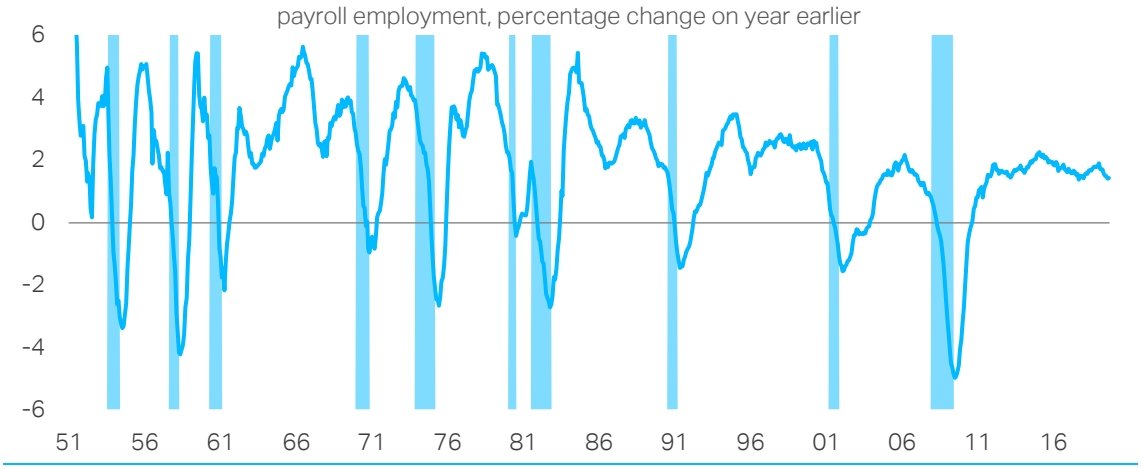
Macro Picture

HOW TO SPOT RECESSIONS

Dario Perkins

Economists usually fail to predict recessions. Rather than try to settle the popular 2020 recession debate, we focus on how investors can spot such a downturn in real time. For the United States, a decline in payrolls would be the most ominous sign. This could still give investors time to exit risk assets. Recession signals are murkier for other DMs.

Chart 1: US recessions defined by employment



Source: BLS, TS Lombard

DISMAL SCIENCE

Economists have a terrible record at forecasting cyclical turning points, correctly predicting just 5 of the last 153 recessions globally. Bond, equity and credit markets usually give mixed signals, providing no clear warning for major downturns. This means investors have no alternative but to monitor macro data in real time, paying particular attention to Greenspan's "discontinuities".

CYCLE PATH

For the US economy, there is a clear distinction between periods of sluggish/low growth and outright recession. Companies cut employment in recessions, which causes powerful spillovers and feedback loops. For other developed nations like Germany and Japan, where stagnation is the norm and companies hoard labour, the recession/non recession debate is less important.

PLUNGE PROTECTION

A decline in payrolls (if not attributable to freak weather etc.) is the most compelling data point for identifying US recessions. This seems obvious, but financial markets have been slow to internalize this information in previous recessions. Equities plunge, yields drop and the curve steepens (because the Fed cuts more aggressively) only after employment starts to contract.

HOW TO SPOT RECESSIONS

Have we reached the end of the cycle? Will there be a US recession in 2020? These are now comfortably our most popular client questions. While we remain cautiously optimistic – the cycle is looking vulnerable, but we do not think a US recession is imminent – we must acknowledge the difficulties associated with trying to predict cyclical turning points. In fact, the consensus has a horrible track record. According to a recent IMF study, for example, economists – covering both the private and public sectors – have failed to predict 148 of the last 153 major downturns, based on projections they made 12 months earlier. Forecasting accuracy remains dreadful even if we restrict our attention to the US, or choose shorter time horizons. This raises two important questions: (i) if we can't forecast them, how quickly can we tell when a recession has started? And (ii) by the time we are reasonably confident a recession is here, is it too late for investors to reposition their portfolios? Financial markets are supposed to be forward-looking, but actually they aren't much better at forecasting recessions than economists. Sure, US yields always invert ahead of major downturns, but with unhelpfully long and variable lags. Equities and credit markets fare even worse, reacting – at best – contemporaneously to bad news. All we can do is monitor the data, being especially vigilant to what Alan Greenspan called 'discontinuities'.

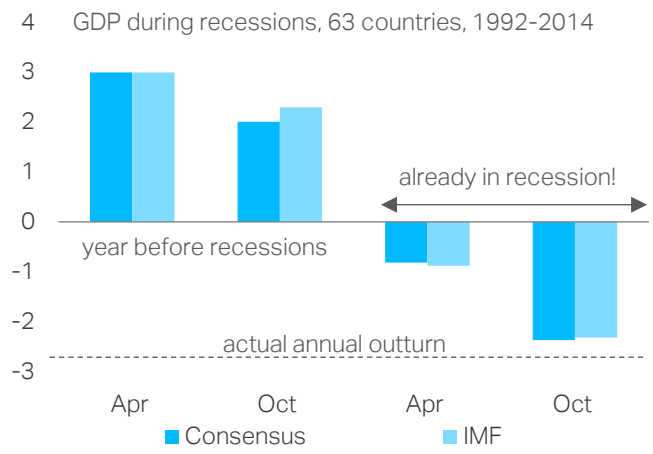
Historically, economists tried to spot recessions in real time by analysing the most cyclical parts of the economy, notably manufacturing activity and capital spending. But with services and consumption now dominant, the goods-producing sectors are prone to providing false recession signals (i.e. they are now 'too cyclical'). We think it makes more sense to focus on employment data, particularly in the United States, where labour-market dynamics provide the main distinction between periods of sluggish growth and outright recession. The central role of the jobs market is intuitive – when companies fire workers they create powerful spillovers and feedback loops. And this corporate response can be quite 'cathartic' – US recessions tend to feel like 'the end of cycle', which is not always true for other parts of the world. In Germany and Japan, in contrast, the recession debate often comes down to a technical question about whether the economy experiences two consecutive quarterly declines in GDP. Since labour markets are more rigid and inflexible, companies hoard labour when demand sags, which blurs the distinction between low growth and outright recession. Are Germany and Japan currently in recession? Given their persistent sluggishness, it doesn't make a huge difference to markets.

When it comes to data 'discontinuities', investors should pay particular attention to US payrolls. Outright declines in employment are rare outside of recessions – this has only happened once since 2009 and extreme weather comfortably explained the move (which was later revised away). The good news for investors is that seeing a decline in US payrolls doesn't necessarily mean it is too late to position their portfolios for the likelihood of recession. The big end-of-cycle plunges in global stock markets typically occur only after US employment has started to contract. In fact, there is usually a brief rally in risk sentiment as it becomes clear the Federal Reserve will start to reduce interest rates more forcefully. We see a similar pattern in bond markets, where the largest declines in yields usually come only after the US labour market has started to buckle. With the Fed cutting rates, the curve also tends to steepen. Of course, we are assuming here that the recession starts in the real economy and spreads to financial markets. In the current context, this would mean trade-war uncertainty, which has already damaged global capex, starts to undermine the US labour market. In a scenario where the recession triggers are 'financial' – such as a large plunge in stock markets or a widespread credit crunch – investors would have less time to protect their portfolios from the downturn. But even in these situations, the potential losses they face will accumulate materially after the labour market has cracked.

1. DISMAL SCIENCE

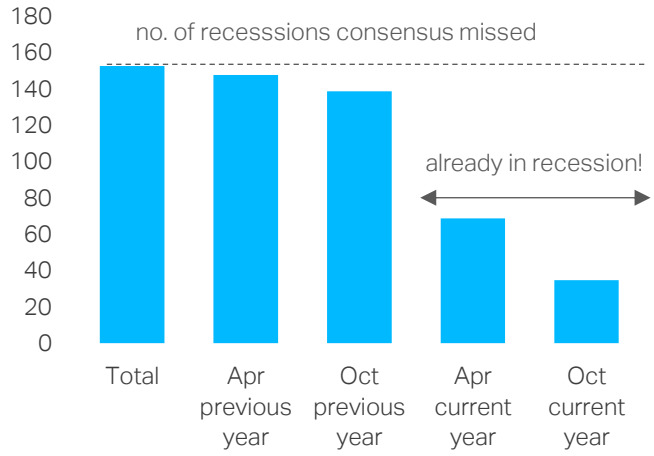
It is an understatement to say economists struggle to forecast cyclical turning points. This failure goes back a long way – during the Great Depression, for example, politicians accused economists of continually forecasting recoveries that didn't materialize. And, after the 2008 crash, Queen Elizabeth II (who allegedly lost £25 million in the crisis) joined a chorus of public criticism, when she asked why nobody had noticed the problem until it was too late. If missing the two biggest financial crises in history wasn't bad enough, economists have also shown they are unable to forecast even 'normal' cyclical downswings. The IMF recently published a comprehensive study based on the experience of 63 DM and EM nations over the period 1992 to 2014. According to the projections economists made 12 months earlier, they successfully predicted just 5 out of 153 recessions. If we reduce the forecast horizon to projections made a few months before the downturn, performance improves – but it remains pretty woeful overall.

Chart 2: IMF study on forecasting recessions



Source: IMF (2018 study), recession is an annual GDP contraction

Chart 3: Not a lot of recession foresight



Source: IMF (2018 study), recession – decline in annual GDP

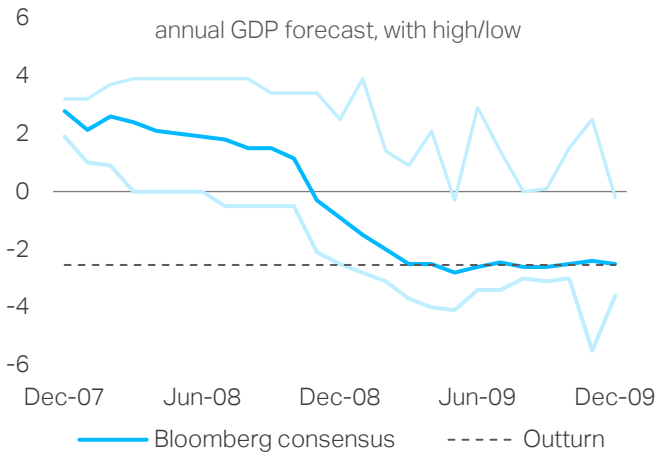
Forecast failures

The United States is the most extensively researched and widely monitored economy in the world, so surely US private forecasters – often paid a small fortune – are better at forecasting the ups and downs in their nation's GDP. Again, the performance of consensus forecasts during recessions suggests otherwise. According to the Philly Fed's survey of professional forecasters, which dates back to the 1960s, the consensus managed to predict just one of the last seven US recessions – the early 1980s downturn that arose after the Federal Reserve raised interest rates to 20 per cent in an effort to tame runaway inflation. On all other occasions, the consensus understated both the ultimate depth and duration of the downturn. At best, economists would forecast a relatively brief period of below-trend activity. The Philly Fed's survey also routinely asks economists to estimate the probability of a decline in GDP at any point in the subsequent four quarters – this probability rarely exceeds 20%, unless the economy is already in recession.

There is no doubt economic models have become more sophisticated over the past 50 years, so why hasn't forecasting improved? Researchers at the George Washington University provide several explanations, such as the nature of economic training (which urges practitioners to assume the status quo in the absence of better information), reputational damage (it is better to forecast continued expansion and be wrong, than to erroneously predict a recession) and herding (the desire not to move too far away from the consensus). Another popular explanation

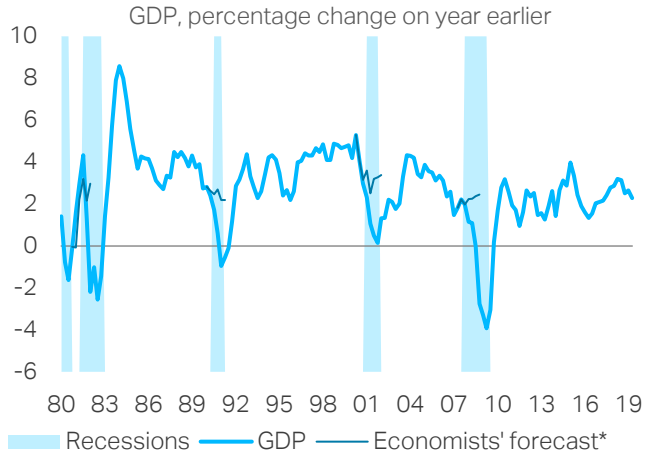
is that random shocks cause recessions, which means they are – by definition – unforecastable. This is consistent with the 'plucking' view of recessions, the idea that GDP will naturally expand until something comes along to drag the growth rate lower. Whatever the cause of this forecasting failure, it is clear GDP projections are unhelpfully sticky, which means they only tend to work in 'normal times' when output doesn't fluctuate by a wide margin.

Chart 4: US forecasts for 2009 GDP



Source: Bloomberg, TS Lombard

Chart 5: Non-forecasts of US recessions

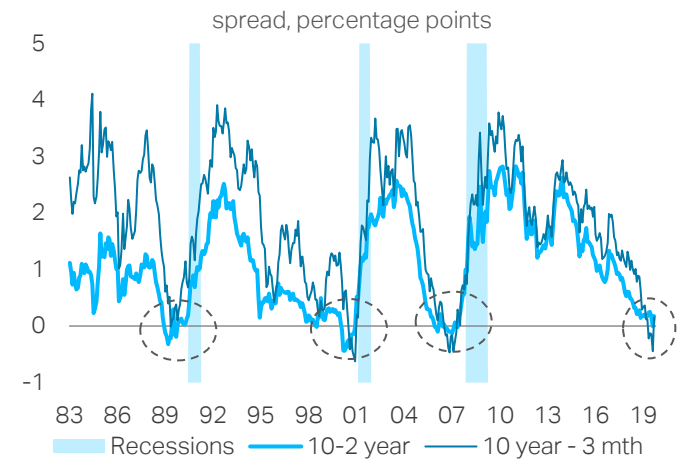


Source: Survey of Professional Forecasters, * f'cast 6-months earlier

Moving the debate on

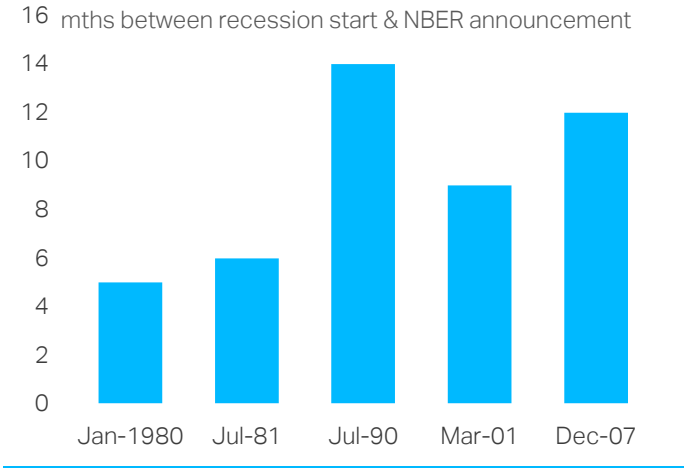
Right now, every investor wants to know whether there will be a recession in 2020. We have written about this issue several times, mainly by identifying the major vulnerabilities (see here and here). But given the obvious problems associated with trying to predict recessions ahead of time, perhaps it makes more sense to focus on two alternative questions: (i) how quickly can we identify a recession once it has already started? And (ii) when we are reasonably confident that a recession has started, is it too late for investors to adjust their portfolios to protect themselves from the downturn? This approach, which accepts that recessions are highly non-linear and unpredictable, can still add value for investors, if it can provide an early-warning system.

Chart 6: Curve uninverts but is this good or bad?



Source: Bloomberg, TS Lombard, NBER

Chart 7: Investors can't wait for the NBER



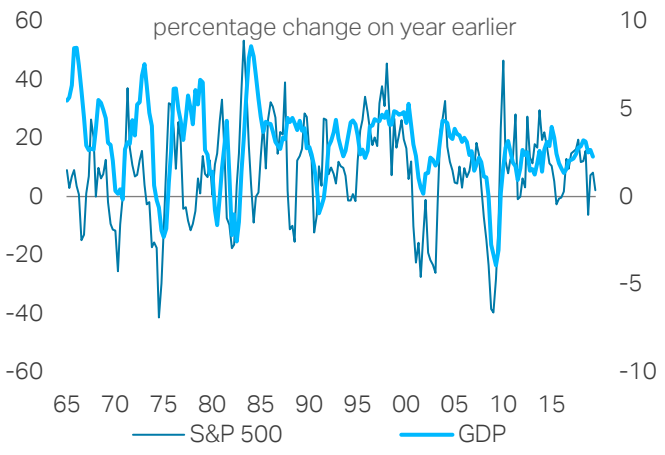
Source: Data available in NBER press release

Identifying a recession

Famously, the NBER has assumed responsibility for providing the 'official' start- and end-dates of US recessions. Unfortunately, there is no way investors can wait for the NBER's formal declaration before deciding what to do. The NBER's Business Cycle Dating Committee usually only declares the start of a recession with a lag of around 6-12 months (Chart 7), by which time it is obvious to everyone that the economy is contracting. To illustrate, the NBER first announced the 2007-09 recession on 1 December 2008, following 10 consecutive monthly declines in employment. With the stock market already down 40% since the peak, investors didn't need a committee of economists to tell them the US economy had entered a severe contraction.

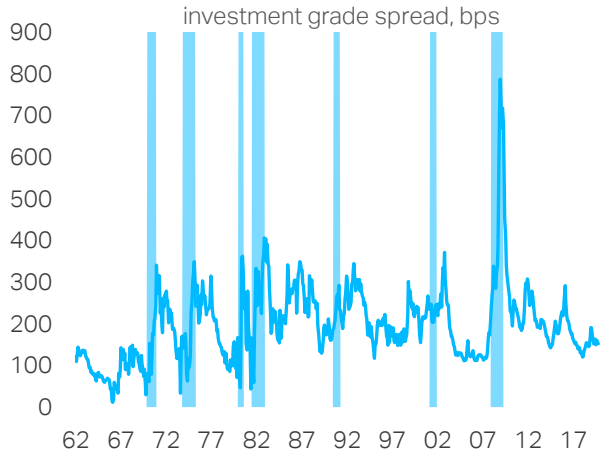
If waiting for the NBER is a non-starter, perhaps ("forward-looking") financial markets can provide a better guide to the recessionary process. In our previous work we found clear evidence bond markets tend to detect cyclical turning points earlier than equities. The US yield curve has inverted ahead of every major downturn since the 1960s. Yet the lag between technical inversion and recession can be anything from 6 months to two years, which means observing such a move in bonds doesn't really provide actionable information for investors. Worse, even inversion isn't a totally fool-proof recession signal because it has occasionally provided false warnings, especially when the Federal Reserve is acting pre-emptively (as in 1998). After a brief inversion recently, the US curve is now steepening again. Does this mean the recession scare was a '98-style false signal or, since the curve always steepens at the point where the economy is entering recession (Chart 6), does it mean a serious downturn is already inevitable? Smart people disagree on these questions and bond-market signals alone cannot settle the debate.

Chart 8: Equities more volatile than GDP



Source: Bloomberg, TS Lombard

Chart 9: Credit markets are noisy too

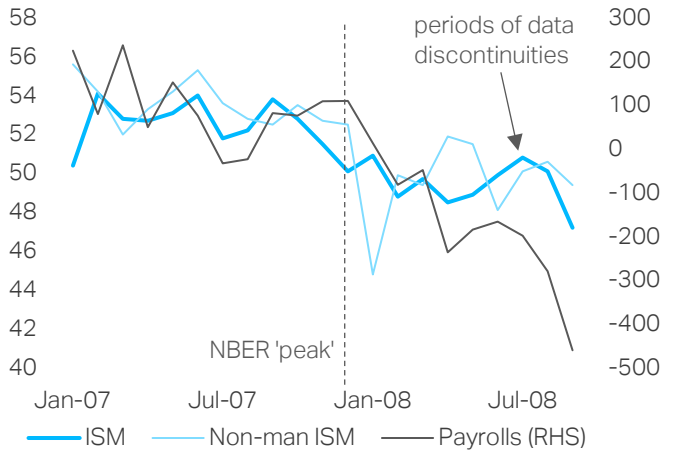


Source: Datastream, Bloomberg, TS Lombard

If we can't rely on the bond market to give us a precise timing for US recessions, looking at the stock market is even less helpful. Sure, equities are highly cyclical and strongly correlated (contemporaneously) to GDP, but they are also much more volatile than the real economy – especially when monitored on a daily, weekly or even monthly frequency (i.e. quarterly data conceal much of the noise). Bear markets, which include a decline in stocks of 20% of more, are common even when the economy is growing. So, while we should expect equities to drop at the start of a downturn, observing a market plunge doesn't 'prove' the recession has arrived. Equity investors also have a tendency to focus too much on the monetary-policy response, which can damp the responsiveness of the stock market to weak economic data – as we show in Section

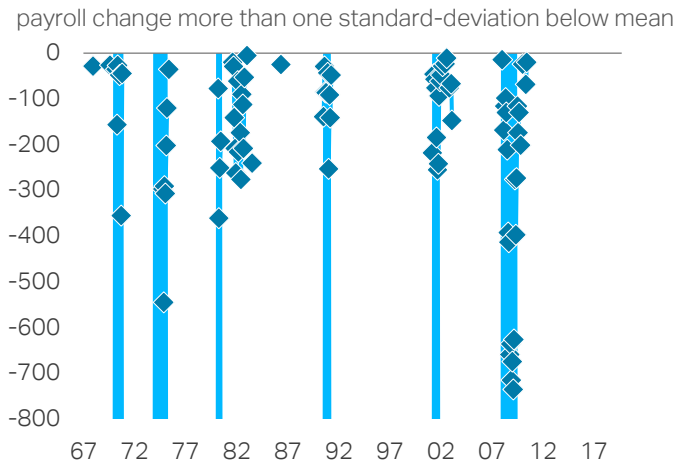
3. Credit markets follow a similar pattern to equities. Spreads will widen materially in a recession, to reflect rising default probabilities, but the credit market can be noisy and this deterioration isn't always apparent in the early stages of the downturn. (2007-09 was the main exception to this story because it was the credit crunch itself that provided a powerful recession trigger.)

Chart 10: Data 'discontinuities' in 2007-08



Source: ISM, BLS, TS Lombard

Chart 11: Negative payrolls mean trouble



Source: BLS, TS Lombard

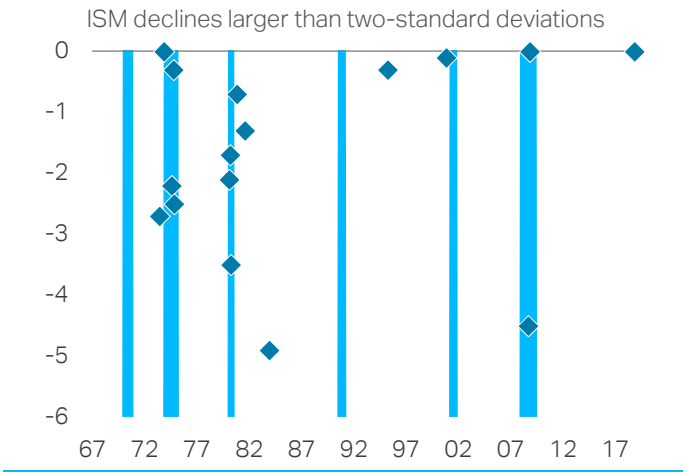
Greenspan's 'discontinuities'

While the bond market might be able tell us something about the threat of a recession 12-24 months ahead, the precise timing is unknowable and the signal itself is not 100% accurate. This means investors have no option but to monitor macroeconomic data. Even sophisticated attempts to combine financial data with economic statistics – such as this recent Chicago Fed study – show we can only really be confident a recession is happening once we see it in the data. To illustrate, the Chicago Fed's model – which includes the slope of the yield curve plus 16 other macro variables, currently gives a rather unhelpful 40% recession probability. So, if we must resign ourselves to monitoring the data, what specifically should we expect to see at the start of a recession? For once, Alan Greenspan might have some useful advice for investors.

Greenspan has argued on numerous occasions that what he calls "discontinuities" in the data are the classic early sign of a recession. These are sudden, sharp swings, which have no readily identifiable cause (such as extreme weather). Speaking to the FT in January 2008, Greenspan had identified such discontinuities early in the downturn, even before the full-blown banking crisis and the collapse in global stock markets. While these discontinuities stopped during the spring, they returned in the autumn, consistent with there being two main phases to the subprime downturn – a housing recession in 2007-08, following by a banking crisis in 2008.

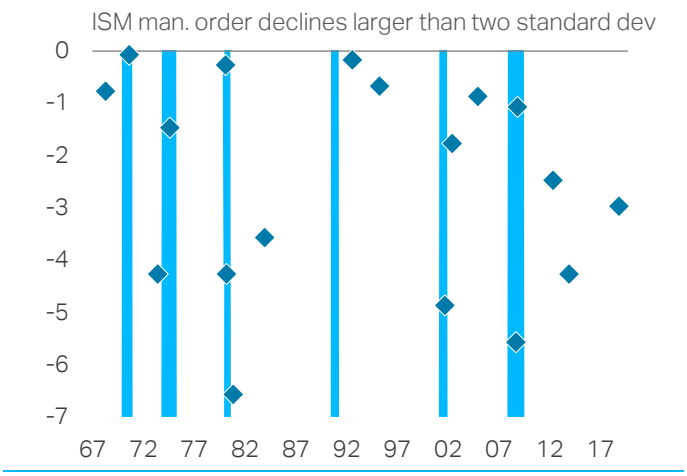
We can formalize Greenspan's recession signal by comparing data outturns with their historical ranges. In Charts 12 to 15, we show what happened in previous US recessions, identifying discontinuities in five of the most popular data series – the two ISM surveys (incl. orders), the monthly change in payrolls, and consumer sentiment. In this exercise, we define a discontinuity as an outturn one or two standard deviations below its historical average (depending on the exact series). Consistent with Greenspan's view, we find that sudden 'non-linear' moves in the data are fairly common in the early stages of US recessions. A plunge in the ISM, or a sudden collapse in consumer confidence – even if temporary – is usually a pretty clear warning sign. Of the five data series we analysed, payrolls came out as the most reliable source of discontinuity. If US employment declines, we can be fairly confident the US economy is entering recession.

Chart 12: ISM discontinutities



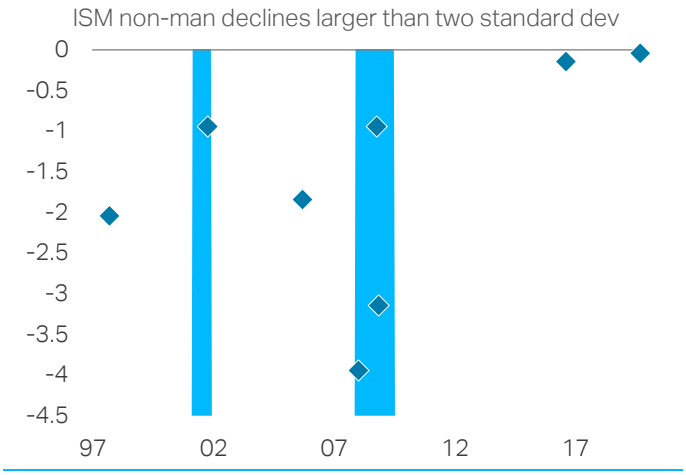
Source: Datastream, TS Lombard

Chart 13: Discontinuities in ISM 'orders'



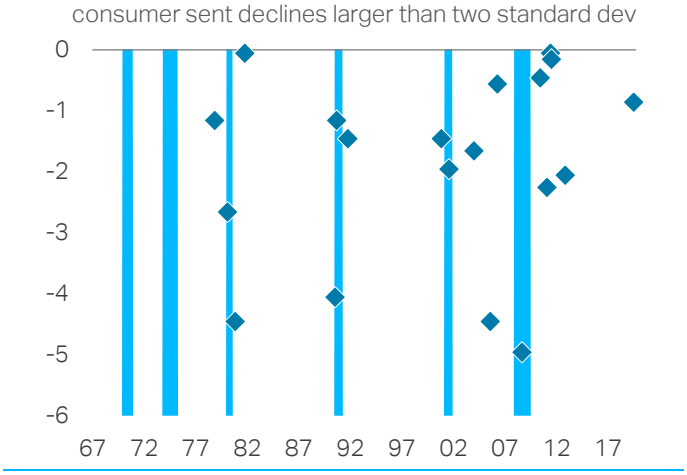
Source: Datastream, TS Lombard

Chart 14: Service-sector discontinuities



Source: Datastream, TS Lombard

Chart 15: Big drops in consumer sentiment

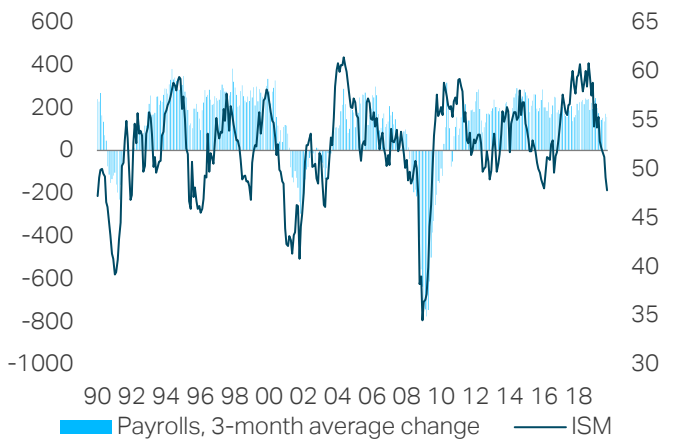


Source: University of Michigan, TS Lombard

2. CYCLE PATH

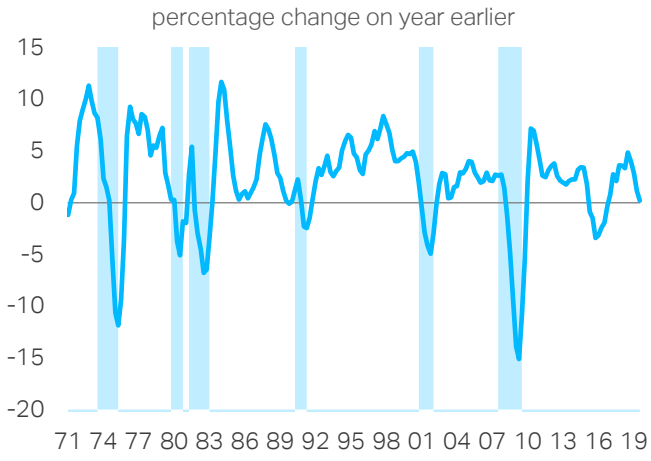
Outright declines in US employment are surprisingly rare outside of recession periods, even if we include the initial vintages of the data rather than the numbers the statisticians have 'smoothed' with subsequent revisions. The current expansion, which started more than a decade ago, has only ever produced a single monthly drop in US payrolls, the 33k decline initially recorded in September 2017. Extreme weather was the main cause of that weakness and the authorities later revised the drop away, so that it now shows a small (+18k) rise. Crucially, the resilience of employment during economic expansions is not a fluke – in fact, labour market trends are arguably the defining feature of the US economic cycle, offering the clearest distinction between periods of low growth and outright recession. When the economy is growing, even modestly, the number of jobs will typically increase. But falling employment is always a symptom of an economy that is in recession, or at the very early stages of recovery.

Chart 16: Payrolls less volatile than the ISM



Source: ISM, BLS, TS Lombard

Chart 17: Manufacturing more cyclical than GDP



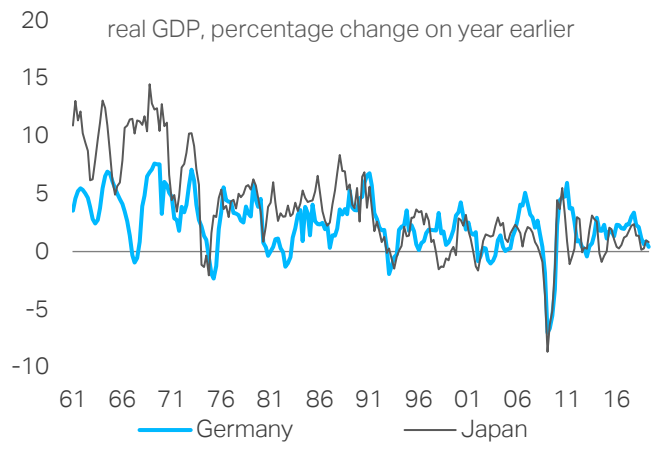
Source: Datastream, TS Lombard

The labour market is special (in the US)

The labour market's central role is the US economic cycle is fairly intuitive. US recessions are highly non-linear and involve powerful spillovers, both between different sectors of the economy and between real activity and financial markets. Outright recession is totally different from a period of low growth. We often hear investors describe a US recession as 'the end of the cycle' and that is exactly how it feels. In a temporary 'soft-patch' or mild slowdown, companies might halt investment (which is why manufacturing activity and capital spending are more cyclical than overall GDP) but they tend to hang on to their workers. Perhaps hiring will slow, or staff will adjust their hours, but wages will continue to rise and consumers will keep spending.

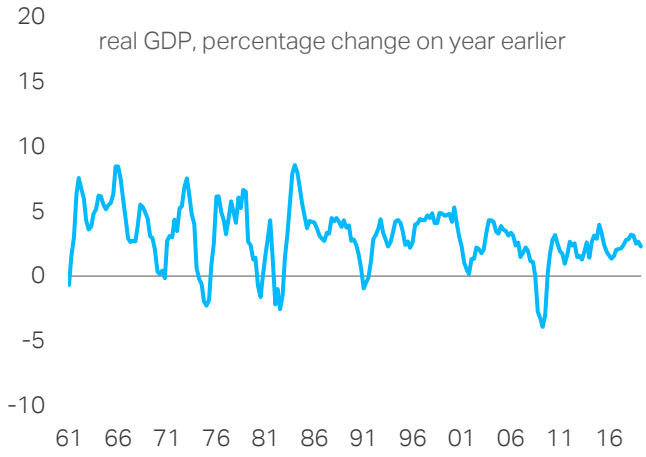
But when the outlook become sufficiently weak or uncertain that companies actually start to fire their workers, they set in motion a much more deflationary chain of events. Consumption declines, both among those people that have lost their jobs and those that are still employed but are nervous about the future. This hits corporate revenues, which can lead to further rounds of job cuts. And as profitability deteriorates, equity prices will plunge and credit will tighten, which provides a further hit to capital spending, hiring and consumer wealth. In short, economic downturns that are powerful enough to undermine employment will also feed on themselves.

Chart 18: Mini-cycles in Germany and Japan



Source: National sources, TS Lombard

Chart 19: US cycles longer, contractions rare



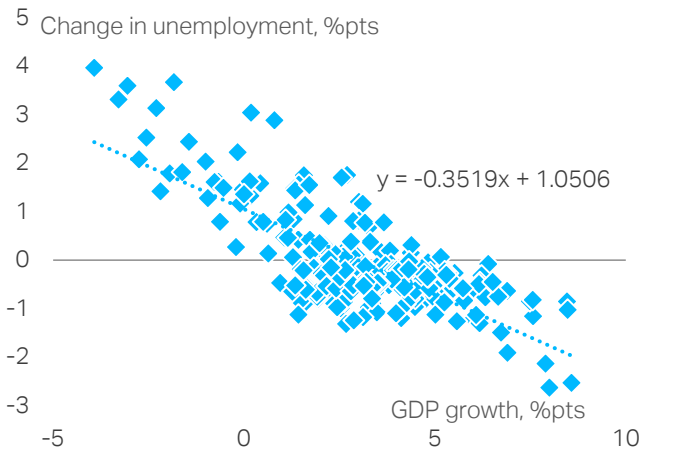
Source: BEA, TS Lombard

When US companies cut employment, they react aggressively (in aggregate). This process can be painful in the short term, because it causes a sharp deterioration in the macro economy, but this same response also generates a prompt improvement in margins (Chart 23). Wages slow and productivity accelerates, so unit labour costs adjust. Over time, improving profit margins will help to restore corporate health and a feed a recovery in business confidence, which provides the basis for a future economic revival; the classic v-shaped recession. Interestingly, this is not always what happens in other parts of the world, especially economies such as Germany and Japan, where companies are more reluctant (or unable) to adjust the size of their workforce.

Non-US non-recessions

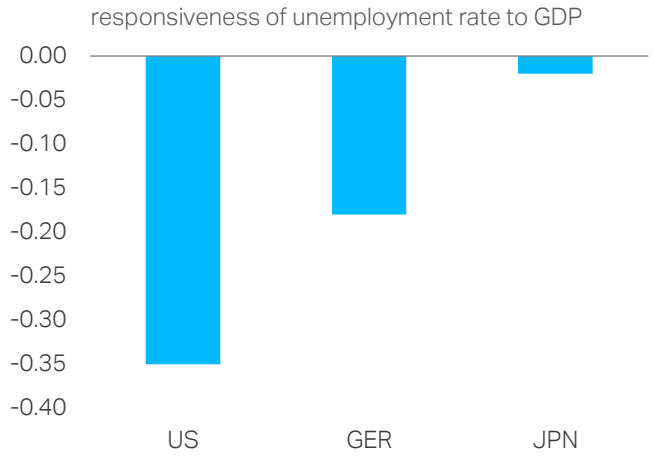
There is currently a lively debate about whether Germany and Japan are in recession. As is often the case for these economies, the argument often comes down to a technical question about whether GDP will contract for two consecutive quarters. Yet this debate largely misses the point. Since Germany and Japan are already growing at a dismal pace and companies are slower to fire workers, which means employment doesn't respond promptly to deteriorating demand, the difference between recession and non-recession is irrelevant – it is a political question and doesn't (shouldn't) matter to most investors. Remember also global markets react much more aggressively to US data than anything coming out of Japan or Europe, which also undermines the case for getting too caught up in the technicalities of German and Japanese recessions.

Chart 20: Okun's law for the United States



Source: BLS, BEA, TS Lombard

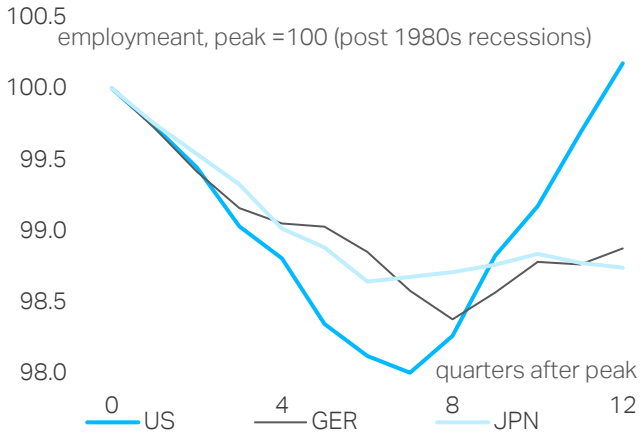
Chart 21: Japan and Germany less 'flexible'



Source: TS Lombard estimates

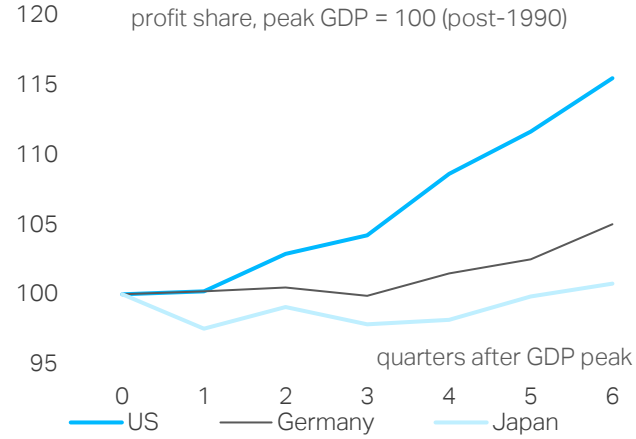
We can look at the role of labour markets another way, by estimating 'Okun's relationship' between unemployment and GDP. Writing in the 1960s, Arthur Okun noted that every 3% decline in US GDP was associated with a one percentage point rise in joblessness. Chart 20 updates Okun's analysis, finding a broadly similar result (though we have expressed it the other way round, as the coefficient on GDP). When we do a similar exercise for Germany and Japan, we find a weaker relationship between GDP and the jobs market. Whereas US unemployment rises by 0.4% pts for every one percentage point decline in GDP, the increase in German and Japanese unemployment is significantly smaller – between zero and 0.15%pts. Our results are consistent with several recent academic studies. In fact, we saw this story play out clearly during the 2008 financial crisis, which had a much larger impact on unemployment in countries like the US, Canada and Spain than Germany and Japan. The German jobless rate rose just 0.2% pts in 2009, despite a whopping 4.7% decline in GDP (twice the US contraction).

Chart 22: 'V-shaped' US recessions



Source: TS Lombard estimates, OECD data

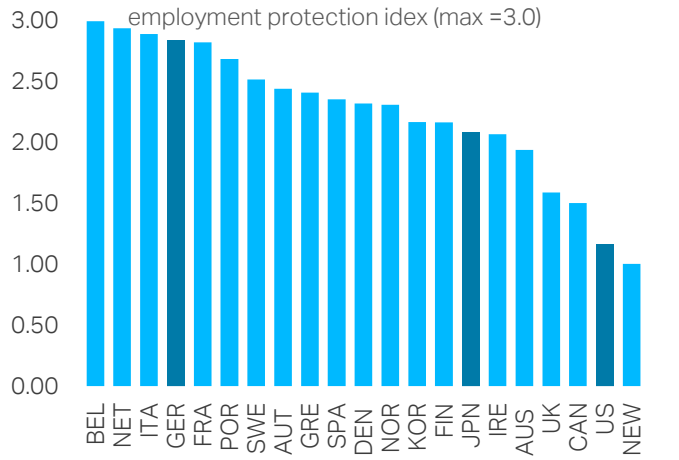
Chart 23: Corporate response boosts margins



Source: TS Lombard estimates based on AMECO database

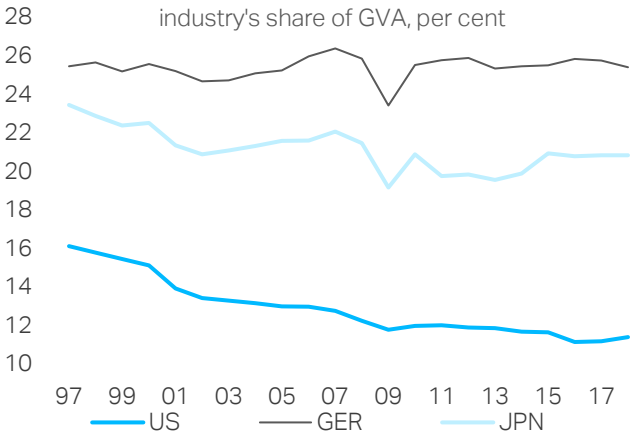
There are various reasons why Okun's relationship is more powerful in the US than elsewhere. One compelling explanation is that the German and Japanese labour markets are more heavily regulated than the United States, thanks to hefty Employment Protection Legislation (see the OECD's indices in Chart 24). This means it is more expensive for German and Japanese companies to adjust their workforce because they face large fixed costs, both when firing staff and also when they subsequently re-hire them. (A recent ILO working paper, which looked at this issue in detail, claims this is the main reason for the large variation in Okun's coefficient across countries). But other factors might also be important, including differences in the composition of final demand. ECB staff, for example, argue that manufacturing activity is less labour intensive than services, which means – for economies like Germany and Japan than have a larger industrial base than the United States (Chart 25) – unemployment will be less sensitive to GDP. ECB estimates also show, in fact, that euro-area unemployment is more responsive to consumption than overall GDP, which means the nature of the slowdown is also important.

Chart 24: US labour market less restrictive



Source: OECD database

Chart 25: US more service-sector based

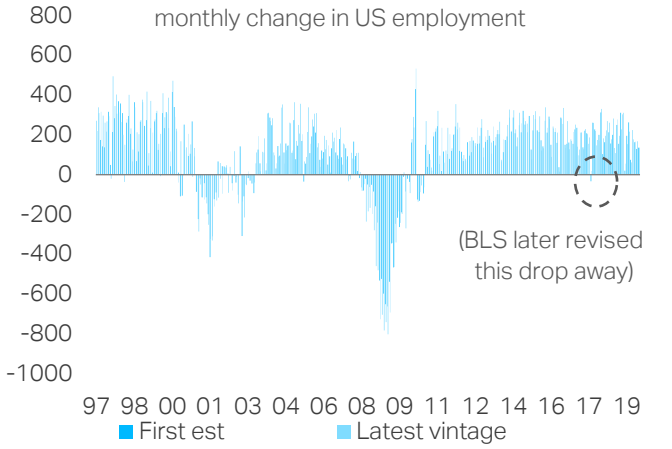


Source: National sources, TS Lombard

Whatever the underlying cause, the unwillingness of German and Japanese businesses to lay off workers might be an advantage in the early stages of a downturn – because the recession starts off milder – but it also means the corporate sector is effectively subsiding the rest of the economy. Wages will be stickier and productivity will slump, so profit margins must contract.

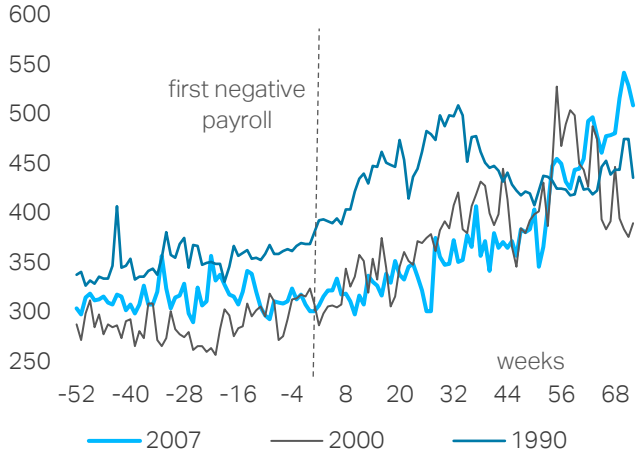
This is why, instead of the v-shaped recessions that are common in the United States, Germany and Japan are prone to shallower but longer-lasting downturns. Since profits remain weak, corporate balance sheet stay under pressure and confidence fails to return. Chart 22 shows the German and Japanese labour markets outperform the US in the early stages of a recession, but employment is slower to recover when demand improves. This blurs the distinction between outright recession and the long periods of stagnation now associated with these two nations.

Chart 26: Only one decline in payrolls since 2009



Source: BLS, Bloomberg

Chart 27: Initial claims an unreliable guide



Source: National sources, TS Lombard

3. PLUNGE PROTECTION

Returning to the situation we face today, it is clear the debate about a US recession hinges on what happens in the labour market. Companies all over the world are already responding to the uncertain macro outlook, particularly the escalation in the trade war between the US and China, by freezing their capital plans. This has hit world trade and manufacturing activity hard. US companies are now doing the same, but given the relatively small weight of the industrial sector in GDP, these trends are less noticeable than in other (export-orientated) nations. If trade tensions ease and capital spending rebounds, the current downturn should prove temporary – global growth would recover. But, if the cautiousness we are seeing from global corporates starts to affect their hiring decisions, or worse, encourages them to actively trim their workforce, the outlook for the global economy would become materially nastier. As far as monitoring US recession risk – which is surely what matters most for global financial markets in 2020 – our analysis suggests investors should be watching US employment data particularly closely[1].

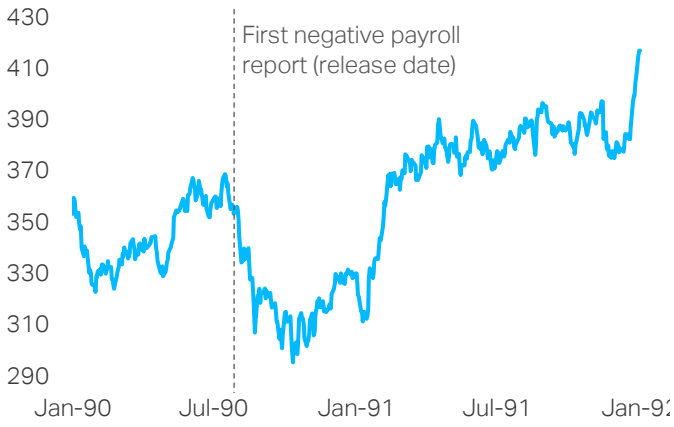
What to do when payrolls decline

Ideally, of course, we would like to find a way to forecast the first decline in US employment, since this would give us a first-mover advantage when it comes to trying to protect our portfolio

[1] Another way to look at this same issue is to focus on the unemployment rate, rather than the monthly change in employment. A Fed economist who is influential on finance Twitter, Claudia Sahm, has come up with a way to identify recessions based on whether the three-month average jobless rate is more than 0.5 percentage points above its minimum from the past 12 months (the modestly-titled "Sahm index"). This is likely to be a more reliable recession guide, but it will also lag simple payroll discontinuities.

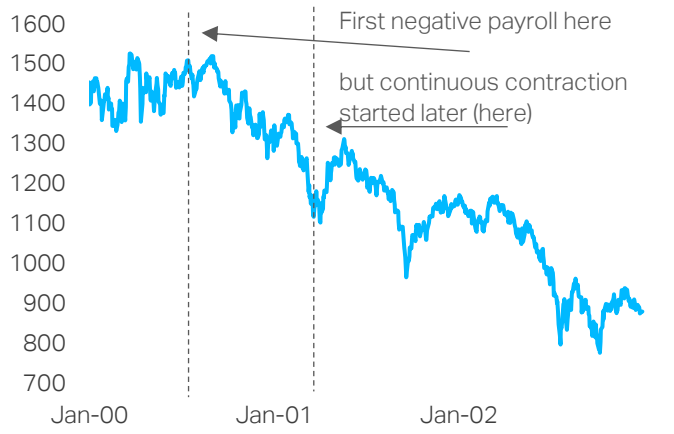
from the start of the recession. Unfortunately, this is more difficult than it sounds because most attempts at predicting short-term moves in payrolls are not particularly reliable. Survey-based methods, such as those based on the ISM employment indices, are too volatile. Initial claims data can be useful, especially as they a published on a weekly basis, but even these data have not provided a particularly long lead in the run-up to previous downturns (Chart 27). Still, even if we can't forecast the first decline in payrolls, we might be able to use our analysis of what this means for recession risk, particularly if we act more decisively than the rest of the market.

Chart 28: S&P 500 during the 1990 recession



Source: Bloomberg, TS Lombard

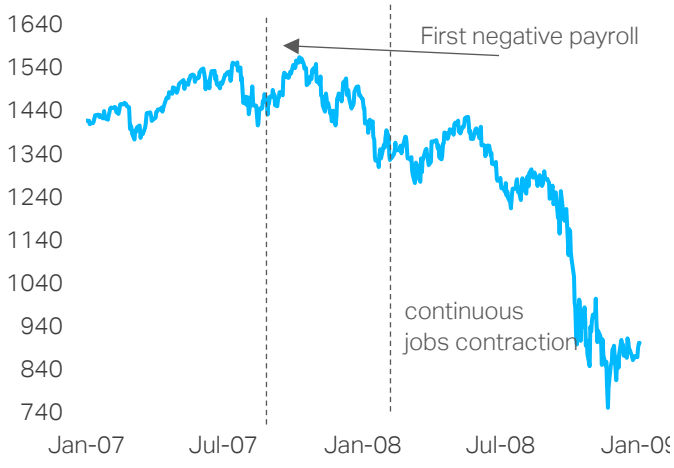
Chart 29: S&P 500 during 2001 recession



Source: Bloomberg, TS Lombard

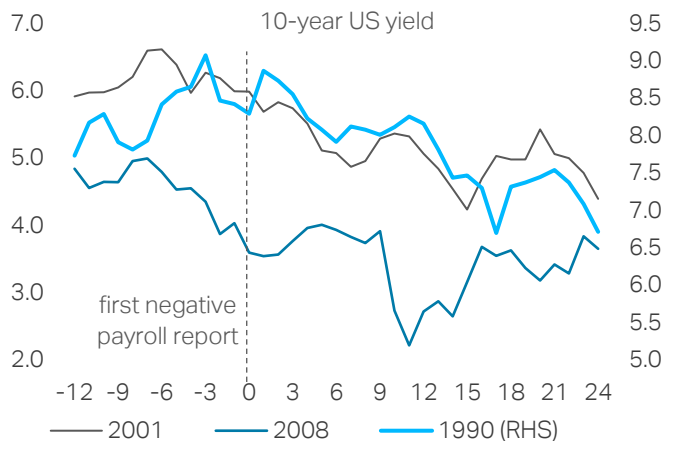
The easiest way to demonstrate this feature is to look at past recessions and show what happened to financial markets after the first reported payroll decline (based on initial vintages of the data – the information investors had in real time, rather than the revised series). Charts 28-30 show what happened to the S&P 500 at the start of the three previous recessions, using the first negative payroll report as a benchmark. It is immediately obvious that the largest declines in equities happened after the jobs market had deteriorated, meaning investors who had waited for clear evidence of a recession (on our analysis) still had time to cut their exposure to risk. In fact, stocks didn't decline much in the preceding three-to six months and even enjoyed a brief boost after the jobs market turned down, presumably because investors thought Fed easing would be sufficient to prevent the recession (the Fed put). 2000 is the main exception because the stock

Chart 30: S&P 500 during 2007-09 recession



Source: Bloomberg, TS Lombard

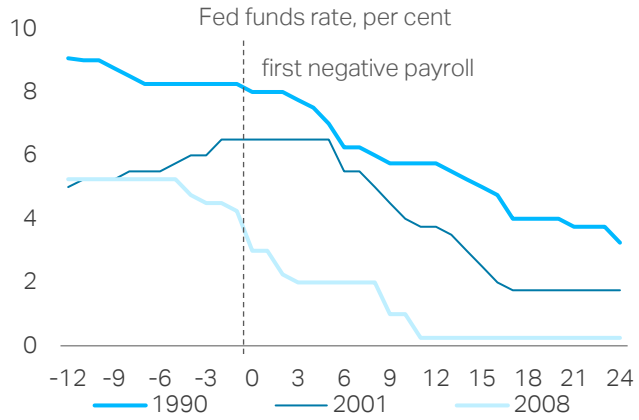
Chart 31: Yields after US payrolls decline



Source: Bloomberg, TS Lo

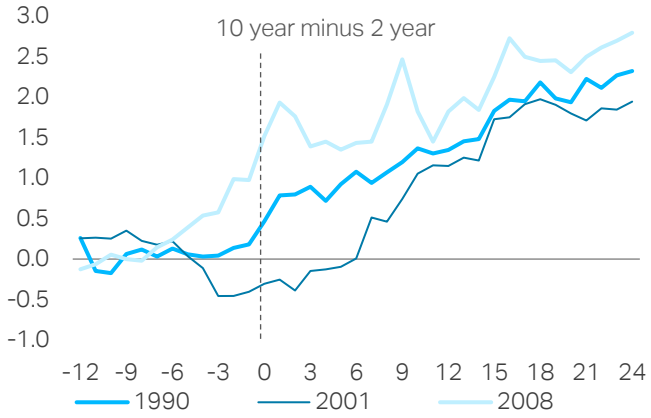
market had already dropped sharply before the economic downturn. But this is not surprising – it was the bursting of the Dotcom bubble that actually caused the recession in the first place.

Chart 32: Fed cuts aggressively once jobs crack



Source: Bloomberg

Chart 33: This steepens the yield curve



Source: Bloomberg, TS Lombard

We can also look at what happened to bond yields and the slope of the yield curve (Charts 31 and 32). On previous occasions where payrolls started to shrink, bond yields trended lower but short rates dropped faster, which means the yield curve steepened. Again, this is presumably because the deterioration in the jobs market forced the Federal Reserve to cut interest rates more aggressively. Fed officials understand the dangers associated with rising unemployment and act more forcefully as it becomes clear the labour market is starting to crack. This reaction is always too late – by the time the jobs market is deteriorating and the Fed is cutting rates, the recession is already underway and the central bank is behind the curve. Current officials, of course, have behaved a little more pre-emptively – cutting interest rates modestly before employment has turned down. But they are clear this is an 'insurance' move rather than a genuine attempt to reverse a recession. If payrolls start to decline, the Fed will cut more forcefully.

A recent Philly Fed study concluded that while economists can't predict recessions, they can still provide a useful service: "*Economists are like doctors, not soothsayers. They can't predict recessions, but they can help us to understand why one is happening*". By analysing the causes of recessions, economists can help policymakers take the most effective action. Our aim with this macro picture has also been similarly modest – we acknowledge recessions are hard to predict (especially when the outlook is as uncertain as it is today) but hopefully we can still help investors to spot a recession in real time, so they can act promptly to 'de-risk' their portfolios.

Bottom line

Economists have correctly predicted just 5 of the last 153 recessions and only one of the last 7 US recessions. For what its worth, financial markets do not have a superior record. The best we can do is look for discontinuities in the data, particularly for the labour market. The nature of the cycle means this approach works better for the US than other economies such as Germany and Japan. When US companies start cutting employment, their action creates powerful spillovers and what genuinely feels like the 'end of the cycle'. Labour hoarding dampens these effects elsewhere. The good news is that even if investors wait to see US employment decline, they might still be able avoid the big losses usually associated with major economic downturns. If US payrolls start to decline, investors should expect the Fed to cut rates more aggressively, stocks to plunge (perhaps after a brief rally), long-term yields to decline, and the curve to un-invert.

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