy statement was more upbeat than expected, noting that "The Canadian economy's adjustment to lower oil prices is largely complete and recent economic data have been encouraging, including indicators of business investment". Nonetheless, inflation remains below the bank's target and wage growth still is subdued. Most analysts think the BoC will hold off on raising rates until the first half of 2018.

The Reserve Bank of Australia (RBA) left its policy rate unchanged at 1.5% in May. Slower consumer spending, the impact of cyclone Debbie, and weakening home building, likely slowed GDP growth sharply in Q1 after the 4.4% (saar) surge in Q4 of last year (see pages 10-11 for individual panelists' forecasts).

### 4 ■ BLUE CHIP FINANCIAL FORECASTS ■ JUNE 1, 2017

# Second Quarter 2017 Interest Rate Forecasts

													Avg. For	, , ,					
Blue Chip			SI	hort-Term					Interme	diate-Term	·		Long	Term		Qtr		(SAAR)	
Financial Forecasts	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	A.	B.	C.	D.
Panel Members	Federal	Prime	LIBOR	Com.	Treas.	Aaa	Baa	State &	Home	Fed's Major		GDP	Cons.						
	Funds	Bank	Rate	Paper	Bills	Bills	Bills	Notes	Notes	Notes	Bond	Corp.	Corp.	Local	Mtg.	Currency	Real	Price	Price
	Rate	Rate	3-Mo.	1-Mo.	3-Mo.	6-Mo.	1-Yr.	2-Yr.	5-Yr.	10-Yr.	30-Yr.	Bond	Bond	Bonds	Rate	\$ Index	GDP	Index	Index
IHS Markit	1.3 H	4.1	1.2	na	0.9	1.0	1.1	1.3	1.9	2.4	3.0	3.9	4.6	3.8	4.1	na	3.4	1.7	0.7
Scotiabank Group	1.3 H	4.3	na	na	1.0 H	na	na	1.4	2.0	2.4	3.1	na	na	na	na	na	3.2	2.0	2.4
J.P. Morgan Chase	1.1	na	1.3	na	na	na	na	1.3	2.0	2.4	3.0	na	na	na	na	na	3.0	1.0	0.2
BNP Paribas Americas	1.1	na	1.2	na	na	na	na	1.6 H	2.4	2.9	na	na	na	na	na	na	2.9	na	-0.5 L
Moody's Analytics	1.0	4.2	1.3	1.0	0.7 L	0.8 L	1.0 L	1.3	2.1	2.8	3.5 H	4.7 H	5.7 H	3.3 L	4.3	na	2.9	2.1	2.2
Barclays Capital	1.0	4.0 L	1.2	na	na	na	na	1.5	2.1	2.5	3.1	na	na	na	na	na	2.5	0.7	0.1
RBC Capital Markets	1.0	na	na	na	na	na	na	1.4	2.0	2.5	3.1	na	na	na	na	na	3.6	1.3	0.4
Swiss Re	1.0	4.1	1.3	1.0	0.9	0.9	1.2 H	1.5	2.0	2.5	3.3	4.2	5.0	na	4.3	na	3.4	-0.4 L	0.6
Goldman Sachs & Co.	1.0	na	1.3	na	0.9	na	na	1.4	2.0	2.5	3.0	na	na	na	4.3	na	3.1	1.0	1.0
Chase Wealth Management	1.0	4.0 L	1.2	1.0	0.9	1.1 H	1.2 H	1.3	1.9	2.4	3.0	4.1	4.7	3.6	4.2	92.1 L	2.8	2.5 H	2.1
AIG	1.0	4.1	na	na	0.9	1.1 H	1.1	1.3	2.0	2.5	3.1	na	4.7	na	4.2	na	3.2	1.4	1.1
Wells Capital Management	1.0	4.1	1.2	0.9	1.0 H	1.1 H	1.2 H	1.4	1.9	2.4	3.0	3.9 L	4.6	3.9	4.1	92.5	2.4	1.4	0.9
GLC Financial Economics	1.0	4.1	1.3	1.0	0.9	1.1 H	1.1	1.4	2.0	2.5	3.1	4.2	4.8	3.7	4.4 H		3.1	1.8	2.7 H
Action Economics	1.0	4.1	1.0 L	1.0	0.9	1.1 H	1.1	1.3	1.9	2.3 L	3.0	3.9 L	4.6	3.7	3.9	94.3	3.2	1.1	0.0
BMO Capital Markets	1.0	4.1	1.3	na	0.9	1.1 H	1.2 H	1.3	1.9	2.4	3.0	na	na	na	4.1	94.0	2.7	1.0	0.9
S&P Global	1.0	4.0 L	1.3	na	0.9	1.0	1.1	1.3	2.0	2.3 L	3.1	na	na	na	4.2	95.5	3.0	2.3	1.3
RidgeWorth Investments	1.0	4.1	1.3	1.0	0.9	1.0	1.1	1.4	2.0	2.4	3.1	4.0	4.7	3.7	4.4	94.0	3.5	2.1	1.4
Regions Financial Corporation	1.0	4.1	1.2	1.0	0.9	1.0	1.1	1.3	1.9	2.3 L	2.9 L	4.0	4.6	3.8	4.1	94.1	3.5	1.9	2.1
Amherst Pierpont Securities	1.0	4.1	1.2	1.0	0.9	1.1 H	1.2 H	1.4	1.9	2.4	3.0	3.9 L	4.7	3.9	4.1	93.5	3.7	1.8	0.3
Fannie Mae	0.9 L	4.1	na	na	0.9	1.0	1.1	1.3	1.8 L	2.3 L	2.9 L	na	na	na	4.0	na	2.9	0.7	0.5
Loomis, Sayles & Company	0.9 L	4.0 L	1.2	0.9	0.9	1.0	1.1	1.4	2.0	2.4	3.0	4.0	4.7	3.6	4.1	94.2	3.4	0.9	8.0
MacroFin Analytics	0.9 L	4.1	1.2	1.0	0.9	1.0	1.2 H	1.3	1.8	2.3 L	3.0	3.9 L	4.5 L	3.4	4.1	94.0	3.4	2.0	2.0
Comerica Bank	0.9 L	4.0 L	1.2	na	0.9	1.0	1.1	1.3	1.9	2.4	3.0	na	na	na	4.1	na	3.0	2.0	1.5
The Northern Trust Company	0.9 L	4.1	1.2	0.8 L	0.9	1.0	1.1	1.3	1.8 L	2.4	3.0	3.9 L	4.6	3.7	4.1	na	2.2	1.5	1.6
PNC Financial Services Corp.	0.9 L	4.0 L	1.2	na	0.9	1.0	1.1	1.4	1.9	2.4	3.1	na	4.7	3.9	4.2	94.6	3.8 H	1.3	1.8
Economist Intelligence Unit	0.9 L	4.0 L	1.2	1.0	0.9	1.0	1.1	1.3	1.9	2.3 L	3.0	na	na	na	3.9 L	na	3.0	na	2.3
Societe Generale	0.9 L	4.0 L	na	na	na	na	na	1.3	1.9	2.4	3.0	na	na	na	na	na	3.1	1.3	0.2
DS Economics	0.9 L	4.1	1.2	0.9	0.9	1.0	1.1	1.3	1.8 L	2.3 L	3.0	3.9 L	4.6	3.5	4.1	94.0	3.7	0.9	0.3
Moody's Capital Markets Group	0.9 L	4.0 L	1.2	1.0	0.9	1.1 H	1.2 H	1.3	1.9	2.3 L	3.0	4.0	4.6	3.5	4.0	93.6	3.3	1.7	0.7
Daiwa Capital Markets America	0.9 L	4.1	1.2	1.1 H	0.9	1.0	1.1	1.4	1.9	2.4	3.0	3.9 L	4.6	na	4.1	94.0	3.1	1.8	0.9
Oxford Economics Nomura Securities, Inc.	0.9 L 0.9 L	4.0 L 4.0 L	1.2 1.4 H	na	0.8	1.0	1.0 L	1.3 1.4	1.9 1.9	2.3 L 2.4	2.9 L 3.0	na 4.1	na 4.7	na	4.2	93.4	3.2 3.2	1.9 1.8	0.9 0.3
,				na	na	na 10	na 101	1.4 1.2 L	1.9 1.8 L	2.4 2.3 L			4.7	na	4.4	na 04.0	2.5		
DePrince & Assoc. Georgia State University	0.9 L 0.9 L	4.0 L 4.0 L	1.2 na	0.9	0.8 0.8	1.0 1.0	1.0 L 1.1	1.4	2.1	2.5 L 2.5	2.9 L 3.2	3.9 L 4.4	4.6 5.2	3.9	4.1 4.3	94.0 na	3.2	1.9 0.4	0.9 1.9
Chmura Economics & Analytics			1.2	na 0.9	0.6	1.0	1.1	1.4	1.9	2.5	3.0			na	4.0	96.4 H	3.2 2.1 L	2.1	2.0
NatWest Markets	0.9 L 0.9 L	4.0 L 4.0 L	1.2	0.9	0.9 1.0 H	1.0 1.1 H	1.1 1.2 H	1.4	1.9	2.4	3.1	na 4.1	na 4.7	na 3.7	4.0	96.4 FI 94.0	3.0	1.7	0.1
					1.0 H		1.2 H		1.9	2.4	3.0							0.4	0.1
High Frequency Economics Wells Fargo	0.9 L 0.9 L	4.0 L 4.3 H	na 1.2	na 1.0	0.9	1.1 H 1.0	1.2 FI	1.4 1.4	1.9	2.4	3.0	na 4.1	na 4.8	na 3.8	na 4.1	na 94.2	3.0 3.0	1.0	0.4
RDQ Economics	0.9 L	4.0 L	1.3	0.9	0.9	1.0 1.1 H	1.1 1.2 H	1.4	1.9	2.4	3.0	4.1 3.9 L	4.0 4.5 L	3.7	4.1	94.2	2.4	2.1	1.0
Nat'l Assn. of Realtors	0.9 L	4.0 L		1.0	0.9	1.0	1.2 n	1.3	1.9	2.4 2.3 L	3.0	3.9 L 4.1	4.5 L	3.5	4.1	94.2 na	3.7	1.7	1.3
Cycledata Corp.	0.9 L	4.0 L		0.9	0.8	0.9	1.1	1.3	1.9	2.4	3.0	4.0	4.8	3.7	4.0	93.0	2.9	1.9	2.3
MUFG Union Bank		4.0 L		1.0	0.8	0.9	1.1	1.3	2.0	2.4	3.0	4.0	4.7	3.7	4.1	94.0	2.6	2.0	2.6
Stone Harbor Investment Partners	0.9 L			1.0	0.8	1.0	1.1	1.3	1.8 L		3.0	4.0	4.6	na	4.1	94.0	3.5	1.1	1.4
Bank of America Merrill Lynch	0.9 L	na	1.3	na	0.9	na	na	1.5	2.5 H		3.5	na	na	na	na	na	3.0	1.3	-0.4
Naroff Economic Advisors	0.9 L	4.0 L		0.9	0.9	1.0	1.1	1.3	1.9	2.3 L	3.0	4.3	4.9	4.1 H	4.1	93.7	2.7	2.1	1.6
	3.5 E										5.0			11	***	55.1	-		
June Consensus	1.0	4.1	1.2	1.0	0.9	1.0	1.1	1.3	1.9	2.4	3.0	4.0	4.7	3.7	4.1	94.0	3.1	1.5	1.1
Top 10 Avg.	1.1	4.1	1.3	1.0	0.9	1.1	1.2	1.4	2.1	2.6	3.2	4.2	4.9	3.9	4.3	94.6	3.6	2.1	2.3
Bottom 10 Avg.	0.9	4.0	1.2	0.9	0.8	0.9	1.1	1.3	1.8	2.3	2.9	3.9	4.6	3.5	4.0	93.4	2.5	0.7	0.1
May Consensus	1.0	4.0	1.2	1.0	0.9	1.0	1.1	1.4	2.0	2.5	3.1	4.1	4.8	3.8	4.2	94.3	2.7	1.7	1.6
Number of Forecasts Changed From	n A Month A	∖go:																	
Down	6	4	13	9	8	5	11	16	24	21	19	14	15	18	20	13	4	26	27
Same	26	28	17	11	17	12	10	17	16	17	17	6	6	6	12	9	12	12	13
Up	12	7	7	5	13	17	13	12	5	6	8	6	6	0	4	3	29	5	5
Diffusion Index	57 %	54 %	42 %	42 %	57 %	68 %		46 %	29 %	33 %	38 %	35 %	33 %	13 %	28 %		78 %	26 %	26 %
Diliusion index	J1 70	J4 70	<del>4</del> 2 70	42 70	J1 70	UO 70	53 %	40 70	<b>49</b> %	აა 70	JO 70	JJ 70	JJ 7/0	13 70	40 %	JU %	10 70	20 70	Z0 70

## **Third Quarter 2017**

## **Interest Rate Forecasts**

	Percent Per Annum Average For Quarter													Avg. For	, , ,				
Blue Chip			S	hort-Term		Ç										Qtr	Qtr (SAAR)		
Financial Forecasts	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	A.	B.	C.	D.
Panel Members	Federal	Prime	LIBOR	Com.	Treas.	Treas.	Treas.	Treas.	Treas.	Treas.	Treas.	Aaa	Baa	State &	Home	Fed's Major		GDP	Cons.
	Funds	Bank	Rate	Paper	Bills	Bills	Bills	Notes	Notes	Notes	Bond	Corp.	Corp.	Local	Mtg.	Currency	Real	Price	Price
	Rate	Rate	3-Mo.	1-Mo.	3-Mo.	6-Mo.	1-Yr.	2-Yr.	5-Yr.	10-Yr.	30-Yr.	Bond	Bond	Bonds	Rate	\$ Index	GDP	Index	Index
Societe Generale	1.4 H	4.3	na	na	na	na	na	1.5	2.2	2.7	3.5	na	na	na	na	na	2.1	2.1	1.6
J.P. Morgan Chase	1.4 H	na	1.4	na	na	na	na	1.6	2.2	2.5	3.1	na	na	na	na	na	1.8	2.0	2.3
Barclays Capital	1.4 H	4.5 H	1.6 H	na	na	na	na	1.7	2.2	2.5	3.1	na	na	na	na	na	2.0	2.0	2.4
Goldman Sachs & Co.	1.3	na	1.6 H	na	1.2	na	na	1.5	2.2	2.6	3.0	na	na	na	4.4	na	2.5	2.0	1.9
Swiss Re	1.3	4.4	1.5	1.2	1.1	1.2	1.5	1.8	2.2	2.7	3.6	4.5	5.4	na	4.5	na	2.3	1.3	2.3
Scotiabank Group	1.3	4.3	na	na	1.1	na	na	1.5	2.2	2.6	3.2	na	na	na	na	na	2.5	2.0	2.5
IHS Markit	1.3 1.2	4.3 4.4	1.3 1.3	na 1.2	1.1 1.2	1.2 1.3	1.3 1.4	1.5 1.6	2.1 2.2	2.6 2.7	3.2 3.4	4.2 4.3	5.0 4.8	4.0 3.7	4.4 4.4	na 94.5	2.9 2.1	2.4 2.0	2.8 2.2
MacroFin Analytics AIG	1.2	4.4	na	na	1.2	1.3	1.4	1.0 1.4 L	2.2	2.7	3.4	na	4.8	na	4.4	94.5 na	2.0	2.0	2.2
Action Economics	1.2	4.3	1.3	1.3	1.2	1.3	1.4	1.4 L	2.2	2.6	3.2	4.1	4.7 L	3.9	4.1	93.0	3.4 H	1.6	1.9
S&P Global	1.2	4.1	1.5	na	0.9	1.1	1.2	1.6	2.1	2.5	3.2	na	na	na	4.3	96.5	2.4	2.4	1.9
Wells Capital Management	1.2	4.3	1.5	1.2	1.3 H	1.4	1.6	1.7	2.2	2.7	3.2	4.1	4.9	4.2	4.4	91.4 L	2.5	2.1	2.4
BMO Capital Markets	1.2	4.3	1.5	na	1.1	1.3	1.3	1.5	2.1	2.6	3.2	na	na	na	4.3	95.8	2.7	2.1	2.5
Wells Fargo	1.2	4.4	1.5	1.2	1.1	1.2	1.3	1.7	2.2	2.5	3.2	4.2	4.9	3.8	4.2	95.0	2.6	2.0	2.1
Moody's Analytics	1.2	4.3	1.4	1.1	0.8 L	0.9 L	1.1 L	1.4 L	2.1	3.0	3.7 H	5.0 H	6.1 H	3.8	4.4	na	2.4	2.5	2.2
Chase Wealth Management	1.2	4.2	1.4	1.2	1.2	1.3	1.4	1.5	2.1	2.6	3.2	4.3	4.9	3.8	4.4	92.3	2.0	2.0	2.3
RDQ	1.2	4.2	1.6 H	1.2	1.3 H	1.6 H	1.7 H	1.8	2.3	2.8	3.4	4.2	4.9	4.3	4.5	95.8	2.2	2.1	2.6
NatWest Markets	1.2	4.3	1.3	1.2	1.2	1.4	1.6	1.7	2.3	2.7	3.3	4.2	4.8	3.9	4.4	97.0 H	2.8	2.2	2.3
Amherst Pierpont Securities	1.2	4.3	1.5	1.3	1.2	1.3	1.5	1.7	2.2	2.7	3.4	4.3	5.0	4.1	4.5	94.0	3.1	2.0	2.6
Regions Financial Corporation	1.2	4.3	1.4	1.2	1.1	1.2	1.3	1.5	2.1	2.5	3.1	4.1	4.8	4.0	4.2	94.5	2.4	1.8	2.3
Comerica Bank	1.2	4.3	1.5	na	1.1	1.3	1.5	1.7	2.2	2.7	3.4	na	na	na	4.4	na	2.9	2.0	2.0
Daiwa Capital Markets America	1.2	4.3	1.5	1.4 H	1.2	1.3	1.4	1.7	2.1	2.5	3.1	4.0 L	4.7 L	na	4.4	95.0	2.5	2.1	2.1
Oxford Economics	1.2	4.3	1.6 H	na	1.1	1.2	1.3	1.6	2.0	2.4	3.1	na	na	na	4.3	93.0	2.3	1.6	2.1
High Frequency Economics	1.2	4.3	na	na	1.2	1.3	1.4	1.7	2.2	2.6	3.3	na	na	na	na	na	2.3	2.4	2.4
DS Economics	1.2	4.3	1.4	1.1	1.1	1.2	1.3	1.6	2.1	2.6	3.2	4.1	4.8	3.8	4.4	93.5	2.5	1.4	1.8
Economist Intelligence Unit	1.2	4.2	1.4	1.2	1.1	1.2	1.2	1.5	2.1	2.5	3.2	na	na	na	4.1	na	2.4 1.9	na 4.0	2.3 2.6
Nomura Securities, Inc. Fannie Mae	1.2 1.2	4.0 L 4.3	1.6 H	na	na 1.1	na 1.1	na 1.2	1.5 1.4 L	2.0 1.9 L	2.6 2.3 L	3.0 2.9 L	4.3	4.9	na	4.6 4.0 L	na	2.2	1.8 1.2 L	2.6 1.8
DePrince & Assoc.	1.2	4.2	na 1.5	na 1.2	1.1	1.3	1.4	1.5	1.9 L	2.4	3.0	na 4.1	na 5.0	na 4.0	4.0 L	na 94.2	2.5	2.0	2.2
MUFG Union Bank	1.2	4.3	1.5	1.2	1.1	1.2	1.5	1.6	2.1	2.5	3.1	4.2	4.9	3.8	4.2	92.0	2.7	1.9	2.8 H
Bank of America Merrill Lynch	1.1	na	1.5	na	1.1	na	na	1.7	2.5	3.0	3.3	na	na	na	na	na	2.3	1.9	1.8
The Northern Trust Company	1.1	4.3	1.5	1.1	1.2	1.3	1.4	1.6	2.1	2.6	3.3	4.1	5.0	3.9	4.3	na	2.0	2.0	2.1
Moody's Capital Markets Group	1.1	4.3	1.5	1.2	1.2	1.3	1.3	1.4 L	2.0	2.4	3.0	4.0 L	4.7 L	3.6 L	4.1	94.3	2.4	1.8	2.2
Loomis, Sayles & Company	1.1	4.2	1.5	1.1	1.1	1.3	1.5	1.7	2.2	2.6	3.2	4.3	5.0	3.7	4.2	94.5	2.3	1.4	2.3
PNC Financial Services Corp.	1.1	4.3	1.4	na	1.1	1.2	1.4	1.7	2.2	2.7	3.4	na	4.9	4.1	4.4	94.7	3.3	2.1	2.3
Georgia State University	1.1	4.1	na	na	1.1	1.2	1.4	1.7	2.6	3.2 H	3.7 H	4.7	5.7	na	4.7	na	1.3 L	3.3 H	2.5
RBC Capital Markets	1.1	na	na	na	na	na	na	1.5	2.2	2.7	3.3	na	na	na	na	na	2.5	1.9	2.7
BNP Paribas Americas	1.1	na	1.3	na	na	na	na	2.0 H	2.9 H	3.2 H	na	na	na	na	na	na	2.4	na	1.8
GLC Financial Economics	1.1	4.3	1.4	1.2	1.1	1.2	1.3	1.5	2.3	2.8	3.4	4.4	5.1	4.1	4.9 H	92.3	2.9	2.3	2.1
RidgeWorth Investments	1.1	4.3	1.5	1.1	1.0	1.1	1.3	1.6	2.3	2.6	3.3	4.1	4.8	3.9	4.5	93.5	2.4	2.1	1.4 L
Naroff Economic Advisors	1.1	4.2	1.5	1.2	1.1	1.3	1.5	1.7	2.3	2.6	3.3	4.5	5.2	4.4 H	4.5	94.3	3.1	2.5	2.7
Nat'l Assn. of Realtors	1.1	4.2	1.4	1.1	1.1	1.2	1.3	1.5	2.1	2.5	3.1	4.3 4.2	4.8	3.7	4.3	na	2.4	1.8 2.2	2.0
Cycledata Corp. Chmura Economics & Analytics	1.1 1.0	4.1 4.0 L	1.4 1.2	1.1 1.0 L	1.0 0.9	1.1 1.1	1.3 1.2	1.5 1.4 L	2.1 1.9 L	2.6 2.4	3.2 3.0		4.9	3.8	4.2 4.1	93.0 96.4	2.4 2.5	1.8	2.5 2.0
Stone Harbor Investment Partners	0.9 L	4.0 L	1.2 1.2 L	1.0 L	0.9	1.1	1.2	1.4 L	2.1	2.4	3.0	na 4.2	na 4.8	na na	4.1	93.0	2.5	1.0	2.3
Storie Harbor investment Farthers	0.9 L	4.0 L	1.Z L	1.0 L	0.9	1.1	1.2	1.4 L	2.1	2.0	3.0	4.2	4.0	IIa	4.3	93.0	2.1	1.3	2.3
June Consensus	1.2	4.2	1.4	1.2	1.1	1.2	1.4	1.6	2.2	2.6	3.2	4.3	5.0	3.9	4.3	94.1	2.4	2.0	2.2
Top 10 Avg.	1.3	4.4	1.5	1.2	1.2	1.4	1.5	1.7	2.4	2.9	3.5	4.5	5.2	4.1	4.6	95.5	3.0	2.4	2.6
Bottom 10 Avg.	1.1	4.1	1.3	1.1	1.0	1.1	1.2	1.4	2.0	2.4	3.0	4.1	4.8	3.7	4.1	92.7	1.9	1.6	1.8
May Consensus	1.2	4.2	1.4	1.1	1.1	1.2	1.3	1.6	2.2	2.7	3.3	4.3	5.0	4.0	4.4	94.7	2.4	2.1	2.4
Number of Forecasts Changed From	n A Month A	<u>\go:</u>																	
Down	4	4	8	5	6	4	7	9	21	21	17	13	15	13	17	15	9	14	21
Same	32	27	19	13	17	14	13	23	17	16	21	9	8	8	13	7	23	21	16
Up	9	9	10	7	15	17	15	13	7	8	6	4	4	1	6	2	13	8	8
Diffusion Index	56 %	56 %	53 %	54 %	62 %	69 %	61 %	54 %	34 %	36 %	38 %	33 %	30 %	23 %	35 %	23 %	54 %	43 %	36 %

# Fourth Quarter 2017 Interest Rate Forecasts

	Percent Per Annum Average For Quarter												Avg. For	vg. For(Q-Q % Chang		je)			
Blue Chip	<u></u>		S	hort-Term		Long-TermLong-Term												(SAAR)	
Financial Forecasts	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	A.	B.	C.	D.
Panel Members	Federal	Prime	LIBOR	Com.	Treas.	Treas.	Treas.	Treas.	Treas.	Treas.	Treas.	Aaa	Baa	State &	Home	Fed's Major		GDP	Cons.
	Funds	Bank	Rate	Paper	Bills	Bills	Bills	Notes	Notes	Notes	Bond	Corp.	Corp.	Local	Mtg.	Currency	Real	Price	Price
	Rate	Rate	3-Mo.	1-Mo.	3-Mo.	6-Mo.	1-Yr.	2-Yr.	5-Yr.	10-Yr.	30-Yr.	Bond	Bond	Bonds	Rate	\$ Index	GDP	Index	Index
IHS Markit	1.5 H	4.3	1.5	na	1.2	1.4	1.5	1.6	2.2	2.7	3.4	4.4	5.2	4.2	4.6	na	2.4	2.3	1.9
J.P. Morgan Chase	1.5 H	na	1.6	na	na	na	na	1.8	2.3	2.7	3.2	na	na	na	na	na	1.8	2.0	2.3
Scotiabank Group	1.5 H	4.5	na	na	1.3	na	na	1.7	2.3	2.8	3.3	na	na	na	na	na	2.3	2.0	2.4
Swiss Re MacroFin Analytics	1.5 H 1.5 H	4.6 4.7 H	1.8 1.5	1.5 1.4	1.4 1.4	1.6 1.5	1.8 1.6	2.1 1.9	2.3 2.4	2.7 3.0	3.6 3.7	4.5 4.5	5.5 5.0	na 3.7	4.6 4.7	na 95.0	2.2 2.1	2.2 2.0	3.2 H 2.1
NatWest Markets	1.5 H	4.7 Fl	1.6	1.4	1.4	1.7	1.0	1.9	2.4	2.8	3.4	4.3	4.9	4.0	4.7	95.0 98.0 H	2.1	2.0	2.1
Amherst Pierpont Securities	1.4	4.6	1.8	1.5	1.4	1.6	1.8	2.0	2.6	3.0	3.7	4.6	5.3	4.4	4.9	95.0	3.2 H	2.2	3.1
AIG	1.4	4.5	na	na	1.3	1.5	1.5	1.6	2.1	2.5	3.2	na	4.8	na	4.2	na	2.0	2.4	2.2
Nomura Securities, Inc.	1.4	4.3	1.6	na	na	na	na	1.6	2.2	2.8	3.2	4.5	5.1	na	4.8	na	2.0	1.8	2.3
Moody's Analytics	1.4	4.5	1.6	1.3	0.9 L	1.0 L	1.3 L	1.5	2.4	3.2	3.9	5.3	6.3	4.0	4.6	na	2.8	2.6 H	2.4
Chase Wealth Management	1.4	4.4	1.6	1.4	1.4	1.5	1.6	1.7	2.3	2.8	3.4	4.5	5.1	4.0	4.6	92.2	2.1	2.3	2.3
Wells Fargo	1.4	4.5	1.7	1.4	1.3	1.4	1.4	1.8	2.3	2.6	3.4	4.3	5.0	3.9	4.3	96.0	2.6	2.0	2.5
Societe Generale	1.4	4.3	na	na	na	na	na	1.8	2.4	2.9	3.7	na	na	na	na	na	2.2	2.1	2.5
RDQ Economics	1.4	4.4	1.9 H	1.5	1.6 H	1.9 H	2.0 H	2.1	2.6	3.1	3.7	4.5	5.1	4.7	4.8	97.2	2.0	2.1	2.6
Naroff Economic Advisors	1.4	4.5	1.7	1.5	1.5	1.6	1.8	2.2 H	2.6	3.1	3.7	4.8	5.5	4.8 H	4.8	95.0	3.0	2.6 H	2.8
MUFG Union Bank	1.4	4.5	1.7	1.5	1.4	1.5	1.8	1.8	2.3	2.7	3.2	4.4	5.1	3.9	4.4	90.0 L	2.8	2.0	3.1
Bank of America Merrill Lynch	1.4	na	1.7	na	1.3	na	na	1.8	2.5	2.9	3.3	na	na	na	na	na	2.3	1.7	1.3 L
Oxford Economics	1.4	4.5	1.8	na	1.3	1.4	1.5	1.8	2.1	2.5	3.1	na	na	na	4.3	92.6	2.6	1.3 L	1.9
Goldman Sachs & Co.	1.4	na	1.7	na	1.3	na	na	1.7	2.3	2.7	3.1	na	na	na	4.5	na	2.3	2.0	2.1
Comerica Bank	1.4	4.5	1.7	na	1.3	1.5	1.6	1.8	2.4	2.9	3.6	na	na	na	4.6	na	3.1	2.0	2.1
S&P Global	1.4	4.4	1.8	na	1.2	1.3	1.4	1.8	2.3	2.7	3.3	na	na	na	4.4	96.9	2.0	2.2	2.2
Economist Intelligence Unit	1.4	4.4	1.6	1.4	1.3	1.3	1.4	1.7	2.3	2.7	3.4	na	na	na	4.3	na	2.1	na	2.2
Regions Financial Corporation Fannie Mae	1.4	4.4	1.5	1.4	1.2	1.3	1.4	1.7	2.2	2.7	3.3	4.3	5.0	4.2	4.4	95.1	2.4	1.7	2.3
DS Economics	1.4 1.4	4.5 4.5	na 1.6	na 1.3	1.2 1.3	1.2 1.4	1.3 1.6	1.5 1.8	2.0 L 2.3	2.3 L 2.7	3.0 L 3.4	na 4.2	na 4.9	na 4.0	4.1 4.4	na 93.1	2.0 1.7	1.9 2.0	2.3 2.3
Action Economics	1.4	4.5	1.5	1.4	1.3	1.4	1.6	1.9	2.3	2.8	3.4	4.2	5.0	4.0	4.4	92.6	2.7	2.0	2.3
Daiwa Capital Markets America	1.4	4.5	1.7	1.6 H	1.3	1.5	1.6	1.9	2.3	2.6	3.2	4.2	4.8	na	4.5	96.0	2.4	2.2	2.3
BMO Capital Markets	1.4	4.5	1.6	na	1.3	1.4	1.5	1.7	2.2	2.6	3.2	na	na	na	4.3	97.9	2.8	2.0	2.4
High Frequency Economics	1.4	4.5	na	na	1.3	1.4	1.6	2.0	2.4	2.8	3.4	na	na	na	na	na	2.3	2.4	2.4
Wells Capital Management	1.4	4.5	1.7	1.4	1.5	1.6	1.8	1.9	2.4	2.8	3.4	4.4	5.1	4.4	4.6	91.8	2.3	2.2	2.5
GLC Financial Economics	1.4	4.5	1.7	1.4	1.3	1.4	1.4	1.7	2.4	3.0	3.6	4.7	5.5	4.3	5.0	94.0	2.8	2.2	2.1
Barclays Capital	1.4	4.5	1.7	na	na	na	na	1.8	2.3	2.5	3.1	na	na	na	na	na	2.0	2.4	2.4
BNP Paribas Americas	1.4	na	1.6	na	na	na	na	2.1	3.0 H	3.4	na	na	na	na	na	na	2.6	na	2.9
DePrince & Associates	1.3	4.3	1.7	1.4	1.3	1.4	1.7	1.7	2.1	2.6	3.2	4.3	5.3	4.1	4.4	94.4	2.6	2.2	2.5
Loomis, Sayles & Company	1.3	4.4	1.6	1.3	1.2	1.4	1.8	2.0	2.4	2.8	3.3	4.4	5.2	3.8	4.4	94.5	2.0	1.9	2.1
Cycledata Corp.	1.3	4.3	1.6	1.3	1.2	1.3	1.5	1.7	2.3	2.8	3.4	4.4	5.2	4.1	4.5	93.0	2.4	2.2	2.6
RBC Capital Markets	1.3	na	na	na	na	na	na	1.8	2.4	2.9	3.4	na	na	na	na	na	2.7	1.3 L	1.6
RidgeWorth Investments	1.2	4.3	1.6	1.2 L	1.1	1.2	1.4	1.7	2.4	2.7	3.4	4.3	5.0	4.1	4.6	93.0	2.4	2.2	1.4
Nat'l Assn. of Realtors	1.2	4.3	1.5	1.2 L	1.2	1.4	1.5	1.7	2.3	2.7	3.2	4.5	5.0	3.9	4.5	na	2.2	2.3	2.3
Chmura Economics & Analytics	1.2	4.3	1.4 L	1.3	1.1	1.3	1.4	1.6	2.3	2.7	3.3	na 4.2	na	na 4.0	4.3	96.0	3.1	2.1	2.3
The Northern Trust Company	1.2	4.3	1.6	1.2 L	1.2	1.4	1.5	1.8	2.3	2.7	3.5	4.3	5.3	4.0	4.3	na 04.5	2.1	2.0	2.1
Moody's Capital Markets Group PNC Financial Services Corp.	1.2 1.2	4.3 4.3	1.5 1.6	1.2 L na	1.2 1.2	1.4 1.4	1.4 1.5	1.4 L 1.8	2.1 2.3	2.4 2.8	3.0 L 3.6	4.0 L na	4.6 L 5.0	3.5 L 3.9	4.1 L 4.5	94.5 94.7	2.0 2.8	1.8 2.1	1.4 2.4
Georgia State University		4.3 4.1 L	na	na	1.0	1.4	1.5	1.0	2.8	2.0 3.7 H	3.0 4.2 H	5.4 H	6.5 H		4.5 5.3 H		2.0 1.0 L	2.1	1.9
Stone Harbor Investment Partners	1.1 L	4.1 L 4.3	1.4 L	1.2 L	1.0	1.2	1.4	1.6	2.0	3.7 Fl	4.2 П 3.2	э. <del>4</del> п 4.4	5.0	na	5.5 п 4.5	95.0	2.5	2.3 1.6	2.1
Cloric Flander investment artifets		1.0		1.2.2		1.4		1.0		2.7	0.2		0.0	TIQ.	1.0	00.0	2.0	1.0	
June Consensus	1.4	4.4	1.6	1.4	1.3	1.4	1.6	1.8	2.3	2.8	3.4	4.5	5.2	4.1	4.5	94.5	2.4	2.1	2.3
Top 10 Avg.	1.5	4.5	1.8	1.5	1.4	1.6	1.8	2.0	2.6	3.1	3.7	4.7	5.5	4.3	4.8	96.3	2.9	2.4	2.8
, ,																			
Bottom 10 Avg.	1.2	4.3	1.5	1.3	1.1	1.2	1.4	1.6	2.1	2.5	3.1	4.2	4.9	3.9	4.2	92.7	1.9	1.7	1.8
May Consensus	1.3	4.4	1.6	1.4	1.2	1.4	1.5	1.8	2.4	2.8	3.4	4.5	5.2	4.2	4.5	95.0	2.4	2.1	2.3
Number of Forecasts Changed Fron	n A Month A	lgo:																	
Down	4	4	8	5	5	5	7	9	17	17	14	10	11	13	13	14	15	13	10
Same	35	32	23	16	24	19	17	25	20	19	18	9	8	8	13	7	21	21	24
Up	6	4	5	3	9	11	11	11	8	9	12	7	7	3	10	1	9	9	9
Diffusion Index	52 %	50 %	46 %	46 %	55 %	59 %	56 %	52 %	40 %	41 %	48 %	44 %	42 %	29 %	46 %	20 %	43 %	45 %	49 %

### First Quarter 2018

### **Interest Rate Forecasts**

### **Key Assumptions**

																Avg. For	•	Q % Chang	
Blue Chip	7		Sh								·					Qtr		·-(SAAR)	
Financial Forecasts	1	2	3	4	_ 5	_ 6	7	- 8	9	10	_ 11	12	13	14	15	Α.	B.	C.	D.
Panel Members	Federal	Prime	LIBOR	Com.	Treas.	Treas.	Treas.	Treas.	Treas.	Treas.	Treas.	Aaa	Baa	State &	Home	Fed's Major		GDP	Cons.
	Funds	Bank	Rate	Paper	Bills	Bills	Bills	Notes	Notes	Notes	Bond	Corp.	Corp.	Local	Mtg.	Currency	Real	Price	Price
	Rate	Rate	3-Mo.	1-Mo.	3-Mo.	6-Mo.	1-Yr.	2-Yr.	5-Yr.	10-Yr.	30-Yr.	Bond	Bond	Bonds	Rate	\$ Index	GDP	Index	Index
Swiss Re	1.8 H	4.9 H	2.0	1.8 H	1.7	1.9	2.1	2.3	2.5	2.8	3.7	4.6	5.5	na	4.7	na	2.1	3.1 H	3.1
Moody's Analytics	1.7	4.8	1.9	1.6	1.2	1.3 L	1.6	1.8	2.7	3.5	4.2 H	5.5 H	6.5 H	4.2	4.9	na	2.7	2.6	2.6
Naroff Economic Advisors	1.7	4.8	1.9	1.8 H	1.8 H	1.9	2.2 H	2.5 H	3.0	3.4	4.0	5.2	5.9	5.2	5.2	94.0	2.5	2.8	2.9
NatWest Markets	1.7	4.8	1.8	1.7	1.7	1.9	2.2 H	2.2	2.7	3.0	3.5	4.3	4.9	4.1	4.7	99.0 H	3.1	2.0	2.4
Amherst Pierpont Securities	1.7	4.8	2.0	1.8 H	1.7	1.9	2.1	2.3	2.9	3.3	4.0	4.9	5.6	4.6	5.3	96.0	2.9	2.4	3.2 H
Nomura Securities, Inc.	1.7	4.5	1.9	na	na	na	na	1.8	2.4	2.8	3.2	4.5	5.1	na	4.9	na	1.8	1.8	2.3
Societe Generale	1.7	4.5	na	na	na	na	na	2.0	2.6	3.1	3.8	na	na	na	na	na	2.0	1.8	2.4
DS Economics	1.6	4.8	1.9	1.6	1.5	1.7	1.8	2.0	2.4	2.9	3.5	4.2	5.0	4.1	4.5	92.7	1.8	2.3	2.1
Barclays Capital	1.6	4.8	1.9	na	na	na	na	1.9	2.4	2.5	3.0	na	na	na	na	na	2.0	2.4	2.6
BNP Paribas Americas	1.6	na	1.9	na	na	na	na	2.2	3.1 H	3.6 H	na	na	na	na	na	na	2.7	na . –	2.8
Oxford Economics	1.6	4.7	2.0	na	1.6	1.7	1.7	2.0	2.2	2.6	3.1	na	na	na	4.4	92.4	3.2	1.7	2.5
MacroFin Analytics	1.6	4.8	1.7	1.5	1.5	1.6	1.7	2.0	2.6	3.1	3.8	4.7	5.2	3.9	4.8	96.0	2.0	2.1	2.2
RDQ Economics	1.6	4.6	2.1 H	1.7	1.7	2.0 H	2.2 H	2.3	2.9	3.5	4.1	4.9	5.5	5.3 H	5.2	98.4	2.2	2.2	2.5
MUFG Union Bank	1.6	4.8	2.0	1.7	1.6	1.7	2.1	2.0	2.4	2.8	3.4	4.6	5.4	4.0	4.5	90.0 L	2.9	2.1	2.8
Regions Financial Corporation	1.6	4.5	1.7	1.6	1.4	1.6	1.7	1.8	2.4	2.8	3.4	4.4	5.1	4.3	4.5	95.8	2.6	2.1	2.4
Action Economics	1.5	4.7	1.7	1.6	1.5	1.6	1.8	2.0	2.5	2.9	3.5	4.5	5.2	4.1	4.6	92.8	2.2	2.0	2.4
IHS Markit	1.5	4.5	1.6	na	1.4	1.6	1.7	1.8	2.4	3.0	3.6	4.6	5.4	4.4	4.8	na	2.7	2.2	1.3 L
Goldman Sachs & Co.	1.5	na	1.8	na	1.4	na	na	1.9	2.5	2.8	3.1	na	na	na	4.7	na	2.3	1.9	2.0
Scotiabank Group	1.5	4.5	na	na	1.3	na	na	1.8	2.4	2.9	3.4	na	na	na	na	na	2.4	2.0	2.2
J.P. Morgan Chase	1.5	na	1.6 L	na	na	na	na	1.8	2.4	2.8	3.3	na	na	na	na	na	1.8	2.1	2.4
Daiwa Capital Markets America	1.5	4.6	1.8	1.7	1.5	1.6	1.7	2.0	2.4	2.7	3.3	4.3	4.9	na	4.6	97.0	2.2	2.2	2.4
RBC Capital Markets	1.5	na 	na	na 	na	na 	na . –	2.0	2.6	3.1	3.6	na 	na	na	na	na	2.7	2.3	2.4
Cycledata Corp.	1.5	4.5	1.8	1.5	1.4	1.5	1.7	1.9	2.5	2.9	3.5	4.5	5.3	4.2	4.6	93.0	2.5	2.2	2.6
Chmura Economics & Analytics	1.5	4.7	1.7	1.5	1.4	1.6	1.7	2.0	2.7	3.0	3.6	na	na	na	4.6	95.1	3.4 H	1.9	2.2
AIG	1.5	4.6	na	na	1.4	1.7	1.8	1.8	2.3	2.6	3.3	na	4.8	na	4.2	na	2.4	2.7	2.2
Wells Capital Management	1.5	4.6	1.7	1.5	1.6	1.7	1.9	2.0	2.5	3.0	3.6	4.6	5.4	4.6	4.7	92.1	2.6	2.3	2.6
S&P Global	1.5	4.6	2.0	na	1.5	1.6	1.7	2.0	2.5	2.9	3.5	na	na	na	4.6	95.7	2.2	2.5	2.7
Loomis, Sayles & Company	1.5	4.6	1.8	1.5	1.4	1.6	1.9	2.2	2.5	2.8	3.3	4.5	5.2	3.8	4.4	94.5	2.3	2.3	2.1
DePrince & Assoc.	1.4	4.4	1.9	1.6	1.4	1.6	1.8	1.9	2.3	2.7	3.3	4.5	5.5	4.3	4.6	94.5	2.6	2.2	2.5
Comerica Bank	1.4	4.5	1.8	na 4.5	1.3	1.5	1.6	1.8	2.4	2.9	3.6	na	na	na	4.6	na	2.7	2.0	2.0
Economist Intelligence Unit	1.4	4.4 4.5	1.6	1.5	1.3	1.4	1.5	1.7 2.2	2.4 2.6	2.8 3.0	3.4 3.6	na	na	na	4.5	na	2.0 2.8	na 2.8	2.4 2.8
High Frequency Economics	1.4 1.4	4.5	na 1.7	na 1.5	1.5 1.3	1.6	1.8 1.5	1.7	2.4	3.0		na 4.0	na 5 7	na 4 E	na 5.0	na 92.9	2.0	1.4	2.0
GLC Financial Economics	1.4	4.5	1.7	1.5 1.4 L	1.3	1.4 1.4	1.6	1.7	2.4	3.0	3.7 3.7	4.9 4.5	5.7 5.2	4.5 4.4	5.0 4.9	92.9 92.5	2.7	2.3	2.3 1.4
RidgeWorth Investments Nat'l Assn. of Realtors	1.4	4.5	1.7	1.4 L	1.4	1.6	1.7	1.9	2.5	2.9	3.4	4.6	5.2	4.4	4.9		2.4	2.3	2.3
						1.5	1.6	1.8	2.5	2.9	3.4			3.9		na 97.5	2.7	2.3	2.3
Wells Fargo	1.4	4.5	1.7	1.5	1.4	1.5	1.6	1.8	2.4	2.7	3.5 3.4	4.4	5.2		4.4	97.5 92.4	2. <i>1</i> 1.0 L	2.1	2.4
Chase Wealth Management Fannie Mae	1.4 1.4	4.4 4.5	1.6 na	1.4 L na	1.4 1.2	1.3 L	1.6 1.4 L	1.7 1.5 L	2.0 L	2.0 2.4 L	3.4 3.0 L	4.5 na	5.1 na	4.0	4.6 4.1 L	92. <del>4</del> na	1.0 L 1.7	2.2	2.4
PNC Financial Services Corp.	1.4	4.5	1.7	na	1.3	1.5	1.6	1.9	2.4	2.9	3.6	na	5.1	na 3.8	4.1 L	94.6	3.0	2.1	2.4
The Northern Trust Company	1.4	4.5	1.8		1.4	1.6	1.7	2.0	2.5	2.9	3.7	4.5	5.5	4.2	4.5		2.1	2.4	2.5
Moody's Capital Markets Group	1.4	4.5	1.8	1.4 L	1.4	1.5	1.7	2.0 1.5 L	2.0 L	2.9	3.0	4.0 L	5.5 4.6 L	4.2 3.5 L	4.5 4.1 L	na 93.8	2.1	1.7	2.5
BMO Capital Markets	1.4	4.5	1.6	na	1.3	1.4	1.6	1.9	2.0 L	2.7	3.2	na	na na	na	4.1 L	97.6	1.9	2.3	2.7
Bank of America Merrill Lynch	1.4	na	1.8		1.4	na	na	1.9	2.5	2.9	3.3								
Stone Harbor Investment Partners	1.4	4.5	1.6 L	na 1.5	1.4	1.5	1.6	1.8	2.5	2.8	3.3	na 4.5	na 5.1	na na	na 4.6	na 96.0	na 1.8	na 2.1	na 2.4
Georgia State University	1.4 1.3 L	4.5 4.3 L	na	na	1.3 1.1 L	1.3 L	1.5	1.7	2.4	3.3	3.9	5.2	6.2	na	4.6 5.4 H	96.0 na	2.5	1.1 L	1.4
Georgia State Offiversity	1.0 L	4.3 L	IIa	IIa	1.1 L	1.3 L	1.0	1.7	2.5	3.3	3.9	5.2	0.2	IIa	3.4 11	IIa	2.0	1.1 L	1.4
June Consensus	1.5	4.6	1.8	1.6	1.4	1.6	1.7	1.9	2.5	2.9	3.5	4.6	5.3	4.2	4.6	94.6	2.4	2.2	2.4
Top 10 Avg.	1.7	4.8	2.0	1.7	1.6	1.8	2.0	2.2	2.8	3.3	3.9	4.9	5.7	4.6	5.0	96.9	2.9	2.6	2.8
Bottom 10 Avg.	1.4	4.4	1.6	1.4	1.3	1.4	1.5	1.7	2.2	2.6	3.1	4.4	5.0	3.9	4.3	92.5	1.8	1.7	1.9
May Consensus	1.5	4.6	1.8	1.6	1.4	1.5	1.7	1.9	2.5	2.9	3.5	4.6	5.3	4.3	4.7	95.1	2.4	2.2	2.4
Number of Forecasts Changed From			-	-		-		-	-	•	-		-	-					
Down	4	3	6	6	6	5	7	10	16	16	15	8	10	11	13	13	14	11	11
Same	37	31	24	14	21	16	16	26	21	22	23	12	10	10	13	10	23	21	26
Up	4	6	7	6	11	14	12	9	8	7	6	6	7	2	10	2	7	10	7
Diffusion Index	50 %	54 %	51 %	50 %	57 %	63 %	57 %	49 %	41 %	40 %	40 %	46 %	44 %	30 %	46 %	28 %	42 %	49 %	45 %

### Second Quarter 2018 Interest Rate Forecasts

### **Key Assumptions**

						D	ont D ^	nn ^									10.1	Of Chan	~~\
Blue Chip			SI				ent Per Ai	nnum A	•							Avg. For Qtr		Q% Chanç -(SAAR)-	
Financial Forecasts	1	2	3	4	5	6	7	8	intermet 9	10	11	12	Long-	14	15	A.	В.	-(SAAR)- C.	D.
Panel Members	Federal	Prime	LIBOR	Com.	Treas.	Treas.	Treas.	Treas.	Treas.	Treas.	Treas.	Aaa	Baa	State &	Home	Fed's Major	ъ.	GDP	Cons.
T dilet members	Funds	Bank	Rate	Paper	Bills	Bills	Bills	Notes	Notes	Notes	Bond	Corp.	Corp.	Local	Mtg.	Currency	Real	Price	Price
	Rate	Rate	3-Mo.	1-Mo.	3-Mo.	6-Mo.	1-Yr.	2-Yr.	5-Yr.	10-Yr.	30-Yr.	Bond	Bond	Bonds	Rate	\$ Index	GDP	Index	Index
Naroff Economic Advisors	2.1 H	5.1 H	2.3 H	2.1 H	2.1 H	2.2 H	2.5 H	2.7 H	3.3 H	3.6	4.3	5.5	6.2	5.6 H	5.4	93.0	3.0	2.4	3.2
Swiss Re	2.0	5.1 H	2.3 H	2.1 H	2.0	2.1	2.4	2.6	2.7	3.0	3.9	4.7	5.7	na	4.9	na	2.1	0.3 L	1.3
Moody's Analytics	2.0	5.1	2.1	1.9	1.5	1.6	1.8	2.0	2.9	3.7 H	4.4 H	5.6 H	6.6 H	4.3	5.2	na	2.0	2.3	2.8
NatWest Markets	1.9	5.0	2.1	2.0	2.0	2.2 H	2.4	2.4	2.8	3.1	3.6	4.4	5.0	4.2	4.7	100.0 H	3.4	1.5	1.1
Amherst Pierpont Securities	1.9	5.1 H	2.3 H	2.0	1.9	2.2 H	2.4	2.6	3.1	3.5	4.3	5.1	5.9	4.8	5.5 H	97.0	3.1	2.3	3.3 H
DS Economics	1.9	5.0	2.1	1.8	1.7	1.9	2.1	2.2	2.5	3.0	3.6	4.3	5.0	4.2	4.5	92.5	2.3	2.2	1.8
BNP Paribas Americas	1.9	na	2.1	na	na	na	na	2.4	3.2	3.7 H	na	na	na	na	na	na	2.6	na	1.8
Barclays	1.9	5.0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	2.5	2.3	2.3
Oxford Economics	1.9	4.9	2.3	na	1.8	1.9	1.9	2.1	2.4	2.7	3.2	na	na	na	4.5	92.2	2.8	2.0	2.3
MUFG Union Bank	1.9	5.0	2.2	1.9	1.9	2.0	2.3	2.2	2.6	3.0	3.6	4.7	5.6	4.1	4.6	88.0 L	3.1	2.8	2.2 2.2
MacroFin Analytics	1.8 1.8	5.0 5.0	1.9 2.1	1.7 1.9	1.7 1.7	1.8 1.9	1.9 2.1	2.2 2.4	2.8 3.0	3.3 3.4	4.0 4.0	4.9	5.4	4.1	5.0 5.0	96.4 93.6	2.0 3.6 H	2.2 2.1	2.2
Chmura Economics & Analytics RDQ Economics	1.8	4.8	2.1 2.3 H	1.9	1.7	2.2 H	2.3	2.4	3.0	3.5	4.0	na 4.9	na 5.5	na 5.2	5.0	99.6	3.0 П 2.1	2.1	2.5
RBC Capital Markets	1.8	na	na	na	na	na	na	2.3	2.8	3.3	3.7	na	na	na	na	na	3.4	1.3	1.6
IHS Markit	1.8	4.5	1.7 L	na	1.5	1.7	1.9	2.0	2.5	3.0	3.7	4.8	5.6	4.6	4.9	na	2.6	2.2	1.6
Goldman Sachs & Co.	1.8	na	2.1	na	1.7	na	na	2.1	2.7	3.0	3.2	na	na	na	4.8	na	2.0	1.9	2.0
Scotiabank Group	1.8	4.8	na	na	1.6	na	na	1.9	2.5	2.9	3.4	na	na	na	na	na	2.4	2.0	2.4
Daiwa Capital Markets America	1.8	4.9	2.1	2.0	1.7	1.9	2.0	2.3	2.6	2.9	3.5	4.4	5.0	na	4.8	98.0	2.1	2.3	2.5
Regions Financial Corporation	1.7	4.8	1.8	1.7	1.6	1.7	1.8	2.0	2.5	2.9	3.6	4.6	5.3	4.4	4.6	95.5	2.3	2.2	2.4
AIG	1.7	4.8	na	na	1.6	2.0	2.1	2.1	2.5	2.8	3.5	na	5.0	na	4.4	na	2.8	2.5	1.9
Action Economics	1.7	4.8	1.8	1.8	1.7	1.8	2.0	2.2	2.6	3.0	3.6	4.6	5.3	4.2	4.7	93.0	3.0	3.0 H	2.5
Wells Capital Management	1.7	4.8	2.0	1.8	1.9	2.0	2.1	2.2	2.7	3.1	3.7	4.7	5.5	4.6	4.8	92.3	2.4	2.5	2.7
S&P Global	1.7	4.8	2.3	na	1.7	1.8	1.9	2.2	2.6	3.0	3.6	na	na	na	4.7	94.6	2.6	2.7	2.7
Loomis, Sayles & Company	1.7	4.8	2.0	1.7	1.6	1.8	2.1	2.3	2.7	3.0	3.3	4.7	5.4	4.0	4.6	94.5	2.3	2.3	2.0
Wells Fargo	1.7	4.8	2.0	1.9	1.6	1.7	1.8	2.0	2.6	2.9	3.6	4.7	5.5	4.1	4.6	96.7	2.8	2.1	2.2
Nat'l Assn. of Realtors	1.7	4.8	1.9	1.6	1.6	1.8	1.9	2.1	2.7	3.1	3.5	4.8	5.4	4.3	4.9	na	2.2	2.3	2.3
High Frequency Economics	1.7	4.8	na	na	1.7	1.9	2.1	2.3	2.7	3.1	3.7	na	na	na	na	na	2.8	2.8	2.8
Nomura Securities, Inc. Societe Generale	1.7 1.7	4.5 L 4.5 L	2.1 na	na na	na na	na na	na na	1.9 2.2	2.4 2.7	2.8 3.3	3.2 3.9	4.5 na	5.1 na	na na	4.9 na	na na	1.7 L 2.2	1.8 2.0	2.2 2.2
DePrince & Assoc.	1.7	4.7	2.0	1.8	1.7	1.8	2.1	2.2	2.5	2.9	3.4	4.7	5.7	4.4	4.7	94.8	2.8	2.2	2.5
Comerica Bank	1.6	4.7	2.0	na	1.5	1.7	1.8	2.0	2.6	3.1	3.8	na	na	na	4.8	na	2.7	2.0	2.0
Economist Intelligence Unit	1.6	4.7	1.8	1.7	1.5	1.6	1.7	1.9	2.7	3.0	3.6	na	na	na	4.7	na	3.0	na	2.3
J.P. Morgan Chase	1.6	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1.8	2.1	2.4
GLC Financial Economics	1.6	4.6	1.9	1.7	1.6	1.6	1.7	1.9	2.7	3.2	3.9	5.3	6.2	4.7	5.4	93.5	2.9	1.6	2.4
Chase Wealth Management	1.5	4.5 L	1.7 L	1.5	1.5	1.6	1.7	1.8	2.4	2.9	3.5	4.6	5.2	4.1	4.7	92.6	2.4	2.3	2.4
Georgia State University	1.5	4.5 L	na	na	1.5	1.7	1.9	2.1	2.8	3.5	4.1	5.4	6.3	na	5.4	na	2.9	1.3	2.5
Cycledata Corp.	1.5	4.5 L	1.8	1.5	1.4	1.5	1.7	1.9	2.5	2.9	3.5	4.5	5.3	4.2	4.6	93.0	2.5	2.2	2.6
RidgeWorth Investments	1.5	4.6	1.9	1.5	1.4	1.5	1.6	1.9	2.6	3.0	3.7	4.5	5.2	4.5	4.9	92.0	2.4	2.3	1.4
BMO Capital Markets	1.5	4.6	1.7 L	na	1.4	1.5	1.7	2.0	2.6	2.7	3.3	na . =	na 	na	4.4	96.2	2.7	1.9	2.0
The Northern Trust Company	1.4 L	4.6	1.8	1.4 L	1.5	1.6	1.8	2.1	2.6	3.1	3.9	4./	5.7	4.4	4.7	na	1.9	2.2	2.3
Fannie Mae PNC Financial Services Corp.	1.4 L 1.4 L	4.5 L 4.5 L	na 10	na	1.3 L 1.5	1.4 L	1.5 1.7	1.6 2.0	2.1 2.4	2.4 L 2.9	3.0	na	na 5 1	na 3.8	4.1	na 94.5	1.8 2.8	2.2 2.1	1.9 2.4
Stone Harbor Investment Partners	1.4 L 1.4 L		1.8 1.7 L	na 141	1.5	1.7 1.5	1.7	2.0 1.8	2.4	2.9	3.7 3.3	na 4.6	5.1 5.2	3.8 na	4.6 4.7	94.5 94.0	2.8 1.9	1.9	2.4
Moody's Capital Markets Group	1.4 L			1.5	1.4		1.4 L			2.4 L	2.9 L	4.0 L	4.6 L	3.5 L	4.1 L	93.6	2.1	1.7	0.9 L
June Consensus	1.7	4.8	2.0	1.8	1.6	1.8	1.9	2.1	2.6	3.1	3.6	4.7	5.5	4.3	4.8	94.4	2.5	2.1	2.2
Top 10 Avg.	1.9	5.0	2.2	2.0	1.9	2.1	2.3	2.4	3.0	3.5	4.1	5.1	5.9	4.7	5.2	96.9	3.1	2.6	2.8
Bottom 10 Avg.	1.4	4.5	1.8	1.5	1.4	1.5	1.6	1.8	2.3	2.7	3.2	4.4	5.0	4.0	4.4	92.2	1.9	1.5	1.5
May Consensus	1.7	4.8	2.0	1.7	1.6	1.7	1.9	2.1	2.6	3.1	3.6	4.7	5.5	4.4	4.8	94.8	2.5	2.2	2.3
Number of Forecasts Changed From			_		_	_	_	4.5	4.5	4.5				•				4.5	
Down	4	4	5	8	7	5	7	10	13	12	12	4	6	8	11	13	11	12	12
Same	36	31	23	14	21	19	20	23	21	21	20	12	8	7	14	11	22	21	27
Up	4	5	6	3	9	11	8	9	8	9	9	10	7	3	11	0	11	9	5
Diffusion Index	50 %	51 %	51 %	40 %	53 %	59 %	51 %	49 %	44 %	46 %	46 %	62 %	52 %	36 %	50 %	23 %	50 %	46 %	42 %
Dillusion illuex	JU /0	JI /0	J1 /0	<del>4</del> U /0	JJ /0	JJ /0	J1 /0	<del>1</del> 3 /0	<del>11</del> /0	<del>1</del> ∪ /0	<del>1</del> ∪ /0	UZ /0	JZ /0	JU /0	JU /0	23 %	JU /0	+∪ /0	<b>⊣∠</b> /0

## Third Quarter 2018 Interest Rate Forecasts

### **Key Assumptions**

																Avg. For	•	Q % Chang	• /
Blue Chip	-															Qtr		(SAAR)-	
Financial Forecasts	1	2	3	4	5	- 6	7	8	9	10	11	12	13	14		A.	B.	C.	D.
Panel Members	Federal	Prime	LIBOR	Com.	Treas.	Aaa	Baa	State &	Home	Fed's Major	Deel	GDP	Cons.						
	Funds	Bank	Rate	Paper	Bills	Bills	Bills	Notes	Notes	Notes	Bond	Corp.	Corp.	Local	Mtg.	Currency	Real	Price	Price
	Rate	Rate	3-Mo.	1-Mo.	3-Mo.	6-Mo.	1-Yr.	2-Yr.	5-Yr.	10-Yr.	30-Yr.	Bond	Bond	Bonds	Rate	\$ Index	GDP	Index	Index
Moody's Analytics	2.5 H	5.6 H	2.6 H	2.3	1.9	2.0	2.2	2.3	3.2	4.0 H	4.5 H	5.8 H	6.8 H	4.4 5 7 LI	5.5	na na n	2.4	2.5	3.0
Naroff Economic Advisors Swiss Re	2.3	5.4	2.5	2.4 H	2.4 H	2.5	2.8 H	3.0 H	3.6 H	4.0 H	4.5 H	5.7	6.4	5.7 H	5.7 H	92.0	2.0	2.6	2.6
NatWest Markets	2.3 2.2	5.4 5.3	2.5 2.3	2.3	2.2	2.4 2.5	2.6 2.7	2.8 2.6	2.9 3.0	3.2 3.2	4.0 3.6	4.9 4.5	5.8 5.1	na 4.2	5.1 4.8	na 100.0	2.2 3.4	1.4 L 2.0	2.4 2.2
Amherst Pierpont Securities	2.2	5.3	2.6	2.3	2.2	2.4	2.6	2.9	3.3	3.7	4.4	5.3	6.0	4.2	5.6	97.5	2.9	2.4	3.3 H
DS Economics	2.1	5.3	2.4	2.0	2.0	2.1	2.3	2.4	2.7	3.1	3.7	4.4	5.1	4.3	4.7	92.4	2.3	2.3	1.8
BNP Paribas Americas	2.1	na	2.3	na	na	na	na	2.6	3.4	3.9	na	na	na	na	na	na	2.4	na	2.7
RDQ Economics	2.1	5.1	2.6 H	2.2	2.3	2.6 H	2.7	2.7	3.2	3.7	4.1	5.1	5.7	5.3	5.4	100.3 H	2.2	2.3	2.5
Chmura Economics & Analytics	2.1	5.3	2.3	2.1	1.9	2.1	2.4	2.6	3.2	3.6	4.3	na	na	na	5.2	92.1	3.4 H	1.8	1.9
MUFG Union Bank	2.1	5.3	2.5	2.2	2.2	2.3	2.6	2.5	2.8	3.2	3.7	4.8	5.7	4.2	4.8	86.0 L	3.2	2.1	3.2
Regions Financial Corporation	2.0	5.0	2.0	1.9	1.8	1.9	2.1	2.1	2.7	3.1	3.7	4.8	5.4	4.5	4.8	95.1	2.2	2.2	2.2
Goldman Sachs	2.0	na	2.3	na	1.9	na	na	2.4	2.8	3.1	3.3	na	na	na	4.9	na	2.0	2.0	2.1
IHS Markit	2.0	4.8	2.2	na	1.7	2.0	2.2	2.3	2.6	3.2	3.8	4.9	5.8	4.7	5.2	na	2.6	2.2	2.1
MacroFin Analytics	2.0	5.2	2.1	1.9	1.9	2.0	2.1	2.4	3.0	3.5	4.2	5.1	5.6	4.3	5.2	96.8	1.8	2.2	2.3
Daiwa Capital Markets America	2.0	5.1	2.3	2.2	2.0	2.1	2.2	2.5	2.8	3.0	3.6	4.6	5.2	na	4.9	98.0	1.9	2.4	2.6
RBC Capital Markets	2.0	na	na	na	na	na	na	2.5	3.0	3.5	3.8	na	na	na	na	na	3.4 H	1.9	3.1
S&P Global	2.0	5.0	2.4	na	2.0	2.1	2.2	2.5	2.8	3.1	3.7	na	na	na	4.8	94.6	2.5	2.4	2.4
Action Economics	2.0	5.1	2.1	2.0	2.0	2.1	2.3	2.4	2.7	3.0	3.6	4.7	5.5	4.2	4.7	93.1	2.9	2.2	2.5
Wells Capital Management AIG	2.0 1.9	5.1 5.0	2.2	2.1	2.2 1.8	2.2 2.2	2.3	2.4 2.4	2.8 2.8	3.2	3.7 3.7	4.8	5.6 5.2	4.6	4.9 4.6	92.5	2.3 2.8	2.6 2.6	2.7 1.9
Loomis, Sayles & Company			na	na 1.0	1.8	2.2	2.3			3.1		na 4.7		na 4.0		na 94.5	2.8	2.6	2.1
Oxford Economics	1.9 1.9	5.0 5.0	2.3 2.4	1.9 na	1.9	2.0	2.4	2.5 2.3	2.8 2.5	3.0 2.8	3.3 3.3	4.7 na	5.4 na	4.0 na	4.6 4.6	94.5	2.3	1.9	2.1
High Frequency Economics	1.9	5.0	na	na	2.0	2.1	2.3	2.4	2.8	3.2	3.8	na	na	na	na	na	2.0	2.8 H	2.8
Nomura Securities, Inc.	1.9	4.8	2.4	na	na	na	na	1.9	2.4	2.8	3.2	4.5	5.1	na	4.9	na	1.5 L	1.8	2.2
Societe Generale	1.9	4.8	na	na	na	na	na	2.2	2.7	3.3	3.9	na	na	na	na	na	2.0	2.0	2.2
Nat'l Assn. of Realtors	1.9	5.0	2.1	1.8	1.8	2.0	2.1	2.3	2.8	3.3	3.7	4.9	5.5	4.5	5.1	na	2.1	2.3	2.2
DePrince & Associates	1.9	4.9	2.3	2.1	1.9	2.1	2.4	2.5	2.7	3.1	3.5	4.9	5.9	4.6	4.9	95.2	2.7	2.2	2.5
J.P. Morgan Chase	1.9	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1.8	2.2	2.4
Barclays	1.9	5.0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	3.0	2.2	2.4
Comerica Bank	1.8	4.9	2.2	na	1.7	1.8	2.0	2.2	2.8	3.3	4.0	na	na	na	5.0	na	2.6	2.0	2.0
Scotiabank Group	1.8	4.8	na	na	1.6	na	na	2.0	2.6	3.0	3.5	na	na	na	na	na	2.3	2.0	2.4
Georgia State University	1.8	4.8	na	na	1.7	1.9	2.1	2.4	2.9	3.7	4.3	5.5	6.5	na	5.6	na	2.7	2.0	3.0
BMO Capital Markets	1.7	4.8	2.0	na	1.6	1.7	1.9	2.2	2.7	2.8	3.3	na	na	na	4.5	94.9	2.5	2.1	2.3
Wells Fargo	1.7	4.8	2.0	1.9	1.6	1.7	1.8	2.0	2.6	2.9	3.6	4.7	5.5	4.1	4.6	97.3	2.8	2.1	2.2
Chase Wealth Management	1.7	4.7	1.9	1.7	1.7	1.8	1.9	2.0	2.6	3.1	3.7	4.8	5.4	4.3	4.9	92.5	2.2	2.2	2.3
GLC Financial Economics	1.7	4.7	1.9	1.7	1.6	1.7	1.7	2.0	2.8	3.4	4.0	5.4	6.3	4.8	5.6	93.7	3.0	1.6	2.4
Economist Intelligence Unit	1.7	4.7	1.9	1.7	1.6	1.6	1.7	1.9	2.7	3.1	3.7	na	na	na	4.8	na	2.4	na	2.2
RidgeWorth Investments	1.7	4.8	2.0	1.7	1.6	1.7	1.8	2.1	2.8	3.2	3.9	4.8	5.5	4.8	5.1	91.5	2.4	2.2	1.4 L
PNC Financial Services Corp. Fannie Mae	1.7 1.6	4.8 4.8	2.0 na	na	1.7 1.4	1.8 1.5	1.9 1.6	2.1 1.7	2.5 2.2	3.0 2.4	3.7 3.0	na na	5.1 na	3.9 na	4.6 4.2	94.4	2.8 1.8	2.1 2.4	2.4 1.9
The Northern Trust Company	1.6	4.8 4.8	na 2.0	na 1.6	1.4	1.8	2.0	2.3	2.2	3.3	3.0 4.1	na 4.9	na 5.9	11a 4.6	4.2	na na	2.1	2.4	2.0
Stone Harbor Investment Partners	1.6	4.8 4.8		1.7	1.7	1.8	1.9	2.0	2.6	3.0	3.4	4.9 4.7	5.9	na na	4.9	92.0	2.1	2.0	2.5
Cycledata Corp.	1.5	4.5 L		1.5 L	1.4	1.5	1.7	1.9	2.5	2.9	3.5	4.5	5.3	4.2	4.6	93.0	2.5	2.2	2.6
Moody's Capital Markets Group	1.4 L	4.5 L	1.9	1.6	1.3 L	1.4 L	1.4 L	1.4 L	1.8 L	2.3 L	2.8 L	3.9 L	4.5 L	3.4 L	4.1 L	93.5	2.1	1.6	1.9
June Consensus		5.0	2.2	2.0	1.8	2.0	2.1	2.3	2.8	3.2	3.7	4.9	5.6	4.4	4.9	94.2	2.4	2.2	2.4
Cuito Consonicuo	0	0.0		2.0		2.0	2	2.0	2.0	0.2	<b>U</b>	-1.0	0.0	-11-1	-1.0	04.12		212	
Top 10 Avg.	2.2	5.3	2.5	2.2	2.2	2.3	2.5	2.7	3.2	3.7	4.2	5.2	6.1	4.8	5.4	97.0	3.1	2.5	2.9
Bottom 10 Avg.	1.6	4.7	1.9	1.7	1.5	1.6	1.7	1.9	2.4	2.8	3.3	4.5	5.1	4.1	4.5	91.6	1.9	1.8	1.9
May Consensus	1.9	5.0	2.2	1.9	1.8	1.9	2.1	2.3	2.8	3.2	3.7	4.9	5.6	4.5	4.9	94.5	2.4	2.2	2.4
Number of Forecasts Changed From  Down	n A Month <i>A</i> 6	<u>√go:</u> 3	5	6	4	8	9	9	12	10	10	6	10	9	11	11	6	10	10
Same	35	33	25	16	24	18	17	25	22	25	20	14	11	10	15	12	26	25	28
Up Diffusion Index	3	4	5	3	10	10	10	8	8	7	11	6	6	4	11	3	12	7	6
Diffusion Index	47 %	51 %	50 %	44 %	58 %	53 %	51 %	49 %	45 %	46 %	51 %	50 %	43 %	39 %	50 %	35 %	57 %	46 %	45 %

#### **International Interest Rate And Foreign Exchange Rate Forecasts**

	3 Mo.	Interest R	ate %			
Blue Chip Forecasters	In 3 Mo.	In 6 Mo.	In 12 Mo.			
Barclays	na	na	na			
BMO Capital Markets	1.40	1.65	1.65			
IHSMarkit	na	na	na			
ING Financial Markets	1.30	1.30	1.60			
Mizuho Research Institute	1.65	1.70	2.15			
Moody's Analytics	1.26	1.40	1.91			
Moody's Capital Markets	na	na	na			
Nomura Securities	na	na	na			
Oxford Economics	na	na	na			
Scotiabank	na	na	na			
Wells Fargo	1.75	1.75	2.00			
June Consensus	1.47	1.56	1.86			
High	1.75	1.75	2.15			
Low	1.26	1.30	1.60			
Last Months Avg.	1.37	1.53	1.76			

	3 Mo.	Interest R	ate %
Blue Chip Forecasters	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	na	na	na
BMO Capital Markets	0.00	0.00	0.00
IHSMarkit	na	na	na
ING Financial Markets	0.05	0.05	0.05
Mizuho Research Institute	0.06	0.06	0.06
Moody's Analytics	na	na	na
Moody's Capital Markets	na	na	na
Nomura Securities	na	na	na
Oxford Economics	na	na	na
Scotiabank	na	na	na
Wells Fargo	0.00	0.00	0.02
June Consensus	0.03	0.03	0.03
High	0.06	0.06	0.06
Low	0.00	0.00	0.00
Last Months Avg.	0.03	0.03	0.03

	3 Mo.	Interest R	ate %
Blue Chip Forecasters	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	na	na	na
BMO Capital Markets	0.30	0.30	0.30
IHSMarkit	na	na	na
ING Financial Markets	0.35	0.40	0.40
Mizuho Research Institute	0.35	0.35	0.35
Moody's Analytics	na	na	na
Moody's Capital Markets	na	na	na
Nomura Securities	na	na	na
Oxford Economics	na	na	na
Scotiabank	na	na	na
Wells Fargo	0.30	0.35	0.65
June Consensus	0.33	0.35	0.43
High	0.35	0.40	0.65
Low	0.30	0.30	0.30
Last Months Avg.	0.35	0.36	0.44

	3 Mo.	Interest R	ate %
Blue Chip Forecasters	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	na	na	na
BMO Capital Markets	na	na	na
IHSMarkit	na	na	na
ING Financial Markets	-0.75	-0.75	-0.75
Mizuho Research Institute	na	na	na
Moody's Analytics	na	na	na
Moody's Capital Markets	na	na	na
Nomura Securities	na	na	na
Oxford Economics	na	na	na
Scotiabank	na	na	na
Wells Fargo	na	na	na
June Consensus	-0.75	-0.75	-0.75
High	-0.75	-0.75	-0.75
Low	-0.75	-0.75	-0.75
Last Months Avg.	-0.75	-0.75	-0.75

	3 Mo.	Interest R	ate %
Blue Chip Forecasters	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	na	na	na
BMO Capital Markets	na	na	na
IHSMarkit	na	na	na
ING Financial Markets	1.00	1.00	1.30
Mizuho Research Institute	na	na	na
Moody's Analytics	na	na	na
Moody's Capital Markets	na	na	na
Nomura Securities	na	na	na
Oxford Economics	na	na	na
Scotiabank	na	na	na
Wells Fargo	0.90	0.95	1.15
June Consensus	0.95	0.98	1.23
High	1.00	1.00	1.30
Low	0.90	0.95	1.15
Last Months Avg.	0.98	1.08	1.30

United States							
10 Yr. (	Gov't Bond	Yield %					
In 3 Mo.	In 6 Mo.	In 12 Mo.					
2.50	2.50	na					
2.50	2.60	2.70					
2.56	2.69	3.02					
2.50	2.70	2.90					
2.55	2.60	2.70					
2.79	3.00	3.51					
2.38	2.38	2.35					
na	na	na					
2.40	2.50	2.73					
2.55	2.80	2.90					
2.72	2.75	2.78					
2.55	2.65	2.84					
2.79	3.00	3.51					
2.38	2.38	2.35					
2.53	2.65	2.82					

Japan							
10 Yr.	Gov't Bond	Yield %					
In 3 Mo.		In 12 Mo.					
0.10	0.15	na					
0.05	0.05	0.10					
na	na	na					
0.00	0.00	0.00					
0.05	0.05	0.05					
0.09	0.14	0.18					
0.15	0.15	0.15					
na	na	na					
0.05	0.07	0.07					
na	na	na					
0.07	0.10	0.15					
0.07	0.09	0.10					
0.15	0.15	0.18					
0.00	0.00	0.00					
0.07	0.09	0.10					

United Kingdom						
	r. Gilt Yield	ls %				
In 3 Mo.		In 12 Mo.				
1.40	1.40	na				
1.40	1.65	1.85				
na	na	na				
1.40	1.60	1.80				
1.40	1.40	1.45				
1.47	1.60	1.93				
1.20	1.20	1.25				
na	na	na				
1.36	1.50	1.71				
na	na	na				
1.40	1.60	1.90				
1.38	1.49	1.70				
1.47	1.65	1.93				
1.20	1.20	1.25				
1.37	1.45	1.67				

Switzerland							
10 Yr. (	Gov't Bond	Yield %					
In 3 Mo.	In 6 Mo.	In 12 Mo.					
na	na	na					
na	na	na					
na	na	na					
0.00	0.25	0.40					
na	na	na					
-0.06	0.00	0.16					
-0.03	0.00	0.03					
na	na	na					
0.10	0.17	0.32					
na	na	na					
na	na	na					
0.00	0.11	0.23					
0.10	0.25	0.40					
-0.06	0.00	0.03					
-0.04	0.03	0.18					

Canada						
10 Yr. Gov't Bond Yield %						
In 3 Mo.	In 6 Mo.	In 12 Mo.				
na	na	na				
1.75	1.80	1.95				
na	na	na				
1.80	1.90	2.20				
na	na	na				
2.35	2.77	3.40				
1.55	1.57	1.60				
na	na	na				
1.75	1.82	1.97				
1.80	1.90	2.10				
1.70	1.85	2.10				
1.81	1.94	2.19				
2.35	2.77	3.40				
1.55	1.57	1.60				
1.79	1.91	2.15				

Fed's Ma	jor Currenc	cy \$ Index
In 3 Mo.	In 6 Mo.	In 12 Mo.
na	na	na
95.8	97.9	96.2
na	na	na
93.5	91.8	88.7
95.0	96.0	97.0
na	na	na
94.1	95.7	93.6
na	na	na
93.0	92.6	92.2
na	na	na
na	na	na
94.3	94.8	93.6
95.8	97.9	97.0
93.0	91.8	88.7
95.6	95.7	95.2

USD/YEN							
In 3 Mo.	In 6 Mo.	In 12 Mo.					
108.0	106.0	na					
115.0	119.0	118.0					
113.3	115.0	119.2					
118.0	120.0	120.0					
114.0	116.0	118.0					
118.0	117.0	115.0					
112.2	113.0	112.6					
115.0	118.0	120.0					
114.0	115.5	117.5					
117.0	117.0	121.0					
na	na	na					
114.5	115.7	117.9					
118.0	120.0	121.0					
108.0	106.0	112.6					
114.6	115.9	118.3					

GBP/USD								
In 3 Mo.	In 6 Mo.	In 12 Mo.						
1.31	1.32	na						
1.25	1.21	1.24						
1.24	1.20	1.18						
1.31	1.35	1.41						
na	na	na						
1.21	1.20	1.20						
1.29	1.28	1.29						
1.32	1.34	1.37						
1.32	1.34	1.36						
1.25	1.25	1.30						
na	na	na						
1.28	1.28	1.29						
1.32	1.35	1.41						
1.21	1.20	1.18						
1 24	1 24	1 26						

USD/CHF							
In 3 Mo.	In 6 Mo.	In 12 Mo.					
1.04	1.08	na					
1.03	1.04	1.06					
0.99	1.00	1.02					
0.97	0.97	0.96					
na	na	na					
1.02	1.02	1.03					
0.98	0.99	0.98					
0.99	0.97	0.96					
0.99	0.98	0.99					
1.07	1.02	1.00					
na	na	na					
1.01	1.01	1.00					
1.07	1.08	1.06					
0.97	0.97	0.96					
1.01	1.01	1.00					

	USD/CAD								
In 3 Mo.	In 6 Mo.	In 12 Mo.							
1.38	1.40	na							
1.36	1.34	1.31							
1.36	1.35	1.31							
1.35	1.34	1.30							
na	na	na							
1.32	1.31	1.28							
1.36	1.35	1.32							
1.38	1.36	1.32							
1.34	1.33	1.32							
1.38	1.36	1.34							
na	na	na							
1.36	1.35	1.31							
1.38	1.40	1.34							
1.32	1.31	1.28							
1.34	1.35	1.32							

### **International Interest Rate And Foreign Exchange Rate Forecasts**

	3 Mo. Interest Rate %						
Blue Chip Forecasters	In 3 Mo.	In 6 Mo.	In 12 Mo.				
Barclays	na	na	na				
BMO Capital Markets	na	na	na				
IHSMarkit	na	na	na				
ING Financial Markets	1.60	1.70	2.00				
Mizuho Research Institute	na	na	na				
Moody's Analytics	na	na	na				
Moody's Capital Markets	na	na	а				
Nomura Securities	na	na	na				
Oxford Economics	na	na	na				
Scotiabank	na	na	na				
Wells Fargo	na	na	na				
June Consensus	1.60	1.70	2.00				
High	1.60	1.70	2.00				
Low	1.60	1.70	2.00				
Last Months Avg.	1.60	1.60	2.00				

Australia							
	10 Yr. Gov't Bond Yield %						
In 3 Mo.	In 6 Mo.	In 12 Mo.					
na	na	na					
na	na	na					
na	na	na					
2.80	2.80	3.00					
na	na	na					
2.85	2.96	3.18					
2.50	2.45	2.43					
na	na	na					
2.70	2.81	3.02					
na	na	na					
na	na	na					
2.71	2.76	2.91					
2.85	2.96	3.18					
2.50	2.45	2.43					
2.76	2.85	2.91					

Eurozone

	AUD/AUD	
In 3 Mo.	In 6 Mo.	In 12 Mo.
0.73	0.72	na
0.75	0.75	0.76
0.73	0.72	0.72
0.75	0.76	0.80
na	na	na
0.73	0.73	0.73
0.74	0.74	0.74
0.72	0.73	0.74
0.75	0.74	0.74
0.75	0.75	0.75
na	na	na
0.74	0.74	0.75
0.75	0.76	0.80
0.72	0.72	0.72
0.74	0.74	0.75

Blue Chip Forecasters	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	na	na	na
BMO Capital Markets	-0.35	-0.35	-0.35
IHSMarkit	na	na	na
ING Financial Markets	-0.32	-0.32	-0.32
Mizuho Research Institute	-0.30	-0.30	-0.30
Moody's Analytics	na	na	na
Moody's Capital Markets	na	na	na
Nomura Securities	na	na	na
Oxford Economics	na	na	na
Scotiabank	na	na	na

3 Mo. Interest Rate %

Wells Fargo -0.32 -0.32 -0.32 June Consensus -0.32 -0.32 -0.32 High -0.30 -0.30 -0.30 Low -0.35 -0.35 -0.35 Last Months Avg. -0.33 -0.32 -0.27

	USD/EUR								
In 3 Mo.	In 6 Mo.	In 12 Mo.							
0.67	0.66	na							
1.06	1.02	1.04							
1.09	1.08	1.06							
1.15	1.15	1.20							
1.08	1.07	1.05							
1.05	1.04	1.03							
1.11	1.11	1.12							
1.10	1.12	1.15							
1.11	1.12	1.12							
1.05	1.10	1.12							
na	na	na							
1.05	1.05	1.10							
1.15	1.15	1.20							
0.67	0.66	1.03							
1.06	1.07	1.08							

		10 Yr. Gov't Bond Yields %										
		Germany			France			Italy			Spain	
Blue Chip Forecasters	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	0.67	0.72	na	na	na	na	na	na	na	na	na	na
BMO Capital Markets	0.45	0.60	0.75	na	na	na	na	na	na	na	na	na
ING Financial Markets	0.60	0.40	0.80	1.05	0.90	1.20	2.60	2.70	2.45	1.90	1.85	1.95
Mizuho Research Institute	0.40	0.45	0.55	na	na	na	na	na	na	na	na	na
Moody's Analytics	0.30	0.35	0.59	0.86	0.92	1.10	1.87	1.78	1.77	1.34	1.34	1.49
Moody's Capital Markets	0.52	0.55	0.70	0.97	1.05	1.15	2.27	2.30	2.45	1.75	1.80	1.93
Nomura Securities	na	na	na	na	na	na	na	na	na	na	na	na
Oxford Economics	0.55	0.75	0.87	1.10	1.30	1.42	2.70	3.09	3.13	1.99	2.29	2.41
Wells Fargo	0.50	0.60	1.00	na	na	na	na	na	na	na	na	na
June Consensus	0.50	0.55	0.75	1.00	1.04	1.22	2.36	2.47	2.45	1.75	1.82	1.94
High	0.67	0.75	1.00	1.10	1.30	1.42	2.70	3.09	3.13	1.99	2.29	2.41
Low	0.30	0.35	0.55	0.86	0.90	1.10	1.87	1.78	1.77	1.34	1.34	1.49
Last Months Avg.	0.47	0.57	0.68	0.92	1.07	1.18	2.27	2.46	2.48	1.61	1.82	1.90

	Consensus Forecasts								
	10-year Bond Yields vs U.S. Yield								
	Current	In 3 Mo.	In 6 Mo.	In 12 Mo.					
Japan	-2.22	-2.48	-2.56	-2.74					
United Kingdom	-1.16	-1.17	-1.16	-1.14 -2.62					
Switzerland	-2.36	-2.54	-2.55						
Canada	-0.79	-0.73	-0.71	-0.65					
Australia	0.22	0.17	0.10	0.06					
Germany	-1.87	-2.05	-2.10	-2.09					
France	-1.43	-1.55	-1.61	-1.63					
Italy	-0.14	-0.18	-0.18	-0.39					
Spain	-0.67	-0.80	-0.83	-0.90					

	Consensus Forecasts								
	3 Mo. Deposit Rates vs U.S. Rate								
	Current	In 3 Mo.	In 6 Mo.	In 12 Mo.					
Japan	-1.20	-1.44	-1.59	-1.83					
United Kingdom	-0.87	-1.15	-1.21	-1.44					
Switzerland	-1.92	-2.22	-2.31	-2.61					
Canada	-0.38	-0.52	-0.59	-0.64					
Australia	0.71	0.13	0.14	0.14					
Eurozone	-1.52	-1.79	-1.88	-2.18					

#### 12 ■ BLUE CHIP FINANCIAL FORECASTS ■ JUNE 1, 2017

### Viewpoints:

#### A Sampling of Views on the Economy, Financial Markets and Government Policy Excerpted from Recent Reports Issued by our Blue Chip Panel Members and Others

#### Will It Be A Summer Break For The Fed?

News out of Washington DC has dominated the headlines, sending the markets into a tailspin. The US stock market witnessed its biggest sell-off of the year on May 17th while Treasuries rallied and the market priced in a shallower path for rate hikes. The expectation for a June hike slipped to approximately 70% from near certainty earlier in the week. We are puzzled that the market remains committed to a hike in June but skeptical about future hikes in 2018. In our view, June is a close call and will be sensitive to financial conditions in the next few weeks. We are therefore holding to our forecast that the Fed will pause at the upcoming meeting, but the Fed's narrative between now and June 3rd (blackout period begins) will be critical for the call.

Even before last week's events, we had been arguing that June was a close call for the following reasons:

While the March weakness was due to "special factors" the disappointment in April was widespread. This has prompted us to revise down our forecast for core PCE inflation this year to 1.7% from 1.9% previously. Meanwhile, wage growth remains sticky, which could lead the Fed to revise down their estimate of NAIRU in June's SEP. According to the Fed's own loan officer survey, demand for consumer loans declined over the prior three months while banks have continued to tighten lending standards. Survey measures have come off the highs and hard data have been mixed to slightly weaker, sending data surprise measures lower. The April FOMC statement was a placeholder given the uncertainty around the data. The Fed can easily change the narrative about the June meeting in the coming two weeks.

The decision of whether to hike rates in June is complicated by the likelihood of the revisions to the Summary of Economic Projections (SEP) released at the June meeting. On the one hand, the unemployment rate has slid 0.4pp from January to 4.4% in April. This brings the current level below the central tendency for year-end. As such, it is likely that Fed officials will mark-to-market and reduce the forecast. On the other hand, inflation has been weaker which will likely lead the median forecast to fall to 1.8% or even 1.7%. So how does the Fed square the circle? It is simple - revise down estimates of NAIRU (long-run unemployment rate). This would be an acknowledgment of an even flatter Phillips Curve,. And it would not be the first time that the Fed has made such a move. The Fed has slashed its estimate for NAIRU over the years as the unemployment rate falls but wage growth fails to accelerate.

Up until the damaging headlines from DC, there was a clear consensus in the market and among our peers (other economists) that the Fed will deliver a hike in June. The arguments included: 1) financial conditions are easy, giving the Fed a green light; 2) although the recent data have weakened, the downside risks have diminished given stronger global growth and the possibility of fiscal stimulus; 3) although the Fed does not need to fight price or wage inflation, they are worried about asset price inflation; 4) the Fed is normalizing rates and still believes that even with a hike, policy will be easy.

These are all credible arguments and reasons that June remains a close call. However, we believe that there are a few important disclaimers to these arguments. Yes, financial conditions have been easy, but they are both an input and output of monetary policy. In other words, financial conditions can change quickly, in part depending on whether the markets perceive the Fed's policies to be accommodative. The markets will not tolerate even a sniff of a hawkish policy mistake. And, we are seeing that financial conditions can adjust swiftly from concerns out of Washington.

We also think it is important to remember that the Fed is not on autopilot. We agree that the Fed has a desire to normalize policy but we believe Fed officials remain quite aware of the constraints placed by low equilibrium rates. The policy prescription for structurally lower

rates is for the hiking cycle to be gradual. As such, a pause in the hiking cycle in the face of mixed/weak data would be appropriate.

We think all eyes and ears should be on Fed communication between now and the blackout period. The "Big Three" - Yellen, Dudley and Fischer - are not scheduled to give official speeches during this period, but could use other outlets, including the media. The next important communication from the Fed will likely come from the minutes released on May 24th. The minutes are edited which means that events which occur after the meeting can influence the tone. There have been many episodes where the interpretation of the minutes contrasts from the view of the statement.

How the narrative is spun between now and the blackout period will dictate what happens at the June FOMC meeting. In the past, the Fed has sent clear messages to the markets weeks before the meeting. There were discrete events that led the market to price in a hike in each episode: 1) December 2015: Fed statement in October hinted strongly at a hike, noting the "next meeting"; 2) December 2016: Fed stated in November that they were pausing "for the time being", hinting at a hike in December; 3) March 2017: Dudley and other Fed officials hit the tapes to signal a hike.

It would be new ground for the Fed to talk down the markets of a rate hike. The meetings that came close were in June and September 2016. In both cases the market priced in close to a 50% probability of a hike about 20 days prior to the meeting. The swing in market pricing in June was a function of Fed communication - officials signaled that June was a live meeting in May but then quickly reversed it after Brexit. Today's situation is unusual - the market is pricing in near-certainty of a hike 27 days out which would require a strong message to turn expectations. If Fed officials overlook the recent weakness in inflation and continue to reinforce the view that the economy is evolving in line with their outlook, it will confirm market's expectations for a rate hike. If the messaging is more cautious, a pause in rate hikes is likely.

It has been amazing to see the market become increasingly convinced of a hike in June but increasingly skeptical of hikes thereafter. At the peak in mid-March, the market was pricing in close to 4 cumulative hikes through 2018 but is now only looking for 2 hikes. But yet markets have pricing in near-certainty that the Fed will hike in the upcoming meeting. This implies that the markets are warning the Fed that a hike in June could be a policy mistake. The market is saying: "Fed: go ahead and hike in June - as you have hinted - but good luck delivering future hikes as you weaken the possibility of acceleration in inflation and real growth."

We tend to talk about the modal forecast for the Fed - will they or won't they hike at a given meeting. However, it is likely more useful for clients to understand the conditional probabilities of hikes. We think the June meeting remains a close call and would put the probability of a hike at just under even odds - 45% chance of a hike and 55% of a pause. Conditional on the Fed not hiking in June, we think the probability of a hike in September is about 70%. If the Fed does hike in June, we think the Fed would be on course to hike again in September, putting the conditional probability at 65%. In other words, we think there is a good case for a hike in September regardless of whether the Fed succeeds with a hike in the June meeting. Of course, all of this is a function of the incoming data and financial conditions. We take the Fed at their word when they say that they are data dependent.

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#### **Capping The Discussion**

The Fed has been inching closer to balance sheet action since reintroducing the topic at its December 2016 meeting. If there were baby steps

### Viewpoints

#### A Sampling of Views on the Economy, Financial Markets and Government Policy Excerpted from Recent Reports Issued by our Blue Chip Panel Members and Others

made this was one giant baby as the Fed now appears to have hammered out the tough decisions and is on the cusp of action. Minutes from the May meeting could not have been clearer—draw-down will begin this year, "nearly all" participants agree on the framework, wherein the monthly pace of runoff is capped in a predictable, graduated fashion, and reduction will take place in *both* MBS and Treasury securities.

A few more steps are needed before drawdown begins. First, a formal rewriting of the "Policy Normalization Principles and Plans," which is the official normalization guidance that is voted on by the FOMC, will lay out a new exit strategy. We expect this to be released with the June FOMC statement. The Fed will no longer "cease" reinvestments, but will likely specify "a set of gradually increasing caps, or limits, on the dollar amounts of Treasury and agency securities that would be allowed to run off each month, and only the amounts of securities repayments that exceeded the caps would be reinvested each month."

Second, either alongside the June statement, or in the minutes of that meeting, we expect the Fed to inform the market about the sizes of the reinvestment caps, which we expect will follow this schedule:

Cease reinvesting a maximum of \$5bn MBS and \$5bn UST each month in 4Q17.

Cease reinvesting a maximum of \$10bn MBS and \$10bn UST each month in 1Q18.

Cease reinvesting a maximum of \$15bn MBS and \$15bn UST each month in 2O18.

Cease reinvesting a maximum of \$20bn MBS and \$20bn UST each month from 3O18 onwards.

On this schedule, we expect the *maximum* balance sheet draw-down over the first four quarters to total \$300bn. Fed officials and researchers have suggested that the impact of a \$600 billion QE program is about the equivalent of a 75bp fed funds rate cut. So a \$300bn rundown of the SOMA portfolio over the first four quarters could be considered the equivalent of 35bp in policy tightening, which would be the upper range of the potential impact on financial conditions, all else equal.

Finally, we continue to expect the FOMC to hike rates in June and December, which will allow it to take a "little pause" in hiking at its September meeting in order to give balance sheet normalization its due process. We also look for the Fed to hike four additional times in 2018.

Ellen Zentner, Ted Wieseman, Robert Rosener and Michel Dilmanian, Morgan Stanley, New York, NY

#### Rent CPI Was Due To Cool Somewhat

Rising rents had been boosting core (and headline) inflation rates over the past few years, but a significant slowing in rental inflation has weighed on the broader price indexes in recent months. After earlier increases in supply, we think that rent inflation was due to cool off. But the weakness in the data from March and April looks exaggerated relative to what we would have expected based on market conditions, and we anticipate some firming relative to those months.

The recent slowing in rental inflation occurred in both tenants' rent and owners' equivalent rent (OER), which together account for about 40% of the core CPI. The two series tend to follow similar trends as they respond to conditions in the rental market, but they differ in their treatments of utilities and weightings of different unit types. When utilities prices increase, OER tends to be depressed relative to tenants' rent because the cost of utilities is removed from the cost of rent in OER. We believe that increases in utilities prices can explain much, but not all, of the recent divergence between tenants' rent and OER.

Market conditions should determine the trajectories of the rent measures going forward. With supply in the rental market increasing throughout much of the expansion, the rental vacancy rate has flattened out following a multiyear move lower and conditions are now reported to be easing after a period with reported tightening. These shifts should put downward pressure on rent.

We use a model that regresses changes in rental inflation (tenants' and OER combined) on various lags of rent, lags of the tightness index and vacancy rate, and changes in utilities prices (along with a constant) to project rental inflation, and find that some cooling in rents was to be expected following the strength reported through early this year. But the model projects a much more gradual slowing in rental inflation than was reported. Rent inflation cooled to about 2.7% (saar) on average in March and April, but the model does not expect rent to get this soft until the end of the year.

We should not expect the model to perfectly predict upcoming changes in rental inflation, but we think the trend likely will be between the softness of March and April and the firmness of earlier months. We will also continue to monitor developments in the market; for example, it remains to be seen whether the latest increase in the NMHC's market tightness index represented a change in the trend or just noise in the data.

Daniel Silver and Zina Bushra Saijid, JPMorgan Chase Bank, New York, NY

#### Can't Keep A Good Market Down

U.S. bond yields have careened lower with long Treasuries hitting one-month lows. Apart from the Fed easing up on the gas pedal, the macro and political backdrop couldn't be much more supportive of Treasuries. Case in point: Inflation, both actual and expected, has made a hasty retreat after hooking up last year. While special factors, such as lower doctor fees and cell phone charges, have pulled the core CPI below 2%, broad softness in goods prices due to the strong greenback, globalization and online competition is keeping inflation on its back heels. Even wage growth, though stirring, has yet to spark, partly because advanced automation has frightened workers from seeking pay hikes.

The U.S. economy stumbled out of the gates again this year and shows mixed signs of regaining momentum. The expected rebound in Q2 growth is more likely to fall short of 3%, as per our call, than top 4%, as per the Atlanta Fed's GDPNow tally. While data on sentiment and production appear solid, consumers seem winded from last year's sprint.

The latest White House distractions could seriously delay the President's growth agenda, undermining business confidence and investment. A delay would also reduce the risk of the budget deficit gapping higher should the Republicans lean too heavily on the old crutch of dynamic scoring to neutralize the impact of tax cuts.

With the "I" word getting bandied about in Washington for the first time since President Clinton's indiscretions, the risk is that an already divided Republican party will become even more fractured, further reducing Congress' ability to pass legislation—not only on bills that would support growth but on those that will be needed to keep the government running (a budget or continuing resolution) or avoid a technical default (debt ceiling) later this year. Suffice it to say that the safehaven bid should remain alive and well at least until congressional hearings on Russia's possible involvement in the U.S. election run their lengthy course.

We still look for 10-year Treasury yields to grind toward 2.6% by yearend on the back of two more taps on the brakes from the Fed and subsequent phasing out of reinvestments. But given the sanguine economic and inflation backdrop, and growing political risks, the yield could easily test 2% before 3%, especially if the White House has a few more weeks like the last two.

Sal Guatieri, BMO Capital Markets, Toronto, Canada

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### **Long-Range Survey:**

The table below contains the results of our twice-annual long-range CONSENSUS survey. There are also Top 10 and Bottom 10 averages for each variable. Shown are consensus estimates for the years 2019 through 2023 and averages for the five-year periods 2019-2023 and 2024-2028. Apply these projections cautiously. Few if any economic, demographic and political forces can be evaluated accurately over such long time spans.

			Aver	age For Th	e Year		Five-Year	Averages
Interest Rates		2019	2020	2021	2022	2023	2019-2023	2024-2028
1. Federal Funds Rate	CONSENSUS	2.6	2.9	2.9	2.9	2.9	2.8	3.0
	Top 10 Average	3.1	3.5	3.4	3.5	3.5	3.4	3.5
	Bottom 10 Average	2.0	2.3	2.3	2.3	2.4	2.3	2.4
2. Prime Rate	CONSENSUS	5.6	5.9	5.9	5.9	5.9	5.8	6.0
	Top 10 Average	6.1	6.5	6.5	6.5	6.5	6.4	6.5
	Bottom 10 Average	5.0	5.3	5.3	5.2	5.3	5.2	5.4
3. LIBOR, 3-Mo.	CONSENSUS	2.9	3.1	3.2	3.1	3.2	3.1	3.2
	Top 10 Average	3.4	3.7	3.7	3.7	3.8	3.7	3.8
	Bottom 10 Average	2.4	2.6	2.6	2.5	2.6	2.5	2.6
4. Commercial Paper, 1-Mo.	CONSENSUS	2.7	3.0	3.0	3.0	3.1	3.0	3.1
· ·	Top 10 Average	3.2	3.5	3.5	3.6	3.6	3.5	3.6
	Bottom 10 Average	2.2	2.5	2.5	2.4	2.5	2.4	2.6
5. Treasury Bill Yield, 3-Mo.	CONSENSUS	2.5	2.8	2.8	2.8	2.9	2.8	2.9
	Top 10 Average	3.1	3.4	3.4	3.4	3.5	3.3	3.5
	Bottom 10 Average	1.9	2.2	2.3	2.2	2.3	2.2	2.3
6. Treasury Bill Yield, 6-Mo.	CONSENSUS	2.6	2.9	3.0	3.0	3.0	2.9	3.0
	Top 10 Average	3.2	3.6	3.5	3.6	3.6	3.5	3.6
	Bottom 10 Average	2.0	2.4	2.4	2.4	2.4	2.3	2.4
7. Treasury Bill Yield, 1-Yr.	CONSENSUS	2.8	3.1	3.1	3.1	3.1	3.0	3.2
•	Top 10 Average	3.4	3.7	3.7	3.7	3.7	3.6	3.7
	Bottom 10 Average	2.1	2.5	2.5	2.5	2.5	2.4	2.5
8. Treasury Note Yield, 2-Yr.	CONSENSUS	2.9	3.2	3.3	3.3	3.3	3.2	3.3
•	Top 10 Average	3.5	3.9	3.9	3.9	3.9	3.8	4.0
	Bottom 10 Average	2.3	2.6	2.7	2.6	2.6	2.6	2.7
10. Treasury Note Yield, 5-Yr.	CONSENSUS	3.3	3.5	3.5	3.6	3.6	3.5	3.6
•	Top 10 Average	3.9	4.2	4.2	4.2	4.2	4.1	4.3
	Bottom 10 Average	2.7	2.9	2.9	3.0	3.0	2.9	3.0
11. Treasury Note Yield, 10-Yr.	CONSENSUS	3.6	3.8	3.8	3.9	3.9	3.8	3.9
•	Top 10 Average	4.2	4.5	4.4	4.5	4.5	4.4	4.6
	Bottom 10 Average	2.9	3.1	3.1	3.2	3.3	3.1	3.3
12. Treasury Bond Yield, 30-Yr.	CONSENSUS	4.2	4.3	4.4	4.4	4.4	4.3	4.5
•	Top 10 Average	4.9	5.0	5.0	5.0	5.0	5.0	5.1
	Bottom 10 Average	3.5	3.7	3.7	3.8	3.8	3.7	3.8
13. Corporate Aaa Bond Yield	CONSENSUS	5.2	5.4	5.4	5.4	5.5	5.4	5.5
	Top 10 Average	5.7	5.9	5.9	6.0	5.9	5.9	6.0
	Bottom 10 Average	4.7	4.9	4.9	4.9	5.0	4.9	5.1
13. Corporate Baa Bond Yield	CONSENSUS	6.1	6.3	6.3	6.3	6.3	6.3	6.4
	Top 10 Average	6.8	7.0	6.9	7.0	6.9	6.9	7.0
	Bottom 10 Average	5.5	5.6	5.7	5.6	5.8	5.6	5.7
14. State & Local Bonds Yield	CONSENSUS	4.6	4.7	4.7	4.7	4.7	4.7	4.8
	Top 10 Average	5.1	5.3	5.2	5.3	5.3	5.2	5.3
	Bottom 10 Average	4.2	4.2	4.2	4.1	4.1	4.2	4.2
15. Home Mortgage Rate	CONSENSUS	5.3	5.5	5.5	5.5	5.5	5.4	5.6
	Top 10 Average	5.9	6.2	6.1	6.2	6.1	6.1	6.2
	Bottom 10 Average	4.6	4.8	4.8	4.7	4.9	4.8	4.9
A. FRB - Major Currency Index	CONSENSUS	93.8	93.2	93.1	93.0	92.7	93.2	92.5
•	Top 10 Average	96.5	96.6	96.9	97.1	97.2	96.9	97.1
	Bottom 10 Average	91.0	89.7	89.2	88.7	88.1	89.3	88.1
			Voor-O	wr-Voor	% Change		Five-Veer	Averages
		2019	2020	2021	2022	2023	2019-2023	2024-2028
B. Real GDP	CONSENSUS	2.2	2.0	2.0	2.0	2.0	2.0	2.1
D. Iwai ODi	Top 10 Average	2.6	2.4	2.4	2.4	2.3	2.4	2.3
	Bottom 10 Average	1.7	1.6	1.6	1.6	2.3 1.6	1.6	1.8
C. GDP Chained Price Index	CONSENSUS	2.2	2.1	2.1	2.0	2.0	2.1	2.0
C. GDF Chamed Flice lines	Top 10 Average	2.5	2.3	2.3	2.0	2.2	2.3	2.3
	Bottom 10 Average	2.3 1.9	2.3 1.9	2.3 1.9	1.9	1.7	2.3 1.8	2.3 1.9
D. Consumer Price Index	CONSENSUS	2.3	2.3	2.3	2.3	2.2	2.2	2.2
D. Consumer rice muca	Top 10 Average	2.6	2.6	2.5	2.5	2.4	2.5	2.4
	Bottom 10 Average	2.6 1.9	2.0	2.0	2.3	1.8	2.0	2.4
	Bottom to Average	1.7	2.0	2.0	2.1	1.0	2.0	2.0

10-Year Treasury Note Yield (%)

2.09

1.78

1.89

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### Databank:

2017 Historical Data												
<b>Monthly Indicator</b>	Jan	Feb	Mar	Apr	May	Jun	Jly	Aug	Sep	Oct	Nov	Dec
Retail and Food Service Sales (a)	0.5	-0.2	-0.1	0.4								
Auto & Light Truck Sales (b)	17.50	17.44	16.52	16.81								
Personal Income (a, current \$)	0.4	0.3	0.2									
Personal Consumption (a, current \$)	0.2	0.0	0.0									
Consumer Credit (e)	3.1	4.4	5.2									
Consumer Sentiment (U. of Mich.)	98.5	96.3	96.9	97.0								
Household Employment (c)	-30	447	472	156								
Non-farm Payroll Employment (c)	216	232	79	211								
Unemployment Rate (%)	4.8	4.7	4.5	4.4								
Average Hourly Earnings (All, cur. \$)	26.02	26.10	26.12	26.19								
Average Workweek (All, hrs.)	34.4	34.3	34.3	34.4								
Industrial Production (d)	0.0	0.4	1.6	2.1								
Capacity Utilization (%)	75.8	75.8	76.1	76.7								
ISM Manufacturing Index (g) ISM Non-Manufacturing Index (g)	56.0 56.5	57.7 57.6	57.2 55.2	54.8 57.5								
				1.172								
Housing Permits (b)	1.236 1.300	1.288 1.219	1.203 1.260	1.172								
Housing Permits (b) New Home Sales (1-family, c)	599	607	642	569								
Construction Expenditures (a)	0.8	1.8	-0.2	309								
Consumer Price Index (nsa., d)	2.5	2.7	2.4	2.2								
CPI ex. Food and Energy (nsa., d)	2.3	2.2	2.0	1.9								
Producer Price Index (n.s.a., d)	1.6	2.2	2.3	2.5								
Durable Goods Orders (a)	2.4	1.4	2.3	-0.7								
Leading Economic Indicators (g)	0.6	0.5	0.4	0.7								
Balance of Trade & Services (f)	-48.2	-43.8	-43.7									
Federal Funds Rate (%)	0.65	0.66	0.76	0.90								
3-Mo. Treasury Bill Rate (%)	0.51	0.53	0.73	0.80								
10-Year Treasury Note Yield (%)	2.43	2.43	2.47	2.30								
2016 Historical Data												
Monthly Indicator	Jan	Feb	Mar	Apr	May	Jun	Jly	Aug	Sep	Oct	Nov	Dec
Retail and Food Service Sales (a)	-0.5	0.3	-0.3	1.2	0.2	0.7	0.0	0.0	1.0	0.7	0.2	1.0
Auto & Light Truck Sales (b)	17.76	17.60	16.58	17.34	17.12	16.77	17.80	16.91	17.68	17.94	17.72	18.32
Personal Income (a, current \$)	0.0	-0.1	0.3	0.5	0.3	0.3	0.4	0.2	0.4	0.4	0.2	0.3
Personal Consumption (a, current \$)	0.1	0.2	0.0	1.1	0.3	0.5	0.4	0.1	0.7	0.5	0.3	0.6
Consumer Credit (e)	4.4	4.4	9.9	5.7	7.5	4.8	5.8	9.0	6.9	5.2	8.3	4.5
Consumer Sentiment (U. of Mich.)	92.0	91.7	91.0	89.0	94.7	93.5	90.0	89.8	91.2	87.2	93.8	98.2
Household Employment (c)	503	510	258	-273	30	32	456	109	271	-24	146	63
Non-Farm Payroll Employment (c)	126	237	225	153	43	297	291	176	249	124	164	155
Unemployment Rate (%)	4.9	4.9	5.0	5.0	4.7	4.9	4.9	4.9	4.9	4.8	4.6	4.7
Average Hourly Earnings (All, cur. \$)	25.37	25.38	25.46	25.54	25.59	25.62	25.71	25.74	25.81	25.90	25.91	25.97
Average Workweek (All, hrs.)	34.6	34.5	34.4	34.4	34.4	34.4	34.4	34.3	34.4	34.4	34.3	34.4
Industrial Production (d)	-2.0	-2.0	25	-1.7	-1.4	-0.9	-1.2	-1.3	-1.2	-0.8	-0.5	0.9
Capacity Utilization (%)	76.1	75.9	75.4	75.6	75.6	75.8	75.9	75.8	75.6	75.7	75.5	76.0
ISM Manufacturing Index (g)	48.2	49.7	51.7	50.7	51.0	52.8	52.3	49.4	51.7	52.0	53.5	54.5
ISM Non-Manufacturing Index (g)	53.5	54.3	54.9	55.7	53.6	56.1	54.9	51.7	56.6	54.6	56.2	56.6
Housing Starts (b)	1.123	1.209	1.128	1.164	1.119	1.190	1.223	1.164	1.062	1.328	1.149	1.268
Housing Permits (b)	1.193	1.195	1.115	1.163	1.178	1.193	1.175	1.200	1.270	1.285	1.255	1.266
New Home Sales (1-family, c)	520	525	533	566	560	559	627	567	570	577	579	548
Construction Expenditures (a)	-0.3	1.4	1.6	-2.9	0.1	0.9	0.5	0.5	-0.2	0.8	1.5	-0.2
Consumer Price Index (s.a., d)	1.4	1.0	0.9	1.1	1.0	1.0	0.8	1.1	1.5	1.6	1.7	2.1
CPI ex. Food and Energy (s.a., d)	2.2	2.3	2.2	2.1	2.2	2.2	2.2	2.3	2.2	2.1	2.1	2.2
Producer Price Index (n.s.a., d)	0.0	0.1	-0.1	0.2	0.0	0.2	0.0	0.0	0.6	1.1	1.3	1.7
Durable Goods Orders (a)	4.3	-3.3	2.0	3.2	-2.9	-4.3	3.6	0.2	0.3	5.0	-4.7	-0.9
Leading Economic Indicators (g)	-0.2	0.1	0.1	0.5	-0.2	0.2	0.5	-0.2	0.3	0.2	0.2	0.6
Balance of Trade & Services (f)	-43.4	-45.6	-37.3	-38.5	-42.2	-45.1	-39.7	-40.5	-36.0	-42.6	-45.5	-44.3
Federal Funds Rate (%)	0.34	0.38	0.36	0.37	0.37	0.38	0.39	0.40	0.40	0.40	0.41	0.54
3-Mo. Treasury Bill Rate (%)	0.26	0.31	0.29	0.23	0.27	0.27	0.30	0.30	0.29	0.33	0.45	0.51

(a) month-over-month % change; (b) millions, saar; (c) month-over-month change, thousands; (d) year-over-year % change; (e) annualized % change; (f) \$ billions; (g) level. Most series are subject to frequent government revisions. Use with care.

1.81

1.64

1.50

1.56

1.63

1.76

2.14

2.49

1.81

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### Calendar Of Upcoming Economic Data Releases

Monday	Tuesday	Wednesday	Thursday	Friday
May 29 Memorial Day U.S. Markets Closed	30 Personal Income and Consumption (Apr S&P/Case-Shiller Home Price Index (Mar) Consumer Confidence (May, Conference Board) Dallas Fed Manufacturing Survey (May)	Chicago PMI (May) Pending Home Sales (Apr) Dallas Fed Services (May) Beige Book EIA Crude Oil Stocks Mortgage Applications	June 1 ADP Employment (May) IHS-Manufacturing PMI (May, Final) ISM Manufacturing (May) Construction Spending (Apr) Light Vehicle Sales (May) Productivity and Costs (Q1, Revised) Weekly Jobless Claims	Employment (May) International Trade (Apr)
5 IHS-Markit Services PMI (May, Final) ISM Non-Manufacturing (May) Factory Orders (Apr)	6 JOLTS (May) QFR (Q1)	7 Consumer Credit (Apr) EIA Crude Oil Stocks Mortgage Applications	8 Quarterly Services Survey (Q1) Weekly Jobless Claims	Wholesale Trade (Apr)
12 Federal Budget (May	FOMC Meeting Producer Price Index (May NFUB Survey (May)	FOMC Meeting Statement and projections (2:00 pm) Press Conference (2:30 pm) Retail Sales (May) Consumer Price Index (May) Business Inventories (Apr))	15 Industrial Production (May) Philadelphia Fed Survey (Jun Empire State Survey (Jun) Import Prices (May) NAHB Survey (Jun) TIC Data (Apr) Weekly Jobless Claims	16 Housing Starts (May) Consumer Sentiment (Jun, pre- liminary, University of Michi- gan) Business Leaders Survey (Jun)
19	20 Philadelphia Fed Non- Manufacturing Survey (Jun) Current Account (Q1)	21 Existing Home Sales (May) EIA Crude Oil Stocks Mortgage Applications	22 Kansas City Fed Survey (Jun) FHFA Home Price Index (Apr) Weekly Jobless Claims Weekly Money Supply	23 IHS-Markit Manufacturing PMI (Jun, flash) New Home Sales (May)
26 Durable Goods (May) Dallas Fed Manufacturing (Jun)	27 S&P/Case-Shiller Home Price Index (Apr) IHS-Markit Services PMI (Jun, flash) Consumer Confidence (Jun, Conference Board) Dallas Fed Services Survey (Jun) Richmond Fed Services (Jun)	28 Advance Economic Indicators (May) Pending Home Sales (May) EIA Crude Oil Stocks Mortgage Applications	29 Real GDP (Q1, Third Estimate) Weekly Jobless Claims Weekly Money Supply	30 Personal Income and Consumption (May) Chicago PMI (Jun) Consumer Sentiment (Jun, Final, University of Michigan)
July 3 IHS-Markit Manufacturing PMI (Jun, Final) ISM Manufacturing (Jun) Light Vehicle Sales (Jun) Construction Spending (May)	4 Independence Day U.S. Markets Closed	5 FOMC Minutes Factory Orders EIA Crude Oil Stocks Mortgage Applications	6 ADP Employment (Jun) IHS-Markit Services PMI (Jun, Final) ISM Non-Manufacturing (Jun) International Trade (May) Weekly Jobless Claims Weekly Money Supply	7 Employment (Jun)

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**Exhibit 7.2:** Largest Company (by market capitalization) in CRSP (NYSE/NYSE MKT/NASDAQ) Deciles and Size Groupings
September 30, 2016

Decile	Company Name	Recent Market Capitalization (in \$thousands)
1-Largest	Apple Inc.	609,163,498
2	Apache Corp.	24,233,747
3	Textron Inc.	10,711,194
4	C F Industries Holdings Inc.	5,676,716
5	Ellie Mae Inc.	3,512,913
6	Generac Holdings Inc.	2,390,899
7	Flagstar Bancorp Inc.	1,569,984
8	SEACOR Holdings Inc.	1,030,426
9	Kadant Inc.	567,843
10-Smallest	Pioneer Energy Services Corp.	262,891

**Source of underlying data:** CRSP databases © 2017 Center for Research in Security Prices (CRSP®), The University of Chicago Booth School of Business (2017).

In the following sections we provide an example of (i) calculating a CRSP Deciles Size Premium and (ii) a Risk Premium Report size premium, using example data from each of the two data sets.

#### Size Premium Calculation: CRSP Deciles Size Premia

In the 2017 Valuation Handbook – U.S. Guide to Cost of Capital, the CRSP Deciles Size Premia are calculated over the years 1926–2016. The following statistics are calculated over this time period:

- The "historical" average annual long-term equity risk premium is 6.94%.
- The average annual risk-free rate is 5.02%.
- CRSP portfolio 10b average annual return equals 23.14%.
- CRSP portfolio 10b OLS beta equals 1.37.

The beta-adjusted size premium for CRSP portfolio 10b is calculated as follows:

10b Size Premium = actual excess return – excess return predicted by CAPM

Looking at Exhibit 7.3, the *actual* excess return of portfolio 10b is 18.12% (23.14% - 5.02%), and the excess return that CAPM *predicted* is 9.49% ( $1.37 \times 6.94\%$ ) (difference due to rounding). The size premium for CRSP portfolio 10b is therefore 8.64%, which is "what actually happened" (18.12%) minus "what CAPM predicted" (9.49%) (difference due to rounding). This is what is meant when we say that the beta of smaller companies doesn't explain all of their returns. In this simple example, beta fell 8.64% short of explaining what actually happened.

**Exhibit 4.7:** OLS Betas, Sum Betas, and Annual Betas, and their Respective Implied Size Premia As of December 31, 2016

Decile	OLS Beta	Size Premium (%)	Annual Beta	Size Premium (%)	Sum Beta	Size Premium (%)
1-Largest	0.92	-0.35	0.94	-0.51	0.92	-0.33
2	1.04	0.61	1.04	0.57	1.06	0.46
3	1.11	0.89	1.10	0.94	1.14	0.66
4	1.13	0.98	1.17	0.64	1.20	0.49
5	1.17	1.51	1.19	1.32	1.25	0.94
6	1.17	1.66	1.21	1.42	1.28	0.90
7	1.25	1.72	1.29	1.43	1.39	0.73
8	1.30	2.08	1.37	1.64	1.48	0.83
9	1.34	2.68	1.47	1.73	1.55	1.23
10-Smallest	1.39	5.59	1.60	4.19	1.69	3.55
Breakdown of 10th Decile						
10a	1.41	4.09	1.52	3.31	1.67	2.26
10w	1.38	3.10	1.41	2.92	1.58	1.74
10x	1.45	5.33	1.67	3.77	1.80	2.86
10b	1.37	8.64	1.74	6.04	1.71	6.27
10y	1.42	7.21	1.80	4.55	1.75	4.93
10z	1.28	11.63	1.60	9.43	1.64	9.17
Size Grouping						
Mid-Cap (3-5)	1.12	1.02	1.14	0.91	1.18	0.65
Low-Cap (6-8)	1.22	1.75	1.27	1.45	1.36	0.82
Micro-Cap (9-10)	1.35	3.67	1.52	2.51	1.59	2.01

Sources of underlying data: (i) CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2017 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. (ii) Morningstar *Direct* database. Used with permission. All rights reserved. Calculations performed by Duff & Phelps, LLC.

OLS and Sum betas are estimated from monthly return data in excess of the 30-day U.S. Treasury bill total return, January 1926–December 2016. Annual betas are estimated from annualized return data in excess of the 30-day U.S. Treasury bill total return, 1926–2016.

Historical risk-free rate represented by the 91-year arithmetic mean income return component of 20-year U.S. government bonds (5.02%).

Calculated in the context of the CAPM by multiplying the historical equity risk premium by beta. The historical equity risk premia in this example is estimated as the arithmetic annual mean return of the S&P 500 Index (11.95%) minus the arithmetic annual mean income return component of 20-year U.S. government bonds (5.02%) from 1926–2016.

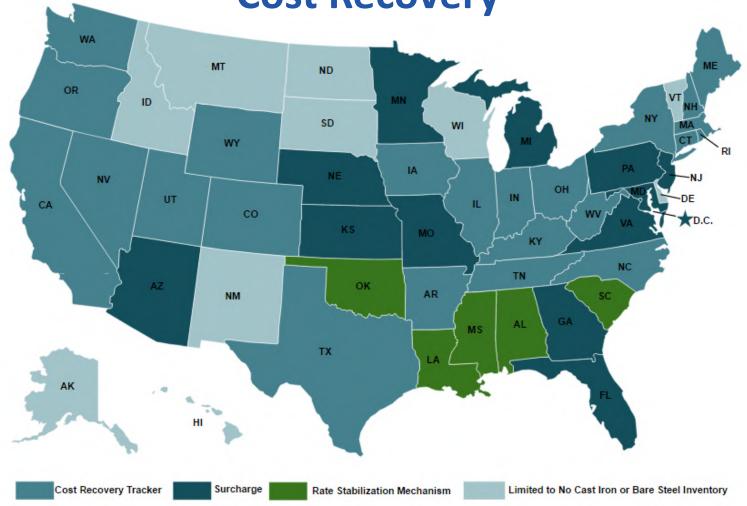


# Innovative Rates, Non-Volumetric Rates, and Tracking Mechanisms: Current List

As of December 2016



**States with Accelerated Infrastructure Cost Recovery** 



## **Utilities with Full Infrastructure Cost Recovery Mechanisms**

4	AL ALL 6 6				
1.	AL – Alabama Gas Company	36.	MA – Columbia Gas of Massachusetts	66.	OK – CenterPoint Energy
2.	AL – Mobile Gas Service	37.	MA – National Grid Massachusetts	67.	OR – Avista Corp.
3.	AR – Arkansas Oklahoma Gas	38.	MA – Eversource Energy	68.	OR – NW Natural
4. 5.	AR SourceGas	39.	MA – Liberty Utilities	69.	PA – Columbia Gas of Pennsylvania
5. 6.	AR – CenterPoint Energy CA – San Diego Gas and Electric	40.	MA—Unitil	70.	PA – Equitable Gas
7.	CA – Southern California Gas	41.	MD – Baltimore Gas and Electric	71.	PA – Peoples Gas Company
8.	CA – Southwest Gas	42.	MD – Columbia Gas of Maryland	72.	PA – Peoples TWP
9.	CO – Public Service Co. of Colorado	43.	MD – Washington Gas	73.	PA – UGI Central Penn Gas
10.	CO – Atmos Energy	44.	MI – Consumers Energy	74.	PA – UGI Penn Natural Gas
11.	CO SourceGas	45.	MI – DTE	75.	PA – PECO
12.	CT – Connecticut Natural Gas	46.	MI – SEMCO Energy	76.	PA – Philadelphia Gas Works
13.	DC – Washington Gas	47.	MN – Xcel Energy	77.	RI – National Grid Narragansett Gas
14.	FL – Chesapeake Utilities	48.	MO – Ameren Missouri	78.	SC – Piedmont Natural Gas
15.	FL – Florida Public Utilities Company	49.	MO – Liberty Utilities	79.	SC – South Carolina Electric and Gas
16.	FL – Florida City Gas	50.	MO – Laclede Gas	80.	TN – Atmos Energy
17.	FL – TECO Peoples Gas	51.	MO – Missouri Gas Energy	81.	TN – Piedmont Natural Gas
18. 19.	GA – Atlanta Gas Light	52.	MS – Atmos Energy	82.	TX – Atmos Energy
20.	GA – Liberty Utilities IL – Ameren Illinois	53.	MS – CenterPoint Energy	83.	TX – CenterPoint Energy
21.	IL – NICOR Gas	54.	NC – Piedmont Natural Gas	84.	TX – Texas Gas Service
22.	IL – Peoples Gas	55.	NC – Public Service of North Carolina	85.	UT – Questar Gas
23.	IN – Vectren North Indiana Gas	55. 56.		86.	•
24.	IN – Vectren South SIGECO		NH – Liberty Utilities		VA – Atmos Energy
25.	IN – NIPSCO	57.	NJ – New Jersey Natural	87.	VA – Columbia Gas of Virginia
26.	KS – Atmos Energy	58.	NJ – Elizabethtown Gas	88.	VA – Virginia Natural Gas
27.	KS – Black Hills	59.	NJ – Public Service Electric and Gas	89.	VA – Washington Gas
28.	KS – Kansas Gas Service	60.	NJ – South Jersey Gas	90.	WA – Avista Corporation
29.	KY – Atmos Energy	61.	NV – Southwest Gas	91.	WA – Puget Sound Energy, Inc.
30.	KY – Columbia Gas of Kentucky	62.	OH – Columbia Gas of Ohio	92.	WA – Cascade Natural Gas Company
31.	KY – Delta Natural Gas	63.	OH – Dominion East Ohio	93.	WA – Northwest Natural Gas Company
32.	KY – Duke Energy Kentucky	64.	OH – Duke Energy	94.	WV – Mountaineer Gas Company
33.	LA – CenterPoint Energy	65.	OH – Vectren Ohio	95.	WV- Dominion Hope
34.	LA – Entergy Gulf States			96.	WY– Black Hills
35.	MA—Berkshire Gas				

### **Limited and Pending Infrastructure Mechanisms**

#### LIMITED – 3 States

- AZ Southwest Gas
- ME Northern Utilities
- NY Consolidated Edison
- NY Corning Natural Gas
- NY National Grid NYC
- NY National Grid Long Island
- NY National Grid Niagara Mohawk
- 8. NY - Orange and Rockland

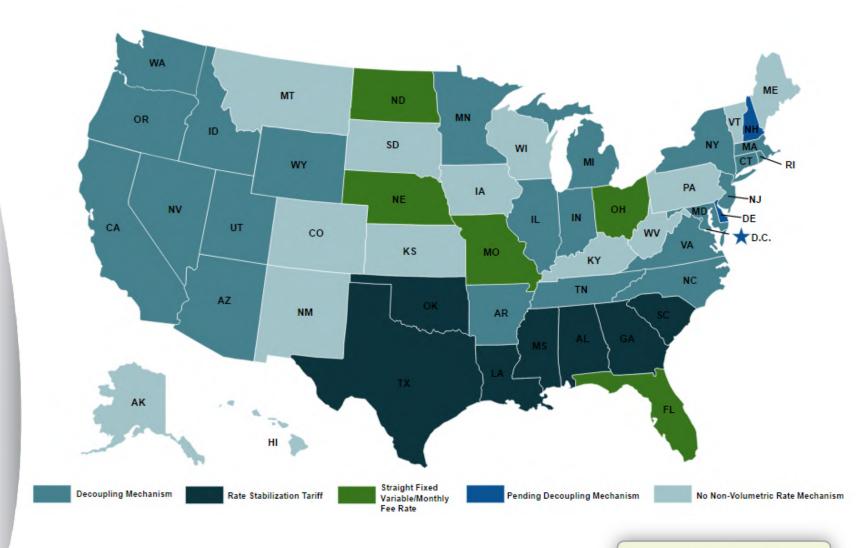
#### **PENDING – 3 States**

- KS All utilities
- NJ Elizabethtown Gas
- NY Consolidated Edison
- NY All utilities

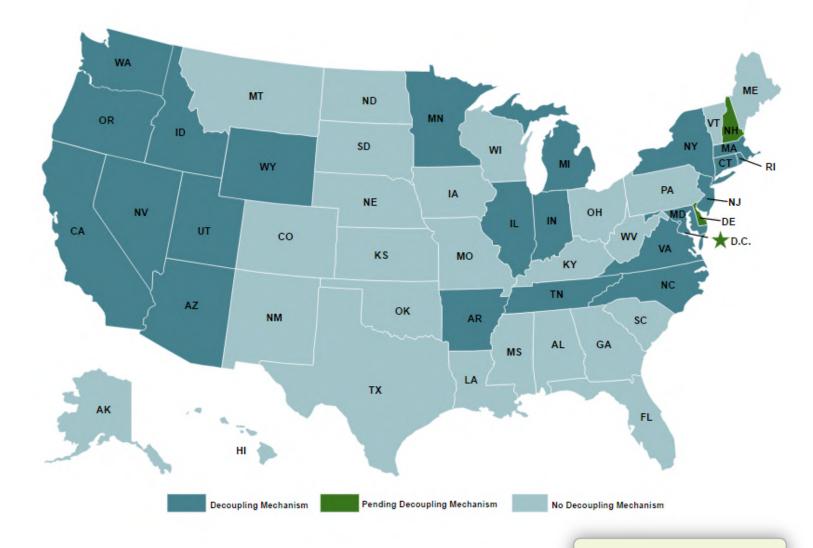
### **GENERIC RULINGS OR LEGISLATION – 3 States**

- Iowa All utilities may apply
- Nebraska All utilities may apply
- West Virginia All utilities may apply

### **States with Non-Volumetric Rate Designs**



### **Current Status of Decoupling Mechanisms**



### **Utilities with Approved Decoupling Mechanisms**

1.	AR – Arkansas Oklahoma Gas	30.	MN – Minnesota Energy Resources
2.	AR – SourceGas	31.	NC – Piedmont Natural Gas
3.	AR – CenterPoint Energy	32.	NC – Public Service Company of North
4.	AZ – Southwest Gas	33.	NJ – New Jersey Natural Gas
5.	AZ – UNS Gas	34.	NJ – South Jersey Gas
6.	CA – Pacific Gas and Electric	35.	NV – Southwest Gas
7.	CA – San Diego Gas and Electric	36.	NY – Corning Natural Gas
8.	CA – Southern California Gas	37.	NY – National Grid NYC
9.	CA – Southwest Gas	38.	NY – National Grid Long Island
10.	CT – Connecticut Natural Gas	39.	NY – National Grid Niagara Mohawk
11.	GA – Liberty Utilities	40.	NY – National Fuel Distribution
12.	ID – Avista	41.	NY – New York State Electric and Gas
13.	IL – Ameren Illinois	42.	NY – Orange and Rockland
14.	IL – Peoples Gas	43.	NY – Rochester Gas and Electric
15.	IL – North Shore Gas	44.	NY – Central Hudson Gas and Electric
16.	IN- Citizens Energy Group	45.	OR – Avista Corp.
17.	IN – Vectren North Indiana Gas	46.	OR – Cascade Natural Gas
18.	IN – Vectren South SIGECO	47.	OR – Northwest Natural Gas
19.	MA – Columbia Gas of Massachusett	:s48.	RI – National Grid Narragansett
20.	MA – Fitchburg Gas and Electric	49.	TN – Chattanooga Gas
21.	MA – National Grid Massachusetts	50.	UT – Questar Gas
22.	MA – Eversource Energy	51.	VA – Columbia Gas of Virginia
23.	MA – Liberty Utilities	52.	VA – Virginia Natural Gas
24.	MD – Baltimore Gas and Electric	53.	VA – Washington Gas
25.	MD – Columbia Gas of Maryland	54.	WA – Avista Corp.
26.	MD – Washington Gas	55.	WA – Cascade Natural Gas
27.	MI—Consumers Energy	56.	WA – Puget Sound Energy
28.	MI – DTE	57.	WY – SourceGas
29.	MN – CenterPoint Energy	58.	WY – Questar Gas

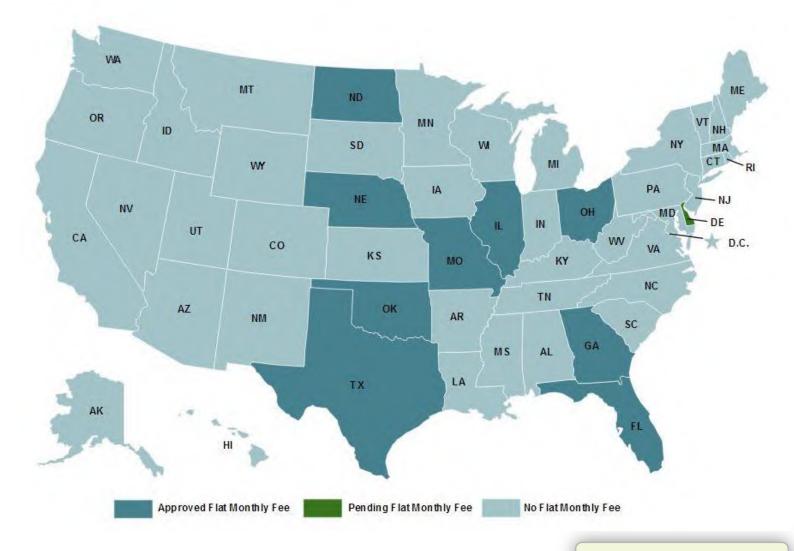
### **Pending Mechanisms**

DC - Washington Gas

Carolina

- DE Delmarva Power and Light
- ID Intermountain Gas
- MI Consumers Energy
- NH Passed Legislation
- VA Washington Gas

# **Current Status of Flat Monthly Fee** Rate Designs (SFV)



### **Utilities with Flat Monthly** Fee Rate Designs (SFV)

### **Approved SFV**

- GA Atlanta Gas Light Individually determined monthly demand charge
- 2. MO – Missouri Gas Energy – Flat monthly fee
- ND Montana-Dakota Utilities 3.
- ND Xcel Energy Flat monthly fee
- OH Columbia Gas of Ohio Flat monthly fee
- OH Dominion East Ohio Flat monthly fee
- OH Duke Energy Flat monthly fee
- OH Vectren Ohio Flat monthly fee

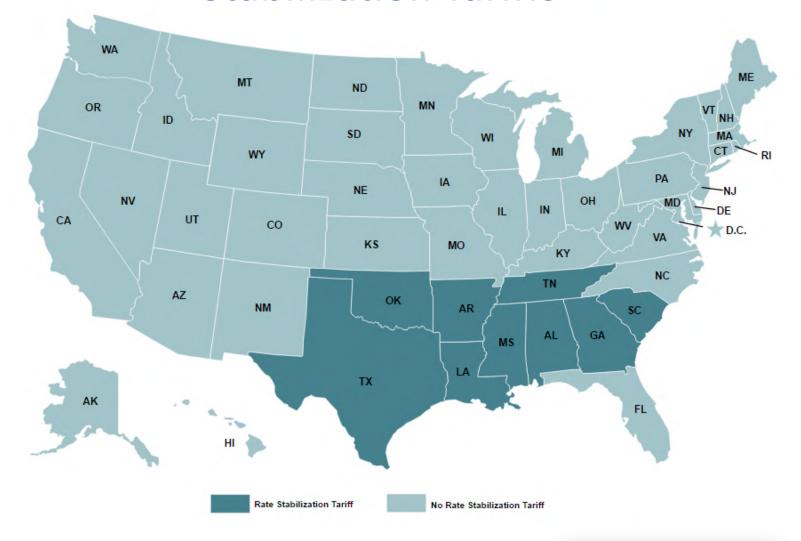
#### Similar to SFV

- FL TECO Peoples Gas Three-tier monthly charge plus a small variable charge
- IL Ameren Illinois 80% revenue for Residential and Small GS Customers per flat fee plus small variable charge 2.
- IL Nicor Gas Flat fee plus a small variable charge 3.
- MO Ameren Modified rate blocks for Residential Service customers 4.
- MO Liberty Utilities Flat fee plus a small variable charge
- MO Laclede Gas Modified rate blocks
- NE Black Hills Declining rate blocks
- NE SourceGas Modified rate blocks
- OK Oklahoma Natural Gas Two-tier plan Offers customers a choice
- TX Texas Gas Service Flat fee up to 200 ccf/month

### **Pending**

DE – Delmarva Power and Light

### **Current Status of Rate Stabilization Tariffs**



### **Current Status of Rate Stabilization Tariffs**

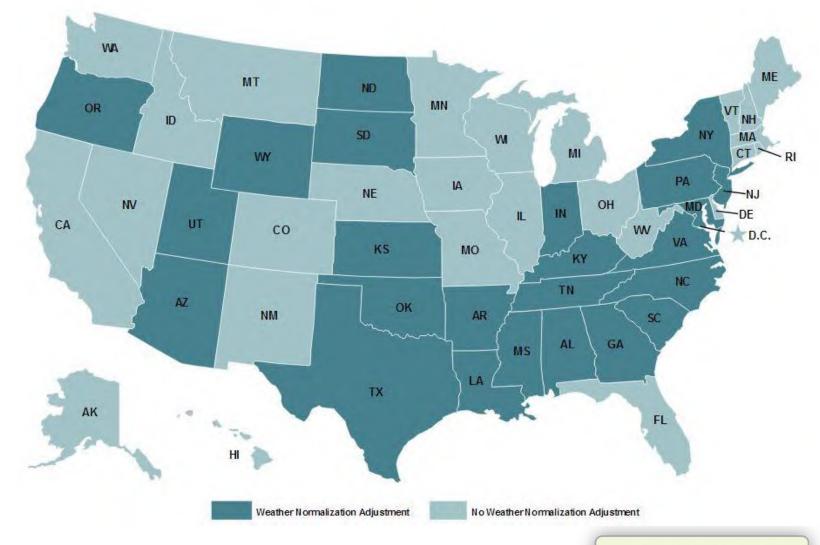
### **Approved**

- 1. AL Alabama Gas
- 2. AL Mobile Gas
- 3. AR CenterPoint Energy
- 4. GA Liberty Utilities
- 5. LA Atmos Energy
- 6. LA CenterPoint Energy
- 7. LA Entergy
- 8. MS Atmos Energy
- MS CenterPoint Energy
- 10. OK CenterPoint Energy
- 11. OK Oklahoma Natural Gas
- 12. SC Piedmont Natural Gas
- 13. SC South Carolina Electric and Gas
- 14. TN Atmos Energy
- 15. TX Atmos Energy

### **Authorized by Legislation**

1. Arkansas

### **Current Status of Weather Normalization Adjustments**

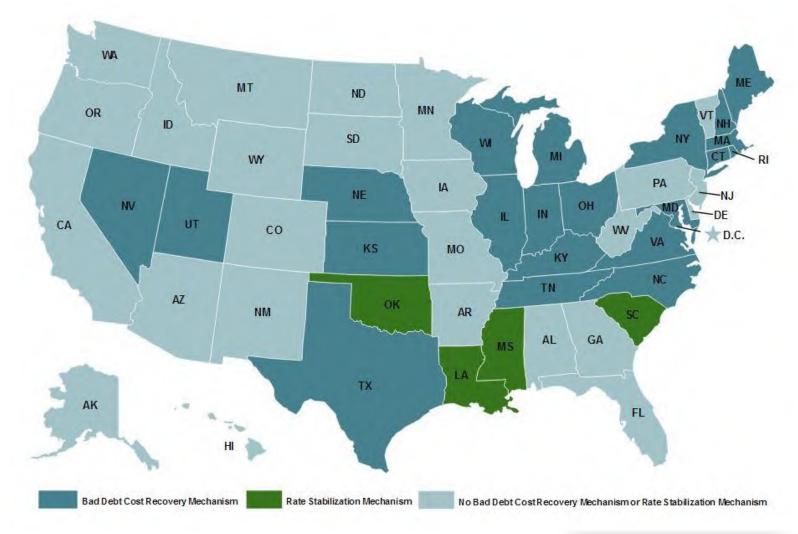


### **Utilities with Approved Weather Normalization Adjustments**

- AZ Southwest Gas 1.
- AL Alabama Gas
- 3. AL – Mobile Gas
- 4. AR – SourceGas
- AR CenterPoint Energy 5.
- GA Liberty Utilities
- 7. IN – Citizens Energy Group
- IN Vectren North Indiana Gas
- 9. IN – Vectren South SIGECO
- KS Atmos Energy
- KS Black Hills 11.
- KS Kansas Gas Service
- KY Atmos Energy
- KY Columbia Gas of Kentucky 14.
- KY Delta Natural Gas 15.
- KY Louisville Gas and Electric 16.
- LA Atmos Louisiana Gas Service
- 18. LA Atmos Trans Louisiana
- LA CenterPoint Energy
- MD Chesapeake Utilities
- MD Columbia Gas of Maryland
- MS Atmos Energy
- MS CenterPoint Energy
- ND Montana-Dakota Utilities 24.
- 25. NJ – Elizabethtown Gas
- 26. NJ – New Jersey Natural Gas
- NJ Public Service Electric and Gas
- NY Central Hudson Gas and Electric
- NY Consolidated Edison 29.
- NY National Fuel Gas Distribution

- NY National Grid Long Island
- NY National Grid Niagara Mohawk 32.
- 33. NY - National Grid NYC
- NY New York State Electric and Gas 34.
- NY Orange and Rockland Utilities
- NY Rochester Gas and Electric 36.
- OK CenterPoint Energy
- 38. OK – Oklahoma Natural Gas
- OR Northwest Natural Gas 39.
- PA Columbia Gas of Pennsylvania
- PA Philadelphia Gas Works
- SC Piedmont Natural Gas 42.
- SC South Carolina Electric and Gas 43.
- 44. SD - Montana-Dakota Utilities
- 45. TN – Atmos Energy
- TN Chattanooga Gas 46.
- TN Piedmont Natural Gas 47.
- 48. TX – Atmos Energy
- 49. TX – Texas Gas Service
- UT Questar Gas 50.
- 51. VA – Atmos Energy
- VA City of Richmond Dept. of Public Utilities
- VA Columbia Gas of Virginia
- VA Roanoke Natural Gas 54.
- 55. VA – Southwestern Virginia Natural Gas
- VA Virginia Natural Gas 56.
- VA Washington Gas

## **Current Status of Bad Debt Cost Recovery**



### **Utilities with Bad Debt Cost Recovery**

VA – Washington Gas

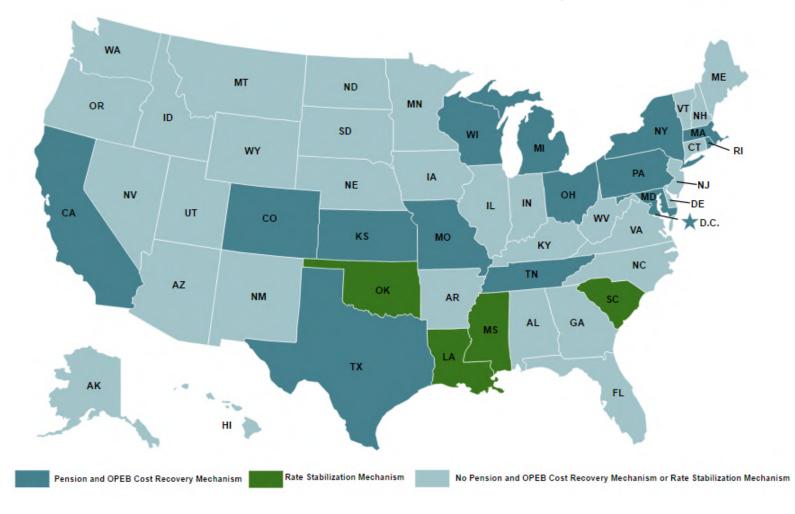
CT - Connecticut Natural Gas NE – Black Hills 1. 2. CT – Southern Connecticut Natural Gas 32. NE - SourceGas 3. CT – Yankee Gas 33. NH - Liberty Utilities DC – Washington Gas 4. 34. NH – Northern Utilities IL – Ameren Illinois 35. NV - Southwest Gas 6. IL – Peoples Gas 36. NY – Central Hudson Gas and Electric 7. IL - North Shore Gas NY – Consolidated Edison 37. 8. IL – Nicor Gas 38. NY – National Fuel Gas Distribution IN - Citizens Energy Group NY - National Grid Long Island 9. 39. 10. IN - NIPSCO 40. NY – National Grid Niagara Mohawk IN - Vectren North Indiana Gas 11. 41. NY – National Grid NYC 12. IN – Vectren South SIGECO NY - New York State Electric and Gas 42. 13. KS – Atmos Energy NY - Orange and Rockland Utilities 43. OH - Columbia Gas of Ohio 14. KS – Black Hills 44. KS - Kansas Gas Service OH – Dominion East Ohio 15. 45. KY - Atmos Energy 16. 46. OH – Eastern Natural Gas KY - Columbia Gas of Kentuckv 17. 47. OH - Pike Natural Gas KY - Delta Natural Gas 18. 48. OH – Vectren Energy Delivery of Ohio OK - CenterPoint Energy 19. KY – Duke Energy 49. 20. LA – CenterPoint Energy 50. OK – Oklahoma Natural Gas MA – Columbia Gas of Massachusetts 21. 51. RI – National Grid 22. MA – National Grid 52. SC - Piedmont Natural Gas 23. MA – NSTAR Gas 53. SC – South Carolina Electric and Gas 24. MD - Baltimore Gas and Electric TN – Atmos Energy 54. 25. MD – Washington Gas 55. TN – Chattanooga Gas 26. ME – Northern Utilities 56. TN – Piedmont Natural Gas 27. MI - DTE TX – Atmos Energy 57. 28. MI – Michigan Gas Utilities TX – Texas Gas Service 58. MS - CenterPoint Energy UT - Questar Gas 29. 59.

NC - Piedmont Natural Gas

30.

- VA Atmos Energy
- VA Columbia Gas of Virginia
- VA Virginia Natural Gas
- 64. WI – Wisconsin Gas

### **Current Status of Pension and OPEB Cost Recovery**

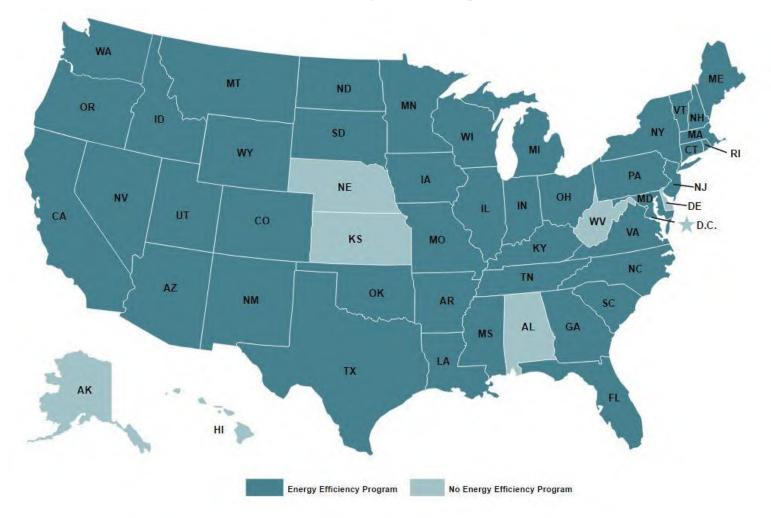


### **Utilities with Pension and OPEB Cost Recovery**

- CA San Diego Gas and Electric
- CA Southern California Gas
- CO Public Service Company of CO (Xcel) 27.
- DC Washington Gas
- 5. KS – Atmos Energy
- KS- Black Hills 6.
- KS Kansas Gas Service
- LA Atmos Energy
- LA CenterPoint Energy
- MA Columbia Gas of Massachusetts
- MA Fitchburg Gas and Electric Light Co. 35. WI Wisconsin Power and Light 11.
- MA National Grid 12.
- MA NSTAR Gas Co. 13.
- 14. MD – Baltimore Gas and Electric Co.
- 15. MI – DTE
- 16. MO – Ameren Missouri
- 17. MO – Laclede Gas
- 18. MO Missouri Gas Energy
- 19. MS Atmos Energy
- MS CenterPoint Energy 20.
- NY Central Hudson Gas and Electric
- NY Consolidated Edison
- NY Orange and Rockland Utilities
- NY National Grid NYC

- 26. OK CenterPoint Energy
- OK Oklahoma Natural Gas
- PA Philadelphia Gas Works
- 29. RI National Grid
- SC –Piedmont Natural Gas
- 31. SC South Carolina Electric and Gas
- 32. TN Piedmont Natural Gas
- 33. TX Atmos Energy
- 34. TX CenterPoint Energy

### **Current Status of Natural Gas Energy Efficiency Programs**



### **Utilities with Natural Gas Energy Efficiency Programs**

	1.	AR – Arkansas Oklahoma Gas	31.	IL – Nicor Gas	61.	MO – Empire Natural Gas
	2.	AR – SourceGas	32.	IL – North Shore Gas	62.	MO – Laclede Gas
	3.	AR – CenterPoint Energy	33.	IL – Peoples Gas	63.	MO – Missouri Gas Energy
	4.	AZ – Southwest Gas	34.	KY – Atmos Energy	64.	MS – Atmos Energy
	5.	CA – Pacific Gas and Electric	35.	KY – Columbia Gas of Kentucky	65.	MS – CenterPoint Energy
	6.	CA – San Diego Gas and Electric	36.	KY – Delta Natural Gas	66.	MT – Montana-Dakota Utilities
	7.	CA – Southern California Gas	37.	KY – Duke Energy Kentucky	67.	NC – Piedmont Natural Gas
	8.	CA – Southwest Gas	38.	KY – Louisville Gas and Electric	68.	NC – Public Service Co. of NC
	9.	CO – Atmos Energy	39.	LA – Atmos Energy	69.	ND – Montana-Dakota Utilities
	10.	CO – Black Hills Energy	40.	LA – CenterPoint Energy	70.	NH – Liberty Utilities
	11.	CO – Colorado Natural Gas	41.	MA – Columbia Gas of Massachusetts	71.	NH – Northern Utilities
	12.	CO – SourceGas	42.	MA – Berkshire Gas	72.	NJ – Elizabethtown Gas
	13.	CO – Public Service Co. of Colorado	43.	MA – Fitchburg Gas and Electric Light	73.	NJ – New Jersey Natural Gas
	14.	CT – Connecticut Natural Gas	44.	MA – Liberty Utilities	74.	NJ – Public Service Electric and Gas
	15.	CT – Southern Connecticut Natural Ga	s 45.	MA – National Grid Massachusetts	75.	NJ – South Jersey Gas
	16.	CT – Yankee Gas Service	46.	MA – NSTAR Gas and Electric	76.	NM – New Mexico Gas
	17.	FL – TECO Peoples Gas	47.	MD – Baltimore Gas and Electric	77.	NV – NV Energy
	18.	GA – Atlanta Gas Light	48.	MD – Columbia Gas of Maryland	78.	NV – Southwest Gas
	19.	IA – Liberty Utilities	49.	MD – Washington Gas	79.	NY – Central Hudson Gas and Electric
ı	20.	IA – Black Hills Energy	50.	ME – Northern Utilities	80.	NY – Consolidated Edison
ı	21.	IA – Interstate Power and Light	51.	MI – Consumers Energy	81.	NY – National Fuel Gas
	22.	IA – MidAmerican Energy	52.	MI – DTE	82.	NY – National Grid NY
ı	23.	IN – Citizens Energy Group	53.	MI – Michigan Gas Utilities	83.	NY – National Grid Long Island
ı	24.	IN – NIPSCO	54.	MN – CenterPoint Energy	84.	NY – National Grid Niagara Mohawk
	25.	IN – Vectren North Indiana Gas	55.	MN – Great Plains Natural Gas	85.	NY – Orange and Rockland Utilities
	26.	IN – Vectren South SIGECO	56.	MN – Interstate Power and Light	86.	NY – St. Lawrence Gas
	27.	ID – Avista Utilities	57.	MN – Minnesota Energy Resources	87.	OH – Columbia Gas of Ohio
	28.	ID – Intermountain Gas	58.	MN – Xcel Energy	88.	OH – Dominion East Ohio
	29.	IL – Ameren Illinois	59.	MO – Ameren	89.	OH – Duke Energy
	30.	IL – MidAmerican Energy	60.	MO – Liberty Utilities	90.	OH – Vectren Energy Delivery of Ohio

### **Utilities with Natural Gas Energy Efficiency Programs (Cont.)**

OK – CenterPoint Energy 112. UT – Questar Gas OK – Oklahoma Natural Gas 111. VA – Columbia Gas of Virginia OR – Avista Utilities 112. VA – Virginia Natural Gas 94. OR – Cascade Natural Gas 113. VA – Washington Gas 95. OR – Northwest Natural Gas 114. VT – Vermont Gas Systems 96. PA – Columbia Gas of Pennsylvania 115. WA – Avista Utilities PA – Equitable Gas 116. WA – Cascade Natural Gas PA - PECO 117. WA – Northwest Natural Gas 98. PA – Peoples Natural Gas 118. WA – Puget Sound Energy 100. PA – Philadelphia Gas Works **119**. WI – City Gas 101. PA – UGI Central Penn Gas 120. WI – Madison Gas And Electric 102. PA – UGI Penn Natural Gas 121. WI – Midwest Natural Gas 103. PA – UGI Utilities 122. WI – St. Croix Valley Natural Gas 104. RI – National Grid 123. WI – Superior Water, Light and Power 105. SC – Piedmont Natural Gas 124. WI – We Energies 106. SC – South Carolina Electric and Gas 125. WI – Wisconsin Light and Power 126. WI – Wisconsin Public Service 107. SD – MidAmerican Energy 108. SD – Montana-Dakota Utilities 127. WI – Xcel Energy 109. TN – Chattanooga Gas 128. WY - Montana-Dakota Utilities 110. TX – Atmos Energy 129. WY – Questar Gas 111. TX – Texas Gas Service