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The Post-Pandemic Cycle: Part 1

The New Alpha Bet

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- **Not all bull markets are the same.** There have been three powerful **secular super cycles** in equities since World War II: 1945-1968, 1982-1999 and 2009-2020. Each was driven by a combination of one or more of the following: very strong growth, falling interest rates, low starting valuations together with rising profit margins.
- **The post-pandemic cycle** starts from a position of record low interest rates, high valuation and high margins, **implying lower longer-term returns with a 'fat & flat' profile.**
- Aggregate returns are likely to be lower than the last cycle but **relative returns compared with bonds should be higher** with less deflationary risks reducing equity risk premia.
- In the absence of falling interest rates, rising margins and higher valuations, we expect **equity markets to become less bifurcated by factor (e.g., Growth versus Value), by sector (Technology versus Banks) and by region (US versus non-US)** than in the last cycle. Instead, we expect greater **opportunities for Alpha generation** as the broadening of the digital revolution across industries, coupled with the increased focus and spending on decarbonisation, drives wider differences between relative winners and losers across the market and within sectors.
- The opportunity set for Alpha generation should improve across and within industries driven by a combination of **1) new areas of technological innovation, 2) companies disrupting non-tech industries, 3) companies enjoying new demand growth from green capex and 4) companies in disrupted industries that adapt to change, opening up new growth streams that generate re-rating.**

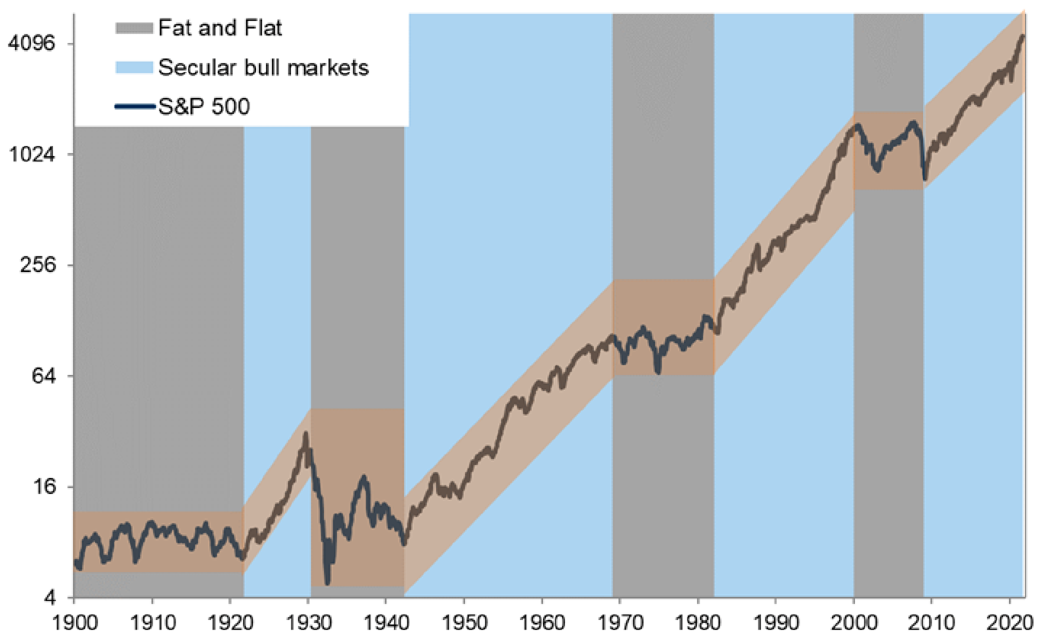
This paper is the first part of a 3-part series looking at the Post-Pandemic Cycle. *In Part 2, we will look at Technology, the leader of the market in the past cycle, and discuss what history can teach us about the endurance of dominant Tech companies and the threats to their growth from disruption and regulation. In Part 3, we will look at new engines of growth and value creation, identifying companies that match these areas of demand across and within sectors.*

Secular & Cyclical market drivers

Most equity cycles revolve around economic cycles but, cutting across these, and often lasting longer than a single cycle, there can also be powerful and long-lasting secular trends. Generally, these are a function of structural shifts in both macro-economic and political conditions. Just as the cycle tends to be broken down into distinct phases during which returns vary and are driven by different factors (see: Global Macroscope: Leadership in the New Cycle, June 14, 2021), longer-term secular trends can determine the strength of the overall market return, as well as which sectors or factors lead or lag the index.

A log scale of the S&P equity index since 1900 (Exhibit 1) shows that, while prices have trended higher over time, the most significant gains are concentrated in specific periods. **For simplicity, it can be argued that there have been three long 'super cycles', or secular bull markets,** since World War II. Each of these has been punctuated by occasional sharp drawdowns and (often quite sharp) 'mini' bear markets (Exhibit 1).

Exhibit 1: Secular & non-trending bull markets
S&P 500 (log scale)



Source: Robert Shiller, Goldman Sachs Global Investment Research

For example, the secular bull market of 1982–2000 was interrupted by the crash of 1987, the Savings and Loan crisis in the late 1980s, the bond crisis in 1994 (when 30-year US treasury yields rose around 200bp in just nine months), and the Asia crisis of 1998. **But one can still consider these periods as part of a secular 'super cycle' in which a powerful structural bull market, driven by some very favourable structural factors, remained uninterrupted over long periods of time, even during the corrections.**

1) 1945-1968 — Post-war boom

This period was dominated by the powerful post-war economic boom and is often referred to as 'The Golden Age of Capitalism'. It was supported by the United States' initiative to aid Europe economically through the Marshall Plan (or the European

Recovery Plan), which helped to boost growth and reduce unemployment. Productivity growth was strong, particularly in Europe and East Asia, and the post-war 'baby boom' further strengthened demand.

While the economic environment was conducive to strong returns in equity markets in this period, valuations also recovered from their post-war levels aided by a secular decline in the equity risk premium as many of the risks to the global system faded. New international institutions and a rule-based global trading system emerged.[1] The setting up of the International Monetary Fund (IMF) and the World Bank, and the Bretton Woods monetary system, helped to reduce uncertainty. Meanwhile, global trade was strengthened and expanded by stronger institutional frameworks, such as the General Agreement on Tariffs and Trade (GATT), created in 1948, and the United Nations Conference on Trade and Development (UNCTAD), founded in 1964. In that same year, the sixth round of GATT negotiations started, commonly referred to as the Kennedy Round of multilateral trade negotiations. By 1967 the negotiations had resulted in cuts to trade tariffs by an average of 35-40% on many items, and were widely described at the time as 'the most important trade and tariff negotiation ever held'.[2]

Throughout the 1960s, the emergence of fast-growing global companies also spurred confidence in the stock market, and in the so-called 'Nifty Fifty' stocks in the United States in particular. The idea behind investing in these stocks was that you need never worry about valuation because these companies either had strong earnings growth or high expectations of strong growth in the future, and many also had strong brands.

As the 1960s progressed, the US Dollar, which was fixed in value against gold under the Bretton Woods system of fixed exchange rates, became overvalued. A significant increase in public spending in the US, as a result of President Lyndon Johnson's Great Society programmes and increased military spending to fund the Vietnam War, put further stress on the system. The Gold Standard had come under significant pressure by the late 1960s and was finally dissolved by President Richard Nixon in 1971, when he announced a 'temporary' suspension of the Dollar's convertibility into gold.[3] The 'Nifty Fifty' stock bubble burst.

In most equity markets, prices had already reached a plateau around 1966 after an astonishing rise over the previous 15 years (in the US and UK especially). In the US in particular, the peak came in 1968. The bear market that followed was structural in nature and the US market declined in real terms by 75% between 1966 and 1982, triggered for the most part by sharply rising inflation and interest rates. But, as in the case of the bear markets of the 1930s and 1940s, it was really at least two bear markets rolled into one. Political and economic shocks were again a key feature. In 1973, the Watergate scandal in the US increased market uncertainty, and by October that year the Arab–Israeli War, together with an OPEC oil embargo and industrial unrest, had fuelled

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1 Post-war reconstruction and development in the Golden Age of Capitalism. (2017). *World Economic and Social Survey 2017.*

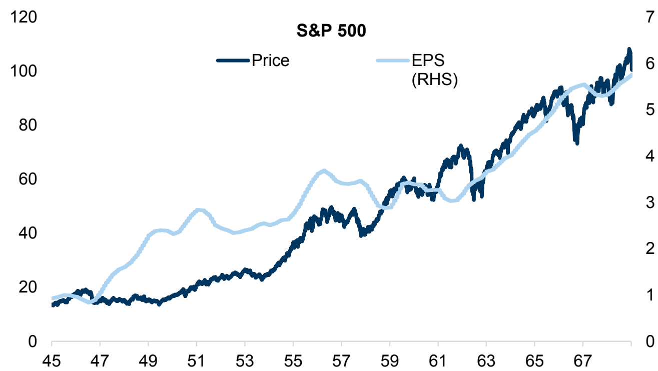
2 Norwood, B. (1969). The Kennedy round: A Try at Linear Trade Negotiations. *Journal of Law and Economics*, 12(2), pp. 297-319.

3 The end of the Bretton Woods System. *IMF*, [online]. Available at: https://www.imf.org/external/about/histend.htm.

further market instability.

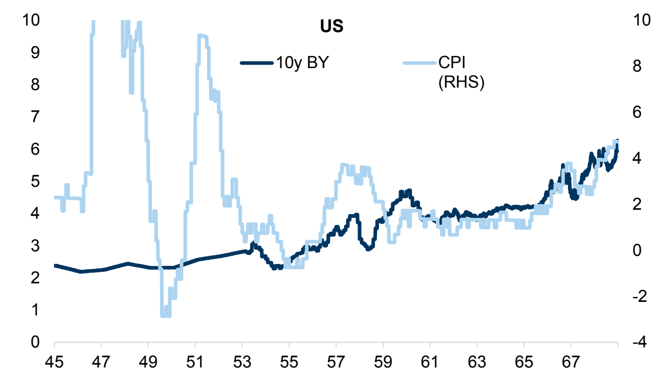
By the end of the 1970s, stock markets had enjoyed some sharp rallies. In the US, Ronald Reagan's defeat of Jimmy Carter in November 1980 and Republican control of the Senate were viewed as market-friendly. For the first time since 1976, the Dow Jones index rose back through 1000. But the enthusiasm did not last. A further sharp round of interest rate hikes (the Fed raised its discount rate to an all-time high of 14%) forced another sharp fall in the stock market and most economies around the world entered another recession. During 1981, inflation, high unemployment and economic stagnation sent stocks throughout the world down to further lows.

Exhibit 2: Post-war boom
S&P 500 Price and EPS



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

Exhibit 3: Post-war boom
US Bond Yield and Inflation



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

2) 1982-2000 — Disinflation and moderation

Tackling inflation was one of the key drivers of this secular bull market post 1982. In particular, some have argued that investors suffered from 'money illusion' after the great inflation of the 1970s. This resulted in two errors: first, investors capitalised future earnings at the then (very high) nominal rate rather than the real rate and, second, they failed to take account of the gains that were generated by depreciating the real value of nominal liabilities (Modigliani and Cohn).[4] Certainly, sharp rises in inflation in the 1970s had contributed to the collapse of valuations in both bond and equity markets. This inflationary era, which had been so damaging to financial markets, came to a close partly as a result of the so-called Volker credit crunch (a period known for the recession caused by the Fed tightening cycle that started in 1977), which took US Fed funds rates (policy rates) from around 10% to close to 20%. From that point, inflation started to fall around the world and, coupled with a vigorous recovery in economic activity from a deep recession, confidence – and asset valuations – started to rise. **From August 1982 to December 1999, the compound real return on the Dow Jones Industrial Average was 15% per year, well in excess of long-run average returns**, or indeed the increase in earnings or book value over the period.[5] Much of this secular bull market therefore

4 Modigliani, F. and Cohn, R. A. (1979). Inflation, Rational Valuation and the Market. *Financial Analysts Journal*, 35(2), pp. 24-44.

5 Ritter, J. and Warr, R. S. (2002). The Decline of Inflation and the Bull Market of 1982–1999. *Journal of Financial and Quantitative Analysis*, 37(01), pp. 29-61.

reflected valuation expansion – a phenomenon that pushed up both equity and fixed income (bond) returns at the same time.

The 1980s also experienced a wide range of de-regulation, reform and privatisation under the Reagan and Thatcher administrations in the US and the UK, respectively. In the US, the Economic Recovery Act of 1981 brought in significant tax reform, which resulted in top-rate income taxes falling from 70% in 1980 to 28% in 1986. Non-defence spending also fell dramatically and several industries were de-regulated, including in the air transport and financial sectors, as the partial repeal of the Glass–Steagall Act of 1933 removed barriers in the financial markets industry that had prevented institutions from combining across banking, securities and insurance businesses. Similar reforms were instituted in the UK, alongside a comprehensive programme of privatisation of a wide array of assets, including utilities. The effect was far-reaching. Companies in public ownership in the UK accounted for 12% of GDP in 1979 but around just 2% by 1997.[6] By the mid-1990s the trend for privatisation had spread to the rest of Europe, even reaching Socialist-led governments such as that of Lionel Jospin in France, which launched a $7.1 billion initial offering of France Telecom in 1997 and made a $10.4 billion secondary offering a year later (as the fervour for Telecom companies accelerated around the expanding Technology bubble).

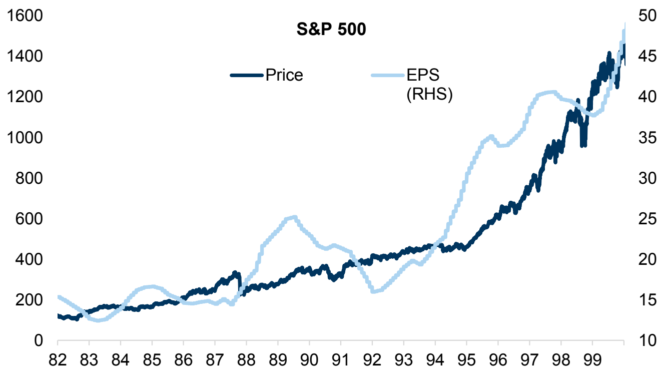
The secular trend was punctuated temporarily by a (sharp but short-lived) crash in 1987 before lower interest rates and a continuation of economic growth pushed equities to all-time highs.

The continuation of the re-rating of equities was spurred by the fall of the Berlin Wall in 1989 and, soon after, the unravelling of the Soviet Bloc. The Dax, the main German stock market index, surged by 30% between October 1989 and July 1990. As a consequence, a more integrated global economy emerged in the 1990s. Throughout this period, equity markets enjoyed a decline in the discount rate; **not only did interest rates stay low as a result of the purging of global high inflation, but the end of the Cold War helped push the equity risk premium down further (the required hurdle rate for investing in risky assets compared with low-risk bonds).**

This strong secular bull market was buffeted once again by the 1998 Asia crisis but a decisive policy response resulted in looser money, which helped to propel the Technology bubble of the late 1990s. When this bubble eventually burst, it brought to an end the secular uptrend that had started in 1982.

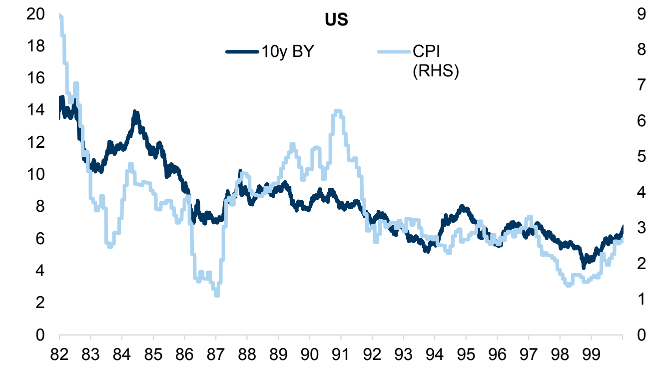
[6] Privatisation in Europe, Coming Home to Roost. (2002). *The Economist.*

Exhibit 4: Disinflation and moderation
S&P 500 Price and EPS



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

Exhibit 5: Disinflation and moderation
US Bond Yield and Inflation



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

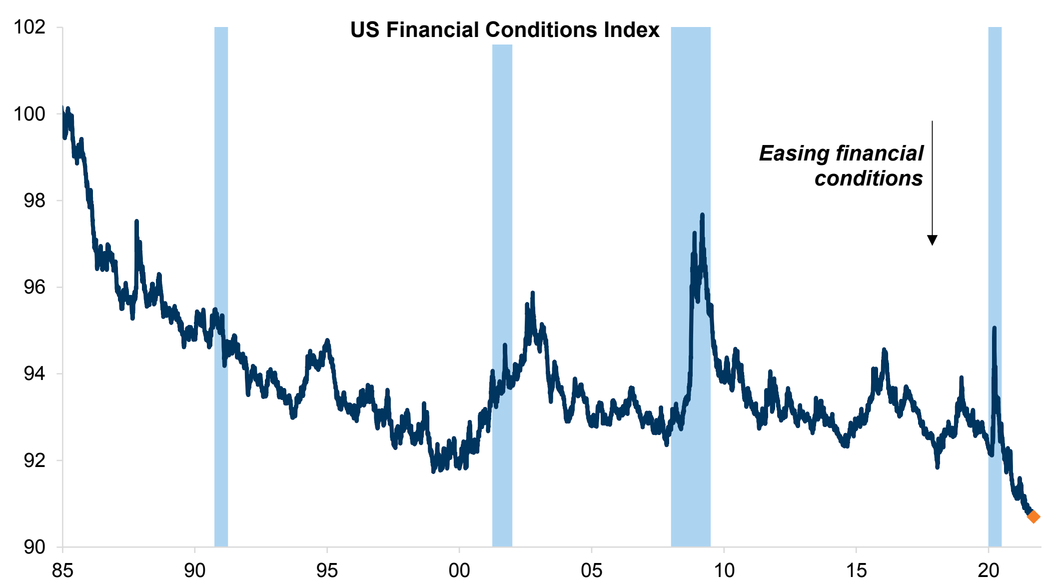
3) 2009 onwards — The start of QE and the post-financial-crisis recovery

The secular drivers of risk assets shifted materially in the period after the Technology bubble burst in the late 1990s. Ever since the start of the current century, the dominant structural driver of financial assets has been the combination of falling inflation expectations and interest rates, generally pushing up equity and bond valuations.

But the fortunes of equity markets changed in the aftermath of the financial crisis and the start of quantitative easing (QE) and zero rate policies. **Having collapsed by 57% from its 2007 peak, the S&P 500 started a powerful recovery that was to result in one of the longest bull markets in history.** Part of the strength of the recovery, as with that from the early 1990s, was a function of the scale of the declines in the economy and market that had preceded it. In the US in particular, the collapse in the housing market had resulted in a huge loss of household wealth. With more than $1 trillion in sub-prime mortgages outstanding, the spread of losses throughout the economy and financial institutions was significant. At the same time, according to then Fed Chair Ben Bernanke, 'too-big-to-fail financial institutions were both a source (though by no means the only source) of the crisis and among the primary impediments to policymakers' efforts to contain it'.[7] Between 2007 and 2010, the median wealth of a household in the United States fell 44%, resulting in levels falling below those of 1969. **Stock prices had also fallen sharply, leaving them relatively cheap and offering significant valuation expansion possibilities in light of the start of QE and the resulting collapse in financial conditions** (Exhibit 6).

[7] Bernanke, B. (2010). *Causes of the Recent Financial and Economic Crisis*. Testimony Before the Financial Crisis Inquiry Commission, Washington, D.C.

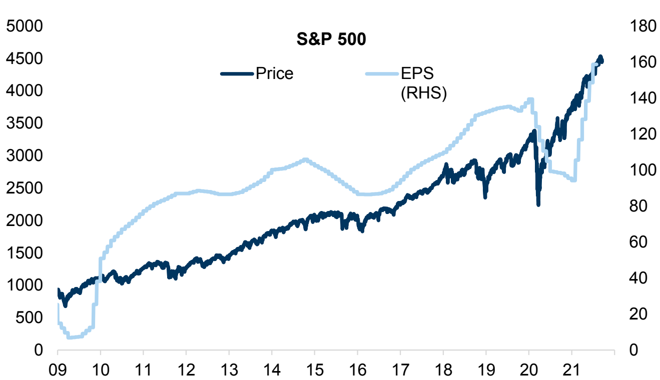
Exhibit 6: US financial conditions are remarkably easy
Shaded areas: US NBER recessions



Source: Bureau of Economic Analysis, Haver Analytics, Goldman Sachs Global Investment Research

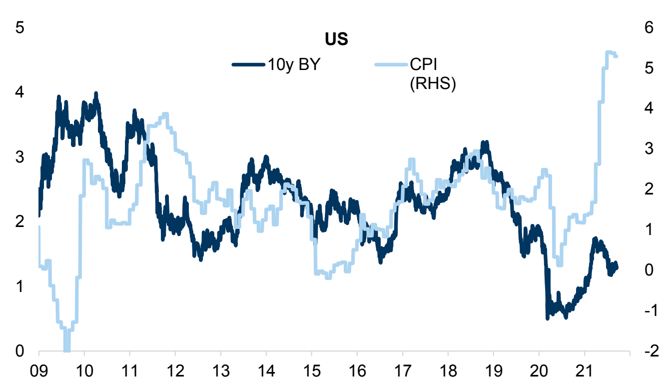
What each of these have in common is a combination of low starting valuation, falling or low cost of capital and a low starting margin. Generally, strong economic growth and regulatory reforms also played a part in reducing the risk premium in equity markets; in the decades from 1980, a combination of supply-side reforms, technological change and globalisation also pushed up margins. The post-financial-crisis cycle extended most of these trends.

Exhibit 7: The start of QE and the post financial crisis recovery
S&P 500 Price and EPS



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

Exhibit 8: The start of QE and the post financial crisis recovery
US Bond Yield and Inflation



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

Flatter bull markets

While strong directional bull markets have dominated periods in history, in particular when interest rates have fallen, not all bull markets are as strong and the directional trajectory of the equity market has often been much flatter. This does not mean that equities are a bad investment during these phases since they tend to deliver the cost of equity, but the opportunities are often more Alpha-driven than Beta-driven during these periods.

In general, we distinguish between two types of less directional bull markets:

- **'Fat & Flat' markets: low but positive aggregate returns over a period of time but punctuated with large cyclical swings.** These are not uncommon and have often characterised the periods between the secular bull markets.
- **'Skinny & Flat' markets: a period of positive but low returns within a narrow trading range.** We find several good examples of relatively flat (low return) and relatively skinny (no bear markets, no bull market with >25% return over less than 2 years) periods. Since 1970, Europe has had a 'Skinny & Flat' market for roughly 30% of the time, compared with c. 20% for the US market since 1945 – see: Global Strategy Paper: Making Cents; The Cycle & the Return of Low Returns, September 4, 2018.

There are good reasons to believe that the next decade will be one that generates lower aggregate returns and is more of a fat & flat market environment than a secular bull market. Three factors, in particular, point to lower future index returns.

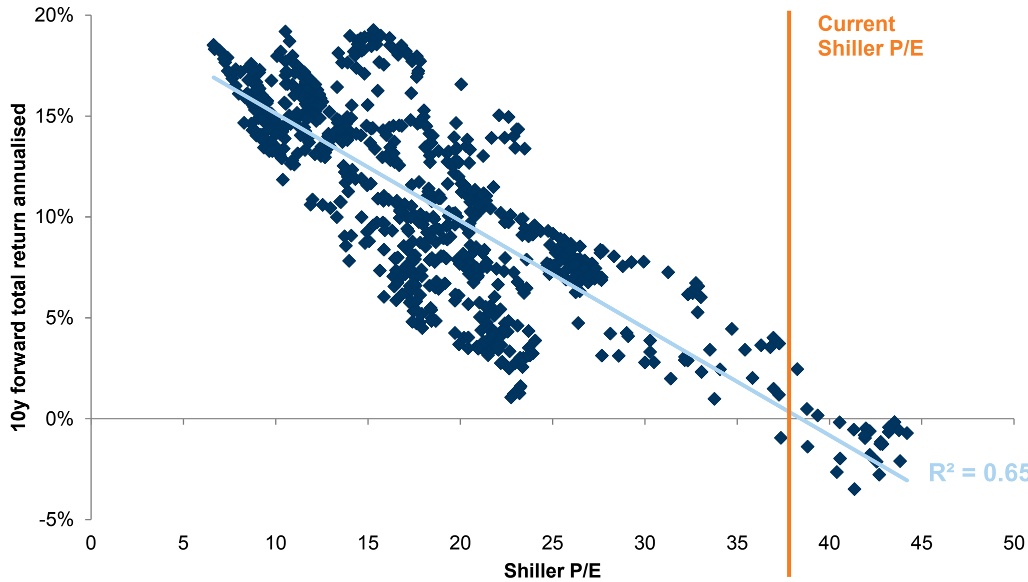
1. Valuations are high.
2. Interest rates are very low.
3. Margins are high.

1. Valuations are high

Valuations have a significant impact on returns over the longer term. The end of the final decade of the last century (when the Technology bubble burst) was one of unusually strong economic and profit growth in most regions. Inflation was generally low and stable and, in the US and Europe, profit shares of GDP and return on equity (ROE) rose to record highs. Despite all of this, if an investor had bought equities towards the height of the boom, when investors were at their most confident, they would have received very poor returns over the subsequent decade. By contrast, these fundamentals were much poorer during much of the 1980s, but equity returns were much higher. Much of the explanation comes down to valuations. Understandably, **great valuation peaks (1929, 1968, 1999) tend to be followed by very poor returns on a risk-adjusted basis, while very low returns, at market troughs (1931, 1974, 2008) tend to be followed by strong returns.**

Higher valuations imply either greater risk of a correction/bear market, or a sustained period of low returns in the future. The read-across from valuation to future returns varies from one measure to another, and is also a greater predictor of medium-term returns than those in the short term. For example, once again based on US data, the R-squared between the Shiller (CAPE) P/E (real price/10-year average real earnings) and 10-year future equity returns is very high (roughly 0.70). Meanwhile, the R-squared is 0.20 for 2-year returns, 0.40 for 5-year and 0.60 for 20-year (Exhibit 9).

Exhibit 9: Correlation between cyclically adjusted P/E and forward returns (over 10 years)
S&P 500 since 1950



Source: Shiller, Goldman Sachs Global Investment Research

The current cycle is unusual as it is starting with high valuations for equities and other asset markets, primarily owing to historically low interest rates. **The rise in stock market valuations relative to GDP has reflected significant falls in bond yields and again suggests more muted aggregate future returns** (Exhibit 10).

Exhibit 10: Global equities have reached a record high valuation vis-à-vis global GDP
Orange diamond: current Global market cap as % of 2022 World GDP (GS forecast)

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

From a valuation perspective, therefore, it is likely that the next decade will see lower absolute returns in equities, and indeed other financial assets, than in the

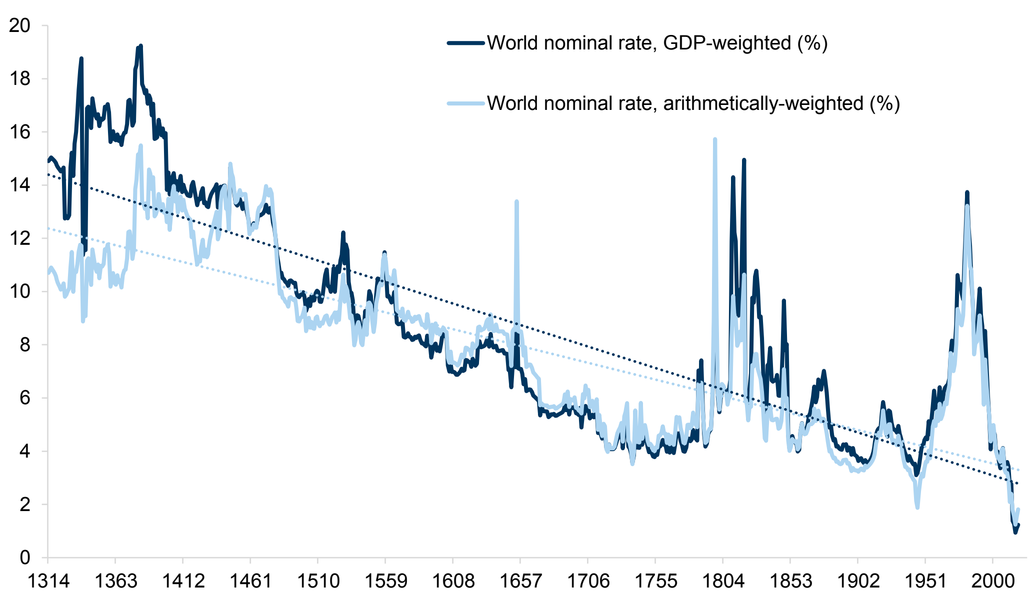
past decade. That said, the relative return, or ex post equity risk premium, is likely to be higher in our view.

2. Interest rates are very low

It is difficult to exaggerate how low interest rates and bond yields are from an historical perspective (Exhibit 11). The secular falls in interest rates since the early 1980s had their roots in the concerted efforts of the Volcker Fed to squeeze out inflation in the early 1980s, but were followed by a series of other important factors. The collapse of the Soviet Union and German reunification in the late 1980s widened the global pool of labour supply. A fear of investment moving East, to take account of cheaper labour, resulted in less aggressive wage-bargaining by unions in both Europe and the US. The Asian and emerging market crisis of 1998 and collapse in commodity prices also played a part, as, of course, did the rapid developments in technology and evolution of the internet that gathered pace during the 1990s. A further significant factor was the entry of China into the WTO in December 2001, coming at a time shortly after the collapse in world stock markets with the bursting of the Technology bubble. In 2008, the financial crisis further drove down investment and interest rates, resulting in the shift in monetary policy towards zero interest rates and QE. Ageing populations in developed economies may also play a part.

Most recently, the collapse in economies as a result of the COVID pandemic has resulted in a yet further decline in inflation expectations (until relatively recently) and in falls both in nominal and real yields.

Exhibit 11: Nominal interest rates are at record low levels
Nominal bond yields, GDP- and arithmetically-weighted, 1314-2018



Source: Bank of England, Goldman Sachs Global Investment Research

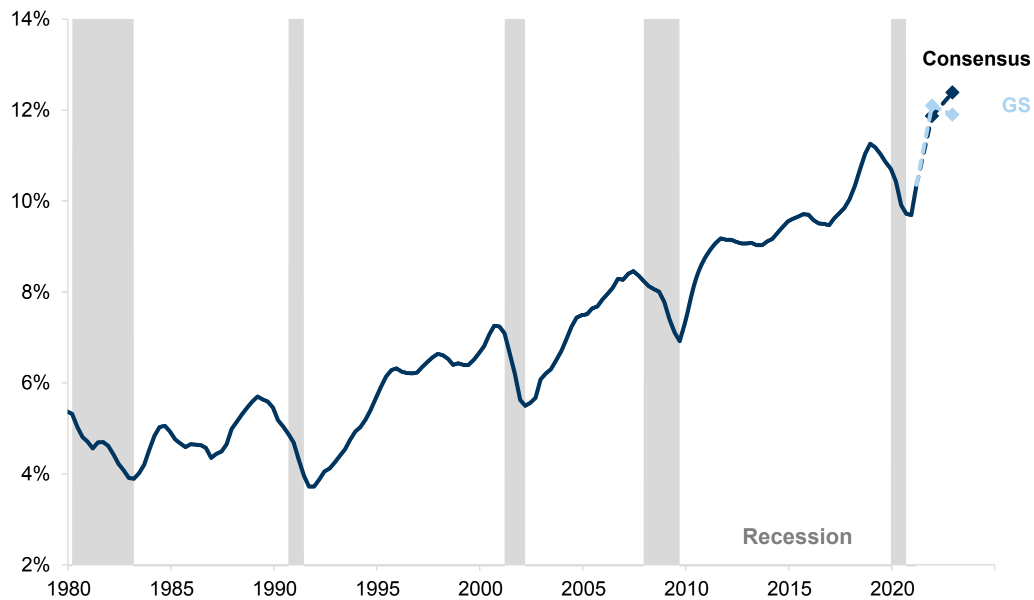
Over the next cycle we are unlikely to see a repeat of this pattern. While this, alone, does not mean that returns should be low – that will also depend on future growth and risk premia – it does mean that equity (and bond) investors are not

going to enjoy the benefit of consistently higher valuations driven by a fall in the risk-free rate.

3. Margins are high

Profit margins have increased dramatically over the secular bull market that started in the early 1980s and, despite the financial crisis, have continued to rise. Some of this, particularly post the financial crisis, can be explained by improved technology and the changing composition of the indices (particularly in the US) (Exhibit 12) towards higher-margin, lower-capital-intensive business models.

Exhibit 12: Margins are high
S&P 500 net profit margin



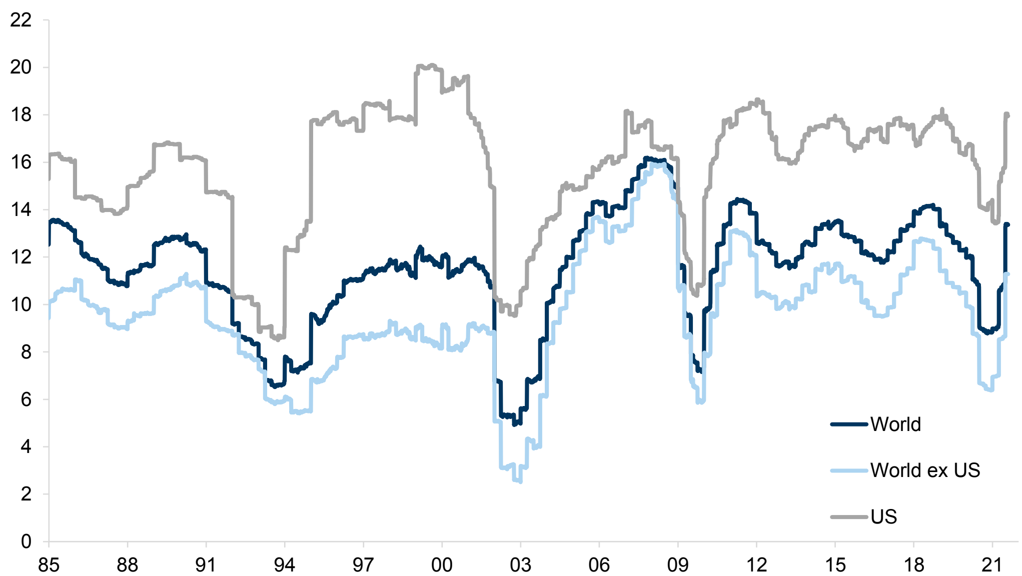
Source: Compustat, Goldman Sachs Global Investment Research

Supply-side reforms stemming back to the 1980s and 1990s, particularly in the forms of regulation, also played an important role. For example, the US introduced the Regulatory Flexibility Act of 1980 which required agencies to consider the impact of regulation on small business. There was also a growing trend of labour market reforms and increased labour market flexibility. For example, the proportion of UK establishments which recognised manual or non-manual trade unions for collective bargaining over pay and conditions declined by almost 20% (from 0.67 to 0.54) between 1980 and 1990; aggregate union membership fell from 13.2 million in 1980 to 9.9 million by 1990.[8] These factors increased productivity and returns on investment in the corporate sector, particularly in the US equity market with its high exposure to technology (Exhibit 13). There was also a material increase in labour supply. A significant rise in labour supply (post the collapse of the Soviet Union and the accession of China into the WTO), even as technological changes accelerated the substitution of technology for labour, also put

8 Disney, R., Gosling, A. and Machin, S. (1993), "British Trade Unions in Decline: What Has Happened to Trade Union Recognition in British Establishments", *Management Research News*, Vol. 16 No. 5/6, pp. 27-27. https://doi.org/10.1108/eb028293

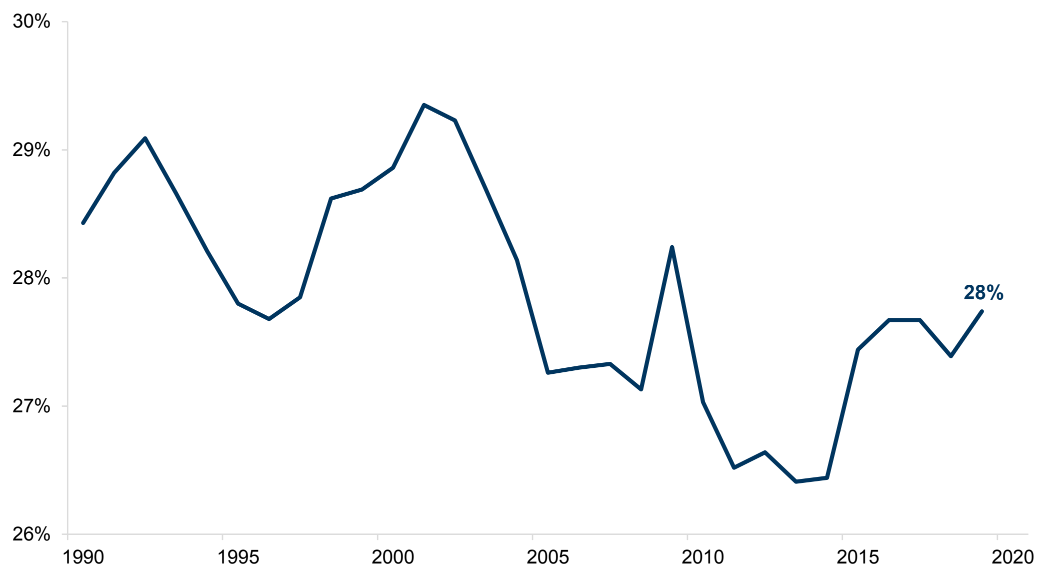
downward pressure on wages (Exhibit 14).

Exhibit 13: US ROE has moved back towards record highs
Return on Equity (%)



Source: Worldscope, Datastream, Goldman Sachs Global Investment Research

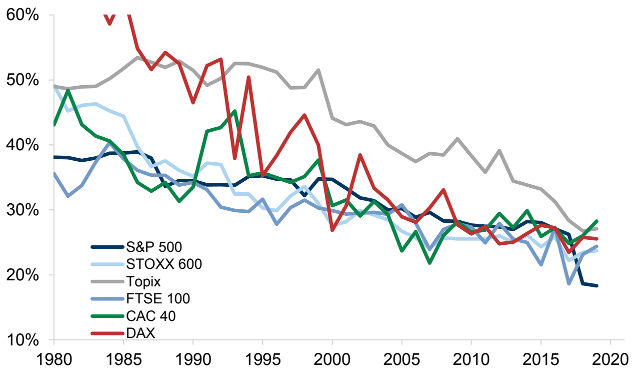
Exhibit 14: The share of output going to employed workers may have bottomed in the past cycle
US private industry employee compensation as share of gross output



Source: Bureau of Economic Analysis, Goldman Sachs Global Investment Research

Falling corporate taxes (Exhibit 15) were another tailwind for margins and returns in the corporate sector (see: *Global Macroscope: More taxing times — implications for equities*, May 13, 2021), while the accelerating trend of globalisation (Exhibit 16) was also instrumental in pushing up corporate profit margins and keeping inflation low (see: Asia Economics Analyst: *The past and the future of China's role in global inflation*, August 27, 2021).

Exhibit 15: The major equity indices have seen a decline in the effective tax rate
Effective tax rate for companies with a positive tax rate below 100%. Current constituents (ex Energy and Basic Resources)



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

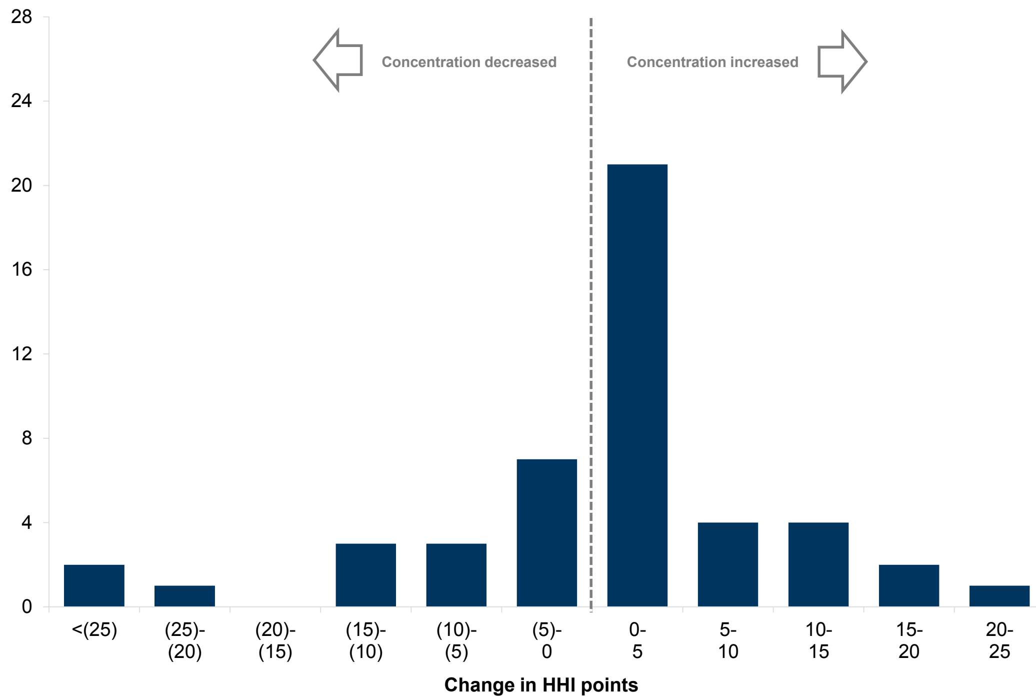
Exhibit 16: China's share of global exports and manufacturing has risen sharply over the past 20 years

Source: Haver Analytics, Goldman Sachs Global Investment Research

Less regulation and the ability for major industries to become more concentrated added to margins and returns on investment (see: *US Equity Views: Equities, antitrust, and the "inestimable" value due process*, July 13, 2021).

Since 1998, increasing market concentration has been fairly broad-based, but most pronounced in the Telecom Services and Tech Hardware industries. Based on the HHI, using revenues, roughly two-thirds of industries experienced an increase in concentration during the past 20 years (Exhibit 17), supporting higher margins and returns on investment.

Exhibit 17: The majority of industries faced an increase in concentration
Number of industries by change in concentration since 1998 (US)



Source: Goldman Sachs Global Investment Research

Exhibit 18: Largest/smallest changes in industry concentration
Based on total annual sales. Universe is publicly-listed US companies using GICS level 2 and 3 industries

	Industry HHI			
Industry	**1998**	**2020**	**Change**	**Industry leaders**
Telecom Services	10	30	**20**	T, VZ
Tech Hardware & Equip.	4	20	**16**	AAPL, HPQ, CSCO
Distributors	11	27	**15**	GPC, CORE
Media	3	17	**14**	CMCSA, CHTR
Various Retailing	3	17	**13**	AMZN, COST, WBA
Consumer Finance	25	15	**-10**	AXP, COF
Automobiles	47	37	**-11**	F, GM
IT Services	24	11	**-13**	IBM, V, PYPL, CTSH, MA
Industrial Conglomerates	58	36	**-22**	GE, HON
Tobacco	75	48	**-27**	PM, MO

Source: Compustat, Goldman Sachs Global Investment Research

While it remains possible that margins could rise further as a result of further innovations and increased productivity, it is unusual for margins to have recovered to pre-recession highs as quickly as has been the case in the current cycle. We would expect to see aggregate profit margins become more stable through this cycle than the last, again pointing, in aggregate, to a flatter environment for index returns.

Why the post-Covid cycle will be different

Taking the macro prospects together, we argue that the post-pandemic cycle is likely to be different from the post-financial-crisis cycle in three particular ways:

1. **Aggregate index returns should be lower.**
2. **Relative returns should be higher (compared with bonds).**
3. **Equity markets are likely to be less driven by macro factors. Sector and country returns should be less bifurcated; Alpha should become more important.**

1. Lower aggregate returns

Following the peak in global inflation in 1982 there have been many crises, including the 1987 crash, the collapse of Communism in 1989, the early recession of the 1990s, the first Gulf War (1991), Black Wednesday (the exit of the UK and Italy from the European exchange rate mechanism) in 1992, the Asian and Russian debt crises (1997/8), the early-2000s recession, September 11 (2001), the second Gulf War, the collapse of LTCM, the sub-prime housing crisis (2008), the financial and banking crises of 2009, and the Covid crisis of 2020/21. **Despite these, the overall returns over that period have been unusually strong. The main reasons for this were the combination of low starting points for valuation and margins, and the high starting point of inflation expectations and interest rates.**

We are now at the opposite end of a 'super cycle', with record low interest rates and inflation expectations, and high valuations and margins. Many of the tailwinds for equity returns enjoyed in recent decades are unlikely to be repeated and may even start to reverse to some extent. Geopolitical pressures and supply chain disruptions revealed during the pandemic have increased the trend towards on-shoring rather than globalisation. Meanwhile, corporate tax rates are set to rise in the US and progress is being made to agree a global minimum corporate tax rate (see: *Global Macroscope: More taxing times — implications for equities*, May 13, 2021). An increased focus on data privacy and antitrust legislation might also limit the increase in market concentration and returns on equity.

In the absence of further secular declines in interest rates and the cost of capital it is unlikely that aggregate valuations in equity markets will continue to rise as much as they did in the last secular bull market.

At the same time, the rise in margins and profit shares of GDP may well have peaked, making future equity returns more dependent on revenue growth. We are not likely to see a trend of ever lower bond yields and it is unlikely that this cycle will see the strong directional **trending bull market type returns of the previous secular phases (1945-1968, 1982-2000 or 2009-2020).**

2. Higher relative returns

While absolute returns may moderate, it is likely that relative returns improve. This seeming inconsistency is explained by shifts in equity risk premium. Four decades of falling risk-free rates have resulted in significant increases in valuations across financial assets. As Exhibit 19 and Exhibit 20 show, most valuation metrics are in a high percentile relative to their own history.

Exhibit 19: European equity valuations have risen, bond valuations remain high
STOXX 600

	Metrics	Current Level	Historical Percentile	Median
Equity (SXXP)	EV / Sales	2.1	99%	85%
	EV / EBITDA	10.3	90%	
	Price / Book	2.0	76%	
	NTM P/E	16.0	82%	
	NTM Free cash flow yield	4.9	88%	
	Cyclically Adjusted P/E	21.7	85%	
	ERP (%)	5.8	28%	
Rates	Germany 10-y Bond Yield	-0.3%	94%	94%
	UK 10-y Bond Yield	0.8%	94%	
Credit	High Yield YTM	2.8%	100%	
	Investment Grade YTM	0.2%	99%	
	High Yield spread	288bp	57%	
	Investment Grade spread	97bp	75%	

European data go back to 1999/2000, apart from High yield and IG spread (2004) the Government and Corporate BY data (1989), the Cycl. Adj. P/E (1984) and NTM FCF yield (2006)

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

Exhibit 20: Valuations across asset markets are high in the US relative to history
S&P 500

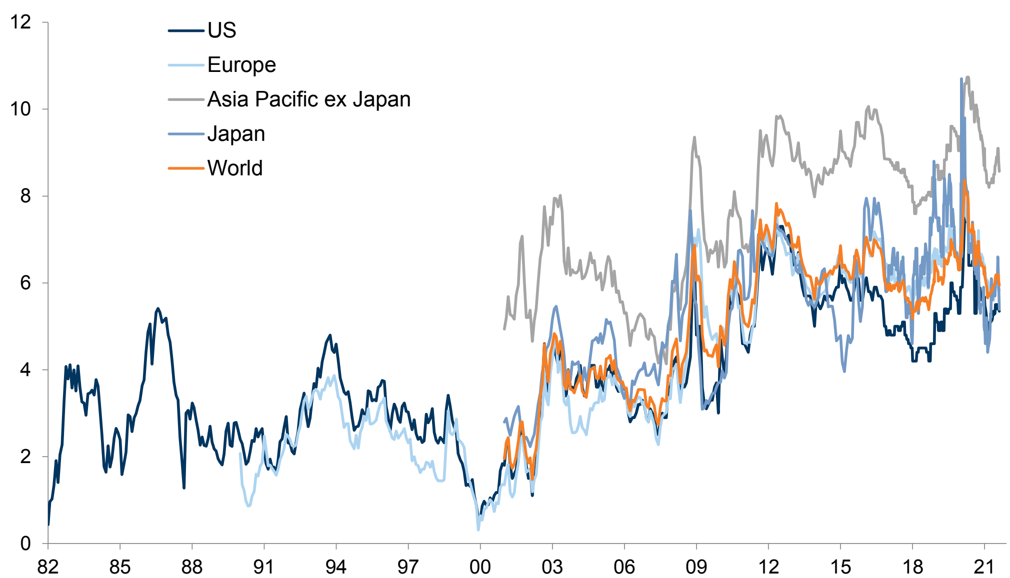
	Metrics	Current Level	Historical Percentile	Median
Equity (SPX)	EV / Sales	3.4	100%	95%
	EV / EBITDA	16.8	98%	
	Price / Book	4.8	96%	
	NTM P/E	21.6	93%	
	NTM Free cash flow yield	3.5	62%	
	Cyclically Adjusted P/E	34.2	95%	
	ERP (%)	5.3	19%	
Rates	Nominal 10-year Treasury	1.3%	98%	94%
	Real 10-year Treasury	-1.0%	88%	
Credit	High Yield YTM	4.5%	100%	
	Investment Grade YTM	2.0%	98%	
	High Yield spread	308bp	91%	
	Investment Grade spread	90bp	89%	

US data go back to 1976, apart from FCF yield (1990), Credit market data (1997), Government BYs (1921) and ERP (1981)

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

The one major valuation in equities that does not look stretched is the equity risk premium (ERP), a version of the bond/equity yield gap. As Exhibit 21 shows, the equity risk premium remains high in most cases, even relative to the low interest rate and inflation environment post 2000.

Exhibit 21: ERPs remain elevated across the board by historical standards



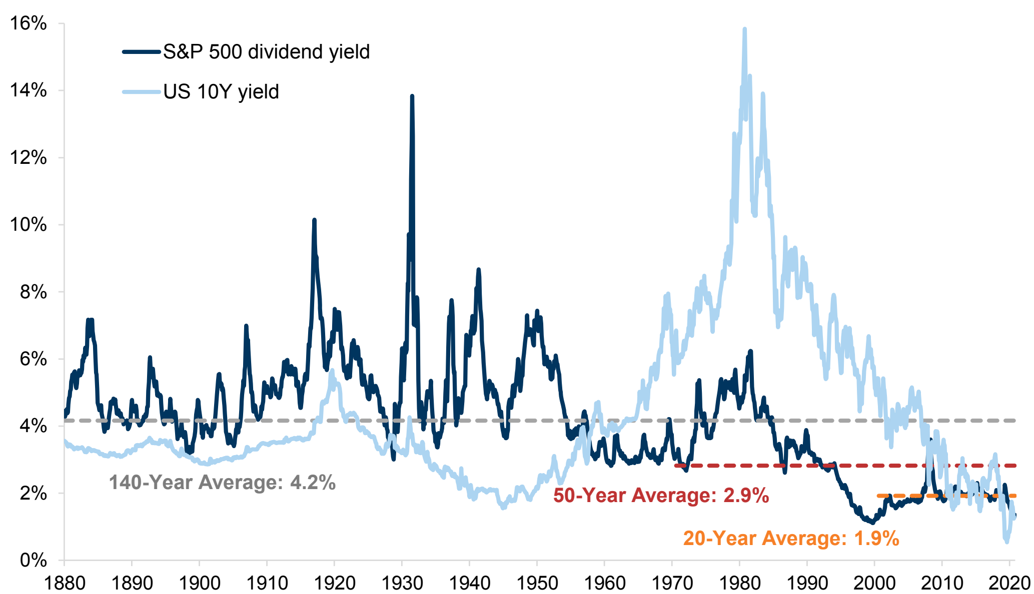
Implied ERPs are calculated by each regional strategy team. While specific assumptions differ between regions, all are calculated using a multi-stage DDM framework.

Source: Goldman Sachs Global Investment Research

As a consequence of this, the relative valuation of risky assets such as equities is very different from previous periods when absolute valuations were as high as they are today.

The last time absolute P/E ratios were as high (or higher) than today was in the late 1990s during the Technology bubble. But in that period **investors were so confident about long-term future growth that they were prepared to buy equities offering a dividend yield of 1% when the prevailing risk-free rate was 6.5%.** Today in the US the dividend yield and the 10-year bond yield are very similar, and the effective yield is even higher than this when we take into account share buy-backs (Exhibit 22). Meanwhile, in markets that are more heavily weighted towards Value and Cyclicals (the laggards in the past cycle), such as Europe, the gap is still very large, suggesting continued scepticism about future growth. The only time that the gap was higher – with similar bond yields but much higher dividend yields – was during World War II.[9]

Exhibit 22: The US dividend yield and 10-year bond yield are very similar

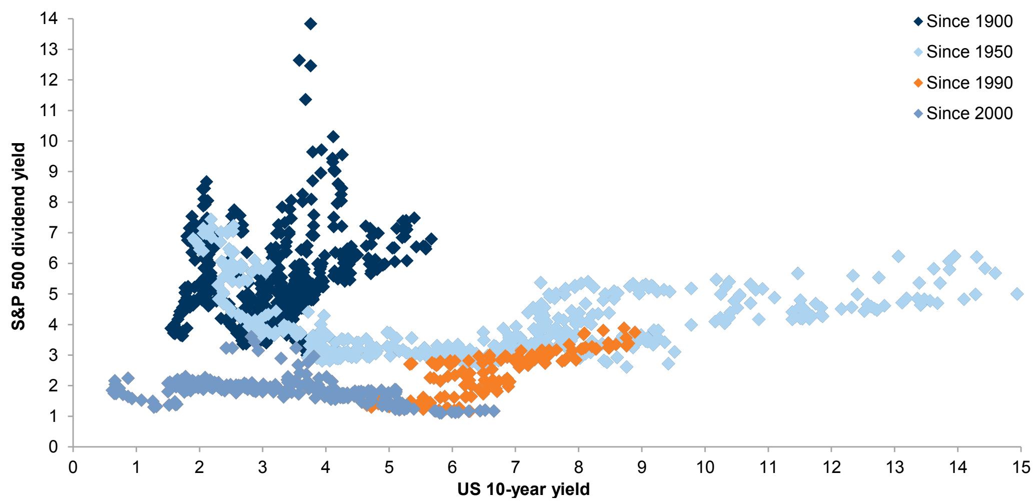


Source: Datastream, Goldman Sachs Global Investment Research

The shift in investor perceptions about the risk of inflation/deflation on various asset classes can be seen in the correlation of bonds and equities. Dividend and bond yields moved together for more than four decades after WWII, but since 2000, as Exhibit 23 demonstrates, dividend yields have failed to adjust downwards despite much lower bond yield - see: Global Strategy Paper: The Equity Duration Puzzle — Asset Allocation at the Zero Lower Bound, October 28, 2020.

[9] Garbade, K. (2020). Managing the Treasury Yield Curve in the 1940s. *Federal Reserve Bank of New York Staff Reports, no. 913.*

Exhibit 23: Since the late 1990s lower bond yields have not supported equity valuations

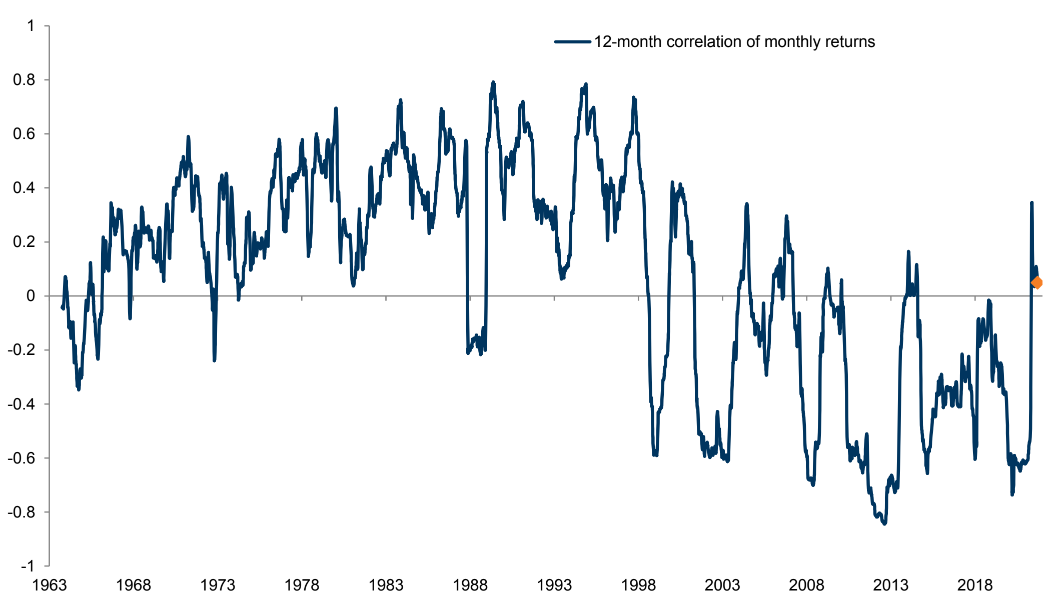


Source: Robert Shiller, Goldman Sachs Global Investment Research

Another way to see how the tails risks around inflation have changed over time is to look at the rolling correlation (Exhibit 24).

Over the longer run, and in more 'normal' periods when bond yields have tracked nominal GDP, there has been a positive monthly correlation between equity and bond prices. Since the late 1990s, successive shocks have resulted in a lower level of bond yields and higher risks of deflation. Consequently, the correlation has turned negative – falls in bond yields have largely been negative for equity prices but, of course, positive for bond prices.

Exhibit 24: Correlation between US 10Y Treasury and S&P 500 monthly returns

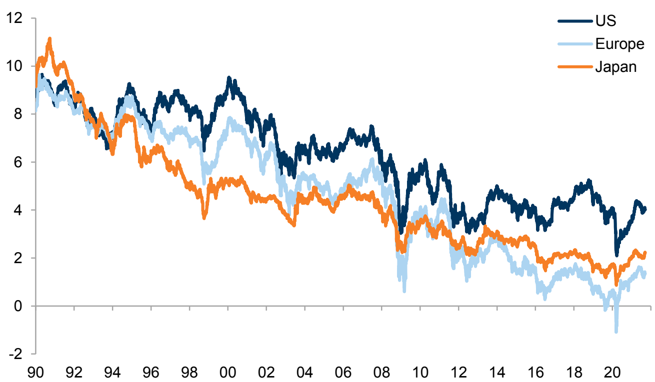


Source: Goldman Sachs Global Investment Research

The shift in this relationship can be partly explained by successive downward adjustments to long-term nominal growth expectations since the start of this century. There have been several drivers of these changes, including demographic trends in the West, less investment spending and lower inflation. **Together, these have driven up the equity risk premium as investors increasingly required a higher prospective relative return (higher relative yield) to compensate for slower longer-term growth, while reduced fears of inflation (and rising fears of deflation) brought down term premia in bond markets** (Exhibit 25 and Exhibit 26).

Exhibit 25: After a multi-year de-rating of equities vs. bonds, implied long-term growth remains very low (especially outside the US)

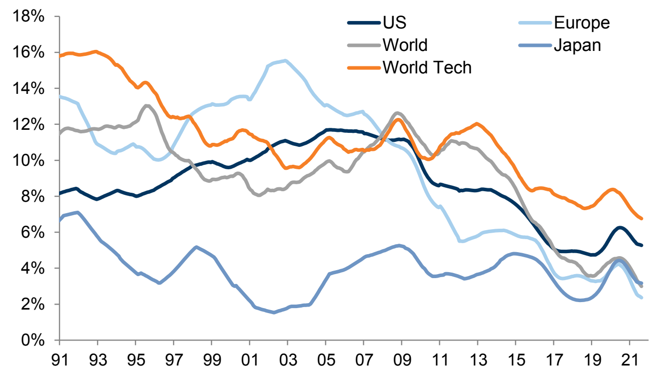
Implied LT growth assuming a 4% ERP



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

Exhibit 26: Top-line growth has been falling along with declining nominal GDP

yoy sales growth (10y rolling average), Market ex Financials



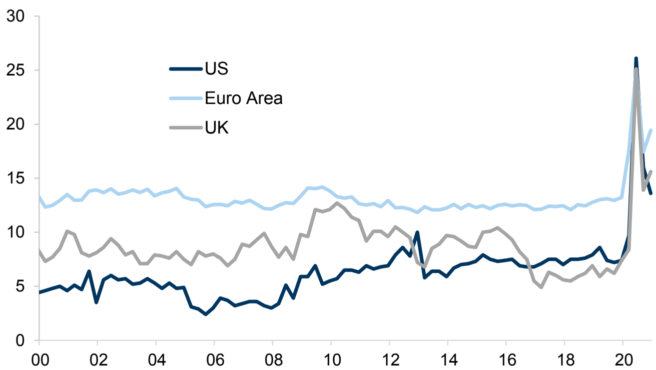
Source: Datastream, Worldscope, Goldman Sachs Global Investment Research

In practice, **the inflation premium on government bonds contracted as investors required a lower return to compensate for the possible risk of higher future inflation consuming their guaranteed nominal returns. Meanwhile, the equity risk premium increased further as investors required relatively higher dividend yields and prospective returns to compensate for the increasingly unpredictable trends of long-term growth.** In Europe in particular, regulation was also a factor: investors such as pension funds and insurance companies have been forced through regulation to invest more conservatively, and into bonds and away from equities.

Since the Coronavirus and the shift to a much more accommodative fiscal stance and aggressive forward guidance by central banks, the correlation has started to normalise. In the short term, higher bond yields (reflecting more confidence in growth and inflation) should support equities but will start to constrain equity returns if the rises are particularly quick or end up pushing bond yields to a level that starts to compromise growth expectations.

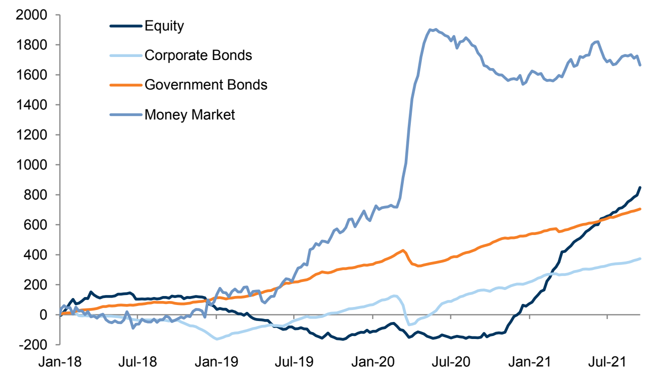
The combination should enhance the relative returns for equities relative to bonds in the post-pandemic cycle even in an environment where financial assets generally achieve lower nominal returns. The substantial increase in excess savings in the private sectors across many countries should also support this trend. While further flows into bond markets may keep yields low for some time, there are more savings looking for a return, as we are already seeing with booming private equity markets this year.

Exhibit 27: Savings rates have spiked across the biggest economies
Savings ratio (%)



Source: Haver Analytics, US Bureau of Economic Research (BEA), Eurostat, ONS, Goldman Sachs Global Investment Research

Exhibit 28: Flows into equities have been strong YTD
Cumulative fund flows across assets

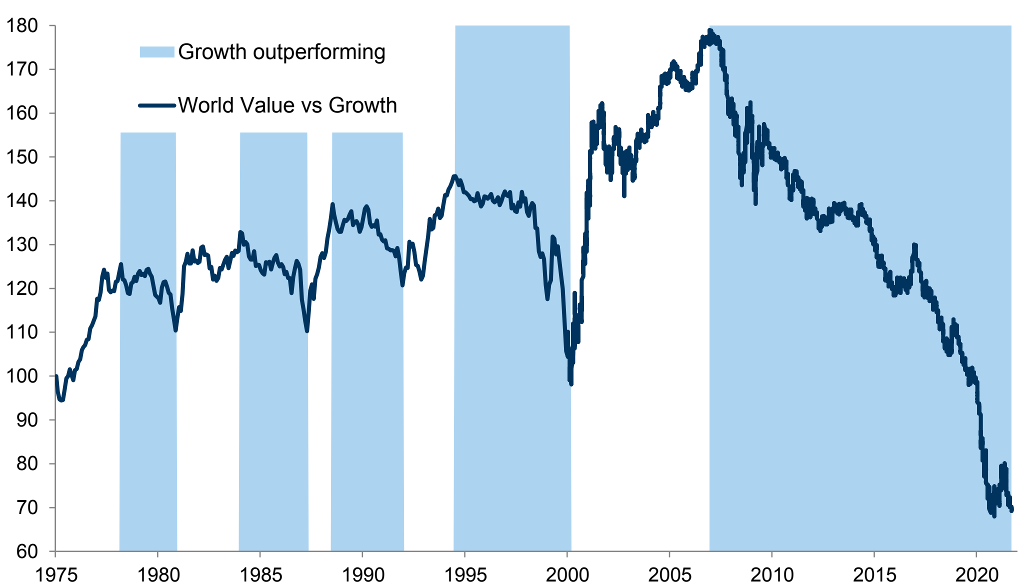


Source: Datastream, Haver Analytics, EPFR, Goldman Sachs Global Investment Research

3. Less factor difference and more Alpha

The period that followed the financial crisis drove significant bifurcation of factor returns. The most obvious manifestation of this was in the outperformance of Growth versus Value and the outperformance of the US equity market relative to others around the world (Exhibit 29).

Exhibit 29: Growth has outperformed since the GFC
MSCI Indices. Relative price performance in local currency*.

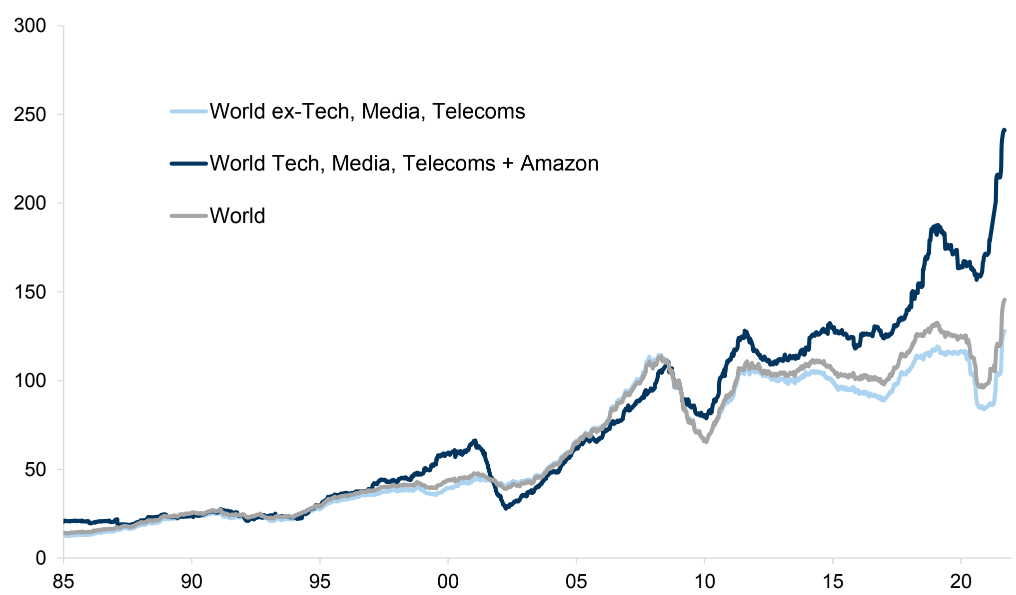


* Monthly Frequency until 2000. Daily Frequency from 2000 onwards.

Source: Datastream, Goldman Sachs Global Investment Research

While this is partly explained by the impact of lower bond yields, it is also a function of the success of the Technology sector in generating high earnings growth in the post-financial-crisis era, while many traditional industries faced a catalogue of problems and headwinds. As Exhibit 30 shows, while global Technology profits have surged since the financial crisis, other sectors in aggregate have made virtually no progress. The differential has continued in the pandemic recession as social distancing has further supported demand for Technology relative to other parts of the economy.

Exhibit 30: Tech earnings have outstripped those of the global market
12m trailing EPS (USD). Indexed to 100 on Jan-2000.

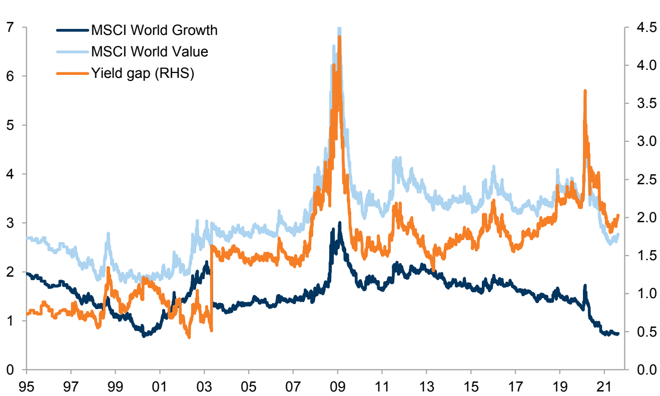


Source: Datastream, Worldscope, Goldman Sachs Global Investment Research

The combination of ever-lower interest rates and a growing gap between the fortunes of the increasingly rare Growth companies and those in more traditional industries has triggered a significant rise in the relative valuation of longer-duration companies.

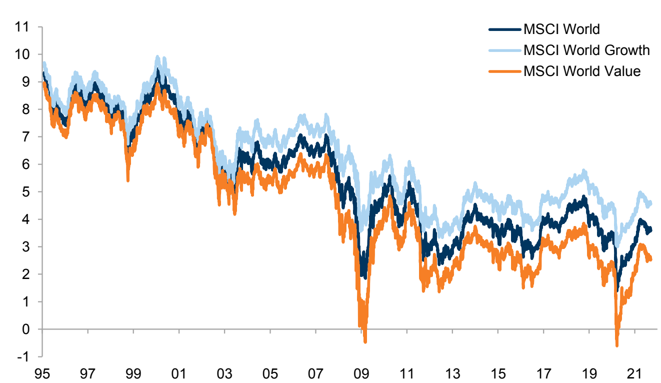
Prior to the sharp inflection point in 2H 2020 triggered by COVID vaccine progress and aggressive further policy easing, the trailing dividend yield for MSCI World Growth had declined close to Tech Bubble levels (Exhibit 31), and the yield gap between MSCI World Growth and Value widened materially to around 2.5%, which is the implied long-term growth differential between the two (Exhibit 32).

Exhibit 31: While dividend yields for global Value stocks have been unchanged since the GFC, they have declined for Growth stocks
Trailing dividend yield (gross)



Source: Bloomberg, Goldman Sachs Global Investment Research

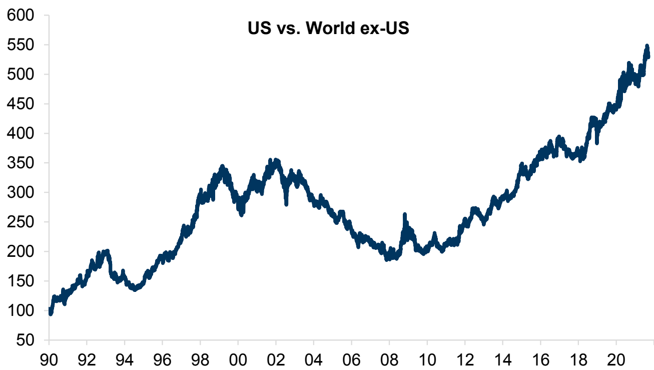
Exhibit 32: Implied LT growth for global Value stocks has fallen sharply
Implied LT growth assuming a 4% ERP



Source: Bloomberg, Goldman Sachs Global Investment Research

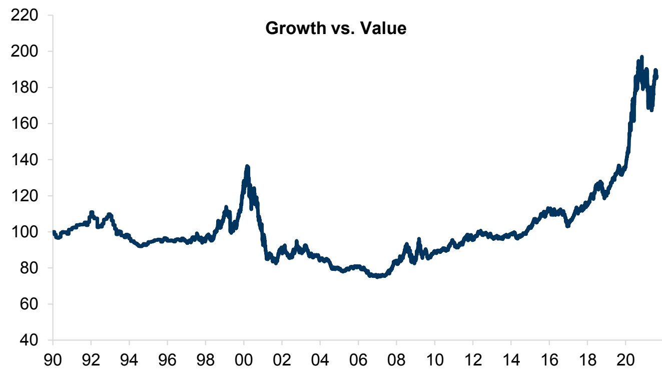
While the equity market has become very bifurcated by factor and sector performance, it has also seen significant spreads of returns by geography, largely reflecting the same macro drivers. This has been manifest in the significant outperformance of the US equity market relative to the rest of the world in the post-financial-crisis cycle.

Exhibit 33: US equities have outperformed the rest of the world
US vs. World ex-US, relative price performance in USD



Source: Datastream, Worldscope, Goldman Sachs Global Investment Research

Exhibit 34: Growth has outperformed Value since the GFC
MSCI Indices. Relative price performance in local currency*.

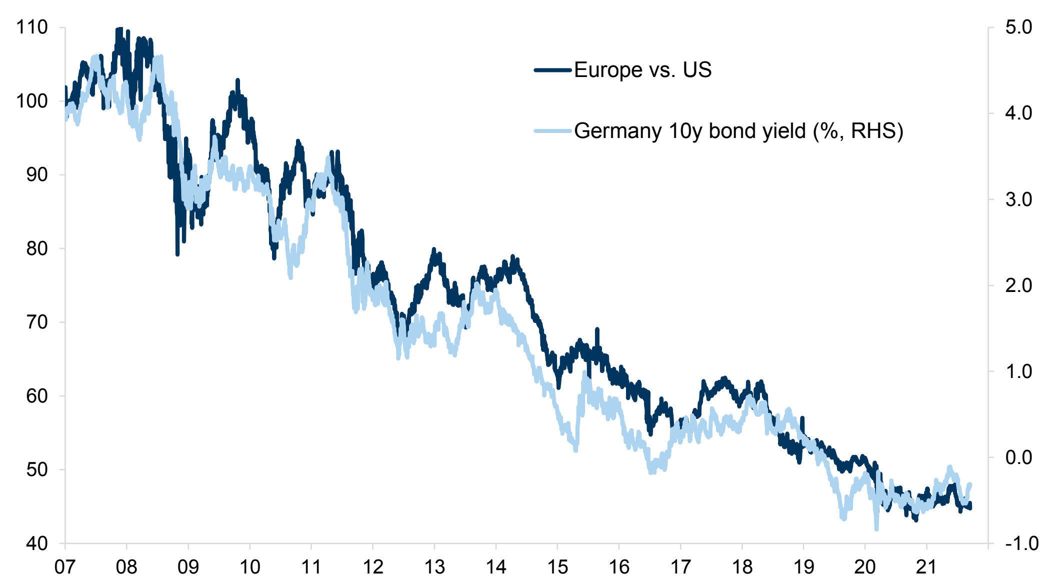


* Monthly Frequency until 2000. Daily Frequency from 2000 onwards.

Source: Datastream, Goldman Sachs Global Investment Research

As in the case of the factor bifurcation, the impact of lower interest rates on duration played an important part (Exhibit 35). Ever-lower bond yields have boosted the valuation of longer-duration equities such as Technology at the expense of shorter-duration equities like Value stocks. In the same way, lower bond yields have boosted the relative valuation and performance of longer-duration, Technology-heavy markets like the US relative to those more heavily weighted towards Cyclical or traditional Value industries, like Europe and Japan.

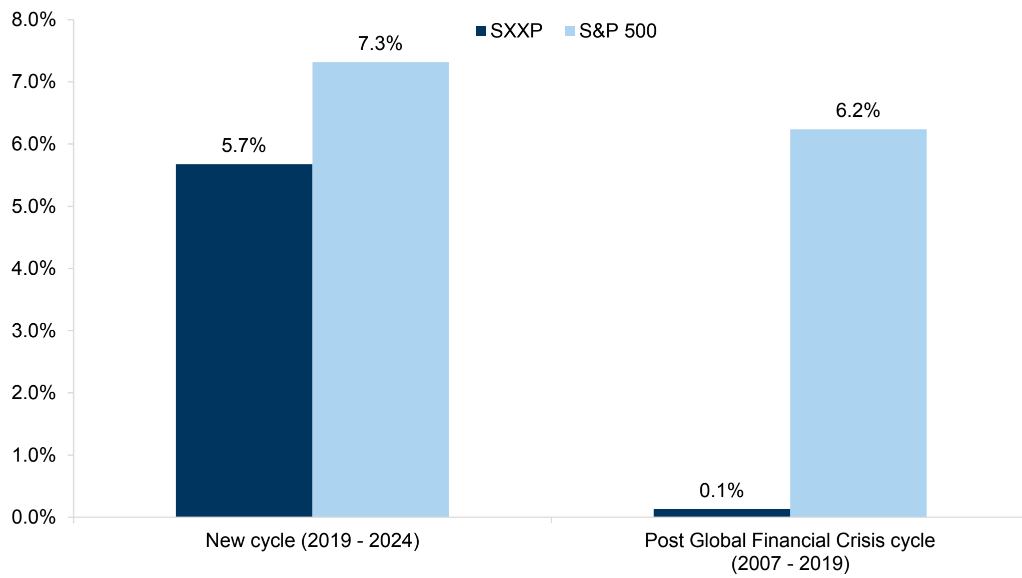
Exhibit 35: Europe vs. US equities performed in line with Bund yield evolution
Relative total return performance in EUR



Source: Datastream, Goldman Sachs Global Investment Research

While the trend towards ever-lower interest rates was instrumental in driving these trends, a large part of the relative performance could also be explained by relative earnings growth. Just as Technology (heavily represented in the S&P 500) experienced much higher EPS growth than other sectors, so the US simply outgrew other markets around the world, particularly in Europe and Asia. Annualised EPS growth was over 6.0% in the US in the previous cycle (between 2007 and 2019), while it was virtually unchanged in Europe (Exhibit 36).

Exhibit 36: The pace of EPS growth in Europe and the US should be more similar this cycle
Annualised EPS growth



Source: I/B/E/S, Standard and Poor's, STOXX, Goldman Sachs Global Investment Research

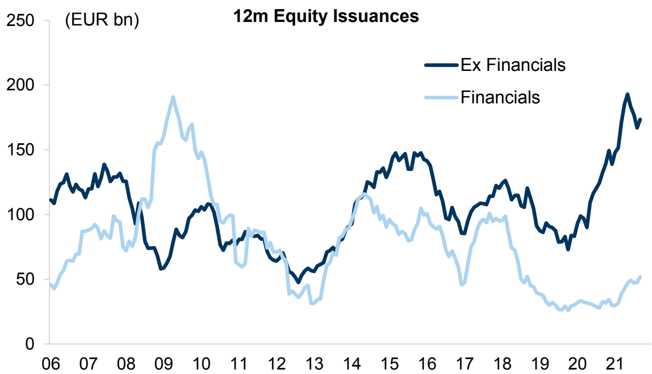
But there are two reasons to suggest that these differences should fade, at least to some extent, over this cycle.

1. Differences in forward earnings growth have become less extreme.

2. Valuation spreads imply greater catch-up potential in laggard markets.

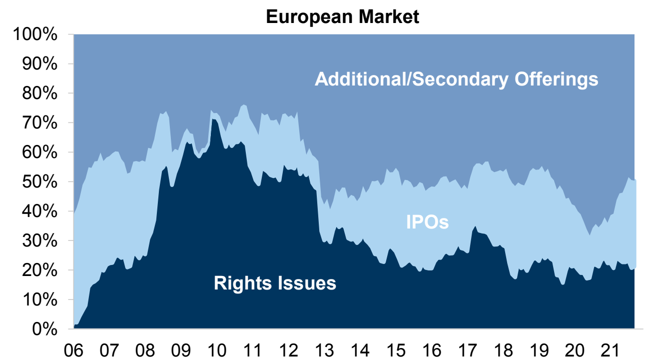
As Exhibit 36 shows, EPS growth between 2019 and 2024 is projected to remain higher in the US than Europe, but the differences are not as great. This is partly because troubled sectors in Europe and other markets are facing fewer headwinds than they did in the post-financial-crisis era. It is also partly because non-US markets have also changed in terms of their composition. In particular, we showed that most of the equity issuance is in faster-growing areas of the market, such as Technology.

Exhibit 37: Issuance has picked up and is carried out by a different pool of economic actors this time around
European Market



Source: Bloomberg, Goldman Sachs Global Investment Research

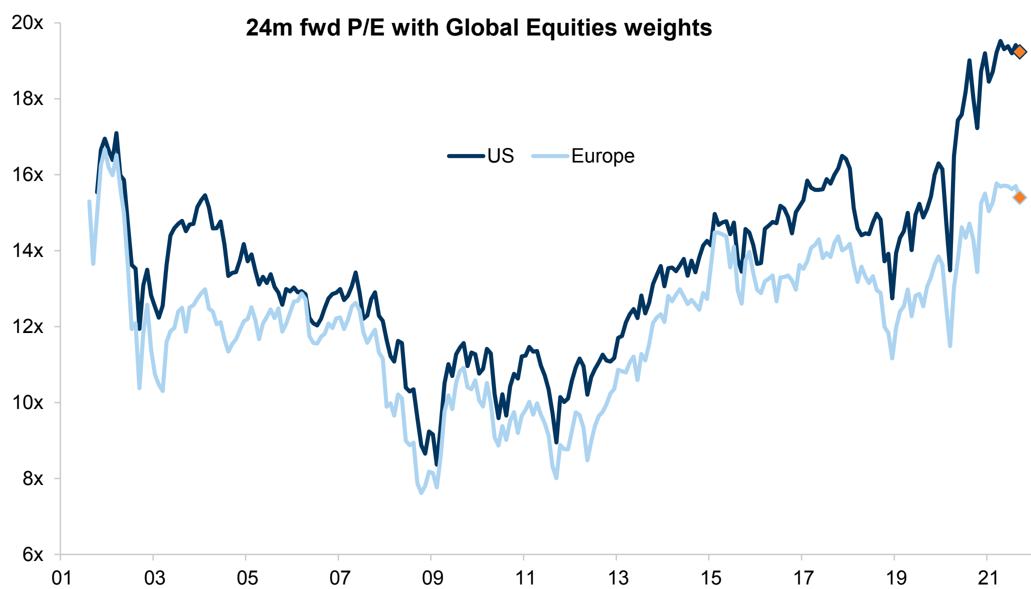
Exhibit 38: The rise in issuance has been concentrated in IPOs and secondary offerings rather than rights issues



Source: Bloomberg, Goldman Sachs Global Investment Research

Valuation differences between markets remain significant even when comparing them on the basis of the same sector weights. This suggests that, while the US equity market should still generate good returns, there is more room for rising valuations on a relative basis outside of the US.

Exhibit 39: European valuations remain well below the US - even on an equivalent sector basis
MSCI Indices, GICS sector classification



Source: FactSet, Goldman Sachs Global Investment Research

In the absence of ever-lower interest rates, we would expect to see less of a differentiation of returns based on factor or country.

We are not arguing that there should be a dramatic reversal of these trends, with Value enjoying a secular period of outperformance or non-US markets significantly outperforming, but rather that the differences in performance defined by factor or geography are likely to be less important. Alpha generation should

improve.

The opportunity set for Alpha generation should improve across and within industries driven by a combination of:

1. New areas of technological innovation, particularly in areas related to 5G, robotics, AI, gaming, education tech, med tech and green tech.

2. Companies disrupting non-tech industries.

3. Companies benefiting from higher green capex.

4. Companies in disrupted industries that adapt to change, opening up new growth streams that generate re-rating.

In Part 2, we will look at Technology, the leader of the market in the past cycle, and discuss what history can teach us about the endurance of dominant Tech companies and the threats to their growth from disruption and regulation. **In Part 3**, we will look at new engines of growth and value creation, identifying companies that match these areas of demand across and within sectors.

Disclosure Appendix

Reg AC

We, Peter Oppenheimer, Guillaume Jaisson, Sharon Bell and Lilia Peytavin, hereby certify that all of the views expressed in this report accurately reflect our personal views, which have not been influenced by considerations of the firm's business or client relationships.

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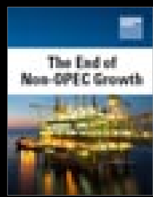
Climate Change

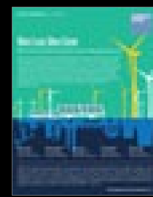
Carbonomics

The End of Non-OPEC Growth

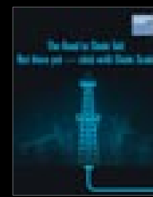


Reimagining Big Oils

The Rise of Renewables



Shale Scale to Shale Tail

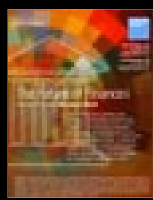


IMO 2020

The Genome Revolution

Digital Health

The Future of Finance

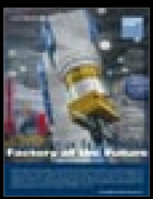


Future of Work

Drones

Space

Factory of the Future



eSports: From Wild West to Mainstream

Music in the Air

EVs: Back to Reality

Venture Capital Horizons

ESG Rising

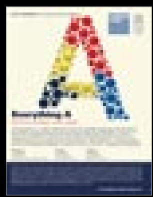
Womenomics

The Chinese Consumer

Feeding China's Changing Appetite

New China, Old China

China A Shares in Anatomy



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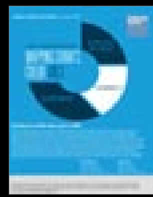
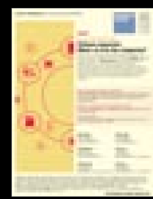


Japan Aging

Made in Vietnam



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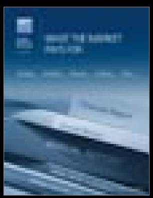

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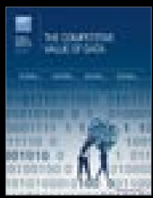

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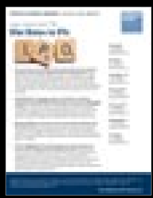
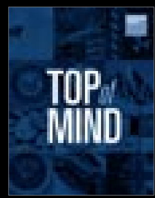


Top of Mind



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