

29 April 2020

When liquidity meets insolvency

Can markets really be propped up indefinitely?

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See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures

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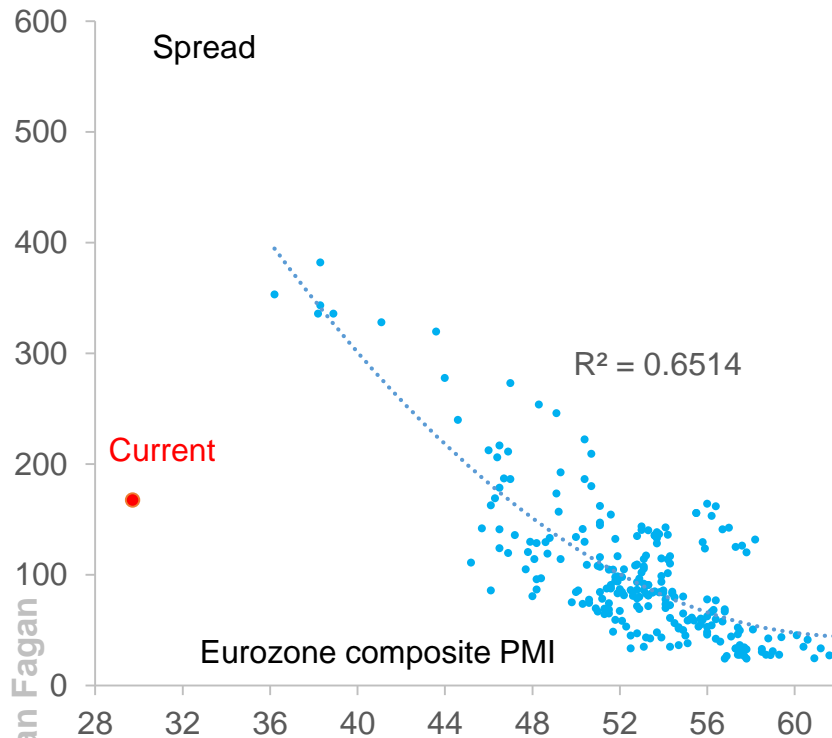
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How durable is the market recovery?

Awful economy ≠ awful markets?

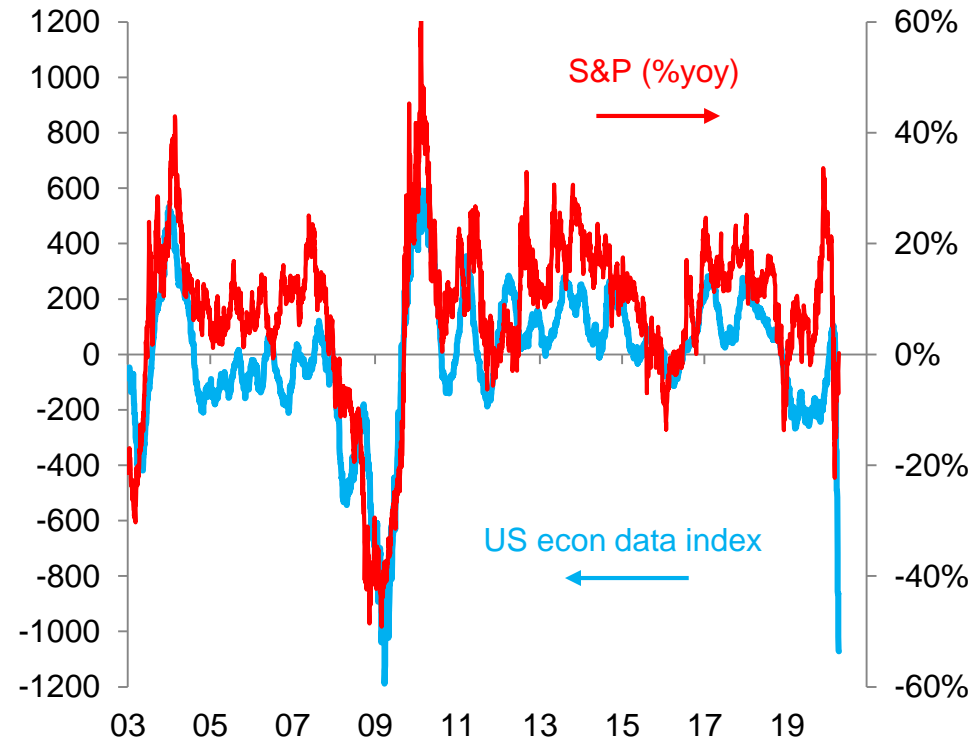
Euro area PMI vs € IG credit spread, bp, 2000-Mar20



Source: Bloomberg, Markit, Citi Research. See [Where the bail-outs stop, trouble starts](#), H. Lorenzen, 22 Apr.

Economy in depression. Equities unchanged

US economic data changes index vs SPX 12m chg (%)



Source: Citi Research.

The gap between markets and data is the largest on record

When limitless liquidity...

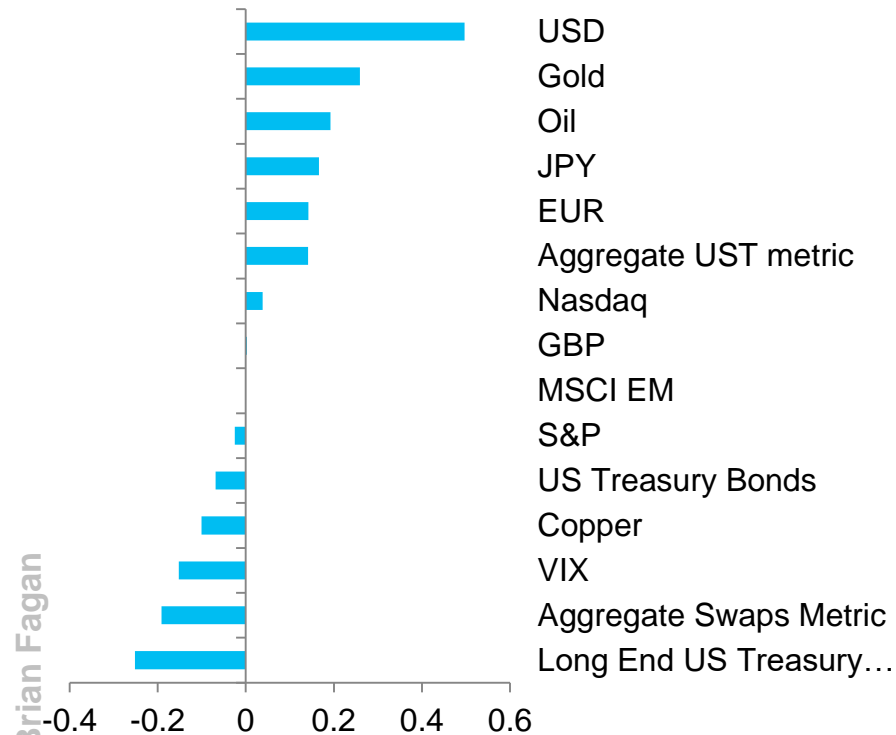
...meets spiralling insolvency

There's bound to be a long-term price

It's easy to explain some of the market bounceback

Positioning is super-defensive

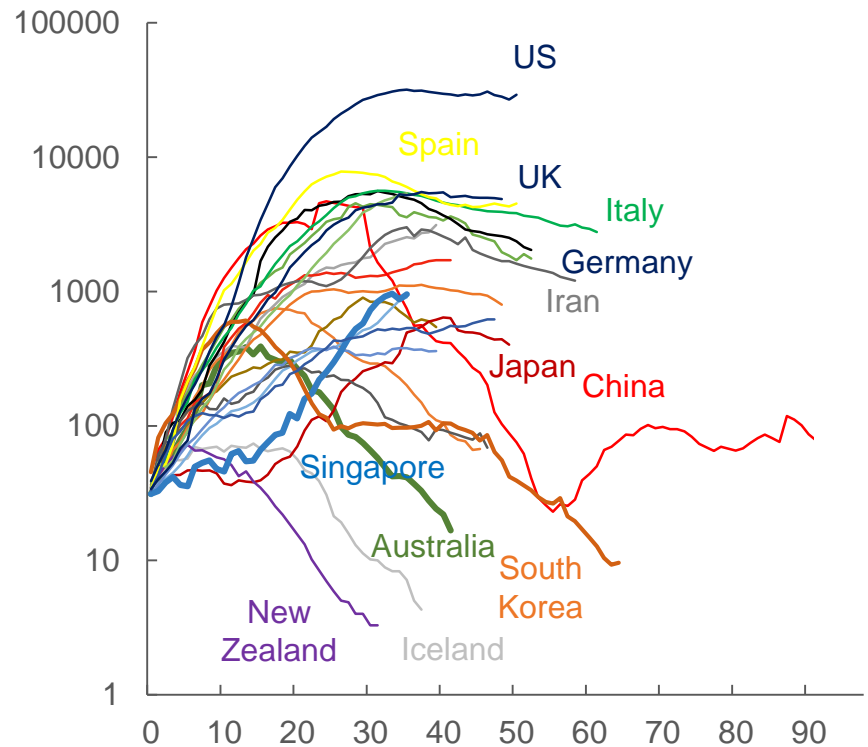
Net speculative long in futures+options, ratio to open interest



Source: CFTC.

Incidence of new cases has peaked (mostly)

New daily coronavirus cases by country vs days since 30 cases reached, log scale



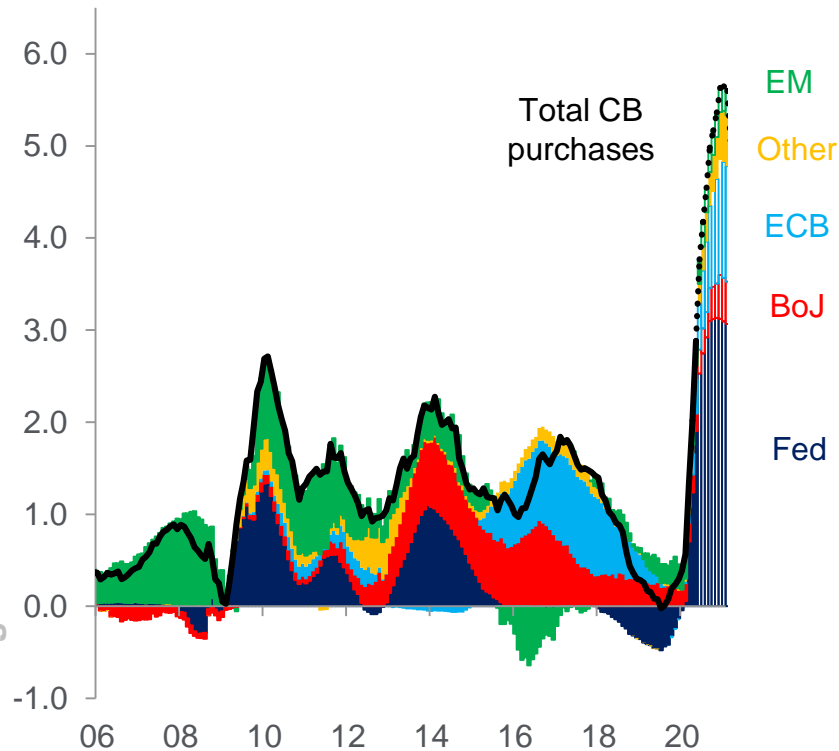
Source: Our World in Data.

Short positions have been squeezed

But mostly it's been about the central banks (again)

An unprecedented wave of liquidity...

Global central bank securities purchases, 12m rolling, \$tn



Source: National central banks, Citi Research. Projections based on CB announcements.
See [Whatever it takes? Why \\$5tn may not be enough](#), H. Lorenzen & M. King, 6 Apr.

...improves valuations vs risk-free

US IG credit, yield pickup vs 10y TIPS and 3m T-bills, %



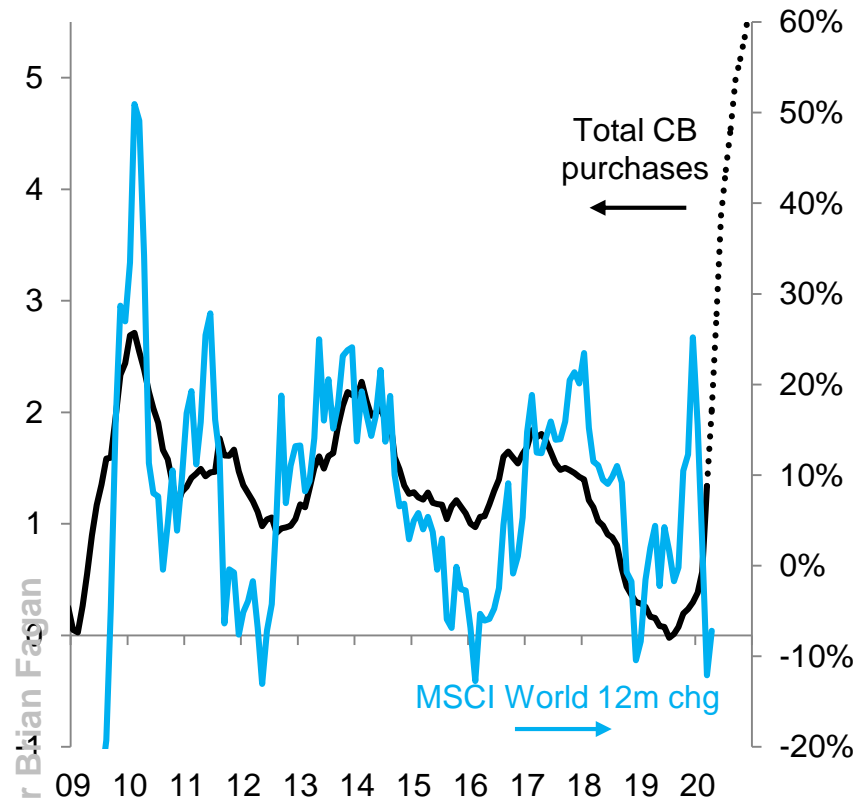
Source: Federal Reserve, FTSE.

\$5tn in prospective buying has reignited FOMO

If historical relationships were to hold... (1)

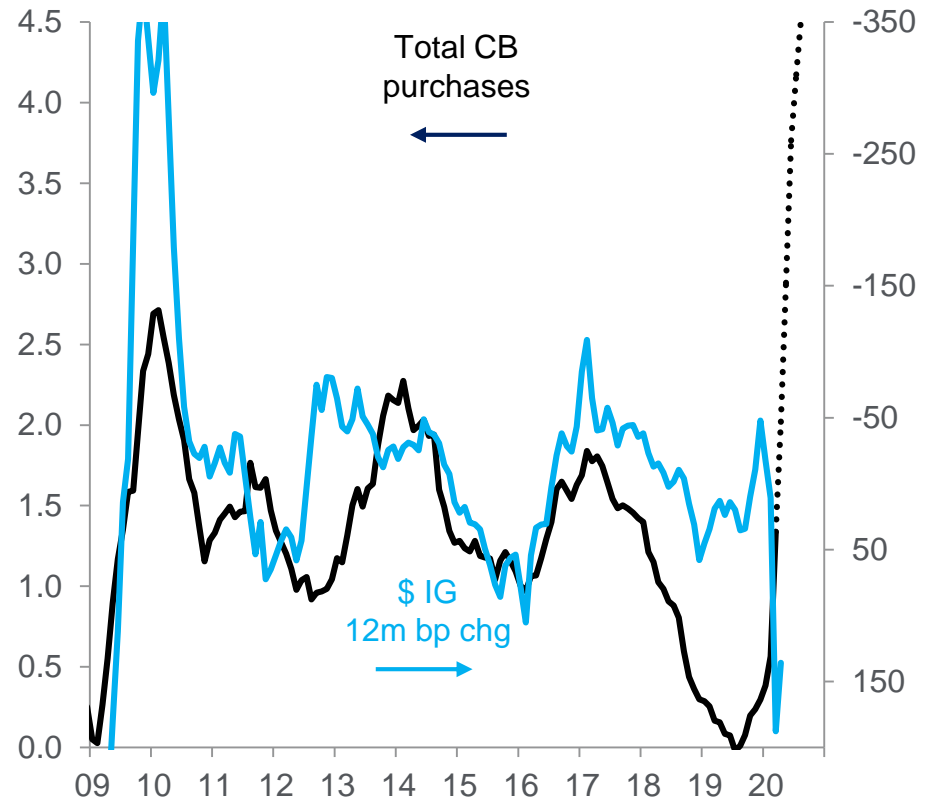
Equities should rebound

Global CB purchases (\$tn) vs equities, 12m rolling



Credit spreads should go negative (!)

Global CB purchases (\$tn) vs credit spread changes, 12m rolling

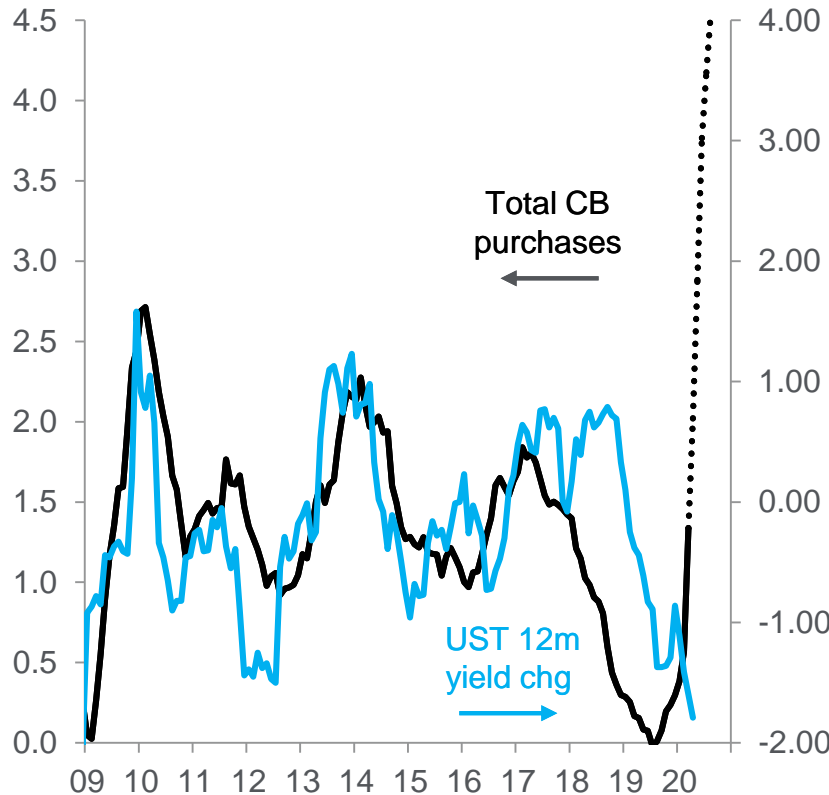


On paper, the central bank buying looks tremendous

If historical relationships were to hold... (2)

Rates should back up sharply...

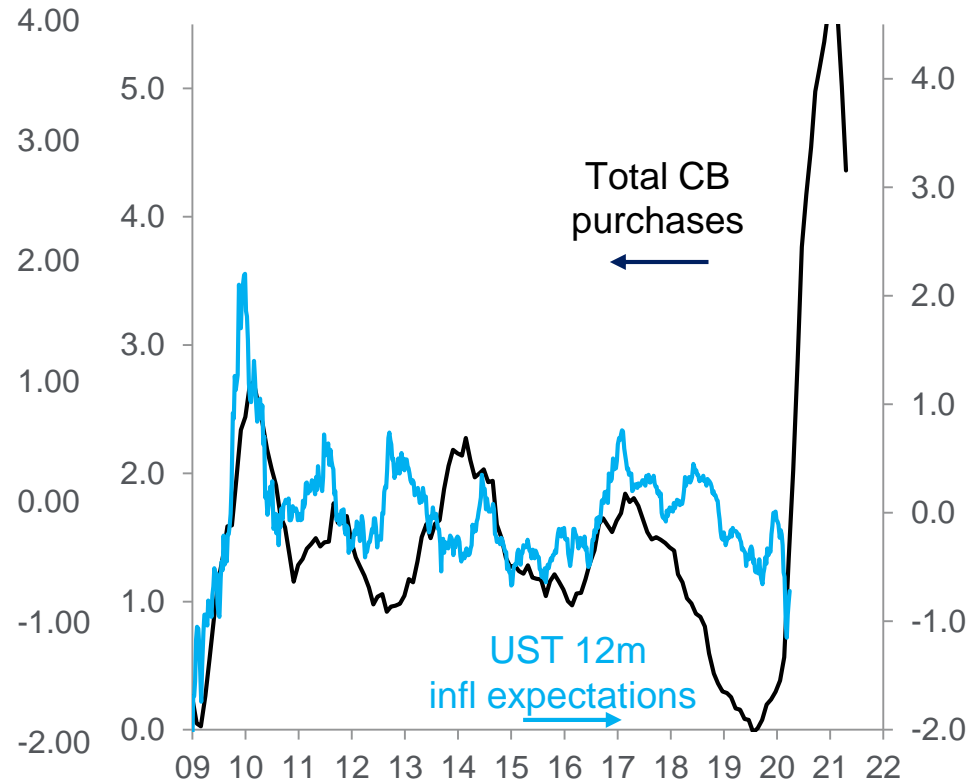
Global CB purchases (\$tn) vs Treasuries, 12m rolling



Source: National central banks, Citi Research.

...thanks to a surge in inflation expectations

Global CB purchases (\$tn) vs 10y inflation breakevens, 12m rolling



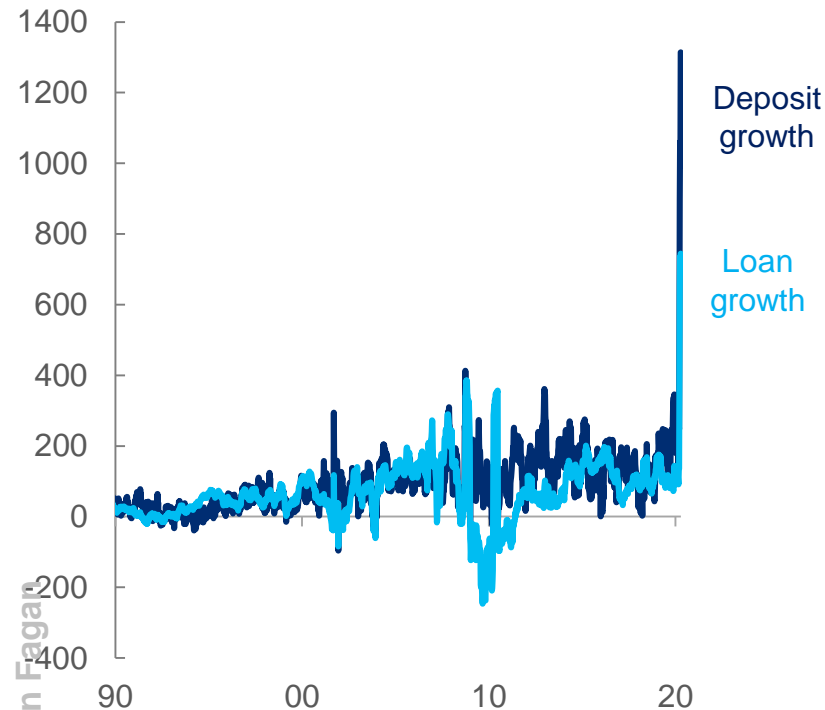
Source: National central banks, Citi Research.

Deflation worries should be nipped in the bud

We're certainly *creating* a lot of money here

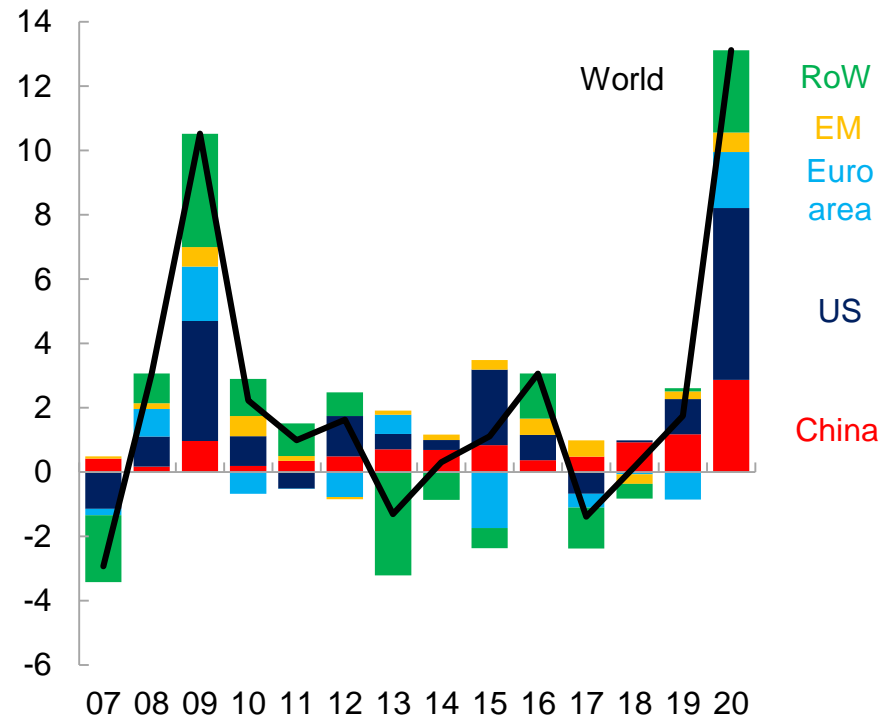
Loan drawdowns => Deposit growth

Chg in US bank balance sheet items, rolling 3m, \$bn



Govt borrowing creates new financial assets too

Chg government debt, % global GDP



Source: Federal Reserve. For more detail, see [Bank Balance Sheet – weekly update](#), A. Hollenhorst, 24 Apr.

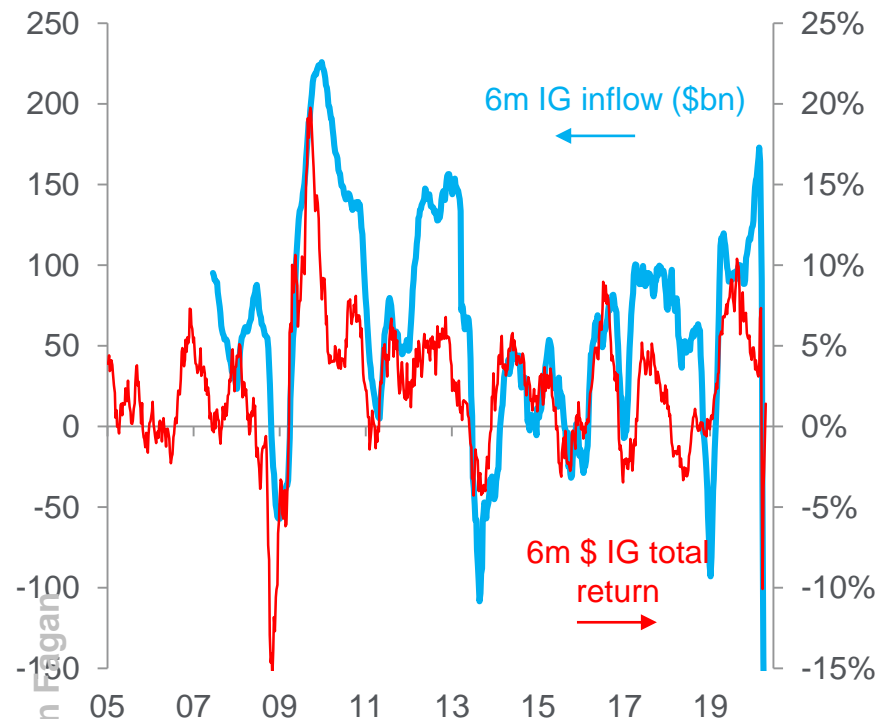
Source: IMF.

It's not just central banks: fiscal and corporate borrowing also create new money from nothing

But will private investors respond as previously?

With returns on many assets rebounding

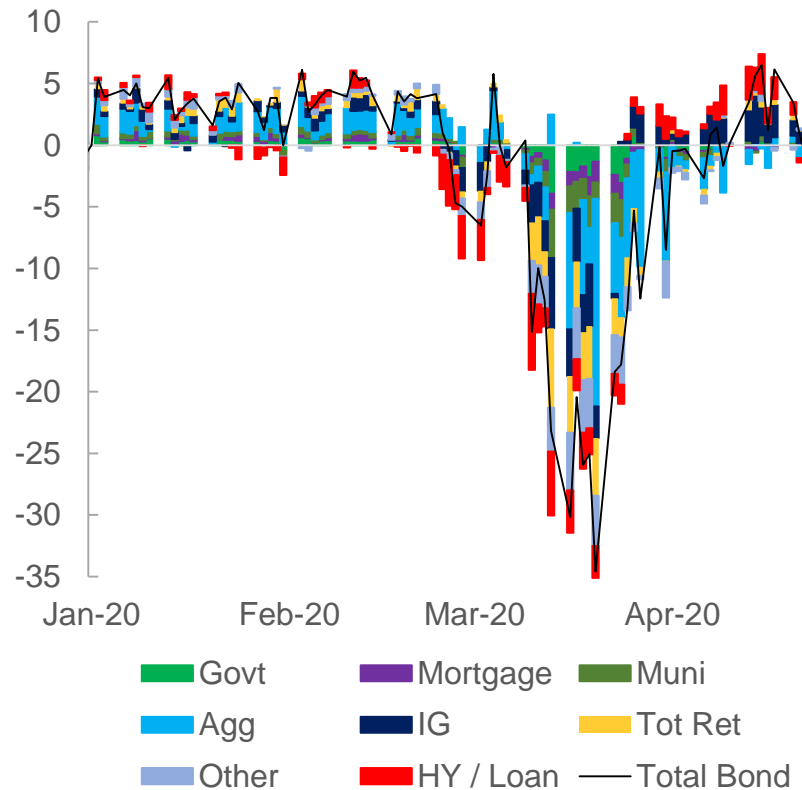
US IG returns vs mutual fund+ETF flows



Source: ICI, FTSE.

Perhaps inflows will follow?

Daily flows into US bond mutual funds+ETFs, \$bn



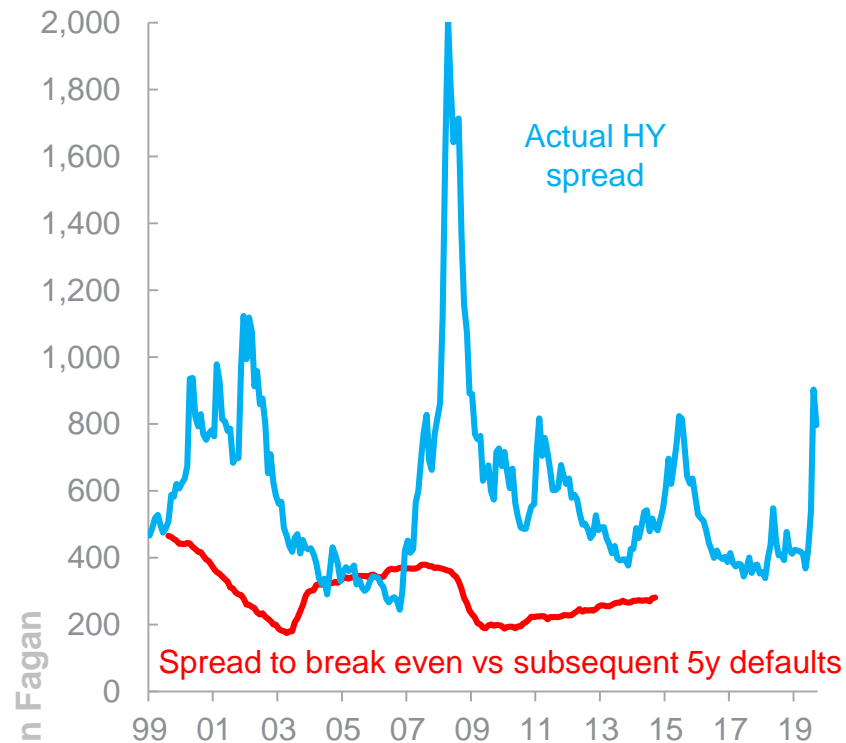
Source: EPFR.

For now, they seem to be doing so

They're receiving quite some encouragement

You'd better hope credit really is cheap

HY spread vs breakeven given perfect foresight of defaults*, bp

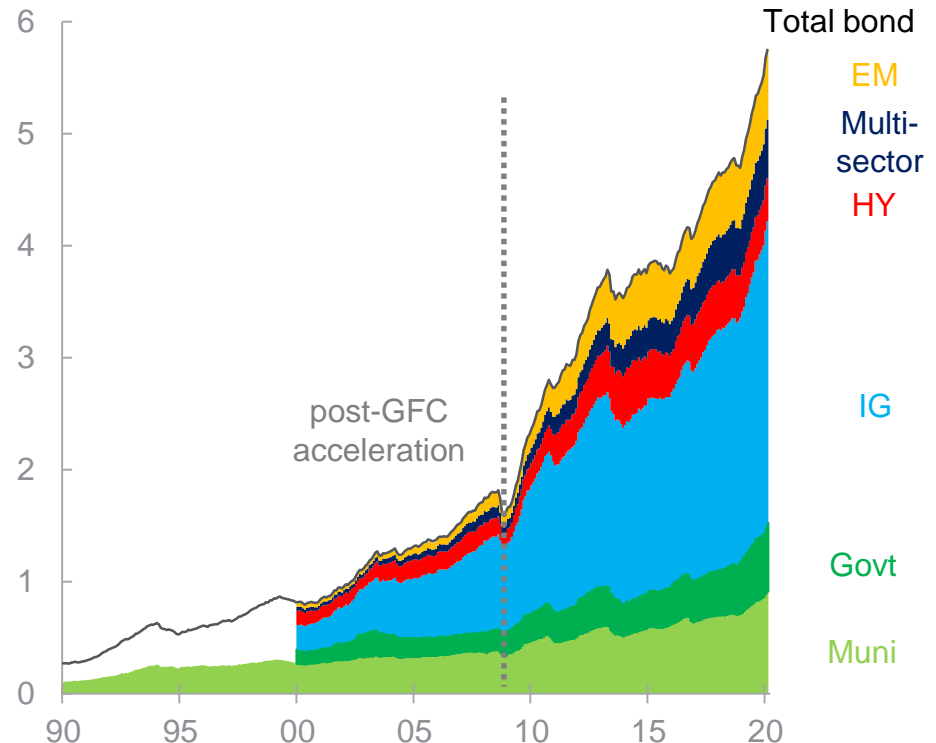


Source: Moody's, FTSE, Citi Research.

* At 20% fixed recovery rate.

Given how investors have piled into it

Mutual fund + ETF holdings in fixed income, \$tn



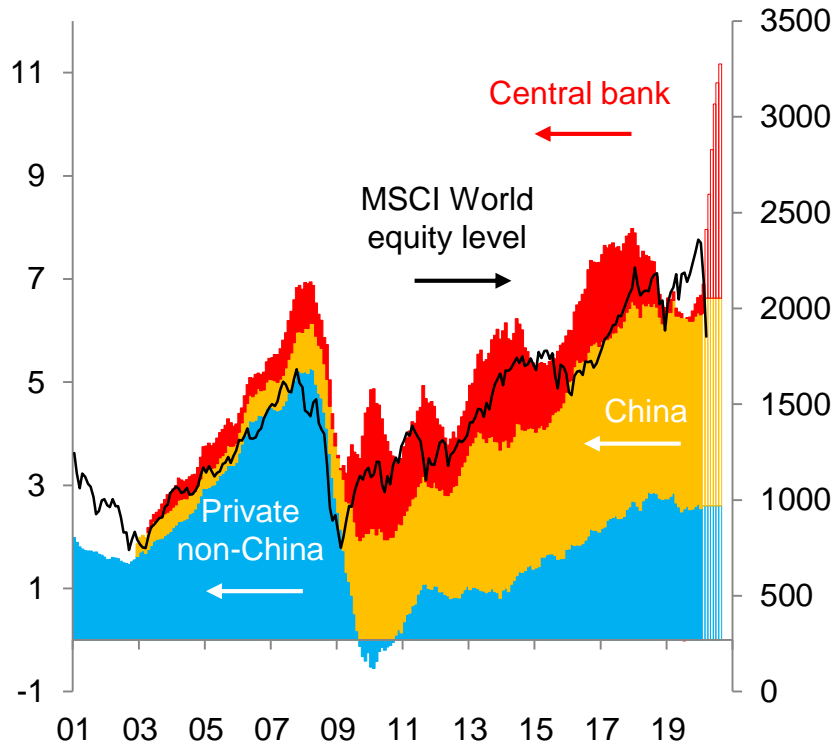
Source: ICI.

The long-only industry has a position to defend

If all the credit creation fuels risk assets as previously...

The only way is up

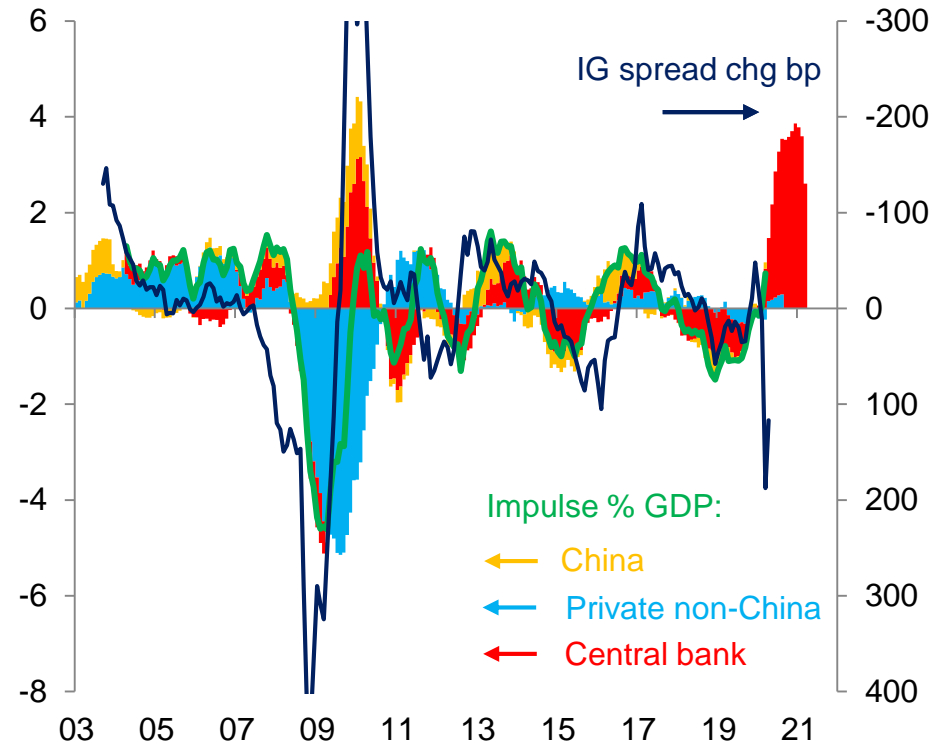
Global credit creation, rolling 12m (\$tn) vs equity market level



Source: National central banks, Citi Research.
Private sector credit flow projected flat for illustration; central bank purchases projected on basis of recent announcements.

Impulse buying ahead?

Global credit impulse (chg in credit creation, % GDP) vs \$ IG 12m chg



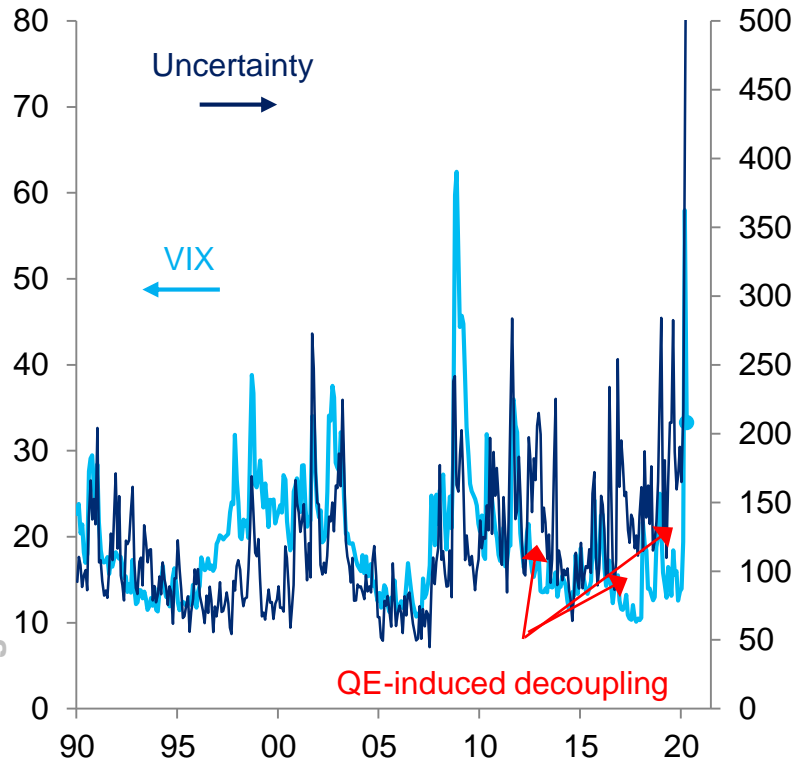
Source: National central banks, Citi Research.
Private sector credit flow projected flat for illustration; central bank purchases projected on basis of recent announcements.

Markets would skyrocket

So perhaps some degree of 'decoupling' is to be expected

Need uncertainty mean volatility?

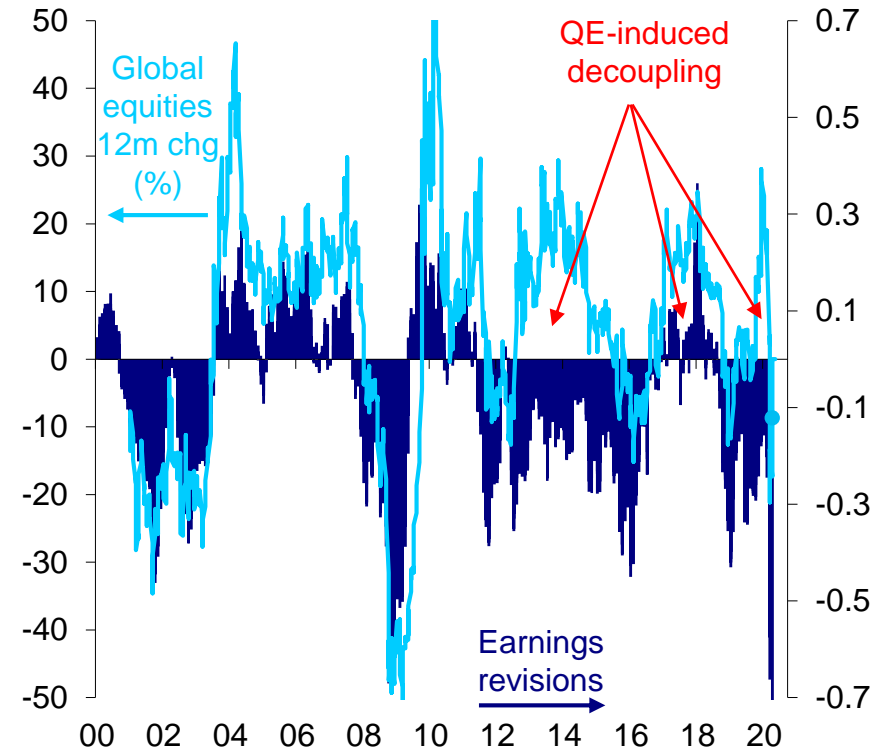
US news-based uncertainty index vs VIX equity volatility, %



Source: Baker-Bloom-Davis, CBOE.

Need falling earnings mean falling equities?

Net change in consensus earnings, 4wk mov avg, vs MSCI World chg



Source: Citi Research.

There's certainly a precedent

When limitless liquidity...

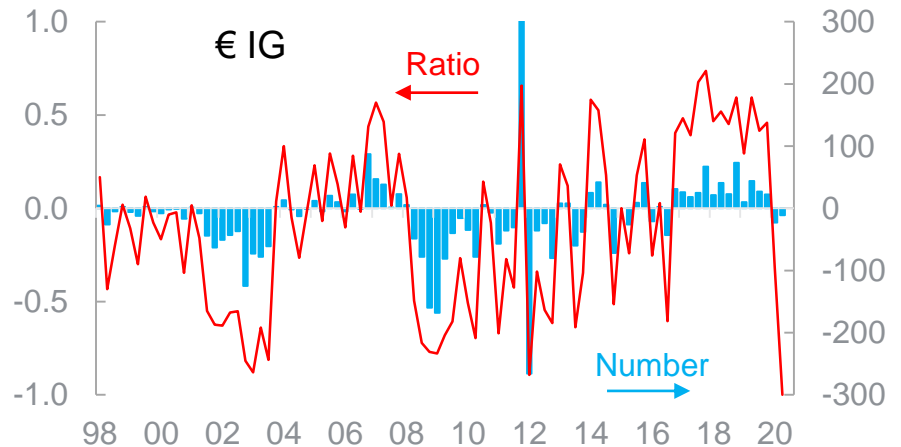
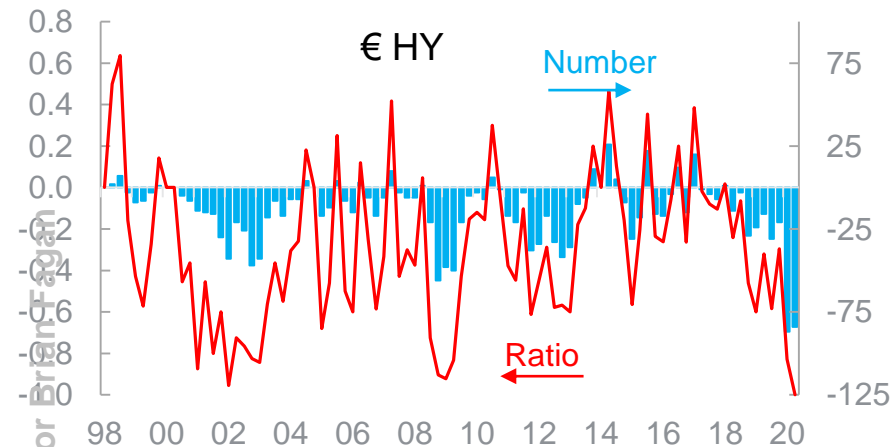
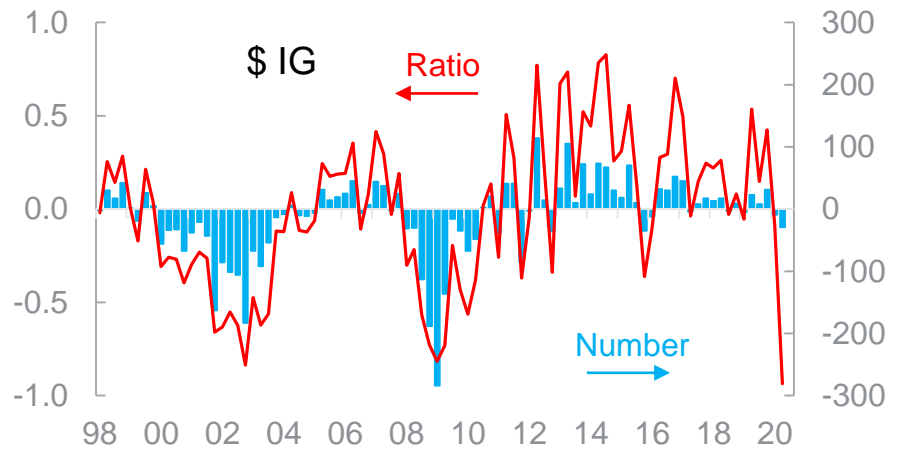
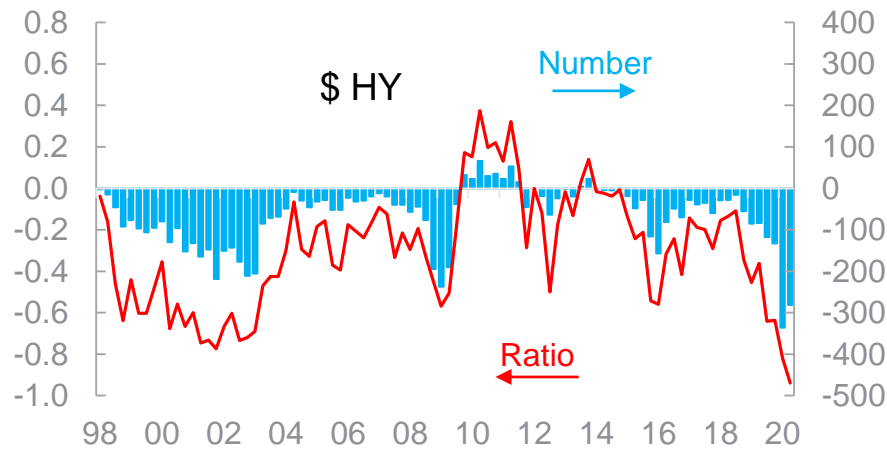
...meets spiralling insolvency

There's bound to be a long-term price

Not everyone is able to ignore fundamentals

HY downgraded en masse – but IG likely to follow

Rating agency net quarterly upgrades vs (upgrades-downgrades)/(upgrades+downgrades)



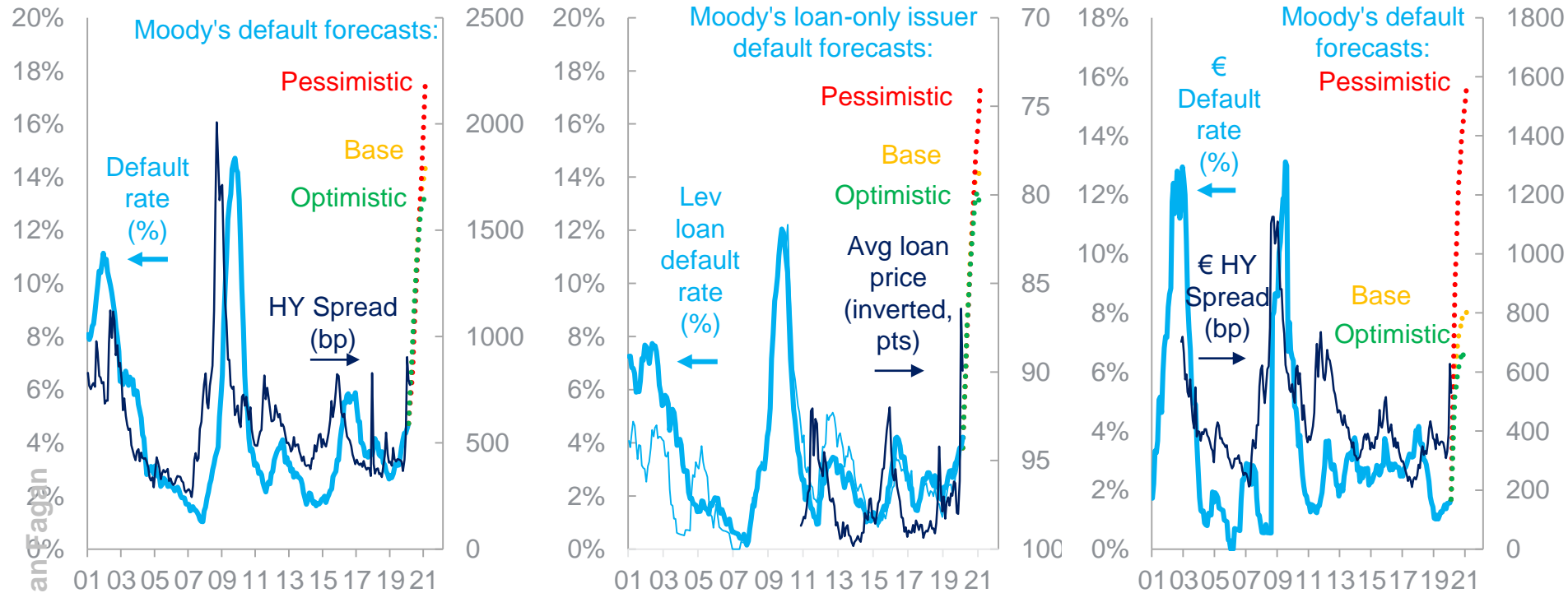
Source: Bloomberg, S&P, Citi Research. Adapted from Bloomberg RATT. Excludes CreditWatch actions, which may well be a more common precursor to downgrades in IG.
For more detail and a different cut of the data, see [Downgrades happening faster than ever – and more to come](#), H. Lorenzen, 9 Apr.

Downgrade ratios are already the worst on record

Ignoring defaults is even harder

Tight by default?

Spread levels historically associated* with different default rates + Moody's 2020 scenarios



Source: Moody's, FTSE, Markit, Citi Research.

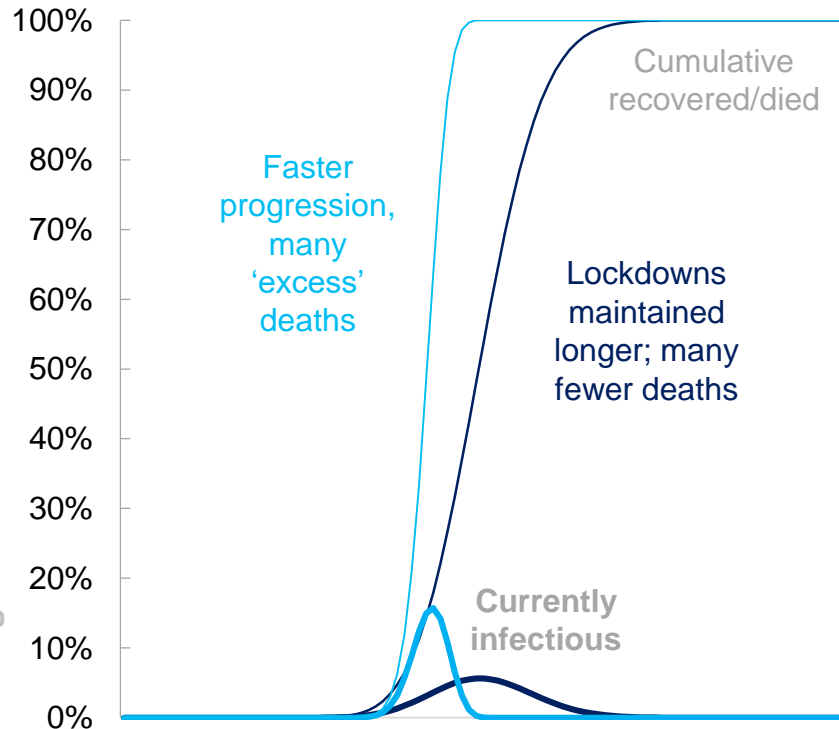
NB these are not breakevens. Breakeven spreads would be much lower. But – as these charts show – markets normally require a substantial risk premium over and above breakevens.

Markets look expensive to even the optimistic scenarios

The battle of the exponentials

Unchecked, the virus spreads exponentially

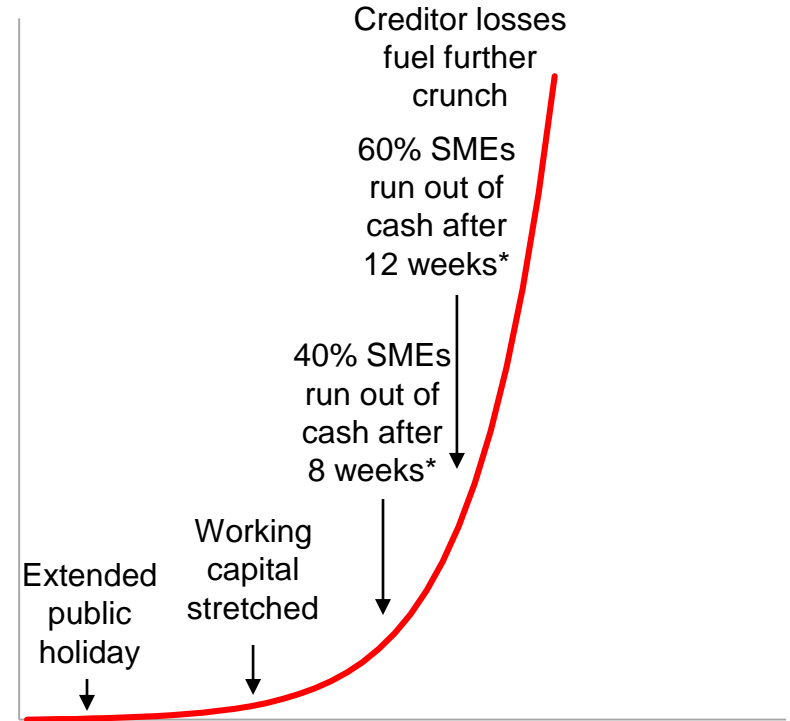
Effect of longer lockdowns on limiting excess deaths, schematic



Source: Citi Research.

But so too do bankruptcies

Cumulative economic loss vs lockdown length, schematic



Source: Citi Research, FT, APA.

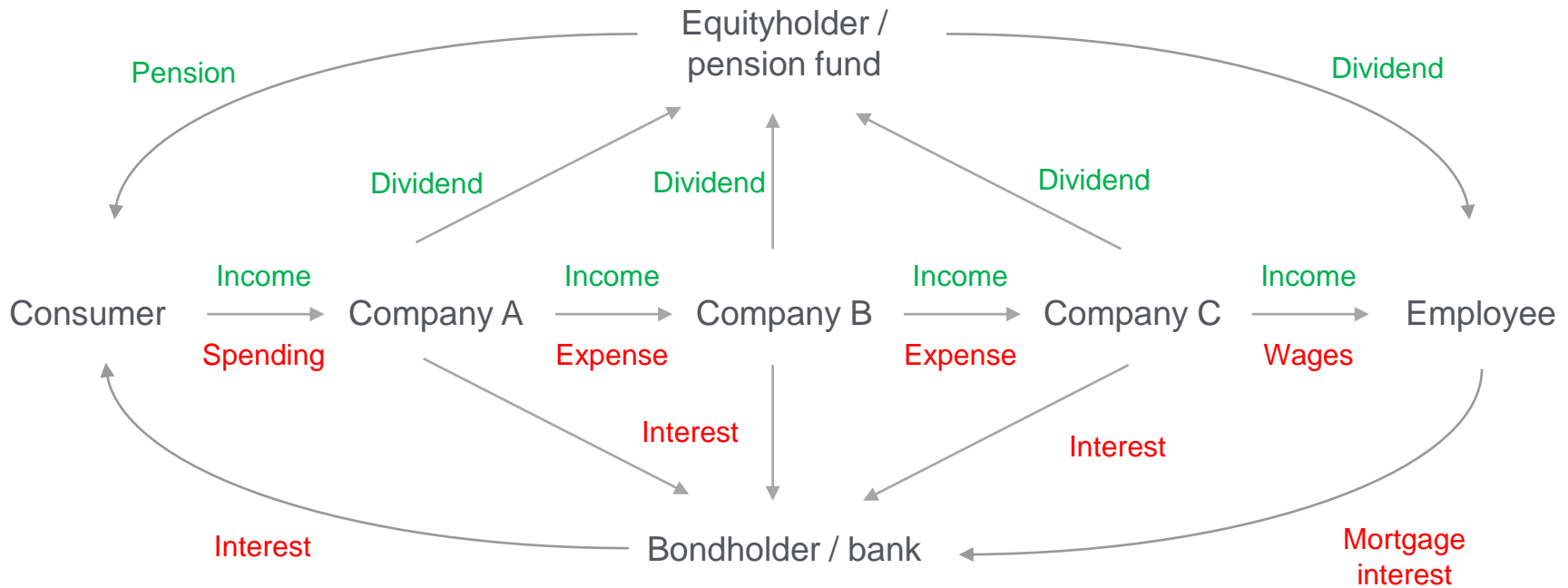
*UK figures based on APA survey of 900 owner-managed businesses.

The cost of extended lockdowns is decidedly nonlinear

The optimized economy is full of debt chains

Your curtailable expense = my vital income

Individually rational expense cutting is collectively disastrous



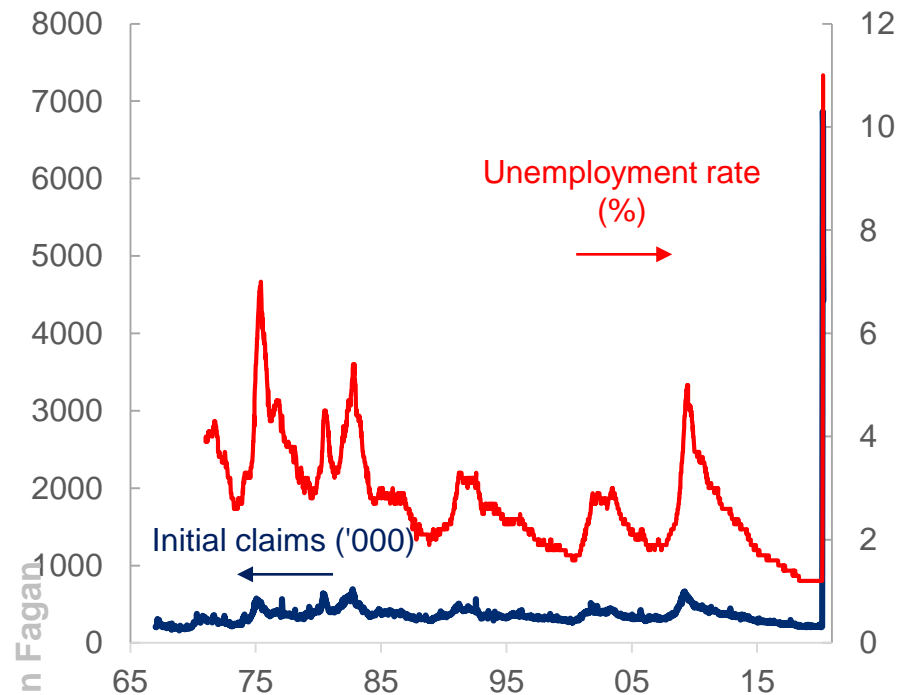
Source: Citi Research.

The chains are only as strong as their weakest link

Without a rapid and complete escape from lockdown

While unemployment is doing this...

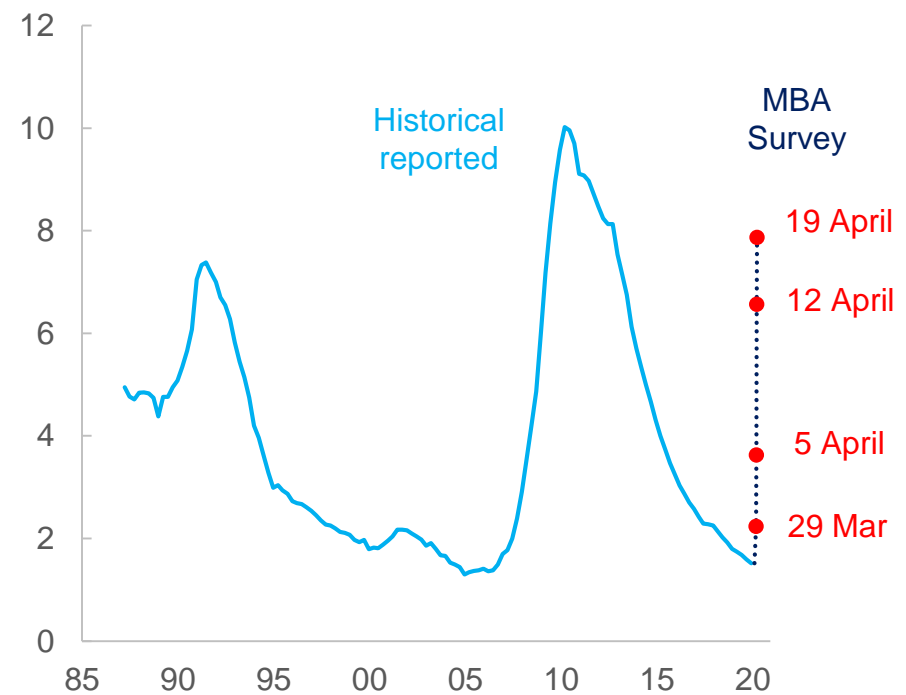
US jobless claims



Source: Department of Labor.

...delinquencies can only skyrocket

US commercial bank mortgage loans in forbearance, % portfolio



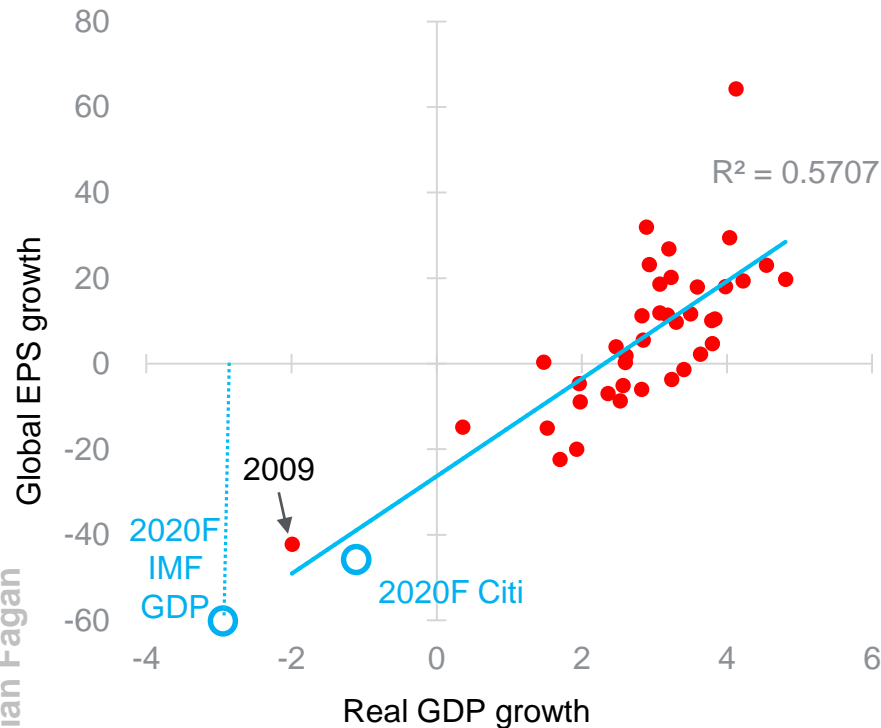
Source: FRB, MBA.

Never mind the capital charge –
who'd want to lend here?

Why isn't this priced in yet?

When earnings turn to losses

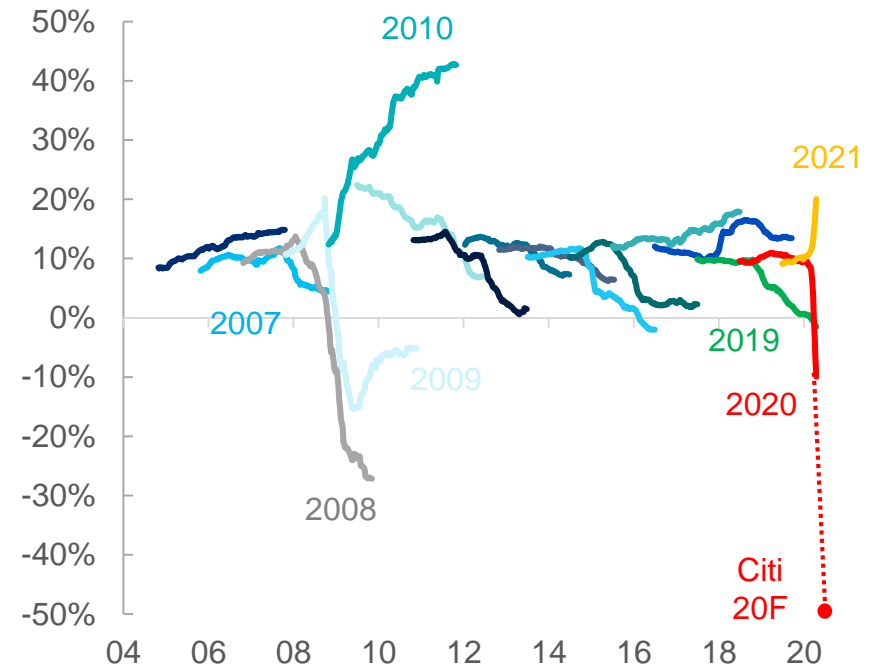
Historical EPS vs GDP growth, global, 1981-2020f



Source: IMF, Factset, Citi Research. See *Navigating the Lockdown*, R. Buckland et al, 3 Apr.

Consensus underestimates the magnitude

Consensus earnings expectations evolution by year



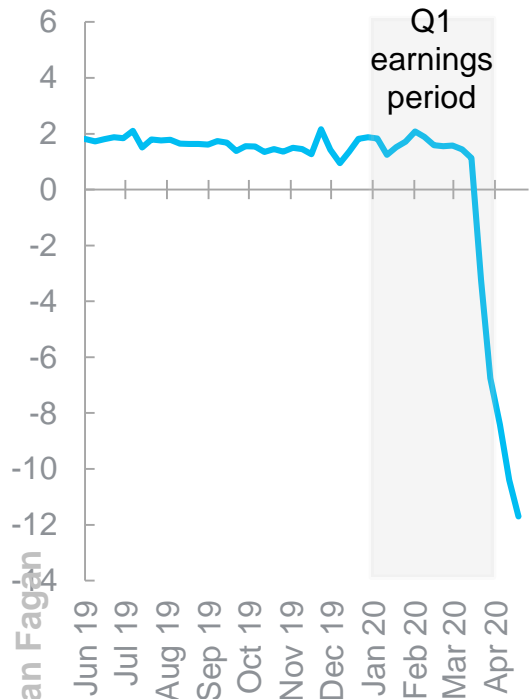
Source: Factset, Citi Research. NB Consensus differs from realized numbers even historically due to exclusion of 'exceptional' items.

Analysts largely follow guidance – now being withdrawn

The evidence emerges only gradually

Q1 was actually the good bit

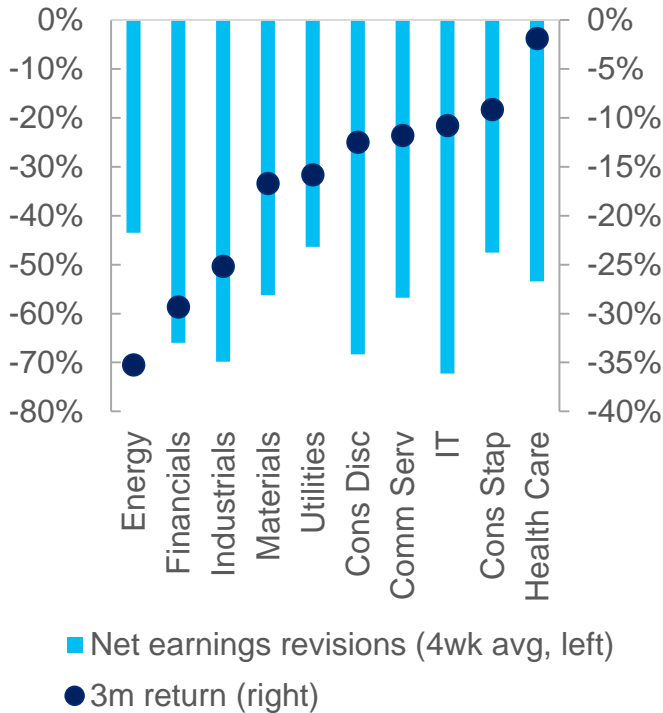
NY Fed Weekly Economic Index, scaled to y/y GDP growth, %



Source: FRBNY.

Impact broader than priced

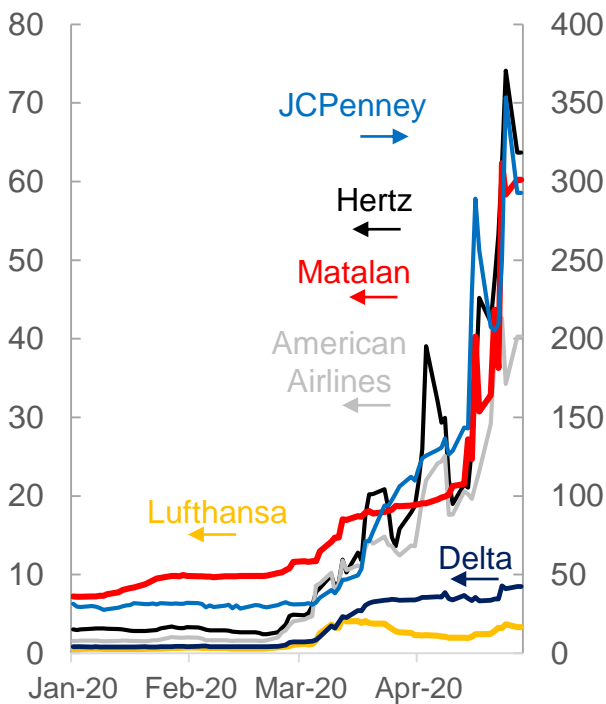
Net earnings downgrades vs eq returns, %



Source: Citi Research, Factset.

Gradually, then suddenly

5y CDS levels, percent



Source: Markit.

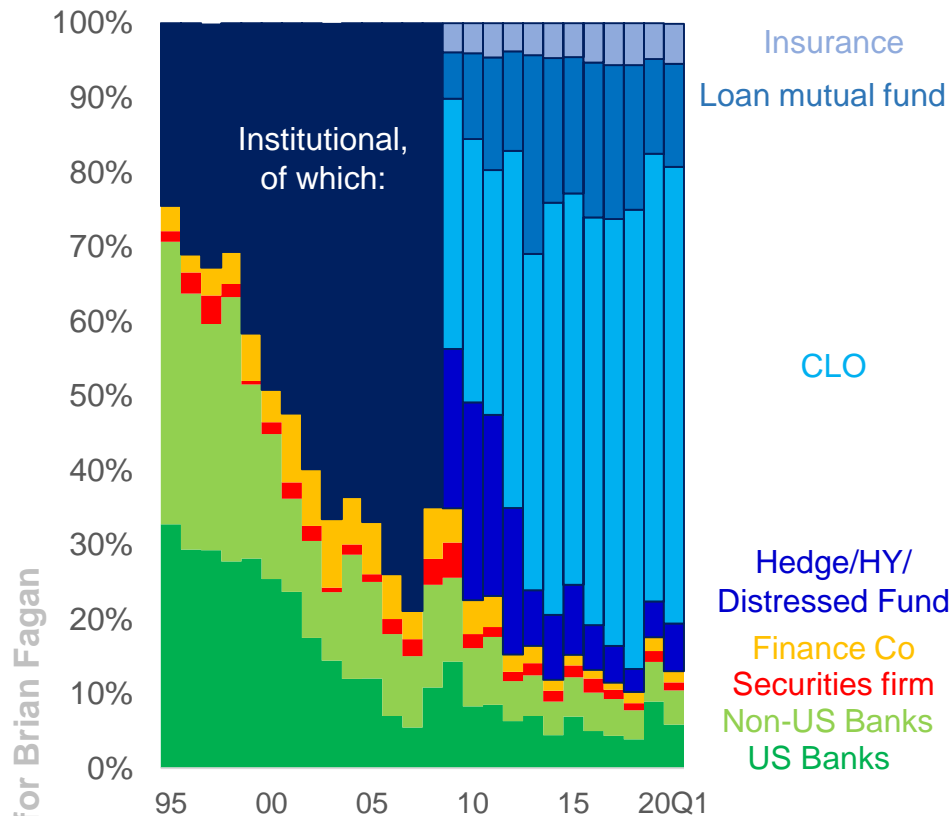
Prepared for Brian Fagan

This leaves markets vulnerable to sudden lurches

Remember how modern credit markets work

Institutional, not relationship-driven

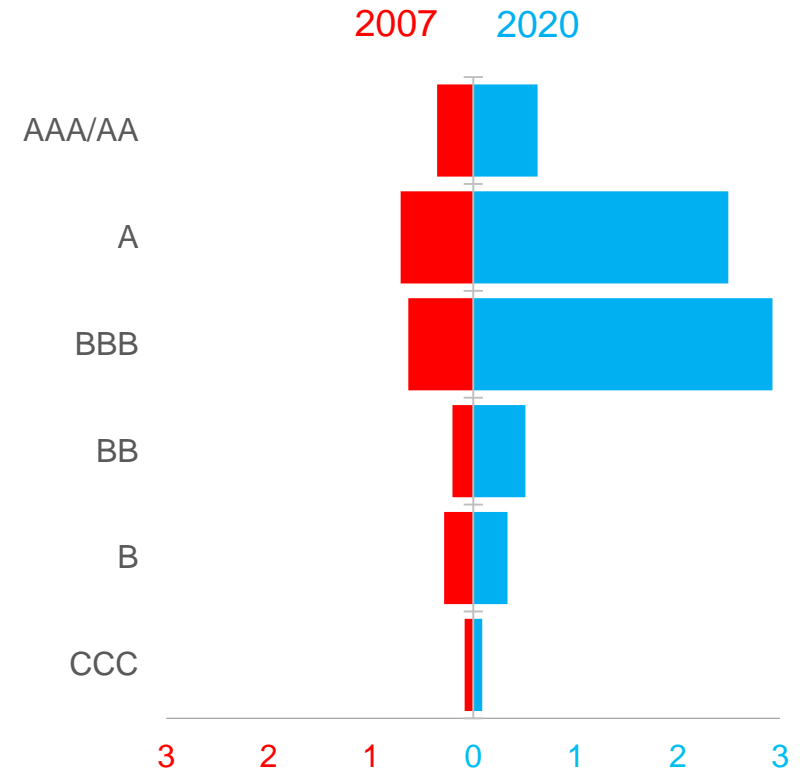
Buyers of US leveraged loans, share of primary, %



Source: S&P Capital IQ, Citi Research.

Acutely conscious of that BBB belly

US corp credit outstanding by rating, 2007 vs 2020, \$tn



Source: FTSE, Citi Research.

Lower quality = more sellers + fewer buyers

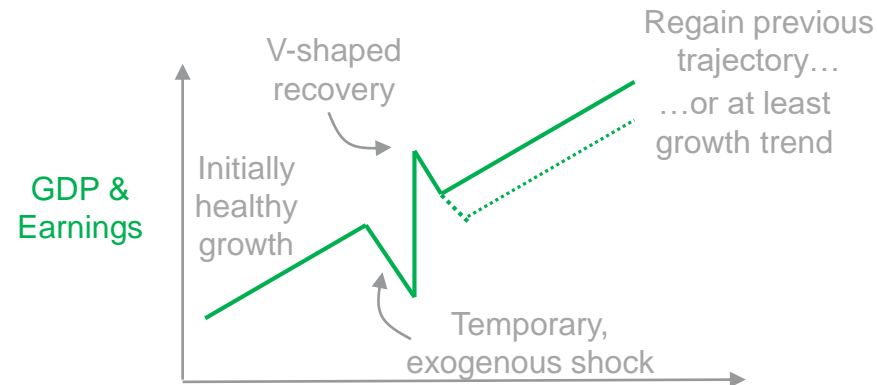
When limitless liquidity...

...meets spiralling insolvency

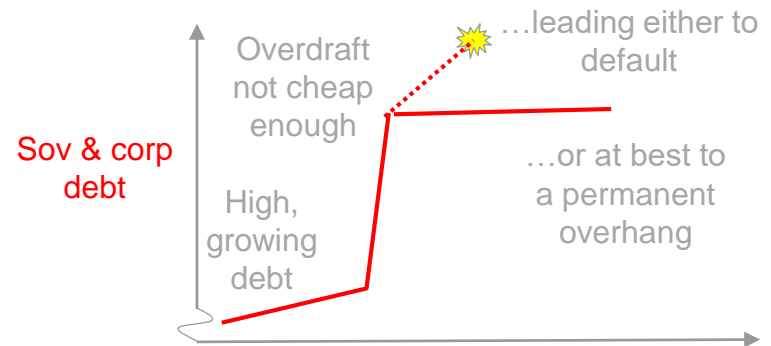
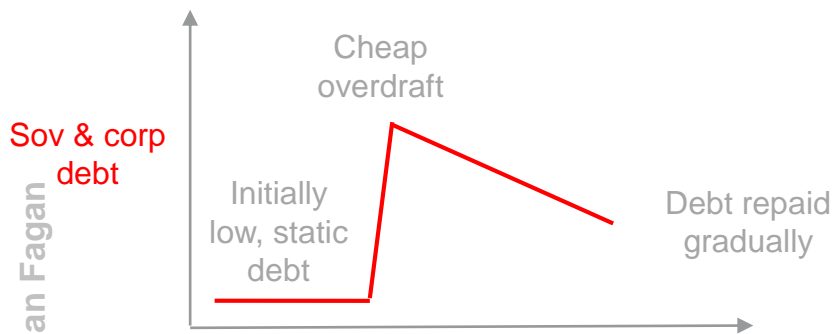
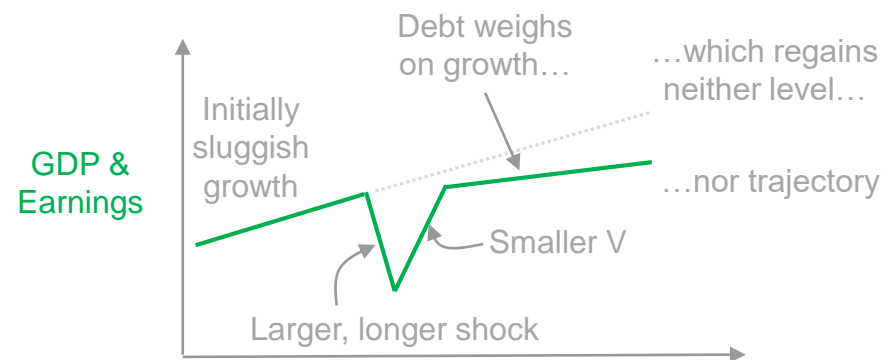
There's bound to be a long-term price

So can we really bounce back to 'normal'?

Do we face a liquidity shock?



...or a solvency shock?



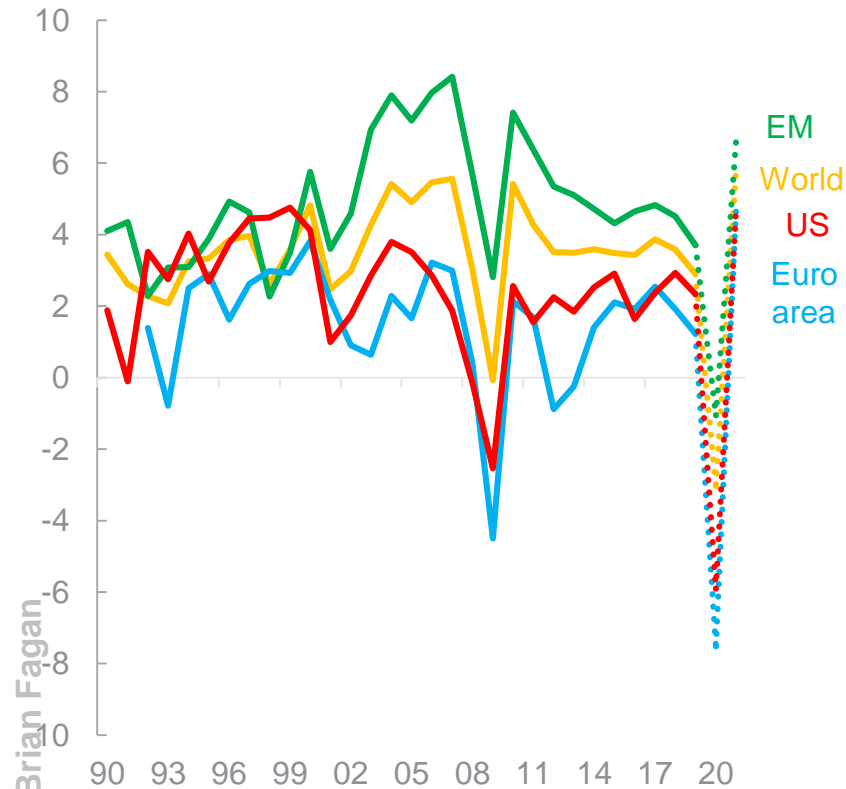
Source: Citi Research.

At best, we come out of this with an awful lot more debt

Consensus still craves a 'V'

Some degree of bounceback is likely

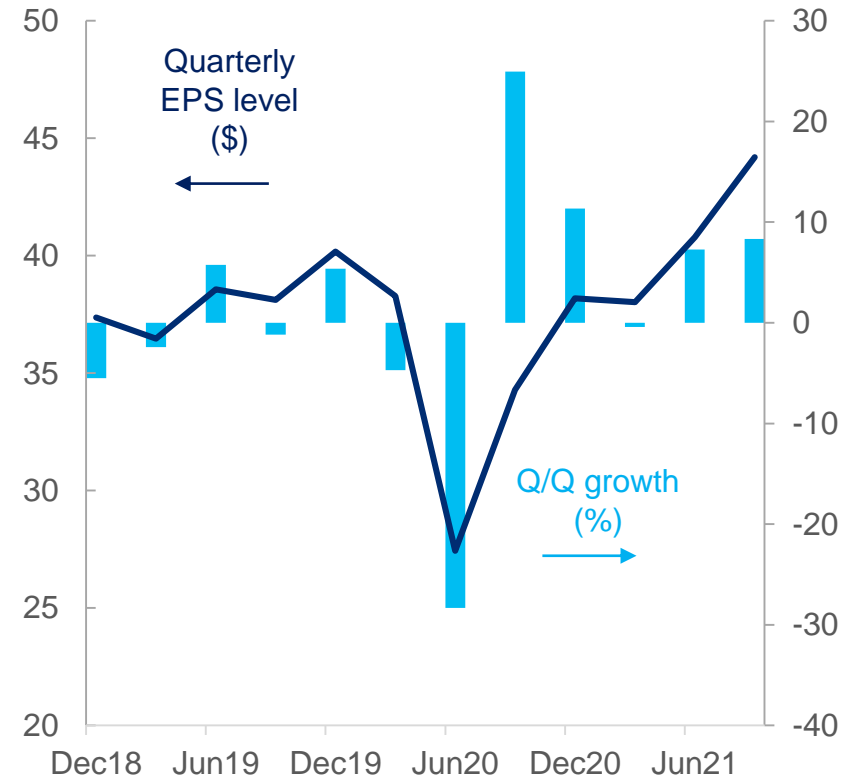
Real GDP growth with IMF forecasts, %



Source: IMF.

But earnings at pre-COVID levels by Dec?

S&P500 consensus earnings levels and growth rates



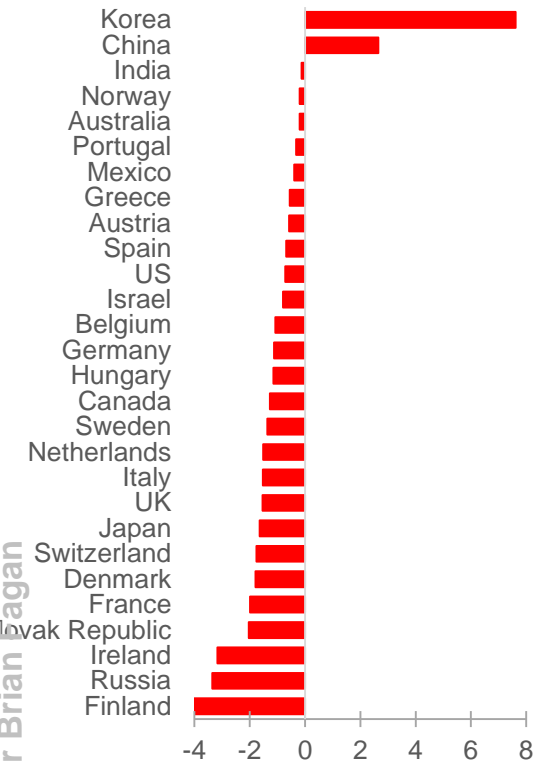
Source: Bloomberg.

It's the long-term costs which are most grossly underestimated

There's likely to be a desire to rebuild 'buffers'

Be they hospital beds

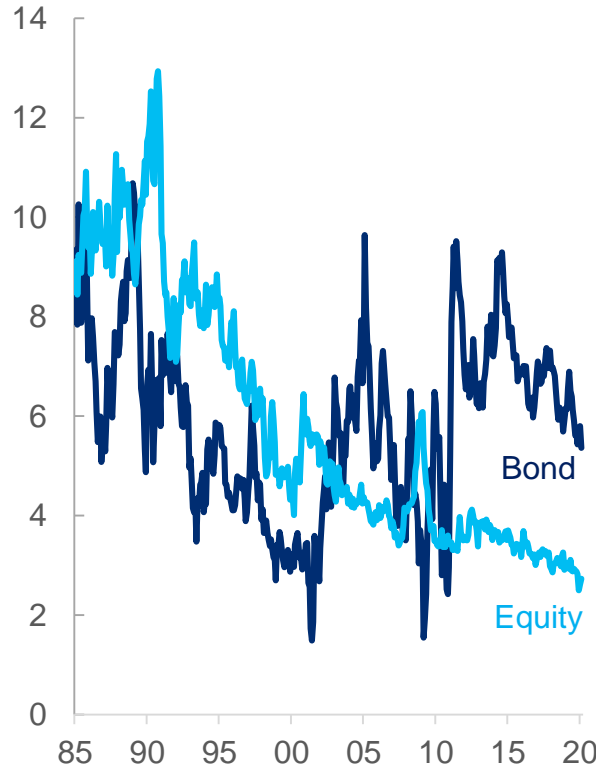
Chg in hospital beds per 1000 population, 2000-latest available



Source: OECD Health statistics.

Or 'excess' portfolio liquidity

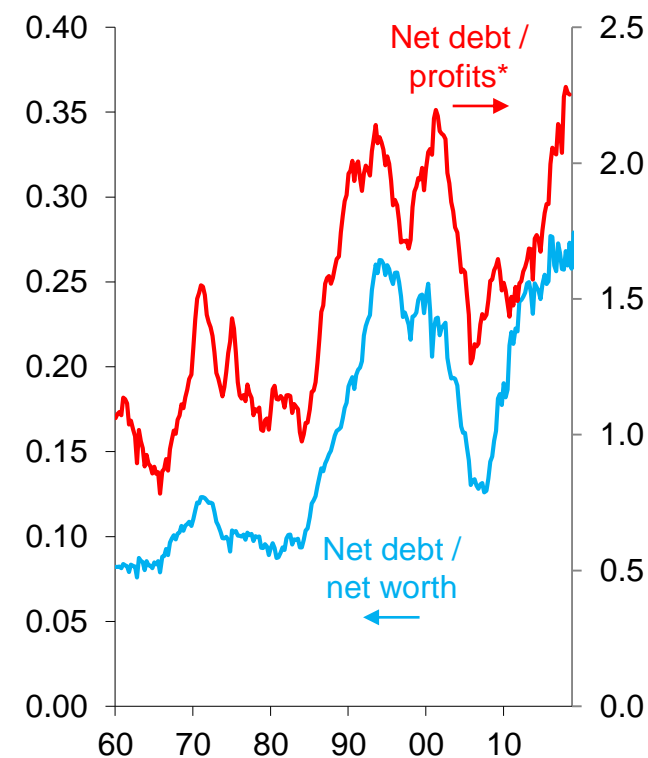
Proportion of mutual fund assets deemed 'liquid', %



Source: ICI.

Or corp balance sheets

US nonfin corp debt ratios, times



Source: Federal Reserve.

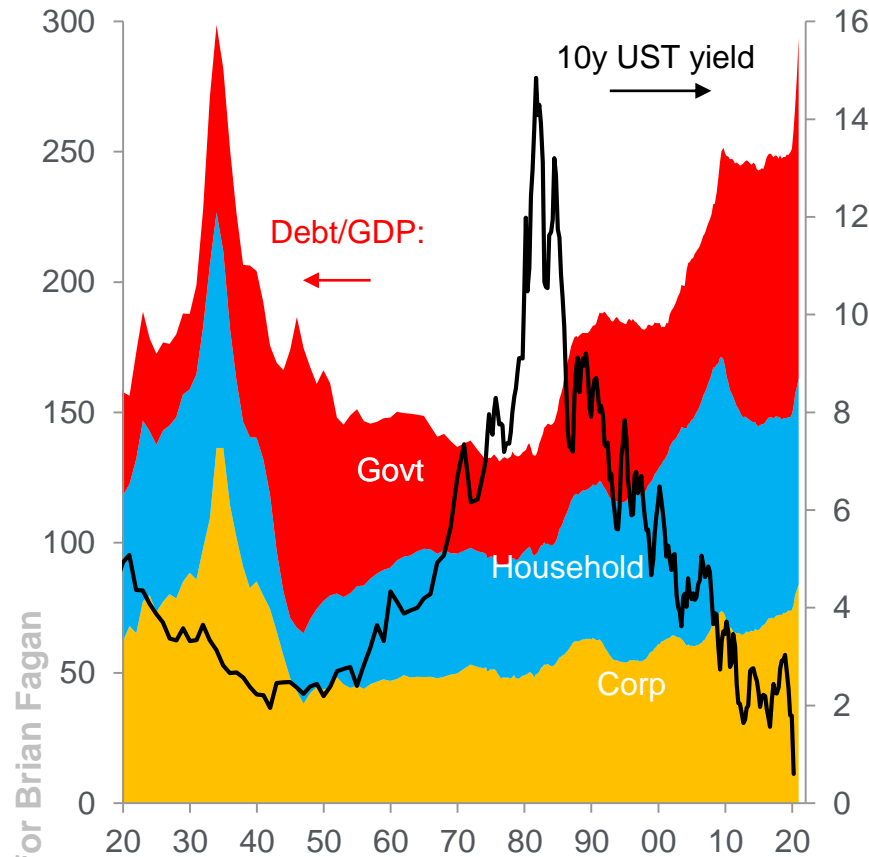
*Uses internal funds + inventory valuation adjustment as the profits metric

Previous 'optimization' has made the system fragile

But that rebuilding will cost still more money

Debt is starting from near-record levels

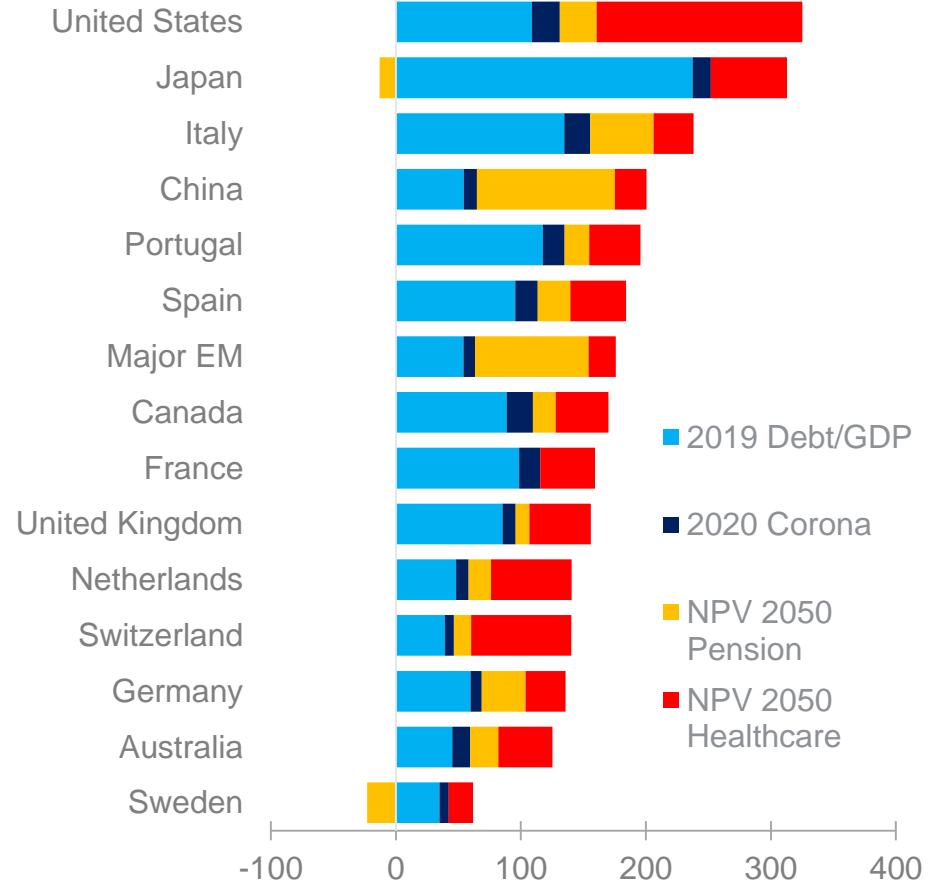
US debt/GDP by sector (%) vs yields (%)



Source: Federal Reserve, Citi Research.

And likely to rise, not fall

NPV of future healthcare and pension commitments vs govt debt, % GDP



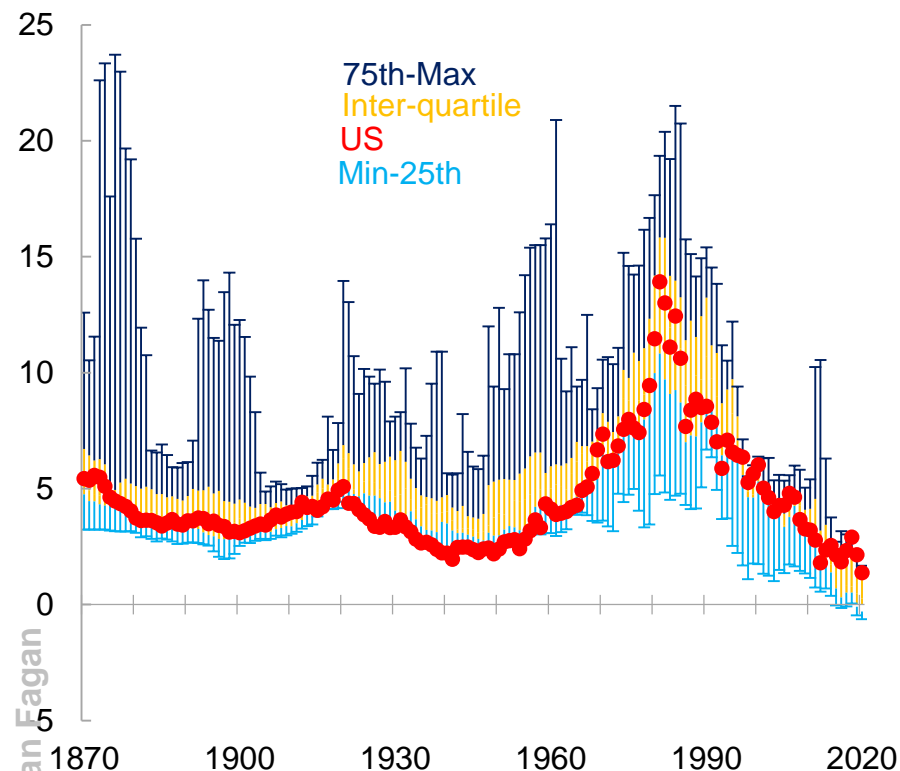
Source: IMF, Citi Research.

Debt levels were already at historical highs

Surely it's just the debt service which matters?

Only low rates keep debt manageable

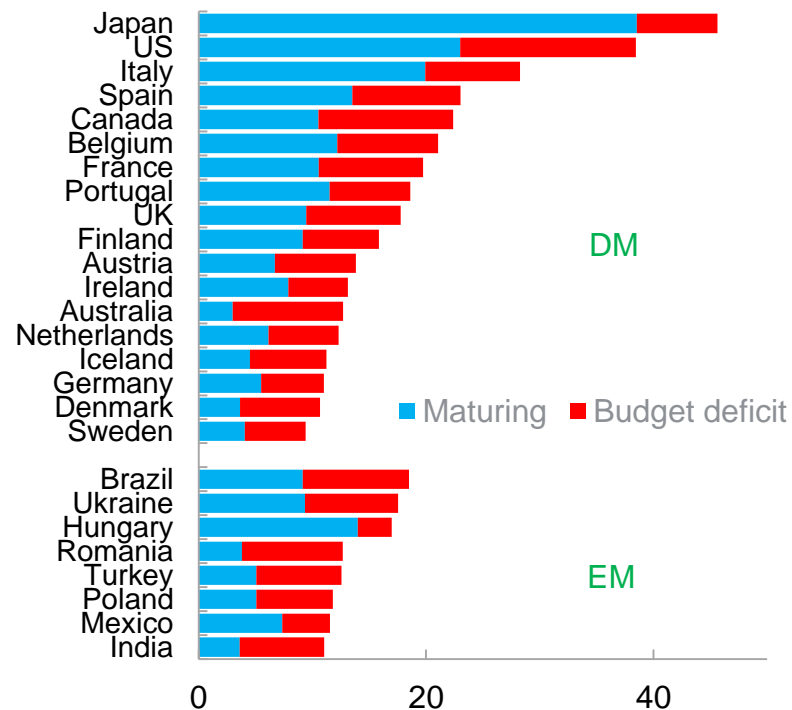
Advanced economy 10y govt bond yields, %



Source: Jorda-Schularick-Taylor database, IMF.

But even then, rollover risks matter

2020 gross government financing needs, % GDP



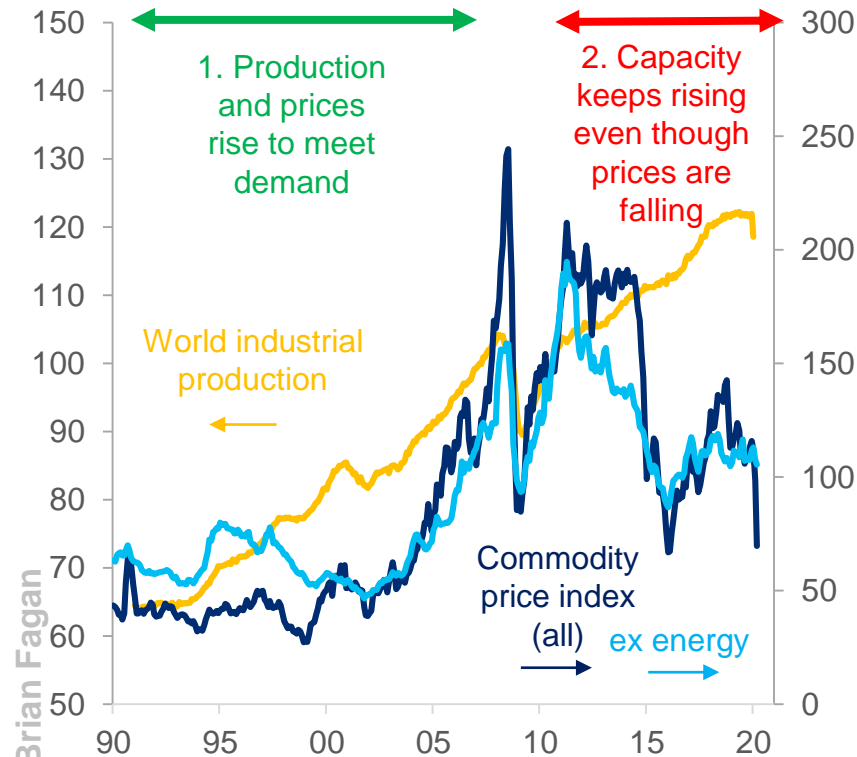
Source: IMF.

Yes – but there's an omnipresent risk that
creditors won't roll principal

What about inflation?

Excess supply is not only in oil

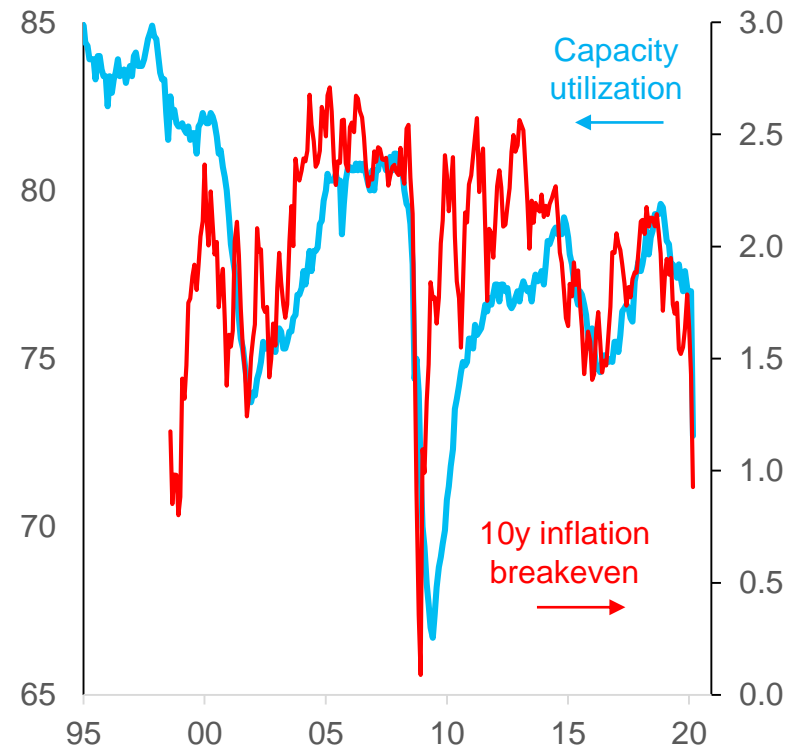
World industrial production vs commodities prices, 2010=100



Source: HWWI, CPB.

Expect any up moves to be severely localized

US industrial capacity utilization vs inflation expectations, %



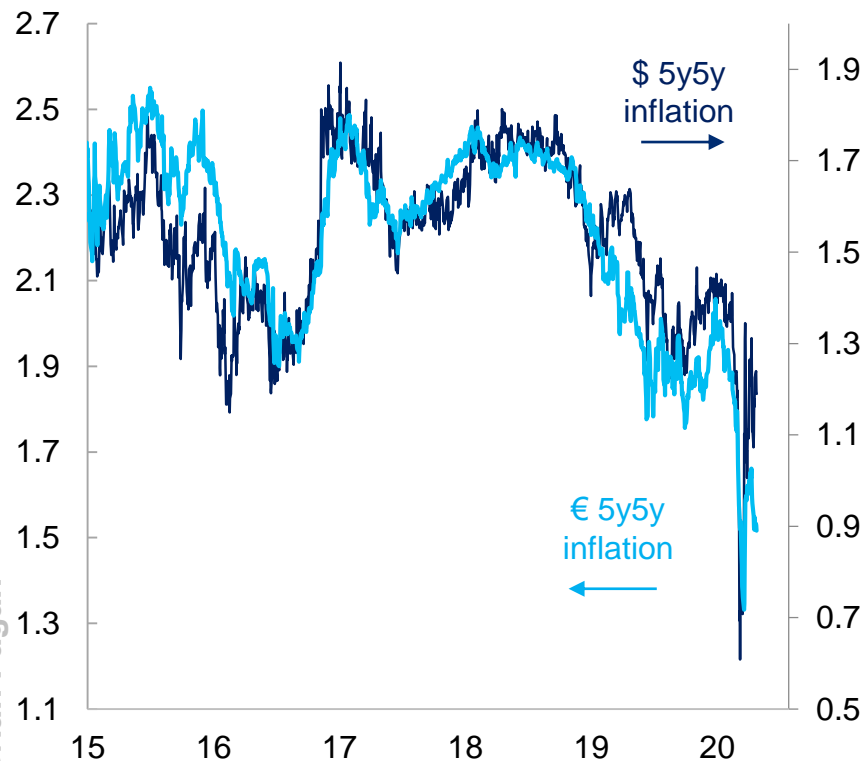
Source: Bloomberg.

Any local supply bottlenecks should be more than offset by the drop in aggregate demand

In most economies, inflation risks falling further

Are you sure about that US rebound?

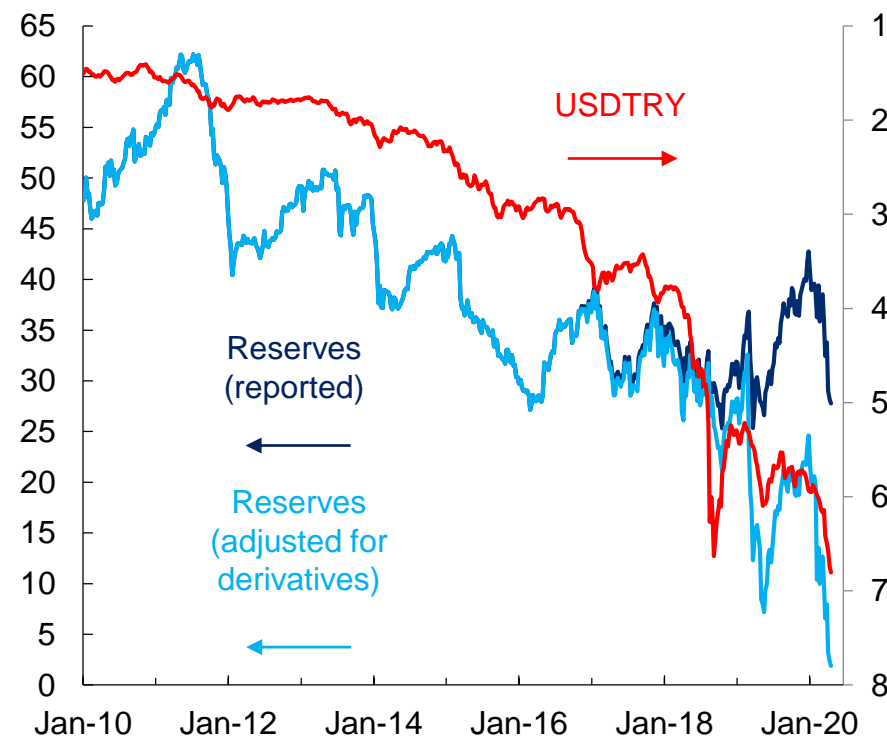
5y5y inflation swap breakevens, %



Source: Bloomberg.

Only in EM does QE create serious risks

Turkey reserves



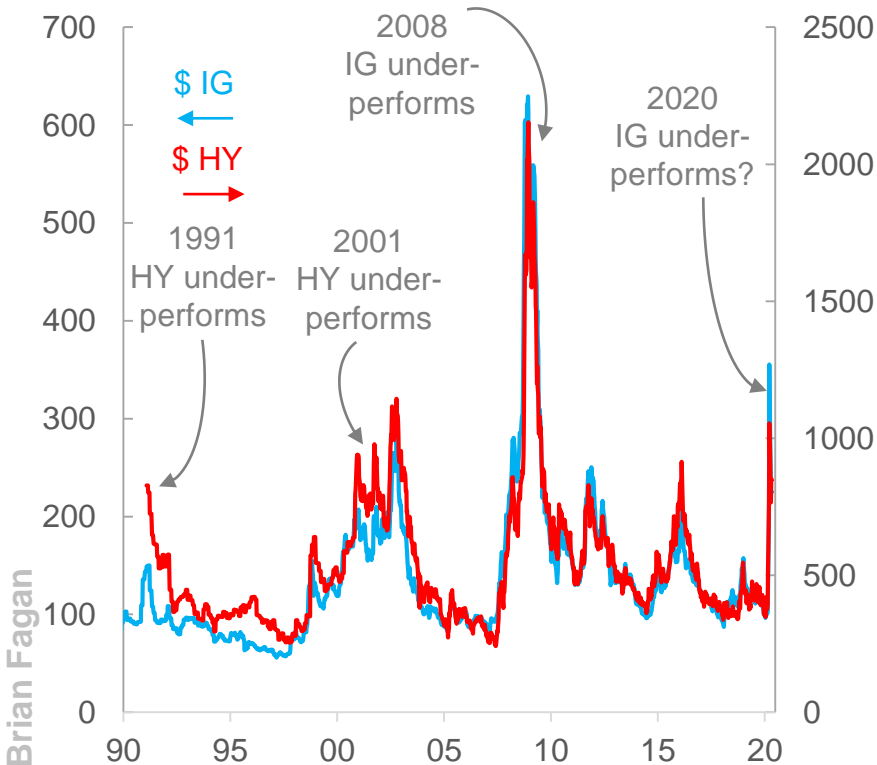
Source: Central Bank of the Republic of Turkey. See [Taking profits on the R186 long in SA and going further UW in TRY assets](#), L. Costa et al., 14 Apr.

If there is to be inflation, it's likely to start with runs on FX

And if payment chains do start to creak...

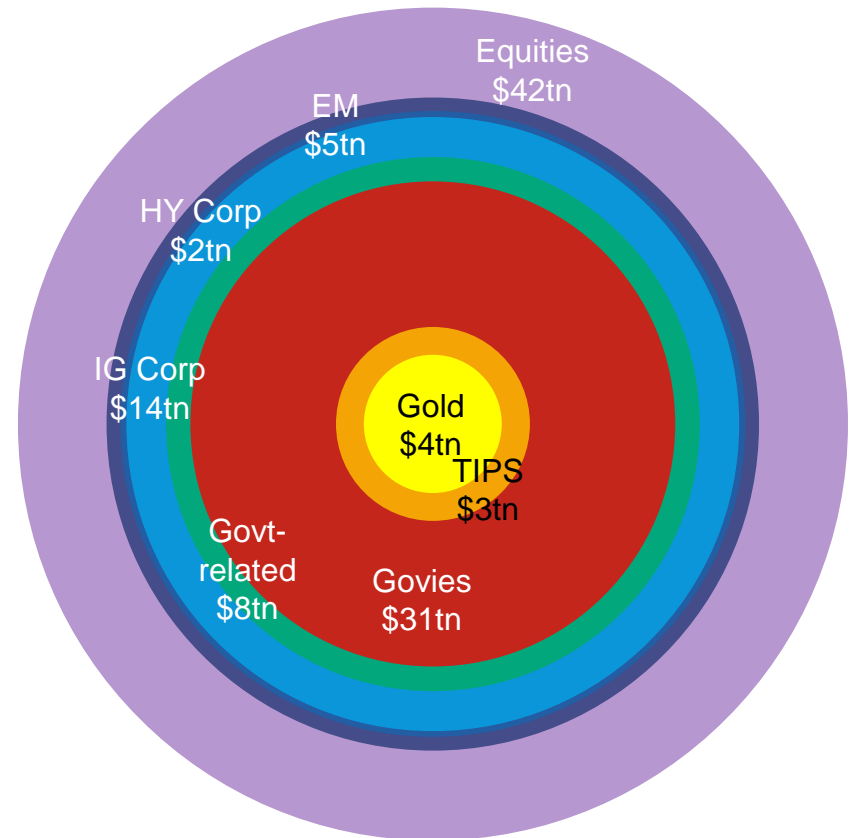
Expect a much bigger discount on HY...

\$ IG and HY spreads, bp



...and indeed on all risk assets

Global asset outstandings, scaled by area



Source: FTSE. For similar arguments and data in Europe, see [Where the bail-outs stop, trouble starts](#), H. Lorenzen, 22 Apr.

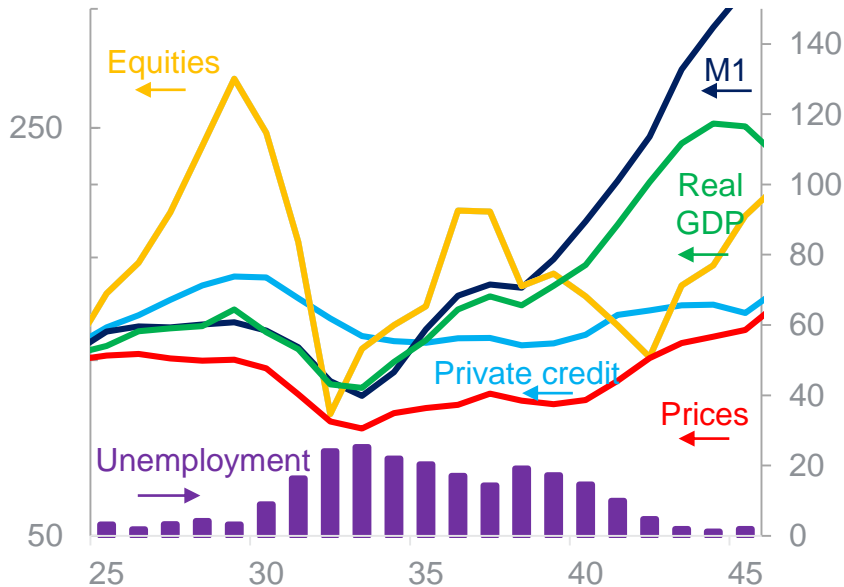
Source: Bloomberg, Citi Research. For more on gold, see [Unprecedented times and unprecedented volatility and price risk](#), A. Doshi, 27 Apr.

The more questionable your cashflow, the greater the risks

A potential lesson from the 1930s

Asset prices revived after the first bust

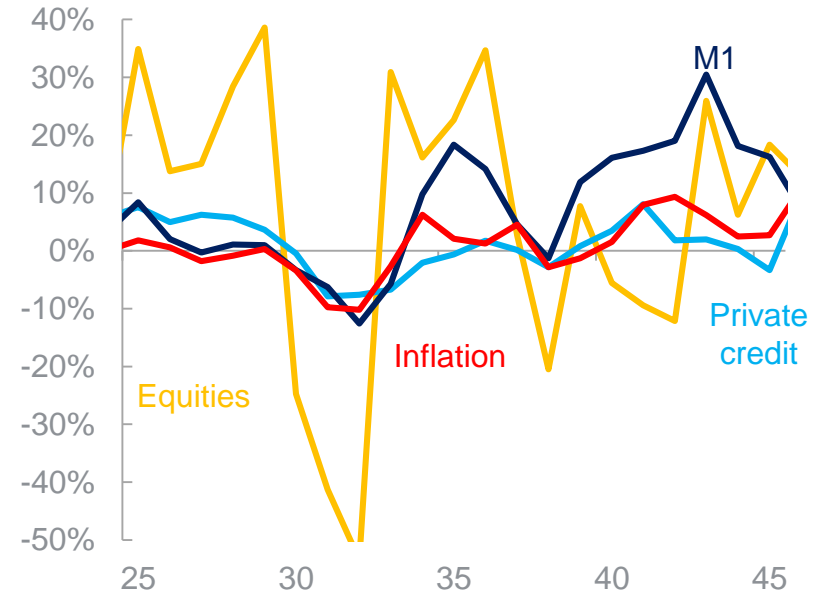
US economic statistics 1925-45 in level terms (log scale)



Source: Historical Statistics of the United States, US Census, WSJ.

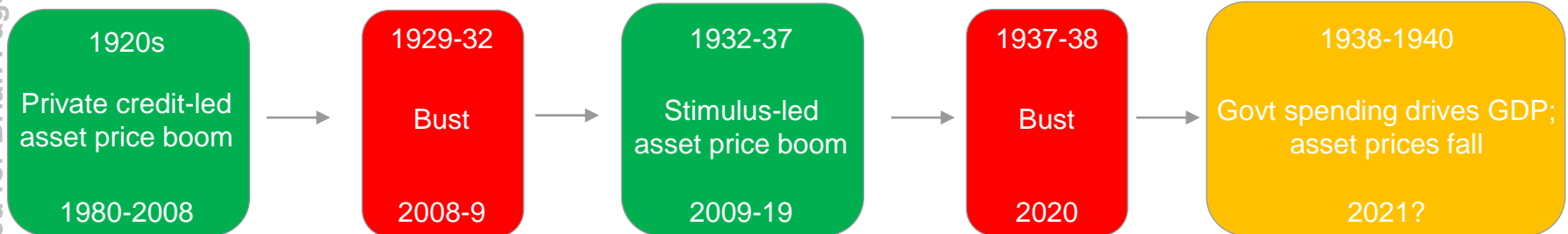
But after the second one they struggled

US economic statistics 1925-45 in annual changes (%)



Source: Historical Statistics of the United States, US Census, WSJ.

Prepared for Brian Fagan



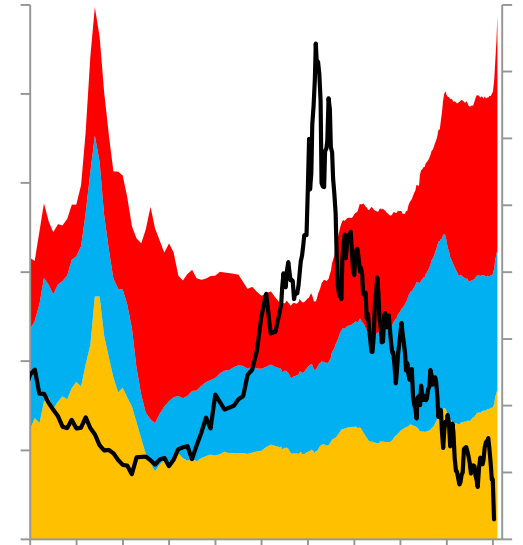
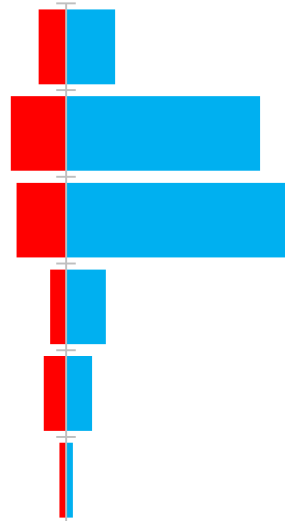
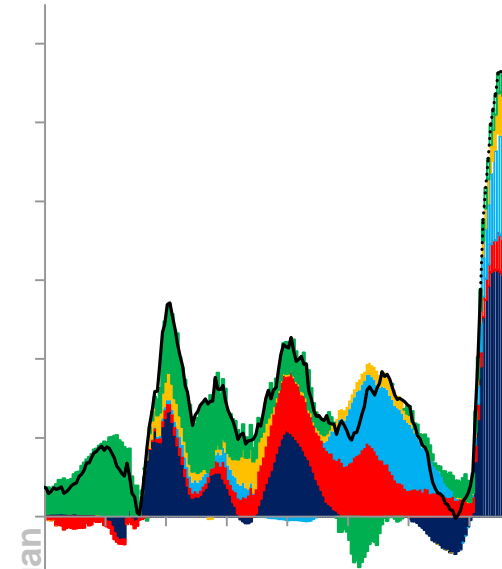
Driving up asset prices too far creates vulnerabilities

Conclusion

Unlimited liquidity

Can postpone debt problems

But not fix them



Expect the coronavirus to continue revealing the vulnerabilities which were there already

Appendix A-1

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