



GLOBAL ECONOMICS FOCUS

Most of the monetary hit is yet to be felt

- **We think that most – perhaps two thirds – of the drag on activity from tighter monetary policy in advanced economies is still to come through in 2023. So, despite some surprisingly resilient data recently, we are sticking to our forecasts for advanced economies to enter recession this year.**
- We think about the transmission of monetary policy to the real economy in terms of four broad channels: exchange rates; confidence; asset prices; and interest rates on borrowing and saving. We doubt that the first two of these have been important so far, and nor are they likely to play a big role in the coming year.
- However, higher interest rates have taken a toll on asset prices, which we think have further to fall. Asset price falls so far have dented areas of investment, particularly in the housing market. **Timely indicators suggest that investment has further to weaken in response to the declines in asset prices that have already taken place; the further price falls we envisage should then further impinge on growth**, particularly in economies where house prices are dropping sharply. But without credit-fuelled increases in asset prices on the way up in 2020 and 2021, policy-induced price corrections in 2022 and 2023 are unlikely to cause the sort of debt-deflation dynamics that could deal a heavy blow to economic activity and financial systems.
- **The interest rate channel is probably the main way in which central banks cause growth to slow.** Already, depositors are locking away funds into more illiquid forms of savings, credit growth has tanked, some interest rate-sensitive areas of activity are taking a hit, and interest expenses of borrowers with outstanding debt have begun to eat into disposable incomes. **On the basis of past form, it looks like the main hit to rate-sensitive activity will come in the first half of this year. And pre-pandemic relationships imply that advanced economies are set to incur the biggest increase in private sector interest expenses as a share of income since the 1980s, with most of this hit yet to come through.**
- **Admittedly, unusually large private sector cash balances built up during the pandemic will generate an offsetting boost to incomes. But this is unlikely to provide much support to spending.** It is true that *net* interest expenses of aggregate household and corporate sectors may not rise much – if at all – this year. But the key question is one of distribution. As long as those earning the high interest income are not, in the main, the same as those paying out the high interest expense, the consequences for spending will be negative. To the extent that higher interest income encourages higher saving, the marginal propensity to spend out of interest income is negative – hence the recent surge in more illiquid forms of saving.
- **The more important caveat about how much pain monetary policy is yet to inflict via the interest rate channel relates to how some economies seem to have become less sensitive to higher rates.** There is early evidence that the passthrough of higher market rates to the debt service costs of existing borrowers is not as strong as it used to be in several places, in part due to a shift towards fixed-rate debt. This is especially the case in the UK and parts of the euro-zone, where debtors have become more insulated from higher rates.
- **But to the extent that a rise in policy rates doesn't yield the same bang for its buck as it once did, in the face of resilient price pressures policy will arguably just have to stay tighter for longer to achieve the same desired disinflationary effect on the economy. In this scenario, unless inflation were to settle back at target of its own accord, the risks would be tilted towards higher interest rates, not stronger growth.**



Most of the monetary hit is yet to be felt

The chances that advanced economies will head into recession this year largely hinge on the view that the full effects of monetary policy tightening are yet to be felt. In defending forecasts of recession, many cite Milton Friedman’s adage that monetary policy works with ‘long and variable’ lags, but don’t go much further; or, if they do, they rely on black box models.

To assess whether most of the monetary headwind lies ahead or has already passed, this *Focus* begins by setting out a framework for thinking about how higher interest rates can be expected to transmit to the real economy. We then use a wide range of indicators to analyse each of the channels of policy transmission, which allows us to gauge how much of the drag from higher rates we have seen so far. We conclude by drawing out the implications for the economic outlook and hence for central bank policy.

Firstly, is it the nominal or real rate that matters?

When it comes to thinking through how activity is affected by interest rates, economists have debated whether they should be analysed in nominal or real terms. The text books say real. After all, in theory, people should be making economic decisions based on the prospective returns on saving and investment after taking inflation into account.

However, in practice, **we are not convinced that looking at interest rates in real terms is worth the added complication.** Admittedly, if the US policy rate, for example, is deflated by contemporaneous inflation, then nominal and real interest rates have behaved rather differently, especially since the GFC and even more so during the past couple of years. (Compare the pink to the blue line in Chart 1.)

This would suggest that the choice of whether to focus on nominal or real interest rates could have a major bearing on the conclusions of any analysis of the effects of monetary policy. Indeed, according to this contemporaneous measure of real rates, the stance of US monetary policy has, up until very recently, never been more accommodative. This is in stark contrast to the *nominal* policy rate, which is significantly higher than it was before the pandemic.

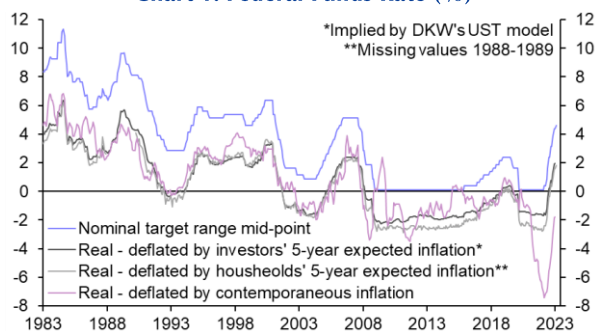
But if we deflate the nominal Fed funds rate by medium-term inflation expectations – which better reflect the time horizon over which households and firms may consider inflation when committing funds to saving or investment opportunities – then we get a different story. Whether we use inflation expectations of investors or households to deflate nominal rates, the variation in these measures of real interest rates is very similar to that of the plain and simple nominal Fed funds rate. (Compare the grey lines with the blue in Chart 1.) This is because expected rates of inflation beyond a one-to-two-year horizon rarely change very much, which leaves changes in nominal interest rates as the key driver of “ex ante” real interest rates. Accordingly, **our analysis focuses entirely on how nominal interest rates transmit to the real economy.**

The key transmission channels of monetary policy

Over the years, economists have devised many ways of describing how changes in central bank interest rates affect output. Mapping out this so-called ‘monetary policy transmission mechanism’ in a way that is practically useful involves balancing comprehensiveness and concision. **Chart 2 is our attempt to optimise this trade-off by focusing in on the key channels at play without getting tangled up in all the various interlinkages and feedback loops.**

Changes in actual or expected policy interest rates can influence economic activity through four main channels. First, by affecting differentials in interest rates with trade partners, monetary policy changes can elicit movements in **exchange rates** that can subsequently influence the balance of net trade. (In economies with large foreign-currency liabilities, the exchange rate can also be an important determinant of debt service costs. But this is more relevant for emerging economies than for advanced economies.)

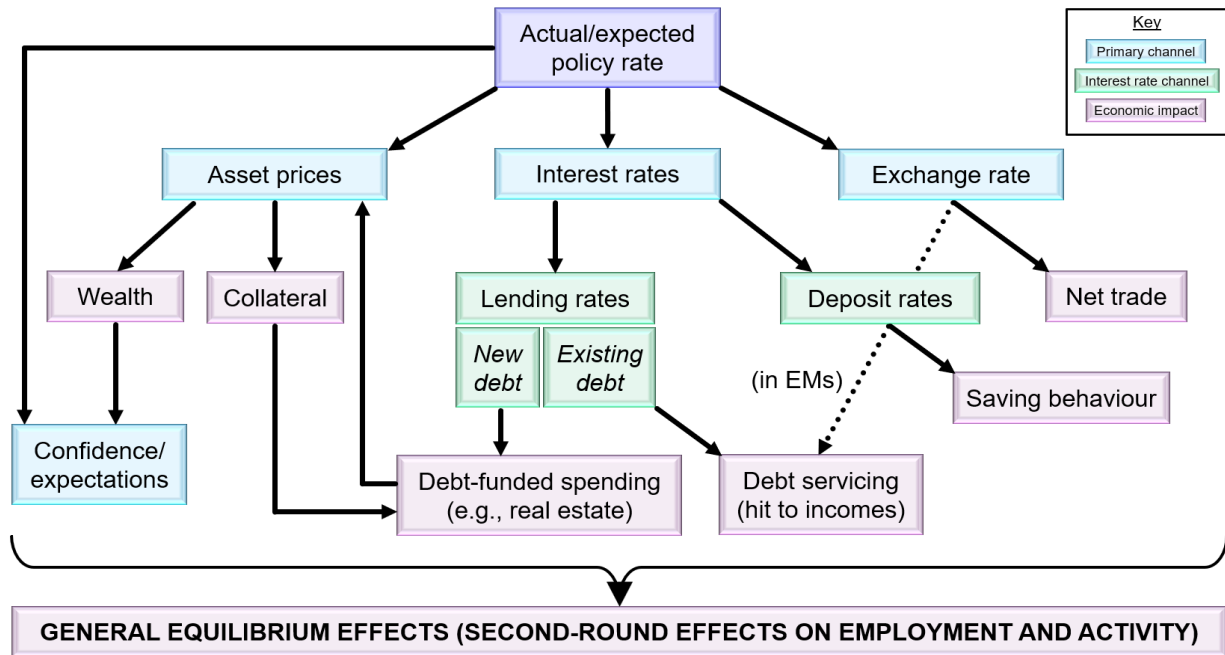
Chart 1: Federal Funds Rate (%)



Sources: Refinitiv, DKW, Capital Economics



Chart 2: Monetary Policy Transmission Mechanism



Source: Capital Economics

Second, changes in central bank interest rates are sometimes thought to have a direct effect on the **confidence and expectations** of households and firms. As the argument goes, higher interest rates signal worse economic times to come, prompting self-fulfilling cutbacks in spending.

Third, by affecting risk-free interest rates in financial markets and benchmark interest rates for mortgage lenders, monetary policy changes are a key driver of **asset prices**. In turn, changes in the prices of financial securities and real assets, like property, can affect consumption via changes in household wealth and influence investment via changes in the value of collateral that would-be borrowers can offer up with which to secure new debt finance.

Fourth, is what can broadly be called the “interest rate channel”. By making saving more attractive, higher deposit interest rates offered by financial intermediaries are thought to encourage saving at the expense of current spending. What’s more, monetary policy changes affect borrowing behaviour through lending rates on both *new* and *existing* debt. Indeed, higher interest rates directly dampen demand for spending that is financed with new debt, such as equipment investment, real estate, and some big-ticket consumer durables like autos. And they also cause existing debtors to devote more of their income

to cover higher interest expenses, which can weaken their demand for goods and services more generally, not just on interest-rate sensitive areas of spending.

Finally, in addition to the direct ‘channels’ of monetary policy transmission, there are ‘general equilibrium effects’ to consider. For example, a monetary-policy-induced weakening of demand for autos, could lead to job losses at auto manufacturers and then later at firms along the supply chain, weakening demand elsewhere in the economy.

Having set out the conceptual roadmap, the next few sections of this *Focus* will evaluate the extent to which tighter monetary policy has been transmitting through these channels so far, and gauge how much more of the hit to activity is likely to come through.

No significant exchange rate channel effects

In a world where few other central banks are tightening policy, and where differentials in interest rates with trading partners are the key driver of exchange rates, policymakers stand a fair chance at engineering an appreciation in the exchange rate with interest rate hikes, with an associated hit to demand via a weaker external trade balance.

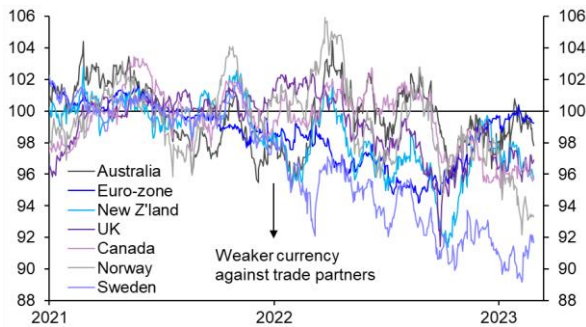
However, this was not the world in which monetary policy tightening took place for most of 2022. Not only has this been the most aggressive tightening



cycle since the 1980s, but crucially it has also been the most synchronised. This means that, **for many central banks, it has been difficult to bring about the sort of differentials in interest rates that might have been necessary to manufacture stronger currencies.**

And because of the aggressive and global nature of this hiking cycle, the weaker global growth outlook – in conjunction with geopolitical factors – served to dampen risk appetite to the benefit of the US dollar. The dollar has given up half those gains in recent months. But other **DM currencies remain weaker now, on a trade-weighted basis, than they were at the outset of their tightening cycles.** (See Chart 3.)

Chart 3: Nominal Effective Exchange Rates (2021 = 100)



Sources: Refinitiv, Capital Economics

Out of all advanced economies, the one country that could plausibly have seen monetary policy impinge on GDP growth via weaker net trade has been the US. And yet, the real goods trade deficit in the US was smaller at the end of 2022 than it was in the previous year. **All in all, the exchange rate channel has played very little role in monetary policy transmission so far in advanced economies, and we doubt this will be a major conduit in 2023 either.**

Any hit to confidence outweighed by other factors

Central bankers like to think they are accomplished communicators not just to market participants, but also to households and firms. The belief is that, when telegraphed in the right way, changes to monetary policy can directly affect people’s expectations for output (and inflation) that become self-fulfilling.

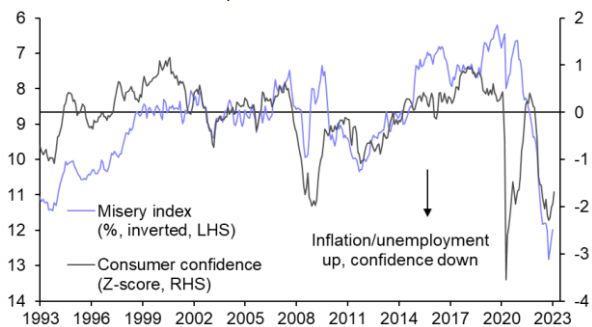
Outside central banks’ own research, however, the evidence for this is far from convincing. Even when significant relationships are found, the magnitude of the effect can be so small as to bring into question its macroeconomic significance. The Bank of England published a [paper](#) on this topic last month, but even

that found that firms’ expectations about their own business typically don’t respond to monetary policy surprises. A 2020 New York Fed [paper](#) found that consumers’ confidence does fall when the Fed springs a surprise hike, but not to any great extent.

Even if the interest rate hikes of the past year or so have dented confidence about the economy, they are unlikely to have been the major determinant.

For households, the overwhelming feature of 2022 was the surge in inflation which saw the so-called misery index (the unemployment rate plus inflation – historically a key driver of consumer confidence) in the G7 rise to its highest level since the 1980s. And now that inflation has peaked, consumer confidence seems to have passed its nadir, even as interest rates continue to rise. (See Chart 4.) Measures of business confidence didn’t fall as much as for consumers, and they have similarly rebounded in recent months.

Chart 4: G7 Misery Index & Consumer Confidence



Sources: Refinitiv, Capital Economics

So, monetary policy has had, at most, minor effects on expectations and confidence in the real economy so far. And given that surveys have turned a corner lately, this is unlikely to be a key channel through which policy dents growth in the months ahead either. However, there is scope for confidence effects to become more pronounced as labour markets weaken later in the year, even as inflation falls.

Asset price corrections have further to go

Unlike with the exchange rate and direct confidence channels, policy tightening has clearly taken a toll on asset prices. Most of last year’s sell-off in equities was due to higher risk-free rates [denting valuations](#). And housing market corrections are mostly due to higher mortgage rates weighing on home purchases.

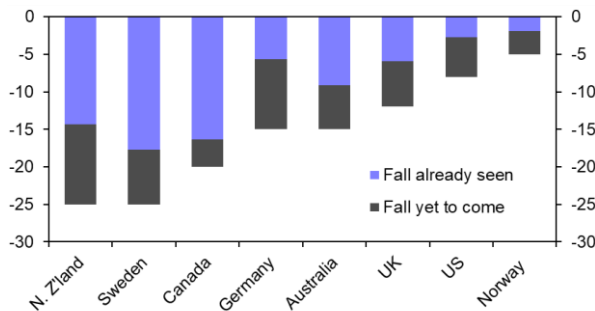
We think that monetary policy will continue to cause the prices of risky assets like equities to fall. For one



thing, regardless of how you measure them, risk premia look too low, so there is scope for tighter policy to dent risk appetite and hence to weigh on valuations. What's more, if economic growth slows by more than is seemingly discounted in the markets in the coming months, as we expect, risky asset prices are likely to take a renewed hit as earnings expectations are revised accordingly. (Though, there is a little circularity here – these earnings-downgrade-induced price falls will partly reflect weaker growth caused by monetary policy operating through other channels, in addition to being the conduit through which higher interest rates cause growth to weaken.)

And while house prices haven't experienced the relief rally that financial assets have enjoyed in recent months, they still have further to fall in our view. (See Chart 5.) Indeed, while equity valuations can adjust quickly to changing risk-free rates, it takes longer for these to affect mortgages rates and for these in turn to prompt a response from buyers and sellers, so house prices adjust more slowly. Valuations are still far too high given where mortgage rates are likely to be over the next couple of years. Given just how high valuations have been in New Zealand and Sweden, and how reliant their mortgage-holders are on variable- or short-term fixed rate debt, house prices probably have furthest to fall in these economies.

Chart 5: % Peak-to-Trough House Price Chg. (2022-24)



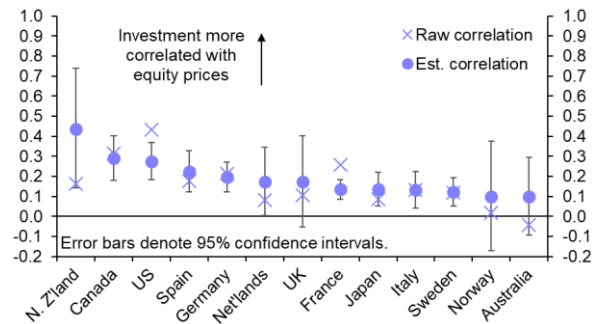
Sources: Refinitiv, Capital Economics

It is one thing for monetary policy to be a key driver of asset prices, but it is another for asset price falls to have a major impact on the macroeconomy.

One possibility is that falling asset prices reduce the resources that are available for spending. But, in practice, **asset price 'resource effects' on activity have probably not been a significant feature of this cycle.** US and UK data show that there wasn't much of a rise in home equity withdrawal when house

prices rose in recent years, and there has been no fall recently either. And as for the effect of falling equity prices on business investment, the experience of the pre-COVID period suggested that this effect tends to be small. Indeed, when controlling for factors like profits, there is, at best, only a weak correlation between equity prices and investment. (See Chart 6.)

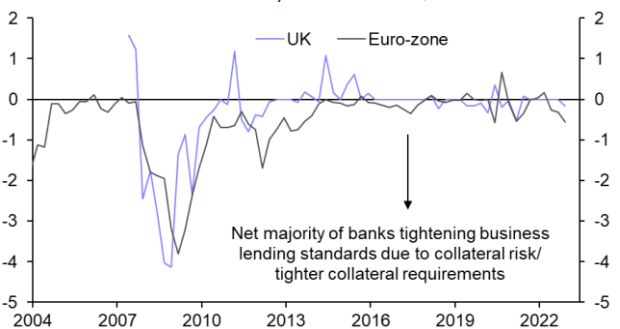
Chart 6: Estimated Correlations of Changes in Real Business Fixed Investment with Equity Prices*



Sources: Refinitiv, CE. *Estimated 1999-19. Controlling for profits, capacity utilisation, bond yields, commodity prices, and interrelated variable lags.

Another way in which lower asset prices could be expected to dampen demand would be by reducing the value of collateral that underpins debt finance. **So far, at least, European banks don't seem to be too concerned about business collateral values.** Lending surveys suggest that only a very small net majority of banks in the euro-zone and UK cite collateral considerations as a reason why they are changing the availability of credit to firms. (See Chart 7.)

Chart 7: Contrib. of Collateral Considerations to Change in Bank Credit Availability to Firms (sd., 0 = net balance)

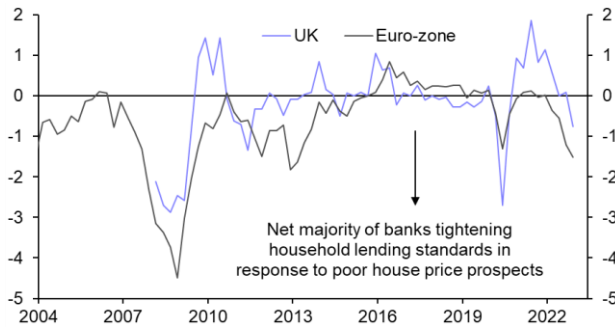


Sources: Refinitiv, ECB, Bank of England, Capital Economics

However, European banks do seem to be restricting access to credit for households on the back of falling house prices. (See Chart 8.) So, to the extent that house purchases stimulate derived demand for home improvements and household furnishings, tightening mortgage lending standards are weighing – and should continue to weigh – on household spending.



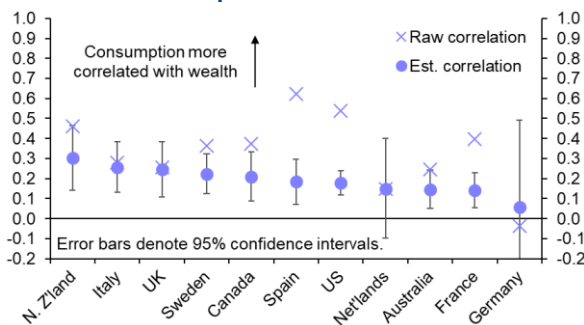
Chart 8: Contribution of House Price Prospects to Change in Bank Credit Availability to H'holds (sd., 0 = net balance)



Sources: Refinitiv, ECB, Bank of England, Capital Economics

Asset prices can also plausibly affect consumption via wealth effects on confidence. Estimates of household wealth effects on private consumption are usually found to be statistically significant, but their size and hence economic relevance varies quite a lot. In some economies, like the US, New Zealand, and Spain, simple correlations of changes in household wealth and consumption are fairly high. But, after controlling for various factors, **our analysis is that household wealth effects don't tend to be that large.** (See Chart 9.) Given how high house prices rose in recent years in places like New Zealand, Sweden, and Canada, and how much they are now falling, wealth effects may have bigger roles to play in these economies.

Chart 9: Estimated Correlations of Changes in Real Private Consumption with Household Wealth*



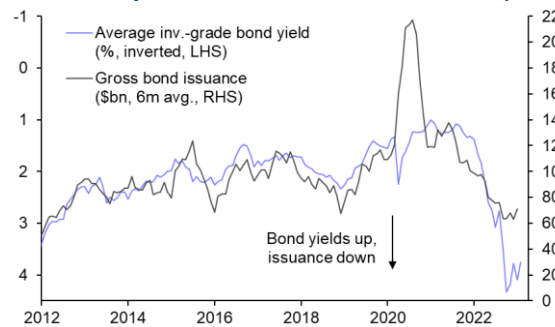
Sources: Refinitiv, CE. *Estimated 1999-2019. Controlling for real income, misery index, short-term interest rates, and interrelated lags of all variables.

The upshot is that we think equity and real estate prices have further to fall and that most of the real economic consequences have yet to come through. That said, our take is that the size of these asset price effects on spending are unlikely to be as big as those arising from the more direct effects of tighter policy via the interest rate channels, to which we now turn.

Hit to new-debt-financed spending feeding through Higher interest rates are starting to feed through to weaker credit demand and interest-rate sensitive areas of spending.

For starters, higher corporate bond yields have weighed heavily on bond issuance, though we may have expected issuance to have fallen further given how far yields have risen. (See Chart 10.)

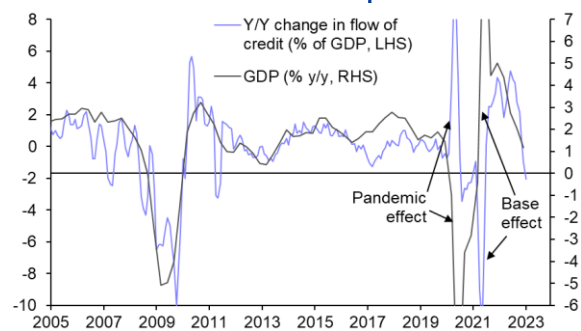
Chart 10: Corporate Bond Issuance & Yield in Major DMs



Sources: Refinitiv, Capital Economics

More broadly, the flow of bank credit to the private sector has slowed sharply in recent months and points to a marked deceleration in GDP growth. (See Chart 11.) In the euro-zone, net bank lending fell outright in December by the most since 2014 when European banks were still reeling from the debt crisis. This was followed by only a small rise in January.

Chart 11: Banks' Private Credit Impulse & GDP in DMs

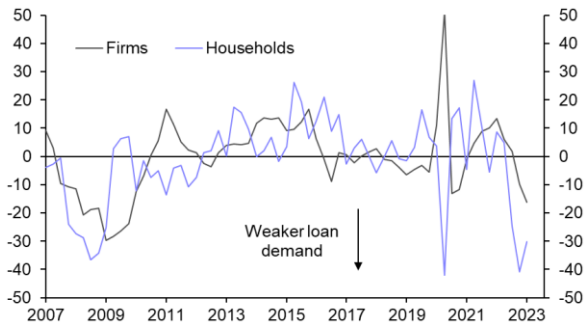


Sources: Refinitiv, Capital Economics

And that's only the hit to credit we've seen so far. Lending surveys show that significant majorities of banks in major DMs are reporting weaker demand for loans from firms and especially households. (See Chart 12.) These surveys also show that many banks expect demand to weaken further in the next quarter.



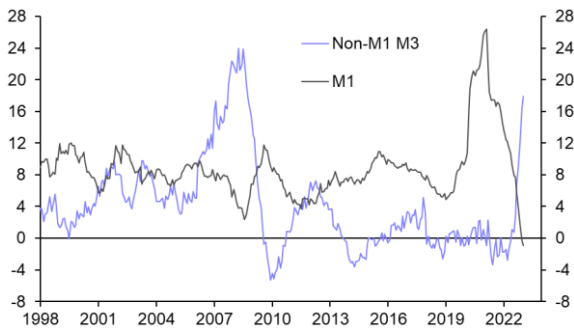
Chart 12: Average Lending Survey Balances in Major DMs (Net % of Banks Reporting Stronger Demand for Loans)



Sources: Refinitiv, Capital Economics

Rather than demanding new loans, households and firms seem to be taking advantage of higher interest rates by moving money into less liquid forms which they are less likely to spend. While the narrow money supply (instant-access demand deposits) is now shrinking in advanced economies, on average, the non-M1 components of the broad “M3” money supply (principally fixed-term time deposits) surged towards the back end of last year. (See Chart 13.)

Chart 13: Average Y/Y Money Growth in DMs (%)



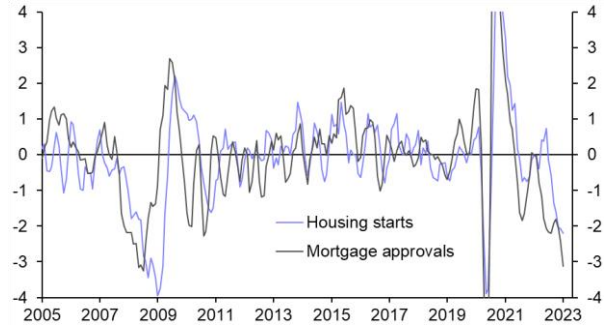
Sources: Refinitiv, Capital Economics

The effect of all of this on activity has generally been more difficult to gauge than usual owing to immense volatility in the data, in part due to supply factors muddying the water. For example, auto sales are typically one of the areas of spending most sensitive to higher interest rates given that new vehicles are often financed with credit. But the alleviation of chip shortages in the second half of last year prompted a revival of sales in the face of higher interest rates, reflecting pent-up demand from the past couple of years. As this source of demand is exhausted, we suspect that auto sales will drop again.

Higher interest rates have most clearly left their mark on housing market activity. Mortgage approvals and housing starts are down sharply (see Chart 14), and

building permits and mortgage applications data have generally softened too since the middle of last year. These timely indicators suggest that most of the fall in residential investment is yet to come, although falling long-dated US Treasury yields seem to have put a floor under housing market activity in the US.

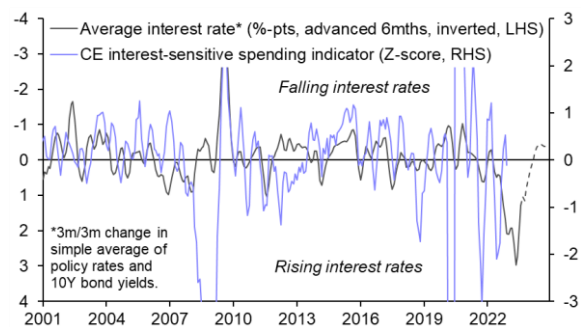
Chart 14: DM CE Interest-Sensitive Spending Indicators: Mortgage Approvals & Housing Starts (Z-Scores)



Sources: Refinitiv, Capital Economics

Clearly, lots of factors affect interest-sensitive areas of spending beyond interest rates themselves. But the simple correlation that does exist between changes in interest rates and related activity suggests that the worst of the hit will materialise in the first half of 2023, with activity perhaps falling at a 2% q/q (8.2% annualised) pace, on average, and continuing to fall at a milder pace for the rest of 2023. (See Chart 15.)

Chart 15: Average Change in Interest Rates & Interest-Sensitive Spending in Major DMs



Sources: Refinitiv, Capital Economics

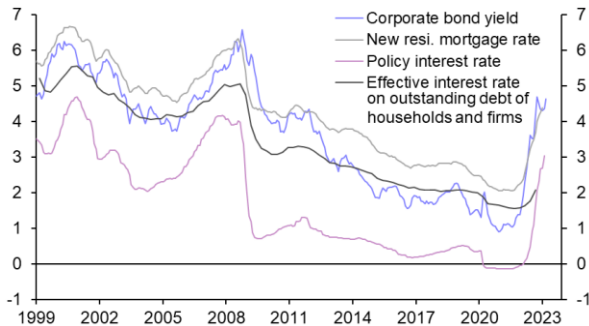
Existing borrowers starting to feel the pinch

While the new debt interest rate channel captures the effect of higher interest rates on certain sectors of the economy, the existing debt channel relates to the more pervasive impact of higher rates on activity throughout the economy. This is because higher interest payments on outstanding debt by existing borrowers dent disposable incomes, which can weaken spending on all sorts of goods and services.



The latest data on interest expenses of the non-financial private sector for advanced economies are for Q3 2022. As of Q3, the effective interest rate on outstanding debt (interest expenses as a percentage of debt) had returned to its pre-pandemic level of about 2%, on average. But given the increases in market interest rates since then, it is clear that this effective rate will have risen further. (See Chart 16.)

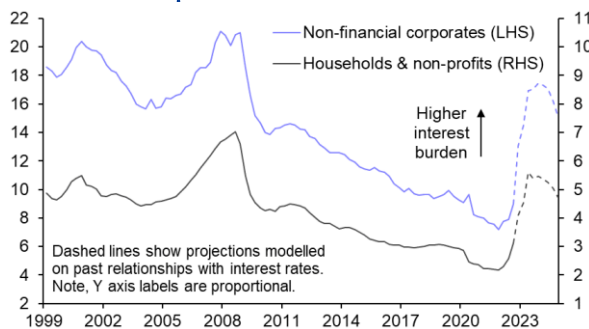
Chart 16: Simple Average Interest Rates in DMs (%)



Sources: Refinitiv, Capital Economics

And since debt-to-income ratios are generally now higher than they were before the pandemic, a given effective interest rate is associated with a higher interest service ratio – interest expenses as a share of income. Based on the past relationship between market interest rates and effective interest rates, our projections for market interest rates and incomes imply that there will be a sharp increase in interest service ratios for households and firms in advanced economies in the first half of this year. (See Chart 17.)

Chart 17: Average Share of Income Accounted for by Interest Expense in Advanced Economies (%)



Sources: Refinitiv, Capital Economics

Looking at a smaller sample of countries with longer back data, **advanced economies look set to incur the biggest rise in interest costs as a share of income since the 1980s, with most of this hit yet to come through.** The rise is bigger for firms than households, on average, because policy rates are rising further –

and staying high for longer – than longer-term rates like 10-year government bonds yields, which are a bigger driver of the interest expenses of households compared those of firms in many cases. Chart 17 implies that about half the hit to household incomes is still to come, and about two thirds for businesses.

Admittedly, there are a couple of potential caveats to bear in mind. One is that while higher interest rates boost the interest expenses of debtors, they also boost the interest income of savers. And given that households and corporates are sitting on a mountain of interest-bearing deposits accumulated during the pandemic, they will earn an unusual amount of interest income this year that could be spent. Indeed, gross debt may be higher as a share of income than before 2020, but *net* debt ratios are typically lower.

However, while it is true that *net* interest expenses as a share of income will rise by less than is implied in Chart 17, it is important to think about who holds the bulk of the assets generating interest income and the likelihood that it will be spent.

While good distributional data are hard to come by, there is little doubt that higher-income households – with a lower marginal propensity to consume – hold a disproportionate share of the interest-bearing assets that have grown massively in the past couple of years. So, interest income won't necessarily rise much for the households that are most likely to spend it.

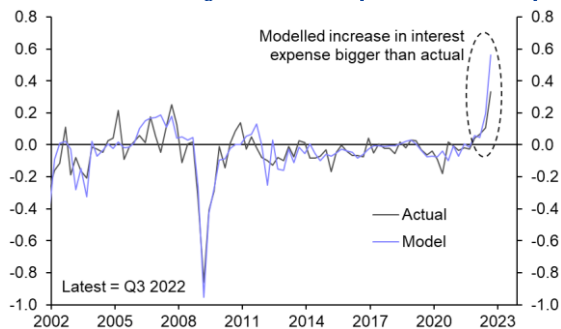
What's more, regardless of who exactly stands to gain from higher interest income, the propensity to spend out of these resources is presumably much lower than spending out of labour income. In fact, it could even be negative, with higher interest income enticing more saving, as Chart 13 suggested. **All in all, higher private sector cash balances are not a good reason to doubt the potency of this channel of monetary policy transmission during this cycle.**

The second – and more credible – caveat is that the passthrough of market interest rates to effective rates has probably lengthened compared to previous tightening cycles in several cases. In other words, the pre-2020 relationships underpinning the projections in Chart 17 are overstating the extent to which interest expenses of existing borrowers will rise as a share of income in the next couple of years.



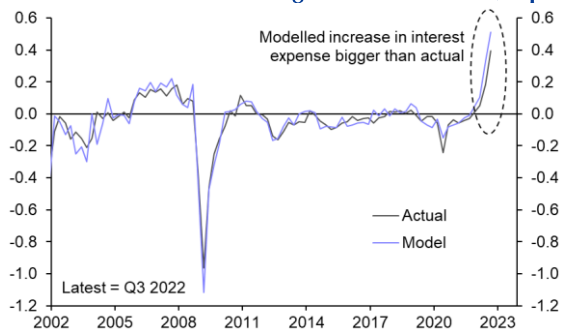
Indeed, we have some early evidence that seems to corroborate this. Based on past relationships, we would have expected the average effective interest rate on outstanding debt of non-financial businesses to have risen by about 0.6%-pts in Q3 compared to Q2. Instead, it rose by a little over half that amount. (See Chart 18.) It is a similar story with households, albeit to a lesser degree. (See Chart 19.)

Chart 18: DM Avg. Q/Q Change in the Effective Interest Rate on Outstanding Non-Fin. Corporate Debt (%-pts)



Sources: Refinitiv, Capital Economics

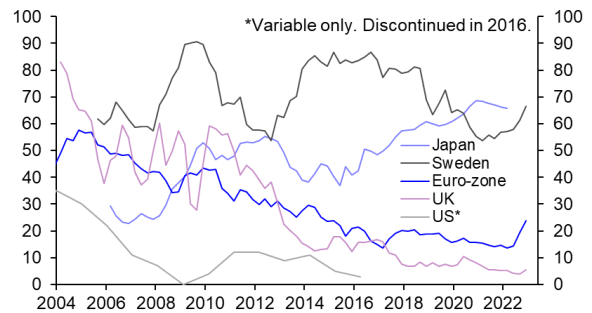
Chart 19: DM Average Q/Q Change in the Effective Interest Rate on Outstanding Household Debt (%-pts)



Sources: Refinitiv, Capital Economics

The fact that the household effective interest rate has not risen as far as the experience of past hiking cycles would suggest comes as little surprise in many cases, especially in Europe. There has been a big shift away from variable-rate mortgages in the UK and parts of the euro-zone making mortgage-holders less sensitive to rising interest rates today. Even the US – which has originated very few variable-rate mortgages since the GFC – will have seen a shift in the composition of its outstanding mortgages away from variable rates towards (typically 30-year) fixed rates, potentially dampening the passthrough a bit there too. (See Chart 20.) As long as mortgage rates fall back towards pre-2022 levels in the next couple of years, a large chunk of mortgage-holders will have missed this tightening cycle entirely by the time they next come to refinance.

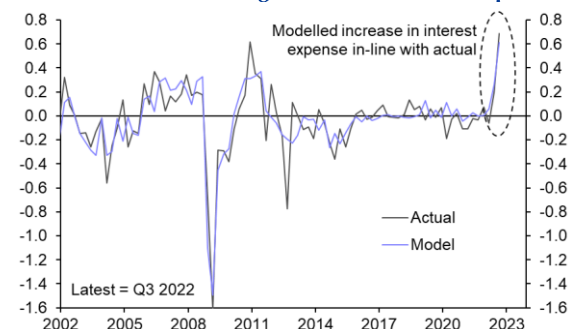
Chart 20: Share of New Residential Mortgages Comprising Variable or <1Y Fixed Interest Rates (%)



Sources: Refinitiv, JHFA, ECB, BoE, FHFA, Capital Economics

In contrast, Sweden has been dependent on variable- or very short-term fixed-rate mortgages for decades, meaning that it is both more sensitive to higher rates than in other DMs, and is no less sensitive than it was in the past. Consistent with this, the past relationship with policy and mortgage interest rates in Sweden did not overpredict the increase in the household effective interest rate in Q3. (See Chart 21.)

Chart 21: Sweden Q/Q Change in the Effective Interest Rate on Outstanding Household Debt (%-pts)

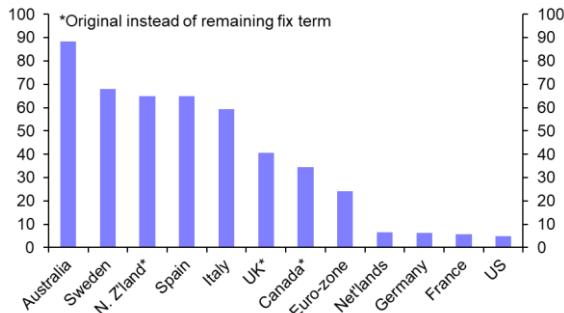


Sources: Refinitiv, Capital Economics

Given that mortgages make up the vast majority of household debt, the passthrough from higher interest rates to household interest expenses will vary across economies depending on the prevalence of mortgages with an interest rate reset in the coming year (either because they are variable rate, or because the fixed-rate term expires within a year, forcing mortgage-holders to refinance at higher rates). Internationally comparable data on the composition of outstanding mortgages – especially over time – are sparse. But Chart 22 gives a cross-country snapshot of the current state of play.



Chart 22: Share of Outstanding Resi. Mortgages/ H'hold Loans Comprising Variable or <1Y Fixed Rates (%)



Sources: Refinitiv, RBA, ECB, BoE, BIS, Capital Economics

Households in Sweden, Australia, New Zealand, and the euro-periphery are highly exposed to higher interest rates. After its structural shift towards fixed mortgage rates in the years following the GFC, the UK now finds itself middle ranking along with Canada, while the core euro-zone economies and the US have a low sensitivity of mortgage interest expenses to higher market interest rates.

On the corporate side of things, the reason for the weaker passthrough of higher interest rates to higher interest expenses so far in many economies is less clear. But it may relate to businesses having shifted towards more fixed-rate loans compared to a decade ago. (See Box 1.)

Conclusion

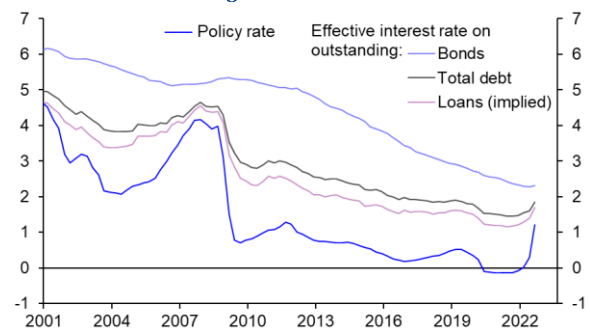
Having set out a conceptual framework for how higher interest rates can feed through to the real economy, we found that several of the theoretical channels have not been prominent conduits of monetary policy transmission during this cycle. But **the interest rate channels are clearly in motion, and perhaps two thirds of the hit is yet to come through.**

Based on the relationships discussed in this analysis, our best guess is that the peak negative impact of higher interest rates will come somewhere around the middle of the year, though the precise timing is highly uncertain and it will vary across economies. Indeed, the second-round effects on activity and employment of the initial hit from higher interest rates are difficult to determine in advance. And without detailed information on the interest-rate types of loans and their maturity profiles, it isn't possible to model the passthrough of higher rates on interest expenses with a high degree of accuracy.

Box 1: Explaining the weaker passthrough to firms

The lower sensitivity of corporate interest expenses to higher rates could conceivably be the result of firms having shifted away from loans to bonds within their debt mix over the years. Indeed, a significant chunk of business loans have variable interest rates, while few corporate bonds do. This explains why effective interest rates on business loan debt typically move with policy interest rates, while effective interest rates on bond debt barely move in response. (See Chart 23.)

Chart 23: DM Average Policy Rate & Effective Interest Rates on Outstanding Debt of Non-Financial Firms (%)



Sources: Refinitiv, Capital Economics

However, this theory doesn't stand up to scrutiny. While there has been a shift towards bond finance since the 2000s, in most cases (especially in Europe) it remains a small share of the total debt of non-financial firms. And in cases where corporate bonds are more prevalent – such as in the US, UK, Canada, and Australia – there hasn't been a big rise in the bond share of debt, and neither has there been a significant rise in the tenor of outstanding bonds (implying that the incidence of credit being rolled over with higher coupons has not diminished either).

With a shift toward long-term bond finance unable to account for the weaker rate passthrough to existing corporate borrowers – and with scant data on the rate-type composition of their loans – we are left assuming that there has been a shift towards less rate-sensitive loans among their loan liabilities. This is particularly plausible outside the US, where growth of variable-rate syndicated loans has been much smaller.

That said, from what we do know about the shift towards fixed-rate debt in Europe, **its stands to reason that there will be more of a slow-burn drag on activity compared to past tightening cycles in the UK and the core euro-zone economies**, compared to the likes of Sweden and New Zealand, where debtors



still seem to be highly sensitive to higher interest rates. **This helps explain why we expect the Bank of England and ECB to resist cutting policy rates for longer than other developed market central banks.**

The big picture is that, contrary to the soft/no landing narrative, we think that tighter monetary policy will push most advanced economies into mild recessions in 2023. To the extent that tighter policy fails to deliver the sort of hit to activity that we envisage, in the face of stubborn inflation, interest rates will end up staying higher for longer to bring inflation sustainably back to target. In other words, unless underlying inflation fortuitously settles back to 2% of its own accord, advanced economies cannot escape the need for weaker demand. Therefore, **the risks are tilted towards interest rates being higher for longer than we currently forecast, not growth ultimately holding up better than we expect in the year ahead.**



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