

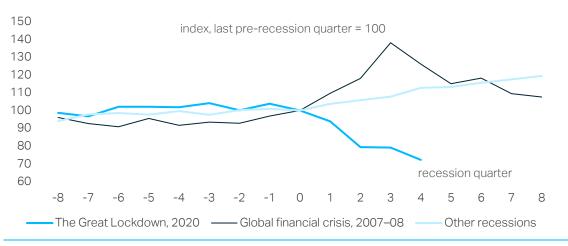
Macro Picture

BALANCE-SHEET HANGOVER?

Dario Perkins

Massive fiscal and monetary stimulus has shielded private-sector balance sheets from the COVID-19 economic downturn. If vaccines remain effective and policy support is not removed too soon, the world should emerge from the current crisis without another balance-sheet hangover. But the global economy will also need new secular growth catalysts for the 2020s.

Chart 1: Massive policy support has prevented financial scarring



Source: IMF Global Financial Monitor January 2021

FINANCIAL SCARRING

Most modern recessions are associated with the buildup of financial vulnerabilities, which eventually require a period of balance-sheet repair. The 2008-09 downturn was an extreme version of this, with policy errors that prolonged the adjustment. The current crisis is genuinely different. Policy has responded forcefully to a shock originating outside the financial system.

SHOCK ABSORBER

While financial vulnerabilities were not the root cause of the current downturn, the pandemic always had the potential to leave persistent "scars" on private-sector balance sheets. Forceful policy action has minimized the private-sector imprint of COVID-19. Governments supported household incomes, provided cheap business loans and absorbed the collapse in revenues.

BALANCE-SHEET CONSTRAINT

The world will emerge from the pandemic with higher levels of public and corporate debt, the main financial overhang from COVID-19. The good news is that another 2008-style balancesheet recession is not inevitable, since these dynamics are usually associated with overlyleveraged households and banks. Yet the economy also needs new secular growth catalysts.



BALANCE-SHEET HANGOVER?

Entering the second year of COVID-19, there is still a great deal of concern about "scarring", the idea the pandemic will permanently harm the world's GDP trajectory. As we examined in previous research, such scarring can take a variety of forms, including persistently high unemployment, the erosion of the capital stock and weaker productivity. There is also the potential for "financial scarring", which is what happens when a recession damages private-sector balance sheets, destroying wealth and/or adding to debt burdens. These dynamics were particularly important after the subprime crash, when many developed nations suffered a multi-year "balance-sheet recession". House prices collapsed, banks tightened lending standards and households rebuilt their saving, with various sectors of the economy trying to resolve severe underlying financial imbalances that had built up during the boom years. While the subprime recession was a particularly acute case of financial scarring, most modern downturns have shared some of its features - they were fundamentally about balance sheets. The COVID-19 crisis, in contrast, has been something entirely new. It originated outside the financial system and was met with a massive policy response. Governments acted forcefully, absorbing the huge financial cost of the pandemic in an effort to "freeze" their economies in the state they were in before the crisis.

To some extent, conditions in financial markets are testimony to policymakers' success. Asset prices immediately recovered from their COVID plunge and credit spreads are back to previous norms, even for the riskiest borrowers. There has been no wave of corporate bankruptcies, in contrast to every previous recession (see Chart 1). Yet, because financial markets sometimes misprice risk (especially when interest rates are zero), monitoring private-sector balance sheets is a better way to assess the effectiveness of government policy. "Sectoral balances" provide a convenient summary, showing how the authorities in the US and in Europe have tried to plug a large hole in private-sector demand. By absorbing the collapse in corporate revenues and protecting household incomes through job furloughs and unemployment insurance, the authorities have minimized the risk of financial scarring. Overall, households remain in a solid financial position and though many corporates have taken on even more debt, this was mainly for precautionary reasons. Of course, the aggregate picture conceals a wide dispersion across companies and individuals. Low-income households are struggling, while SMEs are in a shakier position than larger "listed" companies. There is also an international dimension to these diverges, with the US doing more to prevent financial scarring than most countries in Europe.

COVID-19 looks set to produce far less financial scarring than the subprime crisis. Its main legacy will be substantially higher levels of public borrowing and a moderate increase in corporate debt. While the fiscal consequences of COVID-19 have been spectacular, this is only a macroeconomic risk to the extent it encourages another disastrous austerity programme. Hopefully the authorities have learnt from the experience of the last decade. The increase in corporate borrowing, meanwhile, could be a more serious constraint on growth. There are plenty of commentators warning about the dangers of "zombification" and a lasting "corporate debt overhang". Yet the evidence from past recessions is encouraging: history suggests balancesheet recessions are more typically associated with unsustainable household borrowing and weak banks rather than anything that happens on the corporate side. Our bigger worry is about what is going to drive the global economy onwards once the immediate recovery from COVID-19 is complete. While policymakers have effectively put the global economy into hibernation since the start of the pandemic, the main drivers of the previous expansion (China and DM corporates) were already looking fatigued. To meaningfully extend the cycle beyond the next 12 months, new secular growth catalysts will be necessary, such as household re-leveraging (via strong housing markets/bank lending) or the deus ex machina or an unlikely productivity revival.



1. FINANCIAL SCARRING

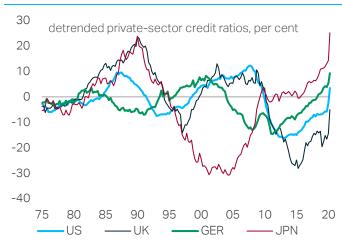
Back in the autumn, we dedicated a significant research effort to "economic scarring", the idea the pandemic might cause permanent collateral damage to the world economy. Even the euro crisis – a totally unnecessary recession in Europe – left a legacy of persistently lower output and lasting income/job losses for a generation of young people. So it was perfectly conceivable shutting down a large part of world economy for 12-18 months to battle an international health emergency might also have undesirable medium-term consequences. We outlined various forms scarring could take, including long-term unemployment (people out of work lose skills or suffer discrimination), declining investment rates, inadequate R&D, deteriorating productivity and a wave of bankruptcies. This Macro Picture updates our analysis, focusing on "financial scarring" - the pandemic's impact on balance sheets. It uses post-lockdown "flow of funds" data for the US and Europe, which wasn't available in the autumn. This information is crucial to understand whether governments have done enough to absorb the financial repercussions of COVID-19.

Chart 2: Decades of bubble troubles



Source: TS Lombard, *price-rents, **inverted scale

Chart 3: Sequence of credit booms



Source: BIS, TS Lombard, de-trended with HP filter

Financial scars after 2008

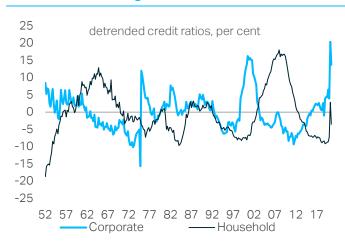
Financial scarring was an issue that gained prominence after the subprime crisis in 2008-09. Even from early in the recovery, there was a minority of economists who warned that the "imbalances" that had built up during the previous boom would take time to resolve, which would weigh on the global economy's performance for years to come. We also knew from past experience that recessions that were associated with serious banking crises and severe housing busts were always deeper and produced slower/more challenging recoveries. Many countries had entered the 2008 crisis with extremely high levels of household debt and as asset prices collapsed, balance sheets deteriorated, leading to voluntary and forced deleveraging. Eventually the phrase "balance-sheet recession" would dominate macro research, an idea inextricably linked to Japan's slide into debt deflation after its property bust in the 1990s.

There is no doubt much of the developed world started the 2010s in a balance-sheet recession. Countries that had experienced the largest housing bubbles struggled through a period of intense household deleveraging, which weighed heavily on their macro performance. Even when people stopped trying to curb their debt ratios - a process that, in the US, was complete by around 2013 - households and financial institutions continued to exercise caution. Saving remained high (despite rapidly rising wealth), banks maintained tight lending standards, credit



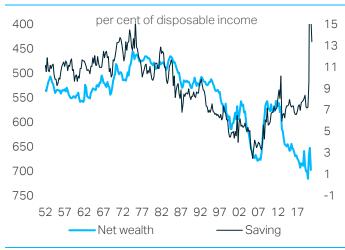
growth was anaemic and housing activity sagged. Worse, governments in most developed nations entered their own voluntary balance-sheet recession, tightening fiscal policy aggressively - especially in the period 2010-2015. It was only late in the 2010s expansion that the authorities eventually eased their self-imposed budget constraints, starting with Trump in 2017. By then, the world economy had suffered nearly a decade of secular stagnation.

Chart 4: Alternating US credit booms



Source: BIS, TS Lombard

Chart 5: Households stayed cautious after 2008



Source: US data, Federal Reserve

COVID recession was different

The 2008 crisis was an extreme version of the modern "financial recession", an economic problem that originated from exuberance in the credit/asset-price cycle. To varying degrees, the past three US recessions have all had their roots in financial developments, sharing some of the features of the 2008 crash - as have other international downturns such as the euro crisis, the LTCM crash and the demise of the Asian "tigers" in 1997. Periods of rampant credit growth and booming asset values create serious macro imbalances that eventually become unsustainable, prompting severe retrenchment. But the COVID-19 recession has been something totally new. Unlike every downturn during the last 30 years, this was the result of an "exogenous shock", rather than the natural unwinding of some deep underlying financial imbalance. Governments shut down their economies in an effort prevent their health systems becoming overwhelmed. Global GDP contracted at its fastest pace in 400 years, but the economic cycle was basically in hibernation, rather than dead by natural causes. While there were financial vulnerabilities that had built up in the 2010s - as the flat/inverted US yield curve indicated even before the crisis - these were not the root cause of the recession. GDP dropped 15% but the cycle never really ended.

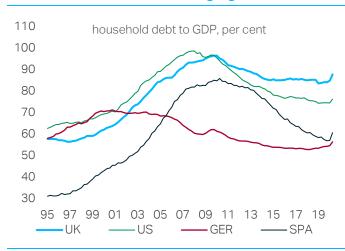
Market "vote of confidence"

The COVID-19 economic crisis didn't start in the financial sector, but there was a very real danger developments in global markets might amplify it, turning a health emergency into a financial crisis. We wrote about this in detail 12 months ago, when it seemed collapsing asset values and a severe tightening in financial conditions might intensify the economic pain associated with lockdowns/social distancing, destroying private-sector balance sheets. Yet the forceful response from international policymakers – both central banks and governments – halted this process, breaking the feedback loop between financial markets and the real economy. Central banks, especially the Federal Reserve, provided a powerful market backstop, reversing the deterioration in credit conditions and putting a floor under asset prices. A recent NBER paper shows Fed actions effectively capped risk premiums 100bps above their non-



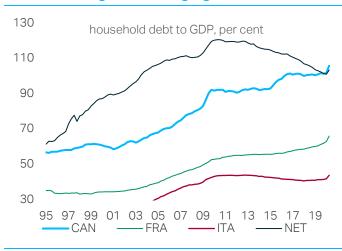
recession averages, breaking the usual "financial accelerator". For many, the subsequent bounce in stock prices and narrowing in credit spreads, (even for the riskiest corporate borrowers), is a definite vote of confidence in policymakers.

Chart 6: Household deleveraging in 2010s



Source: BIS, TS Lombard

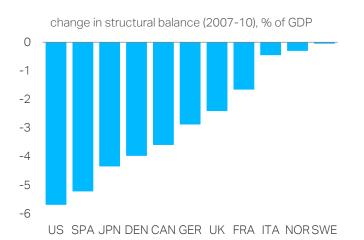
Chart 7: Though deleveraging wasn't universal



Source: BIS, TS Lombard

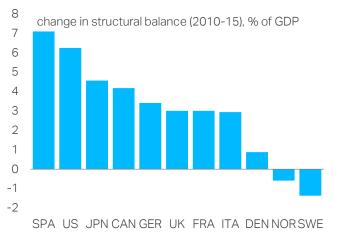
Obviously we must be careful not to over-interpret the buoyancy of financial markets as a sign everything will be fine for the real economy. The now infamous "K-shaped" recession naturally favours the large (especially tech) companies that are listed on the stock market, while the prospect of permazero interest rates has pushed investors into riskier assets for a variety of reasons. And there is always the danger of a bubble in financial markets, where asset prices become detached from fundamentals. Should asset values decline sharply, even the strongest balance sheets would look shakier. Yet we can also monitor the success (or otherwise) policymakers have had in limiting the financial fallout from COVID by looking at "flow of funds". These reveal how governments used their balance sheets to absorb the cost of the pandemic.

Chart 8: Fiscal easing in response to subprime



Source: OECD, TS Lombard

Chart 9: Austerity soon took over

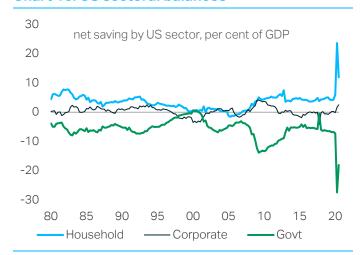


Source: OECD, TS Lombard

¹ Their estimates suggest, based on the impact of bond spread shocks in both the FRBUS model and the model of Gilchrist and Zakrajsek (2012), that the Fed's corporate debt intervention prevented an even larger decline in real GDP, ranging from 0.6 to 2-1/4 percent four quarters later.

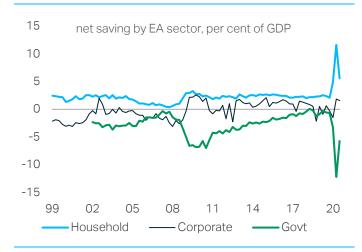


Chart 10: US sectoral balances



Source: Federal Reserve, TS Lombard

Chart 11: Euro area sectoral balances

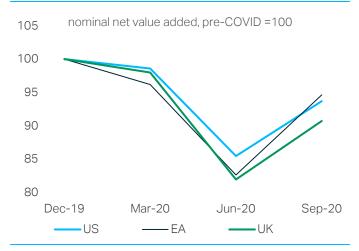


Source: Eurostat, TS Lombard

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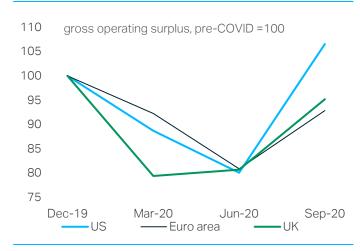
The government response to COVID-19 – both fiscal and monetary – was essentially an attempt to put the economy into hibernation, freezing the business cycle where it had been immediately before the crisis. Policymakers wanted to prevent financial scarring by absorbing most of the cost of the pandemic into the public-sector balance sheet. Remember, the first-round effect of lockdowns and social distancing was a collapse in corporate revenues, as consumers stayed home. If the authorities had done nothing, plunging corporate revenues would have had severe repercussions on the rest of the economy. Companies would have fired workers and gone out of business. Mass unemployment and a wave of bankruptcies would have further undermined spending, amplifying the first-round effects of the pandemic. A recent survey of small US firms found an average decline in revenues of around 30% in 2020Q2 while more than 40% of companies suffered a decline of at least 50% in their cash flow. SMEs struggled most and these companies are responsible for a disproportionately large share of employment and capex.

Chart 12: Corporate revenues collapsed



Source: National sources, TS Lombard

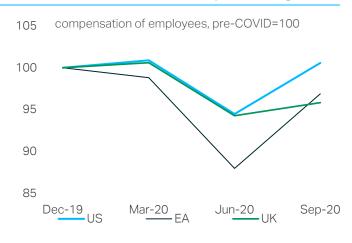
Chart 13: Profits recovered fully in US



Source: National sources, TS Lombard

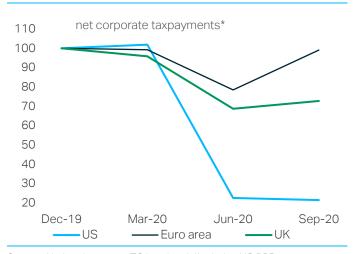


Chart 14: Governments cut corporate wage bill



Source: National sources. TS Lombard

Chart 15: US used large corporate transfers

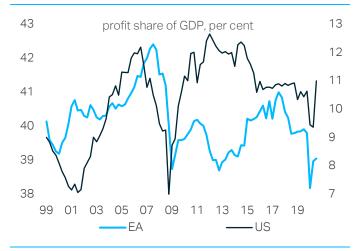


Source: National sources, TS Lombard, *includes US PPP

Governments absorbed the shock

We can illustrate the financial impact of COVID-19 by looking at "sector accounts", both "flows" and "stocks". US and European companies suffered a massive decline in revenues - proxied in the national accounts as "nominal net value-added" - of around 20% between the final quarter of 2019 and the second quarter of 2020 (Chart 12). Yet governments cushioned the blow, introducing a variety of measures to ensure most companies avoided bankruptcy. Perhaps the most important initiative was that governments absorbed the corporate sector's largest cost, its wage bill. They did this through a combination of job furloughs (especially in Europe) and by encouraging companies to put their workforce into temporary unemployment, using the (now greatly enhanced) unemployment insurance scheme to support household incomes. In addition, most governments also supported the corporate sector indirectly, via large tax cuts (or payment deferral), generous business loans, paycheck protection schemes and other income transfers.

Chart 16: Divergence in US-EA profit shares



Source: National sources, TS Lombard

Chart 17: Europeans have taken on more debt

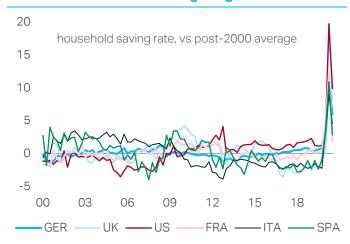


Source: National sources, TS Lombard



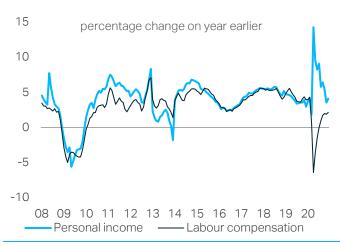
"Sectoral balances" provide a neat illustration of how governments used their own balance sheet to prevent an economic depression in 2020. Charts 10 and 11 summarize the net cash-flow position of the different sectors of the economy – governments, households and businesses – via the difference between their income and expenditure (i.e. their net borrowing/investment). We see a remarkably consistent picture across most developed nations. While corporate revenues plunged, so did their costs and investment rates, leaving the corporate sector's net cash position in surplus. It's a similar - though more extreme - story for households. Consumers cut their spending but governments supported their income, which caused a record surge in household saving rates. Massive net borrowing among governments was the counterpart of this private-sector surplus. Governments ran extremely large fiscal deficits in 2020, as they absorbed most of the cash-flow losses that would otherwise have appeared in other sectors.

Chart 18: Household saving surged



Source: OECD, TS Lombard

Chart 19: Governments supported income



Source: US national accounts, TS Lombard

Corporate debt has increased

Despite the corporate sector being a "net lender" through 2020, spending less than it earned, most OECD economies also experienced an increase in corporate debt during the pandemic (Chart 17). The amount of debt is a financial "stock" position but you would usually expect this to be associated with the accumulated "flow" of a persistent corporate deficit. The fact that it wasn't raises something of a puzzle. One explanation is distributional - while some companies (such as tech superstars) have been generating huge amounts of cash during this pandemic, others were forced to borrow to stay in business. Yet there were also powerful precautionary motives for companies to borrow in 2020, especially when governments and central banks were offering extremely generous terms. Indeed, many companies drew precautionary credit lines, depositing the funds in their bank accounts. We see this clearly in US data, where companies have recently started to pay back some of their borrowing as the economy has reopened².

US policy response>European response

Throughout the COVID-19 crisis, investors have been keen to compare the policy response in the US to that of Europe. In terms of the broad thrust of macro initiatives, the authorities in both jurisdictions have worked along similar lines, with the same basic strategy. In aggregate,

² Note this is the counterpart of the massive increase in the money supply we saw in 2020, which had monetarists panicking about an inflation surge. Yet because the increase in the money supply reflected massive precautionary demand for money, "velocity" has also collapsed. If companies pay back these loans, destroying some of the new money, the monetary aggregates should begin to shrink.



however, the US approach has been more generous - the authorities have used larger direct transfers to the private sector, which has also had the effect of restoring corporate profitability more fully, especially compared to some euro-area nations such as France and Italy³. It is notable the profit share has recovered in the US, while it has sunk to historic lows in the euro area. Euro companies have also experienced a larger increase in debt. And, of course, President Biden is now trying to push through another large stimulus programme, which could add to the US advantage in limiting financial scarring. (Some economists think he is going too far.) Yet we should be careful not to read too much into current US-European comparisons. Ultimately, macro policy success will depend on resolving the health crisis - which isn't yet over - while we might discover the euro area has performed better in other policy areas, such as limiting the scarring in labour markets. Unemployment has risen more in the US than in Europe.

Chart 20: Global fiscal support

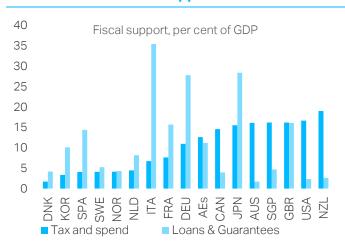
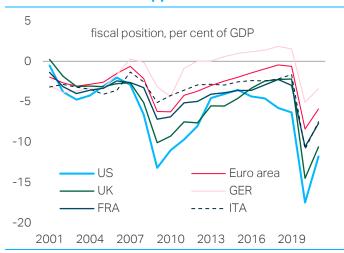


Chart 21: US more supportive than euro area



Source: IMF Fiscal Monitor, January 2021 – excludes Biden plan

Source: IMF COVID-19 fiscal database

To sum up, the policy response to COVID-19 has made a massive difference to the likely balance-sheet repercussions of the pandemic. The risk of financial scarring, which would have been extreme had the authorities not intervened, is now greatly diminished. Our analysis, in fact, reveals only two clear financial imprints from COVID-19: (i) a modest increase in corporate debt (which has an important precautionary element), and (ii) a much larger increase in public debt. So the key issue for financial scarring comes down to the question of whether this sort of debt overhang has any bearing for the performance of the global economy in the 2020s. Will this trigger another "balance-sheet hangover" similar to what happened after subprime? We see reasons for optimism, as long as the pandemic ends soon (vaccines work) and governments do not remove their policy support too quickly, avoiding the mistakes they made a decade ago.

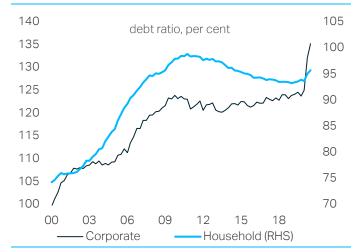
3. BALANCE-SHEET CONSTRAINT

After the 2008 crisis, governments were excessively concerned about the sustainability of their public finances. The debate was dominated by worries about "turning into Greece", falling victim to the "bond vigilantes" and "sitting on a bed of nitroglycerin". The authorities believed they needed to tighten their fiscal positions to ward off this threat and return to sustainable growth.

³ Note in Chart 15 and big relative improvement in US profits has come from net corporate tax payments. This includes the impact of the Paycheck Protection Program - loans companies can use the cover their wage expenses - because these can be written off and US statisticians are including them as a "subsidy" in the corporate accounts.

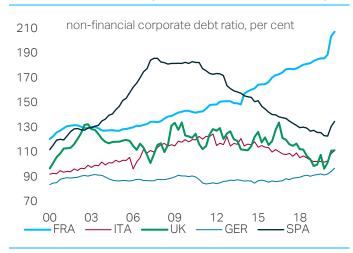


Chart 22: Euro-area debt ratios increased



Source: Eurostat, TS Lombard

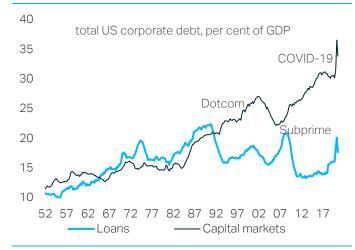
Chart 23: French corporates borrowed heavily



Source: Eurostat

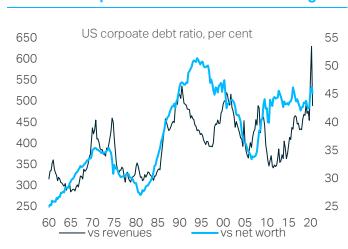
Today, thankfully, most economists have realized that there is no reason for governments to obsess over the size of their debts or make reducing the deficit an explicit policy objective. Nothing magical happens when public debt exceeds 100% of GDP and the borrowing governments have done during the pandemic need not influence future growth prospects, unless the authorities allow it to - through e.g. new rounds of austerity. Yet the politicians do not always listen to economists (!) and it would be brave to rule out premature policy tightening, especially given the nature of the public discourse. But we should be clear in our analysis financial scarring from the public finances is a policy choice, not an economic inevitability.

Chart 24: US corporates have also borrowed



Source: Federal Reserve, TS Lombard

Chart 25: Corporate debt ratio at historic high



Source: Federal Reserve, TS Lombard

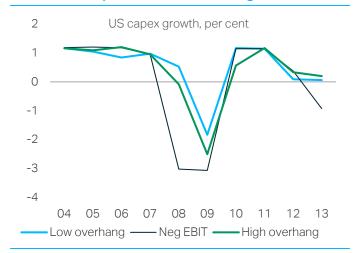
Corporate debt overhang?

There is less agreement among economists about the risk of financial scarring from corporate debt. Some warn that government policy has only delayed a wave of bankruptcies and that the surge in corporate borrowing during this pandemic will weigh on business investment and hiring for years to come, making secular stagnation more potent. One of the starkest warnings comes from Carmen Reinhart who, in a blog for the World Bank, warned we are already suffering a "quiet financial crisis". Even without a cathartic Lehman moment, Reinhart think financial scars "could jeopardize prospects for economic recovery for years to come". The World Bank's Chief



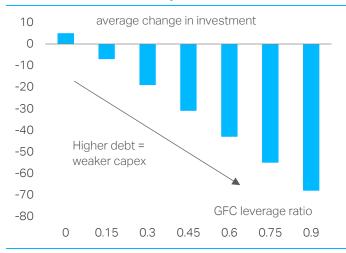
Economist is worried "highly leveraged firms and households" will trigger a slow-motion wave of non-performing loans, which over time will undermine the health of financial institutions and cause a lasting credit crunch. Reinhart is not alone in expressing this pessimistic view. Recently, the IMF, the OECD and the Fed have all said they are concerned about the zombification of the corporate sector, warning that highly leveraged businesses cut their spending more than companies with lower debt levels. (The Fed's analysis is shown in Chart 26, the OECD Chart 27)

Chart 26: Corporate debt overhang in 2008-09



Source: Federal Reserve Liberty Street estimates

Chart 27: Indebted companies invested less



Source: OECD Economic Outlook, December 2020

A note of optimism

We agree it is important to monitor the risks associated with corporate debt, especially among SMEs that are crucial for wider macro performance. Many smaller companies continue to face acute cash-flow pressures and will struggle to survive if the pandemic doesn't end soon, even with generous policy support. The situation in parts of Europe is particularly bad, especially after the latest lockdowns. Yet <u>a compelling research paper from Öscar Jordà, Martin Kornejew,</u> Moritz Schularick and Alan Taylor suggests the pessimism of Carmen Reinhart and others is overdone. Using a unique corporate dataset that dates back to the 1800s (see Chart 27), the researchers show that increases in corporate debt leave fewer macroeconomic scars than periods in which households have overleveraged themselves, which means the comparison between COVID-19 and the subprime crisis is misleading. Chart 28 to 30 summarize the paper's main results, showing no compelling link between corporate debt buildups and subsequent macro performance - either in terms of the depth of the recession, or the pace of the recovery. Household debt, in contrast, is much likelier to produce a balance-sheet hangover.

Economy emerges from hibernation

Let's assume the policy response to COVID-19 is successful. Governments resist the urge to remove their support too soon, the vaccines bring an end to the health crisis during the second half of 2021, and there is no financial scarring. The global economy would effectively be back where it was at the start of 2020, after nearly two years of hibernation. Would this mark the start of a new economic cycle, or the continuation of the old cycle? This sounds like a technical issue but it actually has important macroeconomic implications, especially when most asset values are already at historically high levels - new economic cycles do not usually begin with stock markets pushing into "overvaluation" territory. More importantly, there is also a question about whether the sources of growth in the 2010s can continue to drive the world economy forwards in the 2020s, or whether new growth catalysts will emerge. Remember, there were already



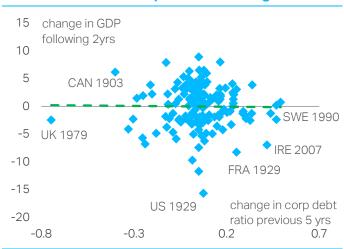
doubts about how long the previous expansion could last even before the pandemic. Corporate margins were under pressure and the yield curve had inverted. Putting the economy into hibernation isn't necessarily going to produce a durable recovery, especially when the previous sources of growth were looking fatigued. After the post-pandemic bounce, activity could sag.

Chart 28: Long history of corporate debt



Source: Jorda et al (2021)

Chart 29: No clear corporate overhang

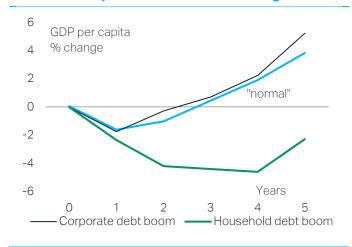


Source: Jorda et al (2020)

Balance-sheet support

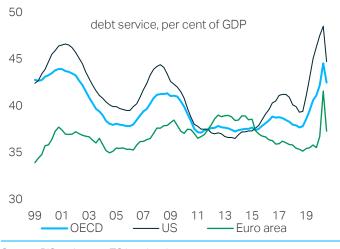
The perma-pessimists are obsessed with the overall level of global debt, which hit fresh highs in 2020. Yet this statistic, on its own, is not particularly meaningful. It is more useful to look at what has been causing the level of debt to rise over the past decade, because this will tell us something about the "growth drivers" of the previous expansion. Chart 33 shows most of the borrowing came from two main sources - China and DM corporates. (There was also an increase in DM public debt but this was a front-loaded response to the 2008 crisis). China, of course, played a particularly dominant role in the 2010s expansion, with every stop-go round of government stimulus providing a critical source of demand for the global industrial cycle.

Chart 30: Corporate debt less of a drag



Source: Jorda et al (2021)

Chart 31: Corporate debt servicing costs

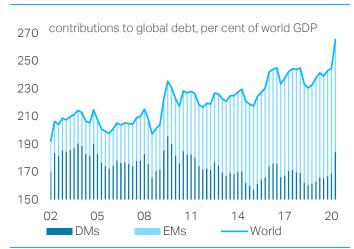


Source: BIS estimates, TS Lombard



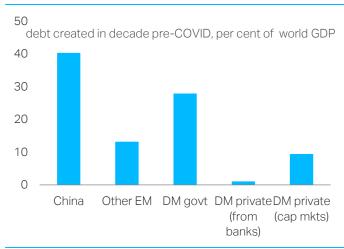
While the tight relationship between China's domestic credit cycle and wider global demand sometimes confused investors, it made sense in a world struggling with secular stagnation - the Chinese state was using its balance sheet in a way that would make even MMT enthusiasts blush! The increase in DM corporate debt, meanwhile, was the result of the international search for yield, the dominant theme in financial markets over the past decade. There was an insatiable appetite for international debt securities - especially USD denominated. Going forwards, we are concerned that these two sources of growth are becoming "maxed out". China doesn't want to accumulate debt as dramatically as it did in the 2010s, while DM corporates - even if they avoid a nasty financial hangover from the pandemic - might be reluctant to keep borrowing.

Chart 32: EMs drove 2010s debt expansion



Source: BIS. TS Lombard

Chart 33: China and the search for yield



Source: BIS, TS Lombard

New growth drivers

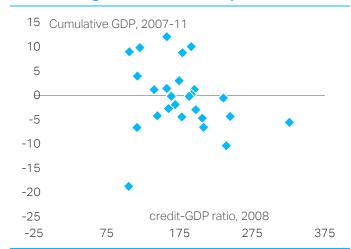
There is no magic level of private debt that marks the boundary between "sustainable" and "unsustainable". But there is evidence that episodes of rapid credit growth in one cycle rarely provide the same sort of impulse to the economy after that cyclical expansion has ended. We see this in Charts 34 and 35. There is no correlation between the level of leverage and subsequent growth performance, but there is a relationship between the rate of change in the credit ratio and future GDP. Put another way, sectors that are experiencing rapid credit creation will eventually cool, losing their ability to drive the economic expansion - which means new sectors must take over, or growth rates will deteriorate. US experience over the past 20 years illustrates this neatly, with alternating credit booms among corporates (1990s, 2010s) and household (2000s). We suspect something similar will happen after the COVID-19 pandemic, with the world no longer able to rely on debt accumulation in China and among DM corporates.

There will certainly be a powerful recovery in the world economy over the next 12 months, as the consumption shock associated with COVID-19 unwinds. But for the expansion to continue beyond 2022, the world is likely to need new secular catalysts - especially if we are going to get another of the long expansions we have been accustomed to since the 1990s. We see three possibilities: (i) a revival in household borrowing and construction activity; (ii) an era of MMT-style government spending, where the authorities deliberately run their economies "hot" or fight a war on climate change/inequality; and (iii) A revival in productivity, as new digital technologies find general purpose applications. The third of these is the most bullish medium-term scenario, but it is also highly speculative. In fact, recent analysis suggests COVID-19 will damage productivity. In the absence of a new secular growth catalyst, we are surely facing an even longer period of zero



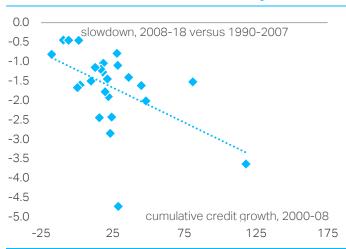
interest rates, which could inflate another large asset-price bubble. In fact, policymakers' success in avoiding financial scarring, surely now makes this the likeliest cyclical "end-game".

Chart 34: High debt ratios not a problem



Source: BIS, TS Lombard

Chart 35: But "hot" sectors eventually cool

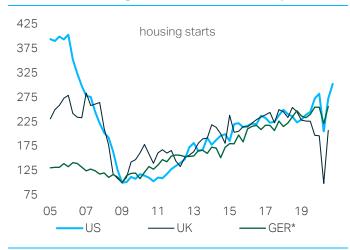


Source: BIS, TS Lombard

Bottom line

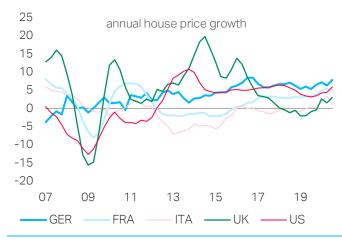
Aggressive fiscal and monetary stimulus has reduced the threat of financial scarring from COVID-19. Not only did the authorities prevent financial markets from amplifying the impact of a problem that started outside the financial sector (unlike most modern recessions), they also shielded private balance sheets from the economic destruction the pandemic has caused. Governments absorbed corporate losses and protected household incomes, preventing mass unemployment and a wave of bankruptcies. If the pandemic ends soon, it should leave only two visible financial imprints - a modest rise in corporate debt and a much larger increase in public debt. While it will be important to monitor financial vulnerabilities among businesses, especially SMEs, there is no reason to expect another 2008-style "balance sheet recession". Yet we still have doubts about what will drive the expansion once the post-pandemic bounce has ended, especially as successful policy has essentially frozen in time an expansion that was already looking fatigued. Without new growth catalysts and with asset values already priced for "late cycle", the next global expansion could be shorter than many investors are assuming.

Chart 36: Housing to become new catalyst?



Source: National sources, TS Lombard

Chart 37: House prices start to re-accelerate



Source: BIS, TS Lombard