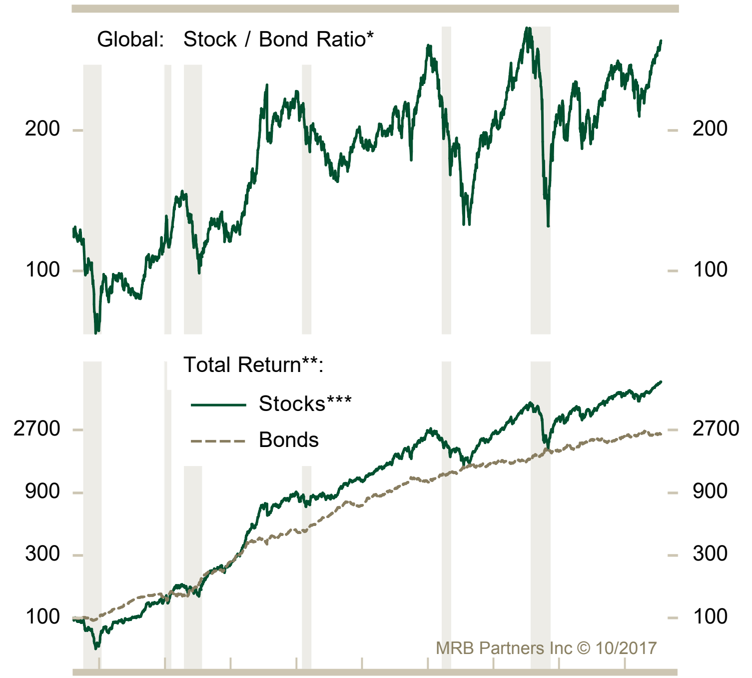
MRB Stylized Investment Cycle Framework

Chart 1 Global Investment Cycle: Growth-Sensitive Assets Vs Safe Havens



* Global Datastream stock market total return index divided by 10-year G7 government bond total return index; rebased
** Rebased
*** Source: Datastream
Note: Shaded for NBER-designated U.S. recessions

The *MRB Stylized Investment Cycle*[1] has been one of our most popular thematic frameworks since we introduced it to clients at the beginning of 2014. It is merely one of the tools we use in determining appropriate investment strategy. However, the power of the *MRB Stylized Investment Cycle* is that it provides a starting point when building a multi-year roadmap, and even suggests what signposts that investors should look for near inflection points.

We use the global stock/bond ratio (i.e. the total return of global equities divided by the total return of 10-year G7 government bonds) to define the investment cycle (**chart 1**). This ratio is a useful measure to capture the shift between growth-sensitive assets and traditional safe-havens. In other words, the ratio reflects the willingness of market participants to accept economic risk exposure. In many ways this is the most significant investment decision for asset allocators. Of course, global equities contribute more significantly than government bonds to the swings in the overall ratio.

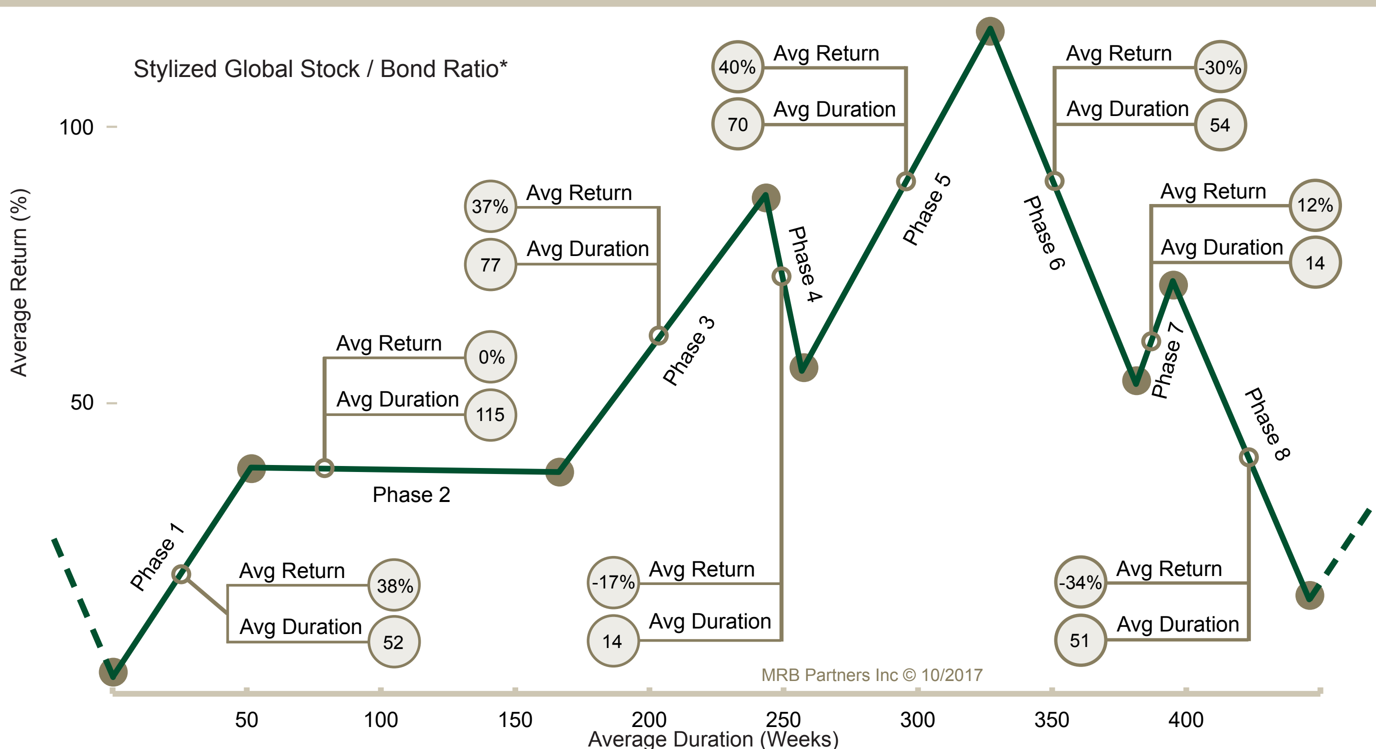
The eight distinct phases of the *MRB Stylized Investment Cycle* are depicted in **chart 2**. Each phase is derived from historical ***average*** performance and duration (in weeks) of the global stock/bond ratio over the four decades preceding the start of the bull market in 2009[2]. That said, **table 1** also provides ***medians*** for those interested. It is worth noting that we opted to use Datastream equity data rather than MSCI, given that the former encompasses a considerably broader equity universe and has more historical data at the sector level (which is used in ***Part II*** of this report). Nonetheless, our testing reveals that MSCI data would have provided very similar results. The total return of the global equities and G7 government bonds that are used for the ratio are calculated in U.S. dollars.

Calling the stock/bond ratio is one of the most important investment decisions

[1] Our reference to investment cycle in this report refers to cyclical swings in financial asset markets (specifically the global stock/bond ratio), rather than the capital expenditure cycle for businesses.

[2] Our stylized depiction of the investment cycle is based on the four investment cycles from 1974 and until the current bull market took hold in 2009.

Chart 2 *MRB Stylized Investment Cycle:* Now In *Phase 5*



Phase 1: **Policy-Induced Rally** Phase 2: **Awaiting Validation** Phase 3: **Lower-Conviction Rally** Phase 4: **Countertrend Pullback** Phase 5: **Higher-Conviction Rally** Phase 6: **First Bear Market Downleg** Phase 7: **Countertrend Bounce** Phase 8: **Final Flush**

* Based on the four cycles in the global stock/bond ratio between 1974 and 2009

Table 1 Asset Performance During Various Phases Of Previous Investment Cycles

	Total Returns Of Previous Investment Cycles* (%)															
	Phase 1		Phase 2		Phase 3		Phase 4		Phase 5		Phase 6		Phase 7		Phase 8	
	Avg	Median	Avg	Median	Avg	Median	Avg	Median	Avg	Median	Avg	Median	Avg	Median	Avg	Median
Duration (weeks)	52	48	115	129	77	83	14	14	70	63	54	47	14	11	51	46
Global Stock/Bond Ratio**	38	32	0	0	37	39	-17	-17	40	33	-30	-25	12	13	-34	-30
Global Equities***	48	49	29	30	37	39	-9	-9	39	35	-21	-16	13	13	-22	-18
G7 Government Bonds	7	5	30	33	1	-3	9	11	0	-1	14	15	1	0	16	13

* Based on the four cycles in the global stock/bond ratio between 1974 and 2009
** Global Datastream stock market total return index divided by 10-year G7 government bond total return index
*** Source: Datastream

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Based on our definition, investment cycles (which includes a bull market and the subsequent bear market) have lasted on balance about 8.5 years (447 weeks), although there have been material differences among cycles. The duration of the typical bull-run is more than six years (328 weeks) and drives prices up almost 120%. The average bear market unfolds in just over two years (119 weeks) and retraces all but about 15% of the bull-run in the global stock/bond ratio.

Although the average of past performance can help prove a crude roadmap, we find it much more useful (particularly during this cycle) to understand the macro fundamentals and investor psychology needed to encourage markets to transition from one phase to

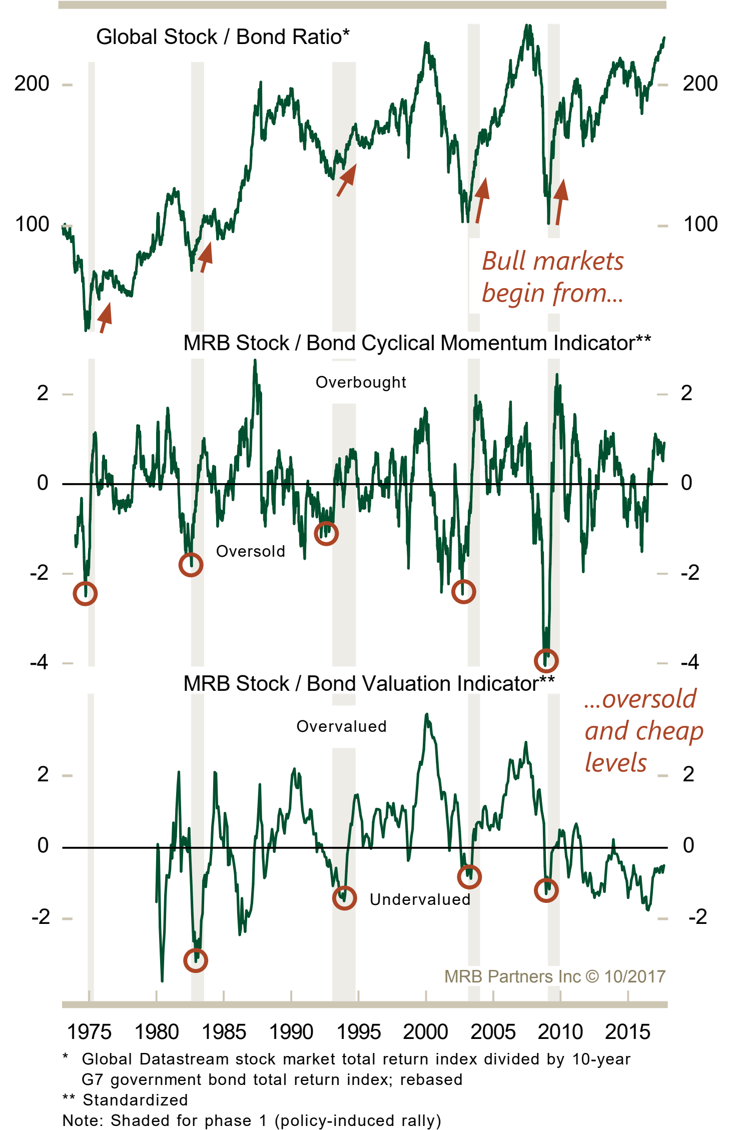
another. Moreover, for most of the past 40 years, bond yields were in a secular downtrend that is not going to be repeated given today's starting point of extremely depressed yields.

Phase 1 (Policy-Induced Rally)

Bull markets begin once policymakers become determined to bring an end to contractionary forces and remove downside tail risks. Typically at that point, there is little in the way of fundamental evidence that a sustained economic recovery will actually take hold. Still, investor sentiment starts to lift from extremely negative readings and eventually most investors belatedly acknowledge that discounting Armageddon in capital markets is no longer profitable (**chart 3**). The selling pressure on equities (and other risk assets) gives way to a sharp upleg, with little differentiation (it often starts as a short-covering rally). In fact, the strongest gains often occur in those sectors/assets where the fundamentals were least attractive, but had become trashed during the previous bear market.

This first upleg of the bull market typically lasts one year (52 weeks), with the global stock/bond ratio surging on balance by 38%. Equities actually jump slightly more than this, but sluggish growth and forceful central bank stimulus allow government bonds to also post mid-single digit gains.

Chart 3 *Phase 1*: Policy-Induced Rally



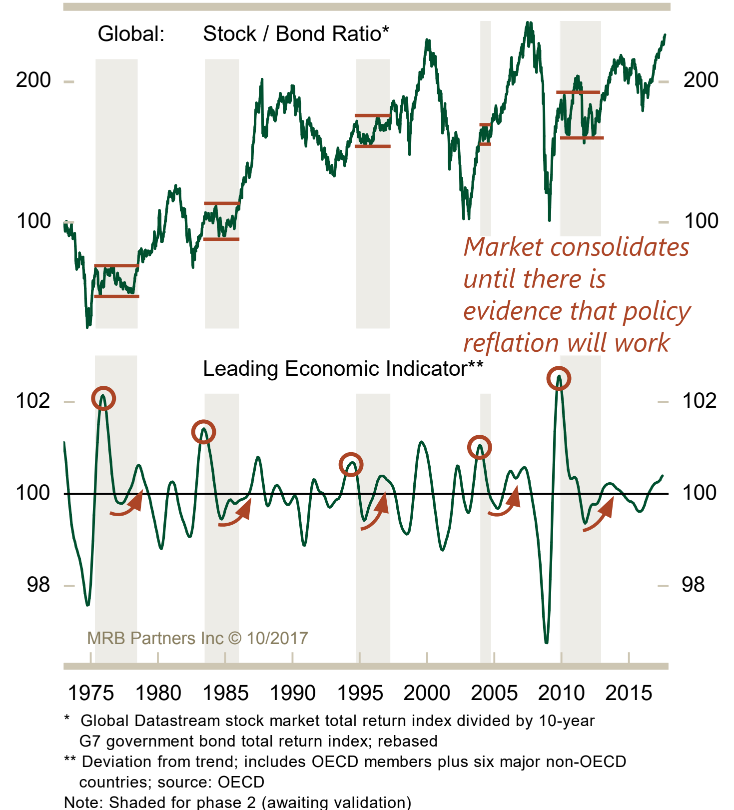
* Global Datastream stock market total return index divided by 10-year G7 government bond total return index; rebased
** Standardized
Note: Shaded for phase 1 (policy-induced rally)

Phase 2 (Awaiting Validation)

After rallying briskly during *Phase 1*, risk asset prices are typically well ahead of underlying fundamentals and technically stretched. While the economy remains fragile and activity is subdued, leading economic diffusion indexes and oscillators are usually at cyclical extremes after snapping back from depressed readings. Thus, the market begins to digest its gains, while these leading diffusion indexes moderate (**chart 4**).

Bull markets begin when policymakers provide an open-ended commitment

Policymakers typically keep conditions very stimulative during this phase but a consolidation (sometimes fairly volatile) occurs in the global stock/bond ratio until the economic data confirm that policy reflation is indeed working to create a sustained expansion. Obviously the more rapid the recovery, the faster the validation is provided,



* Global Datastream stock market total return index divided by 10-year G7 government bond total return index; rebased
** Deviation from trend; includes OECD members plus six major non-OECD countries; source: OECD
Note: Shaded for phase 2 (awaiting validation)

and the shorter the consolidation phase. Risk assets are also very highly correlated during this phase as investors swing between expectations of economic recovery and double-dip recession scares. This is the reason why this phase was termed "risk on/off" during the current cycle. Heightened uncertainty causes investors to err on the side of being more defensive and maintaining a strong home bias with their capital. In turn, the *search for yield* thrives as investors shy away from pro-growth assets but expect that central banks will keep interest rates anchored to offset deleveraging pressures and encourage a sustained recovery.

For consistency in our calculations, we define the start of the "awaiting validation" phase as the peak in the global stock/bond ratio that marked the end of *Phase 1*. The end of *Phase 2* is when the ratio finally breaks above this peak in a sustained fashion. While the ratio between equity and bond performance is flat based on this definition, both equities and government bonds typically generate a total return of nearly 30% during this phase (although the path can be very volatile). Economic uncertainty, easy policy and disinflation provide a boost for government bonds, while lower equity discount rates and excess liquidity help lift stocks. During this phase, equities tend to be priced for an "economic mush" scenario (due to the lack of conviction in a sustained recovery) and investors typically only pay up as earnings improve, rather than extrapolating the trend (i.e. subdued sentiment keeps multiples from expanding). The average duration of *Phase 2* is more than two years (115 weeks), although the range varies widely (i.e. from 40 weeks to 161 weeks).

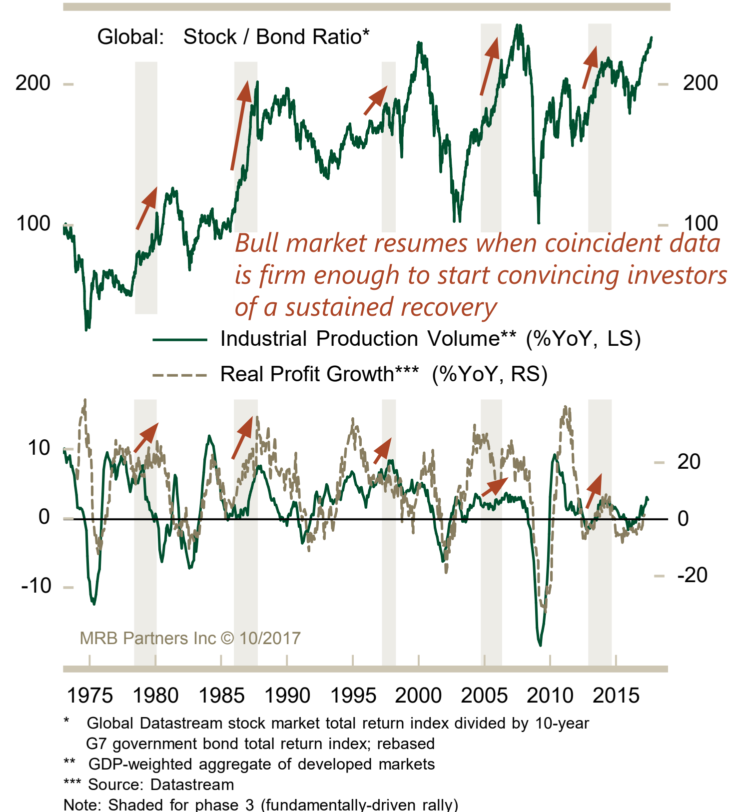
Markets consolidate after initial rally until there is clear evidence of the economic recovery

Phase 3 (Lower-Conviction Rally)

The bull market resumes as the coincident economic and profit data continue to strengthen and help convince more investors that a sustained recovery will develop (i.e. the validation they were seeking in *Phase 2* is provided, **chart 5**). The majority of market participants are still cautious, making this a lower-conviction rally. Still, an increased number of investors start to look ahead and extend their investment horizons. The trajectory of the upleg in the global stock/bond ratio tends to be more gradual than during *Phase 1* (short covering is no longer a factor) and depends heavily on how damaged sentiment was during the prior bear market, as well as the speed of earnings growth. A weak profit recovery is more likely to result in a grinding equity bull market, while a rapid expansion can lead to a fairly steep rise in stock prices.

In *Phase 3*, equity valuation multiples tend to expand gradually to reflect expectations of more investors that the recovery will persist. However, this is also the phase of the rally where correlations start to erode and selectivity among risk assets becomes more important. Investors that are willing to look ahead begin to discriminate, causing divergences to build among countries, sectors and securities based on macro fundamentals. The poorest quality assets may outperform briefly but, for the most part, the massive pricing discrepancies that were apparent at the depth of the previous bear market no longer exist. Instead, investors seek out and are willing to pay up for those assets that can generate elevated and sustained cash flow growth. Thus, it slowly starts to prove rewarding to focus on the dominant themes of the cycle[3].

Chart 5 *Phase 3*: Lower-Conviction Rally



* Global Datastream stock market total return index divided by 10-year G7 government bond total return index; rebased
** GDP-weighted aggregate of developed markets
*** Source: Datastream
Note: Shaded for phase 3 (fundamentally-driven rally)

There are often several smaller corrections in the global stock/bond ratio during *Phase 3* (i.e. less than 10%), but we deliberately focus on the major trends in this report. On this basis, the ratio rallies 37% (on average) in *Phase 3*, which is similar to *Phase 1*. However, the duration of *Phase 3* is considerably longer at 77 weeks (compared with one year for *Phase 1*). Also, during this phase the upside in the stock/bond ratio has traditionally been driven solely by equities. Government bonds have historically (on balance) provided flat total returns. That said, bonds typically generate positive returns (i.e. yields fall) during the first half of *Phase 3* and then give up their gains (i.e. yields rise) by the end of the phase. The latter marks the first sustained backup in bond yields.

Countertrend pullbacks occur when central banks begin normalizing policies

Phase 4 (Countertrend Pullback)

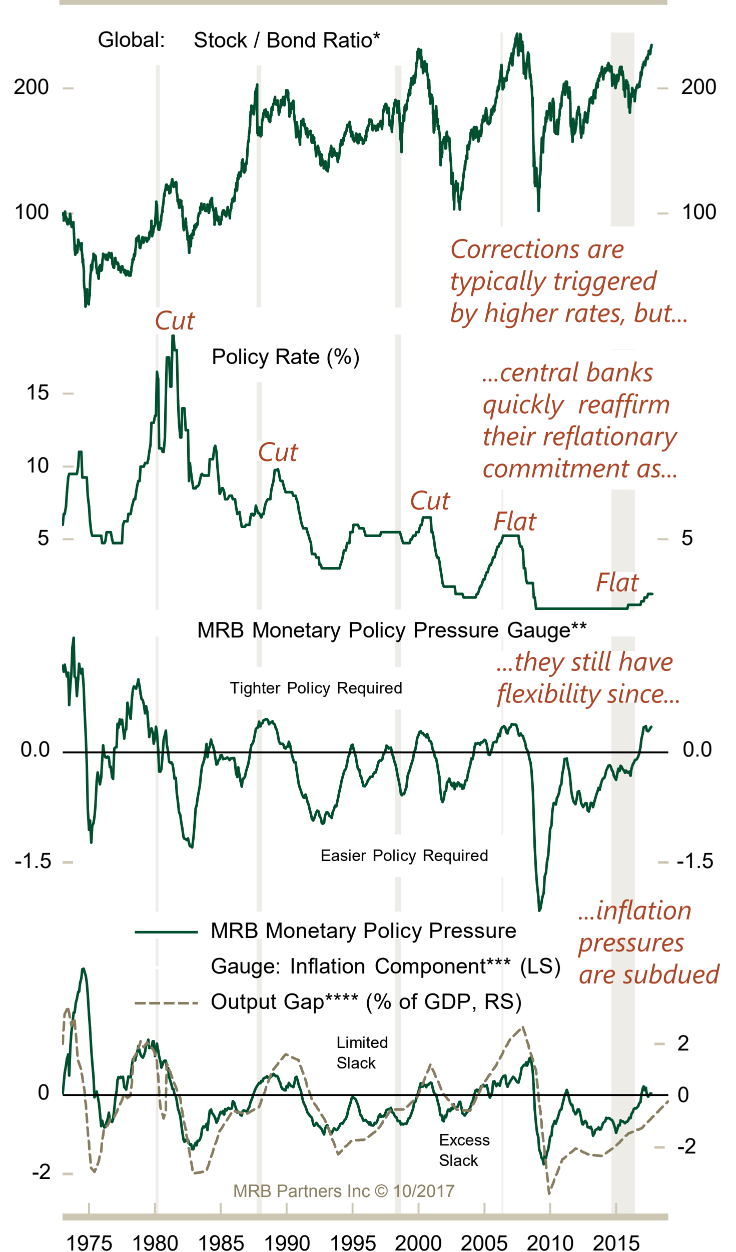
By the end of the lower-conviction rally in *Phase 3*, the global stock/bond ratio is typically overbought once again and due for a technical correction. At the same time, government bond yields are moving higher to reflect stronger economic growth and expectations of rate hikes. This is often the catalyst for a setback, as the average investor is still cautious and begins to worry that the backup in bond yields (or equity discount rates) could outpace the improvement in economic/earnings growth and choke out the bull market (**chart 6**).

[3] For details of MRB's current macro and investment themes, see the **MRB *Theme Report***, "***MRB's Annual Overview Of Key Macro Themes (Part I)***", January 5, 2017 and "***MRB's Annual Overview Of Key Investment Themes (Part II)***", January 7, 2017

Ultimately, this amounts to little more than profit taking and a brief unwinding of risk positions. At that point in the cycle, economic and earnings momentum remains supportive of further equity outperformance, and valuations are not yet demanding. Also, spare capacity is eroding but typically persists and/or inflation remains subdued. Thus, central banks are still trying to encourage growth and often back away from their tightening campaigns (or even reverse course briefly) in order to prevent the economic growth scare from developing into something more material. Likewise, bond yields decline and provide a relief valve, easing investor anxieties.

This countertrend pullback typically only lasts 14 weeks, but results in a 17% correction in the global stock/bond ratio. That said, the equity pullback is only about half this amount, as government bonds rally to account for the remainder.

Chart 6 *Phase 4*: Countertrend Pullback



* Global Datastream stock market total return index divided by 10-year G7 government bond total return index; rebased
** Includes a growth and inflation component; standardized
*** Includes core price pressures, economic slack and inflation expectations
**** Source: OECD
Note: Shaded for phase 4 (counter-trend pullback)

Phase 5 (Higher-Conviction Rally)

After the overbought conditions have been unwound in *Phase 4* and policymakers have reaffirmed their reflationary commitment, the bull market in risk assets resumes. At the same time, the uptrend in return on equity (ROE) is typically restored after moderating during *Phases 3* and *4* (**chart 7**). Similar to *Phase 3*, the upleg in *Phase 5* also tends to be fundamentally driven, with investors seeking the assets that will deliver the strongest future cash flows. Thus, selectivity becomes more critical in generating outsized returns.

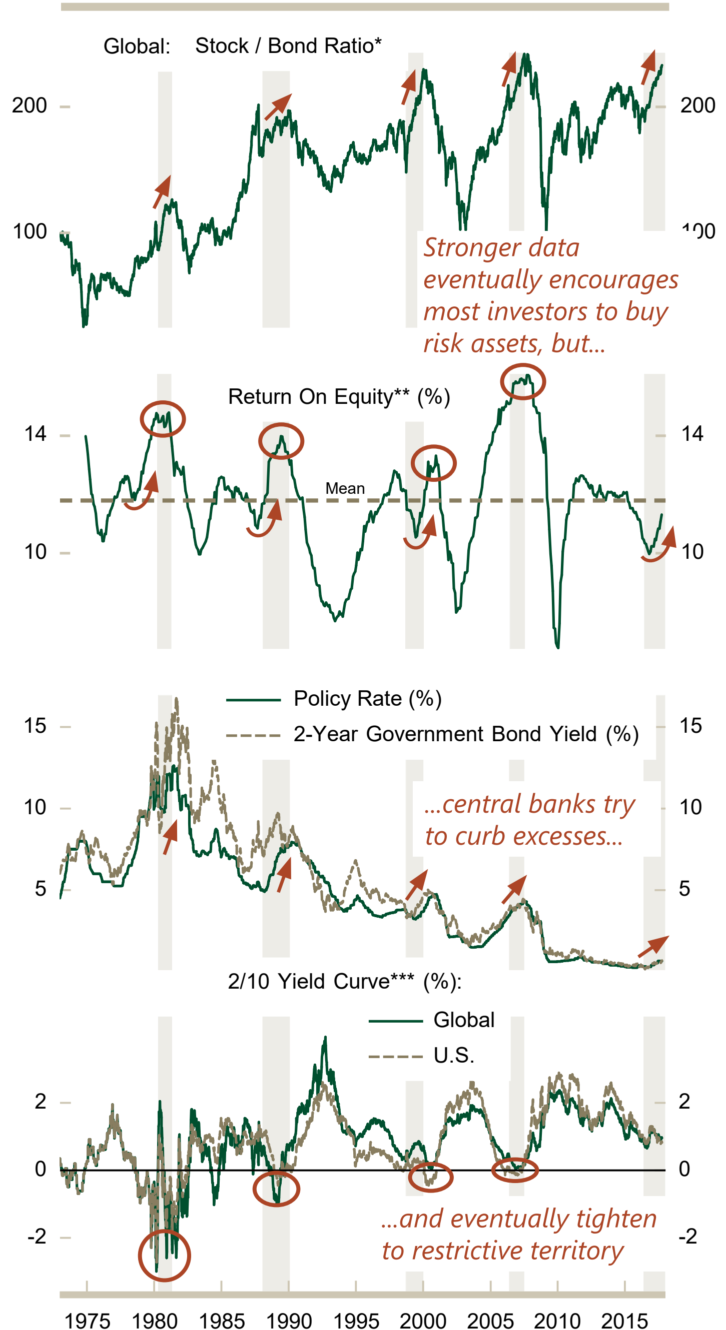
The difference at this point in the cycle is that a much greater percentage of market participants have gained conviction in the sustainability of the expansion. Thus, the rally in *Phase 5* tends to be slightly more pronounced than during *Phase 3*, and equity valuations expand more materially. In fact, risk assets related to key macro or investment themes can become the objects of speculation, fueling mania-like pricing (asset bubbles can develop prior to this phase, but typically in traditional safe-havens or alternatives, rather than in risk assets[4]).

[4] **MRB *Theme Report***, "***Mania Profiling (Part I): Framework & Current Cycle***", March 30, 2017

That said, *Phase 5* also marks the final upleg for the investment cycle. Throughout this phase, the remaining spare capacity in the economy is typically absorbed and CPI inflation trends higher (on a cyclical basis). In periods where consumer price pressures are only building slowly due to structural factors, asset prices inflation tends to be stronger. Either way, this leaves central banks with limited flexibility to keep policy settings accommodative. In fact, by the end of *Phase 5*, monetary authorities have usually tightened into restrictive territory and the yield curve becomes inverted (**chart 7**, bottom panel). Central banks have become determined to cool growth conditions, in order to curb consumer price pressures, capital market speculation and credit excesses (associated with housing, overall spending, and/or financial asset manias).

Likewise, higher policy rates and rising inflation cause bond yields to rise materially during the second half of this phase. The increase in the cost of capital causes economic and profit growth to moderate towards the end of *Phase 5*. This, along with the rise in equity discount rates, encourages investors to scale back risk asset exposure and/or become increasingly selective (i.e. focusing on those sectors/industries that can provide sufficient earnings growth to offset higher interest rates). This is especially true since stocks are usually overbought and valuations have become demanding by this point in the cycle.

Chart 7 ***Phase 5*: Higher-Conviction Rally**



* Global Datastream stock market total return index divided by 10-year G7 government bond total return index; rebased
** Source: MSCI
*** 10-year minus 2-year government bond yield
Note: Shaded for phase 5 (high-conviction rally)

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The global stock/bond ratio rallies 40% (on average) in *Phase 5*, which is slightly higher than *Phase 3*. However, the duration of *Phase 5* is slightly shorter at 70 weeks, making the rally steeper. Equities have traditionally accounted for the entire upleg. Government bond total returns have historically been flat (on average) throughout this phase. However, bonds tend to generate positive returns during the first half of *Phase 5* (i.e. yields fall in response to central banks reaffirming their reflationary commitment in *Phase 4*) and then give up their gains (i.e. yields rise materially) by the end of the phase as central banks tighten into restrictive territory.

Risk assets rally until tight policy conditions choke growth

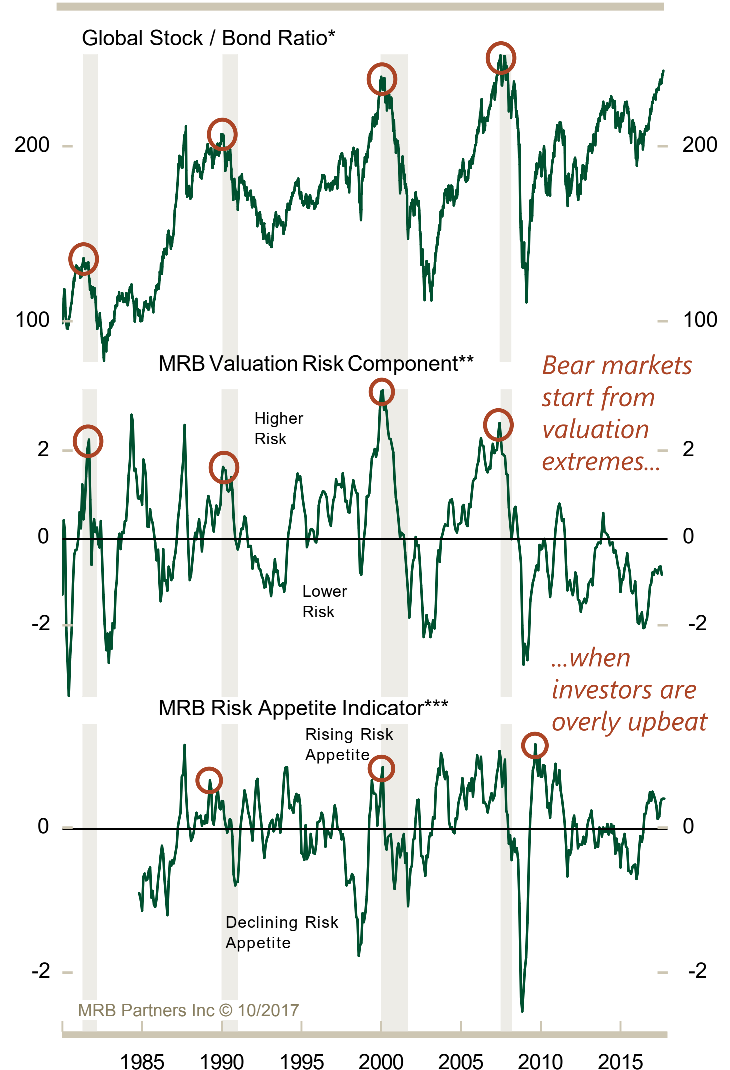
As noted above, this performance has been heavily influenced by the ***secular*** downtrend in bond yields since the early-1980s, and bonds are unlikely to perform as well during future *Phase 5* episodes.

Phase 6 (Bear Market Begins)

Market participants tend to be optimistic and "fully invested" by the latter part of *Phase 5* (i.e. an overwhelmingly positive consensus develops). Indeed, valuations are typically stretched with equities extremely expensive and government bonds cyclically cheap (**chart 8**). This leaves ample room for disappointment, at a point when policymakers are attempting to cool growth conditions. Correspondingly, a bear market begins to take hold.

At the start of *Phase 6* (i.e. the first sustained downleg), coincident economic growth data is still holding up, but leading indicators are weakening. Growth conditions deteriorate materially as the phase progresses. In contrast to the countertrend correction in *Phase 4*, monetary policy settings are restrictive and the authorities are not eager to reaffirm their commitment to support the economic expansion. After all, they had been targeting slower growth in order to curb inflation and/or credit excesses. While central banks eventually abandon their tightening campaigns and reverse course throughout *Phase 6*, they typically do so with a lag.

Chart 8 *Phase 6*: Bear Market Begins



* Global Datastream stock market total return index divided by 10-year G7 government bond total return index; rebased
** Equity valuation risk vs bond valuation risk; standardized
*** A composite measure of various financial market risk/safe haven gauges; standardized
Note: Shaded for phase 6 (bear market begins)

This first downleg of the bear market typically lasts 54 weeks, with the global stock/bond ratio plunging on balance by 30%. Equities typically fall around 20% and government bonds on average rally more than 10%.

Bear markets begin when investors are fully invested and optimistic

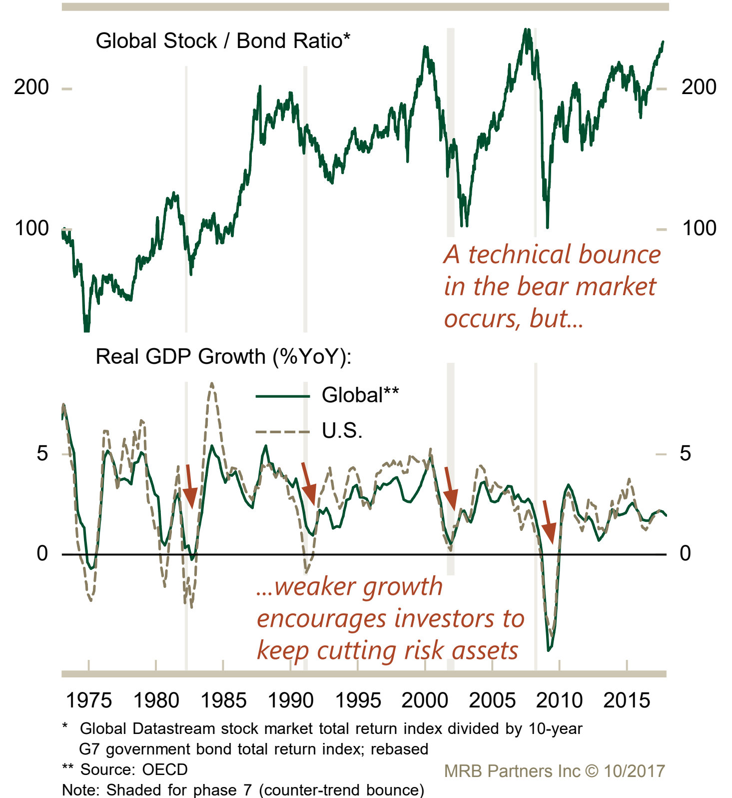
Phase 7 (Countertrend Bounce)

By the end of the first bear market downleg in *Phase 6*, the global stock/bond ratio is typically oversold and due for a technical bounce. Economic conditions are still deteriorating, but central banks have been easing and policy rates have usually moved back to at least neutral (if not accommodative) readings. Nonetheless, monetary authorities are still typically not aggressive or determined to end the slowdown, which

is well underway by this point in the cycle (**chart 9**). The extreme valuations of equities (and other risk assets) that were present at the top of the investment cycle have been removed. However, pricing is not yet cheap (in absolute or relative terms) and certainly not attractive enough to provide a sufficient valuation cushion to compensate investors for leaning into the macro headwinds. Thus, the bounce proves fleeting and amounts to nothing more than a countertrend rally.

Bear markets can have a couple of countertrend bounces, although one is typically more modest or merely a lateral consolidation. For consistency purposes we used the largest upleg for our calculations. On this score, *Phase 7* lasts an average of 14 weeks and results in a 12% increase in the global stock/bond ratio. Equities account for the entire bounce, as weak growth and disinflationary pressures prevent government bond yields from rising (i.e. bond total returns remain relatively flat during this brief phase).

Chart 9 *Phase 7*: Countertrend Bounce



* Global Datastream stock market total return index divided by 10-year G7 government bond total return index; rebased
** Source: OECD
Note: Shaded for phase 7 (counter-trend bounce)

Phase 8 (Final Flush)

After the technically oversold conditions have been largely unwound in *Phase 7*, the bear market in risk assets resumes. The recession becomes fully evident and deepens, encouraging investors to continue to flee for safety. By the end of this phase, investor sentiment is crushed and equities (and other risk assets) eventually plunged to deeply oversold readings (**chart 3**). Valuations have become exceptionally attractive, but market participants are hesitant to bottom fish out of fear of further price weakness in risk assets.

Bear markets take a breather when conditions get oversold…

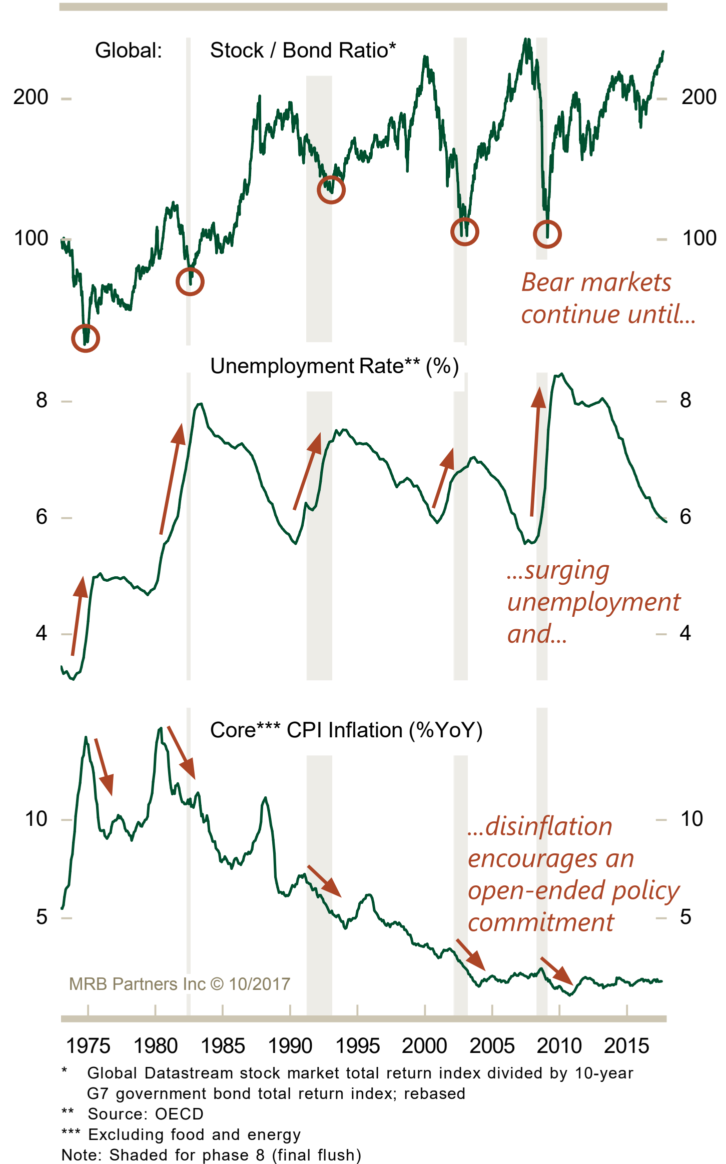
That said, *Phase 8* marks the final downleg for the investment cycle. By this point, the recession has caused unemployment to surge well above equilibrium and there is plenty of spare capacity (**chart 10**). Disinflationary/deflationary pressures are typically intensifying and become worrisome for central banks, which respond by easing aggressively. In fact, by the end of *Phase 8*, monetary authorities are forcefully attempting to reflate economic conditions. Government bond yields melt during this phase, dragging down the cost of capital for the private sector. The economy shows no evidence of improving during this phase, but financial assets eventually become priced for an extremely bleak outcome.

…but do not end until policy becomes highly supportive

There is frequently a double bottom to equity bear markets and stock/bond ratios, as heightened investor anxieties prevent aggressive risk-taking despite attractive pricing.

For consistency in our calculations, we define the end of *Phase 8* as the lowest bottom in the global stock/bond ratio. Based on this definition, the selloff in *Phase 8* tends to be comparable to *Phase 6* in duration and percentage decline (albeit from a lower starting point). The ratio falls 34% on balance over the course of 51 weeks. Equities typically drop around 20% and government bonds on average rally by about 15%.

Chart 10 *Phase 8*: Final Flush



* Global Datastream stock market total return index divided by 10-year G7 government bond total return index; rebased
** Source: OECD
*** Excluding food and energy
Note: Shaded for phase 8 (final flush)

MRB Stylized Investment Cycle And Asset Selection

The *MRB Stylized Investment Cycle* is based on the historical performance of the global stock/bond ratio (i.e. the total return of global equities divided by the total return of 10-year G7 government bonds) over the four decades preceding the start of the bull market in 2009. Our depiction of the typical cycle and discussion below regarding the performance of various assets is based on the ***average*** durations and magnitudes (using weekly data). However, **table 2** also provides ***medians*** for those interested. For a thorough analysis of each of the eight distinct phases, see ***Part I***.

This report analyzes the typical performance of various asset classes during each phase of the MRB Stylized Investment Cycle. In terms of equities, we cover the eleven GICS sectors. Those that have followed our research on this theme in the past will note that the real estate sector has been added to the analysis now that it has been officially separated from the financials sector. We also incorporated U.S. large and small caps, as well as U.S. growth and value stocks into our framework for those making style bets. However, note that the calculated returns for large and small caps are based on stock prices rather than total returns, due to lack of available data.

The MRB Stylized Investment Cycle is useful when determining the optimal asset mix

For investment-grade and high-yield corporate bonds, we focused our analysis on the U.S. market given its liquidity and available history (even then, the statistics for high-yield debt only start in 1984). Finally, we limited the discussion to the three major commodities regularly analyzed in our other research (i.e. copper, crude oil and gold).

Table 2 Asset Performance During Various Phases Of Previous Investment Cycles

	Total Returns Of Previous Investment Cycles[1] (%)															
	Phase 1		Phase 2		Phase 3		Phase 4		Phase 5		Phase 6		Phase 7		Phase 8	
	Avg	Median	Avg	Median	Avg	Median	Avg	Median	Avg	Median	Avg	Median	Avg	Median	Avg	Median
Duration (weeks)	52	48	115	129	77	83	14	14	70	63	54	47	14	11	51	46
Global Stock/Bond Ratio[2]	38	32	0	0	37	39	-17	-17	40	33	-30	-25	12	13	-34	-30
Global Equities[3]																
Equity Benchmark	48	49	29	30	37	39	-9	-9	39	35	-21	-16	13	13	-22	-18
Consumer Discretionary[4]	52	56	29	31	23	31	-9	-10	46	44	-25	-22	17	18	-20	-19
Consumer Staples[4]	35	39	36	34	27	34	-6	-7	30	28	-1	2	11	9	-12	-10
Energy	44	42	27	28	69	68	-15	-15	37	36	-12	-7	17	18	-22	-14
Financials	41	37	44	29	38	41	-11	-9	32	31	-15	-16	10	11	-25	-17
Health Care	33	36	35	37	23	28	-4	-5	25	23	-1	0	9	7	-11	-11
Industrials	51	49	32	35	34	32	-13	-13	56	52	-23	-19	15	14	-26	-19
Information Technology	64	60	26	20	32	29	-11	-10	73	38	-27	-14	18	15	-23	-21
Materials	51	49	19	15	42	45	-15	-15	46	44	-17	-21	17	19	-27	-15
Real Estate	49	55	44	43	36	50	-12	-13	36	38	-20	-22	12	12	-24	-15
Telecom Services	33	31	38	29	34	34	-3	-5	43	34	-15	-7	3	4	-13	-11
Utilities	29	28	50	49	18	16	0	-2	23	20	1	-2	5	5	-11	-9
U.S. Large Caps[5]	33	38	21	13	26	19	-8	-7	30	26	-17	-14	11	10	-17	-18
U.S. Small Caps[5]	65	77	11	5	30	32	-17	-17	39	40	-17	-18	22	23	-18	-23
U.S. Growth Stocks[5]	36	37	27	16	33	32	-10	-7	42	34	-15	-11	13	14	-14	-16
U.S. Value Stocks[5]	40	40	40	45	34	33	-9	-9	32	32	-11	-13	8	9	-16	-18
Fixed Income																
G7 Government Bonds	7	5	30	33	1	-3	9	11	0	-1	14	15	1	0	16	13
U.S. Investment - Grade Corporate Bonds[6]	15	9	28	30	3	1	5	4	5	3	10	8	3	3	8	7
U.S. High-Yield Corporate Bonds[6]	30	18	27	20	10	9	1	0	9	11	-3	-3	9	6	6	2
Commodities																
Brent Crude Oil	-6	-6	11	14	62	42	-2	-2	27	15	9	8	5	15	-11	-7
Copper	19	19	-1	-4	68	65	-1	-4	1	1	-6	-5	2	1	-17	-7
Gold	12	16	-4	-2	77	39	-8	-5	-2	-4	3	-2	-4	-3	5	5

1 Based on the four cycles in the global stock/bond ratio between 1974 and 2009
2 Global Datastream stock market total return index divided by 10-year G7 government bond total return index
3 Source: Datastream
4 MRB calculated to match MSCI composition
5 Source: MSCI; note that large caps and small caps returns are calculated based on stock prices
6 Source: BofA Merrill Lynch

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Phase 1 (Policy-Induced Rally)

Favor cyclical stocks in Phase 1…

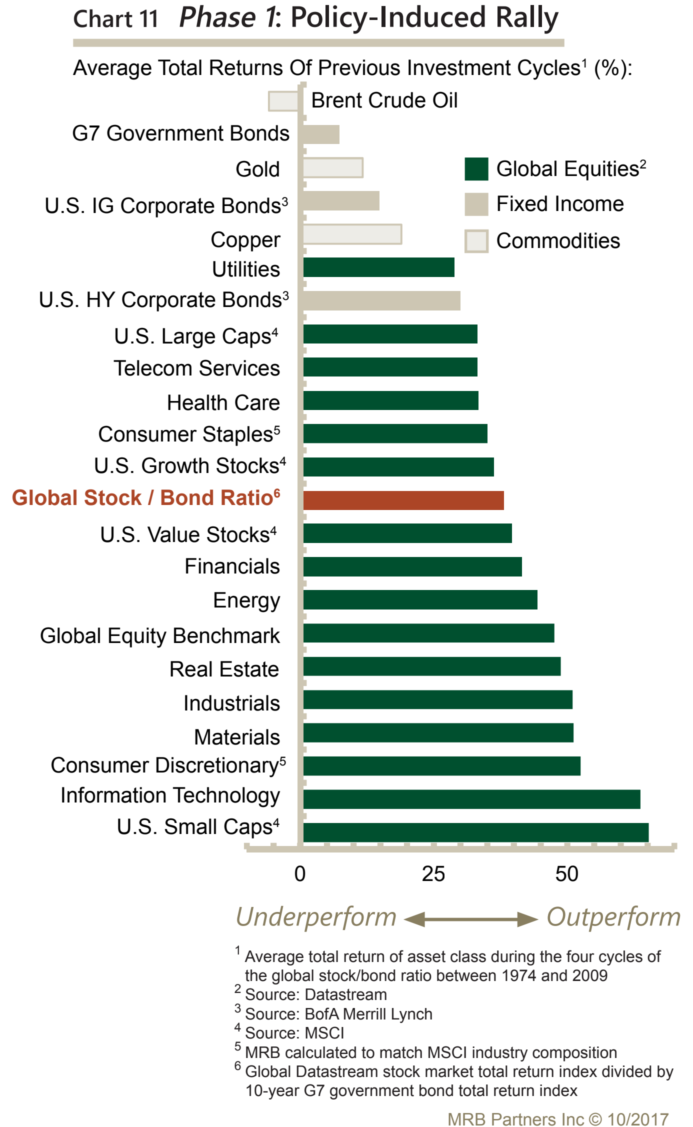
The first upleg of the bull market takes hold when policymakers have made a credible and open-ended commitment to curtail downside tail risks, causing investors to begin unwinding Armageddon pricing in capital markets. During this phase, global equities materially outperform bond markets and commodities, but almost all assets receive some sort of lift (**chart 11**).

…those hit hardest in the prior bear bounce the most

- **Equities:** The total return of the global equity benchmark surges 48% on balance during this phase. The sectors that were hardest hit during the preceding bear market receive the largest lift, which is typically cyclicals. U.S. small caps also do remarkably well during this phase, decisively outperforming large caps, while growth and value stocks perform similarly.

❍ **Bonds:** Weak growth conditions, disinflationary pressures and aggressive central bank policies causes bond yields to drift lower, allowing the total return of G7 sovereign debt to gain further ground (7% on average). However, corporate bonds substantially outperform, with U.S. high-yield debt often delivering returns close to defensive equity sectors during this phase.

❍ **Commodities:** Copper rebounds strongest during this phase (increasing nearly 20% on average), in large part because it is typically crushed during the preceding bear market. In contrast, Brent crude oil prices declined slightly in *Phase 1* in each of the past cycles. Gold receives a boost (12% gain on average) from forceful reflationary policies and depressed real bond yields (i.e. the opportunity cost of gold).



Phase 2 (Awaiting Validation)

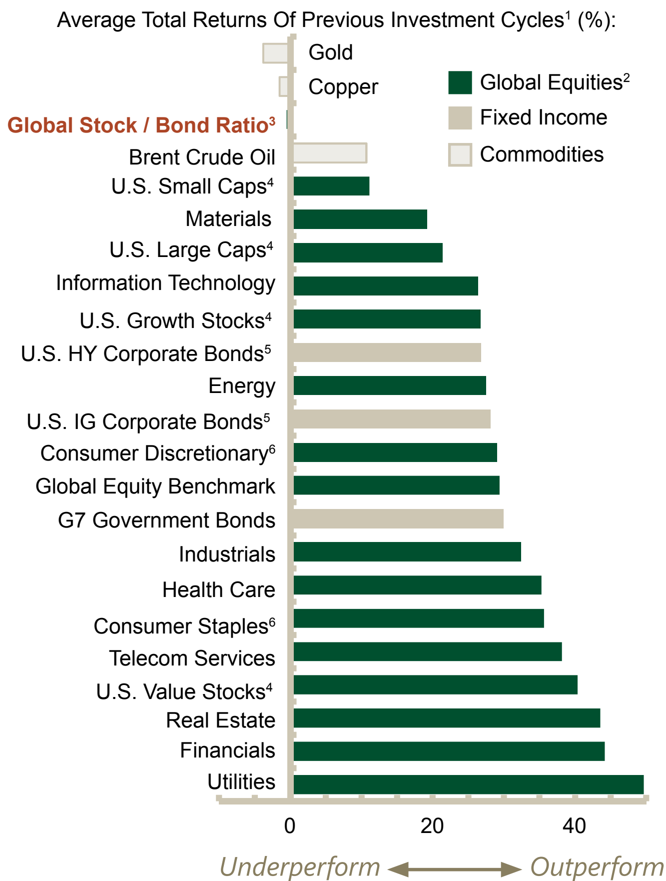
After the initial rally, a consolidation phase occurs until investors receive confirmation that policy reflation is indeed working to create a sustained economic expansion. During this phase, investors are very uncertain about the durability of the economic recovery. However, they know that central banks are fully committed to reflationary policies and will keep interest rates pinned down at cyclical lows to give the economy the best chance of escaping a double-dip recession. Thus, the *search for yield* theme thrives as investors seek fixed-income assets and high dividend-yielding stocks with stable cash flows (i.e. bond proxies). Equity and bond benchmarks experience comparable (and typically pronounced upside), while commodities materially underperform (**chart 12**).

The search for yield thrives in Phase 2

❍ **Equities:** The total return of the global equity benchmark jumps nearly 30% on balance during this phase, although financials, real estate and defensive sectors (including consumer staples, health care, telecom services and utilities) outperform cyclical sectors (including consumer discretionary, energy, industrials, information technology and materials). U.S. large caps outperform their small cap counterparts, while value stocks outpace growth stocks.

❍ **Bonds:** G7 government bonds generate a total return of around 30% on average during this phase, while U.S. investment-grade corporate bonds only trail modestly. High-yield corporate debt underperforms somewhat (this is more evident in the

Chart 12 *Phase 2*: Awaiting Validation



[1] Average total return of asset class during the four cycles of the global stock/bond ratio between 1974 and 2009
[2] Source: Datastream
[3] Global Datastream stock market total return index divided by 10-year G7 government bond total return index
[4] Source: MSCI
[5] Source: BofA Merrill Lynch
[6] MRB calculated to match MSCI industry composition

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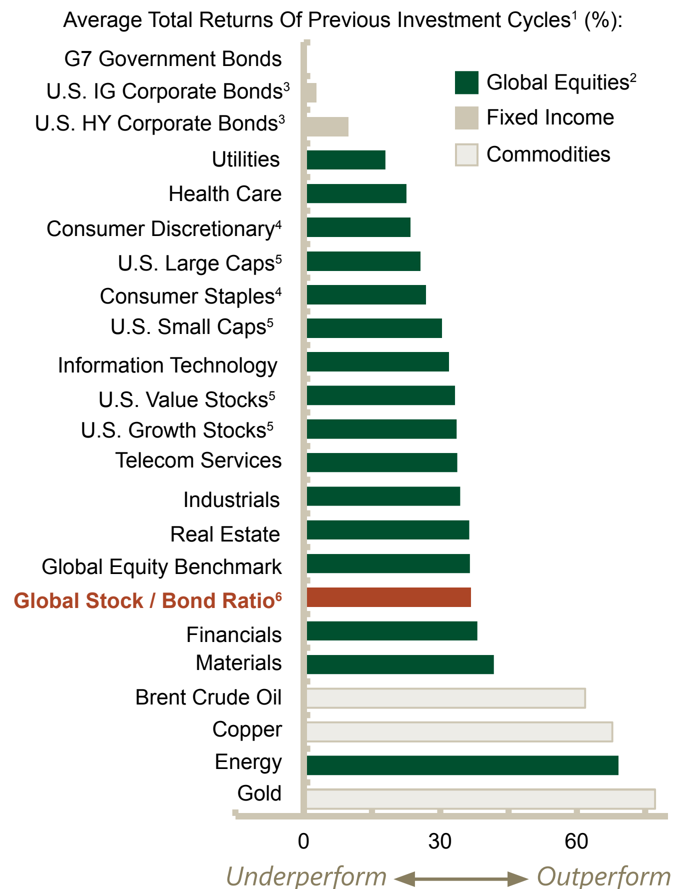
Chart 13 *Phase 3*: Lower-Conviction Rally



[1] Average total return of asset class during the four cycles of the global stock/bond ratio between 1974 and 2009
[2] Source: Datastream
[3] Source: BofA Merrill Lynch
[4] MRB calculated to match MSCI industry composition
[5] Source: MSCI
[6] Global Datastream stock market total return index divided by 10-year G7 government bond total return index

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historical median rather than the average data) as elevated economic uncertainty encourages investors to focus on "higher quality" bonds.

- **Commodities:** Natural resources underperform other competing financial assets. Crude oil performs best (on average delivering just over 10% gains), while copper and gold are typically flat to modestly lower. Suppressed interest rates are positive for gold, but uncertainty of whether policy reflation/liquidity will be sufficient holds back the precious metal.

Commodities outperform all other assets in Phase 3

Phase 3 (Lower-Conviction Rally)

This upleg of the bull market is driven by the economic and profit data strengthening enough to convince the marginal investor that a sustained expansion will develop. Commodities historically generate the strongest upside, followed by the global equity benchmark. Fixed income markets materially underperform (**chart 13**).

❍ **Equities:** Global stocks gain 37% on average during *Phase 3*. Commodity-related stocks (including the energy and materials sectors) post the strongest gains, while financials, industrials, technology and real estate generally outperform consumer discretionary and the defensive sectors (which give up their leadership). U.S. small caps mildly outperform large caps, while there is little differentiation between U.S. value and growth stocks.

❍ **Bonds:** U.S. speculative-grade corporate debt has historically outperformed, generating about 10% on average during this phase. G7 government bonds and investment-grade debt provide roughly flat returns.

❍ **Commodities:** All commodities perform extremely well and outperform other competing assets in *Phase 3*. Historical averages show that gold modestly outperforms, although this was largely because of the surge last cycle. Normally gold underperforms (see the median returns), especially towards the end of this phase when interest rates rise and stronger growth expectations cause investors to favor economically-sensitive commodities (including copper and crude oil).

Chart 14 *Phase 4*: Countertrend Pullback

Phase 4 (Countertrend Pullback)

This brief technical correction weakens equities the most, followed by commodities. Only high-quality debt generates positive absolute returns (**chart 14**).

Only high-quality debt post absolute gains in Phase 4

❍ **Equities:** The total return of the global equity benchmark typically only corrects less than 10%, although cyclical sectors (particularly energy and materials) suffer up to 15% declines. In contrast, defensives (especially bond proxies) outperform, but are still typically not able to gain in absolute terms. U.S. large caps withstand the setback much better than their small cap counterparts, which are hit hard. This short-lived pullback affects U.S. value and growth stocks similarly.

❍ **Bonds:** Government bonds outperform other fixed-income instruments during this phase, rallying nearly 10% on average. High-yield corporates are typically flat, while performance of investment-grade debt is roughly between high-yield and government bonds.

❍ **Commodities:** Gold typically underperforms other commodities during this phase, declining by 8% on average. Crude oil and copper correct mildly.

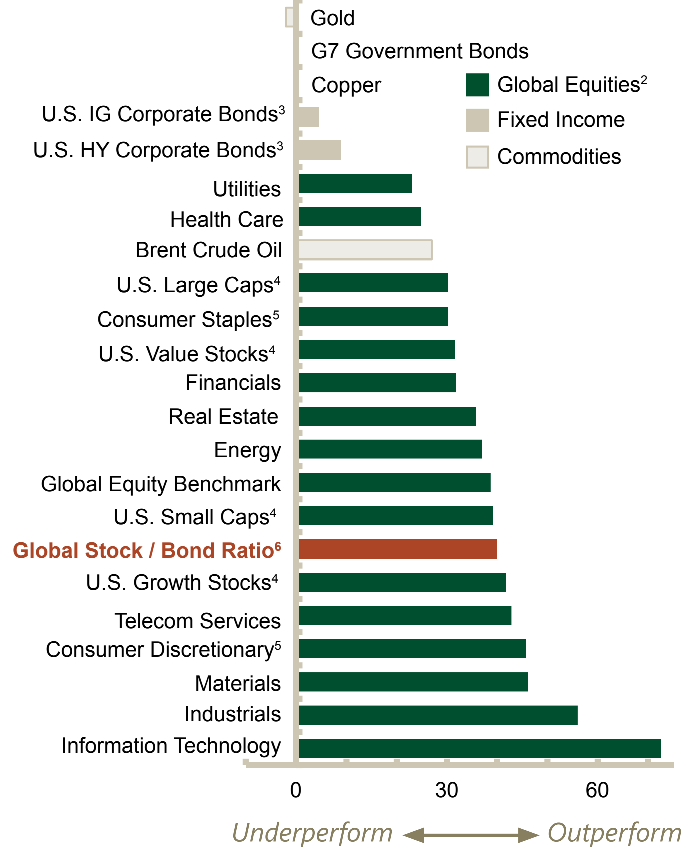
Phase 5 (Higher-Conviction Rally)

Most investors become progressively more upbeat on the outlook for economic and profit growth during this bull market upleg, and extrapolate the good times long into the future. In turn, growth-sensitive risk assets outperform (**chart 15**).

❍ Equities: Global equities rally nearly 40% on average during *Phase 5*. Cyclical stocks lead the upleg, especially industrials, materials and technology (albeit the historical average gain of technology stocks is flattered by the 1990s' mania). Financials and the defensive sectors tend to materially underperform during this phase as growth expectations improve and bond yields ratchet higher while the yield curve flattens. U.S. small caps regain strength after the previous setback and outpace large caps.

❍ **Bonds:** U.S. high-yield corporate debt typically generates a total return of around 10% in *Phase 5*, while G7 government bonds are roughly flat.

Chart 15 *Phase 5*: Higher-Conviction Rally



[1] Average total return of asset class during the four cycles of the global stock/bond ratio between 1974 and 2009
[2] Source: Datastream
[3] Source: BofA Merrill Lynch
[4] Source: MSCI
[5] MRB calculated to match MSCI industry composition
[6] Global Datastream stock market total return index divided by 10-year G7 government bond total return index

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❍ **Commodities:** Crude oil prices tend to rise materially, albeit not to the same degree as the global equity benchmark or commodity-related stocks. Copper is typical flat, and gold falls mildly during this phase.

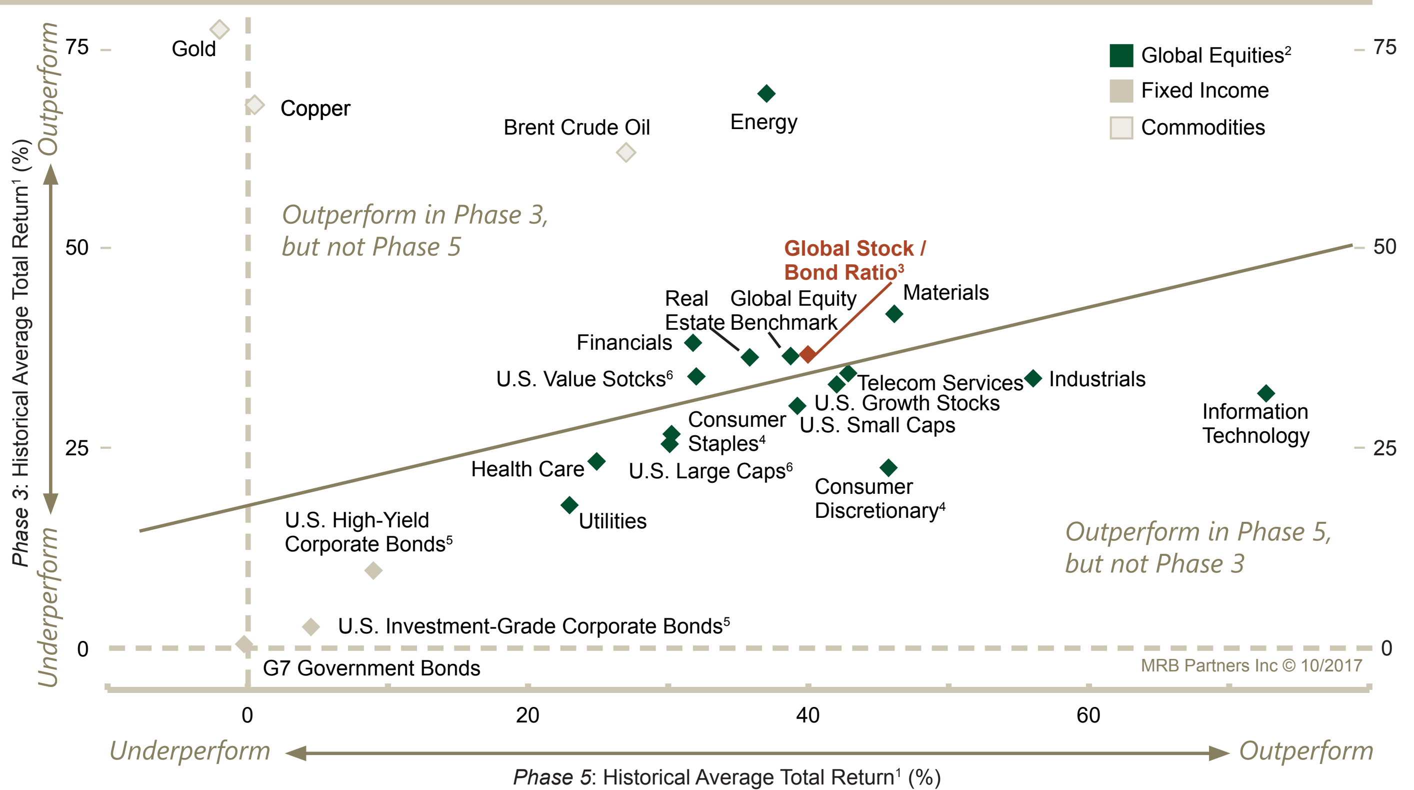
Comparing Uplegs: Phase 3 Vs Phase 5

The lower-conviction rally (*Phase 3*) and the higher-conviction rally (*Phase 5*) are similar in that investors are upgrading their economic outlook and generally seek pro-growth assets. The difference is this that by *Phase 5* a much greater percentage of market participants have gained conviction in the ***sustainability*** of the expansion. Thus, the rally tends to be slightly more pronounced than during *Phase 3* and equity valuation multiples expand more materially. **Chart 16** is a scatter plot of asset performance during these two phases.

Industrials and technology stocks typically take the lead by Phase 5

Fixed-income markets underperform in both cases, with the highest quality, least economically-sensitive bonds generating the worst returns (as might be expected). Likewise,

Chart 16 **Lower-Conviction Rally (*Phase 3*) Vs Higher-Conviction Rally (*Phase 5*)**



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[5] Source: BofA Merrill Lynch
[6] Source: MSCI

defensive equity sectors tend to consistently underperform the global equity benchmark. In terms of style investing, U.S. small caps outperform large caps during these bull market uplegs, while performance of growth and value stocks is mixed. However, there is an interesting divergence among other equity sectors and commodities in these phases.

Commodities do better in Phase 3 than Phase 5...

During the lower-conviction rally (*Phase 3*), physical commodities and related equities tend to outperform substantially, with gold leading. Financials have also traditionally outpaced the broad market modestly. The reason is that at this point in the investment cycle, investors are just starting to accept that the economic expansion will be sustained and begin seeking pro-growth assets. At the same time, central banks are still attempting to encourage economic activity and greater risk taking, given that inflationary pressures remain subdued. Thus, bond yields stay anchored. This combination is ideal for commodities (given that real rates are the opportunity cost of zero-yielding assets) and for financial stocks (since economic activity and trade volumes pick up, while the yield curve remains steep).

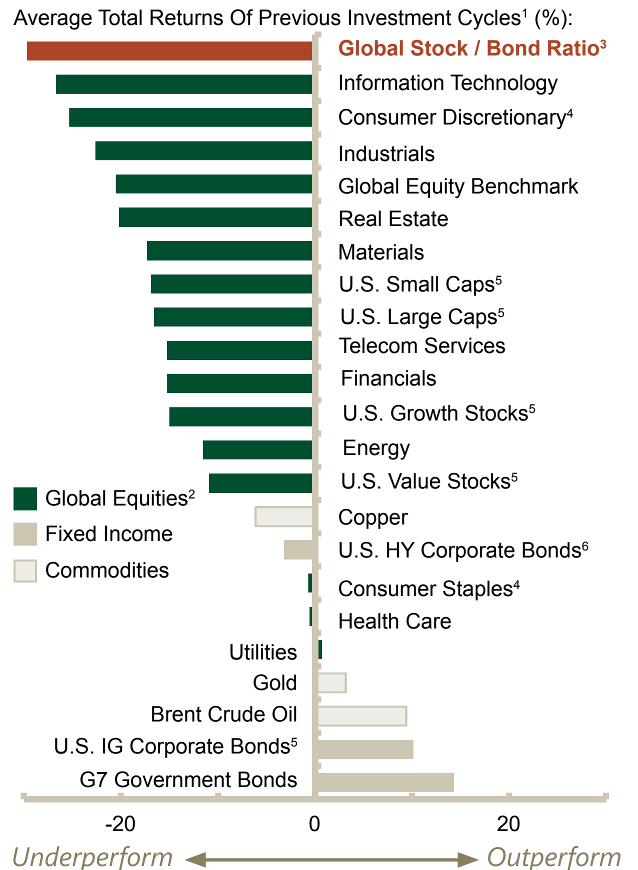
...the reverse is true for tech and industrials

During the higher-conviction rally (*Phase 5*) commodities tend to significantly underperform, especially gold and copper (which typically generate flat to mildly

negative returns). In contrast, technology and industrial stocks dramatically outperform. The reason is that at this point most investors are upbeat and seek growth plays, while central banks are tightening policy in order to curb price pressures and prevent credit excesses from escalating. Thus, cyclical stocks that can provide sufficient earnings growth to offset higher interest rates tend to perform best.

Phase 5 is also the point in the cycle when risk assets related to key macro or investment themes can become the objects of speculation, fueling mania-like pricing. Asset bubbles can develop prior to this phase, but typically in traditional safe-havens, rather than risk assets[5].

Chart 17 *Phase 6*: Bear Market Begins



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[6] Source: BofA Merrill Lynch

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Phase 6 (Bear Market Begins)

Global equities fall sharply during the first downleg of the bear market. High quality fixed income markets significantly outperform and typically generate positive total returns. Commodity performance is mixed (**chart 17**).

- **Equities:** The total return of the global equity benchmark declines about 20% on balance during *Phase 6*. Cyclical sectors are hit hardest, while defensive sectors manage to hold up in absolute terms. Financials modestly outperform the broad market, except of course during a banking crisis. There is not much differentiation among style bets, although growth stocks get hit slightly harder than their value counterparts.

- **Bonds:** G7 government bonds and U.S. investment-grade corporate debt typically generate solid total returns (10-15%) as yields start to fall from a cyclical peak. In contrast, high-yield corporate bonds usually post mildly negative total returns during this phase as spreads widen.

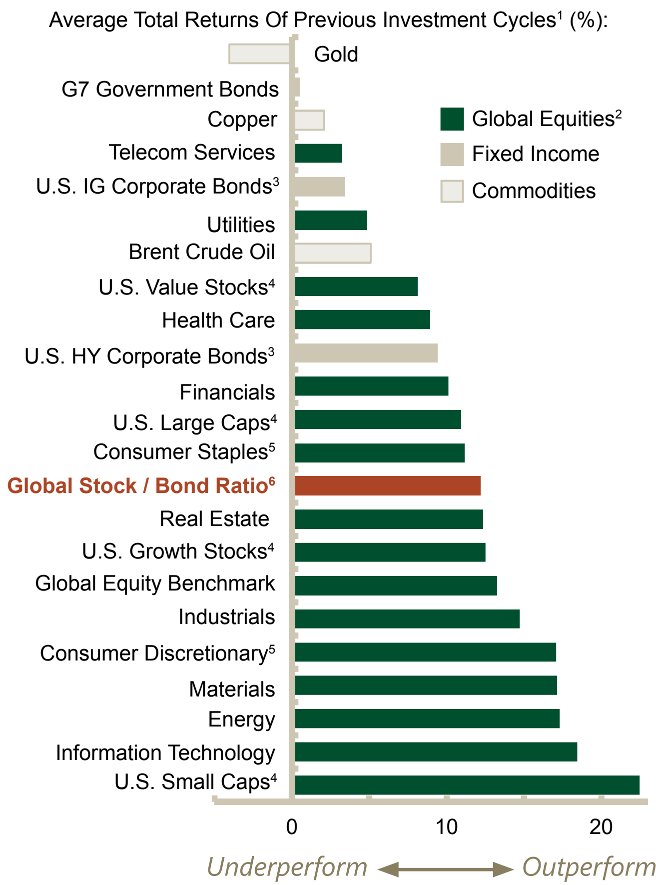
- **Commodities:** Crude oil gains nearly 10% (on balance), while copper falls about 5% and gold is flat to mildly positive during *Phase 6*.

High-quality debt starts to lead the cycle by Phase 6…

…but defensive stocks hold up

[5] For further details and MRB's framework on financial asset bubbles, see the **MRB *Theme Report***, "***Mania Profiling (Part I): Framework & Current Cycle***", March 30, 2017

Chart 18 *Phase 7*: Countertrend Bounce



[1] Average total return of asset class during the four cycles of the global stock/bond ratio between 1974 and 2009
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[3] Source: BofA Merrill Lynch
[4] Source: MSCI
[5] MRB calculated to match MSCI industry composition
[6] Global Datastream stock market total return index divided by 10-year G7 government bond total return index

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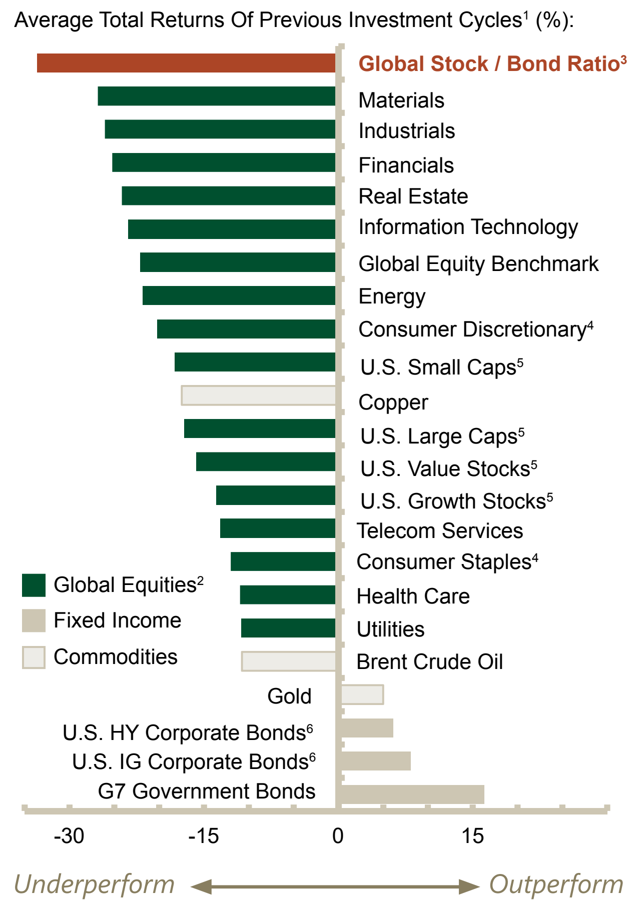
Chart 19 *Phase 8*: Final Flush



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[4] MRB calculated to match MSCI industry composition
[5] Source: MSCI
[6] Source: BofA Merrill Lynch

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Phase 7 (Countertrend Bounce)

This brief technical bounce results in decent global equity gains, while flat to mild strength for fixed income markets and most commodities (**chart 18**).

Cyclical stocks get a healthy bounce in Phase 7

- **Equities:** The global equity benchmark typically provides a total return of 13% during *Phase 7*, with cyclical sectors generating closer to 20%. Defensive sectors tend to only rally modestly, with bond proxies (especially the utilities and telecom sectors) barely getting any lift. Performance of the financial and real estate sectors is usually in the middle, slightly below the global benchmark. During this brief equity bounce, U.S. small caps substantially outperform large caps, and growth stocks outpace value stocks.

- **Bonds:** High-yield corporate bonds outperform, generating nearly 10% total return during this phase. Government bonds and investment-grade debt tend to be roughly flat.

❍ **Commodities:** Crude oil typically outperforms and provides a modest absolute gain, while copper is roughly flat and gold falls slightly in *Phase 7*.

Phase 8 (Final Flush)

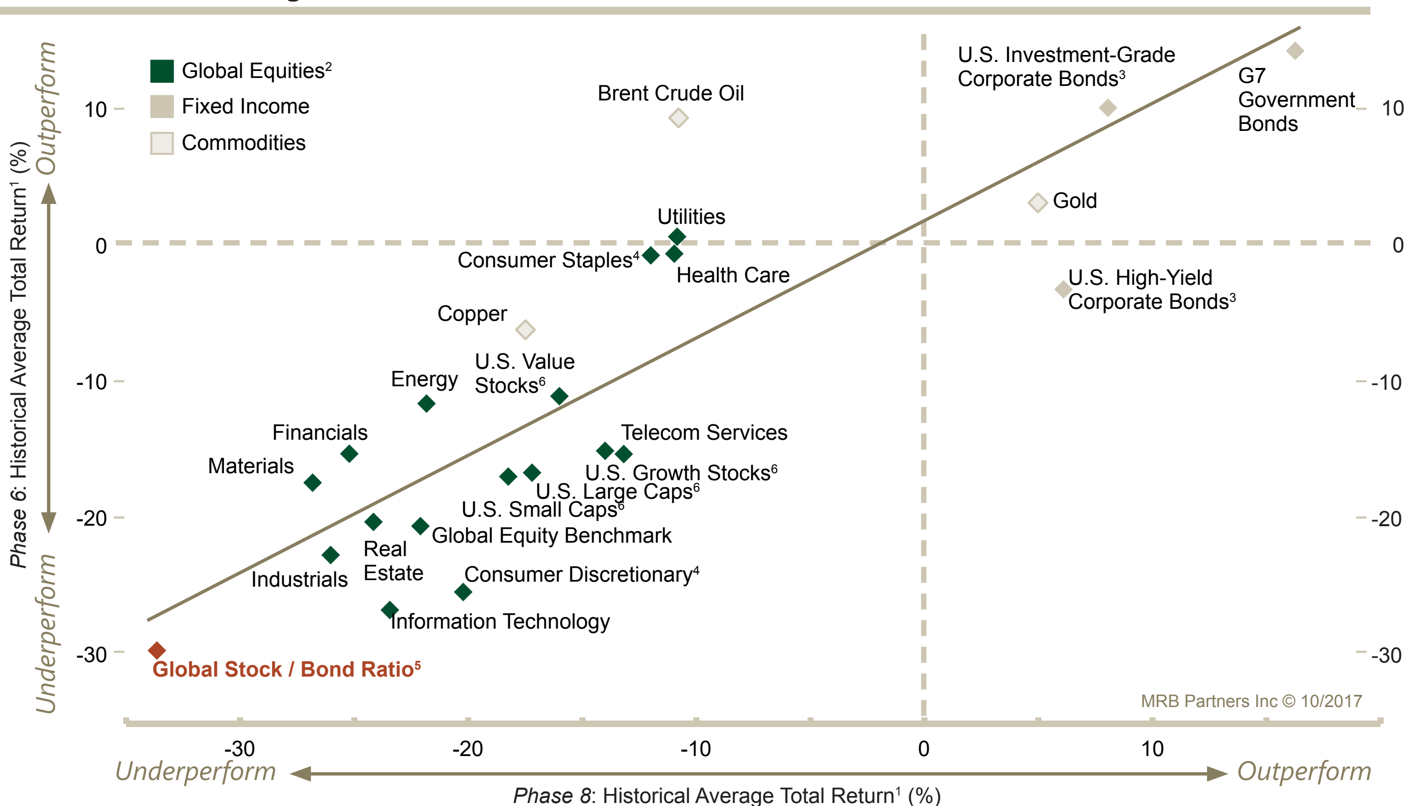
Investors aggressively liquidate their risk asset exposure during this final leg of the bear market. Global equities get hammered across the board, along with economically-sensitive commodities. In contrast, high-quality bonds typically generate sizable total returns, while speculative-grade debt provides modest gains (**chart 19**).

Bonds and gold dominate in Phase 8

❍ **Equities:** The total return of the global equity benchmark drops just over 20% during the typical *Phase 8*. Financials, real estate and mid/late cyclical sectors (including industrials, technology and materials) usually get hit the hardest. Defensive stocks outperform, but still generate double-digit total return losses. In terms of style bets, small caps perform the worst.

❍ **Bonds:** G7 government bonds outperform other fixed-income instruments, generating around 15% total return (on balance) during this phase. U.S. high-yield corporate debt

Chart 20 Bear Market Begins (*Phase 6*) Vs Final Flush (*Phase 8*)



[1] Average total return of asset class during the four cycles of the global stock/bond ratio between 1974 and 2009
[2] Source: Datastream
[3] Source: BofA Merrill Lynch
[4] MRB calculated to match MSCI industry composition
[5] Global Datastream stock market total return index divided by 10-year G7 government bond total return index
[6] Source: MSCI

underperforms. Although the average of previous cycles suggests that corporate bonds still manage to provide modestly positive gains in *Phase 8*, they experienced losses during the 2008-2009 bear market as the carry was insufficient to offset spread widening (given the low level of yields).

- **Commodities:** Copper and crude oil prices decline materially (albeit less than the global equity benchmark), while gold gains about 5% on average during this phase.

Comparing Downlegs: Phase 6 Vs Phase 8

Even defensive stocks get hammered in Phase 8

Chart 20 is a scatter plot of asset performance during the first downleg of the bear market (*Phase 6*) and the final flush (*Phase 8*). A few observations are worth noting:

- The flight-to-safety by investors enables government bonds, investment-grade corporate debt and gold to generate positive absolute returns and outperform other competing assets during both selloffs phases (as might be expected).

- High-yield corporate bonds typically experience small losses during *Phase 6* as spreads blowout but then generate modest gains during *Phase 8* as spreads are elevated by that point and provide a reasonable carry. However, high-yield debt generated losses in both phase of the last cycle, given the starting point of low yields. This will be an even bigger problem in the years ahead.

- Defensive equity sectors manage to hold relatively flat during the first phase of the bear market, but the indiscriminate liquidation of all risk exposure during the final flush causes these sectors to experience total return losses of more than 10%.

- Cyclical equity sectors suffer massive losses during both downlegs (as expected).

- Crude oil manages to generate reasonable gains during *Phase 6* but declines materially in *Phase 8* as the recession develops and deepens. Energy stocks generate losses in both phases, comparable to other equities.

Phillip Colmar
Partner, Global Strategy

MacroResearchBoard

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