Bridgewater®

Daily Observations

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Distinguishing Equity Market Corrections from Bear Markets

The gradual rolling over in the flow of global liquidity due to this year's tightening of monetary policies has dragged the yields of all assets gradually higher, but for equities the continued flow of credit from the financial system has supported growth, allowing for enough earnings growth to roughly offset the rise in yields. Now, strong earnings growth is being extrapolated into the future at a time when forward-looking pressures on growth are slowing, creating the potential for an inflection point. Later this week, we will take a look at the sustainability of the forces driving the prior growth in earnings that is now being extrapolated. Below is a picture of the basic differences between what you might call a correction and a bear market. There is no clear line that separates them, but bigger versus smaller declines in equities do have significant differences.

In general, what tends to differentiate a correction from a bear market is the degree to which a tightening in liquidity and the associated rise in risk premiums pass through to a decline in the economy and earnings. We roughly defined a bear market as a decline in prices of more than 20% and a correction as a decline of 10% to 20%. On this basis, there have been 41 bear markets and 30 corrections over the past 100 years in the four largest developed countries. Risk premiums typically rose by more in bear markets than in corrections, accounting for about an 18% decline in prices in bear markets versus a 10% decline in prices in corrections. The bigger difference between them is that in bear markets the tightening of liquidity and the rise in risk premiums generally broke through to cause an economic downturn, which caused a substantial decline in earnings, whereas in corrections the price decline was more limited to the effects of the rise in risk premiums plus a moderate decline in future discounted earnings growth rates. In bear markets, prices fell by an average of 37%, with earnings falling in 75% of the cases and by an average of 28%. Whereas for corrections, prices fell by an average of 15%, with two-thirds of that decline accounted for by the rise in risk premiums, and actual earnings were on average roughly unchanged. The following table summarizes the historical results and the accounting for their underlying composition.

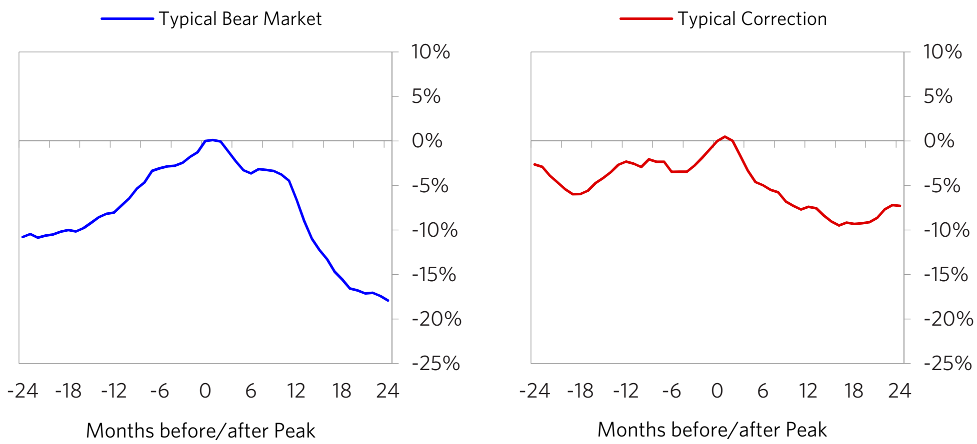
Average During Equity Market Drawdowns

	Equity Drawdown	Impact of Risk Prem	Change in Earnings	Change in Real Economy (vs Potential)
Bear Markets (>20%)	-37%	-18%	-28%	-5%
Corrections (10-20%)	-15%	-10%	-2%	-1%

Biggest difference is whether economy goes into outright decline

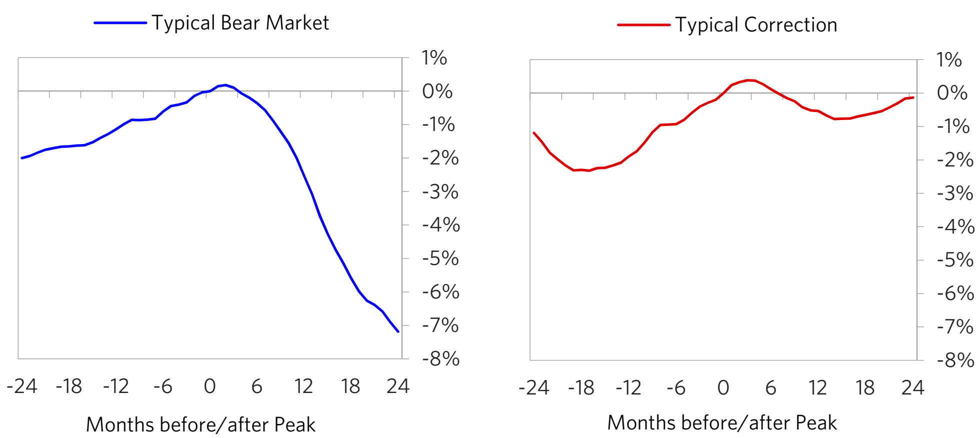
The following charts illustrate these dynamics and the differences. They show the average behavior of corrections and bear markets centered on their respective equity market peaks. As shown, the average impact of a rise in risk premiums has been bigger for bear markets—a post-peak price impact of -18% versus -10% for corrections—and in the two years leading up to the equity market peak, the size of the decline in risk premiums (and the associated rise in prices) was also somewhat bigger. Bear markets have more of a boom/bust look with respect to risk premiums.

Impact of Risk Premiums on Stock Prices



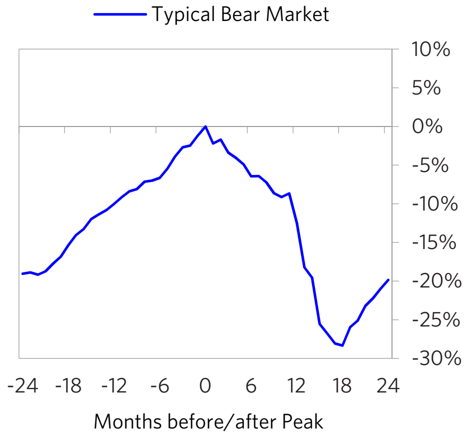
In bear markets, you've seen this bigger rise in risk premiums break through to a significant decline in real economic growth. Whereas in corrections, the economy generally sustained a growth rate roughly similar to the growth of potential, though somewhat slower than the rate of growth that existed leading into the equity market peak.

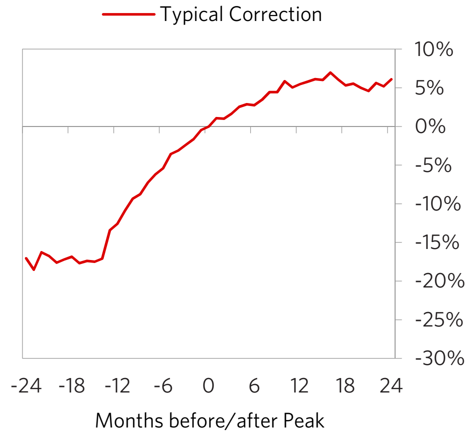
Levels of Activity



In bear markets, that fall in economic activity generally led to a substantial decline in earnings, whereas in corrections, earnings did not decline, though growth rates did slow. (The small difference in the average post-peak path of earnings in the chart below on the right versus the average for all corrections quoted in the table above is due to corrections lasting different lengths of time.)

Earnings Per Share

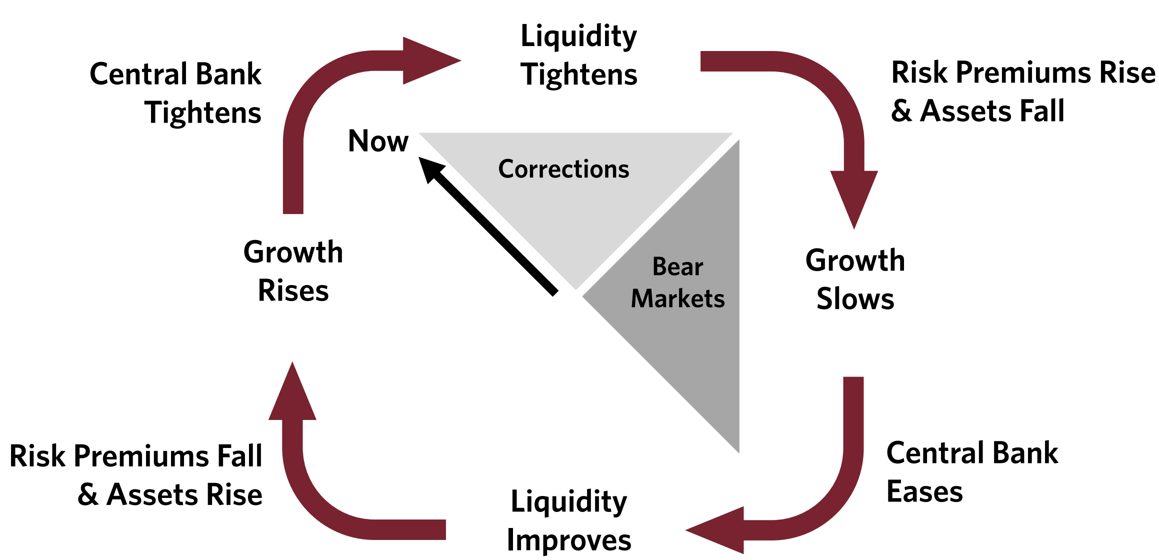




Overlaying these historical outcomes onto the typical liquidity cycle, a tightening of liquidity and a rise in risk premiums, typically following a tightening of monetary policy, have accounted for the initial stages of the move down in equities for both bear markets and corrections. Below, we've outlined the 10:30 to 1:30 section of the clock to illustrate that phase. As described in our October 2 *Observations* (attached), we think we are now roughly at about 10:30 on the dial. Historically, the bigger moves down occurred when the tightening of liquidity, the rise in risk premiums, and the associated declines in assets produced an economic downturn and a substantial decline in earnings, illustrated here by the 1:30 to 4:30 section of the clock. After that, you normally get an easing of monetary policy, which pulls you out of the downturn and triggers a rally. This time around, we have less risk of a sharp decline in economic activity because there is a less than normal amount of leveraging in the system to be pulled back. On the other hand, if a downturn does happen, there is less ability to pull out of it. There is not much room to cut interest rates, the potential from QE has largely been spent, and polarization in the political system will be an inhibitor of effective fiscal policy action. The weakness of these policy levers combined with the substantial pile of economic promises to be kept and the low long-term expected returns of assets increase the longer-term risks presented by this unfolding tightening cycle.

LIQUIDITY CYCLE

i.e., cash to assets; assets to cash



Details on Correction and Bear Market Cases

In the rest of these *Observations*, we show all of the bear markets and corrections and their composition. In three-quarters of the bear markets, earnings actually fell (versus just growing more slowly). The table below shows these cases across four major industrialized countries over the past 100 years. In nearly all of the cases of declining earnings, economic growth was well below potential, falling short of potential on average by a cumulative -8%.

Bear Markets Associated with Earnings Falls

Country	Mkt Bottom	Equity Drawdown	Fall in Earnings	Change in Real Economy (vs Potential)
USA	1903	-26%	-19%	-3%
USA	1907	-34%	-28%	-10%
USA	1914	-25%	-35%	-9%
USA	1917	-28%	-30%	3%
USA	1921	-26%	-31%	-18%
USA	1932	-84%	-72%	-35%
USA	1937	-50%	-33%	-13%
USA	1946	-20%	-27%	-30%
USA	1970	-30%	-17%	-6%
USA	1974	-45%	-18%	-8%
USA	2002	-45%	-37%	-4%
USA	2009	-52%	-55%	-7%
GBR	1932	-45%	-59%	-14%
GBR	1938	-30%	-15%	-3%
GBR	1958	-20%	-12%	-6%
GBR	1962	-21%	-21%	-3%
GBR	1974	-64%	-35%	-7%
GBR	2009	-41%	-48%	-7%
DEU	1988	-44%	-24%	-2%
DEU	1998	-20%	-8%	0%
DEU	2003	-67%	-88%	-6%
DEU	2009	-55%	-79%	-8%
DEU	2011	-25%	-12%	-2%
JPN	1974	-37%	-37%	-10%
JPN	1987	-20%	-18%	-2%
JPN	1992	-56%	-40%	-5%
JPN	1998	-40%	-100%	-4%
JPN	2003	-54%	-100%	-3%
JPN	2009	-56%	-100%	-7%
JPN	2016	-25%	-13%	1%
Average		-40%	-40%	-8%

Across the remaining cases of bear markets where there was not a decline in earnings, in five cases there was a significant rise in inflation (and real earnings were flat or fell):

Bear Markets Associated with Rising Inflation

Country	Year	Equity Drawdown	Change in Earnings	Change in Inflation
GBR	1952	-22%	-5%	8%
GBR	1970	-30%	18%	23%
GBR	1976	-26%	13%	12%
DEU	1970	-32%	6%	4%
DEU	1974	-29%	23%	3%

Four times, there had been a very recent spike in valuations, which quickly reversed:

Bear Markets Following Spikes in Valuations

Country	Year	Equity Drawdown	Change in Earnings	Prior Change in Valuations
USA	1962	-20%	7%	36%
USA	1987	-29%	4%	43%
GBR	1987	-33%	4%	40%
GBR	2003	-43%	-9%	65%

And twice, acute geopolitical risks caused the market to fall:

Bear Markets Associated with Geopolitical Risks

Country	Year	Equity Drawdown	Change in Earnings	World Events
GBR	1940	-34%	6%	Fall of France, Battle of Britain
DEU	1990	-31%	10%	Persian Gulf War

The table below shows the corrections. Across the four major industrialized countries over the past 100 years, there have been 30 stock market corrections that did not turn into bear markets. The average decline in prices was 15%, and PEs fell by an average of 12%. The range of outcomes around earnings and economic output was wider, with corrections coinciding with basically flat earnings and economic activity on average.

Equity Market Corrections

Country	Mkt Bottom	Equity Drawdown	Change in Earnings	Change in Real Economy (vs Potential)
USA	1910	-14%	-28%	-4%
USA	1923	-13%	11%	4%
USA	1957	-15%	-13%	-8%
USA	1966	-15%	-11%	-1%
USA	1978	-15%	11%	3%
USA	1982	-16%	-20%	-8%
USA	1990	-14%	-14%	-4%
USA	1998	-17%	2%	0%
USA	2011	-16%	8%	0%
GBR	1947	-17%	5%	0%
GBR	1956	-14%	5%	-2%
GBR	1965	-11%	-12%	-2%
GBR	1966	-18%	-3%	-3%
GBR	1978	-14%	5%	1%
GBR	1979	-15%	20%	-4%
GBR	1981	-16%	-31%	-2%
GBR	1990	-16%	-15%	-5%
GBR	1992	-15%	-23%	-2%
GBR	1994	-15%	18%	1%
GBR	1998	-15%	-17%	-1%
GBR	2011	-14%	25%	-1%
GBR	2015	-12%	-26%	0%
DEU	1976	-14%	-5%	1%
DEU	1979	-11%	1%	2%
DEU	1984	-10%	21%	0%
DEU	1986	-16%	13%	0%
DEU	1992	-18%	-27%	-4%
DEU	1995	-15%	34%	1%
DEU	1997	-14%	2%	0%
DEU	2015	-18%	-9%	1%
Average		-15%	-2%	-1%

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