

Economics Group

MONTHLY OUTLOOK

U.S. Overview

Markets react to information that differs from what is expected. Already this year, we have witnessed a downgrade in expectations for equipment, nonresidential construction and residential spending, while comments by Federal Reserve officials suggest a path of Federal funds increases that exceed market expectations.

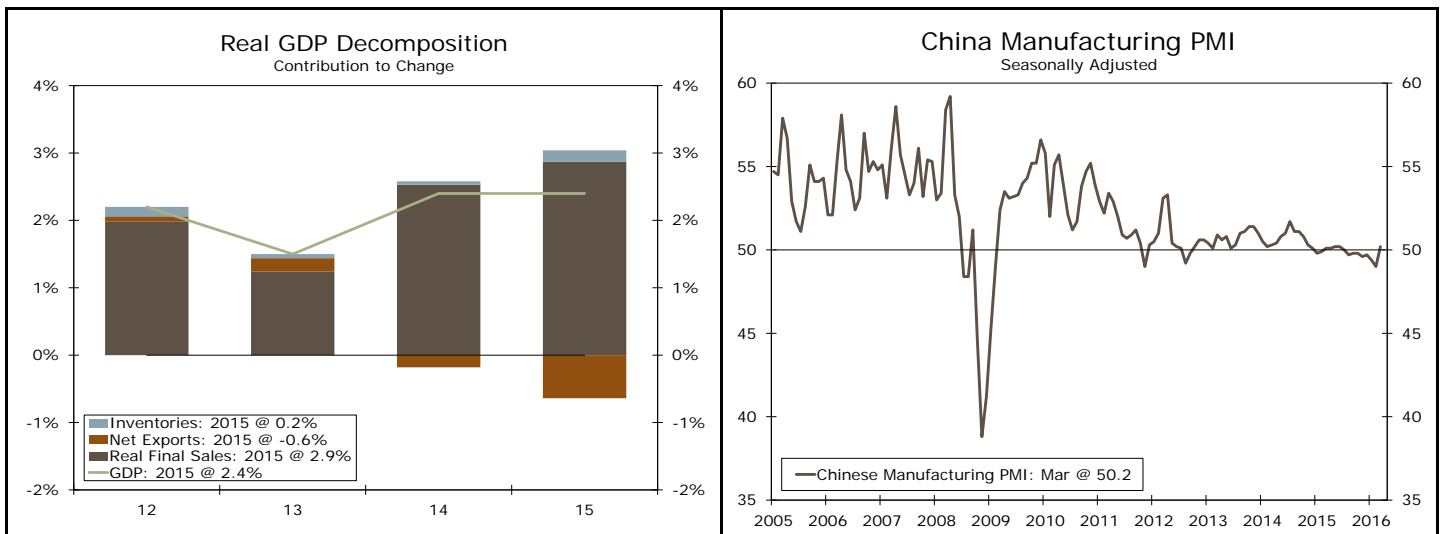
For domestic spending, consumer spending continues to support the growth narrative as job gains and wage improvements indicate continued real disposable income gains. Meanwhile, government spending will also take a step up. However, expectations for equipment and nonresidential structures have downshifted. The weakness in energy and broader commodity prices continues to weigh on these sectors. Overall, real final sales (left graph) remain in the 2.5 percent to 3 percent range.

Inflation patterns are another major uncertainty. Expectations are that the year-over-year inflation measures will rise. But at what pace? Moreover, what does that tell us about the outlook for 2017? Given the outlook for growth and inflation, we suspect that the Fed will enact two increases in the funds rate, which is roughly in-line with the pace indicated by the Fed's dot plot. Yet, we anticipate that longer U.S. benchmark rates will rise less so that the yield curve will flatten out in the year ahead. Given the rise in the funds rate and continued uncertainty over global growth, we anticipate the dollar's value will continue to rise in the year ahead.

International Overview

Global markets have calmed down considerably since the start of the year, with a second quarter that promises some cooler heads regarding the risks for the global economy. China surprised on the upside with March's manufacturing PMI crossing the 50-demarcation point, to 50.2, for the first time since July of last year (right graph). Additional "good" news recently has been the firming in oil prices, which largely preceded the decision by the U.S. Federal Open Market Committee (FOMC) to take back some of the expected increases in interest rates this year.

Still, it is too soon to celebrate as many concerns about the global economy remain. In Latin America, the Brazilian political crisis and economic meltdown continues with markets expecting President Rousseff to be impeached during the second or third quarter of the year. Moreover, the Brazilian economy continues to sink without anyone giving much credence to any potential for improvement. However, there seems to be a feeling that the worst has passed for emerging markets and the global economy and, even though it is probably too early to be sure, returns on emerging market bonds have improved considerably during the past several quarters. This tends to convey that capital seems to be "settling" down after several years of mayhem, as capital was reallocated across the global economy due to changes in monetary policy and growth prospects.



Source: U.S. Department of Commerce, IHS Global Insight and Wells Fargo Securities, LLC



Uncertainty Drives Volatility, Caution

Markets react to information that differs from what is expected. Entering this election year, the range of economic and political outcomes widens into an aging business cycle. Construction spending and factory orders both declined in February. As a result, we have witnessed a downgrade in expectations for first quarter equipment and nonresidential and residential construction spending.

On the plus side, consumer spending continues to support the growth narrative as job gains as well as wages and salary improvements indicate continued real disposable income gains. Meanwhile, government spending will also take a step up supported by gains in spending at the state and local level.

However, expectations for equipment and nonresidential structures have downshifted. The weakness in energy and broader commodity prices continues to weigh on these sectors. As a result, first quarter GDP is now expected to come in close to zero as trade subtracts about three-quarters of a percentage point from the overall GDP growth rate.

Weakness at the start of this year will impact business and consumer sentiment going forward, and therefore, the pace of consumer spending and business investment is likely to downshift relative to prior market expectations.

Inflation patterns are a major uncertainty. Expectations are that the year-over-year inflation measures will rise. But at what pace? Moreover, what does that tell us about the outlook for inflation in 2017?

For decision makers, the problem is that measured inflation will rise due to the low base of inflation a year ago. But, what about the underlying inflation fundamentals? Moreover, after the base effects, do these fundamentals signal further upward

inflation looking into 2017? Our view is that the upward push from employment costs will be modest and that the outlook for inflation will also be very modest.

Fed Actions and the Yield Curve

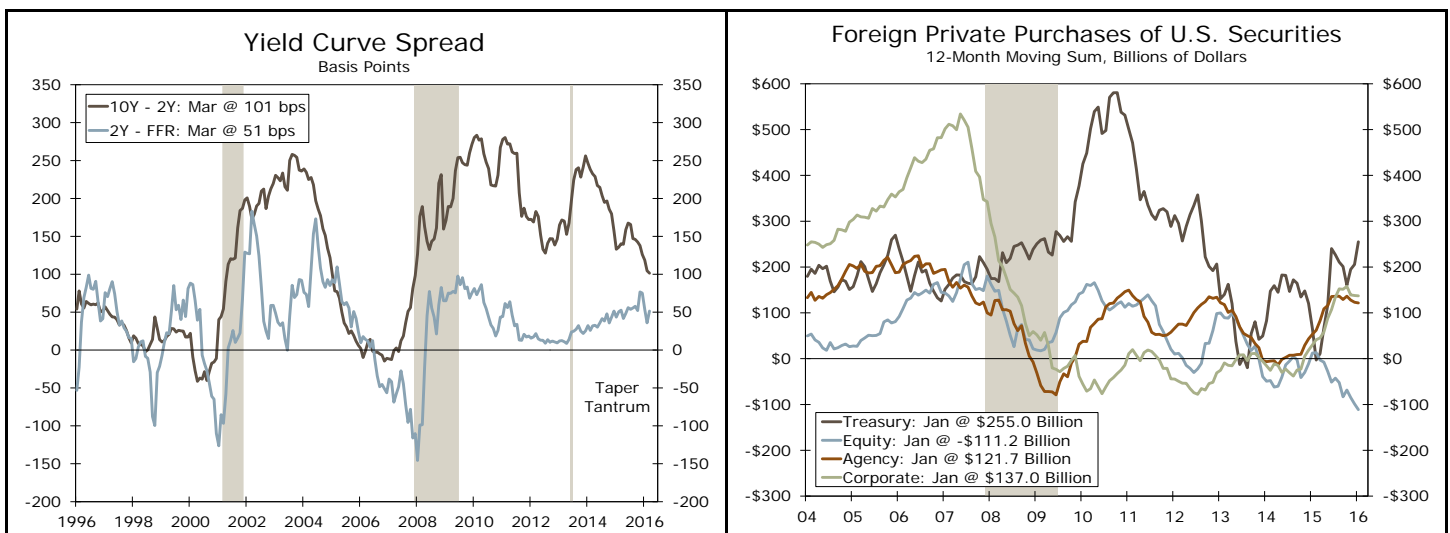
Although comments by Federal Reserve officials suggest a path of Federal funds increases that outperform market expectations, we anticipate that the Fed actions will remain at two increases in the funds rate this year, given the outlook for growth and inflation.

Meanwhile, we anticipate that longer U.S. benchmark rates will rise less so than the yield curve will flatten out in the year ahead. Foreign demand for U.S. financial assets, including agencies, corporates and U.S. Treasury debt, has been very positive so far. However, there is a risk that foreign interest, especially from China and Brazil, may drop off sharply and thereby raise long-term rates above a level consistent with nominal GDP growth and Fed actions.

The Dollar

Given the rise in the funds rate and continued uncertainty over global growth, we anticipate the dollar's value will continue to rise in the year ahead, although the extent of the gain will be more modest than in 2015.

Over the past year, the sharp rise in the dollar has been concentrated in three of our major trading partners—Canada, Mexico and the Eurozone. Meanwhile, the dollar appreciation against China and Japan has been quite modest. Yet, the driving factor for the U.S. trade position has been global growth and the disappointing outlook for growth limits trade improvement.



Source: U.S. Department of the Treasury, Federal Reserve Board and Wells Fargo Securities, LLC

Wells Fargo U.S. Economic Forecast																					
	Actual								Forecast								Actual		Forecast		
	2014				2015				2016				2017				2013	2014	2015	2016	2017
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q					
Real Gross Domestic Product (a)	-0.9	4.6	4.3	2.1	0.6	3.9	2.0	1.4	0.1	2.3	2.6	2.4	2.1	2.2	2.4	2.2	1.5	2.4	2.4	1.7	2.3
Personal Consumption	1.3	3.8	3.5	4.3	1.8	3.6	3.0	2.4	1.9	2.7	2.7	2.6	2.4	2.3	2.3	2.3	1.7	2.7	3.1	2.5	2.5
Business Fixed Investment	8.3	4.4	9.0	0.7	1.6	4.1	2.6	-2.1	-2.3	2.1	3.3	3.5	4.7	4.7	4.9	4.8	3.0	6.2	2.8	0.6	4.2
Equipment	3.5	6.5	16.4	-4.9	2.3	0.3	9.9	-2.1	-2.3	2.5	3.0	3.5	4.1	4.2	4.5	4.4	3.2	5.8	3.1	1.3	3.8
Intellectual Property Products	7.8	4.9	6.5	6.9	7.4	8.3	-0.8	-0.1	3.2	6.0	5.8	5.3	4.9	4.7	4.8	4.7	3.8	5.2	5.7	3.3	5.1
Structures	19.1	-0.2	-1.9	4.3	-7.4	6.2	-7.2	-5.1	-10.5	-5.0	0.0	0.5	6.0	6.0	6.0	6.0	1.6	8.1	-1.5	-5.1	3.5
Residential Construction	-2.7	10.4	3.4	9.9	10.1	9.4	8.2	10.1	9.0	9.0	9.0	8.5	8.5	8.5	8.0	8.0	9.5	1.8	8.9	9.1	8.5
Government Purchases	0.0	1.2	1.8	-1.4	-0.1	2.6	1.8	0.1	0.8	2.1	1.8	1.7	1.2	1.0	1.0	0.9	-2.9	-0.6	0.7	1.3	1.4
Net Exports	-434.0	-443.3	-429.1	-463.6	-541.2	-534.6	-546.1	-551.9	-584.3	-599.0	-616.8	-634.7	-654.2	-671.6	-687.7	-701.7	-417.5	-442.5	-543.5	-608.7	-678.8
Pct. Point Contribution to GDP	-1.4	-0.2	0.4	-0.9	-1.9	0.2	-0.3	-0.1	-0.8	-0.4	-0.4	-0.4	-0.5	-0.4	-0.4	-0.3	0.2	-0.2	-0.6	-0.4	-0.4
Inventory Change	36.9	77.1	79.9	78.2	112.8	113.5	85.5	78.3	70.0	65.0	70.0	70.0	64.0	60.0	61.0	55.0	61.4	68.0	97.5	68.8	60.0
Pct. Point Contribution to GDP	-1.3	1.1	0.0	0.0	0.9	0.0	-0.7	-0.2	-0.2	-0.1	0.1	0.0	-0.1	-0.1	0.0	-0.1	0.0	0.0	0.2	-0.2	-0.1
Nominal GDP (a)	0.6	6.9	6.0	2.2	0.8	6.1	3.3	2.3	0.6	4.6	4.7	4.3	4.2	4.2	4.4	4.5	3.1	4.1	3.5	3.1	4.3
Real Final Sales	0.4	3.5	4.3	2.1	-0.2	3.9	2.7	1.6	0.4	2.5	2.5	2.4	2.3	2.3	2.3	2.4	1.4	2.4	2.3	1.9	2.4
Retail Sales (b)	2.2	4.5	4.4	4.3	2.8	1.9	2.3	1.9	2.8	2.2	2.1	2.7	3.9	4.1	4.2	4.2	3.9	3.9	2.2	2.5	4.1
Inflation Indicators (b)																					
PCE Deflator	1.3	1.7	1.6	1.1	0.2	0.3	0.3	0.5	1.1	1.1	1.3	1.6	2.0	1.9	2.0	2.1	1.4	1.4	0.3	1.3	2.0
Consumer Price Index	1.4	2.0	1.8	1.2	-0.1	0.0	0.1	0.4	1.2	1.2	1.5	1.9	2.4	2.3	2.2	2.2	1.5	1.6	0.1	1.4	2.3
"Core" Consumer Price Index	1.6	1.9	1.8	1.7	1.7	1.8	1.8	2.0	2.3	2.2	2.3	2.2	2.1	2.1	2.1	2.2	1.8	1.7	1.8	2.3	2.1
Producer Price Index (Final Demand)	1.4	2.0	1.8	1.2	-0.5	-0.8	-1.0	-1.2	0.0	0.4	0.8	1.8	2.3	2.2	2.2	2.2	1.4	1.6	-0.9	0.8	2.2
Employment Cost Index	1.8	2.0	2.2	2.3	2.6	2.0	2.0	2.0	1.9	2.3	2.4	2.5	2.6	2.6	2.7	2.8	1.9	2.1	2.1	2.3	2.7
Real Disposable Income (a)	4.0	3.0	2.7	4.7	3.9	2.6	3.2	2.3	3.4	2.8	2.8	2.8	2.7	2.7	2.6	2.6	-1.4	2.7	3.4	2.9	2.7
Nominal Personal Income (b)	3.9	4.2	4.5	5.2	4.5	4.5	4.5	4.0	4.2	4.0	4.1	4.4	4.5	4.5	4.4	4.4	1.1	4.4	4.4	4.2	4.4
Industrial Production (a)	2.2	5.5	2.5	3.7	-1.9	-2.7	1.5	-3.2	-0.6	1.4	1.1	2.2	2.6	2.2	1.1	2.5	1.9	2.9	0.3	-0.2	2.0
Capacity Utilization	77.6	78.4	78.4	78.6	77.7	76.6	76.6	75.8	75.6	75.9	76.1	76.6	76.8	77.0	77.2	77.3	76.9	78.2	76.7	76.1	77.1
Corporate Profits Before Taxes (b)	-3.6	1.2	5.8	3.4	4.6	0.6	-5.1	-11.5	-3.3	-0.7	1.9	1.8	1.5	1.8	1.7	1.7	2.0	1.7	-3.1	-0.1	1.6
Corporate Profits After Taxes	-7.5	-2.6	4.9	2.7	4.7	-0.6	-8.2	-15.0	-4.3	-2.2	0.8	1.1	1.1	1.4	1.4	1.4	1.2	-0.6	-5.1	-1.2	1.3
Federal Budget Balance (c)	-241	47	-117	-177	-263	123	-123	-216	-187	13	-185	-180	-180	-40	-190	-160	-680	-484	-439	-575	-590
Current Account Balance (d)	-96.4	-92.0	-97.9	-103.1	-118.0	-110.8	-129.9	-125.3	-130.0	-135.0	-140.0	-145.0	-150.0	-155.0	-155.0	-160.0	-376.8	-389.5	-484.1	-550.0	-620.0
Trade Weighted Dollar Index (e)	76.7	75.8	81.1	85.1	92.1	90.0	92.3	94.5	89.8	89.8	91.5	93.3	94.8	96.3	97.0	96.5	75.9	78.4	91.1	91.1	96.1
Nonfarm Payroll Change (f)	209	276	245	274	190	251	192	282	209	185	185	180	175	170	165	160	193	251	229	190	168
Unemployment Rate	6.7	6.2	6.1	5.7	5.6	5.4	5.2	5.0	4.9	4.8	4.7	4.6	4.5	4.5	4.4	4.4	7.4	6.2	5.3	4.7	4.5
Housing Starts (g)	0.93	0.98	1.03	1.06	0.98	1.16	1.16	1.14	1.17	1.22	1.23	1.24	1.24	1.25	1.26	1.28	0.92	1.00	1.11	1.20	1.25
Light Vehicle Sales (h)	15.8	16.5	16.7	16.8	16.7	17.1	17.8	17.8	17.1	17.2	17.1	17.0	16.9	16.8	16.7	16.6	15.5	16.4	17.3	17.1	16.8
Crude Oil - Brent - Front Contract (i)	107.6	109.5	103.7	77.3	55.6	63.9	51.6	45.0	35.2	38.5	43.5	46.5	47.0	51.0	57.0	52.0	108.4	99.5	54.0	40.9	51.8
Quarter-End Interest Rates (j)																					
Federal Funds Target Rate	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.50	0.50	0.75	0.75	1.00	1.25	1.50	1.75	2.00	0.25	0.25	0.27	0.75	1.63
3 Month LIBOR	0.23	0.23	0.24	0.26	0.27	0.28	0.33	0.61	0.63	0.95	0.95	1.20	1.45	1.70	1.95	2.20	0.27	0.23	0.32	0.93	1.83
Prime Rate	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.50	3.50	3.75	3.75	4.00	4.25	4.50	4.75	5.00	3.25	3.25	3.27	3.75	4.63
Conventional Mortgage Rate	4.34	4.16	4.16	3.86	3.77	3.98	3.89	3.96	3.69	3.89	3.95	4.06	4.12	4.26	4.33	4.42	3.98	4.17	3.85	3.90	4.28
3 Month Bill	0.05	0.04	0.02	0.04	0.03	0.01	0.00	0.16	0.21	0.61	0.69	0.87	1.15	1.30	1.57	1.87	0.06	0.03	0.05	0.60	1.47
6 Month Bill	0.07	0.07	0.03	0.12	0.14	0.11	0.08	0.49	0.39	0.67	0.78	0.92	1.18	1.40	1.63	1.95	0.09	0.06	0.17	0.69	1.54
1 Year Bill	0.13	0.11	0.13	0.25	0.26	0.28	0.33	0.65	0.59	0.82	0.93	1.01	1.29	1.52	1.79	2.03	0.13	0.12	0.32	0.84	1.66
2 Year Note	0.44	0.47	0.58	0.67	0.56	0.64	0.64	1.06	0.73	1.08	1.20	1.34	1.57	1.81	1.97	2.08	0.31	0.46	0.69	1.09	1.86
5 Year Note	1.73	1.62	1.78	1.65	1.37	1.63	1.37	1.76	1.21	1.58	1.67	1.74	1.84	1.94	2.05	2.14	1.17	1.64	1.53	1.55	1.99
10 Year Note	2.73	2.53	2.52	2.17	1.94	2.35	2.06	2.27	1.78	1.94	2.01	2.13	2.22	2.38	2.47	2.54	2.35	2.54	2.14	1.97	2.40
30 Year Bond	3.56	3.34	3.21	2.75	2.54	3.11	2.87	3.01	2.61	2.69	2.78	2.84	2.89	2.95	3.00	3.05	3.45	3.34	2.84	2.73	2.97

Forecast as of: April 6, 2016

- (a) Compound Annual Growth Rate Quarter-over-Quarter
- (b) Year-over-Year Percentage Change
- (c) Quarterly Sum - Billions USD; Annual Data Represents Fiscal Yr.
- (d) Quarterly Sum - Billions USD
- (e) Federal Reserve Major Currency Index, 1973=100 - Quarter End
- (f) Average Monthly Change
- (g) Millions of Units - Annual Data - Not Seasonally Adjusted
- (h) Quarterly Data - Average Monthly SAAR: Annual Data - Actual Total Vehicles Sold
- (i) Quarterly Average of Daily Close
- (j) Annual Numbers Represent Averages

Source: U.S. Department of Commerce, U.S. Department of Labor, Federal Reserve Board, IHS Global Insight and Wells Fargo Securities, LLC

Relative Calm after the Tempest

Global markets have calmed down considerably since the start of the year with a second quarter that promises some cooler heads regarding the risks for the global economy. For starters, China surprised on the upside with March’s manufacturing PMI crossing the 50-demarkation point, to 50.2, for the first time since July of last year, while the service sector PMI strengthened further, to the highest reading since December 2015. Still, the level for the manufacturing PMI is just slightly above 50, which is marginally better compared to the previous month’s reading of 49.0. However, the fact that it is not falling anymore could be a signal that the measures taken by the Chinese government are starting to make some inroads. The global economy and emerging markets in particular, are probably happy to see some improvement in the growth prospects of the Chinese economy.

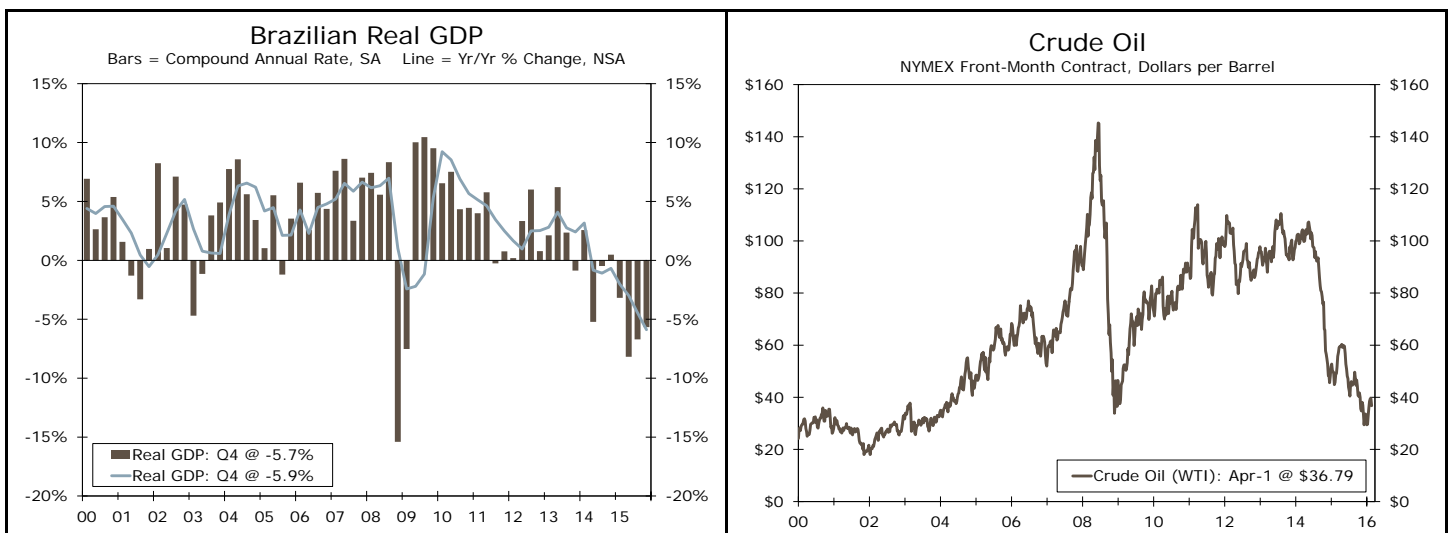
Additional “good” news recently has been the firming in oil prices, which largely preceded the decision by the U.S. FOMC to take back some of the expected increases in interest rates this year, from a potential of four rate increases to only two. Furthermore, the more dovish stance by the Federal Reserve has also pushed the U.S. dollar lower, which is a bit more supportive of at least stable commodity prices.

Still, it is too soon to celebrate as many concerns about the global economy remain. In Latin America, the Brazilian political crisis and economic meltdown continues with markets expecting President Rousseff to be impeached during the second or third quarter of the year. Moreover, the economy continues to sink without anyone giving much credence to any potential for improvement. Meanwhile, markets are also watching the performance of the Mexican economy as the government has had to continuously decrease fiscal expenditures to adjust to the collapse in oil prices over the past almost two years. At the same time, Moody’s decision to

change Mexico’s outlook to negative from stable is another indication that Brazil is not the only one facing issues due to weak global growth and still “low” petroleum prices.

On the more positive side, Argentina’s senate just approved the government’s proposal to end the fight with the “vulture” funds after more than 10 years of litigation. With these changes to Argentine laws that prevented a solution, markets are expecting the country to start taping global credit markets and credit markets are “salivating” with the potential of higher yields as the country issues debt in the international market for the first time since before 2001. Of course, the return to the international financial markets will not be cheap for the country in terms of yields as well as indebtedness but it is something that needed to be done sooner rather than later. Furthermore, although Argentina’s economy is expected to improve, the new administration will have to untangle the cobweb of subsidies created by the previous administration, which means inflation will continue to rise in the short to medium term.

There seems to be a feeling that the worse has passed for emerging markets and the global economy and even though it is probably too early to be sure, returns on emerging market bonds have improved considerably during the past several quarters. This tends to convey that capital seems to be “settling” down after several years of mayhem as capital was reallocated across the global economy due to changes in monetary policy and growth prospects. Still, it is too early to know if this better expectation on emerging market potential growth is sustainable or just a temporary hiatus in the capital reallocation process or if it has teeth. However, for now, markets seem to be giving it the benefit of doubt, and that could be all that is needed to give a boost to expectations on future growth after a very difficult couple of years.



Source: IHS Global Insight and Wells Fargo Securities, LLC

Wells Fargo International Economic Forecast

(Year-over-Year Percent Change)

	GDP			CPI		
	2015	2016	2017	2015	2016	2017
Global (PPP Weights)	2.9%	2.8%	3.2%	3.3%	3.3%	3.6%
Global (Market Exchange Rates)	2.8%	2.5%	3.0%	n/a	n/a	n/a
Advanced Economies ¹	2.0%	1.7%	2.2%	0.2%	0.9%	1.8%
United States	2.4%	1.7%	2.3%	0.1%	1.4%	2.3%
Eurozone	1.5%	1.7%	2.0%	0.0%	0.3%	1.1%
United Kingdom	2.3%	1.6%	1.9%	0.1%	0.7%	1.5%
Japan	0.5%	-0.1%	0.7%	0.8%	0.4%	1.1%
Korea	2.6%	2.7%	3.1%	0.7%	0.9%	1.9%
Canada	1.2%	1.8%	2.5%	1.1%	1.3%	1.9%
Developing Economies ¹	3.7%	3.8%	4.2%	6.1%	5.6%	5.3%
China	6.9%	6.3%	5.8%	1.4%	2.0%	1.9%
India ²	7.2%	7.5%	7.2%	6.0%	4.9%	4.9%
Mexico	2.5%	2.4%	2.6%	2.7%	3.2%	3.2%
Brazil	-3.9%	-3.5%	1.4%	9.0%	9.6%	8.4%
Russia	-3.7%	-0.5%	2.2%	15.6%	7.4%	6.1%

Forecast as of: April 6, 2016

¹Aggregated Using PPP Weights²Forecasts Refer to Fiscal Year

Wells Fargo International Interest Rate Forecast

(End of Quarter Rates)

	3-Month LIBOR						10-Year Bond				
	2016			2017			2016		2017		
	Q2	Q3	Q4	Q1	Q2	Q3	Q2	Q3	Q4	Q1	Q2
U.S.	0.95%	0.95%	1.20%	1.45%	1.70%	1.95%	1.94%	2.01%	2.13%	2.22%	2.38%
Japan	-0.02%	-0.05%	-0.10%	-0.10%	-0.10%	-0.05%	-0.10%	-0.10%	-0.05%	0.00%	0.02%
Euroland ¹	-0.27%	-0.30%	-0.30%	-0.30%	-0.25%	-0.20%	0.15%	0.20%	0.30%	0.40%	0.55%
U.K.	0.58%	0.58%	0.65%	0.90%	0.95%	1.15%	1.50%	1.60%	1.70%	2.00%	2.10%
Canada ²	0.90%	0.90%	0.95%	1.00%	1.25%	1.50%	1.30%	1.35%	1.50%	1.70%	1.80%

Forecast as of: April 6, 2016

¹ 10-year German Government Bond Yield ² 3-Month Canada Bankers' Acceptances

Source: Wells Fargo Securities, LLC

Wells Fargo Securities, LLC Economics Group

Diane Schumaker-Krieg	Global Head of Research, Economics & Strategy	(704) 410-1801 (212) 214-5070	diane.schumaker@wellsfargo.com
John E. Silvia, Ph.D.	Chief Economist	(704) 410-3275	john.silvia@wellsfargo.com
Mark Vitner	Senior Economist	(704) 410-3277	mark.vitner@wellsfargo.com
Jay H. Bryson, Ph.D.	Global Economist	(704) 410-3274	jay.bryson@wellsfargo.com
Sam Bullard	Senior Economist	(704) 410-3280	sam.bullard@wellsfargo.com
Nick Bennenbroek	Currency Strategist	(212) 214-5636	nicholas.bennenbroek@wellsfargo.com
Anika R. Khan	Senior Economist	(704) 410-3271	anika.khan@wellsfargo.com
Eugenio J. Alemán, Ph.D.	Senior Economist	(704) 410-3273	eugenio.j.aleman@wellsfargo.com
Azhar Iqbal	Econometrician	(704) 410-3270	azhar.iqbal@wellsfargo.com
Tim Quinlan	Senior Economist	(704) 410-3283	tim.quinlan@wellsfargo.com
Eric Viloría, CFA	Currency Strategist	(212) 214-5637	eric.viloría@wellsfargo.com
Sarah House	Economist	(704) 410-3282	sarah.house@wellsfargo.com
Michael A. Brown	Economist	(704) 410-3278	michael.a.brown@wellsfargo.com
Erik Nelson	Economic Analyst	(704) 410-3267	erik.f.nelson@wellsfargo.com
Alex Moehring	Economic Analyst	(704) 410-3247	alex.v.moehring@wellsfargo.com
Misa Batcheller	Economic Analyst	(704) 410-3060	misa.n.batcheller@wellsfargo.com
Michael Pugliese	Economic Analyst	(704) 410-3156	michael.d.pugliese@wellsfargo.com
Julianne Causey	Economic Analyst	(704) 410-3281	julianne.causey@wellsfargo.com
Donna LaFleur	Executive Assistant	(704) 410-3279	donna.lafleur@wellsfargo.com
Dawne Howes	Administrative Assistant	(704) 410-3272	dawne.howes@wellsfargo.com

Wells Fargo Securities Economics Group publications are produced by Wells Fargo Securities, LLC, a U.S. broker-dealer registered with the U.S. Securities and Exchange Commission, the Financial Industry Regulatory Authority, and the Securities Investor Protection Corp. Wells Fargo Securities, LLC, distributes these publications directly and through subsidiaries including, but not limited to, Wells Fargo & Company, Wells Fargo Bank N.A., Wells Fargo Advisors, LLC, Wells Fargo Securities International Limited, Wells Fargo Securities Asia Limited and Wells Fargo Securities (Japan) Co. Limited. Wells Fargo Securities, LLC, is registered with the Commodities Futures Trading Commission as a futures commission merchant and is a member in good standing of the National Futures Association. Wells Fargo Bank, N.A. is registered with the Commodities Futures Trading Commission as a swap dealer and is a member in good standing of the National Futures Association. Wells Fargo Securities, LLC, and Wells Fargo Bank, N.A. are generally engaged in the trading of futures and derivative products, any of which may be discussed within this publication. Wells Fargo Securities, LLC does not compensate its research analysts based on specific investment banking transactions. Wells Fargo Securities, LLC's research analysts receive compensation that is based upon and impacted by the overall profitability and revenue of the firm which includes, but is not limited to investment banking revenue. The information and opinions herein are for general information use only. Wells Fargo Securities, LLC does not guarantee their accuracy or completeness, nor does Wells Fargo Securities, LLC assume any liability for any loss that may result from the reliance by any person upon any such information or opinions. Such information and opinions are subject to change without notice, are for general information only and are not intended as an offer or solicitation with respect to the purchase or sales of any security or as personalized investment advice. Wells Fargo Securities, LLC is a separate legal entity and distinct from affiliated banks and is a wholly owned subsidiary of Wells Fargo & Company © 2016 Wells Fargo Securities, LLC.

Important Information for Non-U.S. Recipients

For recipients in the EEA, this report is distributed by Wells Fargo Securities International Limited ("WFSIL"). WFSIL is a U.K. incorporated investment firm authorized and regulated by the Financial Conduct Authority. The content of this report has been approved by WFSIL a regulated person under the Act. For purposes of the U.K. Financial Conduct Authority's rules, this report constitutes impartial investment research. WFSIL does not deal with retail clients as defined in the Markets in Financial Instruments Directive 2007. The FCA rules made under the Financial Services and Markets Act 2000 for the protection of retail clients will therefore not apply, nor will the Financial Services Compensation Scheme be available. This report is not intended for, and should not be relied upon by, retail clients. This document and any other materials accompanying this document (collectively, the "Materials") are provided for general informational purposes only.

SECURITIES: NOT FDIC-INSURED/NOT BANK-GUARANTEED/MAY LOSE VALUE

WELLS
FARGO

SECURITIES