BCA House View Matrix

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Periodical

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WEEKLY REPORT

U.S. Housing Will Drive The Global Business Cycle… Again

Dear Client,

Geopolitical analysis is a fundamental part of the investment process. My colleague, and BCA's Chief Geopolitical Strategist, Marko Papic will introduce a one-day specialized course - **Geopolitics & Investing** - to our current BCA Academy offerings. **This special inaugural session will take place on September 26 in Toronto and is available, complimentary, only to those who sign up to BCA's 2018 Investment Conference.**

The course is aimed at investors and asset managers and will emphasize the key principles of our geopolitical methodology. Marko launched BCA's *Geopolitical Strategy* (*GPS*) in 2012. It is the financial industry's only dedicated geopolitical research product and focuses on the geopolitical and macroeconomic realities which constrain policymakers' options.

The **Geopolitics & Investing** course will introduce:

- The constraints-based methodology that underpins BCA's *Geopolitical Strategy*;
- Best-practices for reading the news and avoiding media biases;
- Game theory and its application to markets;
- Generating "geopolitical *alpha*;"
- Manipulating data in the context of political analysis.

The course will conclude with two topical and market-relevant "*war games*," which will tie together the methods and best-practices introduced in the course.

We hope to see you there. **Click here to join us!** Space is limited.

Peter Berezin,
Chief Global Strategist

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U.S. Housing Will Drive The Global Business Cycle… Again

- Housing is the main channel through which changes in U.S. monetary policy affect the real economy.
- The U.S. housing sector is in good shape, which means that the Fed will be able to raise rates more than the market anticipates.
- The Fed's tightening efforts are coming at a time when cyclical factors are raising the neutral rate of interest.
- Higher U.S. rates will push up the dollar, which will adversely affect emerging markets.
- Stay overweight developed market equities relative to their EM peers, while underweighting deep cyclical sectors relative to defensives.

U.S. Housing Back In The Spotlight

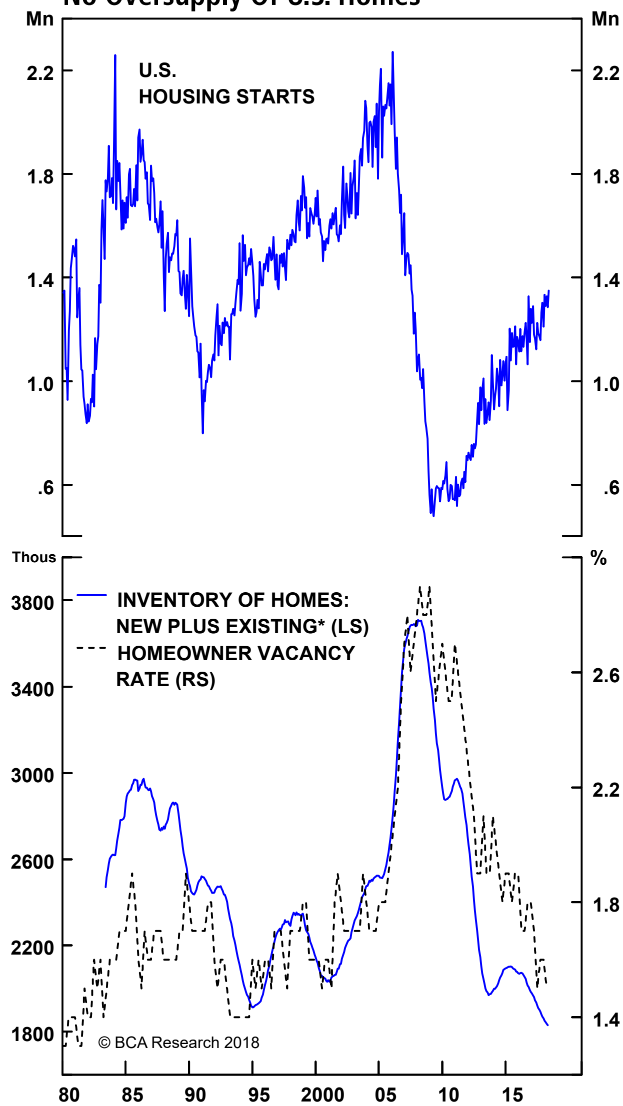
The Global Financial Crisis began in the U.S. and quickly spread to the rest of the world. The U.S. housing market was at the epicenter of the last crisis and it could be the main source of global financial turbulence once again.

Unlike ten years ago however, the problem is not that U.S. housing has become too vulnerable to a downturn. Rather, the problem, as we explain below, is that housing has become too resilient.

Housing starts were slow to recover after the Great Recession. To this day, they are still 40% below their 2006 peak (**Chart 1**). As a result, the homeowner vacancy rate stands at only 1.5%, the lowest level since 2001.

Mortgage lenders remain guarded. The ratio of mortgage debt-to-disposable income is 31 percentage points below where it stood in 2007. Mortgage-servicing costs, expressed as a share of disposable income, are near all-time lows. FICO scores among new borrowers are well above pre-crisis levels. The Urban Institute's

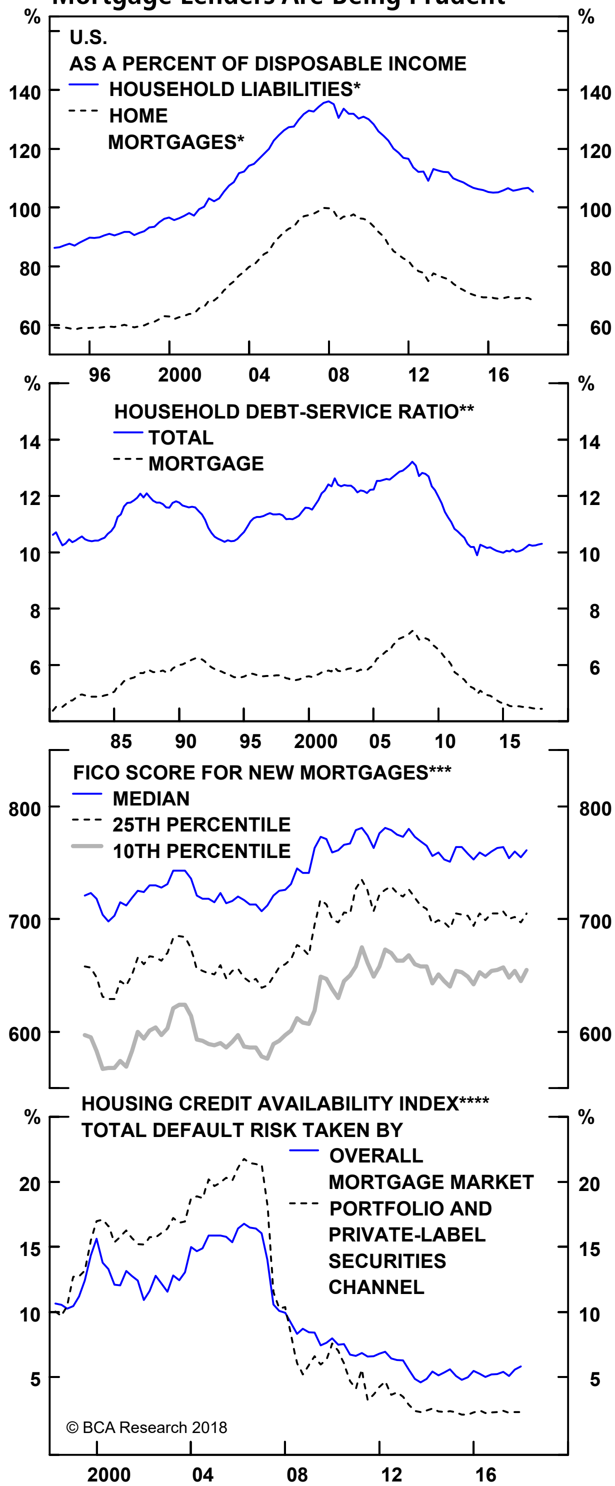
CHART 1
No Oversupply Of U.S. Homes



* SHOWN AS A 12-MONTH MOVING AVERAGE.

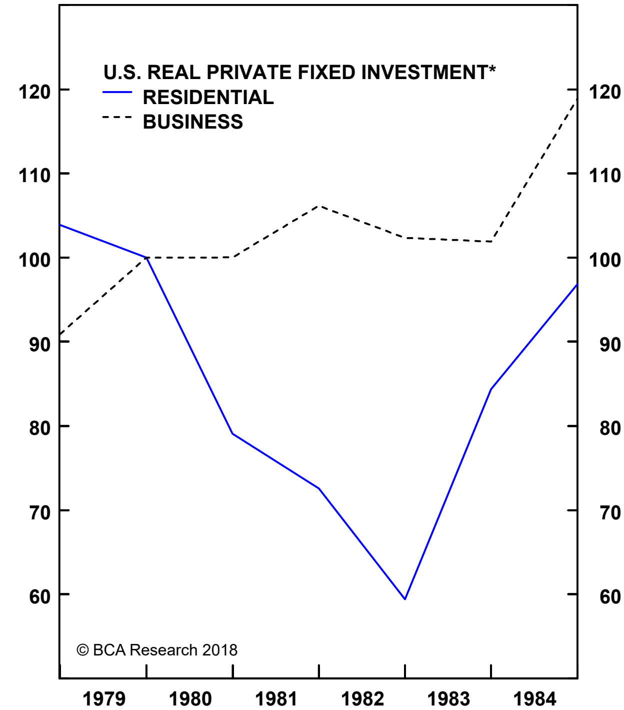
When the Fed hiked rates in the early 1980s, residential investment collapsed but business investment barely contracted.

CHART 2
Mortgage Lenders Are Being Prudent



* SOURCE: FLOW OF FUNDS.
** SOURCE: FEDERAL RESERVE.
*** SOURCE: FEDERAL RESERVE BANK OF NEW YORK.
**** SOURCE: URBAN INSTITUTE HOUSING FINANCE POLICY CENTER.

CHART 3
Residential Investment Collapsed In Response To Higher Interest Rates In The Early 80s... While Business Investment Was Barely Affected



* SHOWN REBASED TO JAN. 1979 = 100. SOURCE: BUREAU OF ECONOMIC ANALYSIS.

Housing Credit Availability Index, which measures the percentage of home purchase loans that are likely to default over the next 90 days, remains in extremely healthy territory (**Chart 2**).

Housing And The Monetary Transmission Mechanism

Housing is the main channel through which the Federal Reserve affects the real economy. When the Fed hiked rates in the early 1980s, residential investment collapsed but business investment barely contracted (**Chart 3**).

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"Housing is the business cycle," as Ed Leamer likes to say. To quote Leamer's timely 2007 Jackson Hole paper:[1]

Of the components of GDP, residential investment offers by far the best early warning sign of an oncoming recession. Since World War II we have had eight recessions preceded by substantial problems in housing and consumer durables. Housing did not give an early warning of the Department of Defense Downturn after the Korean Armistice in 1953 or the Internet Comeuppance in 2001, nor should it have. By virtue of its prominence in our recessions, it makes sense for housing to play a prominent role in the conduct of monetary policy.

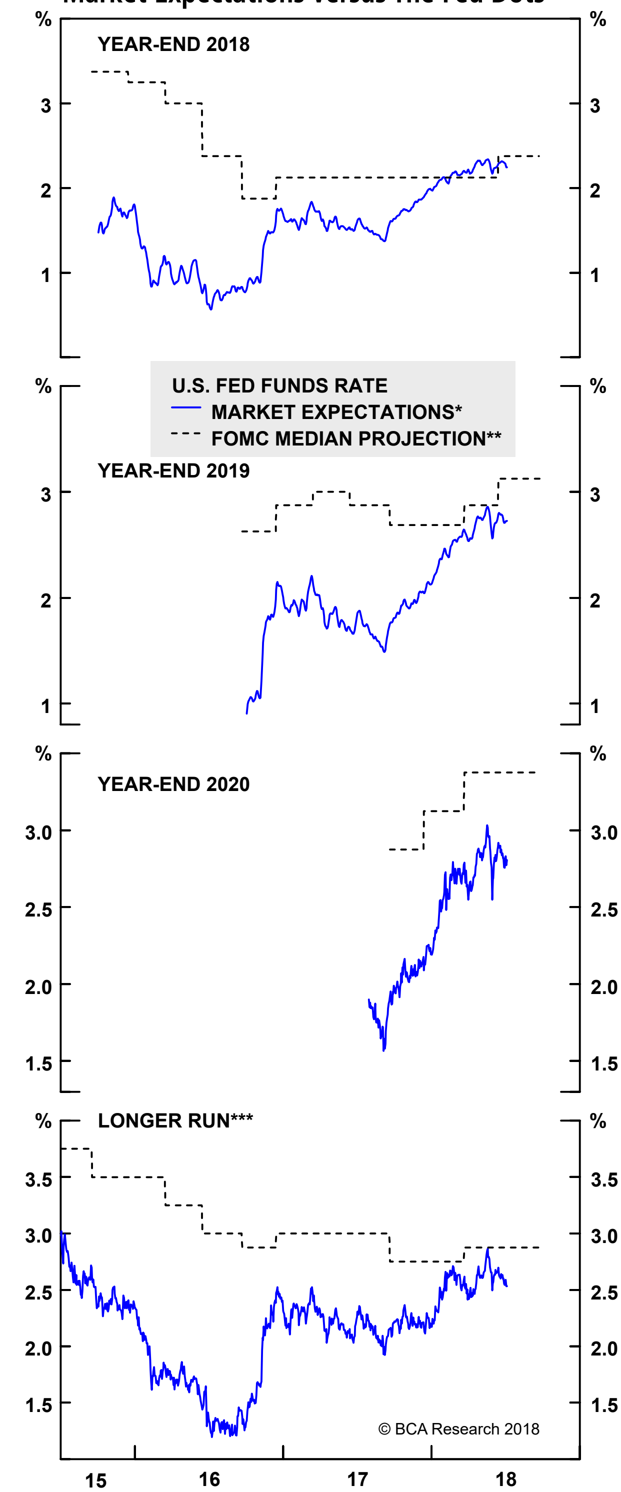
Neutral Rate: Structural Versus Cyclical

The market is pricing in only 90 basis points in rate hikes between now and the end of 2020 (**Chart 4**). Yet, if U.S. housing is in as good shape as it appears, what is stopping the Fed from hiking rates much more than investors currently anticipate?

The answer, one presumes, is that most investors share Larry Summers' view that the neutral rate of interest is very low.

We have a great deal of sympathy for Summers' position. In fact, we ourselves have argued many times that a variety of secular factors are pushing down the neutral rate of interest. These include slower potential GDP growth, the shift to a capital-lite economy, and high levels of income inequality.

CHART 4
Market Expectations Versus The Fed Dots



* AS DISCOUNTED IN OVERNIGHT INDEX SWAP CURVE.
** MOST RECENT PROJECTIONS FROM JUNE 2018.
*** MARKET EXPECTATION PROXIED BY 5-YEAR/5-YEAR FORWARD OVERNIGHT INDEX SWAP RATE.

1 Edward E. Leamer, "Housing Is The Business Cycle," Proceedings, Economic Policy Symposium, Jackson Hole, *Federal Reserve Bank of Kansas City*, (2007).

Housing and equity wealth have been rising much more quickly than GDP.

That said, it is critical to distinguish between the secular and cyclical determinants of the neutral rate. While secular factors are pushing down the neutral rate, cyclical factors are pushing it up.

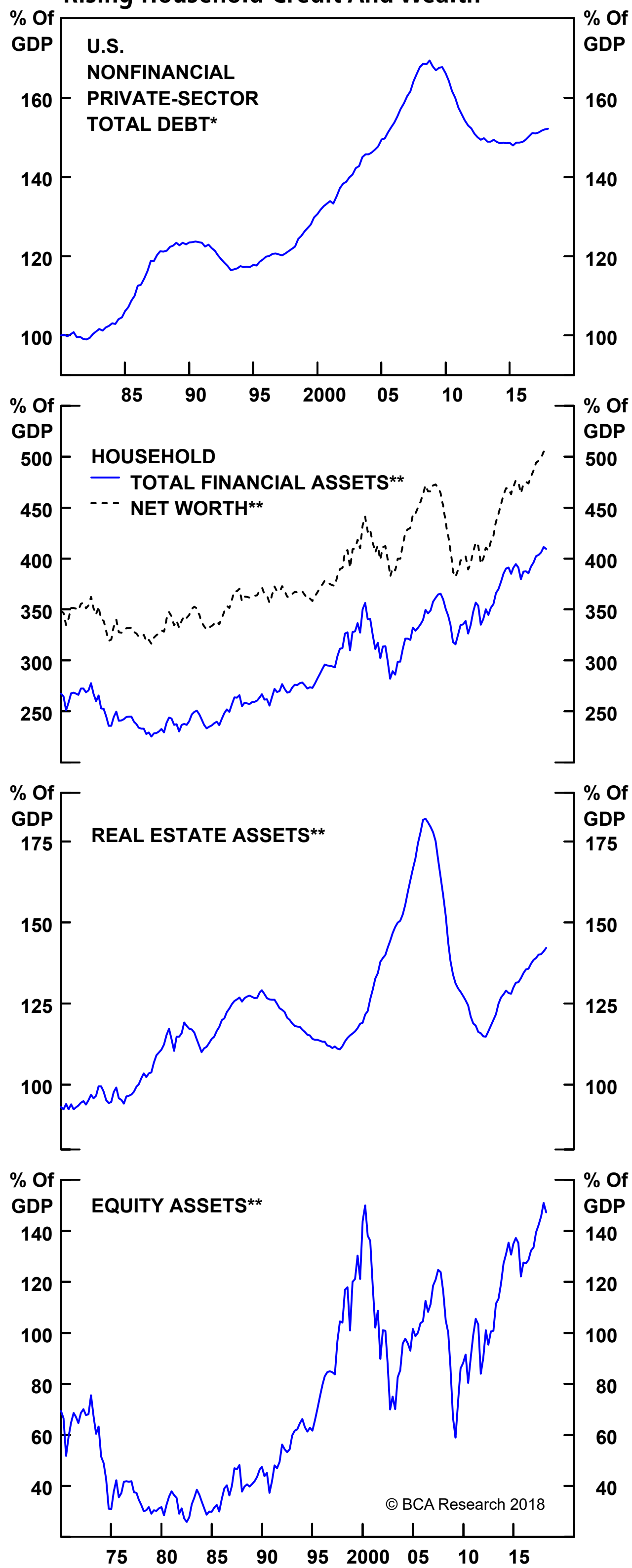
Credit And Household Wealth On The Upswing

Credit is one such cyclical factor. Private credit is now growing faster than GDP. The ratio of nonfinancial private debt-to-GDP has increased by an average of 1.2 percentage points during the past three years, which is close to its historic trend (**Chart 5**).

Not all the new credit is used to finance domestic spending – some of it can flow into imports as well as the purchase of financial assets – but if one assumes that every additional dollar of credit boosts domestic demand by 50 cents, today's pace of credit growth is adding 0.6% of GDP to aggregate demand relative to a situation where the ratio of credit-to-GDP is stable.[2]

In addition, housing and equity wealth have been rising much more quickly than GDP. Household real estate wealth fell from a peak of 182% of GDP in 2006 to 115% of GDP in 2012. It has since clawed its way back to 142% of GDP, equivalent to where it stood in 2002. Equity wealth reached nearly 150% of GDP earlier this year, on par with the prior peak set in 2000.

CHART 5
Rising Household Credit And Wealth



* BIS DATA.
** BASED ON FLOW OF FUNDS DATA.

2 Recall that GDP is a flow variable (how much production takes place every period), whereas credit is a stock variable (how much debt there is outstanding). Thus, credit growth affects GDP and, by extension, the change in credit growth (the so-called credit impulse) affects GDP growth.

CHART 6
Savings Rate Still High Relative To Net Worth

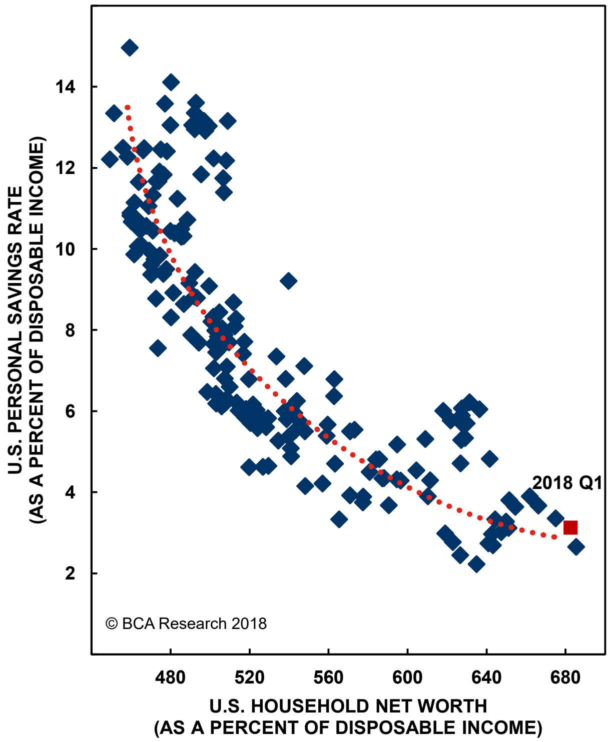
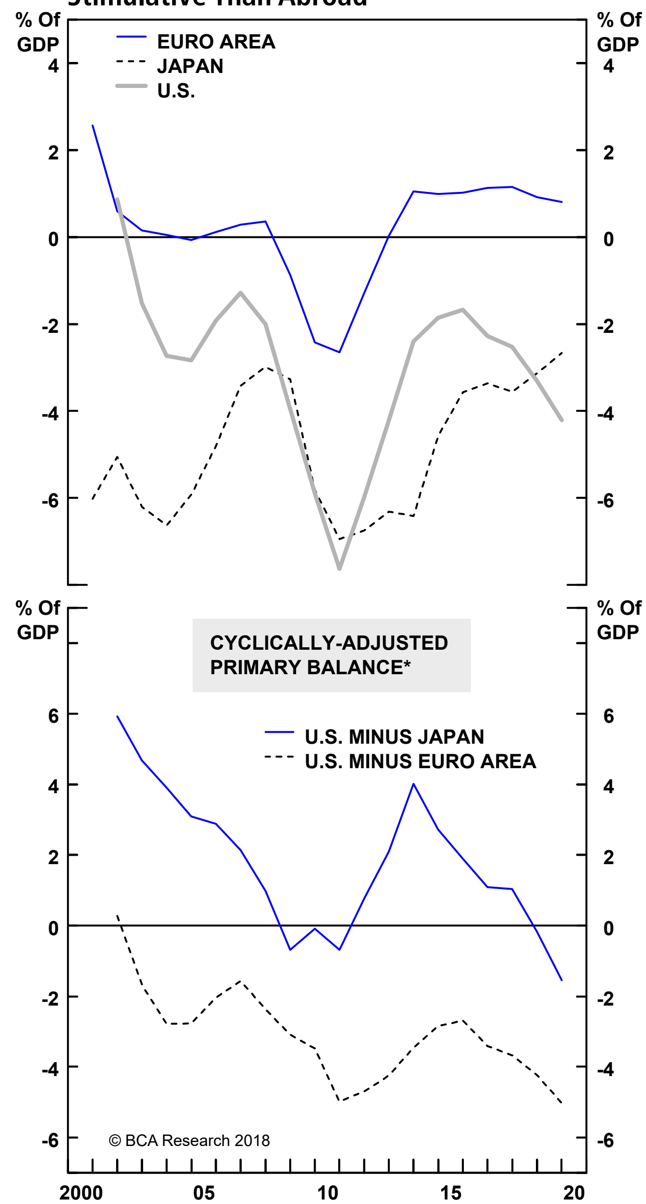


CHART 7
U.S. Fiscal Policy Is More Stimulative Than Abroad



* SOURCE: IMF FISCAL MONITOR.

Historically, there has been a robust relationship between the ratio of household net worth-to-disposable income and the personal savings rate (**Chart 6**). At present, the former stands at an all-time high. This helps explain today's low savings rate. All things equal, a lower savings rate implies more desired spending which, in turn, implies a higher neutral rate of interest.[3]

Loose Fiscal Policy Warrants A Higher Neutral Rate

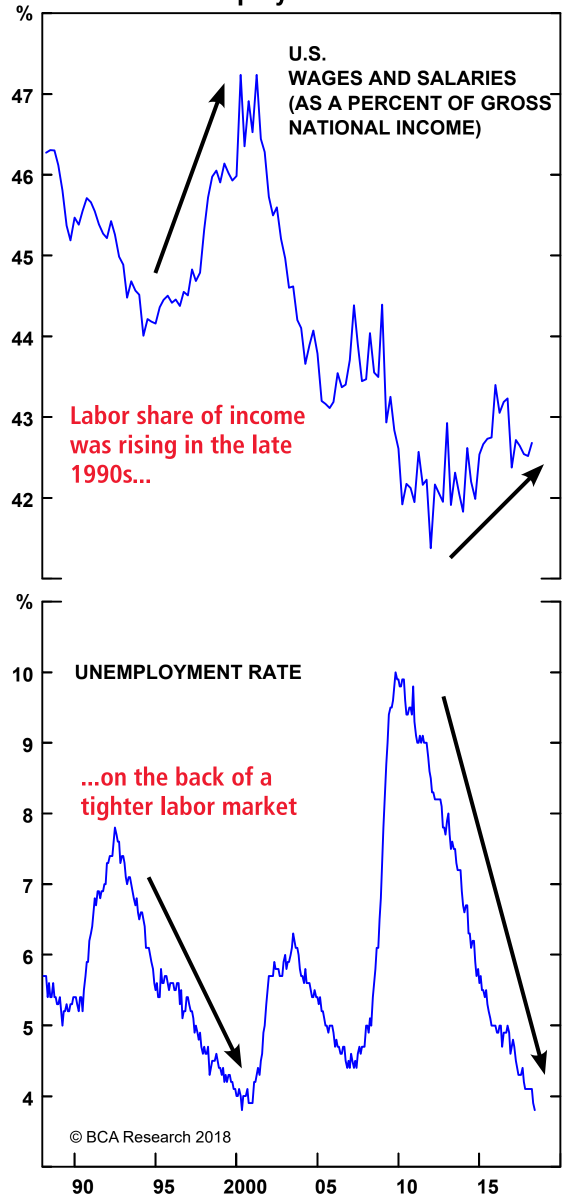
U.S. fiscal policy has also become extremely stimulative. The IMF estimates that the cyclically-adjusted primary budget deficit will reach 4.2% of GDP in 2019, a deterioration from a deficit of 1.7% of GDP in 2015. That is more accommodative than Japan, which is set to have a deficit of 2.7% of GDP next year; or the euro area, which is expected to record a surplus of 0.8% of GDP (**Chart 7**).

3 Conceptually, one can see the relationship between the savings rate and the neutral rate of interest in the Solow Growth Model. For example, the neutral real rate of interest, r^*, in the Model is equal to $(\alpha/s)\ (n + g + d)$, where α is the capital share of income, s is the savings rate, n is labor force growth, g is total factor productivity growth, and d is the depreciation rate of capital. An increase in the savings rate reduces the neutral rate.

When companies say they cannot find good workers, what they usually mean is that they do not want to raise wages to entice good workers to move from competing firms.

Assuming a fiscal multiplier of one, fiscal policy will add a whopping 5% more to aggregate demand in the U.S. than in the euro area next year. If one combines this fact with all the other reasons we have listed for why the neutral rate is higher in the U.S. than the euro area, the market's expectation that the ECB will be hard-pressed to raise rates by very much over the next few years is probably not far from the mark.[4]

CHART 8
Tight Labor Market And Rising Labor Share Of Income: A Replay Of The 1990s?



An Overheated Economy Will Lift The Neutral Rate

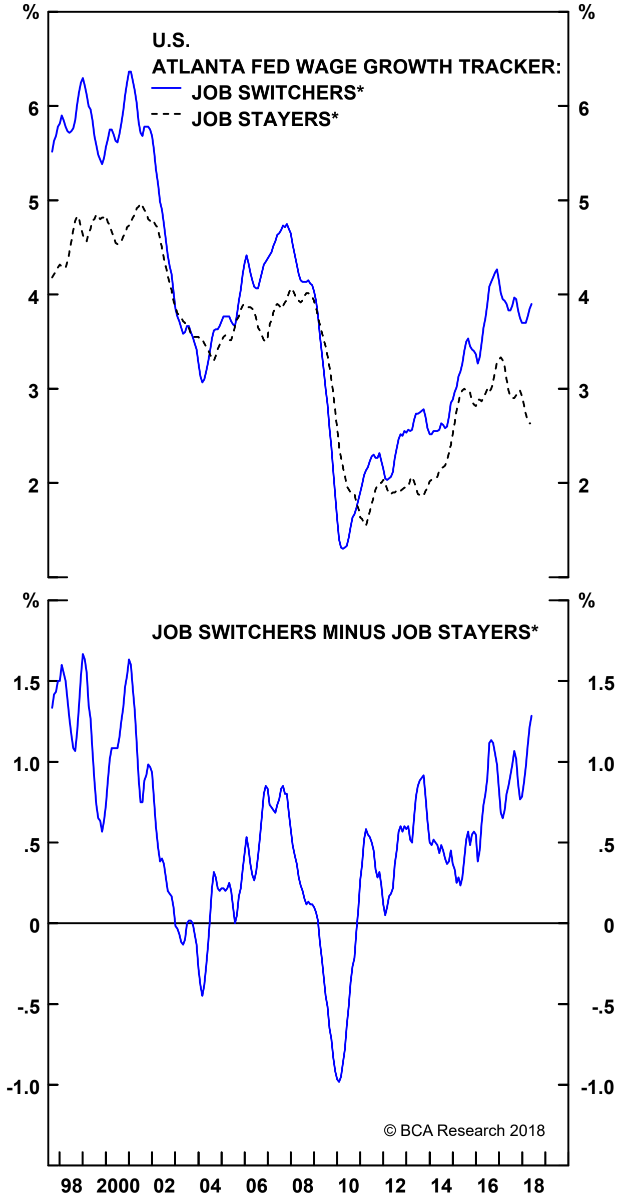
The fact that the U.S. jobless rate has fallen below most estimates of full employment means that the Fed may have to bring rates above their neutral level for a while to cool the economy.

An overheated economy may also push up the neutral rate itself, at least temporarily. **Chart 8** shows that labor's share of income rose during the late 1990s, as businesses were forced to pay higher wages to attract workers. Workers tend to spend more of every dollar of income than companies. Thus, any shift in the distribution of income towards the former raises aggregate demand.

Today, employers are complaining about a "shortage" of qualified workers. While the business press usually takes such comments at face value, the word "shortage" is highly misleading. Except in a few isolated cases, the number of workers a company employs is much smaller than the number of qualified workers it could theoretically hire. Even the internet giants compete for the same well-educated, tech-savvy workers. When companies say they cannot find good workers, what they usually mean is that they do not want to raise wages to entice good workers to move from competing firms.

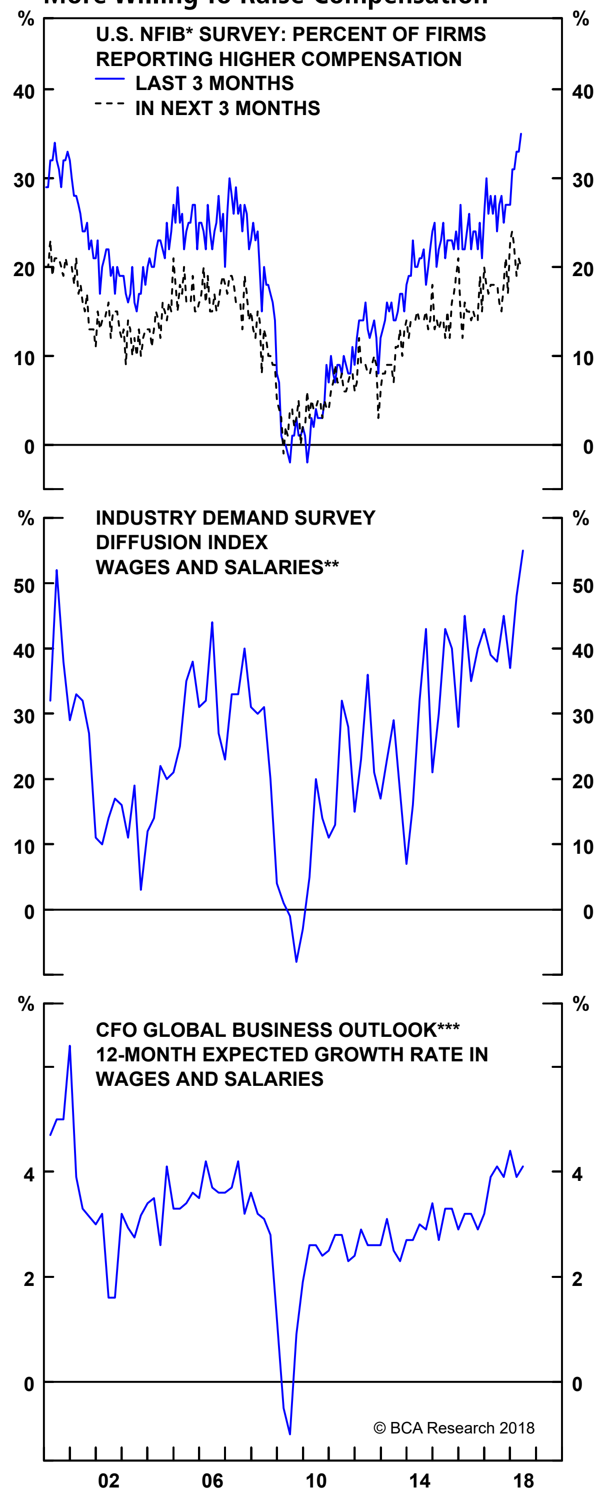
[4] Please see *Global Investment Strategy Weekly Report*, "The U.S. Needs A Stronger Dollar," dated May 4, 2018.

CHART 9
Things Are Perking Up For Job Switchers



* JOB STAYERS INCLUDE PEOPLE WHO ARE IN THE SAME OCCUPATION AND INDUSTRY AS ONE YEAR AGO AND WHO HAVE HAD THE SAME EMPLOYER FOR THE PAST THREE MONTHS; JOB SWITCHERS INCLUDE EVERYONE ELSE.
NOTE: ALL SERIES SHOWN AS 6-MONTH MOVING AVERAGES.

CHART 10
Surveys Show Employers More Willing To Raise Compensation

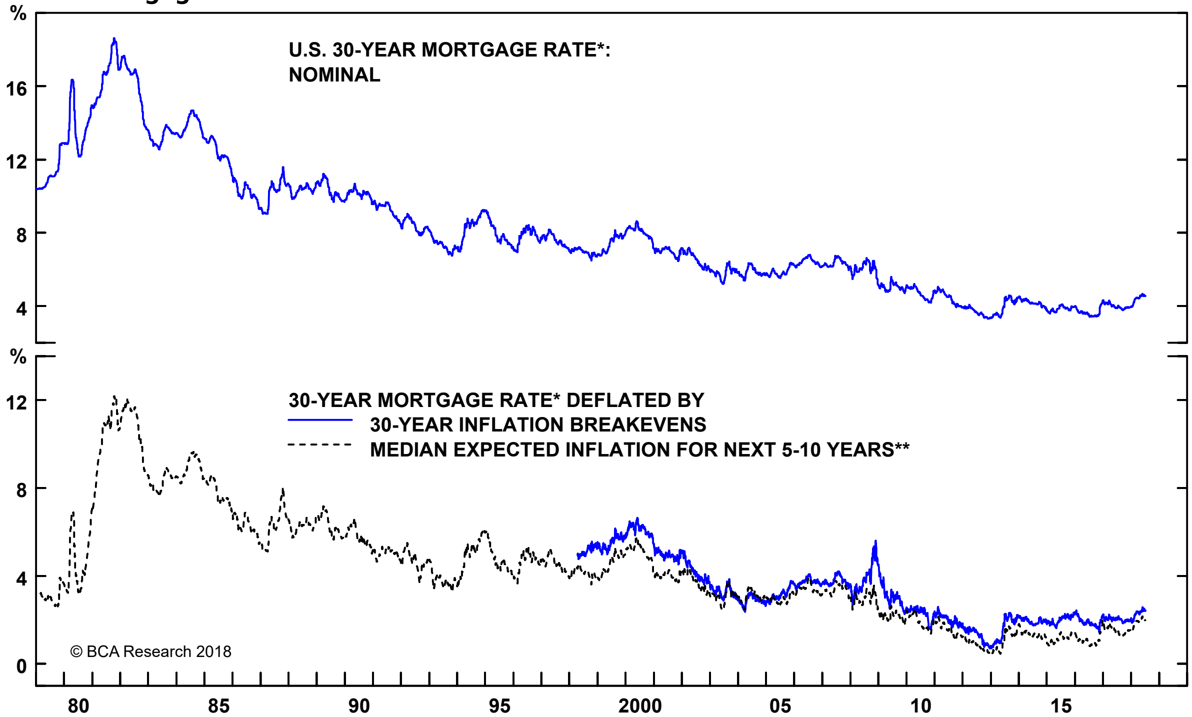


* SOURCE: NATIONAL FEDERATION OF INDEPENDENT BUSINESS.
** PERCENT OF RESPONDENTS REPORTING THAT WAGES AND SALARIES INCREASED AT THEIR FIRMS IN THE PAST 3 MONTHS MINUS RESPONDENTS REPORTING THAT WAGES AND SALARIES DECREASED.
*** SOURCE: DUKE UNIVERSITY CFO GLOBAL BUSINESS OUTLOOK.

Fortunately for potential job-switchers, that is starting to change. The difference between wage growth among job switchers and job stayers in the Atlanta Fed's Wage Growth Tracker has risen to close to where it was in 2000 (**Chart 9**). Surveys suggest that companies are increasingly willing to raise wages (**Chart 10**).

For the first time in a decade, the Federal Reserve wants to slow GDP growth to prevent the economy from over-heating.

CHART 11
U.S. Mortgage Rates Are Still Low



* SOURCE: FREDDIE MAC / FEDERAL RESERVE.
** UNIVERSITY OF MICHIGAN CONSUMER SENTIMENT SURVEY.

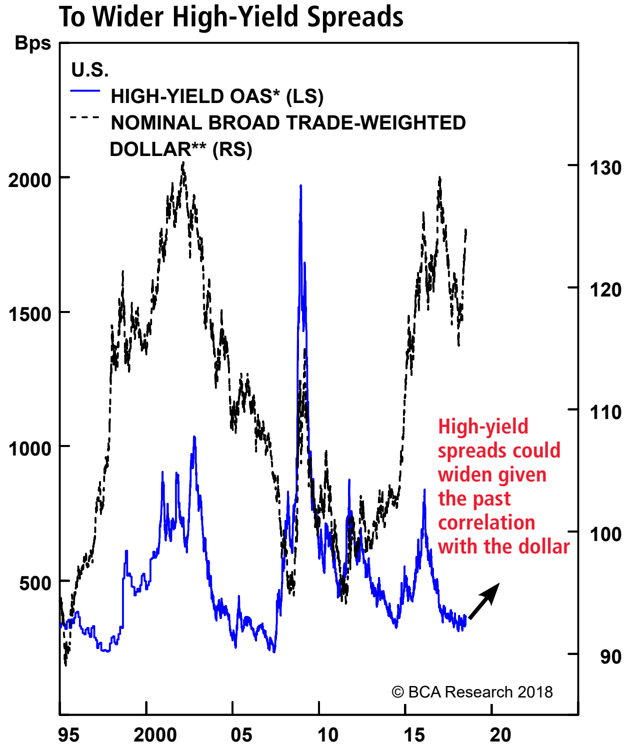
Higher wages and falling unemployment will boost spending, raise consumer confidence, and probably further supercharge the housing market.

Investment Considerations

The 30-year U.S. prime mortgage rate has risen from a low of 3.78% last September to 4.55% at present, but still remains more than 2.5 percentage points below where it stood in 2006. In real terms, today's mortgage rate is significantly lower than the average rate since 1980 (**Chart 11**).

For the first time in a decade, the Federal Reserve *wants* to slow GDP growth to prevent the economy from overheating. This means the Fed must tighten financial conditions. If housing does not buckle as the Fed raises rates, the tightening in financial conditions must come

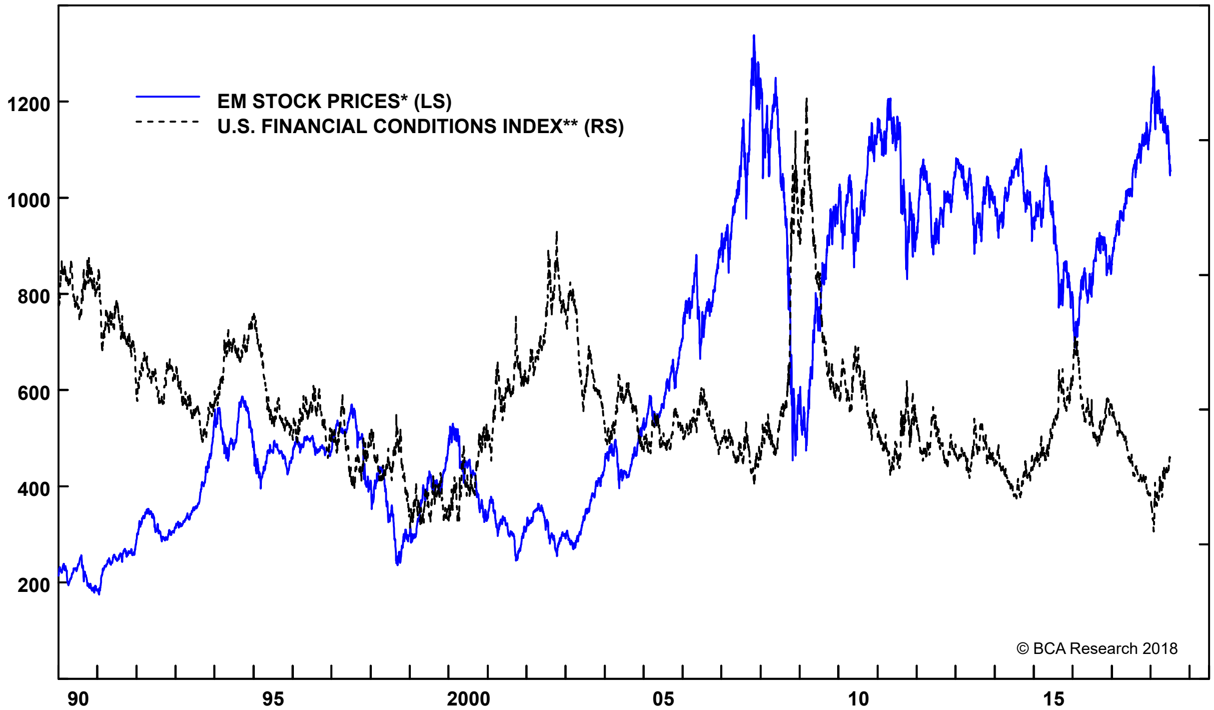
CHART 12
Rising Dollar Usually Corresponds To Wider High-Yield Spreads



* OPTION-ADJUSTED SPREAD. SOURCE: BARCLAYS.
** SOURCE: FEDERAL RESERVE.

CHART 13

Tightening U.S. Financial Conditions Do Not Bode Well For EM Stocks



* IN U.S. DOLLARS. SOURCE: MSCI INC. (SEE COPYRIGHT DECLARATION).
** SOURCE: GOLDMAN SACHS (VIA BLOOMBERG L.P.)

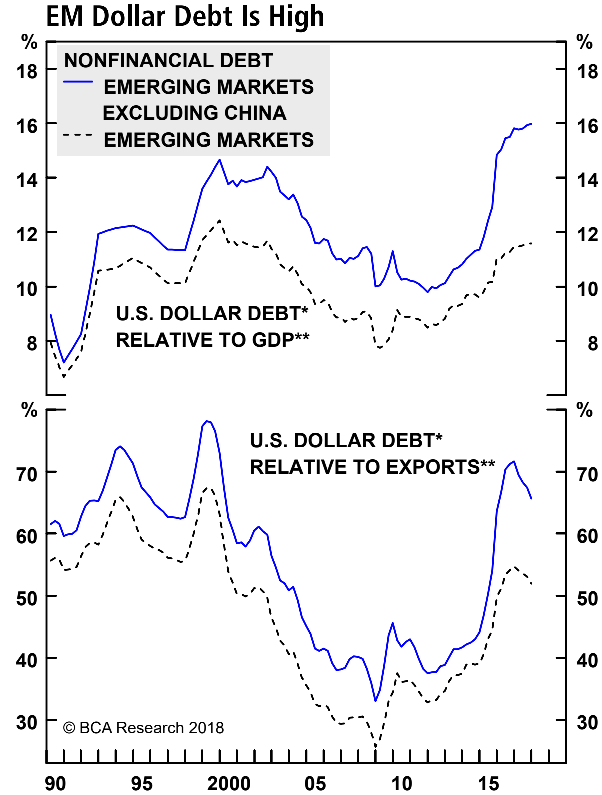
through a stronger dollar, higher corporate borrowing costs, and lower equity prices.

We remain long the dollar and recently downgraded global equities from overweight to neutral. We also recommended that clients cut exposure to credit. **Chart 12** shows that a rising dollar usually corresponds to wider high-yield corporate bond spreads.

The rest of the world will feel the repercussions of Fed tightening, perhaps even more so than the U.S. itself. Emerging market equities almost always fall when U.S. financial conditions are tightening (**Chart 13**). One can believe that EM stocks will go up; one can also believe that the Fed will do its job and tighten financial conditions in order to prevent the U.S. economy from boiling over. One cannot believe that both these things will happen at the same time.

CHART 14

EM Dollar Debt Is High



* SOURCE: BANK FOR INTERNATIONAL SETTLEMENTS (BIS) AND WORLD BANK. BIS DATA FROM 2000. BACK ESTIMATES FOR THE 1990-2000 PERIOD ARE BCA CALCULATED BASED ON EXTERNAL DEBT DATA FROM THE WORLD BANK'S INTERNATIONAL DEBT STATISTICS.
** SOURCE: IMF.

Equity investors should overweight developed market stocks over their EM peers.

As a share of GDP, dollar-denominated debt in emerging markets is now back to late-1990s levels (**Chart 14**). Local-currency debt has also mushroomed (**Chart 15**). This puts emerging market policymakers in the unenviable position of having to decide whether to hurt domestic borrowers by hiking rates or keeping rates low and risking a steep devaluation of their currencies. Neither outcome would be good for EM assets. As such, equity investors should overweight developed market stocks over their EM peers. An underweight in global cyclical sectors relative to defensives is also appropriate at this juncture.

Peter Berezin, Chief Global Strategist
Global Investment Strategy
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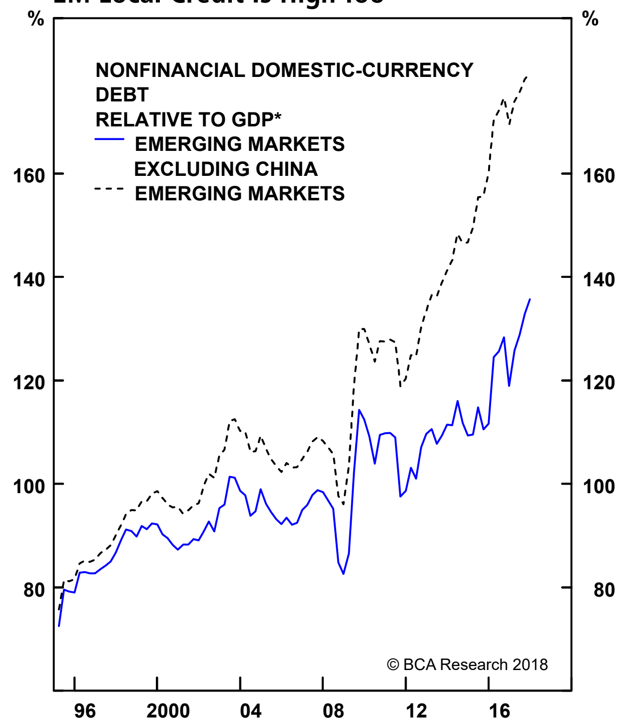
CHART 15
EM Local Credit Is High Too



* CALCULATED AS EM NONFINANCIAL DEBT MINUS EM NONFINANCIAL DEBT DENOMINATED IN FOREIGN CURRENCIES.
SOURCE: BANK FOR INTERNATIONAL SETTLEMENTS (BIS), WORLD BANK, AND IMF. BIS DATA FROM 2000. BACK ESTIMATES FOR 1995-2000 ARE BCA-CALCULATED BASED ON EXTERNAL DEBT DATA FROM THE WORLD BANK INTERNATIONAL DEBT STATISTICS, BIS PRIVATE DEBT STATISTICS, AND IMF PUBLIC DEBT STATISTICS.

Strategy & Market Trends*

	EQUITY PRICES / WORLD BENCHMARKS**	BOND YIELDS	SHORT RATES	CURRENCY VS. US$
U.S.	UP	UP	UP	
CANADA	FLAT	UP	UP	FLAT
JAPAN	UP	FLAT	FLAT	FLAT
AUSTRALIA	FLAT	UP	UP	DOWN
U.K.	FLAT	UP	UP	FLAT
EURO AREA	UP	UP	FLAT	DOWN
EMERGING ASIA	DOWN	FLAT	FLAT	DOWN
LATIN AMERICA	DOWN	FLAT	FLAT	DOWN

* EXPECTATIONS FOR THE COMING 12 MONTHS.
**EQUITY PRICES RELATIVE TO WORLD BENCHMARK EXPRESSED IN LOCAL CURRENCIES.

NOTE: ITALICIZED AND BOLDED TEXT INDICATES A CHANGE IN THE VIEW.

Tactical Trades

The purpose of this section is to provide investment ideas independent of our asset allocation model or direct market forecasts. Once recommended, we will monitor the investment recommendation until we close it out.

TRADE	INCEPTION LEVEL	INITIATION DATE	RETURN-TO-DATE	STOP	COMMENTS
SHORT AUSTRALIAN DOLLAR / LONG CANADIAN DOLLAR	0.975	JUN 28/2018	0.5%	-5.0%	
SHORT AUSTRALIAN DOLLAR / LONG JAPANESE YEN	87.958	FEB 01/2018	6.3%	-5.0%	
LONG SWEDISH KRONA/ SHORT SWISS FRANC	0.1156	JUL 20/2017	-1.8%	0.108	

NOTE: STOPS ARE BASED ON DAILY CLOSING LEVELS. PLEASE NOTE THAT ALL CURRENCY TRADE CALCULATIONS INCLUDE COST OF CARRY.

Strategic Recommendations

This table summarizes our longer-term strategic recommendations. Some of these positions may not necessarily be consistent with our "Tactical Trades."

POSITION	INCEPTION LEVEL	INITIATION DATE	RETURN-TO-DATE	CHANGE FROM PREVIOUS WEEK	COMMENTS
EQUITY RECOMMENDATIONS					
LONG MSCI ALL COUNTRY VALUE INDEX / SHORT MSCI ALL COUNTRY GROWTH INDEX	100	MAR 29/2018	-3.2%	0.1%	
LONG CHINA H-SHARE INDEX / SHORT EM EQUITIES[1]	100	FEB 23/2017	-7.4%	-1.7%	
FIXED INCOME RECOMMENDATIONS					
LONG U.S. 30-YEAR GOVERNMENT BOND / SHORT GERMAN 30-YEAR GOVERNMENT BOND (UNHEDGED)	100	MAR 01/2018	2.0%	-2.4%	
LONG 30-YEAR TIPS BREAKEVEN (LONG U.S. 30-YEAR TIPS / SHORT U.S. 30-YEAR TREASURY)[2]	100	MAR 01/2018	1.8%	0.5%	
SHORT JAPAN 20-YEAR / LONG JAPAN 5-YEAR GOVERNMENT BOND	100	AUG 24/2017	-1.7%	-0.4%	
LONG JAPANESE 10-YEAR CPI SWAP	22 BPS	MAR 31/2016	33 BPS	0.0 BPS	
LONG GERMAN 10-YEAR CPI SWAP	151 BPS	FEB 27/2015	42 BPS	1.0 BPS	
CURRENCY RECOMMENDATIONS					
SHORT EURO / LONG BRITISH POUND	0.9033	AUG 03/2017	2.6%	0.0%	
SHORT EURO / LONG RUSSIAN RUBLE	68.65	JUL 06/2017	0.3%	-1.5%	
SHORT EURO / LONG CANADIAN DOLLAR	1.5132	MAY 18/2017	0.2%	-0.1%	
LONG U.S. DOLLAR (DXY INDEX)[3]	86.915	OCT 31/2014	8.6%	-1.1%	TARGET PRICE IS 98

1 CURRENCY UNHEDGED; THE CORRESPONDING ETFS FOR THIS TRADE ARE THE HANG SENG INVESTMENT INDEX FUNDS SERIES: H-SHARE INDEX ETF (2828 HK), AND THE ISHARES MSCI EMERGING MARKETS ETF (EEM US). THE HANG SENG CHINA ENTERPRISE INDEX COMPRISES OF CHINA H-SHARES (CHINESE STOCKS AVAILABLE TO INTERNATIONAL INVESTORS) CURRENTLY TRADING ON THE HONG KONG STOCK EXCHANGE.
2 TO TRACK THE PERFORMANCE OF THIS RECOMMENDATION, WE USE THE FOLLOWING SERIES: BLOOMBERG BARCLAYS 30-YEAR TIPS ON-THE-RUN INDEX, AND BLOOMBERG BARCLAYS 30-YEAR TREASURY NOMINAL COMPARATOR INDEX.
3 PERFORMANCE EXCLUDES A CUMULATIVE CARRY OF 2.8%.
NOTE: RETURNS RELATIVE TO BENCHMARK. MSCI WORLD FOR EQUITY RECOMMENDATIONS UNLESS OTHERWISE SPECIFIED. CUSTOM BENCHMARK FOR FIXED-INCOME RECOMMENDATIONS BASED ON GDP-WEIGHTED G10 GOVERNMENT BOND PERFORMANCE.

Trades Closed In 2015-2018

TRADE	INCEPTION LEVEL	INITIATION DATE	CLOSING DATE	REALIZED P&L	TYPE OF TRADE
SHORT GOLD	1225	DEC 10/14	JAN 23/15	-5.0%	TACTICAL
LONG S&P 500 / SHORT WTI	100	OCT 2013	FEB 6/15	126.5%	STRATEGIC
LONG GERMAN 10-YEAR BUNDS / SHORT JAPANESE 10-YEAR JGBs	100	JUL 2013	FEB 27/15	13.5%	STRATEGIC
LONG GREEK STOCKS	716.38	JAN 30/15	MAR 9/15	15.0%	TACTICAL
LONG GOLD	1235	FEB 6/15	MAR 9/15	-5.0%	TACTICAL
LONG U.S. DOLLAR / SHORT JAPANESE YEN	111.94	OCT 31/14	APR 10/15	7.5%	TACTICAL
LONG INDIAN STOCKS / SHORT INDONESIAN STOCKS	5.29	OCT 24/14	APR 24/15	-5.0%	TACTICAL
UNDERWEIGHT COMMODITY-MARKET EQUITIES	100	NOV 22/13	MAY 8/15	19.2%	STRATEGIC
LONG CRB METALS INDEX / SHORT WTI CRUDE OIL	100	MAY 08/15	JUN 05/15	-5.0%	TACTICAL
LONG S&P DIVIDEND ARISTOCRATS / SHORT NASDAQ	0.3370	OCT 24/14	JUN 05/15	-5.0%	TACTICAL
LONG GLOBAL CYCLICALS / SHORT GLOBAL DEFENSIVES*	100	MAY 01/15	JUL 3/15	-5.0%	TACTICAL
LONG CHINA H-SHARE INDEX**	11922.56	MAY 23/14	JUL 3/15	50.0%	TACTICAL
SHORT CHINA A- SHARE INDEX / LONG CHINA H-SHARE INDEX	100	JUN 06/15	JUL 3/15	26.4%	STRATEGIC
LONG ITALIAN 10-YEAR GOV'T BONDS	5.878%	AUG 10/12	JUL 17/15	30.5%	STRATEGIC
LONG EURO AREA BANK STOCKS	50.12	JAN 16/15	SEP 24/15	5.9%	TACTICAL
LONG 30-YEAR U.S. TREASURYS / SHORT S&P 500	100	JUN 12/15	OCT 02/15	17.9%	TACTICAL
LONG 12-MONTH NDF USD/CNY	6.4025	MAR 06/15	OCT 02/15	2.5%	TACTICAL
LONG 2.1 UNIT OF U.S. BARCLAYS HIGH YIELD CORPORATE BOND INDEX / SHORT ONE UNIT OF S&P 500	100	OCT 22/15	NOV 26/15	-5.0%	TACTICAL
SHORT NASDAQ 100 MAR 2016 FUTURES	4,692.50	NOV 06/15	JAN 20/16	16.2%	TACTICAL
LONG CHINESE A-SHARES AND H-SHARES	100	JUL 01/15	MAY 19/16	-27.0%	STRATEGIC
SHORT EURO / LONG JAPANESE YEN	139.15	JUN 01/15	JUN 16/16	19.4%	STRATEGIC
SHORT EUROPEAN EQUITIES (U.S. DOLLAR TERMS)	100	JUN 09/16	JUN 24/16	8.2%	TACTICAL
LONG U.S. 30-YEAR / SHORT U.S. 10-YEAR GOV'T BONDS	96 BPS	FEB 07/14	JUL 08/16	22.5%	STRATEGIC
SHORT BRITISH POUND / LONG SWEDISH KRONA	13.16	NOV 12/15	AUG 11/16	19.1%	TACTICAL
LONG 10-YEAR U.S. TREASURYS / SHORT 10-YEAR GERMAN BUNDS	100	AUG 15/14	OCT 27/16	18.5%	TACTICAL
LONG SPANISH 10-YEAR GOV'T BONDS / SHORT ITALIAN 10-YEAR GOV'T BONDS	16 BPS	OCT 15/15	DEC 8/16	6.2%	TACTICAL
LONG CHINESE BANK EQUITIES	100	MAY 19/16	JAN 19/17	32.3%	STRATEGIC
SHORT U.S. DOLLAR / LONG RUSSIAN RUBLE	64.59	NOV 19/15	JAN 19/17	20.1%	STRATEGIC
SHORT NASDAQ 100 MAR 2017 FUTURES	4820.50	AUG 23/16	FEB 23/17	-10.0%	TACTICAL
SHORT U.S. / LONG BASKET OF EURO AREA, JAPANESE, AND CHINESE EQUITIES***	100	FEB 6/15	FEB 23/17	-10.0%	STRATEGIC
SHORT S&P 500	2389.52	MAY 4/17	JUN 15/17	-2.0%	TACTICAL
SHORT EURO / LONG U.S. DOLLAR	1.1205	MAY 25/17	JUN 29/17	-1.6%	TACTICAL
SHORT JAPANESE, GERMAN AND SWISS 10-YEAR GOV'T BONDS	100	JUL 5/16	JUN 29/17	5.3%	STRATEGIC
SHORT FED FUNDS JAN 2018 FUTURES	98.79	APR 20/17	JUL 6/17	11 BPS	TACTICAL
OVERWEIGHT AUSTRALIA (ADD CURRENCY HEDGE)****	100	JAN 23/09	JUL 20/17	59.5%	STRATEGIC
OVERWEIGHT NEW ZEALAND (ADD CURRENCY HEDGE)****	100	JAN 23/09	JUL 20/17	74.2%	STRATEGIC
LONG BRITISH POUND / SHORT JAPANESE YEN	132.01	AUG 11/16	AUG 3/17	9.9%	TACTICAL
SHORT FED FUNDS JUN 2018 FUTURES	98.55	JUL 6/17	SEP 7/17	-18 BPS	TACTICAL
LONG BRENT OIL DEC 2017 FUTURES	49.33	MAY 4/17	SEP 21/17	13.8%	TACTICAL
SHORT S&P 500	2585.64	NOV 16/17	NOV 30/17	-2.0%	TACTICAL
LONG 2-YEAR USD/ SAUDI RIYAL FORWARD CONTRACT	3.89	DEC 10/15	JAN 11/18	-2.9%	STRATEGIC
LONG GLOBAL INDUSTRIAL STOCKS / SHORT GLOBAL UTILITIES	100	SEP 29/17	FEB 1/18	12%	TACTICAL
LONG AUSTRALIAN DOLLAR / SHORT NEW ZEALAND DOLLAR	1.0815	APR 25/14	FEB 1/18	-1.8%	STRATEGIC
SHORT ONE UNIT OF EUR/USD & LONG 1.5 UNITS OF 30-YEAR U.S. TREASURYS VERSUS 30-YEAR GERMAN BUNDS	100	JAN 25/2018	FEB 6/18	-2.5%	TACTICAL
SHORT FED FUNDS DEC 2018 FUTURES	98.6500	SEP 7/2017	FEB 6/18	70 BPS	TACTICAL
LONG S&P 500 / SHORT U.S. BARCLAYS HIGH YIELD CORPORATE BOND INDEX	100	JAN 11/2018	FEB 15/18	-5.0%	TACTICAL
SHORT U.S. 30-YEAR GOVERNMENT BOND	100	JUN 29/2017	MAR 1/2018	3.8%	STRATEGIC
LONG EUROPE AND JAPAN / SHORT U.S. EQUITIES	100	FEB 23/2017	JUN 19/2018	-5.4%	STRATEGIC
AVERAGE RETURN	-	-	-	**12.3%**	-
CUMULATIVE RETURN	-	-	-	**555.5%**	-

* CYCLICALS INCLUDE MATERIALS, ENERGY, INDUSTRIALS, AND CONSUMER DISCRETIONARY; DEFENSIVES INCLUDE TELECOM, CONSUMER STAPLES, AND HEALTH CARE.
** LONG CHINESE BANKS FROM MAY 23, 2014 UNTIL OCTOBER 17, 2014; LONG CHINESE A SHARES FROM OCTOBER 17, 2014 TO FEBRUARY 13, 2015.
*** EQUALLY-WEIGHTED BASKET. HEDGE CURRENCY EXPOSURE.
**** CURRENCY HEDGE ADDED AS OF SEPTEMBER 26, 2014.

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