Global Macroscope

A Bear Market Transition to the Post Modern Cycle

- Most major equity markets have now moved into official bear market territory. The damage beneath the surface has reflected the shift higher in the cost of capital (with long duration stocks being hit most) and recession risks (with many cyclicals underperforming defensives).
- There are now two critical issues for investors; First, how much further can equities adjust before the trough and second what kind of characteristics will the new cycle exhibit.
- We looked at Bear markets back to the 1900s and divided them into three types - Structural, Cyclical and Event-driven - we look at the average performance and duration for each Bear market. We view this as a 'cyclical' bear market with stronger private sector balance sheets and negative real interest rates cushioning against many of the systemic risks associated with the longer and deeper 'structural' bear markets.
- On average cyclical bear markets are down 30% peak to trough and last two years - in terms of performance we are getting close to this kind of sell-off but the duration is so far shorter.
- We find the trough in a cyclical bear market typically comes around 6-9 months *before* the trough in EPS, and 1-2 quarters before the economic nadir post the peak in inflation. The turning point is often around the period when rate expectations start to moderate.
- From a valuation perspective, while there has been a considerable de-rating, and some markets are trading below average valuations, pricing is more consistent with a mild recession than an average or deep recession, leaving them exposed to a further deterioration in expectations.
- In addition, virtually every recession in the last 30 years has been a function of a demand shock but this is a supply shock. This means that monetary policy is less potent, requiring more fiscal intervention, and this is especially worrisome at a time when BYs are rising and debt/GDP ratios are high.
- In terms of the new cycle drivers, we argue that the Post Modern Cycle will be materially different from the past two cycles. Inflation risks, scarcer resources and more regionalisation are likely to result in more capex and lower margins and returns for investors. We expect lower aggregate returns and a 'fatter & flatter' market profile with greater alpha opportunities.

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A Guide to Bear Markets

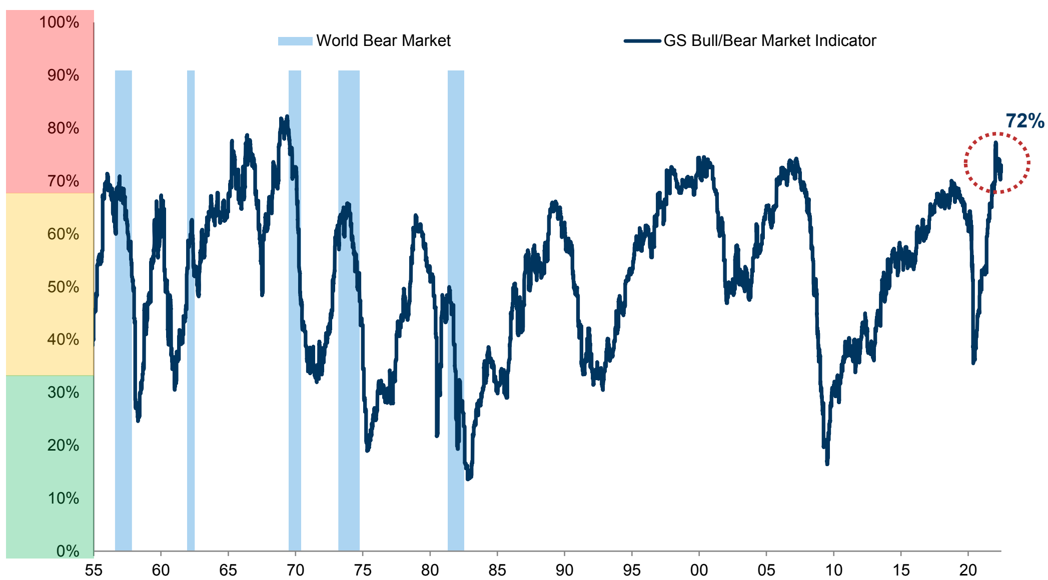
Equity markets have entered a bear phase but not all bear markets are alike. First, some are deeper and longer than others. Second, during bear markets the extent of the fall can vary significantly beneath the surface of the index.

At the aggregate level, and in the context of the changes in expectations that markets have needed to absorb this year, theoretically, a bear market should not be that surprising, all else equal. This time last year, markets were pricing no rate rises this year in the US and only a couple at the end of 2023. At the same time, over a quarter of all government debt globally had a negative yield. Meanwhile, growth expectations were rising for a post pandemic recovery and a war in the Ukraine was not a consideration.

In addition, the extraordinary rebound of equity markets in 2021 had left them expensive in our view, and our Bull/Bear market indicator had reached very elevated levels.

Exhibit 1: Bear market indicator is high

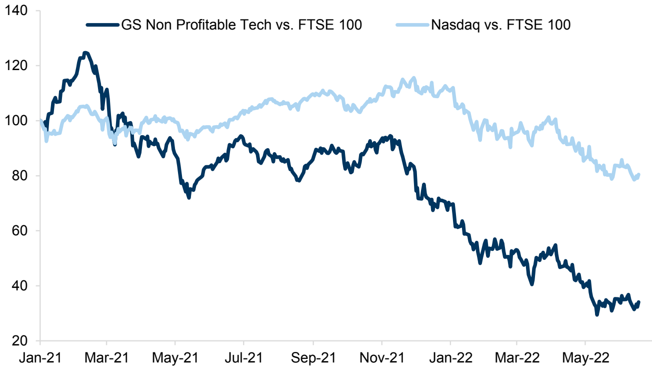
GS Bull/Bear Market Indicator (GSBLBR): Based on 6 US macro variables - Shiller P/E, 0-to-6 quarter fwd yield curve spread, ISM, Private sector financial balance, Core inflation, Unemployment rate



Source: Datastream, Haver Analytics, Robert Shiller, Goldman Sachs Global Investment Research

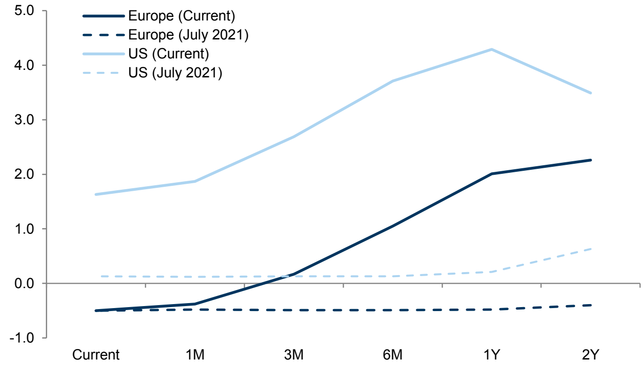
Looking at the dispersion, we think the spread of returns reflect two things: changes in the cost of capital and real interest rates, which have hit long duration growth assets hardest and cyclical parts of the market most vulnerable to recession. For example, year to date, our basket of unprofitable tech companies (GSXUNPTC) has fallen 53%, the Nasdaq by 31% (with one third of the constituents having fallen by more than 70%), while at the other end of the spectrum more value-oriented indices have outperformed; the FTSE 100 is -4% and Ibovespa -4%.

Exhibit 2: Growth indices like Nasdaq and unprofitable tech have underperformed Value indices like FTSE 100
Relative price performance (local currency)



Source: Bloomberg, Goldman Sachs Global Investment Research

Exhibit 3: The repricing in central banks action has been very strong
Policy rate (%)



Source: Bloomberg, Goldman Sachs Global Investment Research

Investors often see bear markets, and the recessions that follow them, as fairly binary: you are either in one or not. But in reality, the scale and depth of bear markets vary quite a lot. To get a sense of the extent to which markets fall, and for how long, we look at our bear market framework first published in Share Despair (2002) and Bear Repair (2004).

Looking at the long-term history (using US data as a proxy), we find that there are different types of bear markets; each type is a function of different triggers and has distinct characteristics. We split bear markets into three categories.

- **Structural bear market** - triggered by structural imbalances and financial bubbles. Very often there is a 'price' shock such as deflation that follows.
- **Cyclical bear markets** - typically a function of rising interest rates, impending recessions and falls in profits. They are a function of the economic cycle.
- **Event-driven bear markets** - triggered by a one-off 'shock' that does not lead to a domestic recession (such as a war, oil price shock, EM crisis or technical market dislocation).

Exhibit 4 shows the previous bear markets and our classification.

Exhibit 4: US Bear markets & Recoveries since the 1800s

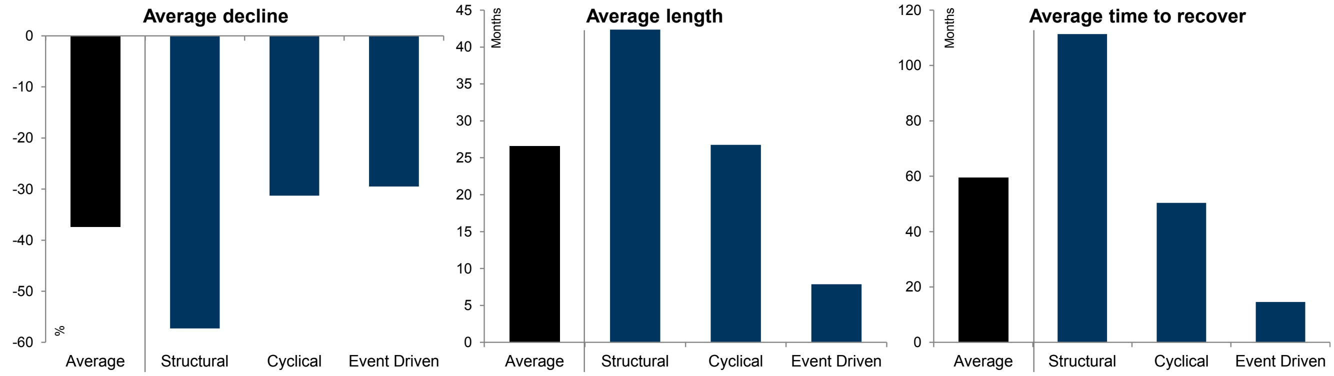
S = Structural, C= Cyclical, E = Event-driven

Type					Time to recover back to previous level		Volatility	
Type	Start	End	Length (m)	Decline (%)	Nominal (m)	Real (m)	Peak to trough	Trough to recovery
S	May-1835	Mar-1842	82	-56	259	-	13	17
C	Aug-1847	Nov-1848	15	-23	42	-	8	9
C	Dec-1852	Oct-1857	58	-65	67	-	19	25
C	Mar-1858	Jul-1859	16	-23	11	-	21	15
C	Oct-1860	Jul-1861	9	-32	15	-	31	17
C	Apr-1864	Apr-1865	12	-26	48	-	14	8
S	Feb-1873	Jun-1877	52	-47	32	11	11	11
C	Jun-1881	Jan-1885	43	-36	191	17	9	11
C	May-1887	Aug-1893	75	-31	65	49	10	12
C	Sep-1902	Oct-1903	13	-29	17	22	9	10
E	Sep-1906	Nov-1907	14	-38	21	250	15	11
C	Dec-1909	Dec-1914	60	-29	121	159	9	12
C	Nov-1916	Dec-1917	13	-33	85	116	12	12
C	Jul-1919	Aug-1921	25	-32	39	14	15	10
S	Sep-1929	Jun-1932	33	-85	266	284	30	20
S	Mar-1937	Apr-1942	62	-59	49	151	20	10
C	May-1946	Mar-1948	21	-28	27	73	14	12
E	Aug-1956	Oct-1957	15	-22	11	13	11	11
E	Dec-1961	Jun-1962	6	-28	14	18	17	10
E	Feb-1966	Oct-1966	8	-22	7	24	12	10
C	Nov-1968	May-1970	18	-36	21	204	11	12
S	Jan-1973	Oct-1974	21	-48	69	148	18	13
C	Nov-1980	Aug-1982	20	-27	3	8	14	24
E	Aug-1987	Dec-1987	3.3	-34	20	20	53	16
C	Jul-1990	Oct-1990	3	-20	4	4	20	17
S	Mar-2000	Oct-2002	30	-49	56	56	22	13
S	Oct-2007	Mar-2009	17	-57	49	49	37	19
E	Feb-2020	Mar-2020	1	-34	5	5	80	29
C	Jan-2022	Jun-2022	5	-23			25	
Average			**26**	**-37**	**58**	**77**	**20**	**14**
Median			**17**	**-32**	**35**	**36**	**15**	**12**
Average Structural			**42**	**-57**	**111**	**116**	**22**	**15**
Average Cyclical			**25**	**-31**	**50**	**67**	**15**	**14**
Average Event Driven			**8**	**-29**	**13**	**55**	**32**	**15**

Source: Datastream, Robert Shiller, Goldman Sachs Global Investment Research

In terms of profiles, the average cyclical and event-driven markets generally tend to fall around 30%, although differ in terms of duration. Cyclical bear markets last an average of two years and take around five years to fully rebound back to their starting point, while the event-driven ones tend to last around six months and recover within a year. The structural ones are by far the worst. The average declines are around 60% playing out over three years or more and tend to take a decade to fully recover (in nominal terms).

Exhibit 5: US bear markets & recoveries since the 1800s



Source: Goldman Sachs Global Investment Research

A Cyclical Bear

So the obvious question: what type of bear market is this?

Most types of bear markets have been quite clear. The sheer scale of the US housing bubble and the deleveraging of private sector balance sheets in 2008 made the global financial crisis a very typical structural bear market in terms of drivers as well as in its profile (length, depth and duration). The pandemic-led bear market had all the hallmarks of a classic event-driven bear – it was triggered by an exogenous shock that derailed a classic cycle, and it was short and sharp but recovered very quickly. Some bear markets start as event driven but then transition into a more cyclical bear market.

Exhibit 6 shows some of the characteristics common pre and post the different kinds of bear markets in the past.

Exhibit 6: Characteristics of different types of bear markets

Pre Bear	Cyclical	Event	Structural	Current
Rising rates	✓	Maybe	✓	✓
Exogenous shock	Maybe	✓	Maybe	✓
'Speculative Rise' in equity prices	×	×	✓	Selective
Economic Imbalances	×	×	✓	✓
Rising productivity	Maybe	-	✓	×
Unusual strength in economy	×	×	✓	×
' New Era' belief	×	×	✓	×*
Post Peak	**Cyclical**	**Event**	**Structural**	**Current**
Economic recession/downturn	Usually	Maybe	Usually	Not yet
Profits collapse	✓	Maybe	✓	Not yet
Interest rates fall & trigger rise in equity prices/fall in bonds	✓	Usually	×	May 2023**
Price shock	×	×	✓	✓

** Some pockets of the market like Cypto and Non-Profitable tech companies have shown signs of 'New Era' belief, but not the broader market*

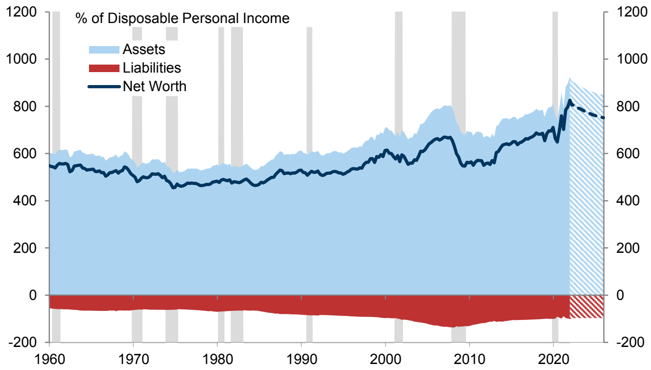
*** Current market pricing of Fed Funds Future*

Source: Goldman Sachs Global Investment Research

We view the current bear market as cyclical one. True it has some characteristics of an event-driven bear (e.g. the impact of the Russian invasion of Ukraine) and, arguably, the scale of the speculative rises that preceded it (particularly in unprofitable tech and crypto currency) displayed some of the typical patterns of a structural bear market. But we would not describe it as structural.

There are some very important underlying supports for this categorization. Private sector balance sheets are unusually robust (households, corporates and banks), the labor market remains strong, and despite the scale of some of the price falls there has not been a systemic shock and credit markets remain orderly.

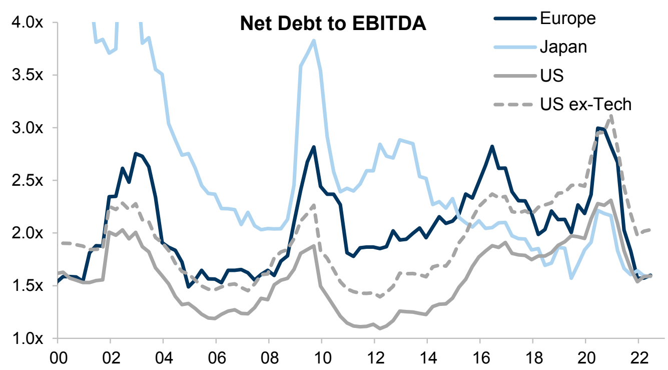
Exhibit 7: US household net worth is near all-time highs
Household net worth as % of disposable personal income - Grey bars indicate NBER recessions



*Dotted and diagonal lines indicate GS forecast based on income, saving, and asset return assumptions

Source: Bureau of Economic Analysis, Federal Reserve Board, US Bureau of Labor Statistics, Goldman Sachs Global Investment Research

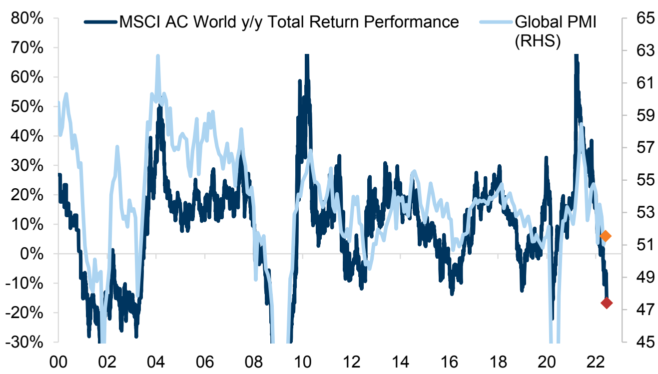
Exhibit 8: Net debt to EBITDA has decreased
Net debt to EBITDA, ex financials



Source: Datastream, Worldscope, Goldman Sachs Global Investment Research

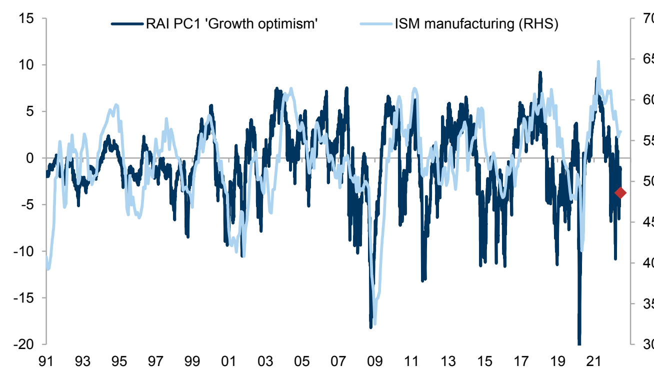
The main driver of a typical cyclical bear markets is that inflation and interest rates are rising and markets are pricing the risk of a recession. While it is difficult to be precise, it seems to us that most equity markets are pricing the risk of a mild (though not deep) recession. Simplistically looking at the way that the most cyclical companies have performed relative to the most defensive ones against current growth momentum indicators suggests that a move into contraction territory is reflected in markets. A similar message comes from the 'growth' component (PC1) from our risk appetite indicator.

Exhibit 9: The market is pricing a moderation in growth



Source: Datastream, Haver Analytics, STOXX, Worldscope, Goldman Sachs Global Investment Research

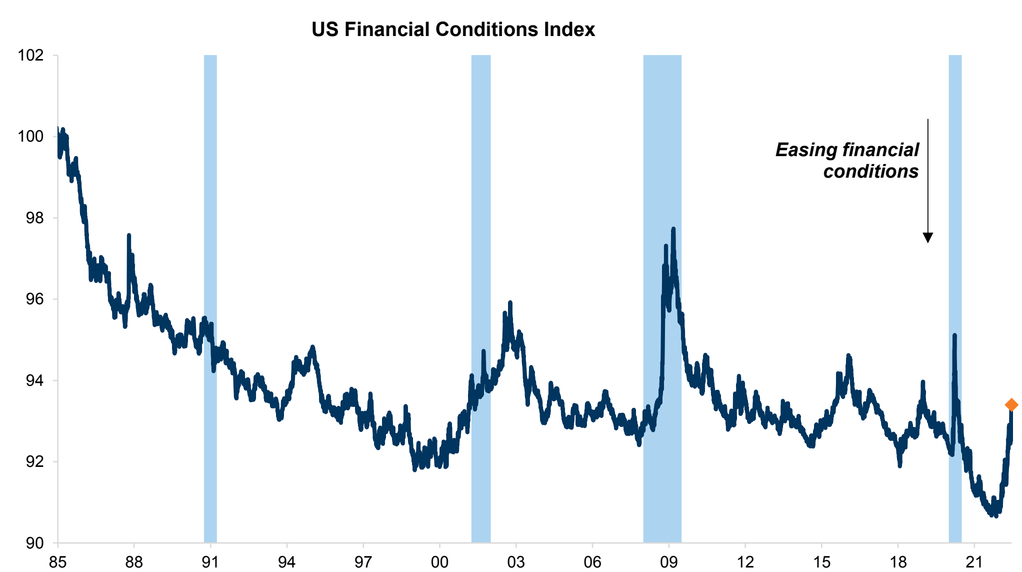
Exhibit 10: Growth optimism has already come down more than lead indicators



Source: Haver Analytics, Goldman Sachs Global Investment Research

Most bear markets end when economic conditions are still poor but there is a sense that they are no longer deteriorating at the same rate. In this context, we would argue that we have further to go, particularly on pricing potentially higher terminal rates and term premia in the bond markets. Even if eventually yields do not rise a lot further, it seems likely that the markets would at least price the risk that they will before we can see a genuine recovery. US financial conditions have tightened quickly, but are not tight by historical standards. This suggests either that rates need to rise further or markets need to price this risk (and de-rate further), which would tighten financial conditions anyway.

Exhibit 11: Financial conditions have sharply tightened, but are not yet 'tight' compared to longer term history
US Financial conditions indicator (FCI)



Source: Goldman Sachs Global Investment Research

A Cyclical Bear but Structural Change to a 'Post Modern' Cycle

While we believe that we are in the latter stages of a classic cyclical bear market (led by rising cost of capital and recession fears), we think that we are in the very early stages of a structurally different cycle.

We have described that 'traditional cycles' in much of the 19th and early 20th century were relatively volatile and short lived. Equities evolved into a 'Modern Cycle' driven by lower inflation and interest rates, independent central banks, globalization, lower volatility, longer cycles and higher profit shares of GDP.

We believe that the new cycle, what we describe as a '<u>Post Modern' Cycle</u>, will be different in a number of ways. We have laid out five areas that are likely to change through the cycle:

1. Inflation is a bigger risk than deflation – pushing up the cost of capital
2. Regionalization dominates over globalization
3. Resources become scarce with expensive labor and commodities – triggering investment
4. There is a need for more investment and capex, governments become more active
5. Investors focus more on margins than revenues.

In this 'Post Modern' Cycle, we also expect equity returns to be weaker as higher interest rates (nominal and real) imply smaller contributions for valuation. We expect a more 'Fat & Flat' than a secular bull market with more focus on alpha than beta.

What Causes Bear Markets to Turn?

No cycle is identical, but we have looked at data for bear markets back to the 1900s (using the US market as a proxy) to assess what causes bear markets to turn. We find four things:

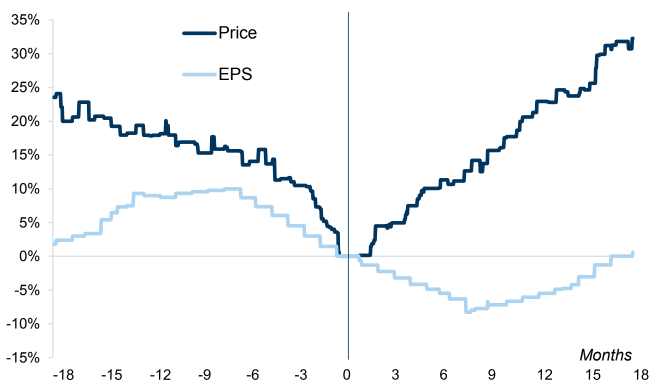
1) Earnings: Typically the market troughs about 6 to 9 months *before* the trough in EPS

Even as equity prices are falling at the outset of a bear market, EPS is often still rising – exactly what we have seen so far this year. Year-to-date, markets are down 20-30% but earnings have been growing at a fast rate, partly a function of the low starting point during the pandemic and partly a function of genuine upward EPS revisions. Companies have been more resilient and better able to pass on higher costs than analysts expected, and top-line growth in particular has surprised to the upside.

The 1Q earnings season was strong on both sides of the Atlantic and 2022 EPS has been revised up YTD by 3% for S&P 500 and 11% for STOXX 600. The weight of commodity sectors, especially in Europe, has helped push up EPS estimates (ex-commodities EPS estimates are up only 2% YTD in Europe). That said, we are starting to see signs that earnings are rolling over – this is especially true in more consumer facing areas and for some tech companies.

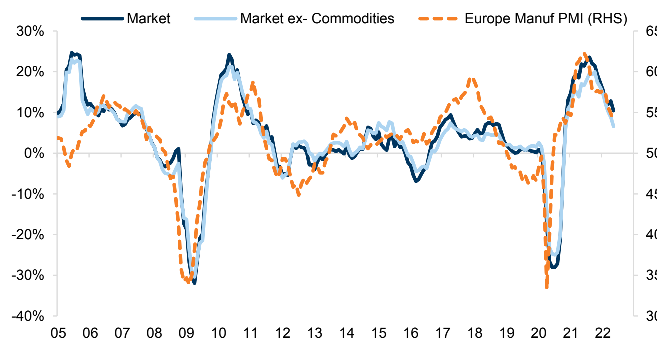
Typically, we find that the market troughs about 6 to 9 months before EPS troughs, meaning earnings keep falling even as the market starts to rally – we describe this as the 'Hope' phase. Earnings are still falling, prices are rising rapidly and valuation is the entire force behind returns (Exhibit 12).

Exhibit 12: Bear market price and EPS: Price recovers about 6-9 months before EPS starts to rise
Time 0 = Bear market low, Time in months (US bear markets since 1903)



Source: Robert Shiller, Goldman Sachs Global Investment Research

Exhibit 13: EPS revisions have started to moderate and we expect this to continue
European 12m fwd Net Income (6m revisions)



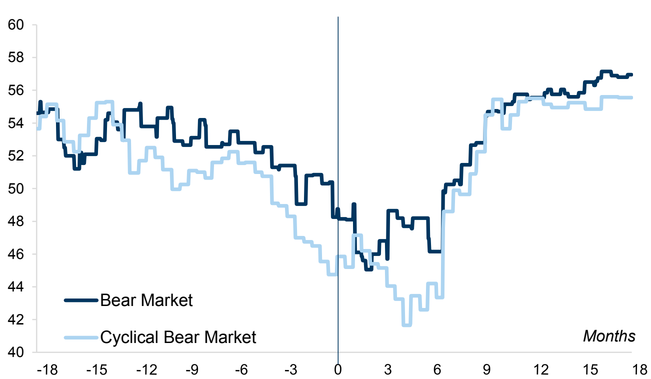
Source: Worldscope, Haver Analytics, Goldman Sachs Global Investment Research

2) The economy: Markets bounce one or two quarter before the economic nadir

We find bear markets start when the ISM is relatively high (mid 50s) and for the first 6-12 months of a bear market, the ISM often remains above 50, but in the last few months of the bear market typically the ISM has dipped below the 50 boom/bust threshold.

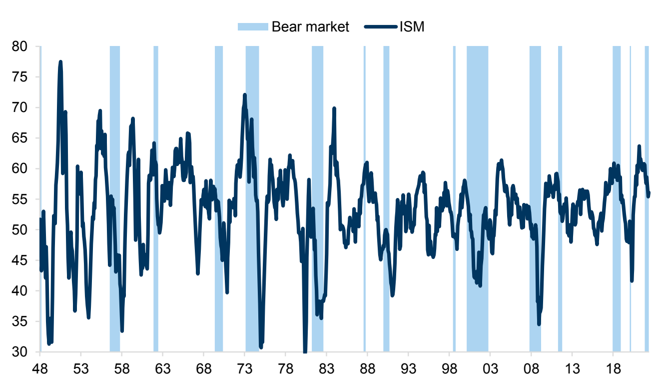
The bear market typically troughs when we are in recession but not yet at the nadir in terms of output. In cyclical bear markets especially, the ISM typically reaches a low point of about 40-44 (Exhibit 14). But by the time you get that low, the equity market has already bounced off the bottom and risen for a few months.

Exhibit 14: In cyclical bear markets especially, the ISM typically reaches a low point of about 40-44
Time 0 = Bear market low, Time in months (US bear markets since 1957)



Source: Haver Analytics, Goldman Sachs Global Investment Research

Exhibit 15: ISM around US bear markets



Source: Haver Analytics, Goldman Sachs Global Investment Research

3) Easing policy conditions: a clear catalyst to markets finding a floor

Every cycle is different but rate cuts or at least the expectations of them (2-year yields starting to fall) do seem to coincide with the low in the market.

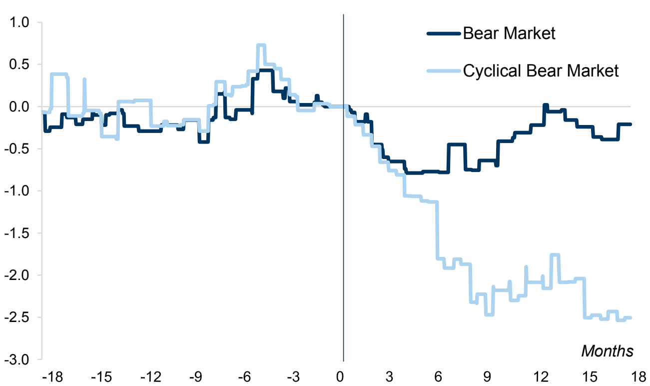
This has been especially true of cyclical bear markets – for structural ones rate cuts matter less as there are structural problems (over-levered balance sheets for example) to unwind which cutting rates will not solve.

Interestingly, even in the case of cyclical bear markets it is not clear that on average rates are rising sharply in the run up to the bear market – but they are certainly not falling (as we show below), and the fact the economy is starting to slow and even falling to recession but rates are not coming down is a tough combination for equities to digest.

The current environment is maybe worse than historical cyclical bear markets, given we have high and sticky inflation and central banks are responding with sharp rate hikes.

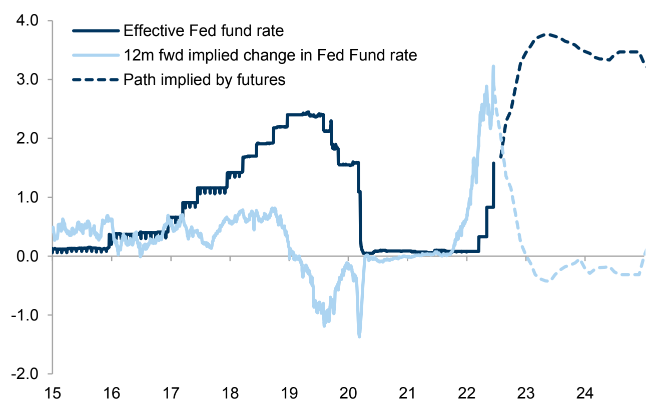
Our economists also find that in monetary policy-driven corrections, the market has on average tended to bottom when the Fed has shifted towards easing, regardless of whether economic activity has troughed (or not) - see Global Markets Daily: What Makes a Trough the Trough?

Exhibit 16: 2y bond yields typically reprice lower just as you see the bottom in cyclical bear markets...
2y US bond yields. Time 0 = Bear market low, Time in months (US bear markets since 1948)



Source: Haver Analytics, Goldman Sachs Global Investment Research

Exhibit 17: The market is pricing the first FOMC cut in H1-2023



Source: Bloomberg, Goldman Sachs Global Investment Research

4) Inflation: we regard inflation peaking as probably more a necessary than sufficient condition to see a turn in stock prices

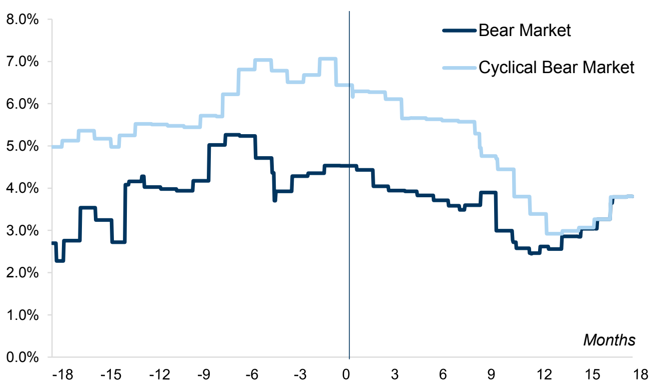
In Strategy Espresso: What happens post peak inflation?, we argue inflation needs to peak and start showing clear signs of moderating for the market to turn. Indeed, if easier policy is a required condition, then a requirement to get a policy switch is that inflation is starting to become less of a problem.

So far, inflation continues to surprise to the upside and inflation expectations in the consumer survey data have climbed. The more this continues, the more pressure there will be on Central Banks to tighten conditions given that rising long-term inflation expectations can feed into wages – especially given the tightness of labor markets.

Typically, inflation is worse in cyclical bear markets than other types of bear markets – just as we see today (Exhibit 18). And typically, inflation peaks around the time of the low in equities.

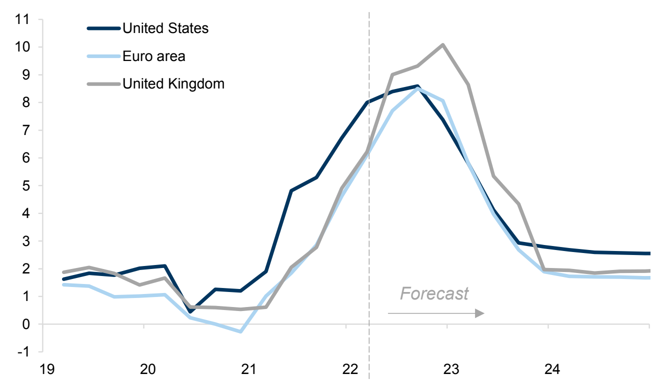
That said, as we discuss in our Strategy Espresso, inflation peaking is not always enough if you do not have other conditions in place – low valuations, a reasonable expectation that growth will turn and signs of policy beginning to ease.

Exhibit 18: Typically, inflation is worse in cyclical bear markets than other types of bear markets
US CPI yoy, level



Source: Haver Analytics, Goldman Sachs Global Investment Research

Exhibit 19: Inflation in the Euro Area is expected to peak later in the year
Y/Y headline inflation, with GS forecasts

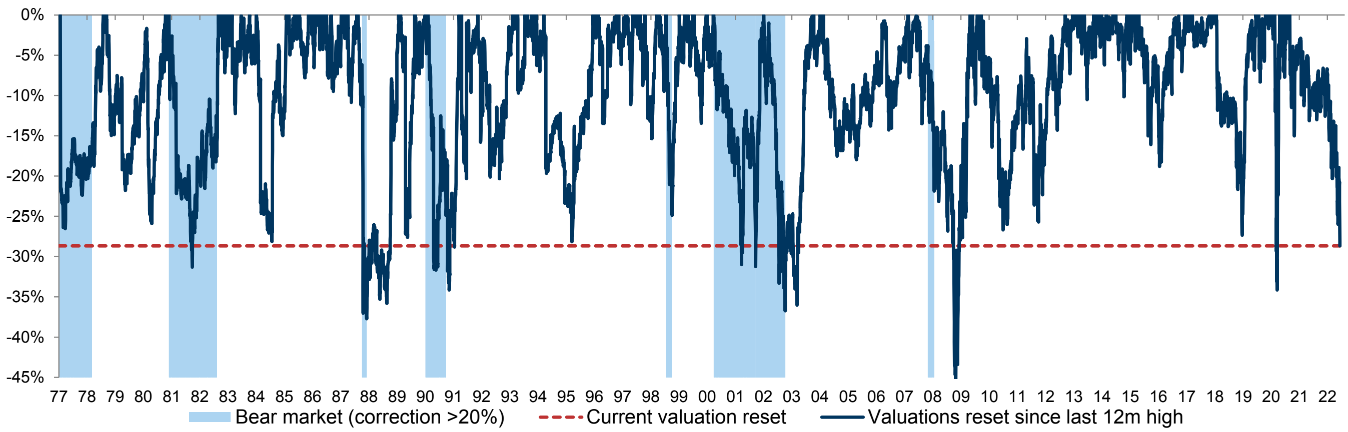


Source: Goldman Sachs Global Investment Research

Is There Value after the Falls?

The scale of the de-rating is comparable to some of the worst bear markets even though the level is still relatively high (especially in the US) (Exhibit 20). In some ways this makes sense as interest rates especially in real terms remain low. Valuations for the market in aggregate globally and the median stock have fallen sharply well below historical average - particularly outside of the US.

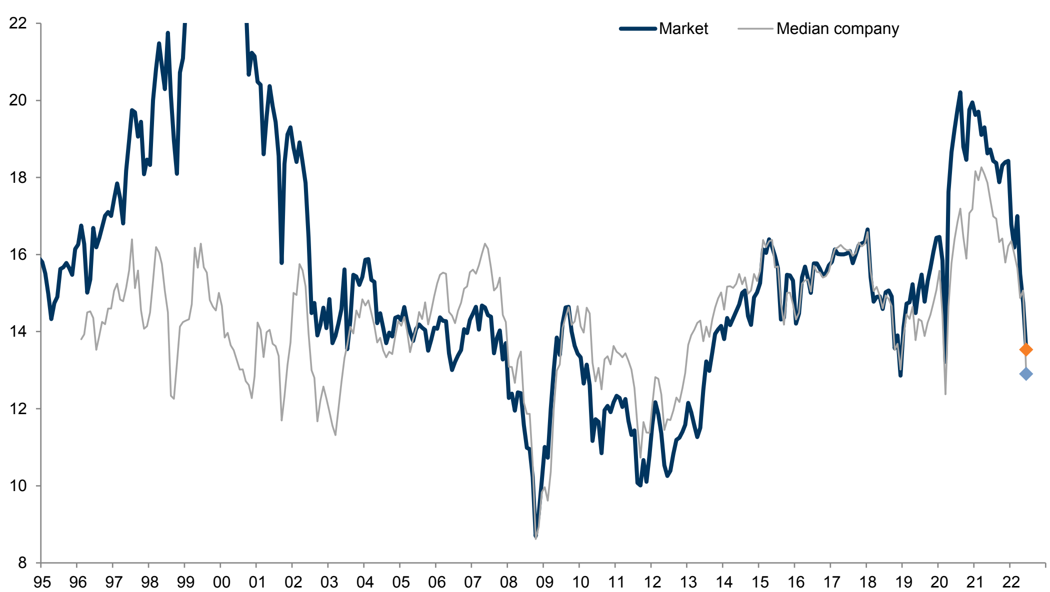
Exhibit 20: Valuation de-rating in equities
MSCI World NTM P/E change since last 12-month peak in valuation



Note: NTM P/E based on S&P 500 data before 1988

Source: I/B/E/S, Datastream, Goldman Sachs Global Investment Research

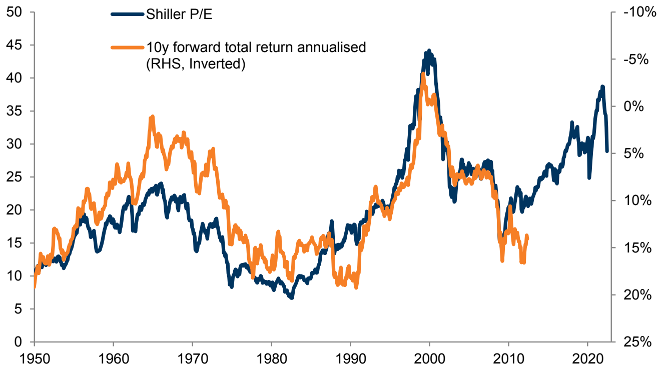
Exhibit 21: Valuation has fallen below average but remains above low in GFC or Sovereign crisis
12m fwd P/E, MSCI AC World - Market and Median stock valuation since 1996



Source: Datastream, I/B/E/S, Goldman Sachs Global Investment Research

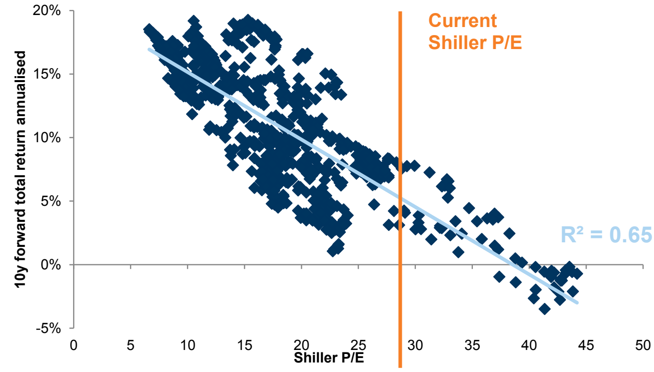
There are also more structural concerns about earnings this cycle given the move away from global supply chains, just in time inventory management, a tight labor market which may mean higher costs plus the rise in interest rates impinging on margins for more levered companies. The US in particular has enjoyed a decade and a half of exceptionally strong EPS growth driven by ever higher margins, and this is vulnerable to an environment with more scarcity of labor, escalating energy costs and more costly supply chains. We discussed some of these issues in the Post Modern cycle. The Shiller P/E – price over 10-year average earnings - is still relatively high in US and has been pointing to lower returns for some time (Exhibit 22).

Exhibit 22: Current valuations would imply much lower future returns
Relationship between US Shiller P/E and future equity returns



Source: Robert Shiller, Goldman Sachs Global Investment Research

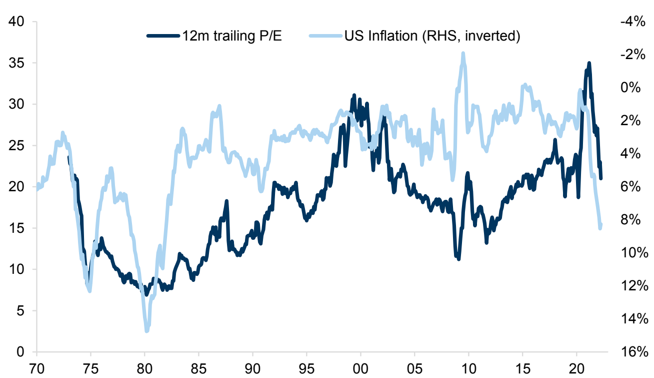
Exhibit 23: Correlation between cyclically adjusted P/E and forward returns (over 10 years)
S&P 500 since 1950



Source: Robert Shiller, Goldman Sachs Global Investment Research

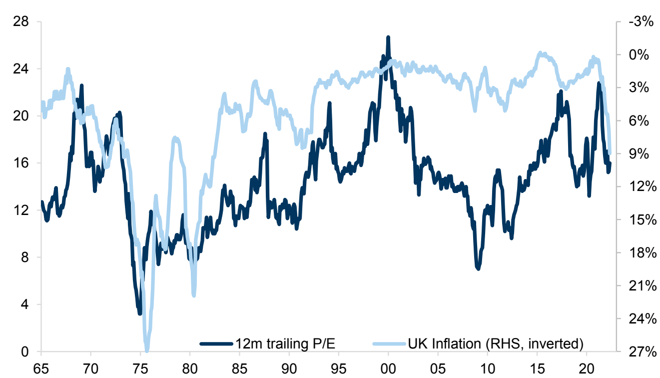
Periods of higher inflation are generally associated with lower equity valuations. Even if inflation does come down from the peaks, assuming it stays sticky and high and is higher than last cycle then it's likely that valuations - especially in the US - won't rise to the levels we saw last cycle when inflation was lower and less volatile. Indeed in the 1970s, the average PE in the US was 12.0x and in the UK 11.7x (based on trailing earnings).

Exhibit 24: The US trailing P/E ratio declined in the 1970s...
US 12m trailing P/E and headline CPI y/y inflation



Source: Datastream, Haver Analytics, Goldman Sachs Global Investment Research

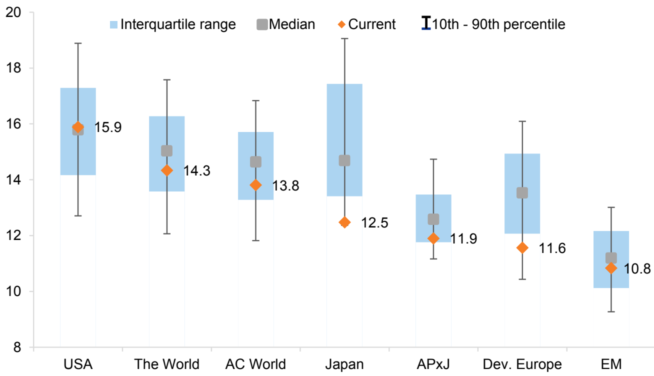
Exhibit 25: ... and the UK was similar
UK 12m trailing P/E and headline CPI y/y inflation (RPI before 1988)



Source: Datastream, Haver Analytics, Goldman Sachs Global Investment Research

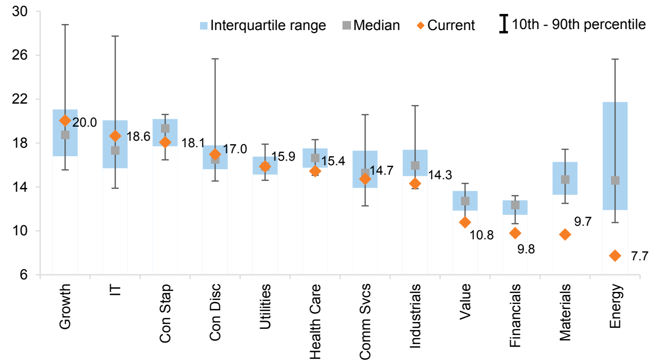
It's also worth looking at valuations regionally and by sector. Despite the sharp decline S&P 500 valuation is only in line with average (Exhibit 26). Outside of the US, global equities look more attractive - they trade below 12x P/E. They are not yet discounting a deep recession but they trade on roughly one standard deviation below their 10-y average which signals a positive asymmetry for medium-term returns. They extract their relative attractiveness from their exposure to key Value sectors: (1) Financials which remain cheap and are already discounting a recession and (2) Energy or Materials which are also cheap with their extremely high earnings given high commodity prices (Exhibit 27). This low valuation should remain a buffer if the bear market continues and their short duration should also protect as financial conditions continue to tighten.

Exhibit 26: Valuation ranges (MSCI Regions) over a 10-year timeline
12-month forward price to earnings multiple



Source: FactSet, Goldman Sachs Global Investment Research

Exhibit 27: MSCI World sector/style valuations
12-month forward P/Es relative to the last 10 years



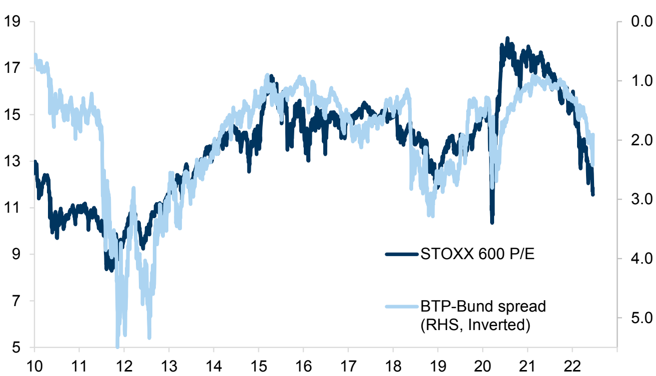
Source: FactSet, Goldman Sachs Global Investment Research

Of course European equities tend to be higher beta and therefore more sensitive to recessions. The European indices have a greater weight in capital-intensive companies and in financials and other cyclicals.

It's still the case that European equities have a close link to sovereign spreads – and these have come back into focus in recent weeks as the ECB has started to withdraw policy support (Exhibit 28). In addition, greater dependency on Russian gas and more direct exposure to the conflict in Ukraine are weighing on European valuations.

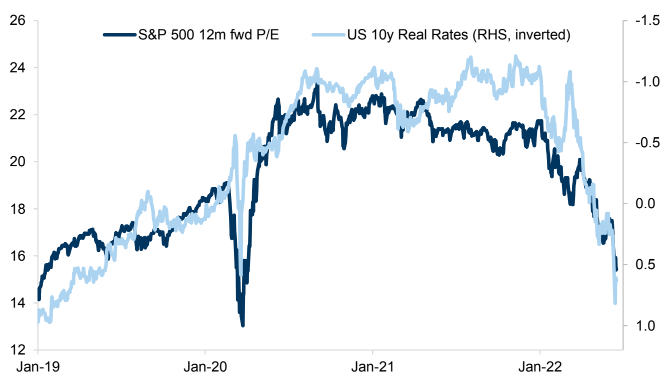
For Europe, there is more dependency on sovereign spreads and general risk factors; for the US, there is a stronger link with real UST yields (Exhibit 29)

Exhibit 28: For Europe, there is more dependency on sovereign spreads and general risk factors...
STOXX 600 12m fwd P/E and BTP-Bund spread (pp)



Source: Datastream, STOXX, Goldman Sachs Global Investment Research

Exhibit 29: ... while the S&P 500 valuation is closely following the path of real rates



Source: Datastream, Bloomberg, Goldman Sachs Global Investment Research

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Reg AC

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