

#2016-Q3

Global Stocks, Bonds, and Consumers

Leading Indicators (SBCLI©)

3rd Quarter 2016 Tables, Charts, and Commentary

17 Trillion Dollar Economies

Douglas T. Breeden*

September, 2016 partial update for Southeast Asia Talks

*William W. Priest Professor of Finance, Duke University, Fuqua School of Business, and
Co-founder and Senior Research Consultant, Amundi Smith Breeden

**I thank Xingchen Ling, Lu Liu and Song Xiao of Duke for excellent research assistance. This research began in 2011-2013 at MIT Sloan with the academic paper entitled "Consumption As A Leading Indicator," followed by the applied paper "A Stocks, Bonds, Consumers Leading Indicator," which can be found at dougbreeden.net. Most recently, my Duke article on "Consumer Signals" was published in the Journal of Asset Management, July 2016.

Overview of Stocks, Bonds, and Consumers Leading Indicators (SBCLI©)

Major indexes of leading economic indicators often have 10 or more variables, with non-intuitive weights, giving users little intuition about the daily movements. The most well-known index is by the Conference Board, which has the following variables and weights for their venerable USA Leading Economic Index (Source: their website, August 3, 2016):

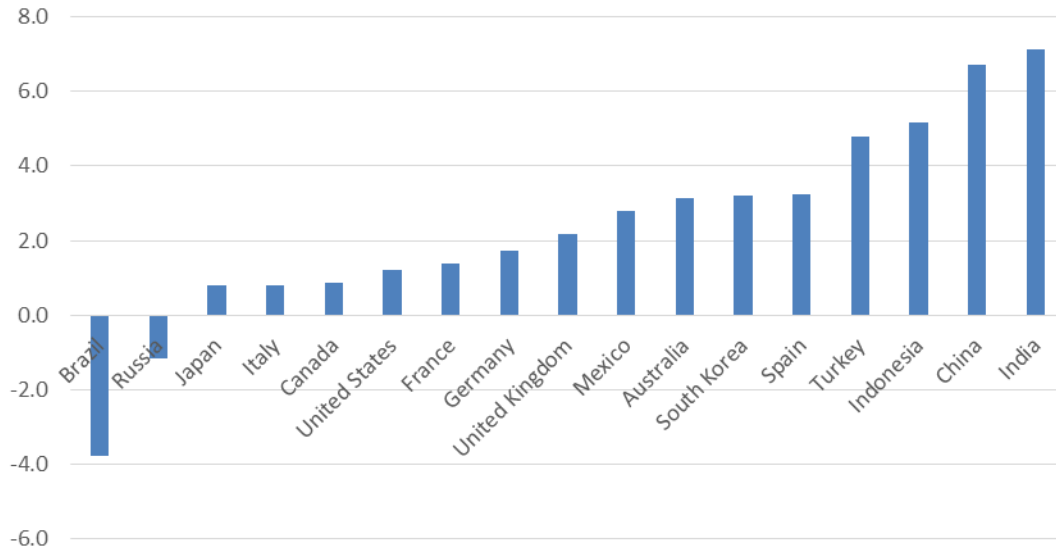
<u>Leading Economic Index Variable</u>	<u>Weight</u>
1. Average weekly hours, manufacturing	0.2741
2. Average weekly initial claims for unemployment insurance	0.0329
3. Manufacturers' new orders, consumer goods and materials	0.0822
4. ISM® new orders index	0.1594
5. Manufacturers new orders, nondefense capital goods excl. aircraft	0.0409
6. Building permits, new private housing units	0.0310
7. Stock prices, 500 common stocks	0.0397
8. <i>Leading Credit Index™</i>	0.0824
9. Interest rate spread, 10-year Treasury bonds less federal funds	0.1115
10. Avg. consumer expectations for business conditions	0.1459

Breeden (2014) presented and implemented a model with only **3 key indicators: (1) a Stock market signal, (2) a Bond market signal, and (3) a Consumer spending signal (SBCLI©)**. All three key variables are quite intuitive and reflect (S) aggregates of millions of stock investors' views, (B) interest rates that reflect bond investors' and central banks' moves, and (C) consumer spending that reflects the information and decisions of millions of individual consumers. SBCLI© uses standardized Z-scores that measure how many standard deviations away from their means are recent (2, 4, and 6-quarter) real stock returns, term structure slopes (advanced economies) or sovereign debt spreads (emerging economies), and (2 and 4-quarter) deviations of real consumer spending growth from that expected from real stock market returns. SBCLI© weights are quite simple and equal 2 for the standardized stock market signal, and 1 each for bond and consumer signals. In the "Consumer Signals" article ([Journal of Asset Management](#) July 2016), Breeden found performance of the simple 3-variable model that was similar that for Conference Board and OECD leading indexes.

I. Executive Summary

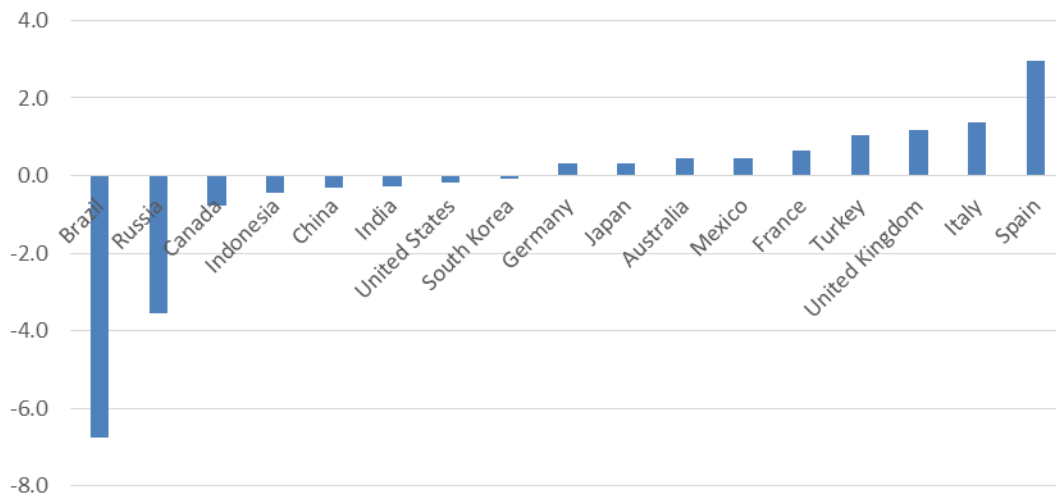
Updated analysis to September, 2016

Real GDP Growth Last 4 Quarters to 2016-Q2



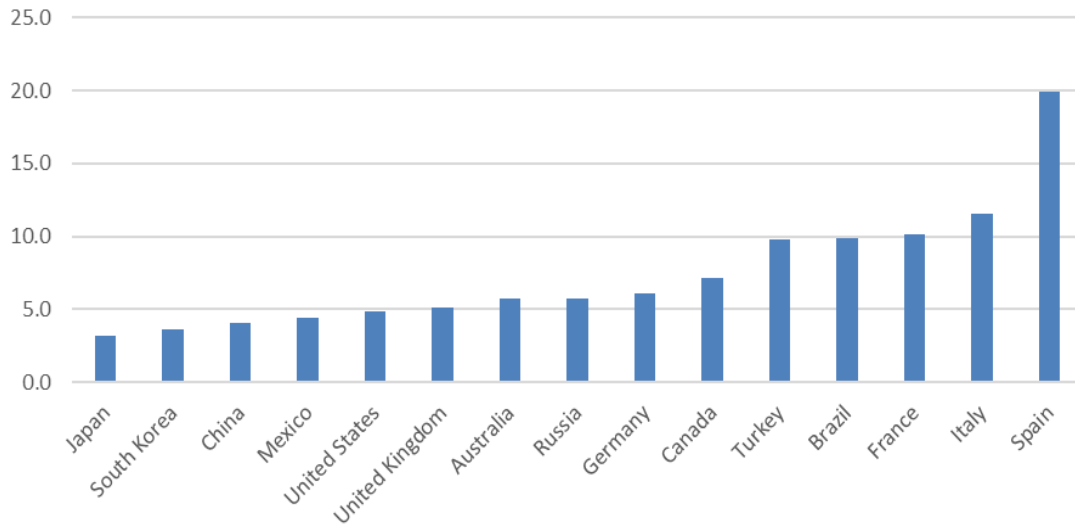
India, China and Indonesia have been the fastest growing of the 17 TDEs, with growth of 7.8% by India. Brazil and Russia have been in sharp recessions, with real GDP contractions of 4% in Brazil.

Real GDP Growth Deviation from 10 Year Trend
(4 Quarters to 2016-Q2. 3 Year Trend for China)



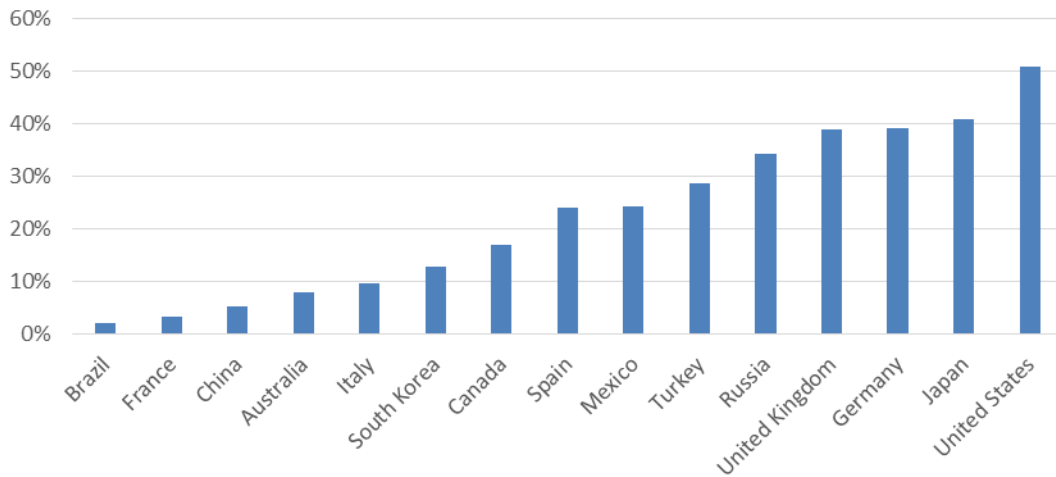
Compared to their 10-year trends (3 years for China), growth was above trend most in Spain, Italy and the U.K. in the 4 quarters ending 2016-Q2. Brazil and Russia again had the worst deviations in growth from their long-term trends.

Global Unemployment Rates 2016-Q2 (%)



Unemployment rates are highest in Spain, Italy, France, Brazil and Turkey. Spain's 20% rate is down from a peak over 26%, a Great Depression value. Japan and South Korea have the lowest unemployment rates in the 3%.

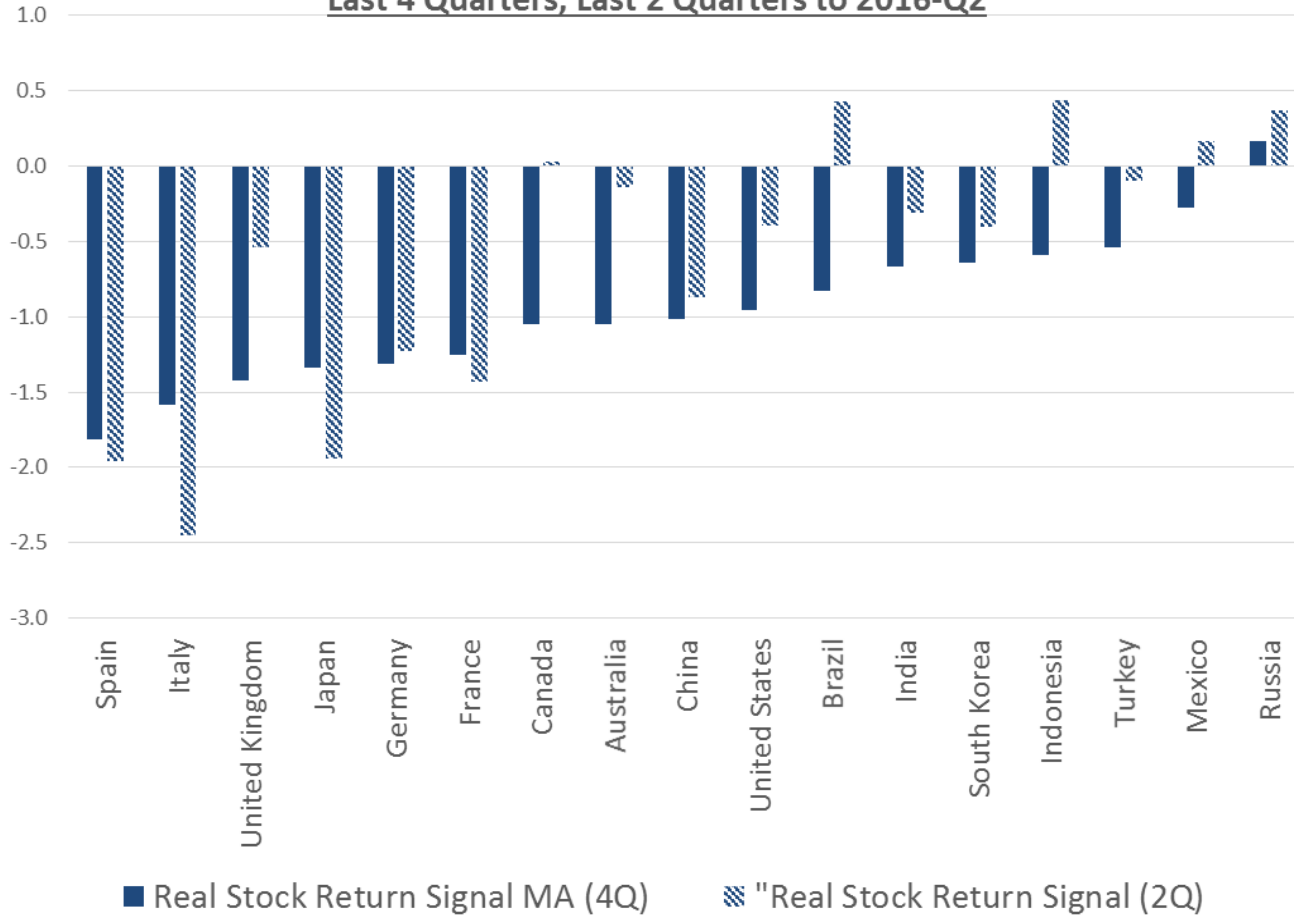
Global Unemployment Rates. 2016-Q2
Improvements: Percent Off Peak



The unemployment rate in the USA is down by 50% from 10% to 5%, and in Japan, Germany and the United Kingdom unemployment is 40% below 10-year peak levels. Spain is down 25% from its peak level.

Real Stock Return Premium Signals Ranked by Country

Last 4 Quarters, Last 2 Quarters to 2016-Q2



In the first half of 2016, emerging markets stocks led the pack, as Russia, Indonesia, Brazil had nice gains and Turkey and India had small losses.

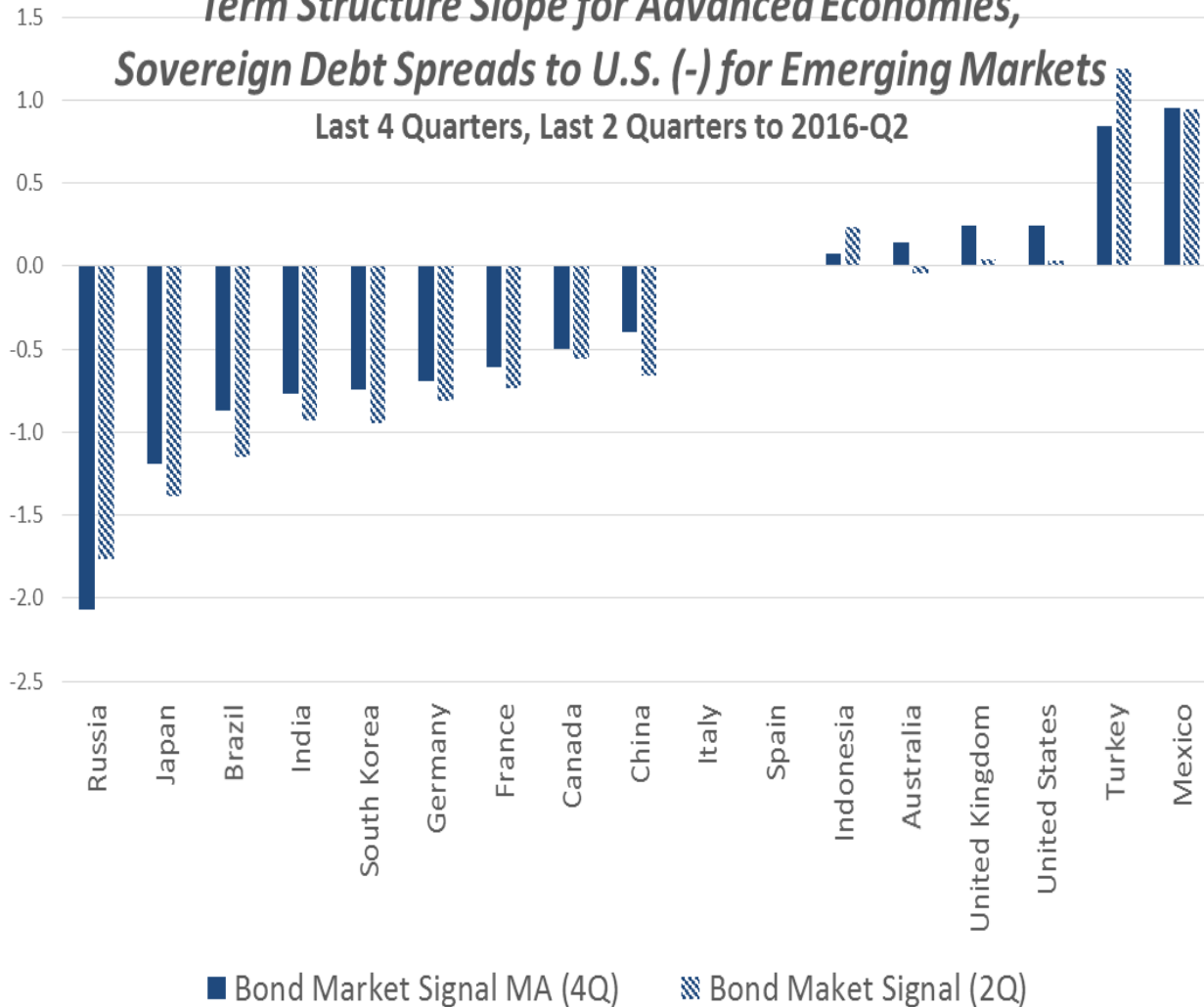
In advanced economies, stocks have fell or did not make 5% risk premiums. Least bad performers were USA, Australia, Canada and the U.K.

Bond Market Signals Ranked by Country:

Term Structure Slope for Advanced Economies,

Sovereign Debt Spreads to U.S. (-) for Emerging Markets

Last 4 Quarters, Last 2 Quarters to 2016-Q2



In the first half of 2016, bond market signals were most positive for Mexico and Turkey, as their sovereign debt spreads tightened a lot. After the failed coup in July, Turkey's spread widened out 79 basis points, as risk is high.

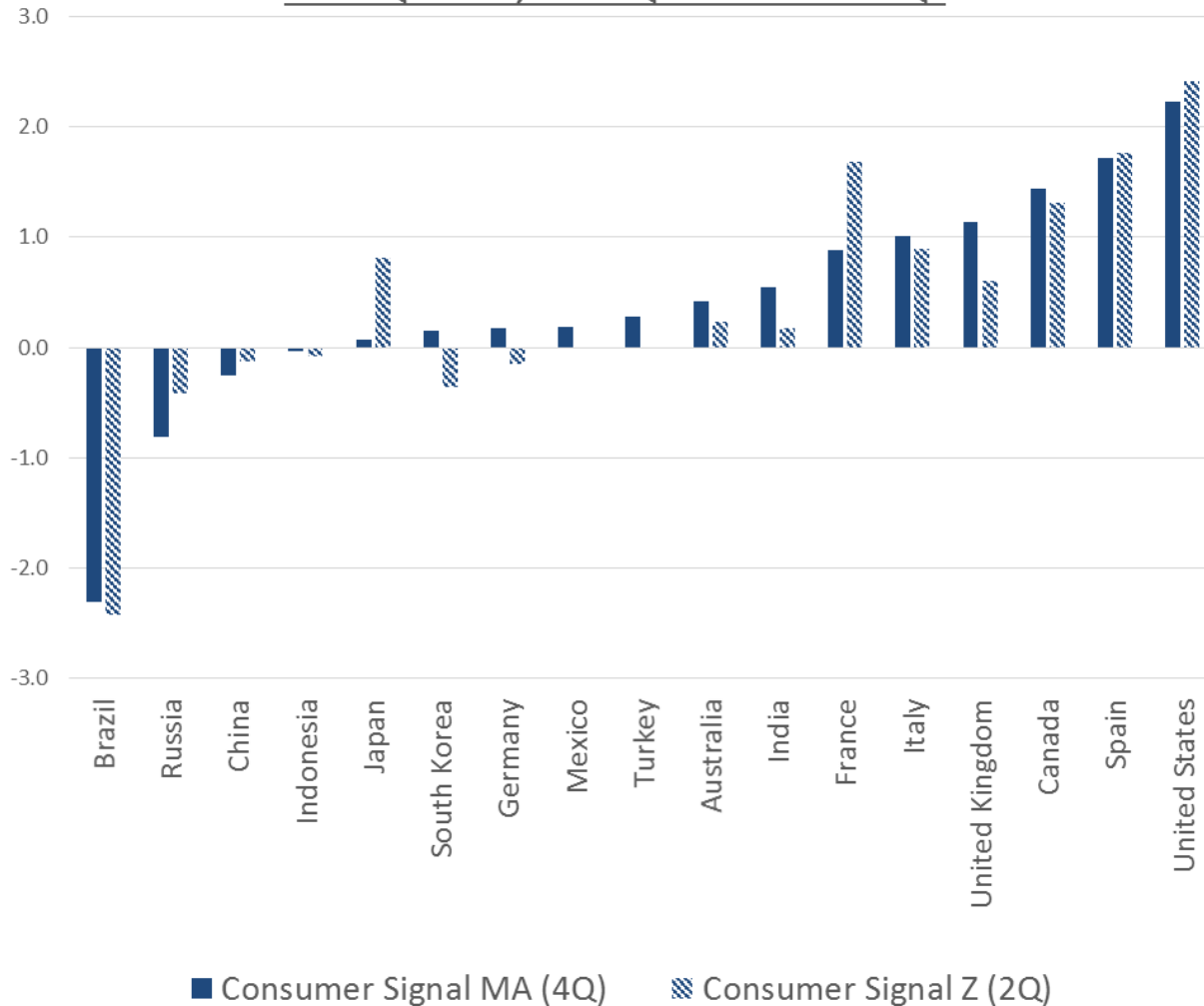
Russia, Brazil and India have negative scores, as their sovereign debt spreads are wide.

Germany, France and South Korea have negative bond scores due to very flat term structure slopes. U.S., UK were near normal

Note: no bond score is used for Italy and Spain, as effects of credit risk make slope inappropriate, and EU support affects sovereign debt spread.

Consumer Signals (4Q, 2Q) Ranked by Country

Last 4 Quarters, Last 2 Quarters to 2016-Q2



Despite underperforming stock markets, consumer spending signals were strong in several countries, led by USA, Spain, Canada, UK, Italy, and France.

Consumer signals were extremely negative in Brazil and also negative in Russia. These effects are beyond the negative stock market performances in those countries.

Global Stock Market Performance and SBCL in 2016, Pre and Post Brexit Vote

9/8/2016 13:17

Douglas T. Breeden, Duke University and Amundi Smith Breeden

Major Stock Price Indexes:		Americas				Europe							AustralAsia					UK FTSE250	
		United States	Canada	Brazil	Mexico	France	Germany	Italy	Spain	United Kingdom	Russia	Turkey	Japan	Australia	S.Korea	China	India	Indonesia	United Kingdom
Year End 2015	12/31/2015	2,044	13,010	43,350	42,978	4,637	10,743	21,418	9,544	6,242	757	71,727	19,034	5,296	1,961	3,539	26,118	4,593	17,122
February Low	2/11/2016	1,829	12,087	39,318	42,359	3,897	8,753	15,773	7,746	5,537	671	70,942	14,953	4,765	1,835	2,746	22,952	4,714	15,179
Average Q2 2016	2016-Q2	2,075	13,851	50,983	45,480	4,370	9,963	17,636	8,707	6,204	913	79,950	16,394	5,232	1,980	2,920	25,984	4,833	16,788
Brexit Voting Day	6/23/2016	2,113	14,131	51,560	46,146	4,466	10,257	17,966	8,885	6,338	941	77,990	16,238	5,281	1,987	2,892	27,002	4,874	17,334
Post-Brexit Low	6/27/2016	2,001	13,690	49,246	44,282	3,985	9,269	15,104	7,646	5,982	889	75,161	15,309	5,137	1,927	2,896	26,403	4,836	14,968
Before Strong USA Jobs	7/7/2016	2,098	14,134	52,015	45,394	4,118	9,419	15,436	8,008	6,534	924	77,952	15,276	5,228	1,974	3,017	27,201	4,836	15,899
Recent data	8/2/2016	2,157	14,477	56,162	46,558	4,328	10,144	16,098	8,277	6,645	903	75,804	16,391	5,541	2,019	2,971	27,982	5,373	17,063
Recent data	8/15/2016	2,190	14,777	59,146	48,695	4,498	10,739	16,998	8,721	6,941	972	78,473	16,870	5,540	2,050	3,125	28,152	5,321	17,929
Recent data	9/2/2016	2,180	14,796	59,616	47,788	4,542	10,684	17,184	8,909	6,895	970	76,884	16,926	5,373	2,038	3,067	28,532	5,353	18,016

Cumulative Percentage Changes in Stock Prices from Brexit Voting Day, June 23, 2016																			
PostBrexit Low	6/27/2016	-5.3%	-3.1%	-4.5%	-4.0%	-10.8%	-9.6%	-15.9%	-14.0%	-5.6%	-5.6%	-3.6%	-5.7%	-2.7%	-3.0%	0.1%	-2.2%	-0.8%	-13.6%
Before Strong USA Jobs	7/7/2016	-0.7%	0.0%	0.9%	-1.6%	-7.8%	-8.2%	-14.1%	-9.9%	3.1%	-1.8%	0.0%	-5.9%	-1.0%	-0.6%	4.3%	0.7%	-0.8%	-8.3%
Most recent data	8/2/2016	2.1%	2.4%	8.9%	0.9%	-3.1%	-1.1%	-10.4%	-6.8%	4.8%	-4.0%	-2.8%	0.9%	4.9%	1.6%	2.7%	3.6%	10.2%	-1.6%
Most recent data	8/15/2016	3.6%	4.6%	14.7%	5.5%	0.7%	4.7%	-5.4%	-1.9%	9.5%	3.3%	0.6%	3.9%	4.9%	3.2%	8.1%	4.3%	9.2%	3.4%
Most recent data	9/2/2016	3.2%	4.7%	15.6%	3.6%	1.7%	4.2%	-4.4%	0.3%	8.8%	3.1%	-1.4%	4.2%	1.7%	2.6%	6.1%	5.7%	9.8%	3.9%

Global Bond Market Yield Spreads and SBCL in 2016, Pre and Post Brexit Vote (10Yr-3m Slope for Advanced, Credit Spreads for Emerging)

9/8/2016 13:17

Douglas T. Breeden, Duke University and Amundi Smith Breeden

Country Slopes and Credit Spreads		Americas				Europe							AustralAsia					UK FTSE250	
		United States	Canada	Brazil	Mexico	France	Germany	Italy	Spain	United Kingdom	Russia	Turkey	Japan	Australia	South Korea	China	India	Indonesia	United Kingdom
Year End 2015	1/4/2016	2.08	0.91	14.16	3.99	1.39	1.15	1.74	1.90	1.37	7.35	8.54	0.28	0.78	0.54	0.61	5.40	2.41	1.37
February Low	2/11/2016	1.38	0.59	14.67	4.44	0.98	0.68	1.77	2.04	0.83	8.64	8.85	0.15	0.19	0.31	1.21	5.96	2.92	0.83
Average Q2 2016	Q2-2016	1.46	0.78	11.06	4.24	0.97	0.70	1.54	1.59	0.93	7.15	7.73	0.10	0.48	0.18	1.18	5.70	2.20	0.93
Brexit Voting Day	6/23/2016	1.46	0.78	10.68	4.31	0.97	0.70	1.54	1.59	0.93	6.81	7.50	0.10	0.48	0.18	1.18	5.68	2.10	0.93
Post-Brexit Low	6/27/2016	1.19	0.60	10.81	4.56	0.83	0.55	1.68	1.60	0.59	7.09	7.89	0.05	0.30	0.03	1.40	5.97	2.39	0.59
Before Strong USA Jobs	7/7/2016	1.10	0.52	10.87	4.54	0.71	0.53	1.55	1.49	0.48	6.98	7.48	0.05	0.11	0.15	1.42	5.85	2.12	0.48
Recent data	8/2/2016	1.29	0.55	10.36	4.45	0.75	0.71	1.49	1.41	0.49	6.91	7.95	0.21	0.18	0.16	1.22	5.62	1.76	0.49
Recent data	8/15/2016	1.27	0.57	10.24	4.26	0.74	0.72	1.42	1.27	0.26	6.76	7.85	0.13	0.22	0.15	1.08	5.59	1.57	0.26
Recent data	9/2/2016	1.28	0.56	10.39	4.24	0.77	0.76	1.53	1.36	0.44	6.56	7.94	0.22	0.22	0.24	1.17	5.52	1.83	0.44

Cumulative Changes in Bond Market Yield Spreads from Brexit Voting Day, June 23, 2016																			
PostBrexit Low	6/27/2016	-0.27	-0.18	-0.13	-0.25	-0.15	-0.16	0.15	0.01	-0.34	-0.28	-0.39	-0.05	-0.18	-0.15	-0.22	-0.29	-0.29	-0.34
Before Strong USA Jobs	7/7/2016	-0.36	-0.26	-0.19	-0.23	-0.26	-0.17	0.01	-0.10	-0.46	-0.17	0.01	-0.06	-0.37	-0.02	-0.24	-0.17	-0.02	-0.46
Recent data	8/2/2016	-0.17	-0.23	0.32	-0.14	-0.22	0.01	-0.05	-0.18	-0.44	-0.11	-0.45	0.11	-0.30	-0.02	-0.04	0.06	0.34	-0.44
Recent data	8/15/2016	-0.19	-0.21	0.44	0.05	-0.23	0.02	-0.11	-0.32	-0.67	0.05	-0.35	0.03	-0.26	-0.03	0.11	0.09	0.53	-0.67
Recent data	9/2/2016	-0.18	-0.22	0.29	0.07	-0.21	0.05	-0.01	-0.23	-0.49	0.25	-0.44	0.12	-0.26	0.07	0.02	0.16	0.27	-0.49

Consumer Spending Z-Score Changes																			
Projected 3Q Changes August, 2016		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.7	0.0	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	-0.7

D.T. Breeden, Duke University

Breeden's Stocks, Bonds, Consumers Leading Indicators (SBCLI®)

Douglas T. Breeden, Duke University and Amundi Smith Breeden

(2Q Returns, Growth)

9/8/2016 13:30

Stock Market Signals

	United States <i>Americas</i>	Canada	Brazil	Mexico	France <i>Europe</i>	Germany	Italy	Spain	United Kingdom <i>FTSE 100</i>	Russia	Turkey	Japan <i>AustralAsia</i>	Australia	South Korea	China	India	Indonesia	United Kingdom <i>FTSE 250</i>
Z-Multiplier	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2
2015-Q4	-1.5	-2.1	-2.1	-0.7	-1.1	-1.4	-0.7	-1.7	-2.3	-0.1	-1.0	-0.7	-2.0	-0.9	-1.2	-1.0	-1.6	
2016-Q1	-1.6	-1.7	-1.8	-0.7	-1.6	-1.5	-2.3	-2.4	-1.6	0.1	-0.8	-1.7	-1.4	-0.7	-1.0	-1.2	-0.1	
2016-Q2	-0.4	0.0	0.4	0.2	-1.4	-1.2	-2.5	-2.0	-0.5	0.4	-0.1	-1.9	-0.1	-0.4	-0.9	-0.3	0.4	-0.5
6/23/2016	-0.1	0.4	0.5	0.4	-1.1	-0.8	-2.2	-1.7	-0.1	0.6	-0.3	-2.1	0.0	-0.4	-0.9	0.1	0.5	0.1
6/27/2016	-1.0	-0.2	0.1	-0.2	-2.8	-2.2	-4.4	-3.5	-1.3	0.2	-0.6	-2.8	-0.4	-0.8	-0.9	-0.1	0.4	-2.7
7/7/2016	-0.2	0.4	0.6	0.1	-2.3	-2.0	-4.2	-3.0	0.6	0.5	-0.3	-2.8	-0.2	-0.4	-0.7	0.2	0.4	-1.6
8/2/2016	0.3	0.8	1.5	0.5	-1.6	-1.0	-3.7	-2.6	0.9	0.3	-0.6	-1.9	0.8	-0.1	-0.8	0.4	1.5	-0.2
8/15/2016	0.6	1.2	2.1	1.1	-1.0	-0.1	-2.9	-1.9	1.9	0.9	-0.3	-1.6	0.8	0.1	-0.5	0.5	1.4	0.9
9/2/2016	0.5	1.2	2.2	0.8	-0.8	-0.2	-2.8	-1.6	1.7	0.9	-0.4	-1.5	0.3	0.0	-0.6	0.7	1.5	1.0

Bond Market Signals (Term Structure Slope or Sovereign Credit Spread for EMs)

	United States	Canada	Brazil	Mexico	France	Germany	Italy	Spain	United Kingdom	Russia	Turkey	Japan	Australia	South Korea	China	India	Indonesia	United Kingdom
Z-Multiplier	1	1	1	1	1	1	0	0	1	1	1	1	1	1	2	1	1	1
Variable	Slope	Slope	Credit	Credit	Slope	Slope	Slope	Slope	Slope	Credit	Credit	Slope	Slope	Slope	Credit	Credit	Credit	Slope
2015-Q4	0.5	-0.4	-0.6	1.0	-0.5	-0.6	0.0	0.0	0.4	-2.4	0.5	-1.0	0.3	-0.6	-0.1	-0.6	-0.1	
2016-Q1	0.1	-0.8	-1.1	0.0	-0.6	-0.7	0.0	0.0	0.2	-2.0	0.8	-1.3	0.0	-0.9	-0.5	-0.6	0.0	
2016-Q2	0.0	-0.7	-1.2	0.5	-0.7	-0.8	0.0	0.0	0.0	-1.8	0.8	-1.4	0.0	-0.9	-0.7	-0.9	0.2	0.0
6/23/2016	0.0	-0.7	-0.9	0.4	-0.7	-0.8	0.0	0.0	0.0	-1.6	0.9	-1.4	0.0	-0.9	-0.7	-0.9	0.3	0.0
6/27/2016	-0.2	-0.9	-1.0	0.3	-0.9	-1.0	0.0	0.0	-0.2	-1.7	1.0	-1.5	-0.3	-1.1	-1.0	-1.1	0.2	-0.2
7/7/2016	-0.3	-1.0	-1.0	0.4	-1.0	-1.0	0.0	0.0	-0.3	-1.7	1.2	-1.5	-0.5	-1.0	-1.0	-1.0	0.3	-0.3
8/2/2016	-0.1	-0.9	-0.7	0.4	-1.0	-0.8	0.0	0.0	-0.3	-1.7	0.7	-1.3	-0.4	-1.0	-0.7	-0.9	0.4	-0.3
8/15/2016	-0.1	-0.9	-0.6	0.5	-1.0	-0.8	0.0	0.0	-0.5	-1.6	0.8	-1.4	-0.4	-1.0	-0.5	-0.8	0.5	-0.5
9/2/2016	-0.1	-0.9	-0.7	0.5	-1.0	-0.7	0.0	0.0	-0.3	-1.5	0.7	-1.3	-0.4	-0.9	-0.6	-0.8	0.4	-0.3

Consumer Signals (Z)

	United States	Canada	Brazil	Mexico	France	Germany	Italy	Spain	United Kingdom	Russia	Turkey	Japan	Australia	South Korea	China	India	Indonesia	United Kingdom
Z-Multiplier	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2015-Q4	2.0	1.6	-2.2	0.4	0.1	0.5	1.1	1.7	0.9	-1.2	0.3	-0.7	0.6	0.7	-0.4	0.9	0.0	0.9
2016-Q1	2.0	2.0	-1.9	0.3	1.7	0.2	1.2	1.9	1.2	-0.8	1.6	-0.2	0.4	-0.1	-0.2	2.0	0.0	1.2
2016-Q2	2.4	1.3	-2.4	0.0	1.7	-0.2	0.9	1.8	1.3	-0.4	0.2	0.8	0.2	-0.4	-0.1	0.2	-0.1	1.3
2016-Q3	2.4	1.3	-2.4	0.0	1.7	-0.2	0.9	1.8	0.6	-0.4	0.0	0.8	0.2	-0.4	-0.1	0.2	-0.1	0.6

Stocks, Bonds, Consumers Leading Indicators (SBCLI®)

	United States <i>Americas</i>	Canada	Brazil	Mexico	France <i>Europe</i>	Germany	Italy	Spain	United Kingdom	Russia	Turkey	Japan <i>AustralAsia</i>	Australia	South Korea	China	India	Indonesia	United Kingdom
2015-Q4	1.0	-1.0	-4.9	0.6	-1.5	-1.5	0.4	0.0	-0.9	-3.6	-0.2	-2.4	-1.0	-0.7	-1.7	-0.7	-1.7	
2016-Q1	0.5	-0.5	-4.7	-0.4	-0.4	-2.0	-1.0	-0.6	-0.2	-2.7	1.6	-3.2	-1.0	-1.6	-1.7	0.1	-0.1	
2016-Q2	2.1	0.6	-3.1	0.6	-0.5	-2.2	-1.6	-0.2	0.8	-1.8	0.9	-2.6	0.0	-1.7	-1.7	-1.1	0.6	0.8
6/23/2016	2.4	1.0	-2.8	0.8	-0.1	-1.8	-1.3	0.1	1.3	-1.4	0.8	-2.7	0.2	-1.7	-1.7	-0.7	0.7	1.5
6/27/2016	1.2	0.3	-3.3	0.2	-2.0	-3.4	-3.5	-1.8	-0.9	-2.0	0.4	-3.4	-0.5	-2.3	-2.0	-1.1	0.5	-2.3
7/7/2016	2.0	0.7	-2.8	0.5	-1.7	-3.2	-3.3	-1.2	0.9	-1.6	0.8	-3.5	-0.4	-1.8	-1.9	-0.7	0.6	-1.3
8/2/2016	2.6	1.2	-1.6	0.9	-0.9	-1.9	-2.8	-0.8	1.2	-1.8	0.2	-2.4	0.6	-1.5	-1.6	-0.2	1.9	0.1
8/15/2016	2.9	1.6	-0.9	1.5	-0.3	-1.0	-2.1	-0.2	2.0	-1.1	0.5	-2.2	0.7	-1.3	-1.2	-0.2	1.8	1.0
9/2/2016	2.8	1.6	-0.9	1.3	-0.1	-1.1	-1.9	0.1	2.0	-1.0	0.3	-2.0	0.2	-1.2	-1.4	0.0	1.8	1.2

Stocks, Bonds Consumers Leading Index Post-Brexit Vote, Turkey's Failed Coup, Strong USA Jobs Reports.

Americas		Europe										AustralAsia					FTSE 250 (Domestic)
United States	Canada	Brazil	Mexico	France	Germany	Italy	Spain	United Kingdom	Russia	Turkey	Japan	Australia	South Korea	China	India	Indonesia	United Kingdom

Stocks, Bonds, Consumers Leading Index (SBCLI) Updated for Stock Price, Consumer Spending and Bond Yield Spread Moves

SBCLI updated for Yield Spreads	6/23/2016	2.4	1.0	-2.8	0.8	-0.1	-1.8	-1.3	0.1	1.3	-1.4	0.8	-2.7	0.2	-1.7	-1.7	-0.7	0.7	1.5
SBCLI at Post-Brexit Low	6/27/2016	1.2	0.3	-3.3	0.2	-2.0	-3.4	-3.5	-1.8	-0.9	-2.0	0.4	-3.4	-0.5	-2.3	-2.0	-1.1	0.5	-2.4
SBCLI Before Strong US Jobs	7/7/2016	2.0	0.7	-2.8	0.5	-1.7	-3.2	-3.3	-1.2	0.9	-1.6	0.8	-3.5	-0.4	-1.8	-1.9	-0.7	0.6	-1.4
SBCLI Most recent data	8/2/2016	2.6	1.2	-1.6	0.9	-0.9	-1.9	-2.8	-0.8	1.2	-1.8	0.2	-2.4	0.6	-1.5	-1.6	-0.2	1.9	0.0
SBCLI Most recent data	8/15/2016	2.9	1.6	-0.9	1.5	-0.3	-1.0	-2.1	-0.2	2.0	-1.1	0.5	-2.2	0.7	-1.3	-1.2	-0.2	1.8	0.8
SBCLI Most recent data	9/2/2016	2.8	1.6	-0.9	1.3	-0.1	-1.1	-1.9	0.1	2.0	-1.0	0.3	-2.0	0.2	-1.2	-1.4	0.0	1.8	1.1

Stocks, Bonds, Consumers Leading Index (SBCLI MA2, 4Q) Updated for Stock Price and Bond Yield Spread Moves

SBCLI updated for Yield Spreads	6/23/2016	1.5	0.2	-3.8	0.2	-0.3	-1.9	-1.2	-0.2	0.5	-2.1	1.2	-2.9	-0.4	-1.6	-1.7	-0.3	0.3	0.7
SBCLI at Post-Brexit Low	6/27/2016	0.9	-0.1	-4.0	-0.1	-1.2	-2.7	-2.3	-1.2	-0.5	-2.4	1.0	-3.3	-0.7	-1.9	-1.9	-0.5	0.2	-1.3
SBCLI Before Strong US Jobs	7/7/2016	1.2	0.1	-3.8	0.0	-1.0	-2.6	-2.2	-0.9	0.3	-2.2	1.2	-3.3	-0.7	-1.7	-1.8	-0.3	0.3	-0.8
SBCLI Most recent data	8/2/2016	1.6	0.3	-3.2	0.2	-0.7	-1.9	-1.9	-0.7	0.5	-2.3	0.9	-2.8	-0.2	-1.5	-1.7	-0.1	0.9	-0.1
SBCLI Most recent data	8/15/2016	1.7	0.5	-2.8	0.6	-0.4	-1.5	-1.6	-0.4	0.9	-1.9	1.0	-2.7	-0.2	-1.4	-1.4	0.0	0.9	0.3
SBCLI Most recent data	9/2/2016	1.7	0.5	-2.8	0.4	-0.3	-1.5	-1.5	-0.2	0.9	-1.9	0.9	-2.6	-0.4	-1.4	-1.5	0.1	0.8	0.5

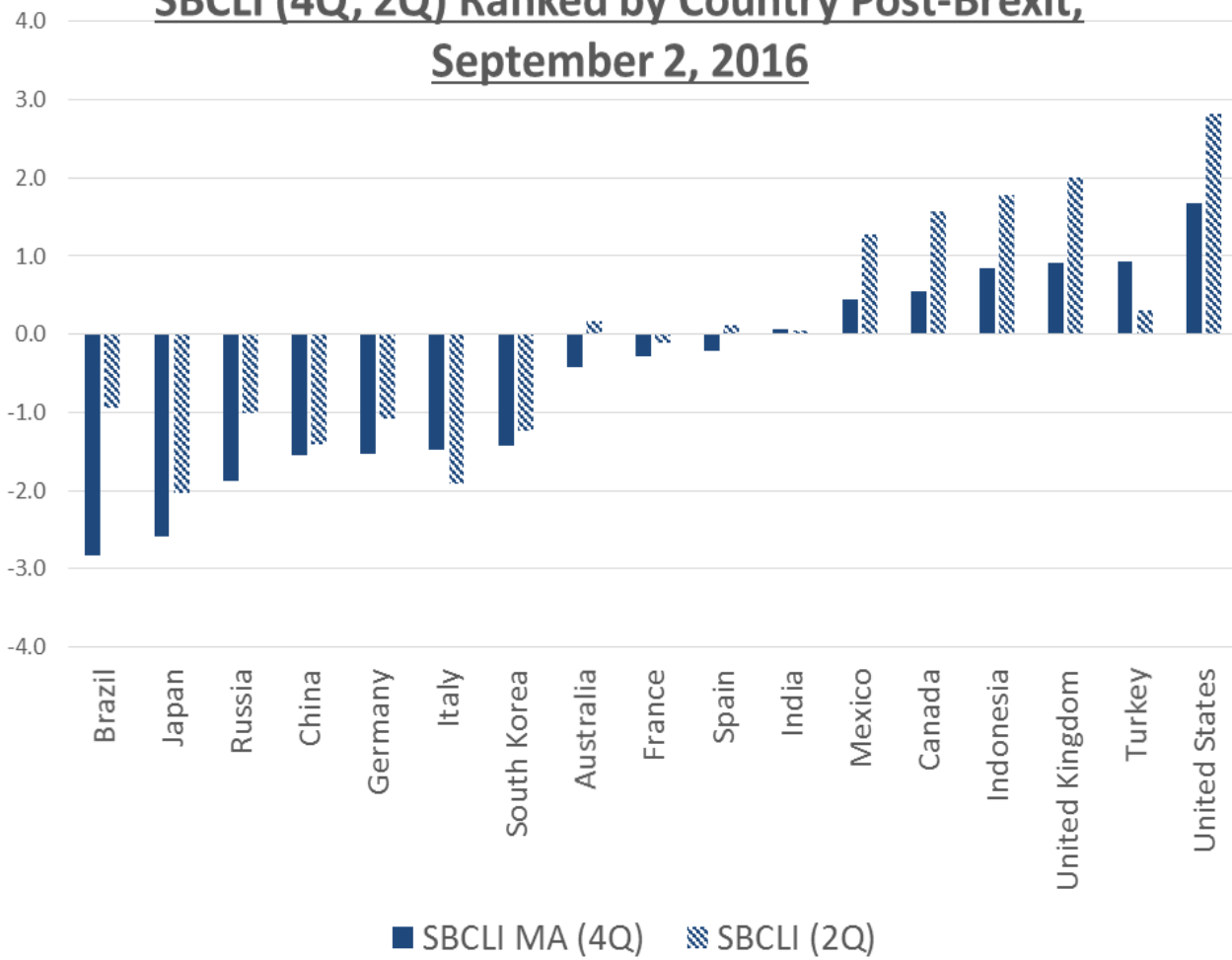
Note that every 1.0 (increase) in SBCLI is normally associated in the next 4 quarters with (1) a (positive) deviation from trend in Real GDP Growth of approximately 0.5%, (2) a (positive) deviation from trend in the growth of Industrial Production of 1.0%, and (3) a decrease in the Unemployment Rate of 0.3%.

Slopes = Sensitivities of Next 4 Quarters Growth and Unemployment to SBCLI© Moves of 1 Point

	GDP Trend Growth 10 Yr	Douglas T. Breeden, Duke University and Amundi Smith Breeden		
		GDP Sensitivity	Industrial Production	Unemployment Rate
United States	1.4	0.50	1.08	-0.45
Canada	1.7	0.41	0.63	-0.27
Brazil	3.0	1.03	0.82	-0.50
Mexico	2.3	0.42	0.47	-0.11
France	0.7	0.36	1.04	-0.16
Germany	1.4	0.66	1.80	-0.10
Italy	-0.6	0.53	1.30	-0.25
Spain	0.3	0.91	1.15	-0.88
United Kingdom	1.0	0.46	0.58	-0.19
Russia	2.4	1.62	1.67	-0.43
Turkey	3.8	0.76	1.18	-0.55
Japan	0.5	0.34	1.04	-0.15
Australia	3.3	0.29	0.22	-0.27
South Korea	2.7	0.07	1.13	-0.09
China*	7.0	0.72	1.16	-0.01
India	7.4	0.34	1.27	
Indonesia	5.6	0.40		
Averages All	2.6	0.58	1.03	-0.29
Average Advanced	1.2	0.45	1.00	-0.28
Average Emerging	4.5	0.76	1.10	-0.32
Average Americas	2.1	0.59	0.75	-0.33
Average Europe	1.3	0.76	1.25	-0.37
Average AustralAsia	4.4	0.36	0.96	-0.13

*China trend growth uses average of last 3 years. Other countries are for last 10 years.

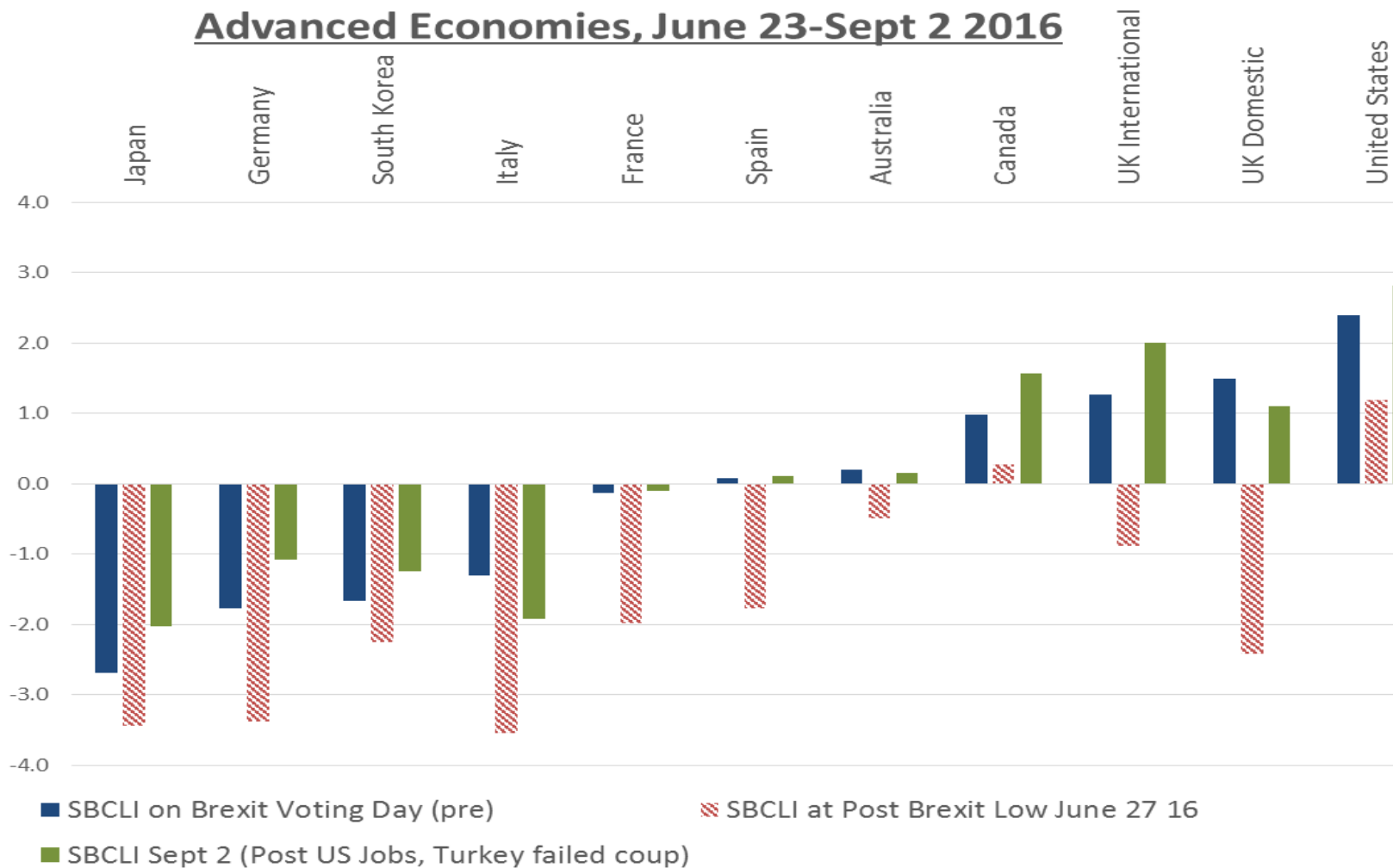
**SBCLI (4Q, 2Q) Ranked by Country Post-Brexit,
September 2, 2016**



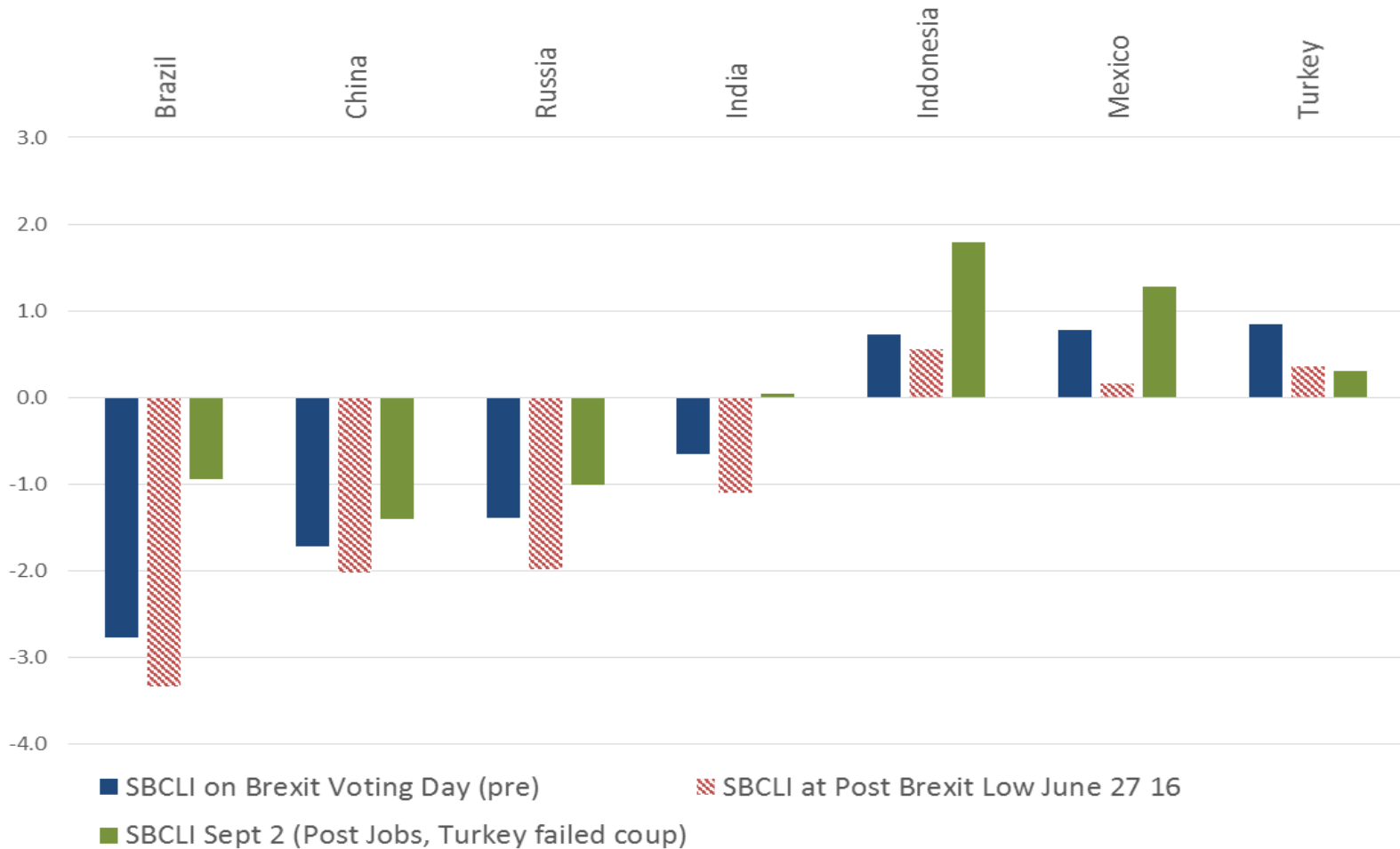
Strongest 2-quarter SBCLI scores at present are in the USA, Indonesia, Canada, and Mexico. UK score is good with FTSE 100 stock index, but is near zero using FTSE 250, which mirrors domestic stocks more.

Japan, Brazil, Russia and Italy have the worst SBCLI scores, given weak stock markets, bond scores and consumers. Brazil's stock market has improved sharply in 2016, moving its 2-quarter SBCLI score a lot.

SBCLI Post-Brexit, Turkey Failed Coup, Strong USA Jobs
Reflects Stock Price, Bond Spread Moves, Consumer Drop in UK, Turkey
Advanced Economies, June 23-Sept 2 2016



SBCLI Post-Brexit, Turkey Failed Coup, Strong USA Jobs
Reflects Stock Price, Bond Spread Moves, Consumer Drop in UK, Turkey
Emerging Markets June 23-Sept 2 2016



Summary

Brexit, Turkey Failed Coup, U.S. Strong Jobs Impacts

- Among advanced economies, Brexit damage was greatest in Italy, Spain, France, Germany and UK Domestic Stocks. Credit concerns have grown with expectations of weaker Eurozone. After the low on June 27th, stocks bounced back sharply. However, interest rates remained much lower than pre-Brexit.
- The strong jobs USA reports in July and August boosted stocks and raised rates, but moderate jobs report on Sept 2 raised ambiguity of Fed movement in September. UK and Eurozone indicators have not fallen as sharply as some had expected. Thus, most countries had SBCLI move back close to or above pre-Brexit levels, making Brexit appear of limited impact globally. Japan still shows negative due to both stock and bond market signals, while their consumer signal is positive. UK SBCLI is quite positive if one looks at FTSE 100 (internationals), but less positive with the FTSE 250, which reflects more domestically oriented companies.
- Emerging markets are doing relatively well in stock and bond markets and largely shrugged off Brexit impacts. Indonesia, Mexico and India show strength, and Brazil's index is bouncing back. While still having a modestly negative index indicating below-trend growth, China has avoided a hard landing so far. Turkey was hit some by the failed coup, but its stock market remains well above 12/31/15, as the markets like the economy's performance there, despite political issues.

Data Appendix

*Data Tables with
Stocks, Bonds, and Consumer Signals, plus
real GDP growth, real Retail Sales growth,
Unemployment Rates and Inflation*

Stock Market Signals

Douglas T. Breeden, Duke University and Amundi Smith Breeden

9/8/2016 16:47

	<i>Americas</i>				<i>Europe</i>								<i>AustralAsia</i>					
	United States	Canada	Brazil	Mexico	France	Germany	Italy	Spain	United Kingdom	Russia	Turkey	Japan	Australia	South Korea	China	India	Indonesia	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Z Multiplier		2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2
2006-Q4		1.2	0.6	0.6	2.5	1.0	0.9	0.8	2.5	0.4	0.6	-0.7	-0.4	0.6	0.1	1.4	1.3	1.6
2007-Q1		1.8	1.3	1.8	3.6	1.7	2.4	1.7	2.8	0.9	1.1	0.5	1.0	2.4	0.7	3.1	1.7	1.9
2007-Q2		1.0	1.2	2.1	3.0	1.3	2.2	0.8	0.7	0.8	0.3	1.0	0.7	2.1	1.8	4.0	0.3	1.7
2007-Q3		0.4	0.6	2.1	1.2	-0.2	1.0	-0.8	-0.5	-0.2	-0.3	1.6	-0.9	0.6	3.9	2.8	0.6	2.1
2007-Q4		-0.2	-0.2	2.1	-0.5	-1.3	-0.1	-1.7	-0.2	-0.8	0.3	1.3	-1.6	0.3	2.2	1.5	3.1	2.3
2008-Q1		-2.0	-1.0	0.7	-1.3	-2.8	-2.1	-2.9	-1.8	-2.2	-0.8	-1.5	-2.8	-2.3	-1.7	-0.5	1.1	0.9
2008-Q2		-2.1	0.0	0.2	-0.3	-2.7	-2.5	-2.9	-2.3	-2.3	-1.1	-2.8	-1.8	-3.2	-1.7	-2.0	-2.1	-1.7
2008-Q3		-2.4	-0.9	-1.5	-1.5	-2.3	-2.1	-2.7	-2.4	-2.7	-2.1	-1.7	-1.0	-2.6	-2.0	-2.2	-2.7	-2.5
2008-Q4		-7.0	-6.5	-5.1	-4.9	-5.3	-5.3	-5.4	-4.4	-6.5	-5.5	-3.4	-4.5	-5.5	-5.3	-2.0	-4.4	-4.7
2009-Q1		-6.9	-6.0	-3.3	-4.0	-5.2	-5.4	-5.5	-4.1	-5.4	-4.6	-3.3	-4.5	-5.3	-3.6	-0.7	-3.8	-3.8
2009-Q2		-0.4	1.1	3.0	1.2	-0.8	-0.7	-1.0	-0.5	-0.5	3.4	1.7	0.2	-0.5	2.4	1.7	2.6	3.4
2009-Q3		4.3	4.0	3.9	4.8	3.0	2.9	3.0	3.9	2.8	4.3	5.9	2.3	3.6	4.5	2.1	5.4	6.6
2009-Q4		3.9	2.4	3.2	3.8	3.0	2.6	2.4	3.6	4.1	2.4	3.7	-0.1	3.4	2.2	0.8	1.7	3.0
2010-Q1		1.6	1.1	1.8	1.5	1.3	1.2	0.5	-0.1	2.4	2.0	1.1	-0.3	1.2	0.3	-0.2	0.2	1.0
2010-Q2		-0.3	0.2	-0.6	0.2	-0.6	0.3	-1.4	-2.4	-0.2	-0.1	0.7	0.4	-0.8	0.1	-0.7	-0.2	1.2
2010-Q3		-1.0	-0.3	-0.6	-0.1	-1.0	0.1	-1.5	-1.3	-1.0	-0.4	0.9	-1.2	-1.4	0.6	-0.8	0.3	1.3
2010-Q4		1.0	1.0	0.4	1.1	0.4	1.2	-0.3	-0.2	1.0	0.7	1.3	-1.0	-0.2	1.6	0.0	0.8	2.1
2011-Q1		2.8	2.3	-0.3	1.3	1.3	2.0	0.8	-0.3	1.6	1.4	0.2	1.0	0.5	1.5	0.2	-0.5	0.8
2011-Q2		0.8	0.2	-1.4	-0.5	0.2	0.5	0.0	-0.4	-0.4	0.1	-0.7	-0.5	-0.6	0.7	-0.3	-1.1	0.1
2011-Q3		-2.1	-1.9	-2.2	-1.1	-2.7	-2.5	-3.5	-2.6	-2.4	-1.1	-1.2	-1.8	-2.3	-1.1	-0.5	-1.2	0.7
2011-Q4		-2.5	-2.4	-1.7	-0.5	-3.6	-3.3	-3.9	-2.8	-2.3	-1.5	-1.9	-1.6	-2.2	-2.1	-0.9	-1.8	-0.6
2012-Q1		0.6	-0.6	0.9	0.5	-0.2	0.6	-0.4	-0.9	0.7	-0.5	-0.7	-0.2	-0.4	-0.1	-0.7	-0.5	-0.2
2012-Q2		0.5	-0.7	-0.1	0.6	0.0	0.8	-1.4	-2.8	-0.1	-0.6	0.2	0.2	-0.3	0.1	-0.2	-0.4	0.5
2012-Q3		-0.4	-1.0	-1.5	0.6	-0.4	-0.3	-1.4	-2.3	-0.8	-0.9	0.8	-0.9	-0.4	-0.8	-0.5	-0.6	0.0
2012-Q4		0.8	0.5	-0.4	0.7	1.5	1.4	1.3	1.5	0.5	-0.1	1.6	-0.1	0.7	0.0	-0.6	0.5	0.3
2013-Q1		1.6	0.8	-0.4	0.7	1.5	1.6	1.4	1.8	1.3	-0.1	1.4	3.3	2.2	0.2	0.3	0.4	0.8
2013-Q2		1.7	-0.3	-1.4	-0.7	1.1	0.8	0.6	0.3	1.5	-0.8	0.8	5.5	1.3	-0.4	0.1	-0.4	1.0
2013-Q3		0.8	-0.5	-1.9	-1.3	0.9	0.3	0.2	0.0	0.2	-0.9	-1.2	2.3	0.0	-0.7	-0.6	-0.8	-0.9
2013-Q4		1.3	1.0	-0.5	-0.5	1.5	1.5	1.7	2.4	0.1	0.4	-1.3	0.6	0.5	0.3	-0.2	0.0	-1.7
2014-Q1		1.1	1.5	-1.0	-0.8	1.1	1.7	2.5	2.5	0.0	-0.3	-1.5	0.3	0.3	-0.1	-0.3	0.7	-0.2
2014-Q2		0.5	1.1	-0.5	-0.3	0.8	0.5	1.8	1.2	0.0	-1.0	-0.4	-0.7	0.1	-0.5	-0.4	1.2	0.8
2014-Q3		0.6	1.1	1.6	1.2	-0.1	-0.6	0.0	0.5	-0.2	-0.4	1.5	0.1	0.2	0.4	0.3	1.6	0.9
2014-Q4		-0.1	-0.4	-0.4	0.1	-1.1	-0.8	-1.7	-0.6	-1.0	-0.2	0.1	1.4	-0.7	-0.5	1.2	1.0	-0.2
2015-Q1		-0.1	-0.7	-2.0	-1.1	1.3	2.1	0.3	-0.1	-0.1	0.2	0.1	1.6	0.3	-0.7	2.2	0.7	-0.2
2015-Q2		0.2	0.2	-0.4	0.1	2.9	2.9	2.8	1.0	1.0	0.2	-0.2	2.2	0.7	0.7	3.2	-0.3	-0.2
2015-Q3		-1.2	-1.5	-0.8	0.1	-0.1	-0.8	0.7	-0.5	-1.7	-0.4	-1.2	0.6	-1.5	-0.2	0.2	-1.1	-1.8
2015-Q4		-1.5	-2.1	-2.1	-0.7	-1.1	-1.4	-0.7	-1.7	-2.3	-0.1	-1.0	-0.7	-2.0	-0.9	-1.2	-1.0	-1.6
2016-Q1		-1.6	-1.7	-1.8	-0.7	-1.6	-1.5	-2.3	-2.4	-1.6	0.1	-0.8	-1.7	-1.4	-0.7	-1.0	-1.2	-0.1
2016-Q2		-0.4	0.0	0.4	0.2	-1.4	-1.2	-2.5	-2.0	-0.5	0.4	-0.1	-1.9	-0.1	-0.4	-0.9	-0.3	0.4

Bond Market Signals (Term Structure Slope or Sovereign Credit Spread for EMs)

9/8/2016 16:47

		Douglas T. Breeden, Duke University and Amundi Smith Breeden																
		United States <i>Americas</i>	Canada	Brazil	Mexico	France <i>Europe</i>	Germany	Italy	Spain	United Kingdom	Russia	Turkey	Japan <i>AustralAsia</i>	Australia	South Korea	China	India	Indonesia
Z Multiplier		1	1	1	1	1	1	0	0	1	1	1	1	1	1	2	1	1
2006-Q4		-1.5	-1.7	1.1	0.3	-1.3	-1.1	0.0	0.0	-1.1	1.4	-0.9	0.3	-1.2	-0.7	0.6	1.5	0.8
2007-Q1		-1.5	-1.6	1.3	0.4	-1.3	-1.0	0.0	0.0	-1.1	1.4	-0.7	0.1	-1.1	-0.9	0.5	1.3	1.3
2007-Q2		-1.2	-1.4	1.5	0.5	-1.1	-0.9	0.0	0.0	-1.0	1.6	-0.5	0.2	-0.8	-0.7	0.4	1.2	1.5
2007-Q3		-0.9	-1.3	1.5	0.4	-1.6	-1.4	0.0	0.0	-1.5	1.5	-0.7	-0.1	-1.2	-0.6	-0.3	1.3	1.6
2007-Q4		-0.5	-1.3	1.2	0.5	-2.0	-1.9	0.0	0.0	-1.8	1.3	-0.6	-0.3	-1.5	-0.7	-1.4	1.0	1.3
2008-Q1		0.1	-0.7	0.8	0.5	-2.0	-2.0	0.0	0.0	-1.6	0.9	-1.0	-0.5	-2.1	-1.1	-2.2	0.7	0.8
2008-Q2		0.6	-0.5	1.0	0.5	-2.0	-2.0	0.0	0.0	-1.4	1.0	-1.5	-0.1	-2.1	-0.9	-1.9	0.4	0.7
2008-Q3		0.7	-0.1	1.0	0.3	-2.1	-2.1	0.0	0.0	-1.5	0.6	-2.1	-0.3	-2.2	-0.6	-1.9	-0.2	0.2
2008-Q4		1.2	0.1	0.6	-0.5	-1.9	-2.1	0.0	0.0	-1.1	-0.2	-3.5	-0.5	-0.7	-1.7	-0.8	1.1	-1.0
2009-Q1		0.8	0.8	0.2	0.2	0.4	0.1	0.0	0.0	0.4	-1.2	-1.0	-0.4	0.7	1.2	-0.8	0.8	-1.1
2009-Q2		1.3	1.8	0.6	0.4	1.3	1.3	0.0	0.0	1.2	-0.8	-0.5	0.1	2.0	2.0	0.0	1.2	-0.7
2009-Q3		1.5	1.8	0.9	0.4	1.7	1.8	0.0	0.0	1.7	-0.8	-0.1	0.0	2.3	2.1	0.3	0.8	-0.3
2009-Q4		1.5	1.8	0.9	0.4	1.7	1.8	0.0	0.0	1.9	-0.3	0.3	0.1	1.5	1.8	0.2	0.5	0.0
2010-Q1		1.7	1.9	1.0	1.0	1.7	1.9	0.0	0.0	2.1	0.3	0.4	0.1	1.3	1.5	0.6	0.6	0.2
2010-Q2		1.5	1.5	0.9	0.5	1.4	1.3	0.0	0.0	1.8	0.5	0.4	0.0	0.6	1.7	0.3	0.5	0.3
2010-Q3		0.9	0.8	0.4	0.1	0.7	0.6	0.0	0.0	1.3	0.1	0.5	-0.2	0.0	1.2	-0.8	-0.2	0.3
2010-Q4		1.0	0.7	0.5	0.6	0.8	0.7	0.0	0.0	1.4	0.0	1.4	-0.1	0.1	0.7	-1.1	-0.3	0.3
2011-Q1		1.5	0.9	0.9	1.4	1.3	1.3	0.0	0.0	1.7	0.2	2.0	0.1	0.4	0.6	-0.7	0.2	0.3
2011-Q2		1.3	0.8	0.7	0.5	0.9	0.8	0.0	0.0	1.5	0.1	1.1	0.0	0.1	-0.2	-1.4	-0.2	0.3
2011-Q3		0.7	0.2	0.2	0.6	0.2	-0.4	0.0	0.0	0.8	-0.3	0.7	-0.1	-0.7	-0.7	-2.9	-0.9	0.2
2011-Q4		0.4	-0.2	0.0	-0.1	0.4	-0.8	0.0	0.0	0.4	-0.5	0.5	-0.1	-1.0	-0.9	-3.5	-1.3	0.2
2012-Q1		0.4	-0.4	0.0	1.4	0.7	-0.4	0.0	0.0	0.2	-0.5	0.2	-0.2	-0.9	-0.8	-3.5	-1.2	0.4
2012-Q2		0.2	-0.6	-0.2	0.4	0.8	-0.5	0.0	0.0	0.1	-0.6	0.2	-0.4	-0.8	-0.9	-3.7	-1.4	0.6
2012-Q3		0.0	-0.8	0.0	0.6	0.6	-0.1	0.0	0.0	0.1	-0.7	0.2	-0.4	-0.9	-1.2	-3.3	-1.4	0.7
2012-Q4		0.1	-0.7	0.1	0.6	0.5	0.1	0.0	0.0	0.4	-0.6	0.2	-0.5	-0.4	-0.9	-3.2	-1.3	0.7
2013-Q1		0.3	-0.6	0.5	0.7	0.6	0.4	0.0	0.0	0.6	0.0	0.3	-0.6	0.2	-1.0	-2.9	-0.9	0.7
2013-Q2		0.4	-0.4	0.6	0.3	0.5	0.2	0.0	0.0	0.5	0.0	0.4	-0.4	0.2	-0.8	-2.8	-0.6	0.7
2013-Q3		1.0	0.1	1.0	0.7	1.0	0.7	0.0	0.0	1.0	0.1	0.4	-0.5	1.2	-0.2	-1.8	-0.7	0.5
2013-Q4		1.0	0.2	1.1	0.6	0.9	0.7	0.0	0.0	1.1	0.1	0.6	-0.6	1.5	-0.2	-1.7	-0.9	0.1
2014-Q1		1.0	0.1	1.1	0.6	0.7	0.5	0.0	0.0	1.2	-0.1	0.2	-0.6	1.5	-0.2	-1.7	-1.0	-0.2
2014-Q2		0.9	-0.1	1.0	0.6	0.3	0.1	0.0	0.0	1.1	-0.2	0.0	-0.7	1.1	-0.3	-1.9	-1.0	-0.3
2014-Q3		0.8	-0.3	0.9	0.7	0.0	-0.1	0.0	0.0	1.0	-0.5	-0.4	-0.7	0.7	-0.6	-2.1	-1.0	-0.6
2014-Q4		0.6	-0.5	0.8	0.1	-0.3	-0.4	0.0	0.0	0.6	-0.9	0.2	-0.9	0.2	-0.6	-2.0	-0.8	-0.5
2015-Q1		0.3	-0.7	0.2	0.6	-0.9	-0.9	0.0	0.0	0.3	-1.7	0.6	-0.9	-0.2	-0.9	-2.1	-0.8	-0.4
2015-Q2		0.5	-0.4	0.0	0.5	-0.6	-0.6	0.0	0.0	0.5	-1.1	1.3	-0.9	0.4	-0.6	-1.2	-0.6	-0.3
2015-Q3		0.5	-0.4	-0.2	0.5	-0.8	-0.5	0.0	0.0	0.5	-2.0	0.7	-0.9	0.4	-0.5	-0.6	-0.5	-0.1
2015-Q4		0.5	-0.4	-0.6	1.0	-0.5	-0.6	0.0	0.0	0.4	-2.4	0.5	-1.0	0.3	-0.6	-0.1	-0.6	-0.1
2016-Q1		0.1	-0.8	-1.1	0.0	-0.6	-0.7	0.0	0.0	0.2	-2.0	0.8	-1.3	0.0	-0.9	-0.5	-0.6	0.0
2016-Q2		0.0	-0.7	-1.2	0.5	-0.7	-0.8	0.0	0.0	0.0	-1.8	0.8	-1.4	0.0	-0.9	-0.7	-0.9	0.2

Consumer Signals (Z)

Douglas T. Breeden, Duke University and Amundi Smith Breeden

9/8/2016 16:47

Z Multiplier	Americas				Europe								AustralAsia				
	United States	Canada	Brazil	Mexico	France	Germany	Italy	Spain	United Kingdom	Russia	Turkey	Japan	Australia	South Korea	China	India	Indonesia
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2006-Q4	-1.0	0.0	-0.1	-0.9	-1.6	0.6	0.0	-0.9	-1.5	0.6	-1.3	-0.3	0.4	-0.2	-0.2	-1.2	1.2
2007-Q1	-1.1	-0.2	0.8	-1.1	0.0	-1.9	-0.1	-0.8	-0.9	0.6	0.4	0.8	1.9	0.1	0.2	0.8	1.1
2007-Q2	-2.6	0.6	0.9	-0.9	0.2	-3.0	-0.2	-1.0	0.0	1.1	0.8	0.0	1.3	-0.2	-0.2	0.9	0.4
2007-Q3	-2.3	1.0	-0.5	-0.6	0.6	-0.1	-0.8	-0.9	0.5	1.7	0.4	-0.5	0.3	-0.8	-1.2	1.1	0.9
2007-Q4	-2.4	2.0	0.2	-0.5	-0.2	-1.3	-1.4	-0.7	0.3	1.2	0.0	-0.5	1.1	-0.7	-1.0	0.6	1.7
2008-Q1	-2.5	2.4	1.8	0.0	-2.1	-1.1	-1.2	-0.3	-0.9	1.2	0.0	0.6	0.3	-0.4	-0.4	0.2	1.9
2008-Q2	-1.9	-1.2	0.9	0.2	-2.3	-0.8	-0.9	-2.1	-1.9	0.8	-0.9	-0.8	-2.0	-1.5	-0.4	-1.0	0.1
2008-Q3	-2.0	-1.7	1.5	0.2	-1.4	-0.6	-1.3	-3.3	-2.3	0.6	-1.3	-1.4	-2.5	-1.7	0.2	-0.4	-1.2
2008-Q4	-1.7	-1.1	0.3	-1.2	-1.3	-0.2	-1.3	-2.2	-2.9	0.0	-1.8	-0.7	-1.8	-2.2	-0.1	0.1	-0.8
2009-Q1	-0.3	-1.4	-0.5	-3.5	-0.6	1.1	-1.1	-0.9	-1.8	-1.5	-2.4	-1.2	-1.1	-2.3	-0.1	0.8	1.8
2009-Q2	-0.7	0.5	2.2	-2.8	1.0	1.6	-0.4	-1.8	-1.0	-2.4	1.2	1.0	0.5	0.7	0.8	1.9	1.6
2009-Q3	-1.3	1.7	2.7	0.3	0.5	-1.4	0.5	-1.7	-0.8	-1.7	1.4	1.4	0.1	1.0	1.0	0.5	-0.9
2009-Q4	-1.5	0.9	-0.4	1.4	1.0	-1.4	0.9	-0.4	0.1	-0.8	-0.8	1.1	-0.2	-0.2	-0.1	-1.6	-1.7
2010-Q1	-1.9	0.7	-1.1	0.4	1.6	-0.2	0.6	-0.7	-1.2	0.9	-0.5	1.5	-0.3	-0.3	-1.0	0.6	-1.8
2010-Q2	0.1	0.8	-0.2	0.1	-0.1	-0.2	0.1	-0.4	-0.2	0.5	0.0	0.3	0.1	-1.0	-0.9	2.5	-1.3
2010-Q3	0.7	0.5	0.7	0.3	-0.3	-0.1	0.7	-1.3	0.3	-0.9	0.8	1.0	0.8	-0.8	-0.1	-0.9	-2.2
2010-Q4	0.7	0.5	1.7	0.7	0.8	0.0	1.0	-1.4	-2.0	-0.8	1.0	0.5	0.5	-0.5	0.6	-0.8	-1.9
2011-Q1	0.0	-1.1	0.8	0.1	1.2	0.6	0.2	-1.5	-1.9	0.2	1.4	-2.1	0.4	-0.4	1.2	3.4	-1.1
2011-Q2	-1.0	-1.1	0.8	0.2	-2.6	-1.1	-0.1	-1.6	-1.4	0.8	0.0	-0.6	0.1	-0.5	1.1	-3.8	-0.4
2011-Q3	0.0	0.1	0.3	1.6	-2.8	-0.1	-0.3	-0.7	-0.8	0.7	-0.6	2.3	-0.2	-1.0	0.6	-4.5	0.7
2011-Q4	0.8	1.1	-0.5	0.9	-0.7	0.9	-2.1	-1.6	0.4	0.4	-0.6	1.7	-0.8	-1.0	0.3	4.6	-0.1
2012-Q1	0.0	1.0	0.0	0.3	-0.7	-0.3	-3.4	-1.3	0.5	0.4	-1.1	0.6	0.3	-0.4	0.2	-0.2	-1.2
2012-Q2	0.2	0.6	0.7	0.4	-0.2	0.1	-1.9	-0.4	0.6	0.9	-1.1	0.8	0.5	-0.3	0.1	-1.2	0.0
2012-Q3	-0.6	0.6	1.0	-0.1	-1.1	0.0	-0.9	-1.1	0.3	0.6	-0.5	0.2	-1.0	-0.1	0.0	1.8	0.7
2012-Q4	-1.0	0.7	1.2	0.2	-0.6	-0.8	-1.3	-2.3	0.4	0.5	-0.5	-0.5	-1.3	0.1	0.1	-1.0	-0.1
2013-Q1	-1.2	0.3	0.1	0.4	-0.6	-1.2	-2.0	-2.3	-0.1	-0.1	-0.2	0.0	-1.2	-0.9	-0.2	-1.9	-0.6
2013-Q2	-1.8	0.8	0.3	-0.4	-0.4	-0.2	-1.7	-1.0	-0.5	0.3	0.6	0.2	-0.9	-0.8	-0.4	-1.0	-0.4
2013-Q3	-1.3	1.2	1.0	-0.6	-0.9	0.7	-0.3	-0.4	0.3	0.7	0.3	0.1	-0.1	0.0	0.1	2.3	0.0
2013-Q4	-0.3	0.2	-0.4	-0.2	-0.4	-0.9	0.3	-0.5	0.5	-0.3	-0.3	-0.7	0.2	0.0	0.5	1.5	0.0
2014-Q1	0.0	-1.0	-0.1	-0.2	-1.2	-1.4	0.4	-0.6	0.1	-0.5	-0.8	1.3	-0.4	-0.3	0.7	-1.4	0.1
2014-Q2	0.4	-0.3	-1.0	0.4	-1.6	-0.9	0.3	-0.5	-0.1	-0.6	-0.8	-2.4	-0.3	-0.9	0.7	-0.5	0.0
2014-Q3	1.5	0.6	-2.0	0.2	0.9	-0.3	0.2	0.0	1.1	-0.1	-0.3	-4.2	0.0	-0.9	0.5	-2.6	-0.6
2014-Q4	2.5	0.4	0.5	-0.2	0.8	1.1	0.4	0.4	0.6	0.3	0.4	0.2	0.1	-0.3	0.1	-0.6	-0.6
2015-Q1	1.9	-0.9	-1.3	0.3	0.7	0.5	0.3	0.6	0.1	-2.5	0.3	0.2	-0.1	-0.2	-0.1	2.0	-0.6
2015-Q2	1.1	-0.8	-4.4	0.3	0.2	-0.6	0.6	0.9	0.9	-3.2	0.0	-1.2	-0.2	-0.6	-0.5	-0.6	-0.5
2015-Q3	2.2	1.4	-3.4	0.1	0.2	0.1	1.3	1.5	1.1	-1.2	-0.4	-0.7	0.4	-0.3	-0.3	-1.4	-0.1
2015-Q4	2.0	1.6	-2.2	0.4	0.1	0.5	1.1	1.7	0.9	-1.2	0.3	-0.7	0.6	0.7	-0.4	0.9	0.0
2016-Q1	2.0	2.0	-1.9	0.3	1.7	0.2	1.2	1.9	1.2	-0.8	1.6	-0.2	0.4	-0.1	-0.2	2.0	0.0
2016-Q2	2.4	1.3	-2.4	0.0	1.7	-0.2	0.9	1.8	1.3	-0.4	0.2	0.8	0.2	-0.4	-0.1	0.2	-0.1
2016-Q3	2.4	1.3	-2.4	0.0	1.7	-0.2	0.9	1.8	0.6	-0.4	0.0	0.8	0.2	-0.4	-0.1	0.2	-0.1

Stocks, Bonds, Consumers Leading Indicators (SBCLI®)

(2Q Returns, Growth)

Douglas T. Breeden, Duke University and Amundi Smith Breeden

9/8/2016 16:47

	United States	Canada	Brazil	Mexico	France	Germany	Italy	Spain	United Kingdom	Russia	Turkey	Japan	Australia	South Korea	China	India	Indonesia	United Kingdom
	<i>Americas</i>				<i>Europe</i>				<i>FTSE 100</i>			<i>AustralAsia</i>				<i>FTSE 250</i>		
2006-Q4	-1.3	-1.1	1.6	1.9	-1.9	0.5	0.8	1.6	-2.1	2.6	-2.9	-0.3	-0.2	-0.8	1.8	1.5	3.6	
2007-Q1	-0.9	-0.5	4.0	2.8	0.4	-0.5	1.5	2.0	-1.0	3.1	0.3	2.0	3.3	0.0	3.9	3.8	4.3	
2007-Q2	-2.8	0.4	4.5	2.5	0.3	-1.7	0.6	-0.4	-0.3	2.9	1.3	0.9	2.5	0.9	4.2	2.4	3.6	
2007-Q3	-2.9	0.3	3.1	1.0	-1.1	-0.5	-1.6	-1.4	-1.1	3.0	1.3	-1.4	-0.3	2.4	1.2	3.0	4.6	
2007-Q4	-3.1	0.5	3.5	-0.5	-3.5	-3.3	-3.1	-0.8	-2.2	2.8	0.7	-2.4	-0.1	0.8	-0.8	4.6	5.3	
2008-Q1	-4.4	0.7	3.4	-0.7	-6.8	-5.1	-4.1	-2.1	-4.6	1.4	-2.6	-2.7	-4.1	-3.2	-3.2	2.0	3.6	
2008-Q2	-3.4	-1.7	2.1	0.4	-7.0	-5.3	-3.8	-4.4	-5.6	0.6	-5.2	-2.7	-7.3	-4.1	-4.3	-2.7	-0.9	
2008-Q3	-3.7	-2.7	1.0	-1.0	-5.8	-4.9	-4.1	-5.7	-6.6	-0.8	-5.1	-2.7	-7.2	-4.4	-3.9	-3.3	-3.5	
2008-Q4	-7.5	-7.5	-4.2	-6.6	-8.5	-7.6	-6.7	-6.7	-10.6	-5.7	-8.6	-5.8	-8.0	-9.2	-2.9	-3.1	-6.5	
2009-Q1	-6.3	-6.6	-3.5	-7.3	-5.5	-4.1	-6.5	-5.0	-6.8	-7.3	-6.8	-6.0	-5.6	-4.8	-1.7	-2.2	-3.1	
2009-Q2	0.3	3.4	5.8	-1.1	1.6	2.2	-1.3	-2.3	-0.3	0.2	2.4	1.2	1.9	5.0	2.4	5.7	4.2	
2009-Q3	4.5	7.5	7.5	5.5	5.1	3.3	3.5	2.2	3.7	1.8	7.2	3.7	6.0	7.7	3.3	6.8	5.4	
2009-Q4	4.0	5.1	3.6	5.6	5.7	3.1	3.3	3.2	6.2	1.3	3.2	1.1	4.7	3.8	0.8	0.7	1.4	
2010-Q1	1.4	3.6	1.7	2.8	4.6	2.9	1.1	-0.7	3.3	3.2	1.0	1.4	2.2	1.6	-0.6	1.4	-0.6	
2010-Q2	1.2	2.5	0.1	0.8	0.6	1.5	-1.3	-2.7	1.4	0.9	1.2	0.7	-0.1	0.8	-1.3	2.8	0.1	
2010-Q3	0.6	1.0	0.6	0.3	-0.6	0.6	-0.8	-2.5	0.6	-1.2	2.2	-0.5	-0.6	1.0	-1.7	-0.8	-0.6	
2010-Q4	2.7	2.2	2.5	2.4	2.0	1.8	0.7	-1.5	0.4	-0.1	3.8	-0.6	0.5	1.8	-0.5	-0.3	0.4	
2011-Q1	4.3	2.1	1.4	2.8	3.9	3.9	1.0	-1.8	1.4	1.8	3.6	-1.1	1.3	1.7	0.8	3.0	0.0	
2011-Q2	1.1	-0.1	0.2	0.3	-1.5	0.2	-0.1	-2.0	-0.4	1.0	0.4	-1.1	-0.4	-0.1	-0.6	-5.1	0.0	
2011-Q3	-1.4	-1.6	-1.6	1.1	-5.4	-3.0	-3.8	-3.3	-2.4	-0.7	-1.1	0.3	-3.2	-2.8	-2.9	-6.6	1.7	
2011-Q4	-1.3	-1.5	-2.2	0.2	-3.9	-3.1	-6.0	-4.4	-1.5	-1.6	-2.0	0.0	-4.0	-4.0	-4.1	1.5	-0.4	
2012-Q1	1.0	0.0	0.9	2.2	-0.2	-0.1	-3.8	-2.2	1.5	-0.5	-1.6	0.2	-1.0	-1.3	-4.0	-1.9	-0.9	
2012-Q2	0.9	-0.7	0.5	1.4	0.6	0.5	-3.3	-3.2	0.6	-0.3	-0.7	0.7	-0.6	-1.1	-3.7	-2.9	1.2	
2012-Q3	-0.9	-1.2	-0.5	1.1	-0.9	-0.3	-2.4	-3.5	-0.4	-1.0	0.5	-1.2	-2.3	-2.0	-3.8	-0.2	1.4	
2012-Q4	0.0	0.5	0.8	1.4	1.5	0.8	0.0	-0.8	1.3	-0.3	1.2	-1.0	-1.0	-0.9	-3.8	-1.8	0.9	
2013-Q1	0.7	0.5	0.2	1.7	1.5	0.8	-0.6	-0.5	1.8	-0.1	1.5	2.8	1.2	-1.6	-2.8	-2.3	0.9	
2013-Q2	0.3	0.1	-0.6	-0.8	1.2	0.8	-1.1	-0.7	1.5	-0.6	1.7	5.3	0.6	-2.0	-3.1	-2.0	1.3	
2013-Q3	0.5	0.8	0.2	-1.2	1.0	1.7	-0.1	-0.4	1.5	-0.1	-0.4	1.9	1.1	-0.8	-2.2	0.7	-0.4	
2013-Q4	1.9	1.3	0.2	0.0	2.0	1.2	2.0	1.9	1.7	0.2	-1.1	-0.7	2.2	0.1	-1.4	0.6	-1.6	
2014-Q1	2.1	0.6	0.0	-0.5	0.6	0.8	2.9	1.9	1.3	-0.8	-2.2	0.9	1.4	-0.6	-1.3	-1.7	-0.3	
2014-Q2	1.8	0.7	-0.5	0.7	-0.6	-0.3	2.1	0.7	1.0	-1.7	-1.3	-3.8	0.8	-1.7	-1.6	-0.3	0.5	
2014-Q3	2.9	1.4	0.5	2.1	0.8	-1.0	0.2	0.6	1.8	-1.0	0.8	-4.8	0.9	-1.1	-1.3	-2.0	-0.3	
2014-Q4	3.0	-0.4	0.9	0.1	-0.6	-0.1	-1.3	-0.2	0.2	-0.8	0.7	0.7	-0.3	-1.4	-0.7	-0.4	-1.3	
2015-Q1	2.1	-2.3	-3.1	-0.2	1.1	1.7	0.6	0.5	0.3	-4.0	1.0	0.8	0.0	-1.8	0.0	1.9	-1.2	
2015-Q2	1.8	-1.1	-4.8	0.9	2.5	1.7	3.4	1.9	2.4	-4.1	1.1	0.2	0.9	-0.5	1.5	-1.6	-1.0	
2015-Q3	1.5	-0.5	-4.5	0.8	-0.6	-1.2	2.0	1.0	-0.1	-3.6	-0.8	-1.0	-0.7	-0.9	-0.7	-3.0	-2.1	
2015-Q4	1.0	-1.0	-4.9	0.6	-1.5	-1.5	0.4	0.0	-0.9	-3.6	-0.2	-2.4	-1.0	-0.7	-1.7	-0.7	-1.7	
2016-Q1	0.5	-0.5	-4.7	-0.4	-0.4	-2.0	-1.0	-0.6	-0.2	-2.7	1.6	-3.2	-1.0	-1.6	-1.7	0.1	-0.1	
2016-Q2	2.1	0.6	-3.1	0.6	-0.5	-2.2	-1.6	-0.2	0.8	-1.8	0.9	-2.6	0.0	-1.7	-1.7	-1.1	0.6	0.8
06/23/16	2.4	1.0	-2.8	0.8	-0.1	-1.8	-1.3	0.1	1.3	-1.4	0.8	-2.7	0.2	-1.7	-1.7	-0.7	0.7	1.5
06/27/16	1.2	0.3	-3.3	0.2	-2.0	-3.4	-3.5	-1.8	-0.9	-2.0	0.4	-3.4	-0.5	-2.3	-2.0	-1.1	0.5	-2.4
07/07/16	2.0	0.7	-2.8	0.5	-1.7	-3.2	-3.3	-1.2	0.9	-1.6	0.8	-3.5	-0.4	-1.8	-1.9	-0.7	0.6	-1.4
08/02/16	2.6	1.2	-1.6	0.9	-0.9	-1.9	-2.8	-0.8	1.2	-1.8	0.2	-2.4	0.6	-1.5	-1.6	-0.2	1.9	0.0
08/15/16	2.9	1.6	-0.9	1.5	-0.3	-1.0	-2.1	-0.2	2.0	-1.1	0.5	-2.2	0.7	-1.3	-1.2	-0.2	1.8	0.8
09/02/16	2.8	1.6	-0.9	1.3	-0.1	-1.1	-1.9	0.1	2.0	-1.0	0.3	-2.0	0.2	-1.2	-1.4	0.0	1.8	1.1

Stocks, Bonds, Consumers Leading Indicators (SBCLI©)

MA(4Q)

Douglas T. Breeden, Duke University and Amundi Smith Breeden

9/8/2016 16:47

	United States	Canada	Brazil	Mexico	France	Germany	Italy	Spain	United Kingdom	Russia	Turkey	Japan	Australia	South Korea	China	India	Indonesia
2006-Q4																	
2007-Q1																	
2007-Q2	-2.0	-0.4	3.1	2.2	-0.8	-0.6	0.7	0.6	-1.2	2.8	-0.8	0.3	1.1	0.0	3.0	1.9	3.6
2007-Q3	-1.9	-0.1	3.6	1.9	-0.4	-0.5	0.0	0.3	-1.1	3.0	0.8	0.3	1.5	1.2	2.5	3.4	4.4
2007-Q4	-3.0	0.4	4.0	1.0	-1.6	-2.5	-1.3	-0.6	-1.2	2.9	1.0	-0.7	1.2	0.8	1.7	3.5	4.5
2008-Q1	-3.7	0.5	3.3	0.1	-4.0	-2.8	-2.9	-1.7	-2.9	2.2	-0.6	-2.1	-2.2	-0.4	-1.0	2.5	4.1
2008-Q2	-3.3	-0.6	2.8	-0.1	-5.2	-4.3	-3.5	-2.6	-3.9	1.7	-2.3	-2.5	-3.7	-1.6	-2.6	1.0	2.2
2008-Q3	-4.1	-1.0	2.2	-0.9	-6.3	-5.0	-4.1	-3.9	-5.6	0.3	-3.8	-2.7	-5.7	-3.8	-3.6	-0.6	0.1
2008-Q4	-5.5	-4.6	-1.1	-3.1	-7.7	-6.4	-5.3	-5.5	-8.1	-2.6	-6.9	-4.2	-7.6	-6.6	-3.6	-2.9	-3.7
2009-Q1	-5.0	-4.6	-1.3	-4.1	-5.6	-4.5	-5.3	-5.4	-6.7	-4.1	-5.9	-4.4	-6.4	-4.6	-2.8	-2.7	-3.3
2009-Q2	-3.6	-2.1	0.8	-3.9	-3.5	-2.7	-4.0	-4.5	-5.4	-2.8	-3.1	-2.3	-3.0	-2.1	-0.2	1.3	-1.1
2009-Q3	-0.9	0.5	2.0	-0.9	-0.2	-0.4	-1.5	-1.4	-1.6	-2.7	0.2	-1.2	0.2	1.4	0.8	2.3	1.2
2009-Q4	2.1	4.3	4.7	2.2	3.7	2.6	1.0	0.4	2.9	0.8	2.8	1.2	3.3	4.4	1.6	3.2	2.8
2010-Q1	3.0	5.6	4.6	4.2	4.9	3.1	2.3	0.7	3.5	2.5	4.1	2.5	4.1	4.6	1.4	4.1	2.4
2010-Q2	2.6	3.8	1.9	3.2	3.2	2.3	1.0	0.2	3.8	1.1	2.2	0.9	2.3	2.3	-0.2	1.7	0.7
2010-Q3	1.0	2.3	1.1	1.6	2.0	1.7	0.2	-1.6	1.9	1.0	1.6	0.4	0.8	1.3	-1.1	0.3	-0.6
2010-Q4	2.0	2.4	1.3	1.6	1.3	1.7	-0.3	-2.1	0.9	0.4	2.5	0.1	0.2	1.3	-0.9	1.3	0.3
2011-Q1	2.5	1.6	1.0	1.5	1.6	2.2	0.1	-2.2	1.0	0.3	2.9	-0.8	0.4	1.4	-0.5	1.1	-0.3
2011-Q2	1.9	1.0	1.3	1.3	0.2	1.0	0.3	-1.8	0.0	0.5	2.1	-0.8	0.1	0.9	-0.5	-2.7	0.2
2011-Q3	1.4	0.2	-0.1	1.9	-0.8	0.4	-1.4	-2.5	-0.5	0.6	1.3	-0.4	-0.9	-0.5	-1.1	-1.8	0.9
2011-Q4	-0.1	-0.8	-1.0	0.2	-2.7	-1.5	-3.1	-3.2	-0.9	-0.3	-0.8	-0.6	-2.2	-2.1	-2.3	-1.8	-0.2
2012-Q1	-0.2	-0.8	-0.4	1.7	-2.8	-1.6	-3.8	-2.8	-0.5	-0.6	-1.4	0.3	-2.1	-2.0	-3.4	-4.3	0.4
2012-Q2	-0.2	-1.1	-0.9	0.8	-1.6	-1.3	-4.6	-3.8	-0.5	-0.9	-1.4	0.3	-2.3	-2.6	-3.9	-0.7	0.4
2012-Q3	0.0	-0.6	0.2	1.6	-0.6	-0.2	-3.1	-2.9	0.5	-0.8	-0.6	-0.5	-1.7	-1.7	-3.9	-1.1	0.2
2012-Q4	0.5	-0.1	0.7	1.4	1.1	0.6	-1.6	-2.0	0.9	-0.3	0.2	-0.2	-0.8	-1.0	-3.8	-2.4	1.1
2013-Q1	-0.1	-0.4	-0.1	1.4	0.3	0.2	-1.5	-2.0	0.7	-0.6	1.0	0.8	-0.6	-1.8	-3.3	-1.3	1.1
2013-Q2	0.1	0.3	0.1	0.3	1.3	0.8	-0.6	-0.8	1.4	-0.4	1.5	2.1	-0.2	-1.4	-3.4	-1.9	1.1
2013-Q3	0.6	0.6	0.2	0.3	1.2	1.2	-0.3	-0.5	1.7	-0.1	0.5	2.3	1.2	-1.2	-2.5	-0.8	0.2
2013-Q4	1.1	0.7	-0.2	-0.4	1.6	1.0	0.4	0.6	1.6	-0.2	0.3	2.3	1.4	-0.9	-2.3	-0.7	-0.2
2014-Q1	1.3	0.7	0.1	-0.8	0.8	1.3	1.4	0.8	1.4	-0.4	-1.3	1.4	1.3	-0.7	-1.8	-0.5	-0.4
2014-Q2	1.9	1.0	-0.2	0.4	0.7	0.5	2.0	1.3	1.3	-0.8	-1.2	-2.2	1.5	-0.8	-1.5	0.1	-0.5
2014-Q3	2.5	1.0	0.2	0.8	0.7	-0.1	1.5	1.2	1.6	-0.9	-0.7	-1.9	1.1	-0.8	-1.3	-1.9	-0.3
2014-Q4	2.4	0.2	0.2	0.4	-0.6	-0.2	0.4	0.2	0.6	-1.3	-0.3	-1.6	0.2	-1.6	-1.1	-0.4	-0.4
2015-Q1	2.5	-0.5	-1.3	0.9	1.0	0.4	0.4	0.6	1.1	-2.5	0.9	-2.0	0.4	-1.5	-0.7	-0.1	-0.8
2015-Q2	2.4	-0.8	-2.0	0.5	0.9	0.8	1.1	0.8	1.3	-2.5	0.9	0.4	0.3	-1.0	0.4	-1.0	-1.1
2015-Q3	1.8	-1.4	-3.8	0.3	0.2	0.3	1.3	0.7	0.1	-3.8	0.1	-0.1	-0.4	-1.4	-0.4	-0.5	-1.6
2015-Q4	1.4	-1.1	-4.8	0.8	0.5	0.1	1.9	0.9	0.7	-3.9	0.5	-1.1	0.0	-0.6	-0.1	-1.2	-1.3
2016-Q1	1.0	-0.5	-4.6	0.2	-0.5	-1.6	0.5	0.2	-0.2	-3.2	0.4	-2.1	-0.9	-1.3	-1.2	-1.4	-1.1
2016-Q2	1.5	-0.2	-4.0	0.6	-1.0	-1.8	-0.6	-0.1	-0.1	-2.7	0.4	-2.5	-0.5	-1.2	-1.7	-0.9	-0.5
06/23/16	1.5	0.2	-3.8	0.2	-0.3	-1.9	-1.2	-0.2	0.5	-2.1	1.2	-2.9	-0.4	-1.6	-1.7	-0.3	0.3
06/27/16	0.9	-0.1	-4.0	-0.1	-1.2	-2.7	-2.3	-1.2	-0.5	-2.4	1.0	-3.3	-0.7	-1.9	-1.9	-0.5	0.2
07/07/16	1.2	0.1	-3.8	0.0	-1.0	-2.6	-2.2	-0.9	0.3	-2.2	1.2	-3.3	-0.7	-1.7	-1.8	-0.3	0.3
08/02/16	1.6	0.3	-3.2	0.2	-0.7	-1.9	-1.9	-0.7	0.5	-2.3	0.9	-2.8	-0.2	-1.5	-1.7	-0.1	0.9
08/15/16	1.7	0.5	-2.8	0.6	-0.4	-1.5	-1.6	-0.4	0.9	-1.9	1.0	-2.7	-0.2	-1.4	-1.4	0.0	0.9
09/02/16	1.7	0.5	-2.8	0.4	-0.3	-1.5	-1.5	-0.2	0.9	-1.9	0.9	-2.6	-0.4	-1.4	-1.5	0.1	0.8

Global Unemployment Rates

Douglas T. Breeden, Duke University and Amundi Smith Breeden

7/24/2016 10:58

	United States	Canada	Brazil	Mexico	France	Germany	Italy	Spain	United Kingdom	Russia	Turkey	Japan	Australia	South Korea	China	India	Indonesia
2006-Q4	4.4	6.1	9.9	3.8	8.3	10.1	6.5	8.3	5.5	6.8	8.8	4.0	4.5	3.4	4.1	0.0	0.0
2007-Q1	4.5	6.2	9.6	3.9	8.4	9.5	6.0	8.1	5.5	6.5	8.8	4.0	4.5	3.2	4.1	0.0	0.0
2007-Q2	4.5	6.1	9.5	3.6	8.1	9.1	5.9	7.9	5.4	6.2	9.1	3.8	4.3	3.3	4.1	0.0	0.0
2007-Q3	4.7	5.9	9.3	3.6	8.0	8.8	6.3	8.3	5.3	6.1	9.3	3.7	4.3	3.2	4.0	0.0	0.0
2007-Q4	4.8	5.9	8.7	3.7	7.4	8.5	6.3	8.6	5.2	5.9	9.4	3.8	4.4	3.2	4.0	0.0	0.0
2008-Q1	5.0	6.0	8.3	3.9	7.2	8.0	6.5	9.2	5.2	6.2	9.3	3.9	4.1	3.0	4.0	0.0	0.0
2008-Q2	5.3	6.0	7.7	3.7	7.3	7.8	6.8	10.4	5.4	5.7	9.4	4.0	4.2	3.1	4.0	0.0	0.0
2008-Q3	6.0	6.1	7.8	3.9	7.4	7.6	6.7	11.7	5.9	6.3	10.1	4.0	4.2	3.2	4.0	0.0	0.0
2008-Q4	6.9	6.6	7.9	4.5	7.7	7.6	6.9	13.9	6.4	7.2	11.4	4.1	4.4	3.3	4.1	0.0	0.0
2009-Q1	8.3	7.8	8.4	5.0	8.6	7.9	7.3	16.6	7.0	8.3	13.0	4.6	5.3	3.4	4.1	0.0	0.0
2009-Q2	9.3	8.5	8.2	5.5	9.2	8.3	7.4	17.8	7.8	8.7	13.8	5.1	5.7	3.8	4.2	0.0	0.0
2009-Q3	9.6	8.6	7.9	5.8	9.2	8.2	7.9	18.3	7.9	8.4	13.2	5.4	5.7	3.7	4.3	0.0	0.0
2009-Q4	9.9	8.5	7.9	5.5	9.5	8.1	8.2	18.8	7.8	8.1	12.3	5.2	5.5	3.6	4.3	0.0	0.0
2010-Q1	9.8	8.2	7.2	5.4	9.4	8.0	8.5	19.2	8.0	8.0	11.9	5.0	5.3	4.2	4.2	0.0	0.0
2010-Q2	9.6	8.0	6.9	5.4	9.3	7.8	8.5	19.9	7.9	7.6	11.2	5.1	5.3	3.4	4.2	0.0	0.0
2010-Q3	9.5	8.1	6.6	5.2	9.2	7.6	8.1	20.1	7.8	7.3	10.9	5.1	5.1	3.7	4.1	0.0	0.0
2010-Q4	9.5	7.7	6.2	5.5	9.2	7.4	8.3	20.2	7.9	6.9	10.4	5.0	5.1	3.5	4.1	0.0	0.0
2011-Q1	9.0	7.7	6.2	5.2	9.2	7.3	8.0	20.5	7.8	6.9	9.6	4.7	5.0	3.7	4.1	0.0	0.0
2011-Q2	9.1	7.5	6.0	5.4	9.1	7.1	8.0	20.7	7.9	6.7	9.6	4.7	5.0	3.4	4.1	0.0	0.0
2011-Q3	9.0	7.3	6.0	5.3	9.2	7.0	8.4	21.8	8.3	6.6	8.8	4.5	5.2	3.3	4.1	0.0	0.0
2011-Q4	8.6	7.4	5.7	5.0	9.4	6.8	9.2	22.6	8.4	6.3	8.5	4.5	5.2	3.2	4.1	0.0	0.0
2012-Q1	8.3	7.5	5.7	5.1	9.5	6.8	10.0	23.5	8.2	5.8	8.5	4.5	5.2	3.4	4.1	0.0	0.0
2012-Q2	8.2	7.3	5.6	4.9	9.7	6.8	10.6	24.5	8.1	5.5	8.3	4.4	5.1	3.2	4.1	0.0	0.0
2012-Q3	8.0	7.3	5.3	4.8	9.8	6.8	10.8	25.3	7.9	5.3	8.3	4.2	5.2	3.1	4.1	0.0	0.0
2012-Q4	7.8	7.3	5.4	5.1	10.1	6.8	11.4	25.9	7.8	5.1	8.6	4.2	5.3	3.1	4.1	0.0	0.0
2013-Q1	7.7	7.2	5.4	5.0	10.3	6.9	11.9	26.2	7.9	5.4	8.8	4.2	5.5	3.2	4.1	0.0	0.0
2013-Q2	7.5	7.1	5.6	5.0	10.4	6.9	12.1	26.2	7.7	5.5	9.0	4.0	5.7	3.1	4.1	0.0	0.0
2013-Q3	7.3	7.1	5.4	4.8	10.3	6.8	12.2	26.2	7.6	5.5	9.2	3.9	5.7	3.1	4.1	0.0	0.0
2013-Q4	6.9	7.1	5.1	4.8	10.1	6.8	12.4	25.8	7.2	5.5	9.1	3.9	5.8	3.1	4.0	0.0	0.0
2014-Q1	6.7	7.0	4.9	5.0	10.2	6.8	12.8	25.2	6.8	5.2	9.3	3.6	5.9	3.5	4.1	0.0	0.0
2014-Q2	6.2	7.0	4.7	4.9	10.1	6.7	12.4	24.6	6.3	5.1	9.7	3.6	6.0	3.6	4.1	0.0	0.0
2014-Q3	6.1	7.0	4.8	4.9	10.4	6.7	12.6	24.2	6.0	5.1	10.3	3.6	6.2	3.5	4.1	0.0	0.0
2014-Q4	5.7	6.7	5.0	4.5	10.5	6.6	12.8	23.7	5.8	5.2	10.4	3.5	6.2	3.5	4.1	0.0	0.0
2015-Q1	5.6	6.8	5.7	4.4	10.4	6.5	12.3	23.1	5.6	5.4	10.3	3.5	6.2	3.6	4.1	0.0	0.0
2015-Q2	5.4	6.8	6.4	4.4	10.4	6.4	12.2	22.5	5.6	5.6	10.3	3.4	6.1	3.8	4.0	0.0	0.0
2015-Q3	5.2	7.0	7.4	4.3	10.5	6.4	11.6	21.6	5.3	5.5	10.2	3.4	6.2	3.6	4.0	0.0	0.0
2015-Q4	5.0	7.0	8.1	4.3	10.2	6.3	11.6	20.9	5.1	5.7	10.4	3.3	5.8	3.5	4.0	0.0	0.0
2016-Q1	4.9	7.2	10.1	4.2	10.2	6.2	11.6	20.4	5.1	5.6	10.0	3.2	5.8	3.8	4.0	0.0	0.0
2016-Q2	4.9	7.1	9.9	4.4	10.1	6.1	11.5	19.9	5.1	5.8	9.8	3.2	5.7	3.7	4.1	0.0	0.0

Last 4 Quarters Real GDP Growth (YoY)

Douglas T. Breeden, Duke University and Amundi Smith Breeden

9/8/2016 16:47

	United States	Canada	Brazil	Mexico	France	Germany	Italy	Spain	United Kingdom	Russia	Turkey	Japan	Australia	South Korea	China	India	Indonesia
2006-Q4	2.4	1.5	4.8	3.9	2.4	5.0	2.6	4.1	1.1	8.3	5.9	2.1	3.1	4.7	12.8	9.8	6.1
2007-Q1	1.2	1.4	5.1	3.2	2.4	4.4	2.3	4.1	1.8	8.2	7.6	2.6	4.4	4.6	14.1	10.7	6.1
2007-Q2	1.7	2.3	6.6	2.8	2.3	3.5	1.7	3.8	2.3	8.8	3.7	2.4	5.1	5.7	14.5	8.9	6.7
2007-Q3	2.3	2.4	6.0	3.0	2.6	3.3	1.2	3.6	2.9	8.7	3.4	2.1	4.8	5.1	14.2	10.8	6.7
2007-Q4	1.9	2.2	6.6	3.5	2.2	2.3	0.1	3.6	3.3	10.1	4.3	1.6	3.8	6.5	13.9	9.0	5.8
2008-Q1	1.1	1.6	6.5	2.6	1.7	2.7	0.7	3.0	2.4	11.0	6.7	1.3	3.4	5.2	11.4	7.8	4.7
2008-Q2	0.8	1.0	5.9	2.0	0.6	1.8	-0.1	2.3	1.0	8.9	2.6	0.0	2.9	4.0	10.3	6.3	6.2
2008-Q3	-0.3	1.4	7.1	1.4	-0.1	0.5	-1.3	0.6	-1.4	5.0	1.1	-0.7	2.7	3.8	9.7	2.0	6.9
2008-Q4	-2.8	0.1	1.0	-1.3	-1.9	-1.8	-3.5	-1.3	-4.4	-1.6	-7.0	-4.8	1.5	-1.6	7.3	0.4	5.8
2009-Q1	-3.5	-2.3	-2.7	-5.3	-3.9	-6.9	-7.1	-3.3	-6.1	-7.5	-14.9	-9.2	1.4	-1.9	7.0	4.5	4.9
2009-Q2	-4.1	-3.7	-1.8	-6.7	-3.5	-6.6	-6.9	-4.3	-5.7	-9.4	-8.0	-6.5	1.7	-1.0	8.4	6.7	4.2
2009-Q3	-3.3	-4.0	-1.2	-4.7	-3.0	-5.7	-5.2	-3.8	-4.0	-7.6	-2.2	-5.5	1.2	1.0	9.9	8.9	4.1
2009-Q4	-0.2	-1.8	5.3	-1.2	-1.0	-3.0	-2.7	-2.9	-1.4	-3.5	5.6	-0.6	2.7	4.9	11.6	13.3	5.6
2010-Q1	1.6	1.7	9.1	4.1	1.2	2.4	0.6	-1.0	0.8	2.2	12.3	5.1	2.0	7.1	12.2	9.8	6.1
2010-Q2	2.7	3.4	8.5	6.6	1.9	4.4	1.9	0.0	2.1	4.7	10.0	4.4	2.1	7.4	10.8	9.5	6.8
2010-Q3	3.1	3.6	7.0	5.4	2.2	4.6	1.9	0.4	2.6	4.8	6.1	5.9	2.4	5.5	9.9	11.3	6.2
2010-Q4	2.7	3.6	5.7	4.5	2.2	4.5	2.2	0.6	2.3	5.0	9.2	3.6	2.7	6.1	9.9	10.5	6.5
2011-Q1	1.9	3.1	5.0	4.2	2.8	5.6	2.0	-0.2	2.3	3.2	11.9	0.1	2.0	4.8	10.1	9.5	6.5
2011-Q2	1.7	2.8	4.7	3.6	2.1	3.7	1.5	-0.8	1.3	3.4	9.1	-1.6	2.5	3.7	10.1	4.8	6.3
2011-Q3	1.2	3.5	3.5	4.2	2.0	3.3	0.5	-1.2	1.2	3.9	9.5	-0.5	3.1	3.4	9.5	4.4	6.0
2011-Q4	1.7	3.1	2.6	4.2	1.5	2.4	-1.1	-1.7	1.3	4.3	5.3	0.3	3.1	2.9	8.7	3.7	5.9
2012-Q1	2.8	2.4	1.6	3.9	0.4	1.0	-2.3	-2.2	1.2	5.4	2.5	3.3	4.4	2.6	8.0	4.5	6.1
2012-Q2	2.5	2.6	1.0	4.5	0.3	0.9	-3.2	-2.5	1.0	4.3	2.6	3.5	3.8	2.4	7.7	7.3	6.2
2012-Q3	2.4	1.4	2.6	3.3	0.2	0.7	-3.2	-2.7	1.8	3.3	2.0	0.3	3.2	2.1	7.6	5.7	5.9
2012-Q4	1.3	0.7	2.6	3.4	0.0	0.2	-2.7	-3.1	1.3	1.5	1.5	0.0	2.7	2.1	8.0	5.3	5.9
2013-Q1	1.3	1.7	3.0	3.1	0.0	-0.4	-2.7	-2.7	1.5	0.8	2.7	0.1	1.8	2.2	7.9	6.2	5.5
2013-Q2	1.0	1.8	3.8	0.6	0.9	0.5	-2.0	-2.1	2.1	1.2	4.6	1.1	2.0	2.7	7.7	7.2	5.6
2013-Q3	1.7	2.3	2.8	1.6	0.6	0.7	-1.4	-1.5	1.7	1.2	4.6	2.1	2.0	3.2	8.0	6.8	5.5
2013-Q4	2.7	3.1	2.5	1.1	0.9	1.6	-0.9	-0.3	2.4	1.9	4.6	2.1	2.3	3.5	7.6	6.4	5.6
2014-Q1	1.6	2.2	2.5	1.1	0.9	2.4	-0.1	0.4	2.6	0.8	4.9	2.4	3.0	3.9	7.4	7.0	5.1
2014-Q2	2.4	2.7	-0.4	3.0	0.4	1.3	-0.2	1.2	3.1	1.1	2.3	-0.4	2.7	3.5	7.5	7.9	5.0
2014-Q3	2.9	2.5	-1.0	2.3	0.7	1.2	-0.4	1.7	3.1	0.9	2.0	-1.5	2.6	3.3	7.1	6.8	5.0
2014-Q4	2.5	2.4	-0.6	2.6	0.6	1.6	-0.4	2.1	3.5	0.1	2.9	-0.9	2.3	2.7	7.1	7.1	5.0
2015-Q1	3.3	2.0	-2.2	2.5	1.3	1.1	0.1	2.7	2.9	-2.8	2.3	-0.9	2.3	2.4	7.0	7.3	4.7
2015-Q2	3.0	1.0	-2.9	2.3	1.1	1.8	0.6	3.2	2.3	-4.5	3.7	0.7	2.1	2.2	7.0	7.4	4.7
2015-Q3	2.2	1.0	-4.4	2.6	1.1	1.7	0.8	3.4	2.0	-3.7	4.0	1.8	2.7	2.8	6.9	7.4	4.7
2015-Q4	1.9	0.3	-5.9	2.4	1.4	1.3	1.1	3.5	1.8	-3.8	5.6	0.8	2.9	3.1	6.8	8.1	5.0
2016-Q1	1.6	1.1	-5.1	2.8	1.4	1.8	1.0	3.4	2.0	-1.2	4.8	0.0	3.1	2.8	6.7	7.4	4.9
2016-Q2	1.2	0.9	-3.8	2.8	1.4	1.7	0.8	3.2	2.2	-1.2	4.8	0.8	3.1	3.2	6.7	7.1	5.1

Last 4Q Real Retail Sales Growth (YoY)

Douglas T. Breeden, Duke University and Amundi Smith Breeden

8/3/2016 11:03

	United States	Canada	Brazil	Mexico	France	Germany	Italy	Spain	United Kingdom	Russia	Turkey	Japan	Australia	South Korea	China	India	Indonesia
2006-Q4	2.1	4.8	8.1	0.0	1.7	-0.1	-0.2	2.4	1.4	13.4	0.0	-0.5	3.7	0.7	11.8	0.0	0.0
2007-Q1	0.1	3.6	8.6	0.0	2.4	-3.2	-0.2	3.8	0.8	13.1	0.0	-0.6	5.3	3.0	12.2	0.0	0.0
2007-Q2	0.4	4.9	10.0	0.0	2.4	-3.4	-0.1	2.2	1.8	14.1	0.0	0.4	4.4	1.9	11.8	0.0	0.0
2007-Q3	0.9	2.8	10.0	0.0	2.8	-3.2	-0.1	1.7	1.9	15.0	0.0	0.4	6.1	4.7	10.0	0.0	0.0
2007-Q4	0.3	3.5	9.7	0.0	3.3	-5.2	-1.3	1.3	2.4	15.3	0.0	1.1	5.0	3.5	11.3	0.0	0.0
2008-Q1	-1.9	4.5	9.7	0.0	2.5	-0.4	-2.2	-2.4	3.5	15.9	0.0	0.1	1.4	5.1	12.0	0.0	0.0
2008-Q2	-2.3	2.1	10.2	0.0	1.8	-1.8	-3.2	-4.0	1.5	13.9	0.0	-1.2	0.3	4.3	13.5	0.0	0.0
2008-Q3	-5.0	1.8	9.9	0.0	0.9	-0.4	-4.0	-5.7	-0.1	13.7	0.0	-1.3	-2.1	3.6	16.9	0.0	0.0
2008-Q4	-10.6	-3.0	6.3	0.0	-0.3	0.6	-4.7	-8.8	-2.2	7.4	0.0	-2.2	-0.4	-4.2	17.2	0.0	0.0
2009-Q1	-10.2	-6.3	5.4	-3.2	-2.0	-4.2	-3.6	-10.1	-4.1	-1.0	0.0	-2.4	3.1	-5.6	16.0	0.0	0.0
2009-Q2	-9.9	-5.0	4.5	-4.4	-1.6	-3.0	-2.7	-8.4	-2.7	-6.0	0.0	-1.9	5.9	-0.5	16.9	0.0	0.0
2009-Q3	-6.4	-2.7	5.1	-3.7	-1.5	-4.3	-1.9	-6.1	-0.9	-9.4	0.0	0.3	4.3	0.5	16.7	0.0	0.0
2009-Q4	-0.7	1.6	9.0	-2.0	-0.1	-3.2	-0.9	-3.6	1.1	-6.4	0.0	1.5	3.0	10.1	15.3	0.0	0.0
2010-Q1	2.1	5.8	11.7	-2.1	1.3	0.1	0.0	-0.2	-0.5	1.7	0.0	4.3	-0.3	9.0	16.0	0.0	0.0
2010-Q2	4.2	3.9	11.1	0.4	2.2	0.9	-0.6	-0.1	-0.3	5.7	0.0	4.2	-1.2	5.6	15.3	0.0	0.0
2010-Q3	3.2	2.3	11.2	1.2	3.2	2.4	-1.2	-2.1	-0.6	7.2	0.0	4.6	1.1	7.2	14.3	0.0	0.0
2010-Q4	5.3	3.0	9.7	0.1	3.0	1.4	-0.6	-1.8	-0.8	6.9	0.0	0.8	-0.7	4.6	12.9	0.0	0.0
2011-Q1	5.1	0.4	7.2	0.9	4.0	1.5	-3.5	-4.6	1.5	5.2	0.0	-2.0	-0.4	6.3	11.1	0.0	0.0
2011-Q2	3.9	1.4	7.6	1.4	3.1	-0.3	-3.1	-4.3	0.1	6.0	0.0	-0.6	-1.3	7.2	11.1	0.0	0.0
2011-Q3	3.9	1.2	6.0	0.8	2.2	0.2	-4.3	-4.4	-0.3	7.7	0.0	-1.2	-1.3	4.6	10.4	0.0	0.0
2011-Q4	3.2	1.4	5.6	3.7	2.0	0.7	-5.3	-5.9	0.5	8.4	0.0	0.9	0.3	2.8	11.7	0.0	0.0
2012-Q1	3.4	1.9	8.5	4.3	1.6	-0.4	-3.4	-3.0	0.4	8.0	0.0	2.9	1.0	2.8	11.2	0.0	0.0
2012-Q2	2.6	0.9	8.2	4.3	1.0	1.2	-5.7	-6.5	-0.7	7.9	0.0	2.2	2.7	1.7	11.0	0.0	0.0
2012-Q3	2.7	1.1	9.0	4.8	1.2	-0.4	-4.3	-7.2	0.2	5.8	0.0	0.5	1.6	1.9	11.4	0.0	0.0
2012-Q4	2.2	0.0	7.8	2.6	0.8	-1.1	-4.7	-8.6	-1.4	5.1	0.0	0.5	0.7	2.1	11.8	0.0	0.0
2013-Q1	1.9	0.6	3.6	1.5	-0.2	0.2	-5.3	-9.3	-1.7	4.4	0.0	0.5	1.2	-0.7	10.3	0.0	0.0
2013-Q2	2.6	2.1	3.6	0.8	-0.1	-0.1	-3.0	-4.6	-0.5	4.1	0.0	0.5	-0.2	-0.4	10.6	0.0	0.0
2013-Q3	2.4	3.0	5.4	0.7	0.1	0.2	-2.8	-1.8	0.8	3.6	0.0	0.6	0.5	-0.2	10.2	0.0	0.0
2013-Q4	2.1	3.1	5.2	2.0	-0.1	0.4	-1.9	0.7	1.0	3.0	0.0	1.7	2.1	0.4	9.6	0.0	0.0
2014-Q1	1.1	2.3	5.4	1.5	-0.6	1.2	-1.5	0.2	1.8	4.0	0.0	4.7	2.5	1.6	10.0	0.0	0.0
2014-Q2	2.7	2.9	3.3	2.6	-0.1	0.5	-1.5	0.3	2.6	2.4	0.0	-5.4	2.3	0.8	10.1	0.0	0.0
2014-Q3	2.9	2.8	-0.2	3.3	-1.2	0.2	-1.7	0.1	0.6	2.7	0.0	-1.8	3.3	0.7	9.7	0.0	0.0
2014-Q4	3.2	2.3	0.8	3.1	-0.2	1.6	-0.8	1.6	2.9	3.2	0.0	-1.5	3.1	0.2	9.5	0.0	0.0
2015-Q1	3.0	0.3	-1.1	5.2	0.5	2.1	0.3	2.0	1.6	-6.7	0.0	-6.4	2.7	-0.3	9.7	0.0	0.0
2015-Q2	2.0	0.5	-3.1	4.9	1.4	2.7	0.6	1.7	1.1	-8.9	0.0	2.9	3.1	1.2	9.0	0.0	0.0
2015-Q3	2.1	0.4	-5.7	5.4	1.9	3.4	1.3	2.5	1.2	-9.7	0.0	0.3	2.6	1.3	8.8	0.0	0.0
2015-Q4	1.6	0.8	-7.1	4.8	0.9	2.7	0.7	2.7	-0.1	-11.8	0.0	-0.9	2.4	3.8	9.0	0.0	0.0
2016-Q1	1.6	3.8	-8.3	6.7	2.0	1.3	0.4	2.7	1.2	-5.1	0.0	-1.4	2.3	2.9	8.4	0.0	0.0
2016-Q2	1.5	1.5	-2.4	7.4	4.6	0.6	-0.1	0.9	2.8	-5.7	0.0	-1.4	2.1	3.4	7.9	0.0	0.0

Note: 2016-Q2 numbers are for May 2016 year-over-year percentage real retail sales growth.

Last 4Q CPI Inflation (YoY)

Douglas T. Breeden, Duke University and Amundi Smith Breeden

7/24/2016 11:36

	United States	Canada	Brazil	Mexico	France	Germany	Italy	Spain	United Kingdom	Russia	Turkey	Japan	Australia	South Korea	China	India	Indonesia
2006-Q4	2.0	1.4	3.1	4.1	1.3	1.3	1.8	2.6	2.7	9.1	9.8	0.3	3.3	2.1	2.0	6.9	6.1
2007-Q1	2.4	1.8	3.0	4.1	1.2	1.9	1.7	2.4	2.9	7.7	10.3	-0.1	2.5	2.0	2.7	7.1	6.6
2007-Q2	2.7	2.2	3.3	4.0	1.2	1.9	1.6	2.4	2.6	8.0	9.5	-0.1	2.1	2.4	3.6	6.3	6.3
2007-Q3	2.3	2.1	4.0	4.0	1.3	2.3	1.6	2.4	1.8	8.9	7.1	-0.1	1.8	2.3	6.1	6.6	6.4
2007-Q4	4.0	2.4	4.3	3.8	2.3	3.1	2.4	4.0	2.1	11.4	8.2	0.5	2.9	3.4	6.6	5.5	6.3
2008-Q1	4.1	1.8	4.6	3.9	2.9	2.9	3.1	4.4	2.4	12.9	8.8	1.0	4.3	3.8	8.0	6.3	6.5
2008-Q2	4.3	2.4	5.6	4.9	3.3	3.0	3.6	4.6	3.4	14.9	10.3	1.4	4.4	4.8	7.8	7.7	9.0
2008-Q3	5.3	3.4	6.3	5.5	3.2	3.1	4.0	4.9	4.8	14.9	11.7	2.1	5.0	5.5	5.3	9.1	12.0
2008-Q4	1.6	1.9	6.2	6.2	1.8	1.6	2.8	2.5	3.9	13.8	10.9	1.0	3.7	4.5	2.5	10.1	11.5
2009-Q1	-0.2	1.2	5.8	6.2	0.6	0.8	1.5	0.5	3.0	13.7	8.4	-0.1	2.4	3.9	-0.6	9.3	8.6
2009-Q2	-0.9	0.1	5.2	6.0	-0.2	0.2	0.9	-0.7	2.1	12.4	5.7	-1.0	1.4	2.8	-1.5	8.9	5.6
2009-Q3	-1.6	-0.9	4.4	5.1	-0.4	-0.2	0.1	-1.1	1.5	11.4	5.3	-2.2	1.2	2.0	-1.3	11.8	2.8
2009-Q4	1.5	0.8	4.2	4.0	0.4	0.4	0.7	0.1	2.1	9.2	5.7	-2.0	2.1	2.4	0.6	13.3	2.6
2010-Q1	2.4	1.6	4.9	4.8	1.3	0.9	1.3	1.1	3.3	7.2	9.3	-0.9	2.9	3.0	2.2	15.3	3.7
2010-Q2	1.8	1.4	5.1	4.0	1.6	1.3	1.4	1.6	3.5	5.9	9.2	-0.7	3.1	2.7	2.9	13.6	4.4
2010-Q3	1.2	1.8	4.6	3.7	1.5	1.1	1.6	2.0	3.1	6.1	8.4	-1.0	2.9	2.9	3.5	10.3	6.2
2010-Q4	1.2	2.3	5.6	4.2	1.6	1.3	1.8	2.6	3.4	8.1	7.4	-0.3	2.8	3.2	4.7	9.2	6.3
2011-Q1	2.1	2.6	6.1	3.5	1.8	1.8	2.3	3.5	4.1	9.5	4.3	-0.5	3.3	3.8	5.1	12.6	6.8
2011-Q2	3.4	3.4	6.6	3.3	2.1	2.0	2.6	3.5	4.4	9.5	5.9	-0.4	3.5	4.0	5.7	10.5	5.9
2011-Q3	3.7	3.0	7.1	3.4	2.1	2.3	2.8	3.1	4.7	8.1	6.4	0.1	3.4	4.3	6.2	10.7	4.7
2011-Q4	3.3	2.7	6.7	3.5	2.4	2.2	3.3	2.8	4.6	6.7	9.2	-0.3	3.0	4.0	4.6	9.9	4.1
2012-Q1	2.9	2.3	5.8	3.9	2.3	2.1	3.3	2.0	3.5	3.9	10.5	0.3	1.6	3.0	3.8	3.7	4.0
2012-Q2	1.9	1.6	5.0	3.9	2.0	1.8	3.3	2.0	2.8	3.8	9.4	0.2	1.2	2.4	2.9	9.8	4.7
2012-Q3	1.7	1.2	5.2	4.6	2.0	2.0	3.2	2.8	2.4	6.0	9.0	-0.4	2.0	1.6	1.9	11.1	4.3
2012-Q4	1.9	0.9	5.6	4.1	1.5	1.9	2.5	3.1	2.7	6.5	6.8	-0.2	2.2	1.7	2.1	10.6	4.1
2013-Q1	1.7	0.9	6.4	3.7	1.1	1.5	1.9	2.6	2.8	7.1	7.2	-0.6	2.5	1.6	2.4	11.6	4.7
2013-Q2	1.4	0.8	6.6	4.5	0.8	1.6	1.2	1.7	2.7	7.2	7.0	-0.3	2.4	1.2	2.4	8.9	5.2
2013-Q3	1.5	1.1	6.1	3.4	0.9	1.6	1.1	1.2	2.7	6.4	8.3	0.9	2.2	1.4	2.8	8.3	7.9
2013-Q4	1.2	0.9	5.8	3.7	0.7	1.3	0.7	0.1	2.1	6.4	7.5	1.4	2.7	1.1	2.9	9.8	7.8
2014-Q1	1.4	1.4	5.8	4.2	0.7	1.2	0.5	0.0	1.7	6.4	8.0	1.5	2.9	1.1	2.3	8.2	7.8
2014-Q2	2.0	2.2	6.4	3.6	0.6	1.0	0.4	0.2	1.7	7.6	9.4	3.6	3.0	1.6	2.2	7.8	7.1
2014-Q3	1.8	2.1	6.6	4.1	0.4	0.9	-0.1	-0.3	1.5	7.7	9.2	3.4	2.3	1.4	2.0	6.7	4.4
2014-Q4	1.2	1.9	6.5	4.2	0.3	0.5	0.1	-0.5	0.9	9.6	8.8	2.5	1.7	1.0	1.5	4.1	6.5
2015-Q1	-0.1	1.1	7.7	3.1	-0.2	0.1	-0.2	-1.0	0.1	16.2	7.5	2.3	1.3	0.6	1.2	5.3	6.5
2015-Q2	0.0	0.9	8.5	2.9	0.2	0.5	0.1	-0.3	0.0	15.8	7.7	0.5	1.5	0.5	1.4	5.1	7.1
2015-Q3	0.1	1.2	9.5	2.6	0.1	0.1	0.2	-0.4	0.0	15.7	7.3	0.2	1.5	0.7	1.7	3.9	7.1
2015-Q4	0.4	1.3	10.4	2.3	0.1	0.3	0.2	-0.3	0.1	14.5	8.2	0.3	1.7	1.1	1.5	5.3	4.8
2016-Q1	1.1	1.5	10.1	2.7	0.0	0.2	-0.1	-0.7	0.3	8.3	8.6	0.1	1.3	1.0	2.1	5.3	4.3
2016-Q2	1.1	1.7	9.1	2.6	0.0	0.2	-0.4	-0.9	0.4	7.4	6.9	-0.4	1.2	0.9	2.1	5.6	3.5



Douglas T. Breeden is the William W. Priest Professor of Finance and former Dean of Duke University's Fuqua School of Business. He also served on faculties at Chicago Booth, Stanford and North Carolina, where he was the Dalton McMichael Professor of Finance. He was the Fischer Black Visiting Professor of Financial Economics at MIT's Sloan School in 2011-2013, winning an "Outstanding Teacher" award.

Breeden published seminal research on insurance prices implicit in option prices, the Consumption CAPM, and hedging mortgage securities. His current research is "A Stocks, Bonds, Consumers Leading Indicator" and (with Robert Litzenberger) "Central Bank Policy Impacts on the Distribution of Future Interest Rates," which won a Roger Murray Prize from the Q-Group. He has presented this research recently to central bank meetings in the USA, England, France and Italy, as well as at the International Monetary Fund.

Breeden was Associate Editor of 5 top journals. He was also Founding Editor and Editor for 10 years of the Journal of Fixed Income. He was elected to the Board of Directors of the American Finance Association and in 2010 a lifetime Fellow. The International Association for Quantitative Finance named Breeden "Financial Engineer of the Year 2013" for being an "industry pioneer."

Breeden holds a Ph.D. in Finance from Stanford and an S.B. from M.I.T. He served on the MIT President's Council, the Sloan School Visiting Committee and the Stanford Business School Advisory Council. He was named an Honorary Professor of the Chinese Academy of Sciences and served on the Boards of Goethe Business School in Germany and the Financial Management Association. He is on the Board of Trustees of Commonfund. Breeden is a Senior Research Consultant for Amundi Smith Breeden, a money management firm that he co-founded.

This research information and data is presented for informational purposes only. The views presented are subject to change and do not necessarily represent Amundi Smith Breeden's views. This information is not to be considered investment advice.