<u>***From Goldilocks to Supply Shocks***</u>

Joseph Little[1]

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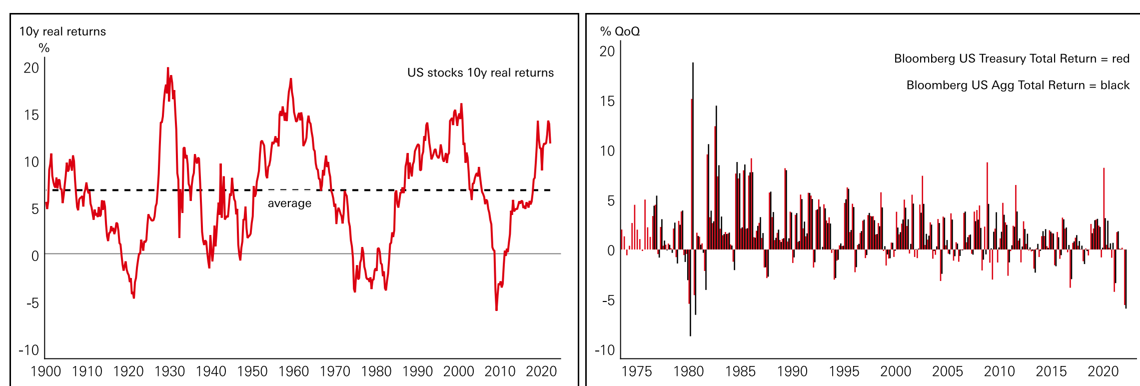
A shocking 2022 for investors

Investors can have few complaints about the last decade or so. Stock market returns have been double-digits, even after adjusting for inflation (figure 1). That's way ahead of the 'lost decade' of the 2000s, when real returns went negative, and it trumps the typical experience of around 6%. Balanced funds, which mix stocks and bonds, have also delivered for investors. A medium risk, global strategy has delivered over 7% annual real returns for the decade to end-2021. That's impressive in the context of the sluggish economic recovery after the financial crisis, fiscal austerity, and the global pandemic.

Figure 1 – 10 year real stock market returns (lhs) & Figure 2 Fixed income total returns QoQ (rhs)



It's been a Goldilocks phase for investors but, since the start of 2022, markets have gone from 'hero' to 'zero'. Year-to-date investment returns are significantly negative. US treasury bonds have had their worst quarter since the 'Great Inflation' of the 1970s and 1980s (figure 2). And post-covid stock market winners, like global tech, have materially underperformed 'defensive' sectors, like energy and utilities. If we adjust for inflation, market performance looks even worse.

The shift in fortunes reflects a gloomier macro scenario. The latest IMF World Economic Outlook, for example, has made swingeing cuts to global growth expectations (down -0.8% to 3.6% for 2022 GDP). Even before the conflict in Ukraine, investors faced a challenging mix of events: economies re-starting post-covid, fear of new virus strains, surging inflation, and new monetary policy frameworks. After the latest turmoil, it's hardly surprising that 'stagflation' fears are on the rise in markets.

The shock to the system could get bigger still. Economists have already begun to speculate that 'Goldilocks is dead', and that we will see a 'return of inflation'. Evidently, sensational journalism sells. But there is more than a grain of truth to the comparison with the 1970s and 1980s. And, as

[1] I am the Chief Strategist at HSBC Asset Management, but I am writing here entirely in a personal capacity. All views and errors are my own.

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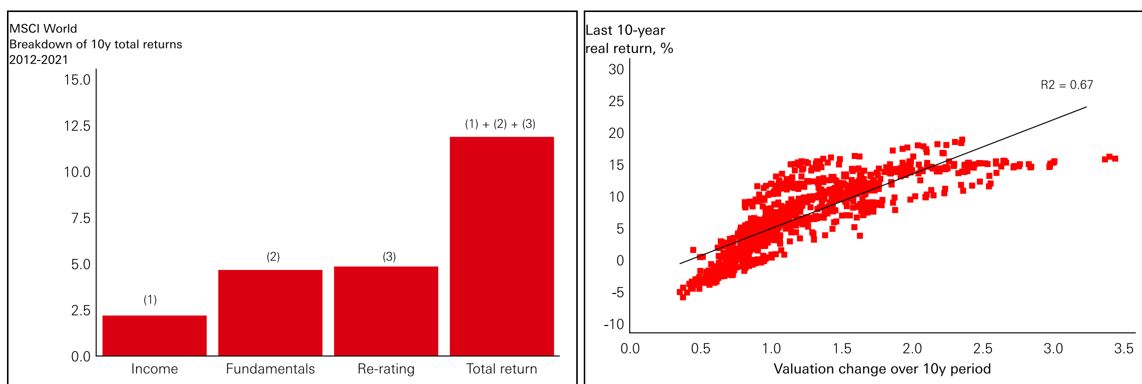
the data remind us, that period of deeply negative real returns was a disaster for investors, as well as for the macro-economy.

In this essay, I look at how current 'supply shocks' could persist for longer, come to dominate the macro landscape over the next decade, and how they could crimp investment returns. My starting point is that the macro context drives markets in the medium-term. Just as demand shocks and 'secular stagnation' have resulted in bumper investment returns during the 2010s and early 2020s, so the emergence of a regime dominated by supply shocks will force investors to accept a new reality of lower returns.

Stock market anatomy

Figure 3 shows stock returns over the last decade (2012-2021) split into their component parts: income, profit fundamentals, and the market re-rating (i.e. the valuation change). Around 80% of the total return in the last ten years has been down to good news on profits and re-pricing.

Figure 3 – MSCI World 10y return components (lhs) & Figure 4 – Valuation changes and returns (rhs)



What comes next? Past performance is no guarantee of future returns. Many investors develop trading strategies based on momentum, but it's not a good forecaster of markets over long horizons. Instead, there is a peculiar cyclicality to long-run returns, as figure 1 implies.

Finance theory tells us that 'discount rates' (i.e. valuations) are the key lens through which we should view expected returns. But that doesn't bode well either; the S&P 500 P/E is in its 97th percentile today. Markets are expensive, analysts talk of a 'bubble in everything', and theory suggests that today's high valuations predict below-par future returns.

But many economists confidently predicted a low-return world in the early 2010s, based on what were then regarded as stretched valuations. That call didn't work out well (figure 3). What these analysts missed was how the economic environment enabled markets to get even more expensive. The cautionary tale reminds us of the importance of valuation moves when we think about investment returns (figure 4). And, by association, the power of the economic regime in determining medium-term investment outcomes.

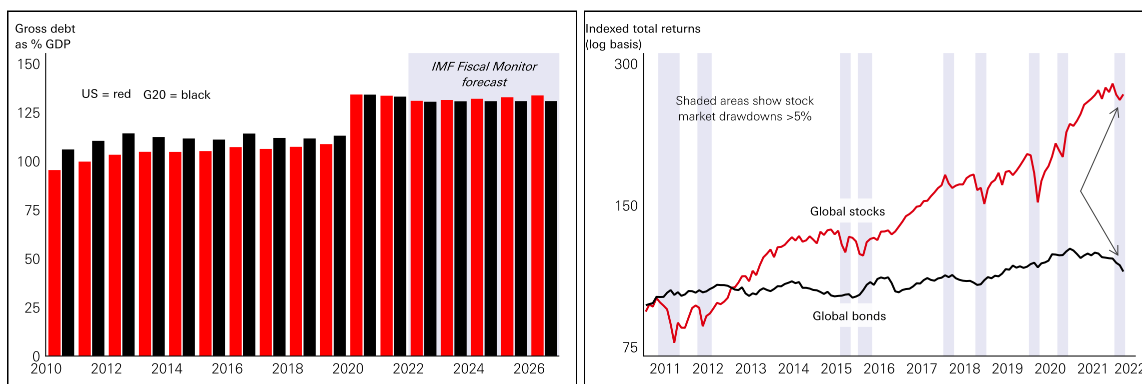
The end of secular stagnation

Bonds can't match up to stocks in return stakes, but of course they are not meant to. Govies have performed a reliable hedging role for investors over the last decade. When stocks wobbled, bonds have rallied. That's smoothed-out the investment journey and made it easier to keep to a long-run savings plan.

This hedging property is not inherent, however, it is derived from the economic regime. Over the last decade, the prevailing environment has been one of 'secular stagnation', a theme revived by Larry Summers in 2013. The essence is that a persistent imbalance between desired savings and desired investment creates 'excess savings' in the economy, drags down aggregate demand, and lowers growth, inflation and the real interest rate.

For central banks, low inflation meant policy in the 2010s could focus on supporting activity. Signs of stalling growth were countered with looser financial conditions. This 'policy put' placed central bankers firmly in investors' corner. When stocks tanked, interest rates could be eased. A recent 'textual analysis' of Fed transcripts by academics Anna Cieslak and Annette Vissing-Jorgensen evidences the intuition.

Figure 5 – US and G20 debt/GDP ratios (lhs) & Figure 6 – Total returns of stocks versus bonds (rhs)



But what the economic regime provides, it can also take away. The signals suggest that the era of secular stagnation is coming to an end. After years of arguing for a 'big bazooka' to address the chronic lack of aggregate demand, G20 policy-makers have delivered fiscal support on the scale the Keynesians mandated (figure 5). That's created a 'warp-speed' economic recovery from the pandemic. But there's been a price for success: supply bottlenecks, rising inflation, and higher real interest rates.

Meanwhile, since the start of 2022, a troubling combination of falling growth expectations and rising inflation puts central bankers in a bind. The 'policy put' has mutated into a 'policy call'. These days, stable stock markets embolden officials to get more hawkish and back in front of the curve. If the negative stock/bond correlation over the last decade implied that policy makers were on investors' side, the recent positive correlation points to the opposite (figure 6).

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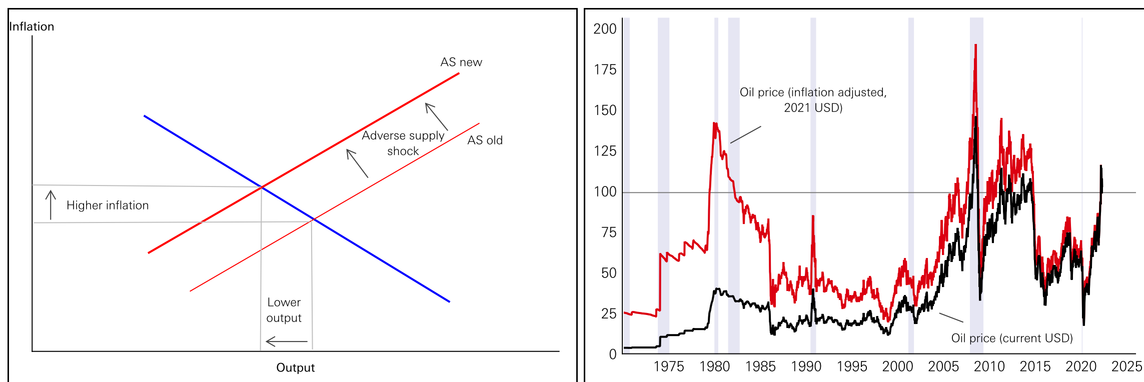
Supply shocks to the system

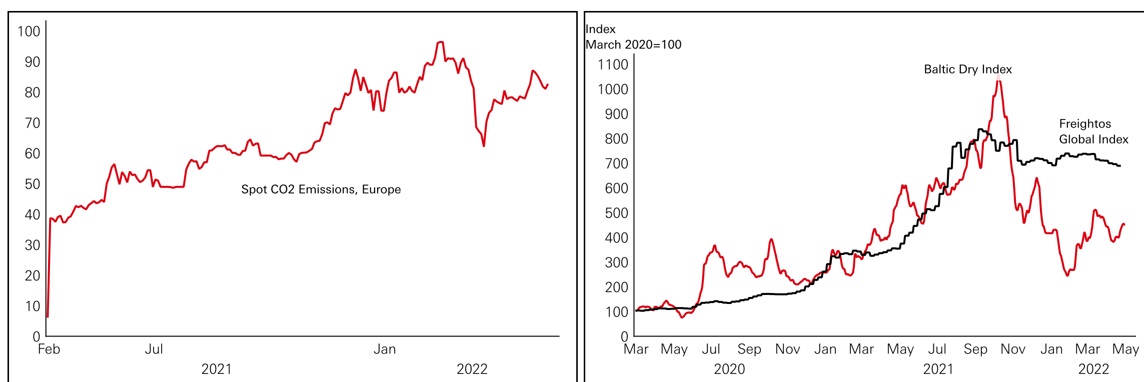
What follows is a stark contrast. Recent events and policy trends suggest supply shocks are becoming a more important driver of macro-economic fluctuations. Two big themes, the commodity super-cycle and deglobalisation, are coming to the fore. And, as implied by the standard AD/AS framework, these adverse developments will jolt growth lower and inflation higher (figure 7).

Figure 7 – AD/AS model under supply shocks (lhs) & Figure 8 – Oil prices in nominal and real USD (rhs)



Rising commodity prices are the textbook supply shock. Figure 8 shows how oil prices have risen after the rapid economic recovery post-covid, and how have they have spiked higher again following the Ukraine crisis. It's not just about oil; recent events have laid-bare the fragility of the European economy to a natural gas shock. And the inflation baskets of emerging economies remain heavily exposed to rising food prices, just as they were during the 2010-12 'Arab Spring'. Aggregate commodities, as reflected by the Bloomberg commodities index, are the best performing global asset class year-to-date, up more than 30%.

Figure 9 – EU carbon price since 2021 (lhs) & Figure 10 – Global freight indices since 2020 (rhs)



A renewed commodity super-cycle, reinforced by the green transition, is underway. This is set to be a major theme over the next decade. From an economic perspective, the transition to Net Zero is largely about carbon pricing, imposing a new cost of production on the economy (figure 9). But the

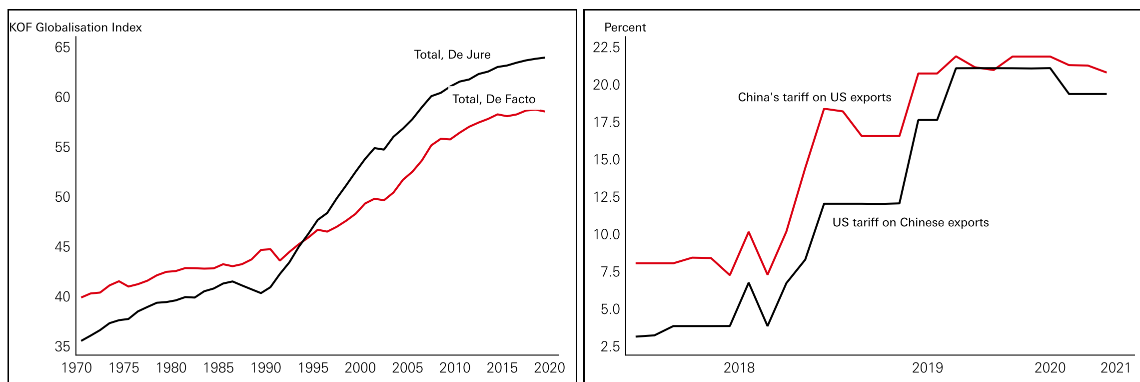
combination of 'physical risks' (avoiding the consequences of a hot-house world) and 'transition risks' (sequencing the climate policy response) creates additional uncertainty.

The second adverse supply shock comes from trade. In 2021, supply bottlenecks meant weaker growth and more inflation. With global value chains still stressed and renewed lockdowns in China, they will repeat that trick in 2022. Economists at the IMF now suppose that fluctuations in shipping costs have an equivalent impact on the economy as oil shocks (figure 10).

Globalisation is in trouble. Current data is consistent with a 'slowbalisation', a flagging trend, rather than an outright 'deglobalisation' (figure 11). But the reversal risks are intensifying, alongside rising geopolitical strains.

The shift toward a multi-polar world, where individual countries pursue national interests independently of one another, now seems inevitable. A new global order likely incorporates a trimmed-down set of rules on public goods (such as the climate) and avoids 'beggar-thy-neighbour' policies. But it will also provide more space for national autonomy and policy experimentation. That's a dramatic departure from 1990s neoliberalism (the so-called 'Washington Consensus'). And it opens the door to a gradual ratcheting-up of trade tariffs, a new wave of economic sanctions, differing technology standards, alternative cross-border payment systems, and diversified reserve currencies.

Figure 11 – KOF Globalisation index levels-off (lhs) & Figure 12 – US and China tariffs (rhs)



The new supply-side economics

How does this new economic regime impact the key economic variables - inflation, profits, and the cost of capital - that have fostered bumper investment returns over the last decade? A regime of somewhat higher inflation, weaker profits, and a rising market price of risk beckons.

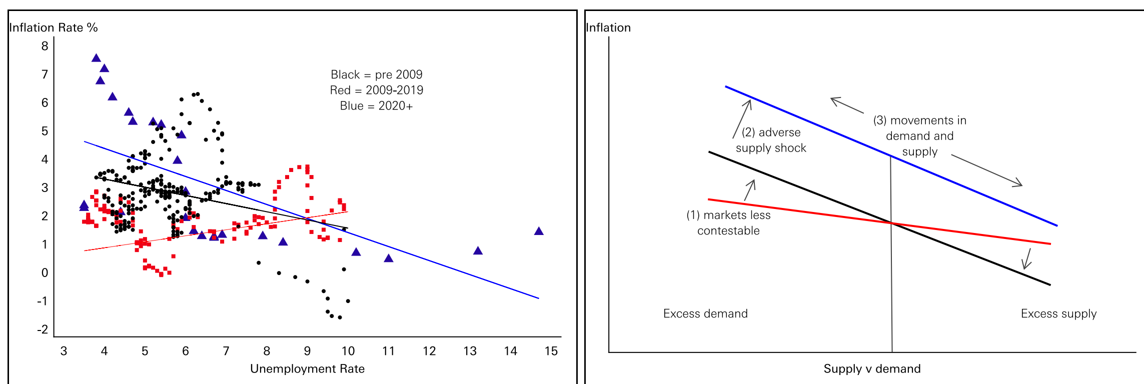
(i) More inflation, and a challenge to inflation control

In the middle of last year, inflation problems were concentrated in a few sectors and were straight-forward to dismiss as transitory. But inflation breadth has been building and that's put 'Team Transitory' more and more on the back-foot. As Agustin Carstens of the Bank of International Settlements has observed, 60% of advanced economies now have inflation above 5%, and 50% of emerging economies have it over 7%.

We know that much of current price pressures connect to the 'warp speed' recovery post-covid, and a surprisingly-persistent level of demand for goods (instigated during lockdown and then continued). But economists have also noted a third element to the story: a bizarrely unresponsive supply-side.

Labour markets, for example, look very tight. In the previous decade, we became accustomed to thinking about 'flat Phillips Curves', and of labour supply able to meet any level of demand. But recent data put that in doubt. Figure 13 shows how the US Phillips Curve is steeper since 2020. A 'war for talent' and the 'Great Resignation' have taken us back to a downward-sloped shape. Other dimensions of aggregate supply have been sluggish too; global commodity investment and measures of energy supply, like the Baker Hughes world rig count, remain notably low.

Figure 13 – US Phillips Curves since 2009 (lhs) & Figure 14 – Supply shocks and Phillips Curve (rhs)



New supply shocks compound the problem. A 2017 lecture by former BoE Governor Mark Carney outlined how deglobalisation can simultaneously twist and shift-out the Phillips Curve, reflecting how it balkanises labour markets and reduces contestability (figure 14). Others structural forces, like technological progress, might still underpin a broadly low inflation world. But shifts in the economy's tectonic plates alter things from the scenario of the last decade.

Climate policy also acts on inflation with a positive sign. Scenario analysis by the NGFS (Network for Greening the Financial System), a group of central bankers and regulators, assumes modest inflation increases due to higher carbon and energy prices. For Europe, the NGFS forecasts an extra 1% point on the CPI by 2030, which dissipates by 2050 (Net Zero 1.5°C scenario).

A worse inflation/unemployment trade-off looms. Policymakers' task will be to ensure that inflation control is not lost. Reassuringly, modern economies have shed the collective bargaining architecture and industrial structure which enabled the Great Inflation of the 1970s and 1980s. Instead, these days, inflation is a psychological process, with expectations at the heart of economists' models (figure 15 shows market-based inflation compensation).

The real problem, then, is that inflation has just become *so* noteworthy. The latest CPI 'trends' on social media, occupies the front page of news websites, and vexes consumers who worry about the 'cost-of-living crisis'. This shift in awareness about inflation could prompt a wage/price spiral. And it's the opposite of what central banks want to see as they attempt to maintain inflation control.

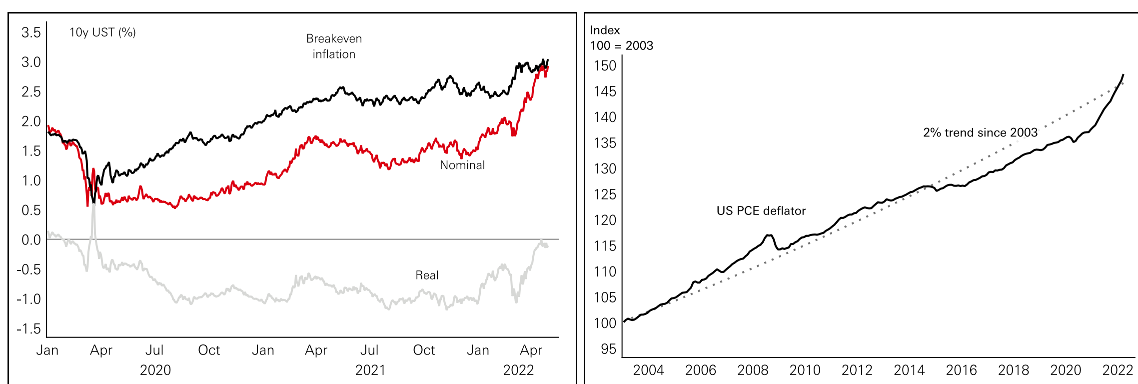
Famously, former Fed Chairman Alan Greenspan defined price stability as when: "*economic agents no longer take account of the prospective change in the general price level in their economic*

decision-making". The current situation, plus the coming supply shocks, implies the opposite. As inflation weighs on economic decision-making, it risks more uncertainty and volatility.

It remains to be seen how economic behaviour will adapt in the long-run. Team Transitory may ultimately be proved right. Perhaps UK workers will heed Governor Bailey's advice on wage restraint. Or maybe technological ingenuity will dampen high goods price inflation, even while supply chains remain hampered.

Higher inflation versus last decade is a realistic assumption, especially given the renewed co-ordination between monetary and fiscal policies, and the challenges experienced with the 'effective lower bound' and negative interest rates. An annual inflation rate of around 3% over the next decade would count as a benign outcome at this juncture. However, even that would represent a significant upshift versus the recent past (figure 16).

Figure 15 – US Treasury yields and components (lhs) & Figure 16 – US PCE deflator trends higher (rhs)



(ii) A 'natural' squeeze on corporate profits

Profits have been a key driver of bumper returns over the last decade, so any setback here could be material. Figure 17 highlights how US profits have dramatically rebounded after the pandemic shock. That profit delivery, especially in the light of tight labour markets, is impressive.

But the latest IMF World Economic Outlook points to a slowdown in global growth. That removes what has been an important prop for profits in recent years. The risk of a cyclical softening of activity, or worse a recession, creates additional risk.

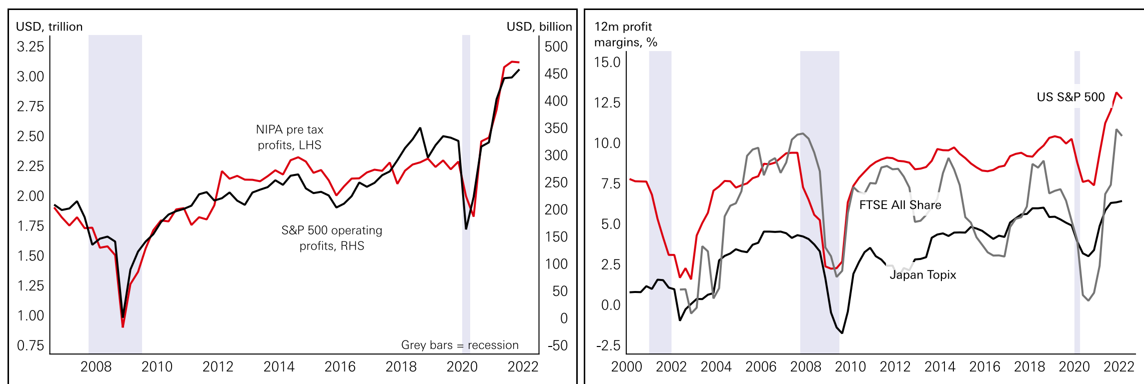
Supply shocks reinforce profits caution. Slower-for-longer global trade growth weighs on trend GDP. In the 2010s, global trade volumes were growing above 5%, now that trend is 2-3%. That weakens an important force that had lengthened and moderated business cycles since the 1990s. And the push toward national self-sufficiency and near-shoring could increase macro volatility further.

What's more, according to calculations by Jean Pisani-Ferry at the Peterson Institute for International Economics, the carbon transition implies a similar growth shock as 1974's oil crisis. Pisani-Ferry reckons the hit to current global GDP could be around 4%, as higher energy and carbon prices bite, parts of the capital stock become obsolete, and labour needs to be re-allocated to new sectors. There are some mitigating forces; including the forewarning of (and opportunity to plan for) the climate emergency, as well as new sources of growth. But it's a sobering analysis.

A more 'techno-optimistic' viewpoint would see the climate emergency as a once-in-a-lifetime chance to accelerate investment, especially in renewables and green tech. More investment could add a couple of percentage points onto GDP by 2030, lower the cost of decarbonisation, and reduce the economy's reliance on consumption spending. In the case of near-shoring, there's an equivalent optimistic angle; new capex spending could help diversify existing supply chains rather than replace them, and make the system more resilient to future shocks.

Such a new investment surge (plus its accelerating effects on growth and concomitant productivity boost) seems like the most plausible pathway to extend good news on profits. Especially at the current time when other macro sources of profits are exhausted (e.g. fiscal spending or private sector re-leveraging). But the niggling worry is that this represents wishful thinking, especially because the transition to that end-point is likely to be rather bumpy.

Figure 17 – US corporate profits NIPA and S&P (lhs) & Figure 18 – Equity index profit margins (rhs)



Meanwhile, there are new questions for how society divides up the GDP pie, and rewards each 'factor of production'. Profit margins are very extended (figure 18) and, although analysts have been forecasting a mean-reversion for decades (mostly without much luck), the drags are building-up. Tighter financial conditions, higher commodity prices, carbon as a new indirect business cost, and rising wages all now point to a margin squeeze. The share of output that goes to labour and to nature is set to increase. Even if this counter-trend only takes us back to historic returns on capital, it would feel like a significant adjustment, and challenge the investment return arithmetic.

The market *zeitgeist* of responsible investing also matters for the profits outlook. Socially-responsible investment strategies now dominate the financial landscape; gobbling-up inflows and as a popular thematic allocation. That's not just about carbon pricing and the environment; social factors (the 'S' in ESG) are increasingly emphasised. Issues like living wages, diversity, and other corporate responsibilities are closely-monitored by stock-pickers. Gradually, that is influencing management behaviour and nudging corporates toward a more stakeholder-led approach; maximising shareholder welfare, rather than just profits or market value.

(iii) Higher interest rates and de-rating risks for stocks

Asset class re-pricing was an important force behind the Goldilocks decade for investors. But set against the new supply shocks and a more adverse growth/inflation mix, a replay looks unlikely. To

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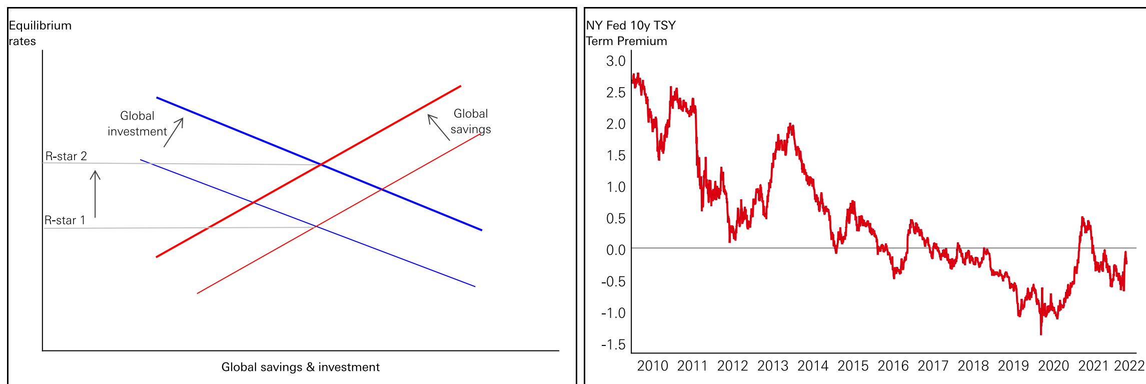
see this, it's helpful to view the market rating, also known as the price of risk, as reflecting two components: the interest rate and a risk premium.

Higher inflation drives higher interest rates. That is both obvious and already underway in financial markets, as advanced economy central banks have amped-up their hawkish rhetoric and acknowledged how far behind the curve they are. Real interest rates are not yet positive, even if they have shifted abruptly higher in Q1 (figure 15).

Relative to history, we are still in a low interest rate world. Many of the economic drivers that have kept interest rates low-for-long remain in place (i.e. ageing demographics, high debt, and inequality). That said, a combination of reduced savings (more fragmented world, more early retirees) plus rising investment (carbon transition, fiscal bazooka) does point to a macro system with a higher 'equilibrium interest rate' (figure 19). It's a subtle change. For the US economy, neutral interest rates may have moved up by a little bit, to say 2-3%.

Figure 19 – Savings, investment and rstar (lhs) & Figure 20 – NY Fed measure of term premium (rhs)



Still, higher interest rates mean higher long-term bond yields. The 'term premium' also matters (figure 20). This is usually the market reward for inflation uncertainty. But, in recent years, investors have gladly accepted low (or negative) term premia because of the low inflation regime and the portfolio-hedging properties of bonds. UK Gilts or US Treasuries may have been richly-priced but, like a comprehensive insurance policy, they have you fully-covered when you need it.

A rising stock/bond correlation jeopardises that. During the Great Inflation era, the stock/bond correlation was between 0.2-0.4, according to research from Alexi Savov and Itamar Drechsler. The current correlation is around zero (figure 21), and bonds will need better return properties if they're no longer equity hedges. Not to mention the inflation concerns and more price-conscious, local-focus of international fixed income managers. Over the long-run, the term premium has averaged around 1%. Even a part reversion to that norm would add upward pressure to bond yields.

A higher long-term interest rate means that the 'kernel' on which other asset classes are priced is shifting. Equities will trade on that, plus on fluctuations in the 'equity risk premium' (connected to profits volatility). And the profits headwinds described above point to a need for the equity premium to be above-average now. That means that, after a decade when stock market re-ratings boosted investment returns, we can't count on that positive contribution anymore.

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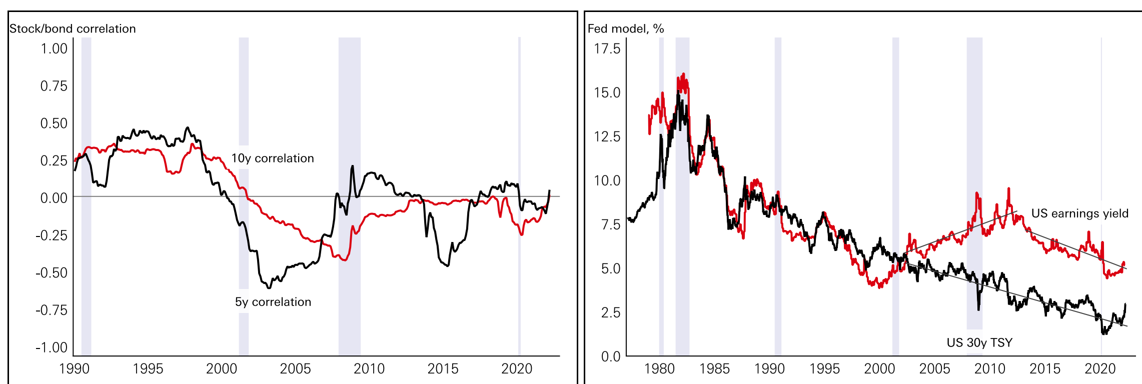
The one piece of good news is that current equity pricing already embeds a 'margin of safety'. Since the early 2000s, the classic 'Fed model' relationship between stocks and bonds has broken down (figure 22). That indicates an already-elevated risk premium, and it might imply that stocks have some limited resilience to higher rates. There has certainly been a flavour of that in markets during 2022; many analysts have been surprised that stocks have not performed even more poorly.

Alternatively, recent resilience may be an illusion. In a more indebted macro environment there is a fair amount of systemic risk out there, and that ought to be priced. As figure 22 illustrates, stocks have typically been sensitive to moving nominal bond yields in the past, something that finance academics castigate as a 'money illusion'. But given the regime of supply shocks, it's hard to see past the need for asset markets to re-price and re-adjust themselves. To avoid disappointment, investors need to set realistic return expectations.

Figure 21 – Global stock/bond correlation (lhs) & Figure 22 – The 'Fed model' decouples (rhs)



Conclusion: shock therapy for expected returns

The great economist Fisher Black claimed that estimating expected returns was, *"the key issue in investments"*. The last decade has been a bumper phase of returns for investors, driven by good news on profits and a market re-rating. But nothing lasts forever.

Macro analysis and market signals suggest that the economic regime is in flux. The phase of 'secular stagnation' is coming to an end. What was a Goldilocks age for investors is set to become an era of 'supply shocks', with the transition to Net Zero and deglobalisation as two prominent mega-trends.

Supply shocks are likely to have a significant impact on economic variables, adversely affecting growth and inflation. Corporate profits look particularly vulnerable to slowing GDP and a margin squeeze. Inflation control is also called into question. That should be defendable, but somewhat higher medium-term inflation seems inevitable. And, on the back of all that, the market price of risk looks set to rise. What were tailwinds for investment returns in the 2010s, are now becoming headwinds in the 2020s.

That means the next decade is destined to be more uncomfortable for investors. We should expect lower returns and more volatility. But if a turbulent market regime is the price we have to pay to address the climate emergency or to avert a dismantling of the global and social order, perhaps that will represent pretty good value for money after all.

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