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Monthly forecast and analysis of the global economy and financial markets

I. OVERVIEW

Highlights 2

II. SPECIAL REPORT:

U.S. Equity Sectors: Trade War Winners And Losers 18

III. INDICATORS AND REFERENCE CHARTS

Equities 37
Fixed Income 41
Currencies 44
Commodities 47
Economy 50

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I. OVERVIEW

- President Trump has taken the next step in the trade war by charging some of America's major trading partners with outright currency manipulation. However, we are not headed for Plaza Accord 2.0, because neither the ECB nor the PBOC will re-orient policy until their own economic and inflation dynamics warrant it.

- Moreover, we doubt the FOMC will be bullied into keeping rates lower than policymakers deem appropriate. With the labor market showing signs of overheating, the Fed will stick with its current game plan and ignore President Trump's tweets.

- The worsening trade dispute is the key risk that investors face and there are growing signs that uncertainty regarding the future of the world trade order is dampening animal spirits and global capital spending. Risk tolerance should be no more than benchmark.

- Based on previous late cycle periods, the fact that S&P 500 profit margins are still rising suggests that most risk assets will outperform bonds and other defensive sectors in the near term. Nonetheless, timing is always difficult and we have decided to focus on capital preservation given extended valuations and a raft of risks that could cause a premature end to the bull market.

- The flattening U.S. yield curve is also worrying. We would not ignore the signal if the curve inverts, although there are reasons to believe that it is not as good a recession signal as it has been in the past. We wish to see corroborating evidence from our other favorite indicators before trimming risk asset exposure to underweight. A peak in the S&P 500 operating margin would be a strong sign that the end of the cycle is drawing close.

- Even if trade tensions soon die down and global growth holds up, the extended nature of the U.S. economic and profit cycle make asset allocation particularly tricky. Attractive late-cycle assets to hold include structured product, Timberland and Farmland. High-quality bonds will of course outperform in the next recession, but yields are likely to rise in the meantime.

- We believe that U.S. Agency MBS are unattractively valued, but should remain insulated from negative shocks such as a trade war or higher Treasury yields. We also like Agency CMBS.

- Oil and related plays are not a reliable late-cycle play, but we are bullish because of the favorable supply-demand outlook. However, this does not carry over to base metals, where we are more cautious.

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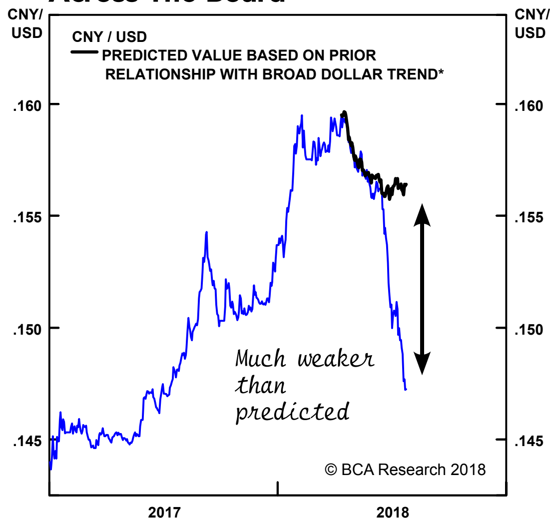
We warned in last month's *Overview* that investors had not yet seen "peak pessimism" on the global trade front. Right on cue, President Trump raised the stakes again in July by threatening to impose tariffs on virtually all imports of Chinese goods. Congress is pushing the President to be tough on China because American voters have soured on trade.

China will not easily back down with the authorities responding in kind to the U.S. President's trade threats. They have also allowed the RMB to depreciate to cushion the trade blow (**Chart I-1**). It is not clear whether the authorities purposely depressed the RMB or whether they simply failed to lean against market pressures. Either way, it is a dangerous approach because it has clearly raised the U.S. President's ire.

President Trump has taken the next step in the broader trade war by charging some major trading partners with outright currency manipulation. The script appears to be following previous times that the U.S. sought trade adjustment *via* tariffs and currency re-alignment: the early 1970s and the 1985 Plaza Accord. Adjusting currencies on a sustained basis requires much more than simply "talking down" the dollar. There must be major changes in relative monetary and/or fiscal policies *vis-à-vis* U.S. trading partners. On the fiscal front, expansionary U.S. policy is working at cross purposes with the desire to have a weaker dollar and a smaller trade gap.

We do not foresee the U.S. President having any success in changing the broad thrust of monetary policy either.

CHART I-1
RMB Is Much Weaker Across The Board



* BASED ON THE BLOOMBERG U.S. DOLLAR SPOT INDEX AND BCA CALCULATIONS.

Europe and Japan enjoyed booming economies in the early 1970s and mid-1980s, and thus had the luxury of placating the U.S. by adjusting monetary policy and thereby appreciating their currencies. Today, it is difficult to see how either Europe or China can afford significant monetary policy tightening that generates major bull markets in their currencies. Neither the ECB nor the People's Bank of China (PBOC) will re-orient policy until their own economic and inflation dynamics warrant it.[1] It is also unlikely that the Bank of Japan will raise the 10-year yield target to either strengthen the yen or to help bank profits. This is not Plaza Accord 2.0.

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1 For more information on why a replay of the 1985 Plaza Accord is unlikely, please see BCA *Geopolitical Strategy Weekly Report* "The Dollar May Be Our Currency, But It Is Your Problem," dated July 25, 2018, available on gps.bcaresearch.com

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258307

Powell Isn't Arthur Burns

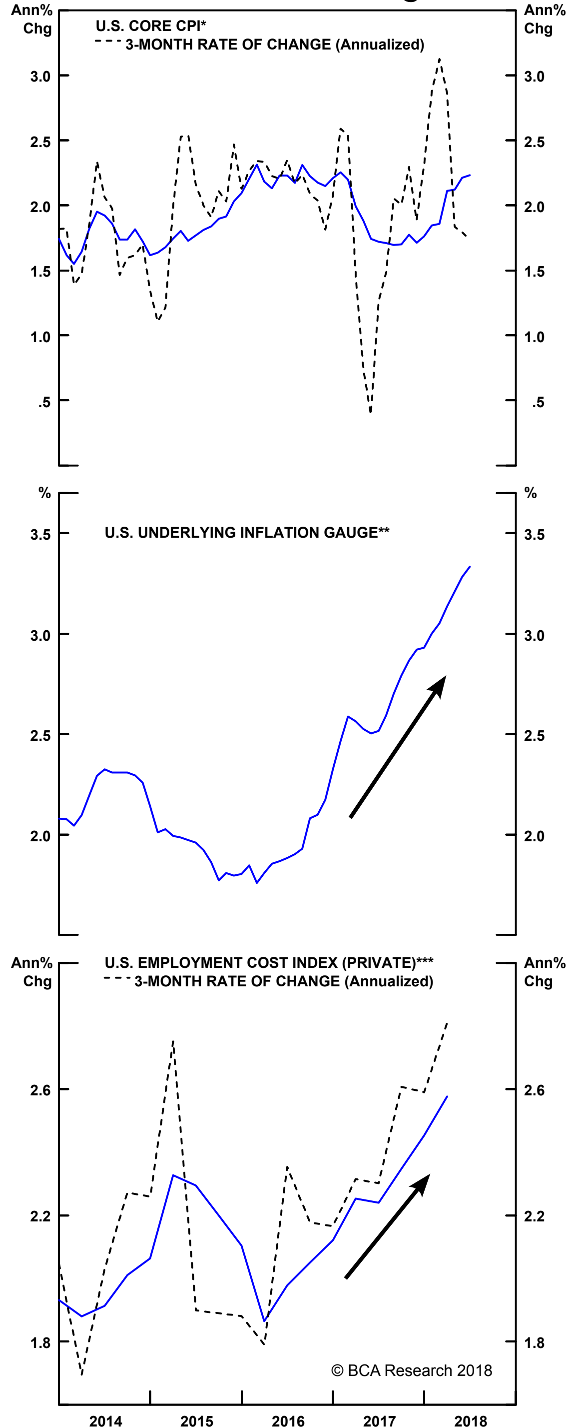
As for the Fed, we doubt the FOMC will be bullied into keeping rates lower than policymakers deem appropriate. The Fed is more open and independent today than in the 1970s and 1980s. Even if Fed Chair Powell were amenable, any hint that he is being politically manipulated to change course would result in a bond market riot that would rattle investors to their core. More likely, the Fed will stick with its current game plan and ignore President Trump's tweets.

Powell could not be any clearer in his July Congressional Testimony: "*With a strong job market, inflation close to our objective, and the risks to the outlook roughly balanced, the FOMC believes that–for now–the best way forward is to keep gradually raising the federal funds rate.*"

Investors should not be fooled by the uptick in the U.S. unemployment rate in June. The rise reflected a pop in the labor force participation rate. However, the labor force figures are volatile and there is no upward trend evident in the participation rate. The real story is that the labor market continues to tighten. The number of people outside the labor force who want a job, as a percentage of the total working-age population, is back to pre-recession lows. The Employment Cost Index for private-sector workers shows that wage growth is accelerating. Moreover, the New York Fed's Underlying Inflation Gauge, which leads core CPI inflation by 18 months, has already jumped to almost 3 ½% (**Chart I-2**). Small businesses

CHART I-2

U.S. Inflation Is Percolating



* EXCLUDES FOOD AND ENERGY.
** FULL DATA SET MEASURE, SOURCE: FEDERAL RESERVE BANK OF NEW YORK.
*** SOURCE: BUREAU OF LABOR STATISTICS.

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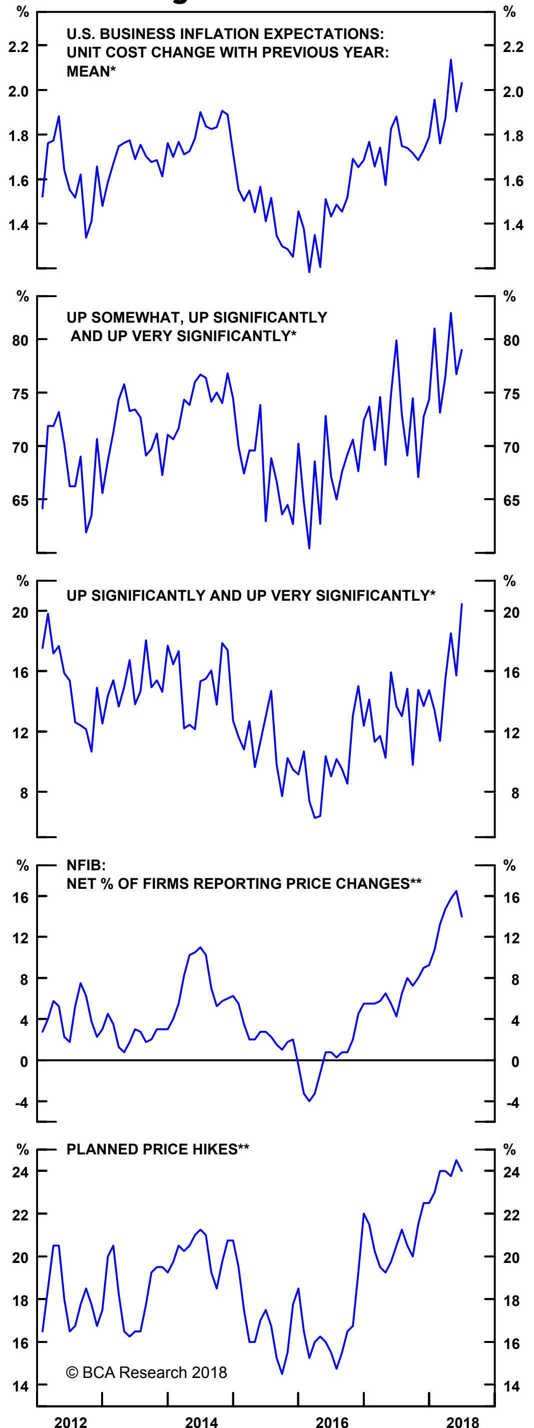
are increasingly able to pass on cost increases to consumers (**Chart I-3**).

The Minutes from the mid-June FOMC meeting included a lengthy discussion of the growing signs of inflation pressure and labor shortage. Firms are responding to the lack of qualified labor by offering training, automating, and boosting wages. Anecdotal evidence suggests that bottlenecks and other cost pressures are boiling over in the transportation sector. Despite an acute shortage of truck drivers, the average hourly earnings data do not show any acceleration in their wages (**Chart I-4**, second panel). However, these data do not include bonuses, which have been on the rise. The PPI for truck transportation services was up 7.7% year-over-year in June, while the Cass Freight Index that tracks full-truckload prices rose 15.9% year-over-year. The latter does not even include fuel costs. These pipeline cost pressures have implications not only for the Fed, but for corporate profit margins as well (see below).

CHART I-3
U.S. Pricing Power On The Rise



* SOURCE: FEDERAL RESERVE BANK OF ATLANTA.
** SOURCE: NATIONAL FEDERATION OF INDEPENDENT BUSINESS.

The U.S. Yield Curve: A Red Flag?

The FOMC expects that the fed funds rate will continue to rise and will temporarily exceed its 2.9% estimate of the neutral rate. If the true neutral rate is higher than the Fed's estimate, then the FOMC could find itself hiking too slowly and the economy could severely overheat. And *vice versa* if the true neutral rate is below 2.9%. We are keeping a close eye on the yield curve as an indication of policy tightness. If the curve inverts with a few more Fed rate

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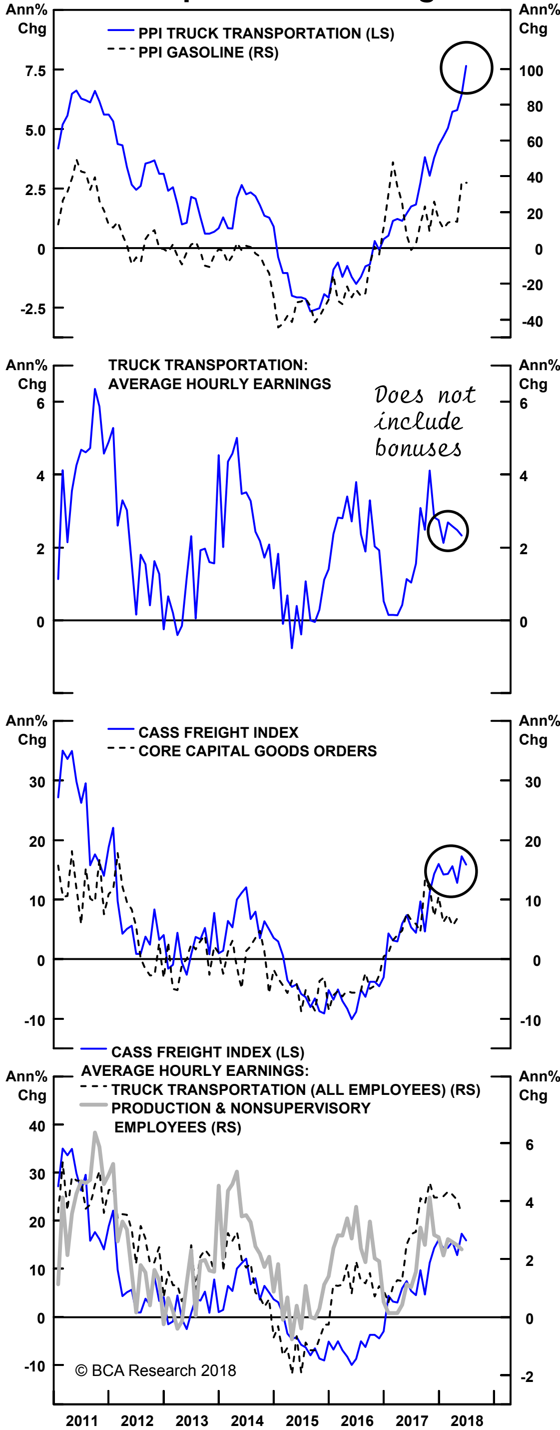
CHART I-4
U.S. Transportation Is Boiling Over



hikes, it would signal that the ***market believes*** that policy is turning restrictive.

It is possible that the yield curve is not as good a recession signal as it has been in the past. First, there is a lot of uncertainty regarding the neutral fed funds rate in the post-GFC world. The collective market wisdom on this could be wrong.

Indeed, BCA's Chief Global Strategist, Peter Berezin, makes the case that the neutral rate is rising faster than most investors believe.[2] Structural factors have depressed the neutral rate, including population aging and low productivity growth. However, these structural tailwinds for bond prices are now slowly turning into headwinds.

Moreover, as Peter argues, cyclical pressures are acting to lift the neutral rate. Private credit growth is rising faster than nominal GDP growth again. The same is true for housing and equity wealth, at a time when the personal saving rate is falling. All this implies strong desired spending which, in turn, suggests a higher neutral rate of interest. It will be important to watch the housing market; if it remains healthy in the face of rate hikes, it means that the neutral rate is still north of the actual fed funds rate.

Chart I-5 presents today's market expectation for the real fed funds rate, based on the forward OIS curve and

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2 Please see BCA *Global Investment Strategy Weekly Report* "U.S. Housing Will Drive the Global Business Cycle…Again," dated July 6, 2018, available on gis.bcaresearch.com

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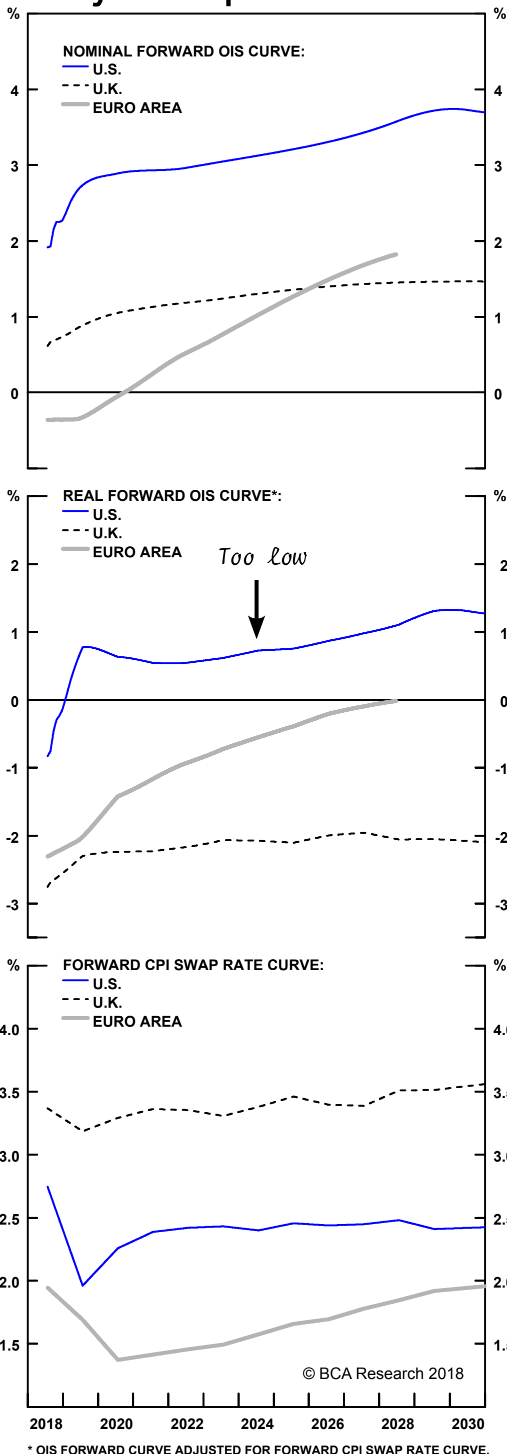

the forward CPI swaps curve. Technical issues may be distorting forward rates in 2019, but we are more interested in expectations further into the future. The real fed funds rate is expected to hover in the 55-75 basis point range until 2024. It then rises to about 1%, but not until almost the end of the next decade. This appears overly complacent to us, suggesting that the risks are to the upside for market expectations of the terminal, or neutral, short-term interest rate.

If the neutral rate is indeed higher than the market is currently discounting, then an inverted curve may be premature in signaling that policy is too tight and that an economic slowdown is on the horizon.

Moreover, the term premium on long-term bonds may still be depressed by asset purchases by the Fed and the other major central banks, again suggesting that the curve will more easily invert than in the past. There is much disagreement on this issue, even among FOMC members and among BCA strategists. This publication is sympathetic to the work done by the Fed Staff which suggests that the term premium has been substantially depressed by quantitative easing. **Chart I-6** shows the annual change in the size of G4 central bank balance sheets (inverted), along with an estimate of the term premium in the 10-year government bonds of the major countries. The chart is far from conclusive, but it is consistent with the view that QE has depressed term premia worldwide. Moreover, forward guidance and the low level of inflation since the

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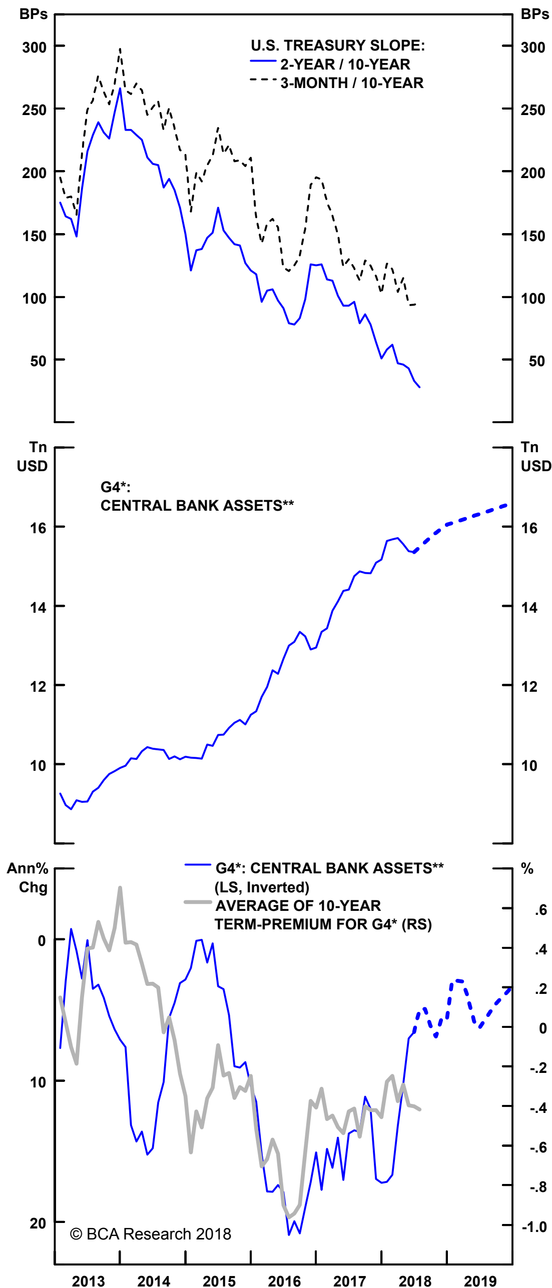
CHART I-6

Depressed Term Premiums Distort Yield Curves



* SUM OF U.S., U.K., EURO AREA AND JAPAN AND CONVERTED INTO USD;
** U.S.: ASSUMES TREASURY HOLDINGS DECLINE BY THE LOWER AMOUNT OF THE MATURING AMOUNT EACH MONTH AND THE CAP SET BY FOMC, AGENCY BONDS AND MBS HOLDINGS DECLINE BY THE LOWER AMOUNT OF $15 Bn PER MONTH AND THE CAP SET BY FOMC, CURRENCY IN CIRCULATION GROWS 4.5% PER YEAR.
EURO AREA: 30 Bn EUR PER MONTH UNTIL SEPTEMBER 2018, AND TAPERS BY 15 Bn EUR UNTIL DECEMBER 2018. ECB PURCHASES END IN JANUARY 2019.
JAPAN: 70 Tn JPY PER YEAR UNTIL DECEMBER 2018, AND 60 Tn JPY PER YEAR UNTIL DECEMBER 2019.

GFC have undoubtedly dampened interest-rate volatility, which theory suggests is a key driver of the term premium.

The factors that have depressed the term premium are beginning to reverse, including G4 central bank balance sheets. Still, the premium will trend higher from a low starting point, suggesting that an inverted curve today may not necessarily signal a recession.

That said, it would be wrong to completely dismiss a U.S. curve inversion, given its excellent track record. Historically, the 3-month/10-year Treasury slope has worked better than the 2/10 yield slope in terms of calling recessions. An inversion of the 3-month/10-year curve has successfully heralded all seven recessions in the past 50 years with one false positive signal. Nonetheless, the curve tends to be very early, inverting an average of almost 12 months before the recession. And, given the possible distortion to the term premium, we would want to see corroborating evidence before jumping to the conclusion that an inverted curve is sending a correct recession signal. For example, the U.S. and/or global Leading Economic Indicator would need to turn negative.

The bottom line is that a curve inversion would not be enough ***on its own*** to further trim risk asset exposure to underweight. Nonetheless, we are not dismissing the message from the yield curve either, especially in the context of a trade war that could prematurely end the expansion.

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Trade War Hitting Economy?

Estimates based on macro models suggest that the damage to global GDP growth from higher tariffs would be quite small. Nonetheless, these models do not incorporate the indirect, or second-round, effects of rising tariff walls. Business leaders abhor uncertainty, and will no doubt hold off on major capital expenditure plans until the trade dust settles. The uncertainty can then ripple through the economy to industries that are not directly affected by the trade action. The extensive use of global supply chains reinforces this ripple effect.

Labor is not free to move between countries or between industries to facilitate shifts in production that are required by changing tariffs. Capital is more mobile, but it is still expensive to shift machinery. Some of the world's capital stock could become "stranded", raising the cost of the tariffs to the world economy. Finally, important economies-of-scale are lost when firms no longer have access to a single large global market. This month's *Special Report*, beginning on page 18, sorts out the U.S. equity sector winners and the losers from a trade war with China. ***Spoiler alert***: there are not many winners!

The bottom line is that the trade threat for the global economy and risk assets is far from trivial.

The negative trade headlines have not had a meaningful economic impact so far, but there are some worrying signs. A number of indicators suggest that global growth continues to slow, including the BCA Global Leading Economic Indicator diffusion index, the Global ZEW sentiment index and the BCA Global Credit Impulse index (**Chart I-7**). The softness in these indicators predates the latest flaring of trade tensions. Nonetheless, business confidence outside the U.S. has dipped (fourth panel). Growth in capital goods imports for an aggregate of 20 countries continues to decelerate, along with industrial production for capital goods and machinery & electrical equipment in the major advanced economies (production related to energy, consumer products and IT remain strong; **Chart I-8**).

None of these data are flagging a disaster, but they all support the view that uncertainty regarding the future of the world trade order is dampening animal spirits and global capital spending. Even if trade tensions soon die down, the extended nature of the U.S. economic and profit cycle make asset allocation particularly tricky.

Late Cycle Investing

Some of our economic and policy analysis over the past year has focused on previous late-cycle periods. Specifically, we analyzed the growth, inflation and policy dynamics after the point when the economy reached full employment (i.e. when the unemployment rate fell below the CBO estimate of full employment).

This month we look at asset class returns during late cycle periods. We wanted to use as broad a range of asset classes as possible, although data limitations mean

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CHART I-7
Global Growth Is Still Moderating...

GLOBAL*:
LEI (LS)
LEI DIFFUSION INDEX** (RS)

GLOBAL:
ZEW ECONOMIC SENTIMENT***

BOOM / BUST INDICATOR****
(26-Week Rate of Change)

BUSINESS CONFIDENCE*****
U.S.
MAJOR ADVANCED ECONOMIES****** (EX. U.S.)

GLOBAL:
6-MONTH CREDIT IMPULSE*******

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2014 2015 2016 2017 2018

* INCLUDES 23 COUNTRIES; SHOWN STANDARDIZED.
** BASED ON PERCENTAGE OF RISING vs FALLING DATA SERIES.
*** GDP-WEIGHED AVERAGE OF U.S., U.K., EURO AREA AND JAPAN.
**** BASED ON THE RATIO OF GLOBAL STEEL AND OTHER METALS EQUITIES AND COMMODITY RESEARCH BUREAU RAW INDUSTRIALS INDEX RELATIVE TO U.S. UI CLAIMS.
***** STANDARDIZED. BASED ON BCA CALCULATIONS.
****** GDP-WEIGHTED AVERAGE OF U.S.,U.K., EURO AREA, JAPAN AND AUSTRALIA.
******* INCLUDES U.S., CHINA, AND EURO AREA.

CHART I-8
...In Part Due To Capital Spending

GLOBAL MANUFACTURING:
PMI* (LS)
PMI DIFFUSION INDEX** (RS)

GLOBAL:
REAL BUSINESS INVESTMENT (LS)
CAPITAL GOODS IMPORTS (RS)

For Bottom 3 Panels:
MAJOR ADVANCED ECONOMIES***
INDUSTRIAL PRODUCTION
ANNUAL % CHANGE
3-MONTH RATE OF CHANGE

CAPITAL GOODS

MACHINERY AND ELECTRICAL EQUIPMENT

CONSUMER GOODS

Consumer holding up

© BCA Research 2018

2011 2012 2013 2014 2015 2016 2017 2018

* SOURCE: J.P. MORGAN CHASE & CO. / MARKIT.
** BASED ON % OF COUNTRIES WITH PMI ABOVE 50 VS. BELOW 50; SHOWN AS 3-MONTH MOVING AVERAGE.
*** GDP-WEIGHTED AVERAGE OF U.S., U.K., EURO AREA AND JAPAN.

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that we can only analyze the late-cycle periods at the end of the 1990s and the mid-2000s (**Chart I-9**).

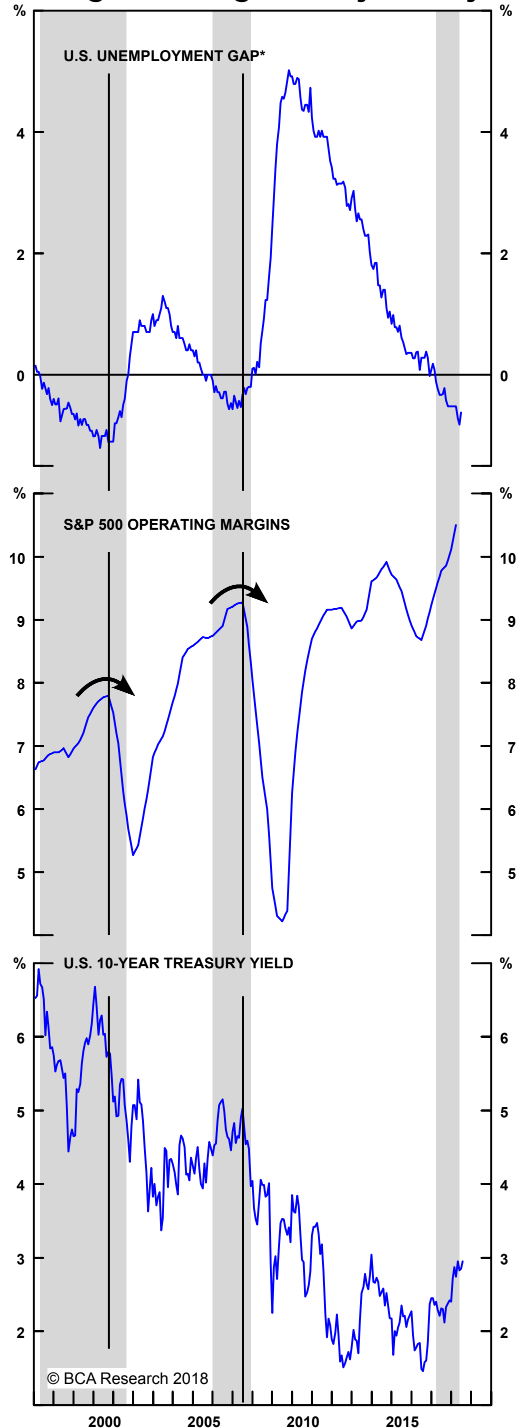
To refine the analysis, we split the late-cycle periods into two parts: before and after S&P 500 profit margins peak. One could use other signposts to split the period, such as a peak in the ISM manufacturing index. However, using the S&P operating profit margin proved to be a more useful break point across the cycles in terms of timing trend changes in risk assets.

Table I-1 presents total returns for the following periods: (1) the full late-cycle period – i.e. from the point at which full employment is reached until the following recession; (2) from the point of full employment to the peak in the S&P margin; (3) from the peak in the margin to the recession; and (4) during the subsequent recession. All returns are annualized for comparison purposes, and the data shown are the average of the late 1990s and mid-2000 late-cycle periods.

We must be careful in interpreting the results because no two cycles are exactly the same, and we only have two cycles in our sample of data. Nonetheless, we make the following observations:

- Treasury bond returns are positive across the board, which seems odd at first glance. However, in both cases the selloff occurred before the late-cycle period began. Yields then fluctuated in a range, and then began to fall after margins peaked. Global factors also contributed to Greenspan's "conundrum" of stable

CHART I-9
Margin Peak Signals Very Late Cycle



*UNEMPLOYMENT RATE MINUS NAIRU.
NOTE: SHADING DENOTES PERIODS WHEN THE UNEMPLOYMENT IS BELOW NAIRU; VERTICAL LINES DENOTE PEAK IN OPERATING MARGINS.

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TABLE I-1
Late-Cycle Asset Returns

	LATE CYCLE PERIOD*	BEFORE MARGIN PEAK**	AFTER MARGIN PEAK***	RECESSION	2001 RECESSION	2008 RECESSION	AVERAGE
U.S. FIXED INCOME							
CASH	5.7	5.4	6.2	3.3			
GOVERNMENT BONDS	7.7	5.2	15.4	6.9			
INVESTMENT GRADE CORPORATE BOND	6.5	5.1	11.4	5.8		-15.4	-15.4
HIGH-YIELD CORPORATE BOND	5.4	7.1	-0.2	-1.7	-8.4	-32.6	-20.5
GOVERNMENT-RELATED	7.6	5.5	14.8	7.6			
BARCLAYS AGGREGATE INDEX	7.3	5.5	13.3	6.9		-3.6	-3.6
EQUITIES							
U.S.	12.2	20.8	-2.1	-12.3	-43.8	-50.6	-47.2
U.S. SMALL CAP	10.4	17.2	-3.1	-5.1	-17.7	-51.8	-34.8
S&P 600 / S&P 500	-1.5	-1.8	-1.0	8.1			
GROWTH / VALUE	-1.6	0.8	17.9	15.7	-38.9	-27.3	-33.1
CYCLICAL/DEFENSIVES	-4.3	1.3	-20.3	-9.3	-16.0	-61.9	-39.0
DIVIDEND ARISTOCRATS	10.3	13.0	1.1	1.3		-43.9	-43.9
EMERGING MARKET	17.9	18.2	16.4	-9.3	-38.4	-51.7	-45.1
GLOBAL	11.7	19.1	-5.2	-15.4	-45.3	-50.7	-48.0
ALTERNATIVES							
HEDGE FUNDS	13.8	16.9	-1.4	-1.2		-21.3	-21.3
U.S. DIRECT REAL ESTATE	16.9	16.9	12.7	-2.5		-24.1	-24.1
U.S. REITS	7.0	12.7	-6.6	-10.3		-69.7	-69.7
U.S. PRIVATE EQUITY	26.4	34.7	-7.7	-11.8	-23.9	-25.7	-24.8
U.S. VENTURE CAPITAL	81.3	138.0	-25.7	-26.5	-69.5	-18.9	-44.2
U.S. STRUCTURED PRODUCTS	7.4	5.8	12.4	7.2			
MBS	7.5	5.8	12.5	8.1			
CMBS	6.6	4.4	12.9	0.0		-34.2	-34.2
ABS	6.0	5.6	8.0	5.4		-13.8	-13.8
U.S. TIMBERLAND	13.9	12.1	13.7	0.4			
U.S. FARMLAND	14.2	12.8	14.7	7.6			
COMMODITIES	4.4	-1.1	20.6	-31.7	-35.0	-67.6	-51.3
OIL	18.1	12.9	21.1	-28.5	-41.5	-70.3	-55.9
GOLD	12.5	6.1	22.3	9.2		-24.6	-24.6
DISTRESSED DEBT	11.1	27.7	-24.5	0.5		-61.4	-61.4

* FROM TIME FULL EMPLOYMENT IS REACHED TO NEXT RECESSION.
** FROM TIME FULL EMPLOYMENT IS REACHED TO MARGIN PEAK.
*** FROM MARGIN PEAK TO NEXT RECESSION.

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bond yields in the years before the Great Recession. We do not expect a replay this time around given the low starting point for real yields and the fact that the Fed is encouraging an overshoot of the inflation target. Bonds are unlikely to provide positive returns on a six month horizon.

- Similar to Treasurys, investment-grade (IG) corporate bond returns were positive across the board for the same reason. However, IG underperformed Treasurys after margins peaked and into the recession. High-yield bonds followed a similar pattern, but suffered negative ***absolute*** returns after margins peaked.
- U.S. stocks began to sniff out the next recession after margins peaked.
- Small caps outperformed large caps in the recessions, but relative performance was mixed after margins peaked. We are avoiding small caps at the moment based on poor fundamentals and valuations.
- Growth stocks had a mixed performance versus value stocks before and after margins peaked, but tended to outperform in the recessions.
- Dividend Aristocrats performed well relative to the overall equity market after margins peaked and into the recessions on average, but the performance was not consistent across the two late cycles.
- EM stocks performed well before margins peak, and poorly during the recessions. However, the performance is mixed in the period between the margin peak and the recession. We recommend an underweight allocation because of poor macro fundamentals and tightening financial conditions.
- In theory, Hedge Funds are supposed to be able to perform well in any environment, but returns were a mixed bag after margins peaked.
- The return performance of Private Equity, Venture Capital and Distressed Debt were similar to the S&P 500, albeit with more volatility. Avoid them after margins peak.
- Structured Product is one of the few categories that performed well across all periods and cycles. The index we used includes MBS, CMBS and ABS.
- Farmland and Timberland returns were attractive across all periods and cycles, except for Timberland during one of the recessions.
- Oil and non-oil commodities tended to perform poorly during recession, but returns were inconsistent in the other phases shown in the table.
- Gold was also a mixed bag.

The historical return analysis underscores that it is dangerous to remain aggressively positioned late in an economic cycle because risk assets can begin to underperform well before evidence accumulates that the economy has fallen into recession. Using the peak in the S&P 500 operating profit margin as a signal to lighten up appears prudent.

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Based on this approach, investors should generally remain overweight risk assets generally, including stocks, corporate bonds, hedge funds, private equity and real estate, as long as margins are still rising. Investors should scale back in most of these areas as soon as margins peak.

For fixed income, investors should be looking to raise exposure but move up in quality after margins peak. Oil and related plays are not a reliable late-cycle play, but we are bullish because of the favorable supply-demand outlook. However, this does not carry over to base metals, where we are more cautious.

There are some assets other than government bonds that generated a positive average return late in the cycle ***and*** during the recession periods, suggesting that they are good late-cycle assets to hold. However, this is misleading because in some cases they experienced a significant correction either during or slightly before the recession (see the maximum drawdown columns in **Table I-1**; blank cells indicate that the asset did not experience a correction). These include IG credit, CMBS, ABS, Gold and Dividend Aristocrats.

The only assets in our list that provided ***both*** a positive return across all the phases in **Table I-1** and avoided a correction during the recessions, were mortgage-backed securities, Timberland and Farmland. A *Special Report* from BCA's Global Asset Allocation service found that Timberland is a superior inflation hedge to Farmland, but the latter is a superior hedge against recessions and equity bear markets.[3]

We believe that Agency MBS are unattractively valued, but should remain insulated from negative shocks such as a trade war or higher Treasury yields (as long as the Treasury selloff is not extreme). Our fixed income team also likes Agency CMBS.[4]

When Will U.S. Margins Peak?

It is impressive that S&P 500 after-tax operating margins are extremely elevated and still rising. The trend has been aided by tax cuts, but corporate pricing power has improved and wage growth has not yet accelerated enough to damage margins.

Chart I-10 presents some indicators to monitor as we await the cyclical peak in profit margins. These are generally not leading indicators, but they do provide some warning when they roll over late in the cycle. The first is the BCA Margin Proxy, which is the ratio of selling prices for the non-financial corporate sector to unit labor costs. Margins have tended to fall historically when the growth rate of this ratio is below zero. The same is true for nominal GDP growth minus aggregate wages. The aggregate wage bill incorporates both changes in wages/hour and in total hours worked. We are also watching a diffusion index

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3 Please see BCA *Global Asset Allocation Service Special Report* "U.S. Farmland & Timberland: An Investment Primer," dated October 24, 2017, available on gaa.bcaresearch.com

4 Please see BCA's *U.S. Bond Strategy Weekly Report*, "The Fed's Balance Sheet Problem," dated July 17, 2018, available on usbs.bcaresearch.com

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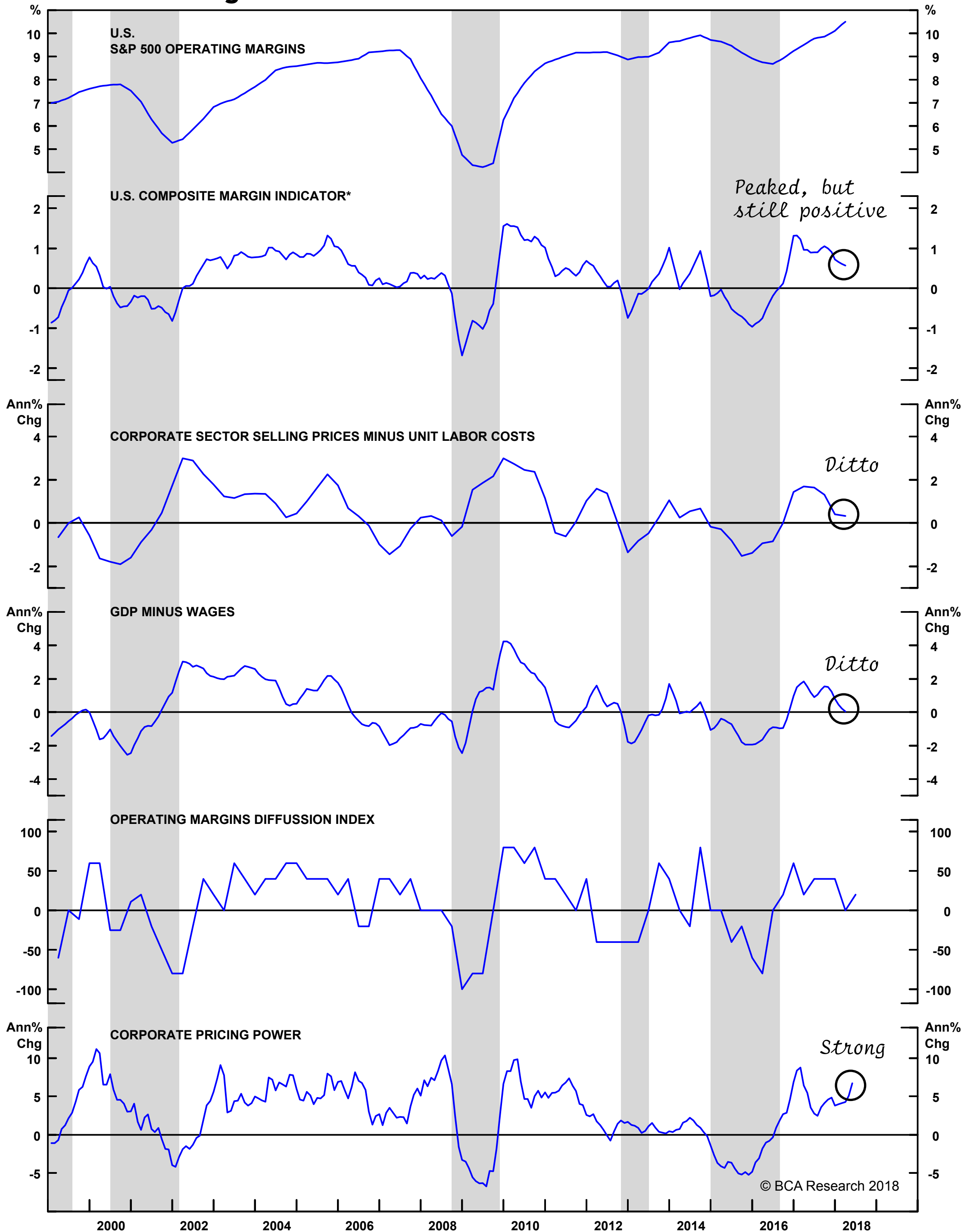
CHART I-10

U.S. Profit Margin Indicators To Watch



* CALCULATED AS THE AVERAGE OF THE INDICATORS SHOWN IN THE BOTTOM FOUR PANELS.
NOTE: SHADING DENOTES PERIODS WHEN U.S. COMPOSITE MARGIN INDICATOR IS LESS THAN ZERO.

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258307

of the changes in margins for the industrial components of the S&P 500, as well as BCA's Corporate Pricing Power indicator. The latter takes into consideration price changes at the detailed industry level.

None of these indicators are signaling an imminent top in margins, but all appear to have peaked except the Corporate Pricing Power indicator. An equally-weighted average of these four indicators, labelled the U.S. Composite Margin Indicator in **Chart I-10**, is falling but is still above the zero line. We would not be surprised to see S&P 500 margins peak for the cycle late early in 2019.

Conclusions:

The S&P 500 has so far been largely immune to shocking trade headlines with the help of a solid start to the U.S. Q2 earning season. Based on previous late cycle periods, the fact that S&P 500 profit margins are still rising suggests that investors should remain fully-exposed to most risk assets. Nonetheless, timing is always difficult and we have decided to focus on capital preservation given extended valuations and a raft of risks that could cause a premature end to the bull market.

These risks include a possible hard economic landing in China, crises in one or more EM countries, and an escalation in the trade war among others. Some investors appear to believe that the U.S. can "win" the trade war, but there are no winners when tariff walls are rising. We are not yet ready to go underweight on risk assets, but risk tolerance should be no more than benchmark. This includes equities, corporate bonds, EM assets and other risky sectors. An inversion of the yield curve could trigger a shift to underweight, although this signal would have to be corroborated by our other favorite U.S. and global indicators. Attractive late-cycle assets to hold include structured product, Timberland and Farmland.

The first statements by Jay Powell as FOMC Chair underscored that it is too early to hide in Treasurys. Market expectations for real short-term interest rates are overly benign out to the middle of the next decade. Moreover, the Fed is not in a position to be proactive in leaning against the negative impact of rising tariffs because inflation is near target and the labor market is showing signs of overheating. This means that bond yields are headed higher until economic pain is clearly evident. Keep duration short of benchmark.

Long-term rate expectations for the Eurozone appear even more complacent than they do for the U.S. The real ECB policy rate is expected to remain in negative territory until 2028 (**Chart I-5**)! At some point there will be a convergence of real rate expectations with the U.S., which will boost the value of the euro. Nonetheless, we believe that it is too early to position for rate convergence. Core inflation is still well below target and Eurozone economic growth has softened recently, suggesting that the ECB will be in no hurry to lift rates once asset purchases have ended. ECB policymakers

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will be disinclined to cater to President's Trump's desire for tighter monetary policy in Europe, which means that the U.S. dollar has more upside versus the euro and in broad trade-weighted terms.

An escalation in the trade war would augment upward pressure on the greenback. As the dollar's behavior during the Global Financial Crisis illustrates, even major shocks that originate from the U.S. tend to attract capital inflows into the safe-haven Treasury market. Emerging market assets are particularly vulnerable to another upleg in the dollar because of the high level of U.S. dollar-denominated debt. Favor DM to EM equity markets and currencies.

Mark McClellan
Senior Vice President
The Bank Credit Analyst

July 26, 2018
Next Report: August 30, 2018

Hansi Huang NATIONAL TREASURY MGMT AGE

258307

II. U.S. Equity Sectors: Trade War Winners And Losers

- In this *Special Report*, we shed light on the implications of the U.S./Sino trade war for U.S. equity sectors.
- The threat that trade action poses to the U.S. equity market is greater than in past confrontations. Perhaps most importantly, supply chains are much more extensive, globally and between China and the U.S. Automobile Components, Electrical Equipment, Materials, Capital Goods and Consumer Durables have the most extensive supply chain networks.
- The USTR claims that it is being strategic in the Chinese goods it is targeting, focusing on companies that will benefit from the "Made In China 2025" initiative. The list of Chinese goods targeted in both the first and second rounds covers virtually all of the broad import categories. The only major items left for the U.S. to hit are ***apparel, footwear, toys and cellphones.***
- Beijing is clearly targeting U.S. products based on politics in order to exert as much pressure on the President's party as possible. Based on a list of products that comprise the top-10 most exported goods of Red and Swing States, China will likely lift tariffs in the next rounds on **civilian aircraft, computer electronics, healthcare equipment, car engines, chemicals, wood pulp, telecommunication and integrated circuits.**
- Supply chains within and between industries and firms mean that the impact of tariffs is much broader than the direct impact on exporters and importers. We measure the relative exposure of 24 GICS equity sectors to the trade war based on their proportion of foreign-sourced revenues and the proportion of each industry's total inputs that are affected by U.S. tariffs.
- The Semiconductors & Semiconductor Equipment sector stands out, but the Technology & Hardware Equipment, Capital Goods, Materials, Consumer Durables & Apparel and Motor Vehicle sectors are also highly exposed to anti-trade policy action. Energy, Software, Banks and all other service sectors are much less exposed.
- China may also attempt to disrupt supply chains *via* non-tariff barriers, placing even more pressure on U.S. firms that have invested heavily in China. Wholesale Trade, Chemicals, Transportation Equipment, Computers & Electronic Parts and Finance & Insurance are most exposed. U.S. technology companies are particularly vulnerable to an escalating trade war.
- Virtually all U.S. manufacturing industries will be negatively affected by an ongoing trade war, even defensive sectors such as Consumer Staples. The one exception is defense manufacturers, where we recommend overweight positions.
- Our analysis highlights that the best shelter from a trade war can be found in services, particularly services that are insulated from trade. Financial Services appears a logical choice, and the S&P Financial Exchanges & Data subsector is one of our favorites.

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The trade skirmish is transitioning to a full-on trade war. The U.S. has imposed a 25% tariff on $50 billion worth of Chinese goods, and has proposed a 10% levy on an additional $200 billion of imports by August 31. China retaliated with tariffs on $50 billion of imports from the U.S., but Trump has threatened tariffs on another $300 billion if China refuses to back down. That would add up to over $500 billion in Chinese goods and services that could be subject to tariffs, only slightly less than the total amount that China exported to the U.S. last year.

BCA's *Geopolitical Strategy* has emphasized that President Trump is unconstrained on trade policy, giving him leeway to be tougher than the market expects.[1] This is especially the case with respect to China. There will be strong pushback from Congress and the U.S. business lobby if the Administration tries to cancel NAFTA. In contrast, Congress is also demanding that the Administration be tough on China because it plays well with voters. Trump is a prisoner of his own tough pre-election campaign rhetoric against China.

The U.S. primary economic goal is not to equalize tariffs but to open market access.[2] The strategic goal is much larger. The U.S. wants to see China's rate of technological development slow down. Washington will expect robust guarantees to protect intellectual property and proprietary technology before it dials down the pressure on Beijing.

The threat that the trade war poses to the U.S. equity market is greater than in past confrontations, such as that between Japan and the U.S. in the late 1980s. First, stocks are more expensive today. Second, interest rates are much lower, limiting how much central banks can react to adverse shocks. Third, and perhaps most importantly, supply chains are much more extensive, globally and between China and the U.S. Nearly every major S&P 500 multinational corporation is in some way exposed to these supply chains. **Chart II-1** shows that Automobile Components, Electrical Equipment, Materials, Capital Goods and Consumer Durables have the most extensive supply chain networks. The Global Value Chain Participation rate, constructed by the OECD, is a measure of cross-border value-added linkages.[3]

In this *Special Report*, we shed light on the implications of the trade war for U.S. equity sectors. Complex industrial interactions make it difficult to be precise in identifying the winners and losers of a trade war. Nonetheless, we can identify the industries most and least exposed to a further rise in tariff walls or non-tariff barriers to trade. We focus on the U.S./Sino trade dispute in this *Special Report*, leaving the implications of a potential trade war with Europe and the possible failure of NAFTA negotiations for future research.

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1 Please see BCA *Geopolitical Strategy Special Report*, "Constraints & Preferences Of The Trump Presidency," dated November 30, 2016, available at gps.bcaresearch.com.

2 Please see BCA *Geopolitical Strategy Weekly Report*, "Trump's Demands On China," dated April 4, 2018, available at gps.bcaresearch.com.

3 For more information, please see: "Global Value Chains (GVSs): United States." May 2013. OECD website.

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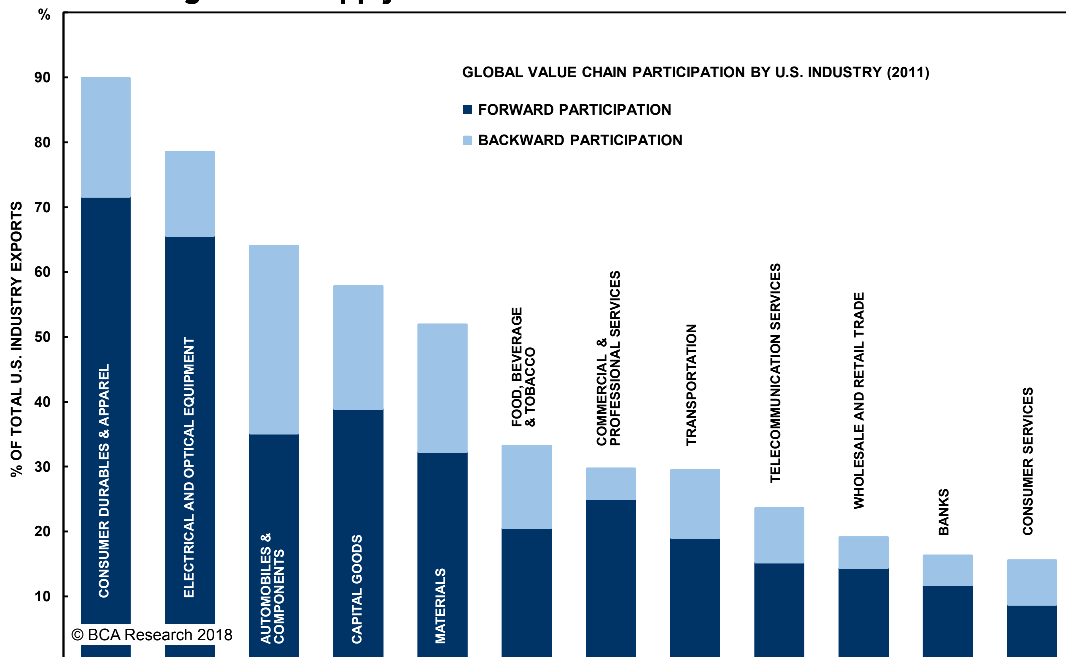
CHART II-1
Measuring Global Supply Chains



NOTE: ELECTRICAL AND OPTICAL EQUIPMENT INCLUDES SEMICONDUCTOR EQUIPMENT AND TECHNOLOGY HARDWARE AND EQUIPMENT.
SOURCE: OECD DATA AND BCA CALCULATIONS.

Trade Channels

There are at least five channels through which rising tariffs can affect U.S. industry:

(1) **The Direct Effect:** This can be positive or negative. The impact is positive for those industries that do not export much but are provided relief from stiff import competition *via* higher import tariffs. The impact is negative for those firms facing higher tariffs on their exports, as well as for those firms facing higher costs for imported inputs to their production process. These firms would be forced to absorb some of the tariff *via* lower profit margins. Some industries will fall into both positive and negative camps. U.S. washing machines are a good example. Whirlpool's stock price jumped after President Trump announced an import tariff on washing machines, but it subsequently fell back when the Administration imposed an import tariff on steel and aluminum (that are used in the production of washing machines);

(2) **Indirect Effect:** The higher costs for imported goods are passed along the supply chain within an industry and to other industries that are not directly affected by rising tariffs. This will undermine profit margins in these indirectly-affected industries to the extent that they cannot fully pass along the higher input costs;

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(3) **Foreign Direct Investment:** Some Chinese exports emanate from U.S. multinationals' subsidiaries in China, or by Chinese or foreign OEM suppliers for U.S. firms. Even though it would undermine China's economy to some extent, the Chinese authorities could make life more difficult for these firms in retaliation for U.S. tariffs on Chinese goods.

(4) **Macro Effect:** A trade war would take a toll on global trade and reduce GDP growth globally. Besides the negative effect of uncertainty on business confidence and, thus, capital spending, rising prices for both consumer and capital goods will reduce the volume of spending in both cases. Moreover, corporate profits have a high beta with respect to economic activity. We would not rule out a U.S. recession in a worst-case scenario. Obviously, a recession or economic slowdown would inflict the most pain on the cyclical parts of the S&P 500 relative to the non-cyclicals, in typical fashion.

(5) **Currency Effect:** To the extent that a trade war pushes up the dollar relative to the other currencies, it would undermine export-oriented industries and benefit those that import. However, while we are bullish the dollar due to diverging monetary policy, the dollar may not benefit much from trade friction given retaliatory tariff increases by other countries.

Some of the direct and indirect impact can be mitigated to the extent that importers facing higher prices for Chinese goods shift to similarly-priced foreign producers outside of China. Nonetheless, this adjustment will not be costless as there may be insufficient supply capacity outside of China, leading to upward pressure on prices globally.

Targeted Sectors:

(I) U.S. Tariffs On Chinese Goods

As noted above, the U.S. has already imposed tariffs on $50 billion of Chinese imports and has published a list of another $200 billion of goods that are being considered for a 10% tariff in the second round of the trade war. The first round focused on intermediate and capital goods, while the second round includes consumer final demand categories such as furniture, air conditioners and refrigerators. The latter will show up as higher prices at retailers such as Wal Mart, having a direct and visible impact on U.S. households. **Appendix Table II-A1** lists the goods that are on the first and second round lists, grouped according to the U.S. equity sectors in the S&P 500.

The U.S. Trade Representative (USTR) claims that the Chinese items are being targeted strategically. It is focusing on companies that will benefit from China's structural policies, such as the "Made In China 2025" initiative that is designed to make the country a world leader in high-tech areas (see below).

Table II-1 reveals the relative size of the broad categories of U.S. imports

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TABLE II-1

U.S. Imports From China (January-May 2018)

	USD Mn	% OF TOTAL
MACHINERY	57,122	27.8
TELECOMMUNICATIONS EQUIPMENT	35,557	17.3
DATA PROCESSING MACHINES	29,923	14.6
FURNITURE & BEDDING	10,579	5.2
APPAREL	10,568	5.2
METALS MANUFACTURING	9,200	4.5
ALL OTHERS	8,060	3.9
MOTOR VEHICLES / TRANSPORTATION EQUIPMENT	6,842	3.3
FOOTWEAR	5,503	2.7
TEXTILE	4,713	2.3
ORGANIC CHEMICALS	3,523	1.7
PREFAB BUILDINGS, SANITARY, PLUMBING	3,297	1.6
SCIENTIFIC INSTRUMENTS	3,229	1.6
NONMETALLIC MINERAL	2,882	1.4
TRAVEL GOODS, HANDBAGS	2,400	1.2
PHARMACEUTICAL PRODUCTS	1,502	0.7
CORK AND WOOD MANUFACTURES	1,455	0.7
RUBBER MANUFACTURES	1,441	0.7
PLASTICS	1,412	0.7
PAPER, PAPERBOARD	1,243	0.6
CHEMICAL MATERIALS	1,024	0.5
NONFERROUS METALS	1,022	0.5
FISH	1,012	0.5
IRON AND STEEL	828	0.4
VEGETABLES AND FRUIT	800	0.4
TOTAL	**205,140**	**100.0**

SOURCE: U.S. CENSUS BUREAU.

from China, based on trade categories. The top of the table is dominated by Motor Vehicles, Machinery, Telecommunication Equipment, Computers, Apparel & Footwear and other manufactured goods. The list of Chinese goods targeted in both the first and second rounds covers virtually all of the broad categories in **Table II-1**. The only major items left for the U.S. to hit are ***Apparel and Footwear***, as well as two subcategories; ***Toys and Cellphones***. These are all consumer demand categories.

(II) Chinese Tariffs On U.S. Goods

Total U.S. exports to China were less than $53 billion in the first five months of 2018, limiting the amount of direct retaliation that China can undertake (**Table II-2**). The list of individual U.S. products that China has targeted so far is long, but we have condensed it into the broad categories shown in **Table II-3**. The U.S. equity sectors that the new tariffs affect so far include Food, Beverage & Tobacco, Automobiles & Components, Materials and Energy. China has concentrated mainly on final goods in a politically strategic manner, such as Trump-supported

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TABLE II-2
U.S. Exports To China (January-May 2018)

	USD Mn	% OF TOTAL
TRANSPORT EQUIPMENT	10,304	19.5
OTHER MACHINERY	4,798	9.1
ELECTRICAL MACHINERY, APPARATUS & APPLIANCES	4,576	8.6
PETROLEUM, PETROLEUM PRODUCTS	4,013	7.6
ALL OTHERS	3,732	7.1
ORES/ MINERALS	3,280	6.2
CHEMICALS	3,053	5.8
OIL SEEDS AND OLEAGINOUS	2,809	5.3
PROFESSIONAL SCIENTIFIC INSTRUMENTS	2,807	5.3
PLASTICS	2,232	4.2
PULP AND WASTE PAPER, PAPER BOARD	1,525	2.9
CORK AND WOOD	1,402	2.6
APPAREL, FOOTWEAR & RELATED ITEMS	1,339	2.5
MISCELLANEOUS MANUFACTURED GOODS	1,163	2.2
PHARMACEUTICAL PRODUCTS	1,109	2.1
GAS, NATURAL AND MANUFACTURED	917	1.7
OFFICE MACHINES AND ADP EQUIPMENT	885	1.7
CEREALS	694	1.3
TELECOMMUNICATIONS EQUIPMENT	630	1.2
MEAT AND VEGETABLE MATERIALS	500	0.9
FISH	471	0.9
PHOTO APPT, EQUIPMENT & OPTICAL GOODS	423	0.8
IRON AND STEEL	241	0.5
TOTAL	**52,902**	**100**

SOURCE: U.S. CENSUS BUREAU.

rural areas and Harley Davidson bikes whose operations are based in Paul Ryan's home district in Wisconsin.

What will China target next?

Chart II-2 shows exports to China as percent of total state exports, and **Chart II-3** presents the value of products already tariffed by China as a percent of state exports. Other than Washington, the four states most targeted by Beijing are conservative: Alaska, Alabama, Louisiana and South Carolina.

Beijing is clearly targeting products based on politics in order to exert as

TABLE II-3
China Tariffs On U.S. Goods

<table>
<tr><th>PRODUCT</th><th>GICS SECTOR</th></tr>
<tr><td>MEAT</td><td rowspan="9">FOOD, BEVERAGE & TOBACCO</td></tr>
<tr><td>FISH / SEAFOOD</td></tr>
<tr><td>DAIRY</td></tr>
<tr><td>VEGETABLES</td></tr>
<tr><td>NUTS</td></tr>
<tr><td>FRUITS</td></tr>
<tr><td>GRAINS / CEREALS</td></tr>
<tr><td>WHISKY</td></tr>
<tr><td>TOBACCO</td></tr>
<tr><td>MOTOR VEHICULE & PARTS</td><td>AUTOMOBILE & COMPONENTS</td></tr>
<tr><td>MINERALS (INCLUDING COAL)</td><td rowspan="3">MATERIALS</td></tr>
<tr><td>PETROLEUM PRODUCTS</td></tr>
<tr><td>PLASTICS</td></tr>
<tr><td>NATURAL GAS</td><td>ENERGY</td></tr>
</table>

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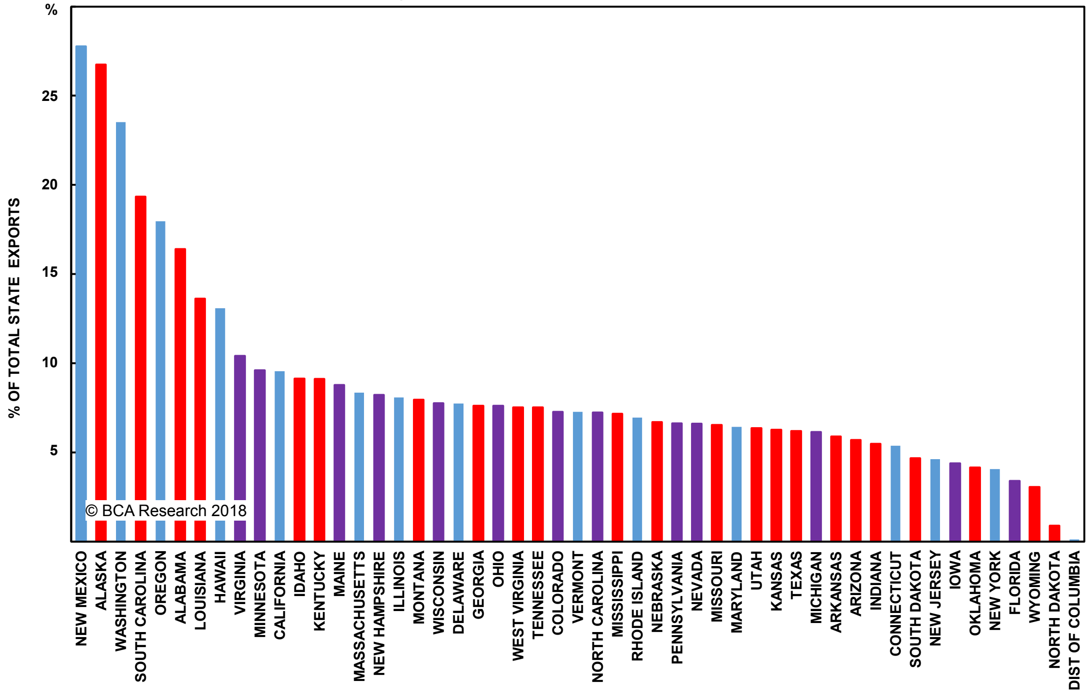
CHART II-2

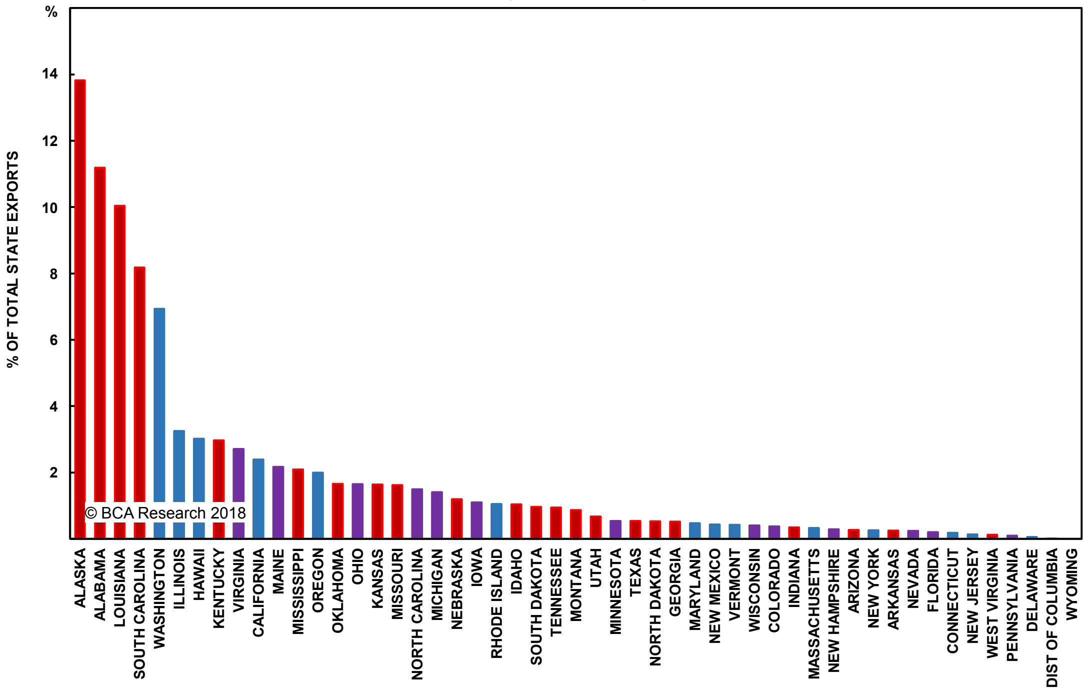
U.S. Exports To China By State



SOURCE: USA TRADE ONLINE AND BCA CALCULATIONS.

CHART II-3

Value Of U.S. Products Tariffed By China (By State)



SOURCE: USA TRADE ONLINE AND BCA CALCULATIONS.

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TABLE II-4

Number Of U.S. States Exporting To China By Category

EXPORT CATEGORIES NOT YET HIT BY TARIFFS	SWING STATE	RED STATE	TOTAL
CIVILIAN AIRCRAFT, ENGINES, AND PARTS	12	15	27
MACHINE FOR RECEPTION, CONVERSION, TRANSMISSION, OR REGENERATION OF VOICE, IMAGE AND DATA	3	4	7
PROCESSORS AND CONTROLLERS, ELECTRONIC INTEGRATED CIRCUIT	3	3	6
VALUE OF REPAIR AND ALTERATION OF ARTICLES PREVIOUSLY IMPORTED	2	4	6
BITUMINOUS COAL, NOT AGGLOMERATED	2	4	6
INSTRUMENTS AND APPLIANCES FOR MEDICAL, SURGICAL OR VETERINARY SCIENCES	3	2	5
SPARK-IGNITION PISTON ENGINE, OF A KIND USED FOR VEHICLES, OF A CYLINDER CAPACITY > 1.000 CM^3	2	3	5
CHEMICAL WOODPULP, SODA AND ETC	0	5	5
PHONES FOR CELLULAR NETWORKS OR FOR OTHER WIRELESS NETWORK	4	0	4
ELECTRONIC INTEGRATED CIRCUITS	2	2	4

much pressure on the President's party as possible. To identify the next items to be targeted, we constructed a list of products that comprise the top-10 most exported goods of Red States (solidly conservative) and Swing States (competitive states that can go either to Republican or Democratic politicians). **Appendix Tables II-A2** and **II-A3** show this list of products, with those that have already been flagged by China for tariffs crossed out.

Table II-4 shows the top-10 list of products that are not yet tariffed by China, but are distributed in a large proportion of Red and Swing states. What strikes us immediately is how important aircraft exports are to a large number of Swing and Red States. In total, 27 U.S. states export **civilian aircraft**, engines and parts to China. This is an obvious target of Beijing's retaliation. In addition, we believe that **computer electronics, healthcare equipment, car engines, chemicals, wood pulp, telecommunication and integrated circuits** are next.

Market Reaction

Chart II-4 highlights how U.S. equity sectors performed during seven separate days when the S&P 500 suffered notable losses due to heightened fears of protectionism. Cyclical sectors such as Industrials and Materials fared worse during days of rising protectionist angst. Financials also generally underperformed, largely because such days saw a flattening of the yield curve. Tech, Health Care, Energy and Telecom performed broadly in line with the S&P 500. Consumer Staples outperformed the market, but still declined in absolute terms. Utilities and Real Estate were the only two sectors that saw absolute price gains.

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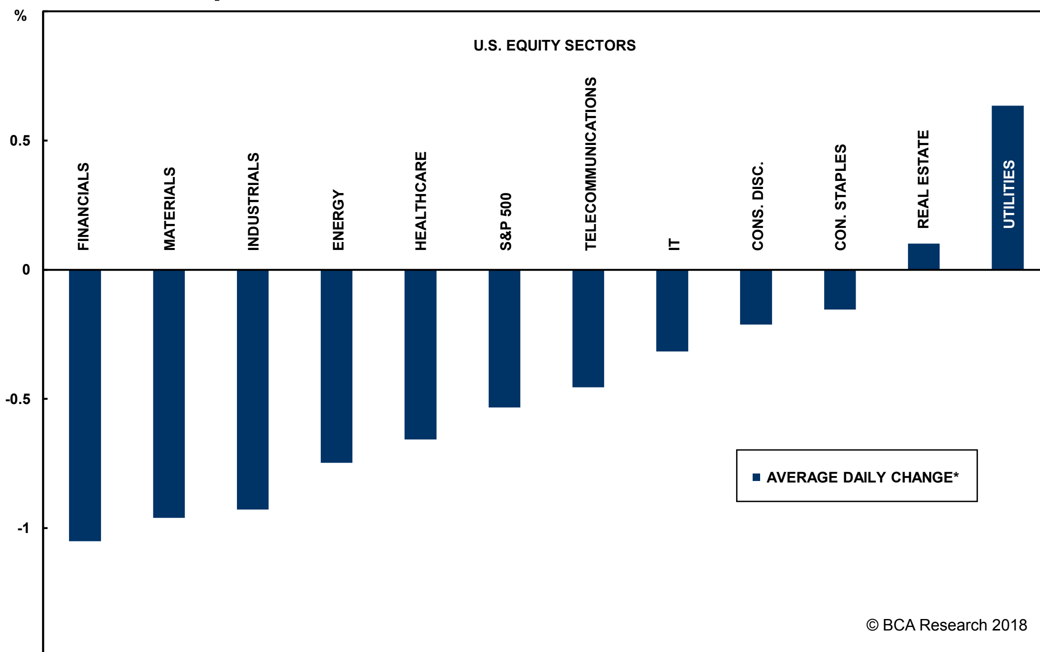
CHART II-4

S&P 500: Impact Of Trade-Related Events



* BASED ON AN AVERAGE OF SEVEN MARKET-IMPACTING TRADE-RELATED EVENTS WHERE THE S&P 500 FELL BY MORE THAN 0.5%:
3/3/2018: TRUMP TWEETS HE WANTS TO TAX GERMAN CARS.
3/22/2018: INVESTIGATION INTO CHINA UNDER SECTION 301 COMPLETED AND TRUMP INSTRUCTS THE UNITED STATES TRADE REPRESENTATIVE (USTR) TO DRAW UP A LIST OF POTENTIAL TARIFF TARGETS.
5/23/2018: INVESTIGATION ON U.S. AUTO AND PARTS IMPORTS UNDER SECTION 232 STARTED.
5/29/2018: WHITE HOUSE SAYS IT WILL PUT A 25% TARIFF ON $50 BILLION OF CHINESE IMPORTS.
6/15/2018: USTR ANNOUNCES THAT IT WILL IMPOSE ADDITIONAL TARIFFS UNDER SECTION 301.
6/18/2018: TRUMP THREATENS TO IMPOSE $400 BILLION IN TARIFFS AGAINST CHINA.
7/11/2018: WHITE HOUSE SAYS IT WILL PUT A 10% TARIFF ON AN ADDITIONAL $200 BILLION OF CHINESE IMPORTS.

The market reaction seems sensible based on the industries caught in the cross-hairs of the trade action so far. At least some of the potential damage is already discounted in equity prices. Nonetheless, it is useful to take a closer look at the underlying factors that should determine the ultimate winners and losers from additional salvos in the trade war.

Determining The Winners And Losers

The U.S. sectors that garner the largest proportion of total revenues from outside the U.S. are obviously the most exposed to a trade war. For the 24 level 2 GICS sectors in the S&P 500, **Table II-5** presents the proportion of total revenues that is generated from operations outside the U.S. for the top five companies in the sector by market cap. Company reporting makes it difficult in some cases to identify the exact revenue amount coming from outside the U.S., as some companies regard "domestic" earnings as anything generated in North America. Nonetheless, we believe the data in **Table II-5** provide a reasonably accurate picture.

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TABLE II-5

Foreign Revenue Exposure (2017)

GICS SECTOR	FOREIGN SOURCED REVENUE AS A PERCENT OF TOTAL REVENUE*	
	MEAN	MEDIAN
SEMICONDUCTOR AND SEMICONDUCTOR EQUIPMENT	88.9	87.3
TECHNOLOGY AND HARDWARE EQUIPMENT	64.2	68.9
FOOD BEVERAGE AND TOBACCO	58.4	73.8
MATERIALS	54.4	51.8
SOFTWARE AND SERVICE INDUSTRY	54.2	52.6
CAPITAL GOODS	53.0	54.7
HOUSEHOLD AND PERSONAL PRODUCTS	51.8	55.0
ENERGY	47.5	58.6
AUTOMOBILE COMPONENTS INDUSTRY	46.3	36.7
INSURANCE INDUSTRY	45.4	48.9
CONSUMER DURABLES AND APPAREL	44.4	42.6
PHARMACEUTICALS, BIOTECH AND LIFE SCIENCES	42.9	47.9
CONSUMER SERVICES	37.3	30.1
RETAILING	33.9	30.5
HEALTH CARE EQUIPMENT AND SERVICE	31.6	46.2
DIVERSIFIED FINANCIALS INDUSTRY	20.3	26.1
COMMERCIAL AND PROFESSIONAL SERVICES	20.2	4.9
FOOD AND STAPLES RETAILING	19.4	23.9
REAL ESTATE	13.6	6.4
MEDIA	13.3	14.7
TRANSPORTATION	10.9	0.0
BANKS	8.4	5.3
UTILITIES	5.7	0.0
TELECOMMUNICATION SERVICES	2.2	0.0

* BASED ON TOP 5 COMPANIES IN EACH SECTOR BY MARKET CAP.

Semiconductors, Tech Equipment, Materials, Food & Beverage, Software and Capital Goods are at the top of the list in terms of foreign-sourced revenues. Not surprisingly, service industries like Real Estate, Banking, Utilities and Telecommunications Services are at the bottom of the exposure list.

U.S. companies are also exposed to U.S. tariffs that lift the price of imported inputs to the production process. This can occur directly when firm A imports a good from abroad, and indirectly, when firm A sells its intermediate good to firm B at a higher price, and then on to firm C.

In order to capture the entire process, we used the information contained in the Bureau of Economic Analysis' Input/Output tables. We estimated the proportion of each industry's total inputs that are affected by already-implemented U.S. tariffs and those that are on the list for the next round of tariffs. These estimates, shown in **Appendix Table II-A4** at a detailed industrial level, include both the direct and indirect effects of higher import costs.

At the top of the list is Motor Vehicles and Parts, where Trump tariffs could

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TABLE II-6
U.S. Import Tariff Exposure

GICS SECTOR	% OF INTERMEDIATE INPUTS AFFECTED BY TARIFFS*
AUTOMOBILE COMPONENTS INDUSTRY	71.4
SEMICONDUCTOR AND SEMICONDUCTOR EQUIPMENT	58.9
TECHNOLOGY AND HARDWARE EQUIPMENT	58.9
CAPITAL GOODS	58.0
CONSUMER DURABLES AND APPAREL	53.8
MATERIALS	44.6
FOOD, BEVERAGE AND TOBACCO	28.9
TRANSPORTATION	21.9
TELECOMMUNICATION SERVICES INDUSTRY	19.5
ENERGY	18.1
COMMERCIAL AND PROFESSIONAL SERVICES	17.6
CONSUMER SERVICES	17.1
HEALTH CARE EQUIPMENT AND SERVICE	14.0
FOOD AND STAPLES RETAILING	12.1
UTILITIES	12.0
REAL ESTATE	11.1
SOFTWARE AND SERVICE INDUSTRY	9.6
RETAILING	9.5
MEDIA	8.7
BANKS	2.0
DIVERSIFIED FINANCIALS INDUSTRY	0.5
INSURANCE INDUSTRY	0.4

* BASED ON BEA INPUT/OUTPUT (USE) TABLE.

affect more than 70% of the cost of all material inputs to the production process. Electrical Equipment, Machinery and other materials industries are also high on the list, together with Furniture, Computers & Electronic Parts and Construction. Unsurprisingly, service industries and Utilities are in the bottom half of the table.[4]

We then allocated all the industries in **Appendix Table II-A4** to the 24 GICS level 2 sectors in the S&P 500, in order to obtain an import exposure ranking in S&P sector space (**Table II-6**).

[4] Please see BCA *U.S. Equity Strategy Special Report*, "Brothers In Arms," dated October 31, 2016, available at uses.bcaresearch.com.

Chart II-5 presents a scatter diagram that compares import tariff exposure (horizontal axis) with foreign revenue exposure (vertical axis). The industries clustered in the top-right of the diagram are the most exposed to a trade war.

The Semiconductors & Semiconductor Equipment sector stands out by this metric, but the Technology & Hardware Equipment, Capital Goods, Materials, Consumer Durables & Apparel and Motor Vehicle sectors are also highly exposed to anti-trade policy action. Energy, Software, Banks and all other service sectors are much less exposed. Food, Beverage & Tobacco lies between the two extremes.

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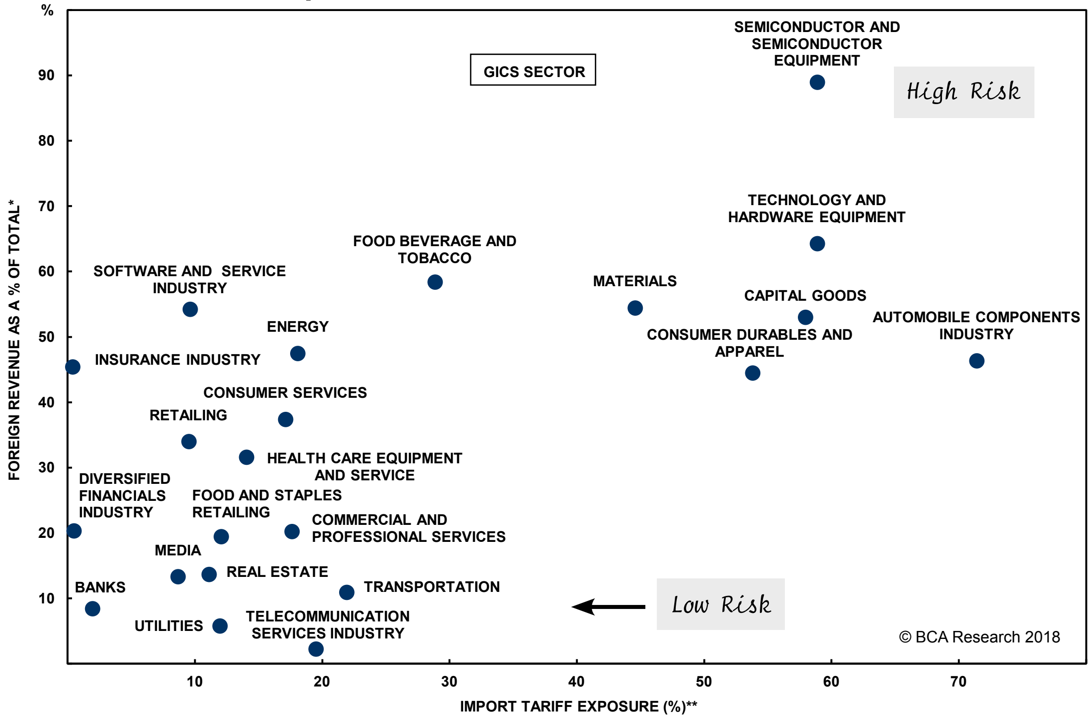
CHART II-5

U.S. Industrial Exposure To A Trade War With China



* BASED ON TOP 5 COMPANIES IN EACH SECTOR BY MARKET CAP.

** PERCENT OF TOTAL INTERMEDIATE INPUTS THAT ARE AFFECTED BY U.S. IMPORT TARIFFS, BASED ON BEA INPUT/OUTPUT (USE) TABLE.

Joint Ventures And FDI

As mentioned above, most U.S. production taking place in China involves a joint venture. The Chinese authorities could attempt to disrupt the supply chain of a U.S. company by hindering production at companies that have ties to U.S. firms.

Data on U.S. foreign direct investment (FDI) in China will be indicative of the industries that are most exposed to this form of retaliation. The stock of U.S. FDI in China totaled more than $107 billion last year (**Table II-7**). At the top of the table are Wholesale Trade, Chemicals, Transportation Equipment, Computers & Electronic Parts and Finance & Insurance. Apple is a good example of a U.S. company that is exposed to non-

TABLE II-7

Stock Of U.S. Direct Investment In China (2017)

INDUSTRY	USD Mn
OTHER INDUSTRIES	16,568
WHOLESALE TRADE	13,992
CHEMICALS	13,258
TRANSPORTATION EQUIPMENT	12,814
COMPUTERS AND ELECTRONIC PRODUCTS	8,425
FINANCE (EXCEPT DEPOSITORY INSTITUTIONS) AND INSURANCE	7,501
OTHER MANUFACTURING	7,462
MACHINERY	5,170
DEPOSITORY INSTITUTIONS	4,457
HOLDING COMPANIES (NONBANK)	3,886
FOOD	3,693
MINING	2,725
INFORMATION	2,657
PRIMARY AND FABRICATED METALS	2,405
PROFESSIONAL, SCIENTIFIC, AND TECHNICAL SERVICES	1,613
ELECTRICAL EQUIPMENT, APPLIANCES, AND COMPONENTS	932
ALL INDUSTRIES	**107,556**

SOURCE: BEA.

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tariff retaliation, as the iPhone is assembled in China by Foxconn for shipment globally with mostly foreign sourced parts. Our Technology sector strategists argue that U.S. technology companies are particularly vulnerable to an escalating trade war (See **Box II-1**).[5]

[5] Please see BCA *Technology Sector Strategy Special Report* "Trade Wars And Technology," dated July 10, 2018, available at tech.bcaresearch.com

Conclusions:

When it comes to absolute winners in case of a trade war, we believe there are three conditions that need to be met:

1. Relatively high domestic input costs.
2. Relatively high domestic consumption/sales; the true beneficiaries of a tariff are those industries who are allowed to either raise prices or

BOX II-1

The Tech Sector

The U.S. has applied tariffs on the raw materials of technology products rather than finished goods so far. At a minimum, this will penalize smaller U.S. tech firms which manufacture in the U.S. and provide an incentive to move production elsewhere. Worst case, the U.S. tariffs might lead to component shortages which could have a disproportionately negative impact, especially on smaller firms. Although it has not been proposed, U.S. tariffs on finished goods would be devastating to large tech companies such as Apple, which outsources its manufacturing to China.

China appears determined to have a vibrant high technology sector. The "Made In China 2025" program, for example, combines ambitious goals in supercomputers, robotics, medical devices and smart cars, while setting domestic localization targets that would favor Chinese companies over foreigners. The ZTE sanctions and the potential for enhanced export controls have had a traumatic impact on China's understanding of its relatively weak position with respect to technology. As a result, because most high-tech products are available from non-U.S. sources, Chinese engineers will likely be encouraged to design with non-U.S. components; for example, selecting a Samsung instead of a Qualcomm processor for a smartphone.

Similarly, China is a major buyer of semiconductor capital equipment as it follows through with plans to scale up its semiconductor industry. Most such equipment is also available from non-U.S. vendors, and it would be understandable if these suppliers are selected given the risk which would now be associated with selecting a U.S. supplier.

The U.S. is targeting Chinese made resistors, capacitors, crystals, batteries, Light Emitting Diodes (LEDs) and semiconductors with a 25% tariff. For the most part these are simple, low cost devices, which are used by the billions in high-tech devices. Nonetheless, China could limit the export of these products to deliver maximum pain, leading to a potential shortage of qualified parts. A component shortage can have a devastating impact on production since the manufacturer may not have the ability to substitute a new part or qualify a new vendor. Since the product typically won't work unless all the right parts are installed, want of a dollar's worth of capacitors may delay shipping a $1,000 product. Thus, the economic and profit impact of a parts shortage in the U.S. could be quite severe.

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displace foreign competitors, with the consumer typically bearing the cost.

3. Relatively low direct exposure to global trade – international trade flows will certainly slow in a trade war.

There are very few manufacturing industries that meet all of these criteria. Within manufacturing, one would typically expect the Consumer Staples and Discretionary sectors to be the best performers. However, roughly a third of the weight of Staples is in three stocks (PG, KO and PEP) that are massively dependent on foreign sales. Moreover, a similar weight of Discretionary is in two retailers (AMZN and HD) that are dependent on imports. As such, consumer indexes do not appear a safe harbor in a trade war. Nevertheless, if the trade war morphs into a recession then consumer staples (and other defensive safe-havens) will outperform, although they will still decrease in absolute terms.

Transports are an industry that has relatively high domestic labor costs and an output that is consumed virtually entirely within domestic borders. However, their reliance on global trade flows – intermodal shipping is now more than half of all rail traffic – means they almost certainly lose from a prolonged trade dispute.

There is one manufacturing industry that could be at least a relative winner and perhaps an absolute winner: defense. Defense manufacturers certainly satisfy the first two criteria above, though they do have reasonably heavy foreign exposure. However, we believe high switching costs and the lack of true global competitors mean that U.S. defense company foreign sales will be resilient. After all, a NATO nation does not simply switch out of F-35 jets for the Russian or Chinese equivalent. Further, if trade friction leads to rising military tension, defense stocks should outperform. Finally, the ongoing global arms race, space race and growing cybersecurity requirements all signal that these stocks are a secular growth story, as BCA has argued in the recent past.[6]

Still, as highlighted by the data presented above, the best shelter from a trade war can be found in services, particularly services that are insulated from trade. Financial Services appears a logical choice, especially the S&P Financial Exchanges & Data subsector (BLBG: S5FEXD – CME, SPGI, ICE, MCO, MSCI, CBOE, NDAQ).

Another appealing – and defensive – sector is Health Care Services. With effectively no foreign exposure and a low *beta*, these stocks would outperform in the worst-case trade war-induced recession.

Mark McClellan
Senior Vice President
The Bank Credit Analyst

Marko Papic
Senior Vice President
Geopolitical Strategy

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Associate Editor
U.S. Equity Strategy

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6 Please see BCA *U.S. Equity Strategy Special Report*, "Brothers In Arms," dated October 31, 2016, available at uses.bcaresearch.com.

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APPENDIX TABLE II-1: Allocating U.S. Import Tariffs To U.S. GICS Sectors

GICS SECTORS AFFECTED	PRODUCTS TARGETED FOR U.S. IMPORT TARIFFS
ENERGY	
	OIL AND GAS DRILLING PLATFORM PARTS
CAPITAL GOODS	
	AIRCRAFT TIRES
	AIRCRAFT ENGINES AND ENGINE PARTS
	AIR AND GAS COMPRESSORS, WHICH ARE USED IN VARIOUS GOODS LIKE REFRIGERATORS
	HELICOPTERS, AIRPLANES AND SPACECRAFT
	SCALES, MOSTLY FOR WEIGHING LARGE INDUSTRIAL EQUIPMENT
	CRANES AND OTHER "LIFTING EQUIPMENT"
	BULLDOZERS, BACKHOES, TAMPERS, BORING MACHINES AND OTHER LARGE CONSTRUCTION VEHICLES
	MACHINERY FOR PROCESSING AND MOLDING METALS OR CEMENT, AND THEIR PARTS
	LARGE VEHICLES USING BOTH DIESEL AND NON-DIESEL FUEL
	MACHINERY FOR FOODS PROCESSING, INCLUDING MEAT PROCESSING AND FRUIT PROCESSING
	INDUSTRIAL HEATING EQUIPMENT
	MACHINERY FOR MAKING PAPER CARDBOARD AND OTHER PAPER PRODUCTS
	MACHINERY FOR PROCESSING AND MOLDING METALS OR CEMENT, AND THEIR PARTS
	MACHINERY FOR MAKING GLASS PRODUCTS, INCLUDING LIGHTBULBS
	MACHINERY FOR MAKING RUBBER OR PLASTIC GOODS
	DC AND AC GENERATORS OF VARIOUS SIZES AND POWER LEVELS
	ELECTRICITY TRANSFORMERS
	INDUSTRIAL OVENS AND FURNACES
	INDUSTRIAL MAGNETS
	TRAINS AND RAIL PARTS
	BALL BEARINGS
	CONSTRUCTION EQUIPMENT (PVC, WALL COVERINGS, VINYL TILES, BIDETS, LAVATORY PANS)
	MACHINERY
	PARTS OF STEAM TURBINES, ROTORS
	ENGINE PARTS
	TRUCKS
AUTOMOBILES & COMPONENTS	
	SOME CARS AND TRUCKS, MOTORCYCLES
	RUBBER
	TIRES
FOOD, BEVERAGE & TOBACCO	
	MEAT, POULTRY, FISH
	CEREALS AND DAIRY PRODUCTS
	VEGETABLE, FRUITS, SEEDS AND NUTS
	TOBACCO
	DAIRY MILKERS, CHICKEN INCUBATORS AND OTHER LIVESTOCK EQUIPMENT
TECHNOLOGY HARDWARE & EQUIPMENT	
	LITHIUM BATTERIES AND OTHER BATTERIES
	RADAR AND RADIO EQUIPMENT
	PARTS FOR TELEVISIONS, VIDEO-RECORDING EQUIPMENT AND SIMILAR VIDEO PRODUCTS
	ELECTRONIC TRAFFICS SIGNS
	ELECTRICAL EQUIPMENT SUCH AS RESISTORS AND CIRCUIT BREAKERS
	LEDS
	LASERS
	PARTS OF PRINTERS AND COPY MACHINES
	COMPUTERS AND COMPUTER EQUIPMENT
	TELECOMMUNICATION EQUIPMENT
UTILITIES	
	MACHINERY, APPARATUS AND PARTS OF NUCLEAR REACTORS
PHARMACEUTICALS, BIOTECHNOLOGY & LIFE SCIENCES	
	MICROSCOPES AND TELESCOPES
MATERIALS	
	INDUSTRIAL METALS AND PRECIOUS METALS: COPPER,NICKEL, COBALT, ALUMINIUM, LEAD, ZINC, TIN, CHROMIUM, IRON TUNGSTEN, MOLYBDENUM, TANTALUM, MAGNESIUM, BISMUTH, TITANIUM, ZIRCONIUM, CADMIUM
	URANIUM COAL PETROLEUM
	CHEMICAL COMPOUNDS: OXYGEN, NITROGEN, AMMONIA, ACIDS, ALCOHOLS, OXIDES, SALTS, HYDROXIDE
	PLASTICS WOOD AND WOOD PRODUCTS, PULP, PAPER PRODUCTS
CONSUMER DURABLES & APPAREL	
	FABRICS
	CARPETS
	WHITE GOODS
	FURNITURE
	CONSUMER ELECTRONICS
	VIDEO MONITORS AND TELEVISION
COMMERCIAL & PROFESSIONAL SERVICES	
	OFFICE EQUIPMENT

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APPENDIX TABLE II-2: Exports By U.S. Red States

RED STATES	NUMBER OF STATES	EXPORTS
24	15	CIVILIAN AIRCRAFT, ENGINES, AND PARTS
	6	~~PASSENGER VEHICLE WITH CYLINDER CAPACITY MORE THAN 3000 CC~~
	5	CHEMICAL WOODPULP, SODA AND ETC
	5	~~PASSENGER VEHICLE WITH CYLINDER CAPACITY BETWEEN 1500 AND 3000 CC~~
	4	BITUMINOUS COAL
	4	PETROLEUM OIL FROM BITUMINOUS MINERALS, NOT CRUDE OIL OR BIODIESEL.
	4	MACHINE FOR RECEPTION, CONVERSION, TRANSMISSION, OR REGENERATION OF VOICE, IMAGE AND DATA
	4	BOMBS, MINES AND OTHER AMMUNITION
	4	VALUE OF REPAIR AND ALTERATION OF ARTICLES PREVIOUSLY IMPORTED
	4	~~CORN, OTHER THAN SEED CORN~~
	4	~~SOYBEANS~~
	4	LIGHT OILS
	4	~~COTTON~~
	3	SPARK-IGNITION PISTON ENGINE, OF A KIND USED FOR VEHICLES, OF A CYLINDER CAPACITY > 1.000 CM^3
	3	PROCESSORS AND CONTROLLERS, ELECTRONIC INTEGRATED CIRCUIT
	3	MEDICAL NEEDLES, CATHERERS AND PARTS ETC
	3	~~MOTOR VEHICLE FOR THE TRANSPORT OF GOODS, NOT EXCEEDING 5 TONNES~~
	3	~~MEAT OF BOVINE ANIMALS, BONELESS, FRESH OR CHILLED~~
	3	SOYBEAN OILCAKE AND OTHER SOLID RESIDUE
	3	CRUDE OIL FROM PETROLEUM AND BITUMINOUS MINERALS
	3	NATURAL GAS
	3	~~MEAT OF SWINE, FRESH OR CHILLED~~
	2	PASSENGER VEHICLE WITH CYLINDER CAPACITY BETWEEN 1500 AND 2500 CC
	2	~~PASSENGER VEHICLE WITH CYLINDER CAPACITY MORE THAN 2500 CC~~
	2	ELECTRICAL PLUGS AND SOCKETS FOR A VOLTAGE NOT EXCEEDING 1,000 V
	2	ELECTRONIC INTEGRATED CIRCUITS
	2	~~CHICKEN CUTS AND EDIBLE OFFAL (INCLUDING LIVERS), FROZEN~~
	2	AIRPLANES AND OTHER AIRCRAFT, OF AN UNLADEN WEIGHT EXCEEDING 15,000 KG
	2	PARTS AND ACCESSORIES FOR AUTOMATIC DATA PROCESSING MACHINES
	2	MEMORIES, ELECTRONIC INTEGRATED CIRCUITS
	2	COMPOSITE DIAGNOSTIC OR LABORATORY REAGENTS
	2	~~GEAR BOXES FOR MOTOR VEHICLES~~
	2	~~MEAT OF BOVINE ANIMALS, BONELESS, FROZEN~~
	2	~~WHEAT AND MESLIN, NESOI~~
	2	WHOLE HIDES & SKINS
	2	~~WHISKIES~~
	2	INSTRUMENTS AND APPLIANCES FOR MEDICAL, SURGICAL OR VETERINARY SCIENCES
	2	MACHINES FOR MANUFACTURING SEMICONDUTOR DEVICES
	2	~~ETHYL ALCOHOL & OTHER SPIRITS~~
	2	MECHANICAL FRONT-END SHOVEL LOADERS
	2	BENTONITE, INCLUDING CALCINED

CROSSED OUT PRODUCTS HAVE ALREADY BEEN HIT BY TARIFFS.

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APPENDIX TABLE II-3: Exports By U.S. Swing States

SWING STATES	NUMBER OF STATES	EXPORTS
12	12	CIVILIAN AIRCRAFT, ENGINES AND PARTS
	4	PHONES FOR CELLULAR NETWORKS OR FOR OTHER WIRELESS NETWORK
	3	PROCESSORS AND CONTROLLERS, ELECTRONIC INTEGRATED CIRCUIT
	3	INSTRUMENTS AND APPLIANCES FOR MEDICAL, SURGICAL OR VETERINARY SCIENCES
	3	MACHINE FOR RECEPTION, CONVERSION, TRANSMISSION, OR REGENERATION OF VOICE,IMAGE AND DATA
	3	~~SOYBEANS~~
	2	~~MEAT OF SWINE, FRESH OR CHILLED~~
	2	ELECTRONIC INTEGRATED CIRCUITS
	2	GOLD, NONMONETARY, UNWROUGHT
	2	VALUE OF REPAIR AND ALTERATION OF ARTICLES PREVIOUSLY IMPORTED
	2	SPARK-IGNITION PISTON ENGINE, OF A KIND USED FOR VEHICLES, OF A CYLINDER CAPACITY > 1.000 CM^3
	2	~~PASSENGER VEHICLE WITH CYLINDER CAPACITY BETWEEN 1500 AND 3000 CC~~
	2	~~PASSENGER VEHICLE WITH CYLINDER CAPACITY MORE THAN 3000 CC~~
	2	PARTS AND ACCESSORIES OF BODIES FOR MOTOR VEHICLES
	2	~~GEAR BOXES FOR MOTOR VEHICLES~~
	2	PARTS AND ACCESSORIES OF MOTOR VEHICLES
	2	PARTS AND ACCESSORIES OF PRINTERS, COPYING MACHINES AND FACSIMILE MACHINES
	2	~~TOBACCO~~
	2	IMMUNOLOGICAL PRODUCTS
	2	MEDICAMENTS
	2	BITUMINOUS COAL

CROSSED OUT PRODUCTS HAVE ALREADY BEEN HIT BY TARIFFS.

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APPENDIX TABLE II-4: Exposure Of U.S. Industries To U.S. Import Tariffs

INDUSTRY	% OF INTERMEDIATE INPUTS AFFECTED BY U.S. TARIFFS*
MOTOR VEHICLES, BODIES AND TRAILERS AND PARTS	71.5
OTHER TRANSPORTATION EQUIPMENT	71.3
ELECTRICAL EQUIPMENT, APPLIANCES AND COMPONENTS	70.1
PLASTICS AND RUBBER PRODUCTS	66.8
MACHINERY	66.0
FABRICATED METAL PRODUCTS	64.1
FURNITURE AND RELATED PRODUCTS	63.0
COMPUTER AND ELECTRONIC PRODUCTS	58.9
PAPER PRODUCTS	58.8
TEXTILE MILLS AND TEXTILE PRODUCT MILLS	55.3
CHEMICAL PRODUCTS	52.6
FEDERAL GENERAL GOVERNMENT (DEFENSE)	50.2
CONSTRUCTION	49.9
PRIMARY METALS	49.5
WOOD PRODUCTS	45.6
PRINTING AND RELATED SUPPORT ACTIVITIES	45.1
MISCELLANEOUS MANUFACTURING	43.2
NONMETALLIC MINERAL PRODUCTS	40.2
FOOD AND BEVERAGE AND TOBACCO PRODUCTS	39.7
APPAREL AND LEATHER AND ALLIED PRODUCTS	37.3
SUPPORT ACTIVITIES FOR MINING	34.9
FOOD SERVICES AND DRINKING PLACES	34.0
AIR TRANSPORTATION	31.0
RAIL TRANSPORTATION	30.1
PIPELINE TRANSPORTATION	29.9
WASTE MANAGEMENT AND REMEDIATION SERVICES	29.8
MINING, EXCEPT OIL AND GAS	28.5
FARMS	27.8
TRUCK TRANSPORTATION	25.9
STATE AND LOCAL GENERAL GOVERNMENT	23.2
OTHER SERVICES, EXCEPT GOVERNMENT	21.2
BROADCASTING AND TELECOMMUNICATIONS	19.5
OIL AND GAS EXTRACTION	18.1
FORESTRY, FISHING AND RELATED ACTIVITIES	18.0
MOTOR VEHICLE AND PARTS DEALERS	18.0
SOCIAL ASSISTANCE	17.7
ACCOMMODATION	17.4
AMUSEMENTS, GAMBLING AND RECREATION INDUSTRIES	16.5
OTHER TRANSPORTATION AND SUPPORT ACTIVITIES	16.5
NURSING AND RESIDENTIAL CARE FACILITIES	15.9
STATE AND LOCAL GOVERNMENT ENTERPRISES	15.0
FEDERAL GOVERNMENT ENTERPRISES	14.3
TRANSIT AND GROUND PASSENGER TRANSPORTATION	14.2
EDUCATIONAL SERVICES	14.0
AMBULATORY HEALTH CARE SERVICES	13.8
WATER TRANSPORTATION	13.6
HOSPITALS	12.4
FOOD AND BEVERAGE STORES	12.1
DATA PROCESSING, INTERNET PUBLISHING AND OTHER INFORMATION SERVICES	12.0
UTILITIES	12.0
ADMINISTRATIVE AND SUPPORT SERVICES	11.9
MISCELLANEOUS PROFESSIONAL, SCIENTIFIC AND TECHNICAL SERVICES	11.2
WAREHOUSING AND STORAGE	10.1
RENTAL AND LEASING SERVICES AND LESSORS OF INTANGIBLE ASSETS	9.0
COMPUTER SYSTEMS DESIGN AND RELATED SERVICES	7.2
WHOLESALE TRADE	6.7
GENERAL MERCHANDISE STORES	6.7
OTHER RETAIL	6.7
HOUSING	6.4
FEDERAL GENERAL GOVERNMENT (NONDEFENSE)	5.8
MANAGEMENT OF COMPANIES AND ENTERPRISES	5.6
PETROLEUM AND COAL PRODUCTS	4.8
PUBLISHING INDUSTRIES, EXCEPT INTERNET (INCLUDES SOFTWARE)	3.9
PERFORMING ARTS, SPECTATOR SPORTS, MUSEUMS AND RELATED ACTIVITIES	3.7
MOTION PICTURE AND SOUND RECORDING INDUSTRIES	2.6
LEGAL SERVICES	2.2
OTHER REAL ESTATE	2.2
FEDERAL RESERVE BANKS, CREDIT INTERMEDIATION AND RELATED ACTIVITIES	2.0
SECURITIES, COMMODITY CONTRACTS AND INVESTMENTS	0.6
INSURANCE CARRIERS AND RELATED ACTIVITIES	0.4
FUNDS, TRUSTS AND OTHER FINANCIAL VEHICLES	0.4

* BASED ON BEA INPUT/OUTPUT (USE) TABLE.

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III. Indicators And Reference Charts

Our equity-related indicators flashed caution again in July, despite robust U.S. corporate earnings indicators.

Forward earnings estimates continued to surge in July. The net revisions ratio and the earnings surprises index remained well above average, suggesting that forward earnings still have upside potential in the coming months.

However, several of our indicators suggest that it is getting late in the bull market. Our Monetary Indicator is approaching very low levels by historical standards. Equities are still close to our threshold of overvaluation, at a time when our Composite Technical Indicator appears poised to break down. An overvalued reading is not bearish on its own, but valuation does provide information on the downside risks when the correction finally occurs. Equity sentiment is close to neutral according to our composite indicator, but the low level of implied volatility suggests that investors are somewhat complacent.

Our U.S. Willingness-to-Pay (WTP) indicator has fallen significantly this year, and the Japanese WTP appears to be rolling over. The WTP indicators track flows, and thus provide information on what investors are actually doing, as opposed to sentiment indexes that track how investors are feeling. Flows into the U.S. stock market are waning, and those into the Japanese market are wavering. Flows into European stocks have flattened off.

Finally, our Revealed Preference Indicator (RPI) for stocks remained on a 'sell' signal in July. The RPI combines the idea of market momentum with valuation and policy measures. It provides a powerful bullish signal if positive market momentum lines up with constructive signals from the policy and valuation measures. Conversely, if constructive market momentum is not supported by valuation and policy, investors should lean against the market trend. These indicators are not aligned at the moment, further supporting the view that caution is warranted.

The U.S. 10-year Treasury is slightly on the inexpensive side and our Composite Technical Indicator suggests that the bond has still not worked off oversold conditions. This suggests that the consolidation period has further to run, although we still expect yields to move higher over the remainder of the year. This month's *Overview* section discusses the upside potential for the term premium in the yield curve and for market expectations of the terminal fed funds rate.

This year's dollar rally has taken it to very expensive levels according to our purchasing power parity estimate. The long-term trend in the dollar is down, but we still believe it has some upside while market expectations for the terminal fed funds rate adjust upward.

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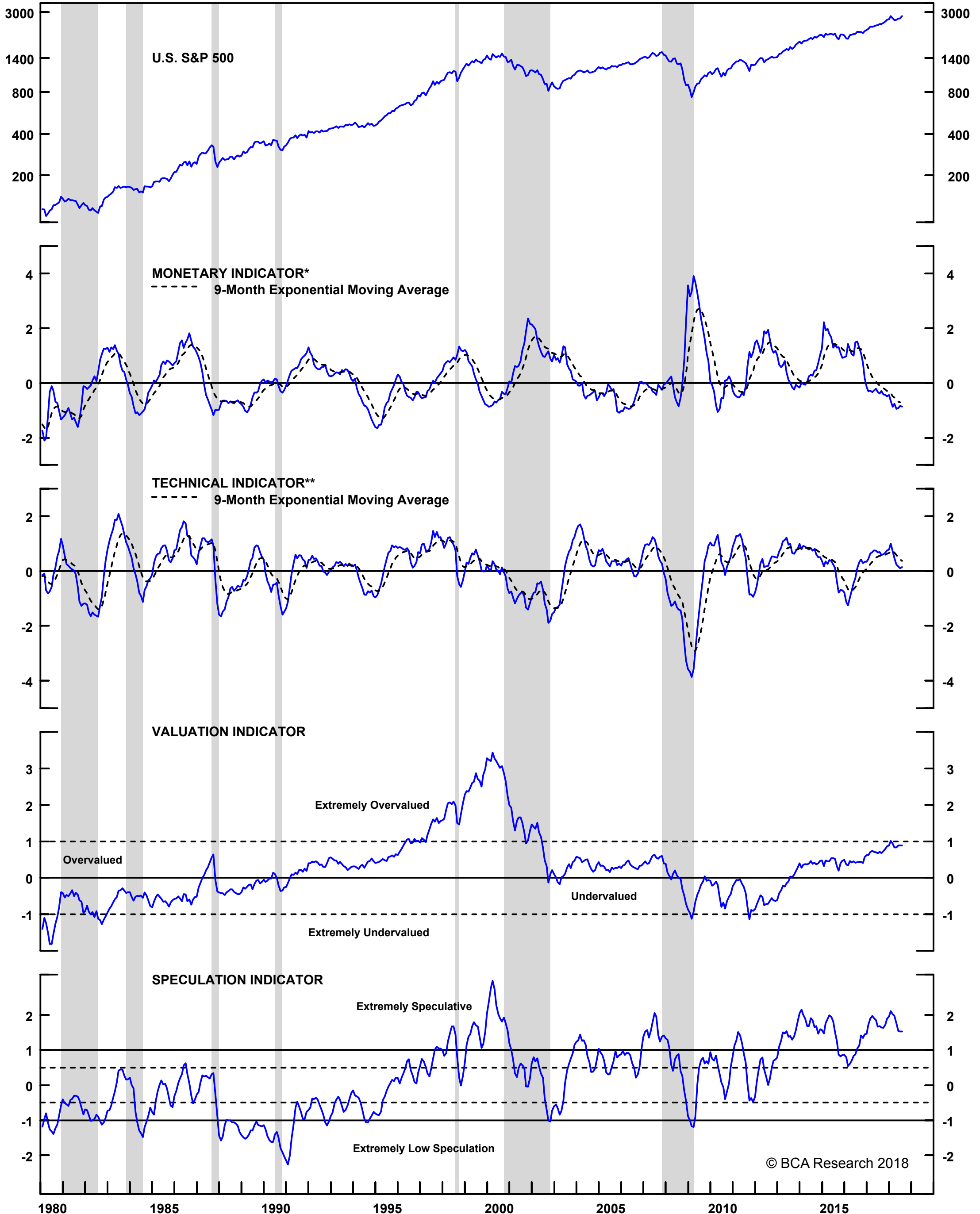
EQUITIES:

CHART III-1
U.S. Equity Indicators



* SELL (BUY) WHEN MONETARY INDICATOR FALLS (RISES) BELOW (ABOVE) ZERO.
** SELL WHEN TECHNICAL INDICATOR CROSSES BELOW ZERO, BUY WHEN IT RISES ABOVE 9-MONTH EMA.
NOTE: SHADED AREAS INDICATE BEAR MARKETS.

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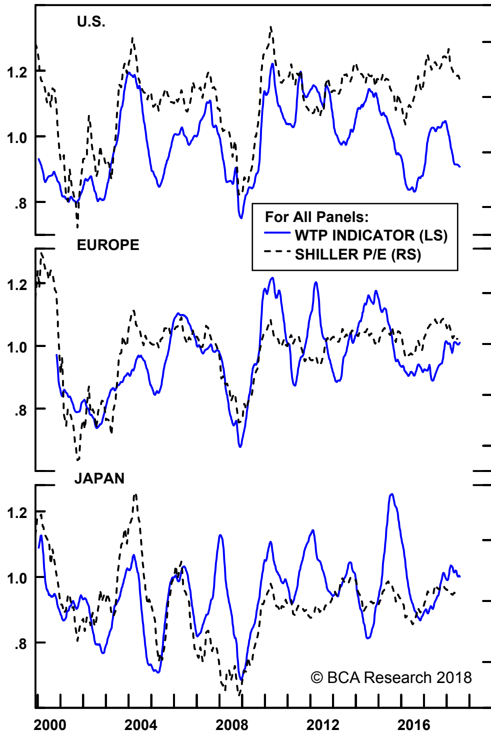
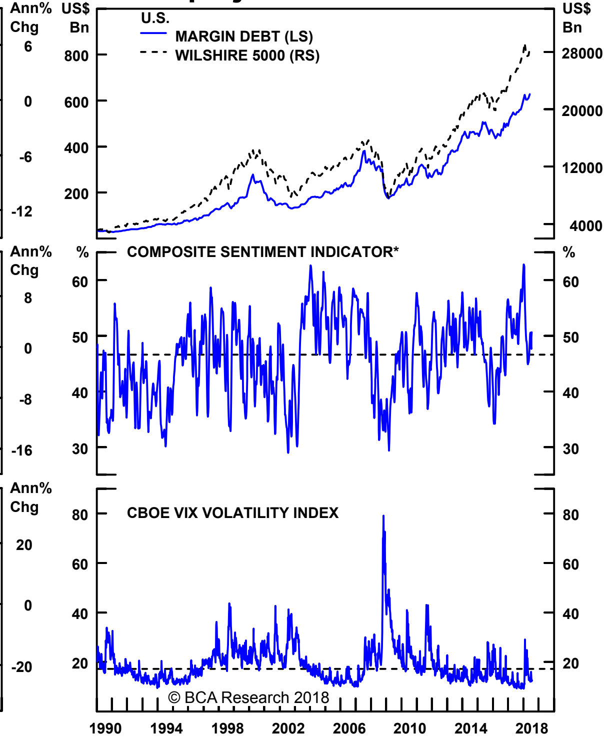
CHART III-2
Willingness To Pay For Risk



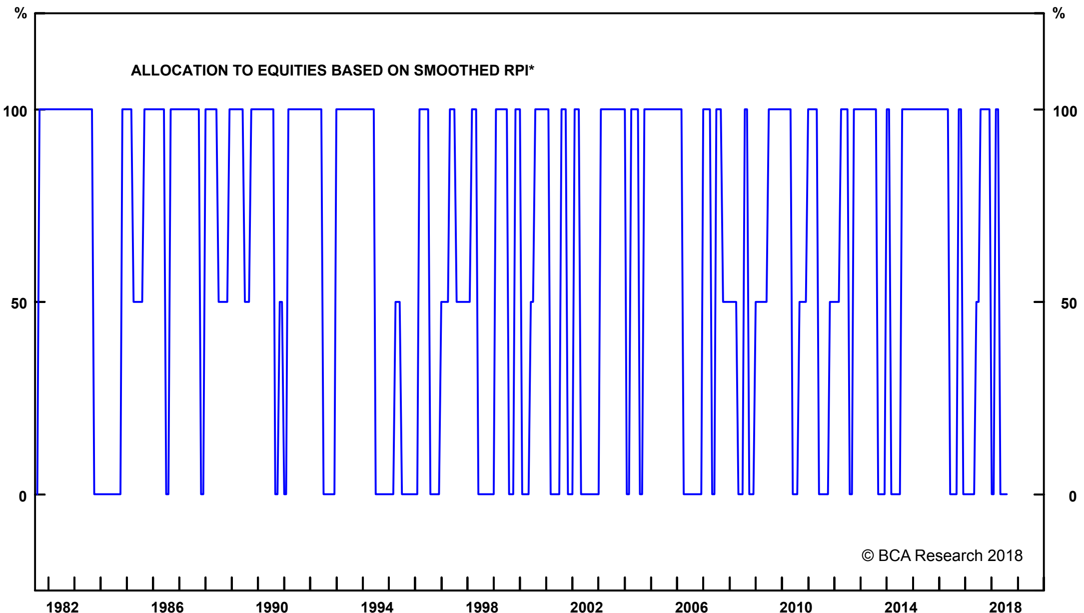
SOURCE: BLOOMBERG FINANCE L.P.; BCA CALCULATIONS.

CHART III-3
U.S. Equity Sentiment Indicators



* BASED ON ADVISOR, INDIVIDUAL INVESTOR AND TRADER SENTIMENT. SHOWN SMOOTHED EXCEPT FOR LATEST DATAPOINT.
NOTE: HORIZONTAL DASHED LINES INDICATE MEDIAN (1990 - PRESENT).

CHART III-4
Revealed Preference Indicator



* BASED ON OPTIMIZED RPI METHODOLOGY, BUT REQUIRES TWO SIGNALS IN A ROW TO CHANGE THE ALLOCATION.

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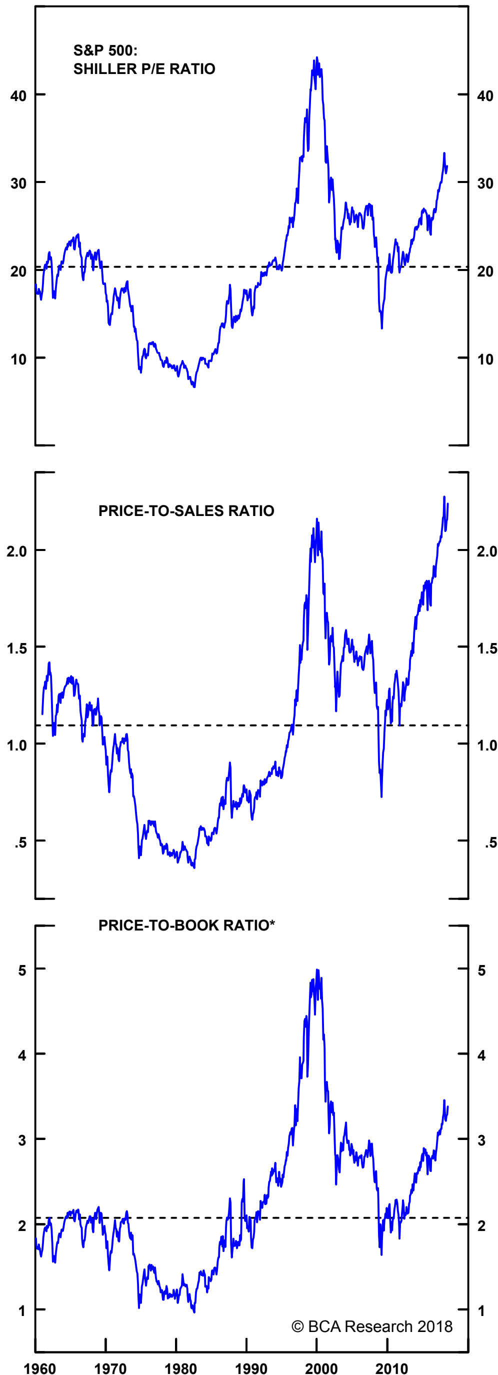
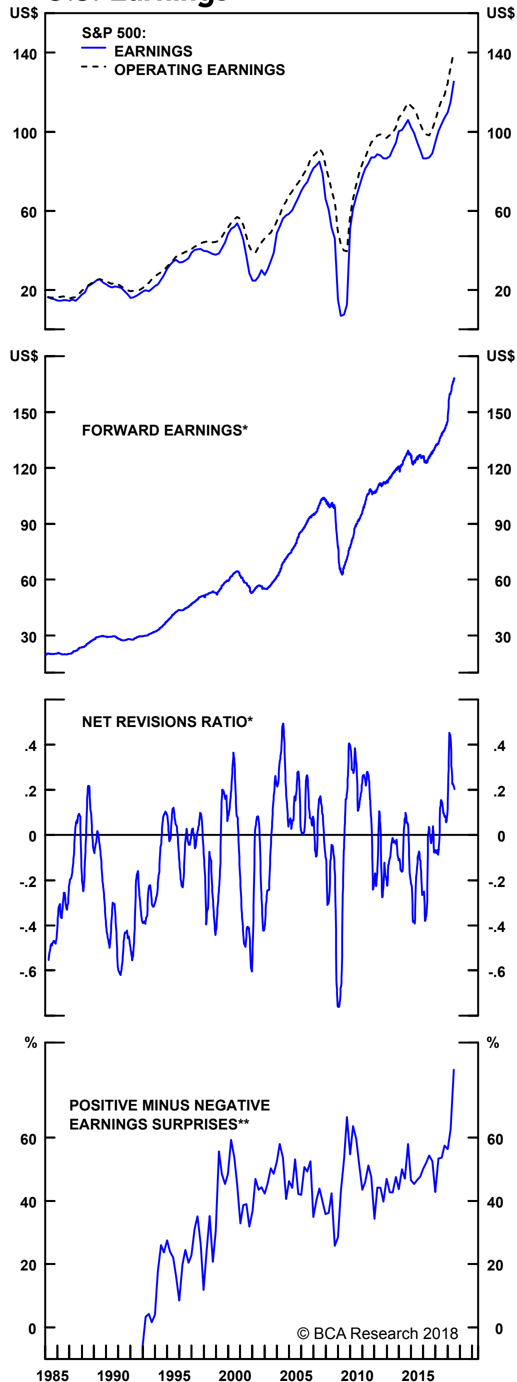
CHART III-5
U.S. Stock Market Valuation



* EXCLUDING FINANCIALS, UTILITIES AND TRANSPORTS PRIOR TO 1977.
NOTE: HORIZONTAL DASHED LINES INDICATE MEDIAN (1960 - PRESENT).

CHART III-6
U.S. Earnings



* IBES DATA.
** BLOOMBERG FINANCE L.P.

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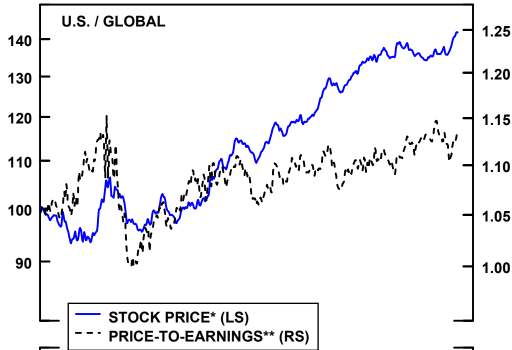
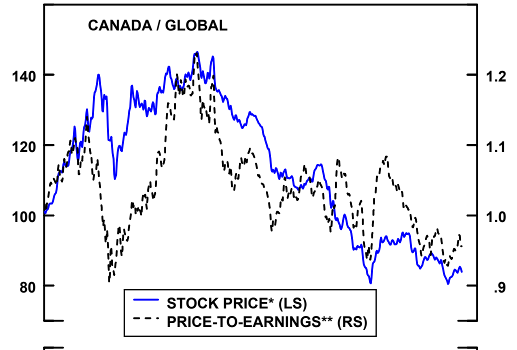
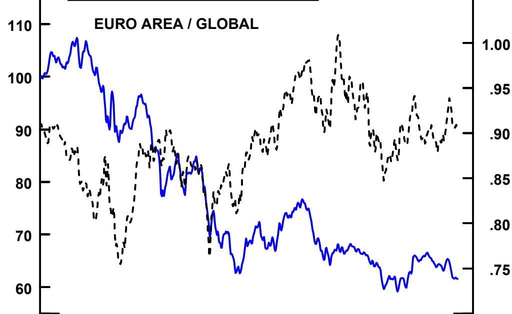
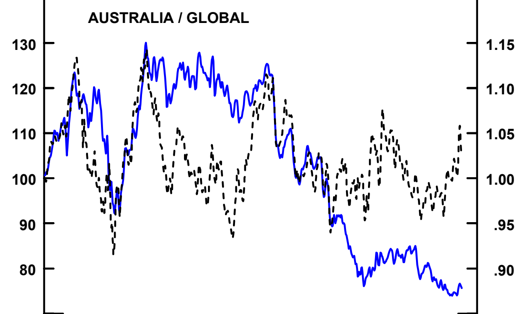
CHART III-7 AND CHART III-8

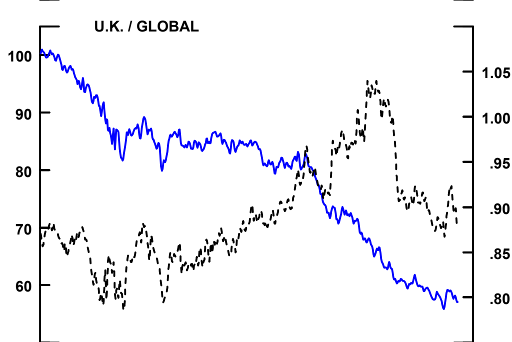
Global Stock Market And Earnings: Relative Performance

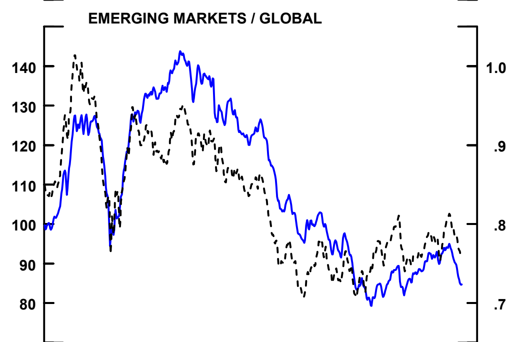


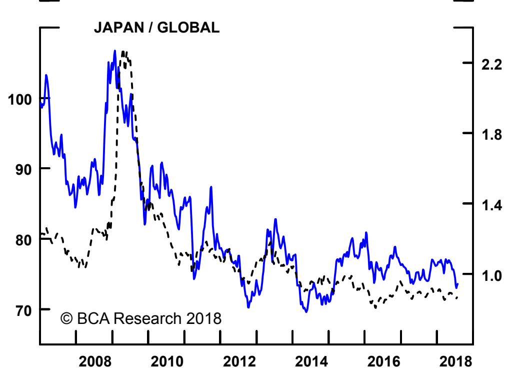












* SHOWN IN COMMON-CURRENCY TERMS, REBASED TO JANUARY 2007 = 100, SMOOTHED EXCEPT FOR LATEST DATAPOINT. SOURCE: MSCI INC. (SEE COPYRIGHT DECLARATION).
** BASED ON 12-MONTH FORWARD EARNINGS, SHOWN SMOOTHED EXCEPT FOR LATEST DATAPOINT. SOURCE: IBES.

* SHOWN IN COMMON-CURRENCY TERMS, REBASED TO JAN. 2007 = 100, SMOOTHED EXCEPT FOR LATEST DATAPOINT; SOURCE: MSCI INC. (SEE COPYRIGHT DECLARATION).
** BASED ON 12-MONTH FORWARD EARNINGS, SMOOTHED EXCEPT FOR LATEST DATAPOINT. SOURCE: IBES.

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FIXED INCOME:

CHART III-9
U.S. Treasurys And Valuations

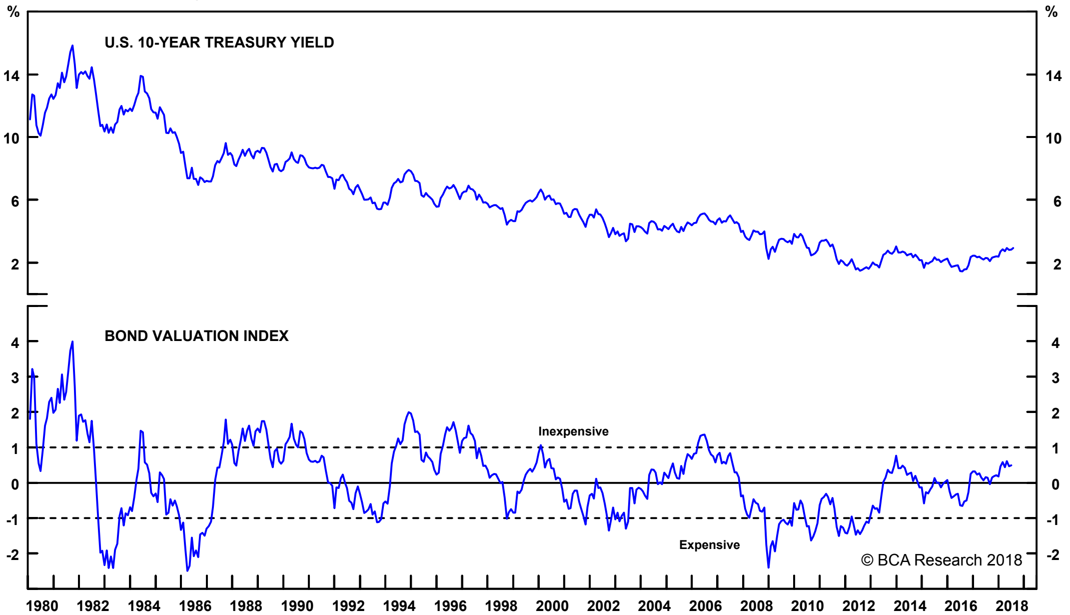
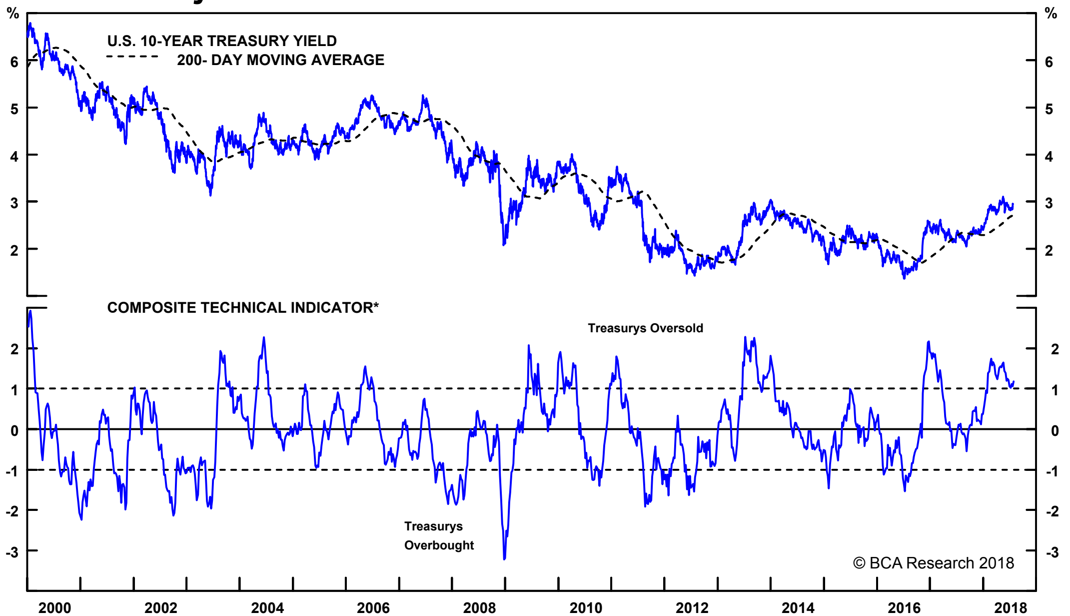


CHART III-10
U.S. Treasury Indicators



* BASED ON MOMENTUM, TRADER POSITIONING AND SENTIMENT.

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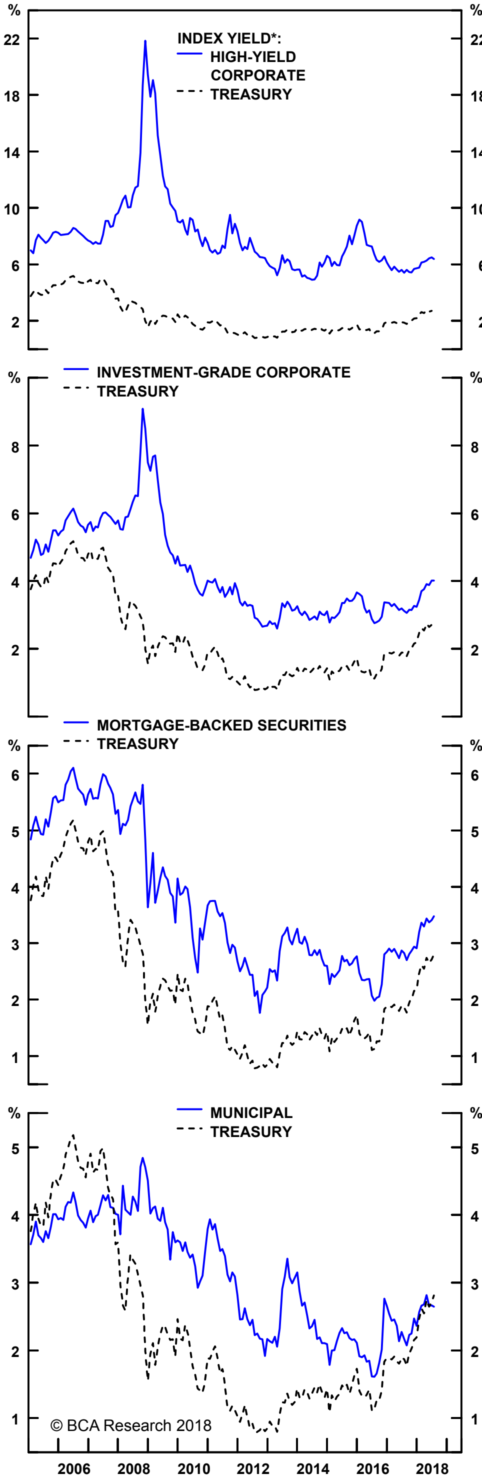
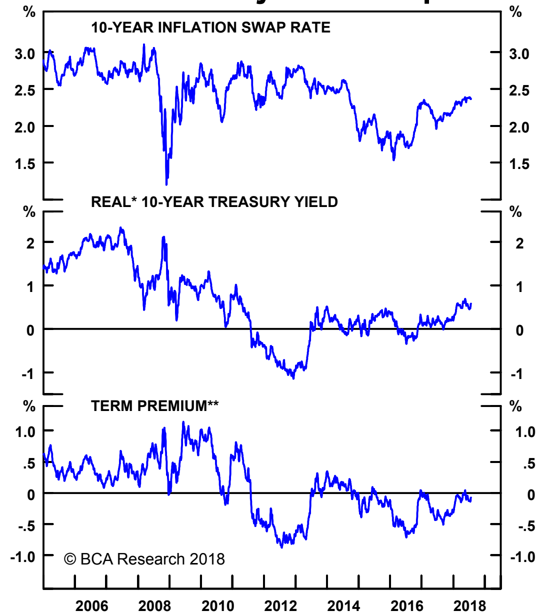
CHART III-11
Selected U.S. Bond Yields



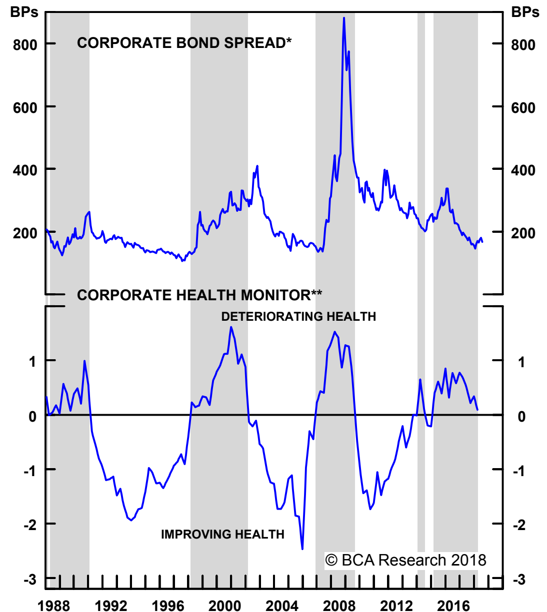
* SOURCE: BLOOMBERG BARCLAYS INDICES.

CHART III-12
10-Year Treasury Yield Components



* DEFLATED BY 10-YEAR INFLATION SWAP RATE, SMOOTHED EXCEPT FOR LATEST DATAPOINT.
** SMOOTHED EXCEPT FOR LATEST DATAPOINT. SOURCE: KIM AND WRIGHT, FEDERAL RESERVE FINANCE AND ECONOMICS DISCUSSION SERIES, 2005-33.

CHART III-13
U.S. Corporate Bonds And Health Monitor



* WEIGHTED-AVERAGE OF INVESTMENT-GRADE AND HIGH-YIELD OVER TREASURY MASTER, SOURCE: BLOOMBERG BARCLAYS INDICES.
** COMPOSITE OF 6 KEY FINANCIAL RATIOS FOR THE NON-FINANCIAL CORPORATE SECTOR.
NOTE: SHADING DENOTES PERIODS OF DETERIORATING CORPORATE HEALTH.

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CHART III-14
Global Bonds: Developed Markets

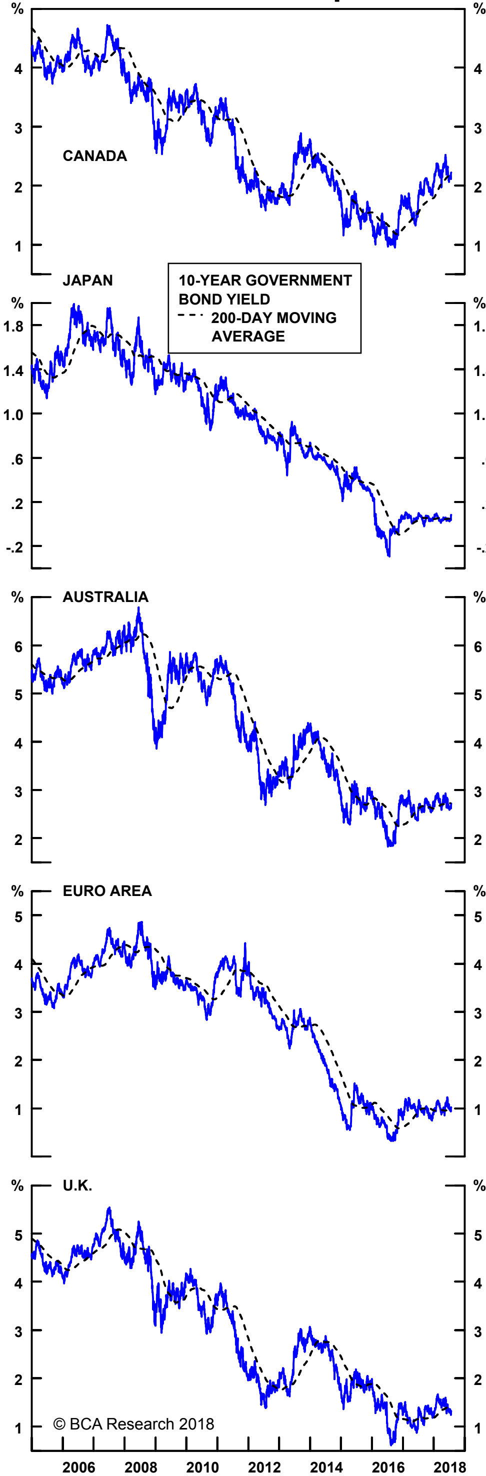
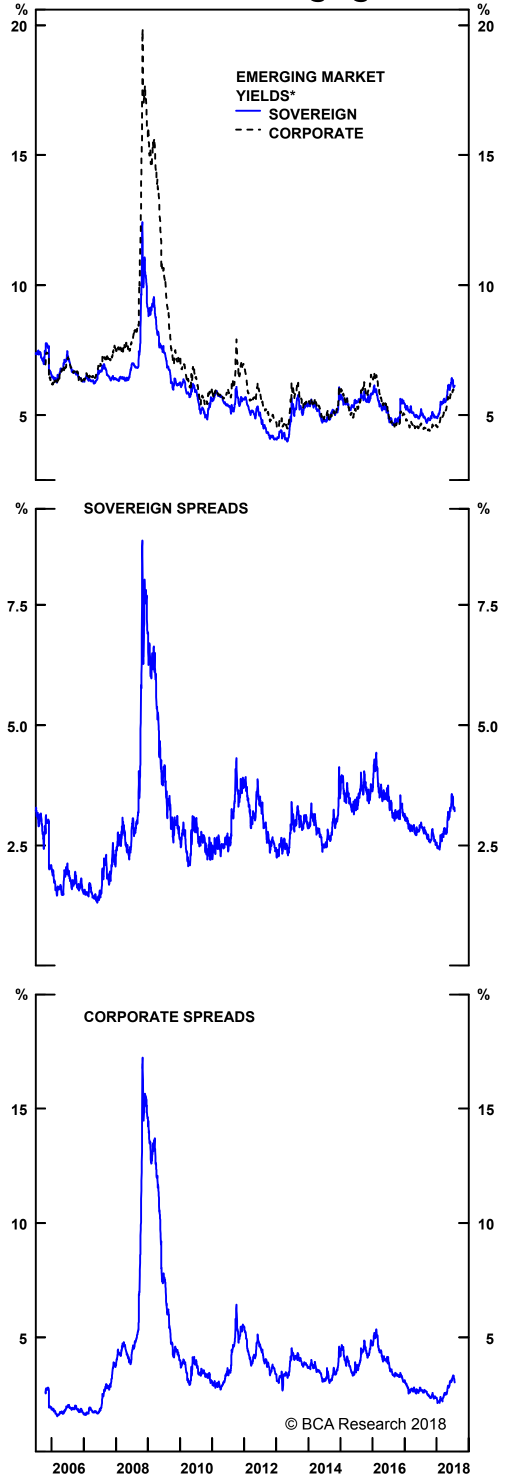


CHART III-15
Global Bonds: Emerging Markets



* IN LOCAL-CURRENCY TERMS; SOURCE: BLOOMBERG BARCLAYS INDICES.

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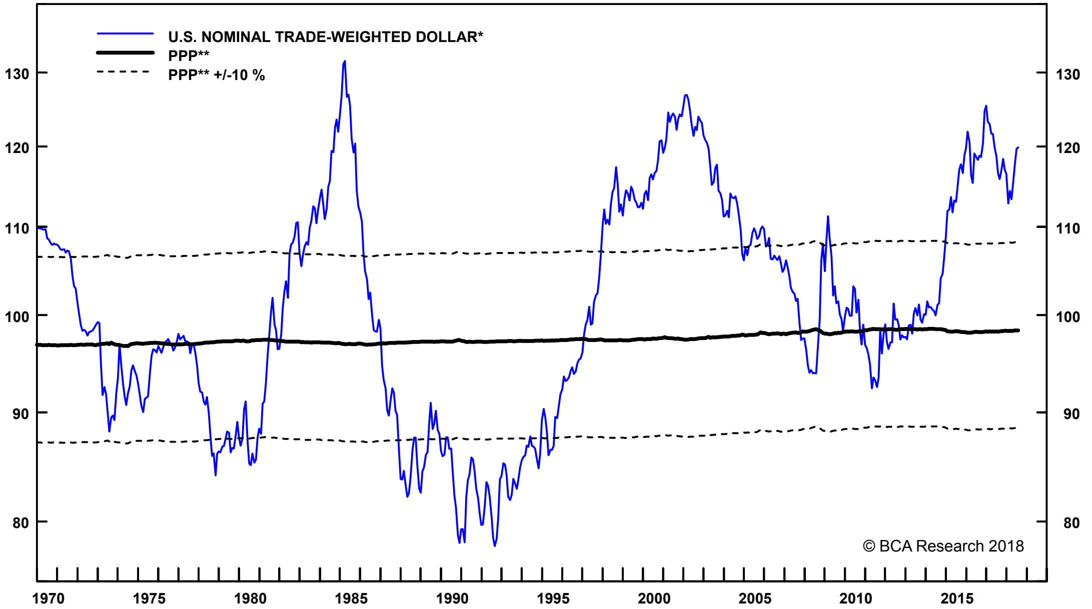
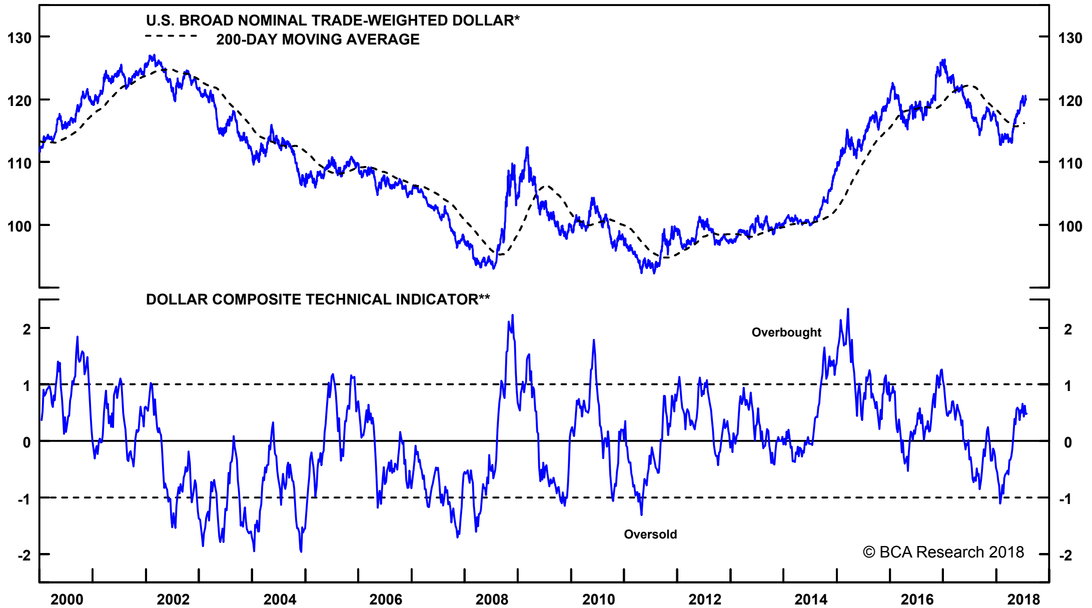
CHART III-16
U.S. Dollar And PPP



* SOURCE: J.P. MORGAN CHASE & CO.
** PURCHASING POWER PARITY BASED ON G7 EXCLUDING U.S. PRODUCER PRICES.

CHART III-17
U.S. Dollar And Indicator



* SOURCE: J.P. MORGAN CHASE & CO.
** BASED ON MOMENTUM, BREADTH, SENTIMENT AND TRADER POSITIONING.

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CHART III-18
U.S. Dollar Fundamentals

* CPI BASED; SOURCE: J.P. MORGAN CHASE & CO.

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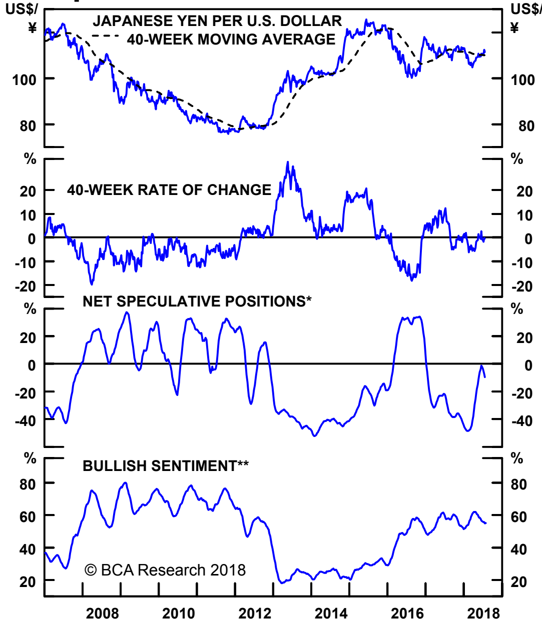
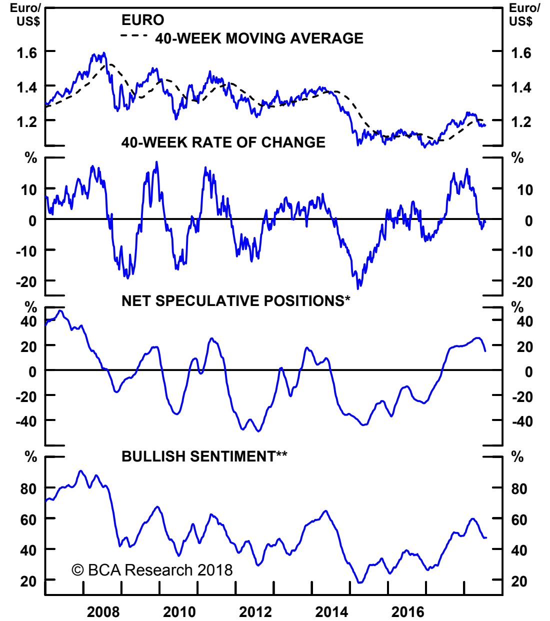
CHART III-19
Japanese Yen Technicals



* PERCENT OF OPEN INTEREST, SHOWN SMOOTHED. SOURCE: CFTC.
** SHOWN SMOOTHED. SOURCE: MARKETVANE.NET.

CHART III-20
Euro Technicals



* PERCENT OF OPEN INTEREST, SHOWN SMOOTHED. SOURCE: CFTC.
** SHOWN SMOOTHED. SOURCE: MARKETVANE.NET.

CHART III-21
Euro/Yen Technicals

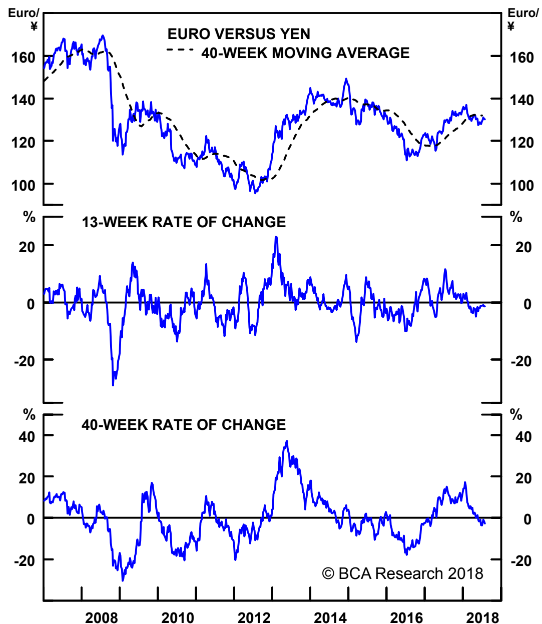


CHART III-22
Euro/Pound Technicals

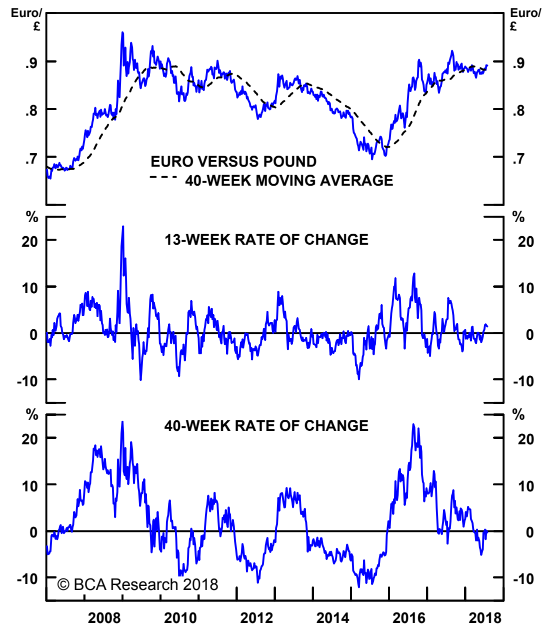


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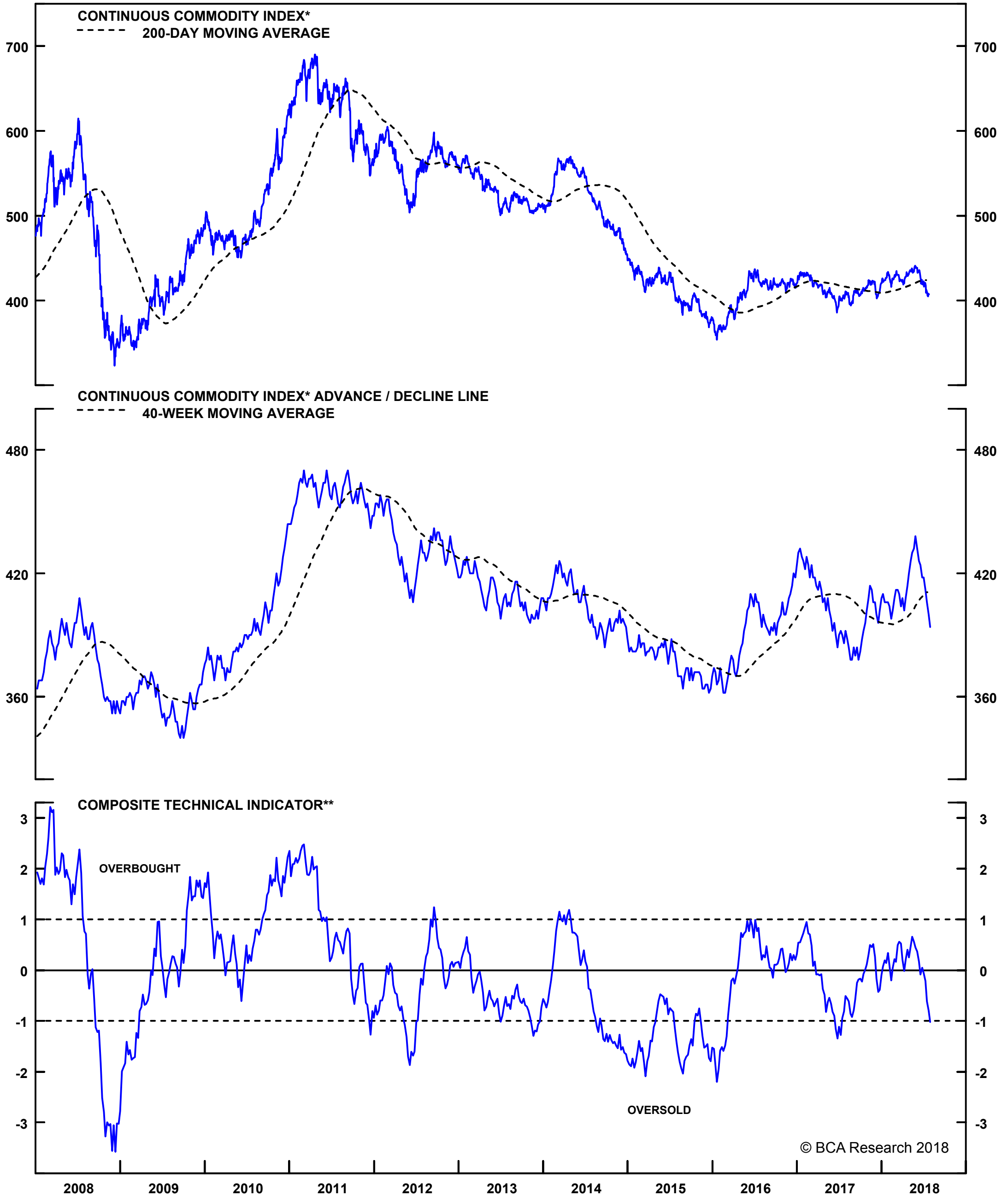
CHART III-23

Broad Commodity Indicators



* SOURCE: THOMSON REUTERS.
** BASED ON MOMENTUM, TRADER POSITIONING AND SENTIMENT.

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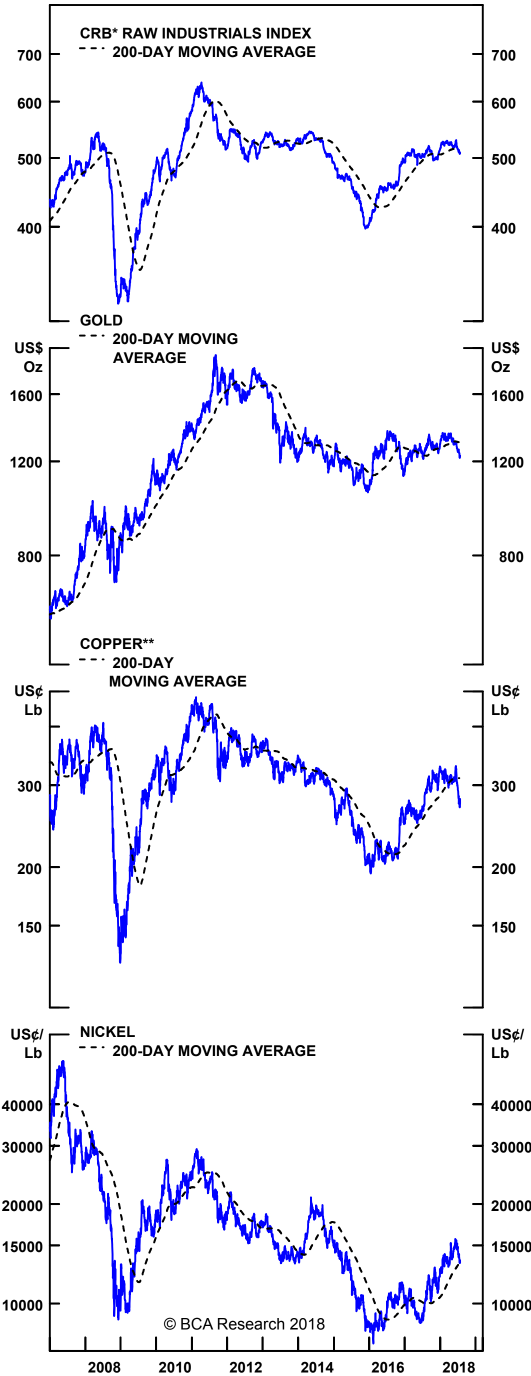
CHART III-24
Commodity Prices



* COMMODITY RESEARCH BUREAU, INC.
** 1-MONTH FUTURES. SOURCE: COMMODITY EXCHANGE Inc.

CHART III-25
Commodity Prices

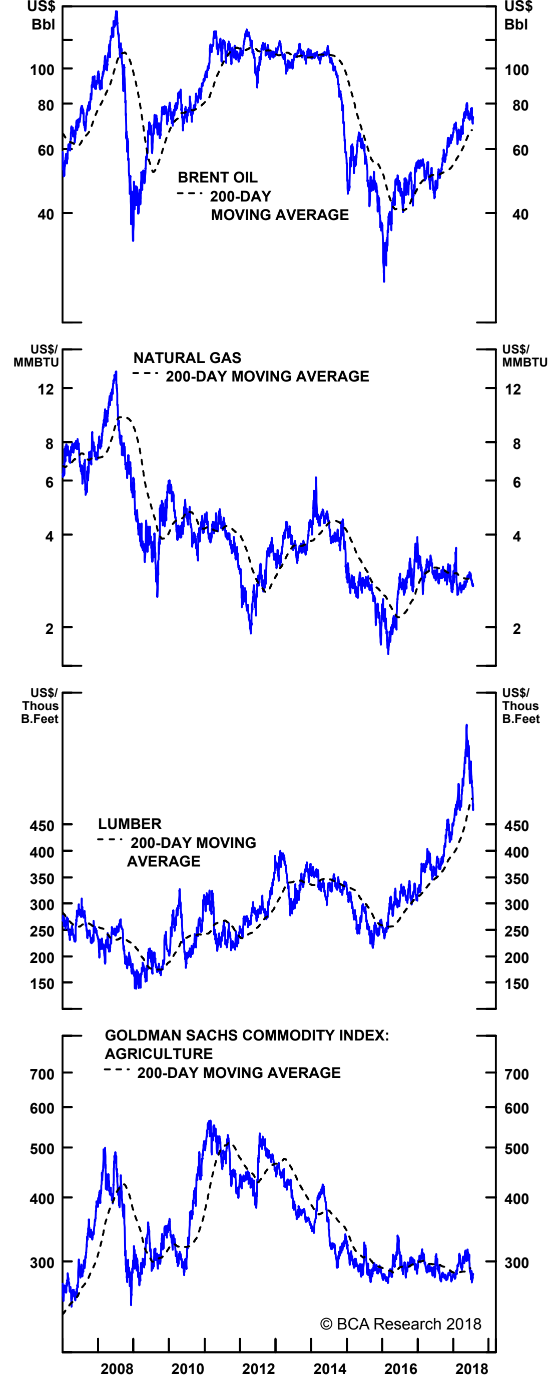


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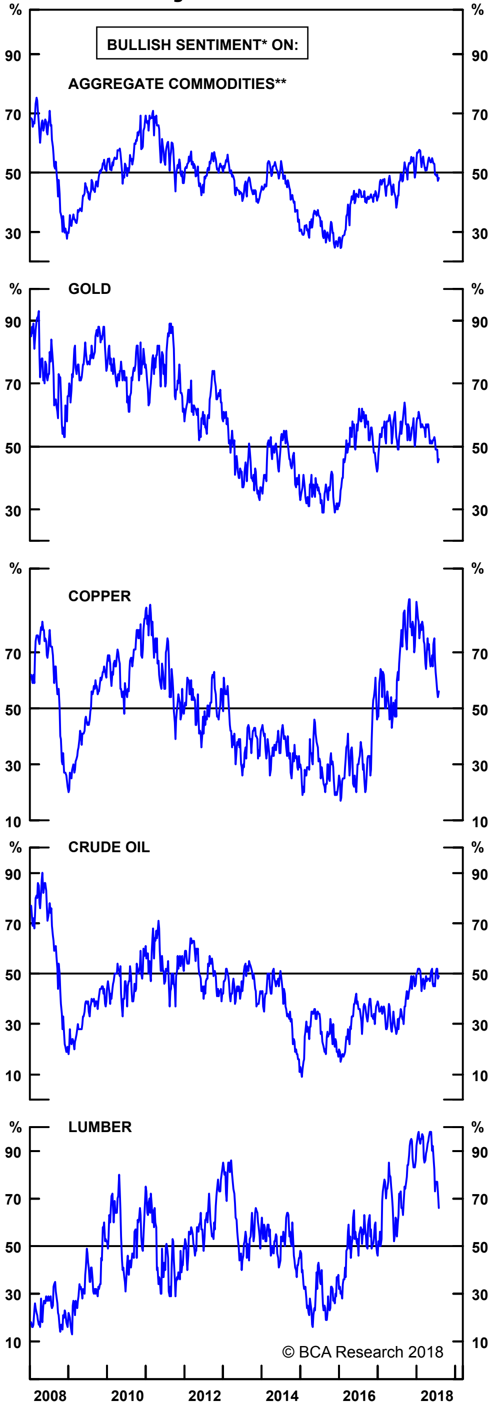
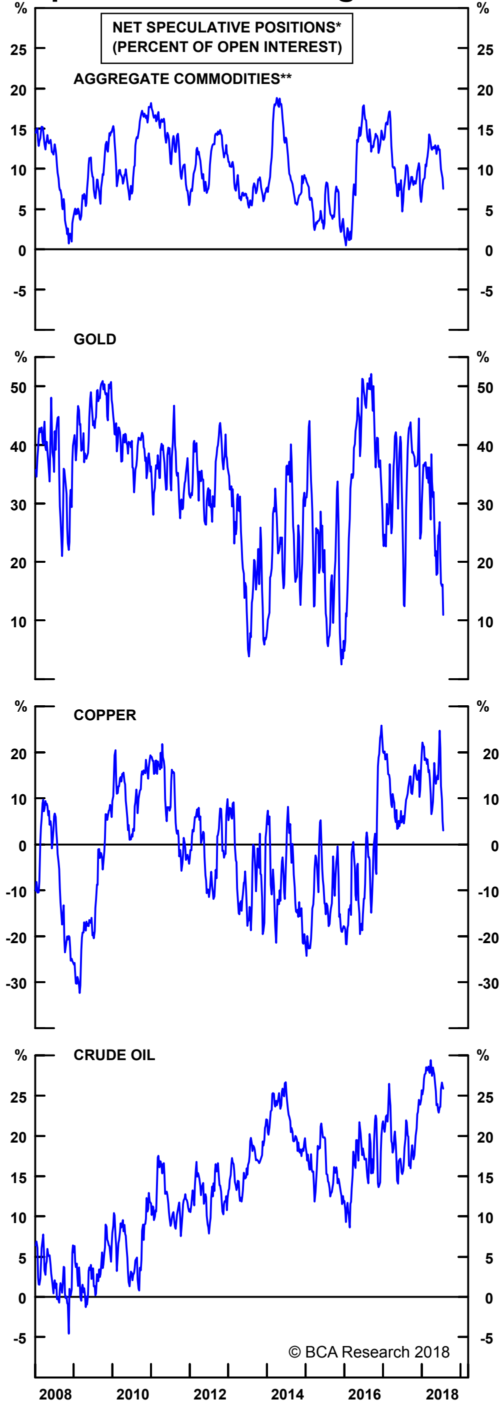
CHART III-26
Commodity Sentiment



* SOURCE: MARKETVANE.NET.
** INCLUDES 13 COMMODITIES.

CHART III-27
Speculative Positioning



* SOURCE: CFTC.
** INCLUDES 17 COMMODITIES.

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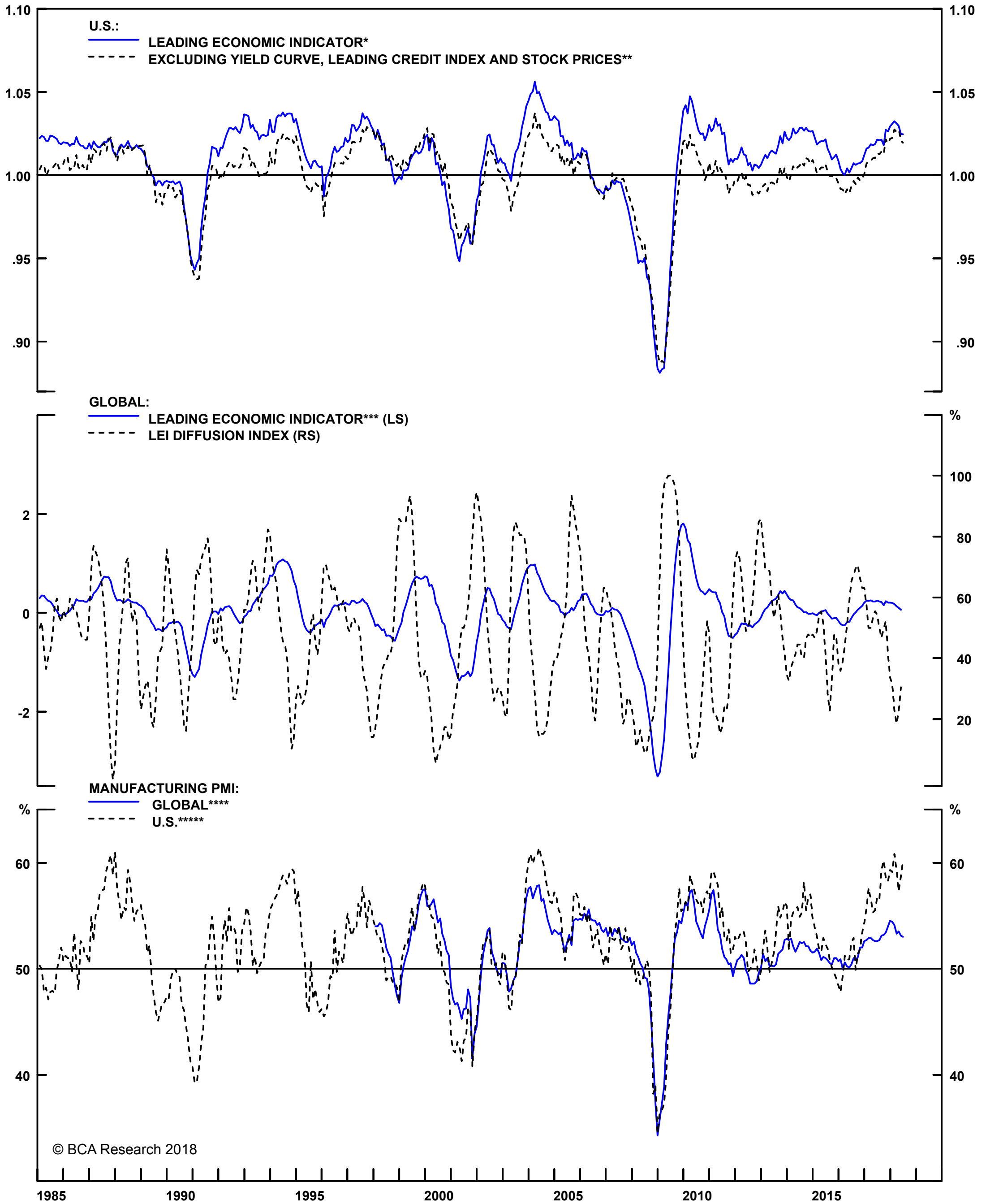
ECONOMY:

CHART III-28

U.S. And Global Macro Backdrop



* SHOWN AS A DEVIATION FROM TREND. SOURCE: THE CONFERENCE BOARD.
** BCA CALCULATIONS.
*** INCLUDES 23 COUNTRIES, SHOWN AS A DEVIATION FROM TREND. BCA CALCULATIONS.
**** SOURCE: J.P. MORGAN CHASE & CO.
***** SOURCE: INSTITUTE FOR SUPPLY MANAGEMENT.

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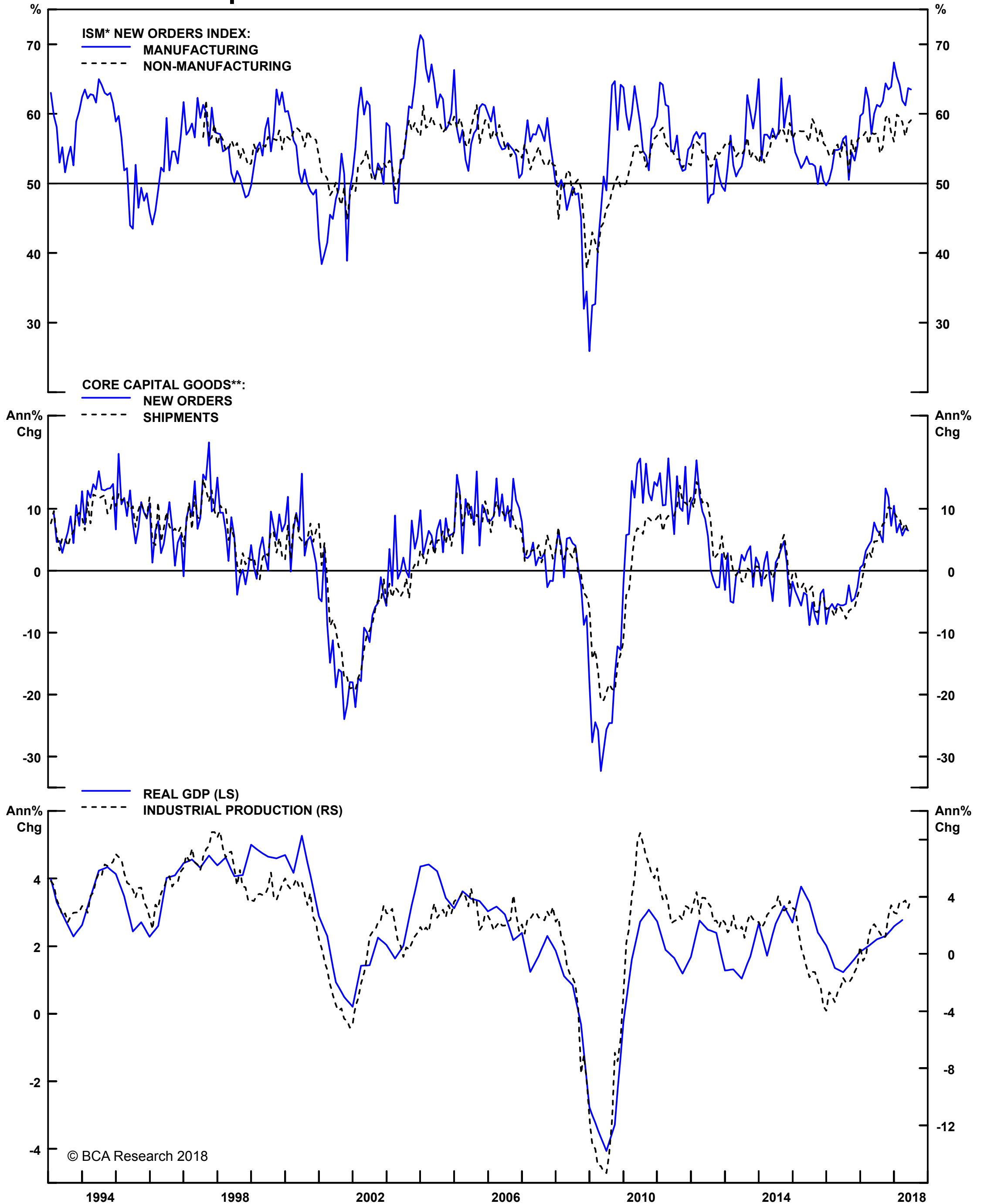
CHART III-29

U.S. Macro Snapshot



* INSTITUTE FOR SUPPLY MANAGEMENT.
** MANUFACTURING NONDEFENSE CAPITAL GOODS EXCLUDING AIRCRAFT.

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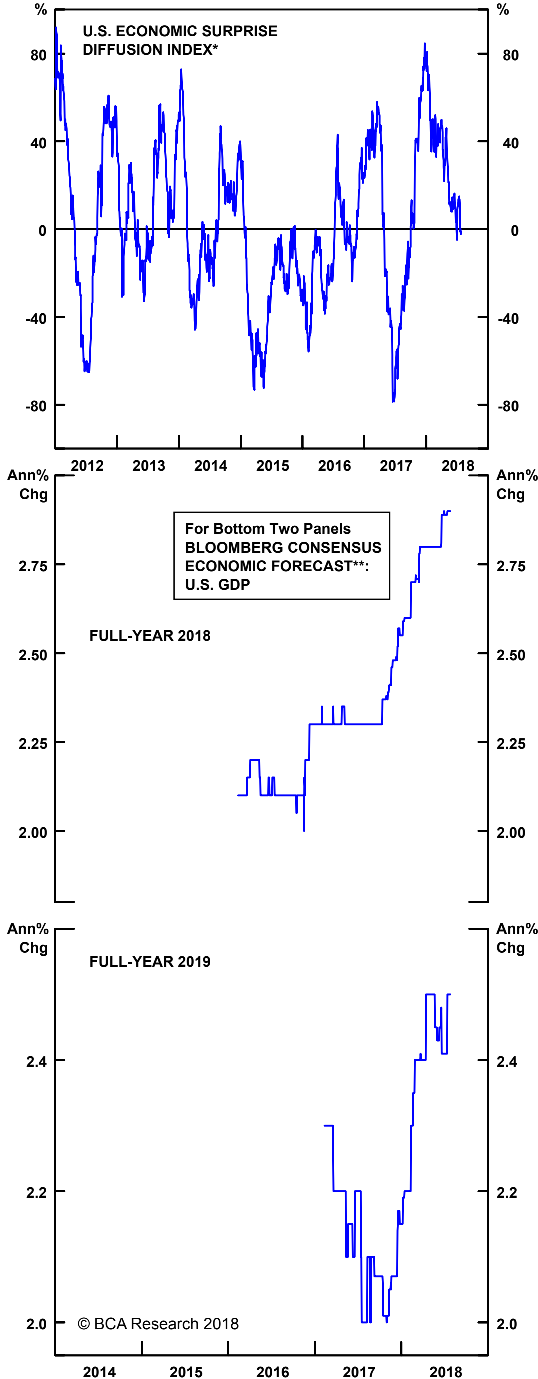
CHART III-30

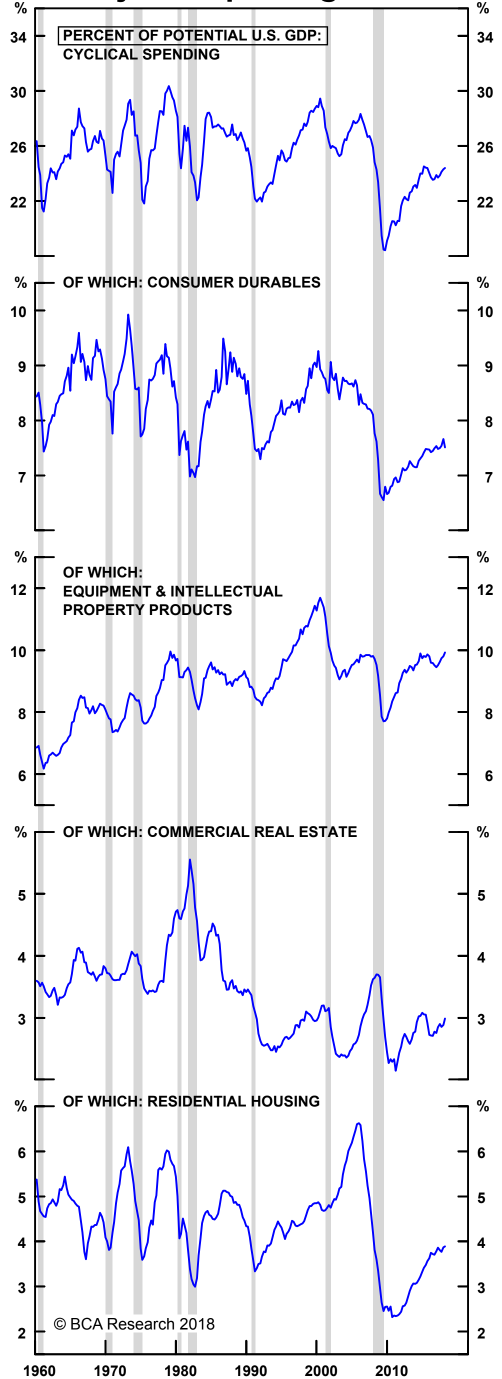
U.S. Growth Outlook



* ROLLING 3-MONTH STANDARD DEVIATION OF DATA SURPRISES, SMOOTHED.
SOURCE: CITIGROUP GLOBAL MARKETS INC.
** SOURCE: BLOOMBERG FINANCE L.P.

CHART III-31

U.S. Cyclical Spending



NOTE: SHADED AREAS REPRESENT NBER-DESIGNATED RECESSIONS.

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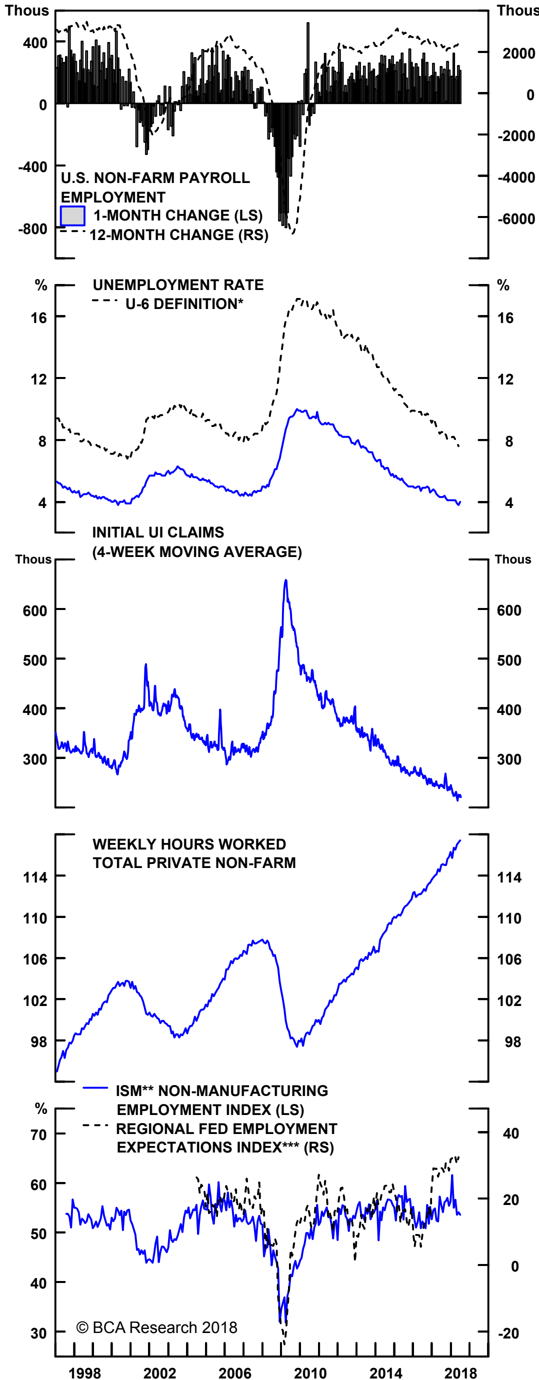
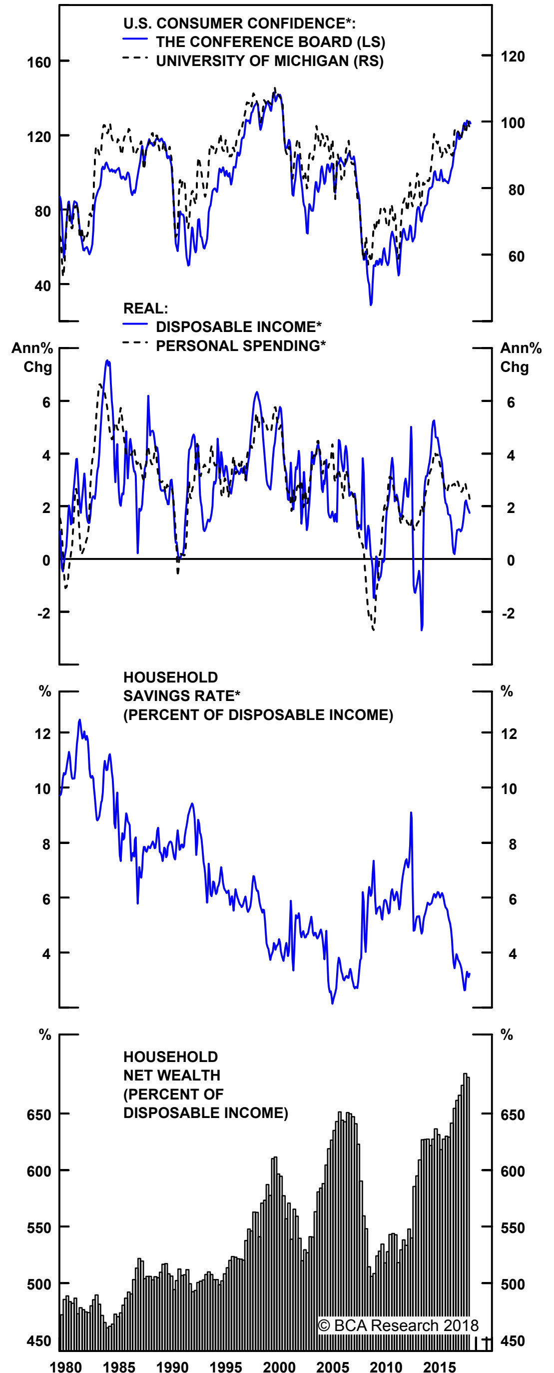
CHART III-32
U.S. Labor Market



* INCLUDES UNEMPLOYED, MARGINALLY ATTACHED AND PART TIME WORKERS.
** INSTITUTE FOR SUPPLY MANAGEMENT.
*** AVERAGE OF PHILADELPHIA, RICHMOND, KANSAS CITY, DALLAS AND NEW YORK EMPLOYMENT EXPECTATIONS INDEX IN 6 MONTHS.

CHART III-33
U.S. Consumption



* SHOWN SMOOTHED EXCEPT FOR LATEST DATAPOINT.

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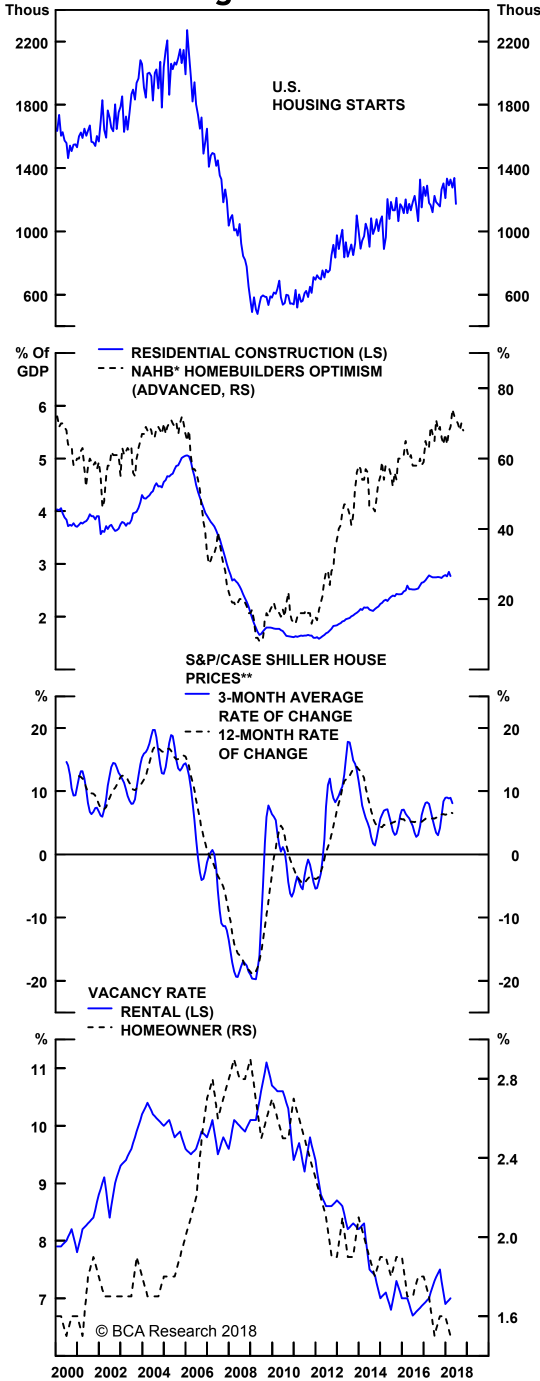
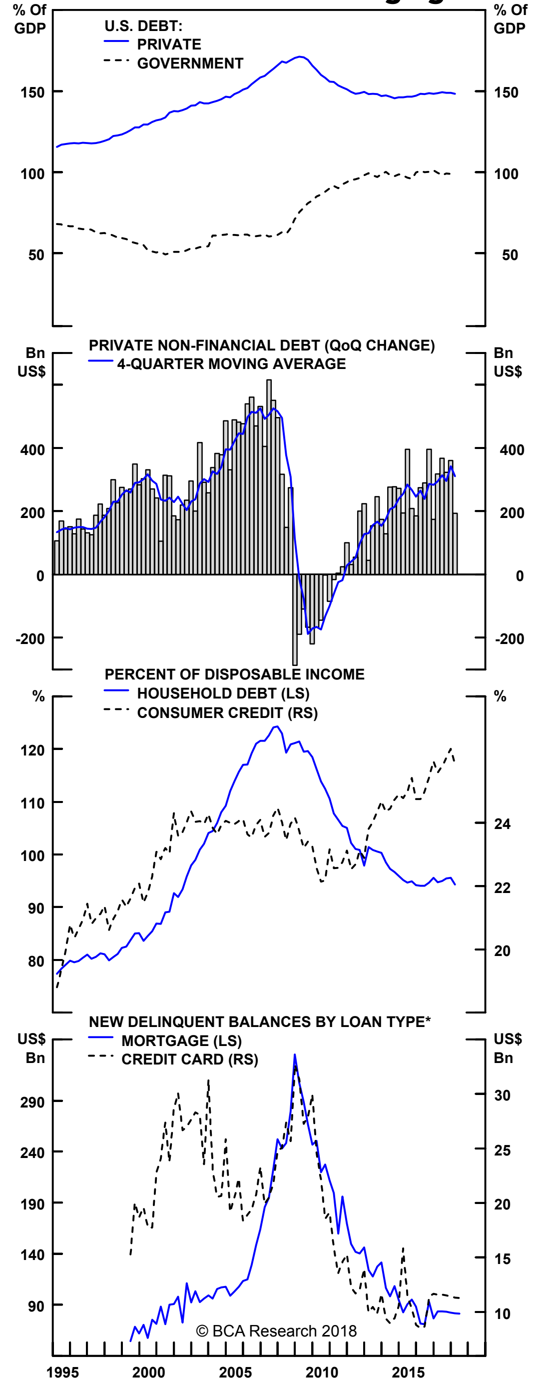
CHART III-34
U.S. Housing



* NATIONAL ASSOCIATION OF HOMEBUILDERS.
** S&P/CASE SHILLER 20-CITY COMPOSITE.

CHART III-35
U.S. Debt And Deleveraging



* DEFLATED BY HEADLINE CPI. SOURCE: FRBNY CONSUMER CREDIT PANEL/EQUIFAX.

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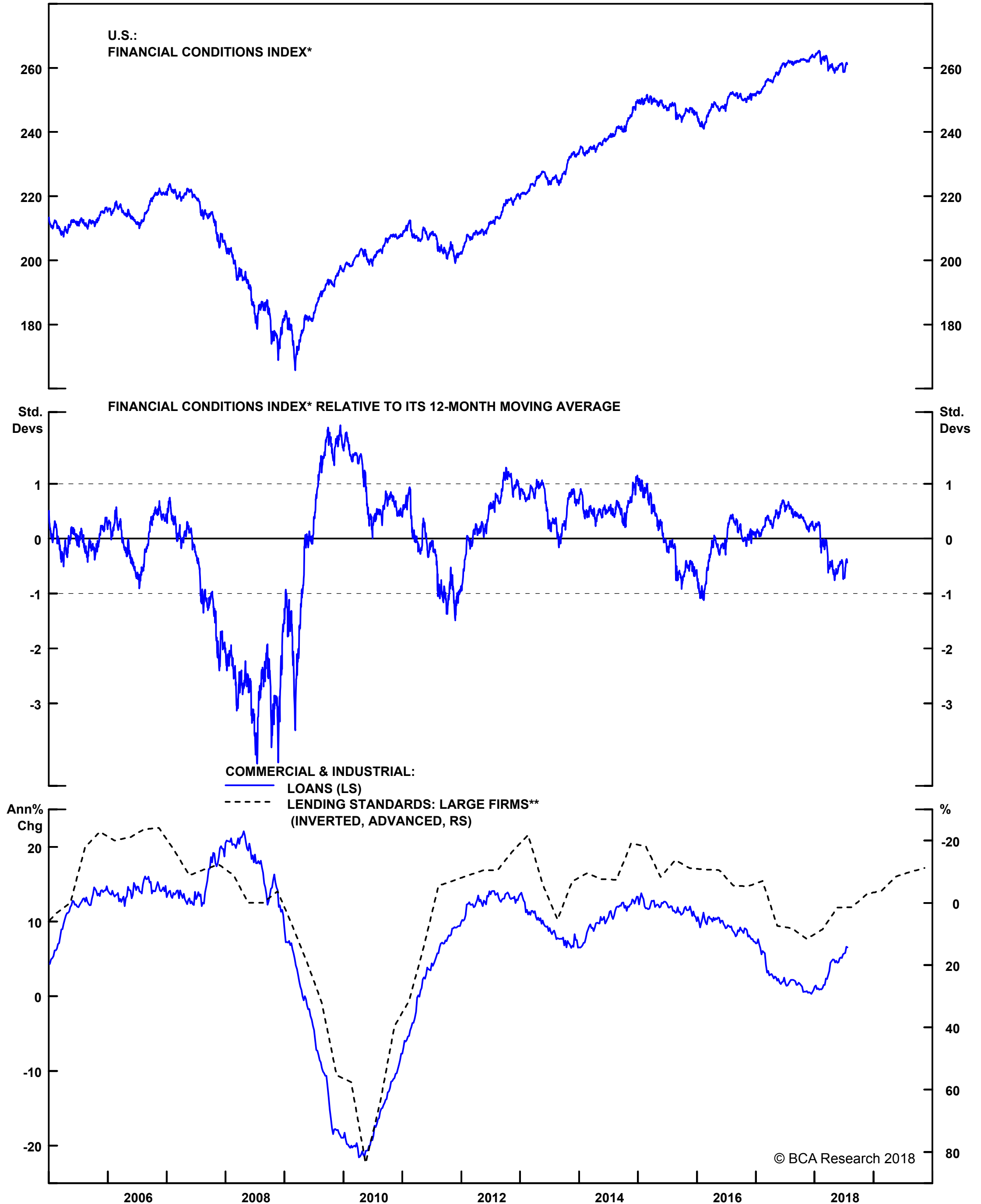
CHART III-36

U.S. Financial Conditions



* BCA CALCULATIONS.
** SOURCE: FEDERAL RESERVE SURVEY OF SENIOR LOAN OFFICERS.

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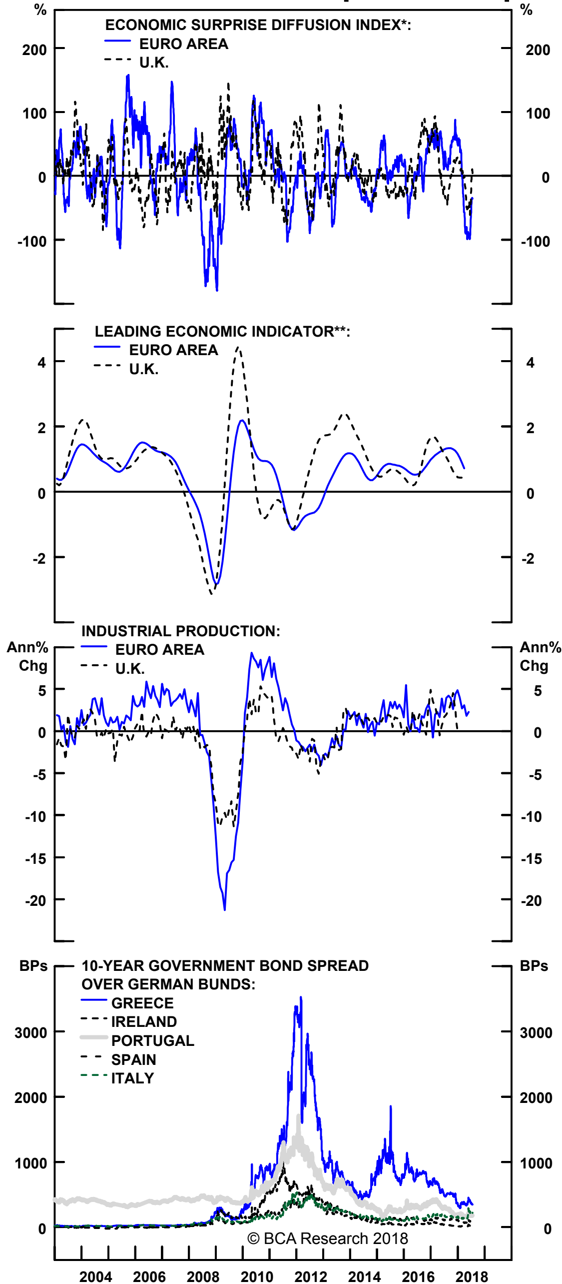
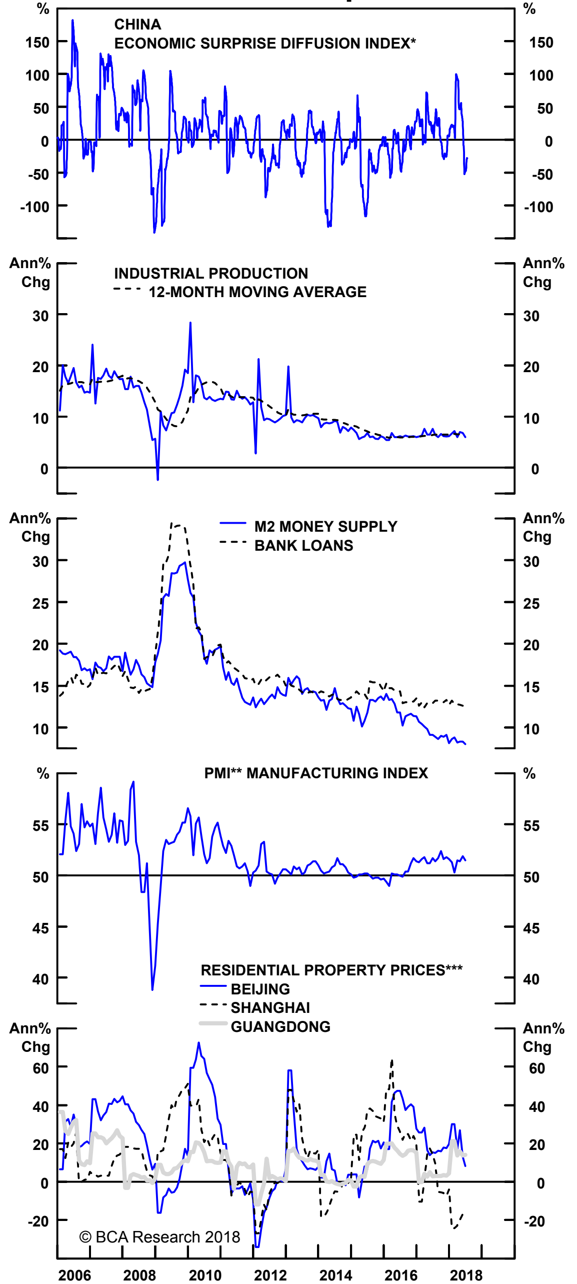


* ROLLING 3-MONTH STANDARD DEVIATION OF DATA SURPRISES, SMOOTHED. SOURCE: CITIGROUP GLOBAL MARKETS INC.
** SHOWN AS A DEVIATION FROM TREND.



* ROLLING 3-MONTH STANDARD DEVIATION OF DATA SURPRISES, SMOOTHED. SOURCE: CITIGROUP GLOBAL MARKETS INC.
** SOURCE: NBS.
*** SOURCE: NATIONAL BUREAU OF STATISTICS.

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