



GLOBAL ECONOMICS FOCUS

Is corporate greed to blame for high inflation?

- *Note: We'll be discussing the economic and policy risks around the 'greedflation' debate in a 20-minute online briefing at 10:00 EDT/15:00 BST on Thursday, 6th July. [Register now](#).*
- **The surge in inflation in advanced economies has not been driven by a widening of firms' profit margins. However, the fact that firms have been able to *maintain* profit margins in the face of rising costs means that inflation has been 2-3%-pts higher in advanced economies than would otherwise have been the case. For decades, higher input costs have squeezed firms' profit margins. The fact that they have not done so in the past 18 months is due to an imbalance of demand and supply, which is the real cause of higher inflation.**
- In broad terms, 'greedflation' is the idea that high inflation is the result of corporate profiteering. The policy implication that is often presented is that workers should not pay the price of disinflation through higher unemployment and lower real wages, and instead profit margins should be squeezed with price controls.
- We develop a framework for identifying the ways in which corporate profits can contribute to inflation by comparing corporate unit pre-tax profits with unit costs. Our analysis suggests that **there isn't much evidence of firms, in aggregate, driving up inflation by actively expanding profit margins in advanced economies.** This contrasts with many other studies from the likes of the IMF, which reach the opposite conclusion since they use a measure of profits that includes household rent, self-employed income, and capital depreciation.
- **That said, firms have passed higher costs onto consumers to protect margins to an unusual degree.** Firms usually lack the pricing power to defend margins by hiking prices, so unit profits tend to move inversely to costs. In the past year or two, though, costs have surged and yet margins have been resilient. If higher costs had eaten into margins in the same way as they had done in the decades before the pandemic, inflation at the end of last year would have been lower throughout advanced economies, especially in the US and UK. **Consequently, corporate profits have contributed to high inflation, but not in the way that most assume.**
- **Having said that, we dispute it makes sense to argue that profits have caused high inflation. Probably the most common conceptual error in the greedflation debate has been to confuse what causes inflation with how inflation manifests itself.** An excess of demand relative to supply is the root cause of inflation, as it grants cyclical pricing power to producers over consumers in product markets, and to workers over employers in labour markets. Whether inflation shows up more in profits or wages will depend on the relativities of pricing power in the different markets. But **from the perspective of central banks fighting inflation, the remedy is the same – to redress the demand-supply imbalance with tighter monetary policy.**
- **Arguably, the fact that inflation has manifested itself to a significant extent through resilient profits raises the chances of a soft landing.** After all, it suggests that margin compression could help drag inflation down to 2% more quickly and less painfully than by relying solely on weaker wage growth. But while margin compression will probably play a role in bringing down inflation, labour markets are unlikely to get away unscathed even if they hold up better than they have in previous downturns. Ultimately, **scope for margin compression should not convince central banks that they can take their feet off the brakes anytime soon.**
- **Finally, as the cost-of-living squeeze drags on and the cost-of-borrowing squeeze intensifies, political pressure on governments to take action against corporate profitability is mounting, which presents risks to equity prices, especially in staple sectors.** Any structural reforms to redress market concentration in some industries would play out over years, so the near-term hit would probably be small. The more immediate risks to corporates stem from price controls and more widespread use of windfall taxes on 'excess profits'.



Is corporate greed to blame for high inflation?

As the cost-of-living crisis has worn on, the ‘principal problem in Political Economy’ – as 19th century economist David Ricardo put it – has reared its head. High inflation has raised questions about how higher costs are being shared between those earning wages, profit, and rent. Broadly speaking, the idea that firms are causing high inflation by taking little of the hit from higher costs themselves, or are even becoming more profitable, has been referred to as ‘greedflation’. If true, there are various policy implications for central banks, governments, and regulators.

In this *Focus*, we shed light on whether the current bout of high inflation can be pinned on corporate profits. We kick off by presenting a framework for quantifying greedflation with which we assess the evidence in the US, Canada, euro-zone, UK, and Australia. We then reflect on whether it makes sense to argue that inflation is ever *caused* by profits, and proceed to consider the implications of our findings for inflation, policy, and equity prices.

How to detect ‘greedflation’

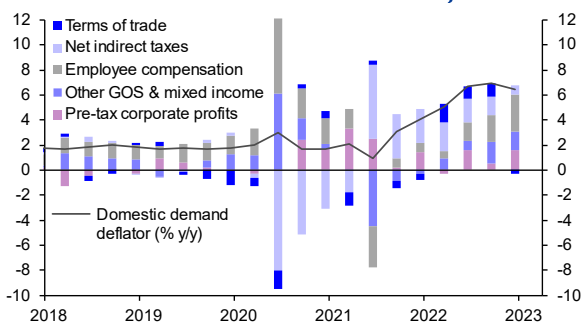
Many point to the fact that real average wages have fallen or that firms have reported high profit margins in recent years as proof of greedflation. These are just two of the conceptual pitfalls that are common in this debate, which we debunk in Box 1 at the end of this *Focus*. And Box 2 sets out how to decompose inflation into profit and other income drivers, which is another area of the greedflation debate that causes confusion. With our method for decomposing inflation, Chart 1 shows the breakdown of the average rate of domestic demand inflation in five major advanced economies into the contributions from the terms of trade and forms of domestic income.

For example, by the end of 2022, the terms of trade (in this case, the price of imports relative to the price of exports – depicted by the royal blue bars) were no longer positively contributing to inflation in DMs, on average. Unit labour costs – denoted by the grey ‘employee compensation’ bars – went from accounting for less than one percentage point of inflation at the start of 2022 to 3%-points by Q4. Meanwhile, the contribution of unit corporate pre-tax profit to inflation – the pink bars – has oscillated around the 0-1%-pt range since the middle of 2021. (From now on, we will mostly refer to ‘unit profits’ and ‘unit margins’, simply as ‘profits’ and ‘margins’. But, as we justify in Box 1, our focus is on profits/margins per unit of output, rather than in gross terms.)

These sort of charts breaking down inflation into the income drivers are often misinterpreted. Many assume that the way to spot profit-driven inflation is to examine the contribution of profits *in absolute terms*. In other words, a rising profit contribution (bigger pink bars in Chart 1) means that profits are adding to inflation. But this is not necessarily true.

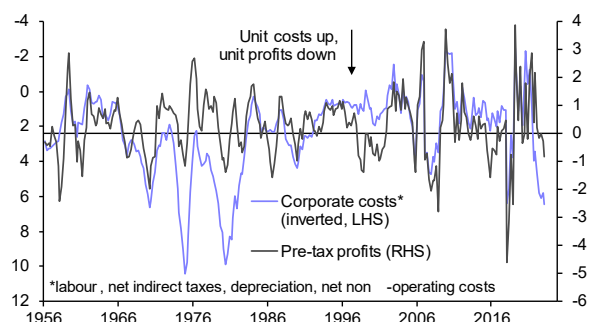
While rising profits could reflect firms hiking prices, they could also reflect falling costs without any change in prices and hence without any upward effect on inflation. Indeed, this has tended to be the case historically. Apart from during the mid-1970s and early 1980s – when firms enjoyed strong pricing power – **competition has ensured that the profits of (largely price-taking) firms have tended to be the mirror image of costs.** This is illustrated in Chart 2, which shows the inverse relationship between the contribution of costs to US domestic demand inflation in blue and that of pre-tax corporate profits in black.

Chart 1: Percentage-Point Breakdown of Average Domestic Demand Deflator in Five Major DMs



Sources: Refinitiv, Capital Economics

Chart 2: %-Point Contributions of Unit Corporate Costs & Profits to US Domestic Demand Inflation



Sources: Refinitiv, Capital Economics



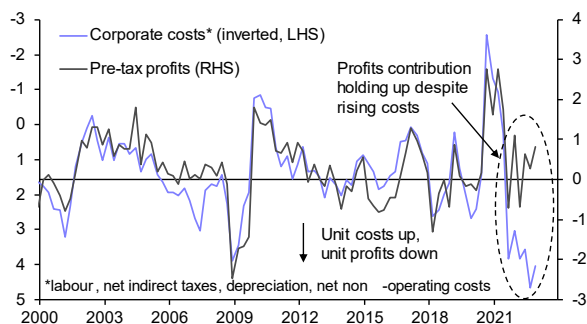
Not only could rising profits *not* be an indication of greedflation, but unchanged profits could be. Again, it depends what is happening to costs. If costs are rising, and profits are stable, then prices are being hiked to defend margins. As we've seen, historically, competition tends to force firms to absorb higher costs rather than pass them onto consumers. But if high margins are being sustained – albeit not expanding – despite rising costs, this is indicative of firms wielding abnormal power to push up prices.

The upshot is that unit profits in absolute terms do not reveal whether economies are suffering from greedflation. Rather, greedflation can be inferred only by comparing unit profits to unit costs.

How much inflation can be attributed to profits?

So, to quantify any profit-driven inflation, the key is to compare corporate profits with costs. Chart 3 does this for the advanced economies covered in this analysis. It shows that the tight inverse relationship that existed between 2000 and 2020 broke down in 2021, with the profits contribution to inflation hovering around zero, on average, while the corporate costs contribution kept rising. (The profits contribution to inflation depicted by the black line in this chart is the same as the pink bars in Chart 1, albeit after stripping out mining sector profits in Australia and Canada, which are determined more by global commodity prices than by mining firms' costs.)

Chart 3: %-Pt Contributions of Unit Corporate Costs & Profits to DM Average Domestic Demand Inflation



Sources: Refinitiv, CE. Excluding mining sectors in Australia & Canada.

The average corporate pre-tax profits contribution to inflation in advanced economies has been neither high nor rising in recent years. This rules out the idea that corporates have, in aggregate, driven up inflation by actively expanding margins with price hikes beyond increases in costs – a process that we think can be aptly described as 'hard greedflation'.

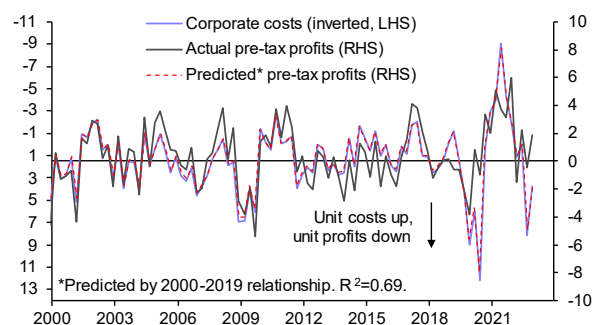
But we think it would be wrong to conclude that there is therefore no evidence at all of inflation being profit-driven. On the contrary – if profits had fallen in line with the rise in costs during 2021-2022, as they had done in past decades, average inflation in advanced economies would have been 2-3%-points lower in Q4 2022. (That is to say that if the black line had followed the blue line in Chart 3, the profits contribution to inflation would have been negative and inflation would not have risen so much.)

The point is that higher costs normally erode profit margins. But firms have used pricing power they haven't experienced in decades to defend margins by passing costs onto consumers to an unusual extent, in what could be described as 'soft greedflation'. Put differently, inflation has been higher than would be the case had firms shared in the burden of higher costs by absorbing them into their bottom lines.

Quantifying greedflation

We can model pre-pandemic relationships between unit profits and unit costs to estimate the amount of inflation that has arisen from firms hiking prices to defend margins. Chart 4 takes the example of the UK. The red dashed line is the prediction of the profits contribution to inflation based on inverted changes in the costs contribution (the blue line underneath). The difference between the black and dashed red lines (both plotted on the right-hand axis) quantifies the extent to which changes in unit profits are determined by changes in firms' selling prices rather than changes in their unit costs. Essentially, the residual is an estimate of corporate pricing power, or greedflation.

Chart 4: %-Point Contributions of Unit Corporate Costs & Profits to UK Domestic Demand Inflation



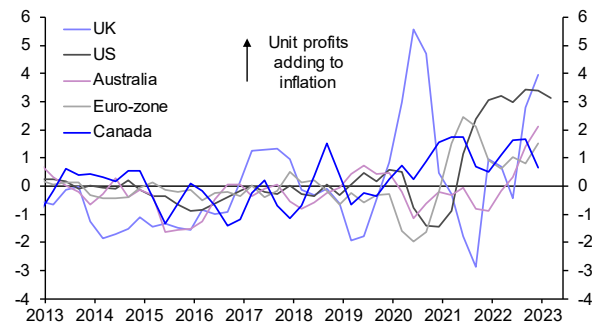
Sources: Refinitiv, Capital Economics

Chart 5 shows the (smoothed) greedflation residuals for the five advanced economies included in this study. The residuals are positive in all cases, meaning



that **unit profit margins have been higher than you would expect given what has happened to costs – and inflation has been higher as a result.**

Chart 5: Est. Greedflation Contributions to Inflation (Actual Less Predicted Profit Contribs., %-Pts, 2Q MA)



Sources: Refinitiv, CE. Excluding mining sectors in Australia & Canada.

Differences between countries

Greedflation has seemingly been least prominent in recent years in Canada, where inflation has been perhaps little more than one percentage point higher than it would have been had unit pre-tax profits fallen as they had done in recent decades to absorb the higher costs. In contrast, in the US, inflation was around 3%-points higher throughout 2022 as profits remained high despite a big rise in costs.

More recently, the UK stands out among advanced economies as having seen formidably resilient corporate margins in the face of surging costs. In the second half of 2022, UK inflation was about 4%-pts higher than it would have been had profits absorbed rising costs as they did before the pandemic.

Meanwhile, in the euro-zone, the single-quarter greedflation residual jumped in Q4. This was not the result of unit profit margins merely holding up in the face of higher costs, but of an outright widening of margins indicative of European corporates hiking prices above and beyond increases in unit costs.

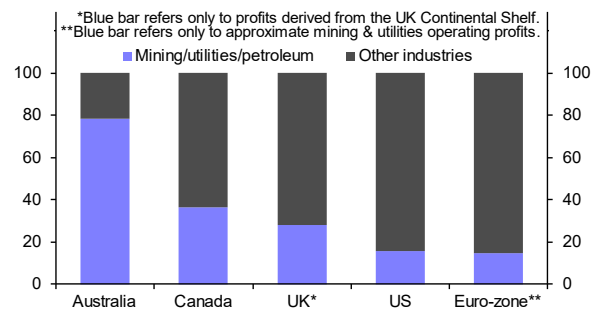
And as for Australia, in contrast to recent analysis by the RBA – which considered unit profits only in absolute terms – we find that resilient non-mining sector profit margins have in fact been contributing to high inflation. (See the pink line in Chart 5.)

Are high profits all about commodity prices?

Like the RBA, we strip out the mining sector from our analysis of Australia (and also of Canada) given that much of their profit is generated from higher prices on exported goods, which do not feed into domestic

demand inflation. This raises a broader question of whether resilient aggregate corporate profit margins in the other advanced economies can be pinned on mining, energy utility, and petroleum manufacturing companies that have benefitted from high global commodity prices, especially since Russia’s invasion of Ukraine. While we lack timely industry profits data that are internationally comparable, the data that are available **suggest that commodity sector profits account for only a small share of the rise in overall profits in the US and Europe.** (See Chart 6.)

Chart 6: Share of the Increase in Total Corporate Profits* from 2019 to 2022 by Industry (%)

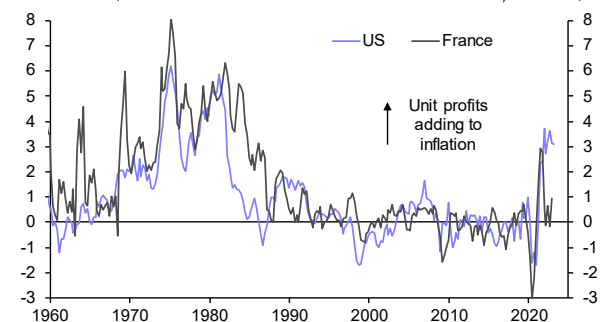


Sources: Refinitiv, Statcan, Census Bureau, CE. * Various definitions.

Corporate pricing power not seen since the 1980s

From a historical perspective, advanced economies have not seen this degree of corporate pricing power since at least the 1980s. In the US, the last time profits seemed to be determined so much by price changes rather than simply dropping out from changes in firms’ costs was 1981. While France – unlike its euro-zone peers – has not experienced much greedflation in recent years, it does at least have a lengthy back series to help contextualise the current greedflation trends. In France, it was the mid-to-late-1980s when the estimated greedflation residual was last at a high level. (See Chart 7.)

Chart 7: Est. US & France Greedflation Contributions to Inflation (Actual Less Predicted Profit Contrib., %-Pts)



Sources: Refinitiv, Capital Economics

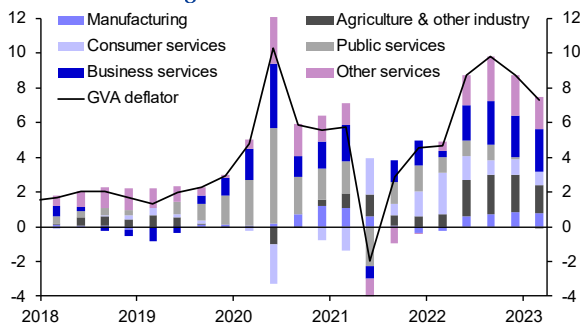


Rethinking the greedflation debate

So, inflation could have been lower had unit profit margins absorbed rising costs as they typically had done in the decades before the pandemic. However, **we think it is a mistake to then infer that resilient profits have caused high inflation in recent years. Rather, we think it is more appropriate to say that inflation has manifested itself more in the form of profits than it has done for many decades.** At first glance, this may seem to be simply a semantic sleight-of-hand of little consequence for economic policy. On the contrary, we think that **overlooking this distinction is probably the biggest conceptual error committed in the ongoing greedflation debate, and it can lead to misguided implications for policy.**

To assess if high inflation was ‘profit-driven’ we, like others, analysed the income breakdown of GDP (profits, wages etc.). But you could alternatively analyse the expenditure or output breakdowns of GDP to see which areas of spending or production have ‘driven’ high inflation. For example, from an expenditure point of view, you could decompose changes in GDP deflator inflation into contributions from the prices of goods and services categories, such as household furnishings, business machinery, and restaurants. From an output perspective, you could decompose inflation into changing prices of output produced by various industries, such as agriculture, manufacturing, or services. (See Chart 8.)

Chart 8: Percentage-Point Breakdown of Y/Y % Changes in the UK GDP Deflator



Sources: Refinitiv, Capital Economics

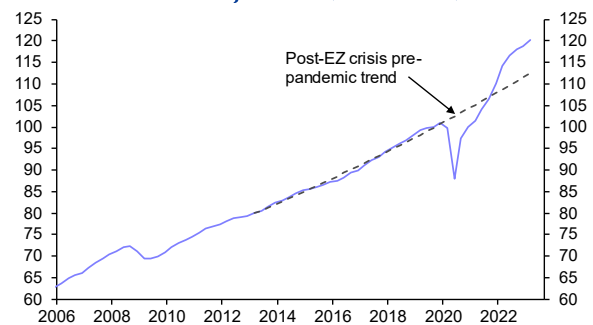
Like the income breakdown approach, these are just different ways of decomposing inflation into various drivers. **It makes as much sense to claim that profits or wages have caused inflation as it does to say that various items of expenditure or sectors of industry are to blame.**

What does this mean for central banks?

Decomposing inflation reveals where it is showing up, but the cause ultimately lies in excess demand (or, more precisely, an imbalance between demand and supply). Indeed, in product markets, excess demand grants cyclical pricing power to producers over consumers, with a relative scarcity of goods and services allowing firms to charge higher prices. And the same dynamic applies in labour markets, only with workers gaining pricing (‘bargaining’) power over employers with respect to wages when they become relatively scarce and hence less replaceable.

Admittedly, with advanced economies doing little more than stagnating in real terms, the current economic climate might not feel like one of ‘excess demand’. But looking at demand only in real terms misses the point that *nominal* demand is strong – it is just that it is feeding higher prices rather than higher real output. In aggregate, households and firms have the nominal resources with which to spend on goods and services, and are doing so – hence nominal domestic demand is well above trend. (See Chart 9.)

Chart 9: Average Nominal Domestic Demand in Five Major DMs (2019 = 100)



Sources: Refinitiv, Capital Economics

In both product and labour markets, pricing power is procyclical since it increases when demand exceeds supply. **Whether excess demand and hence inflation shows up more in profits or wages will depend on the relativities of pricing power in the different markets.** (The fact that corporates have fared relatively well compared to employees suggests that competition in labour markets between workers has been more intense than in product markets between firms.) **But from the perspective of central banks fighting inflation, the diagnosis is the same – excess demand – and so too is the remedy – higher interest rates.**



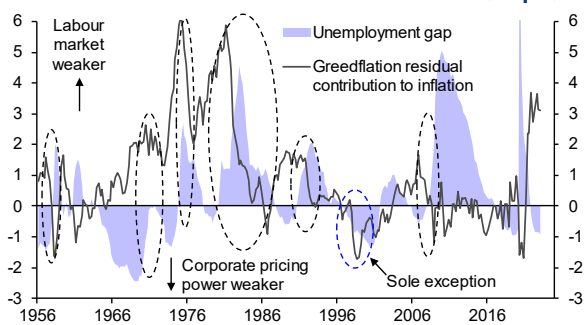
Consequently, from a monetary policy standpoint, the greedflation debate is largely a distraction from the key point that unusually elevated core inflation indicates that the economy is running into capacity constraints, which can be alleviated by rate rises.

Arguably, it is still relevant for central banks that inflation has manifested itself through profits because it raises the chances of a soft landing. After all, margin compression could help drag inflation down more quickly and less painfully than if weaker wage growth were doing all the heavy lifting. Taking this assessment onboard, policymakers might gain confidence that disinflation can be achieved without much of a loosening of labour market conditions.

While margin compression will probably end up playing a bigger disinflationary role this time than in recent decades, we doubt this means that labour markets can get away unscathed. Indeed, the record is that when corporate pricing power weakens, this goes hand-in-hand with weaker labour markets.

In the 60 years or so before the pandemic, US firms' pricing power – as proxied by our greedflation residual – fell significantly on seven occasions. Going by the CBO's measure of the US unemployment gap, the labour market weakened in six of the seven cases (see Chart 10), because firms scaled back hiring or cut jobs in response to weakening margins and lower employment in turn caused demand to weaken. The only occasion when margins weakened without pain in the labour market was 1997, and this case is the least comparable with today because margins weren't high to begin with.

Chart 10: US Unemployment Gap & Greedflation Contribution to Domestic Demand Inflation (%-pts)



Sources: Refinitiv, Capital Economics

Admittedly, given that we are forecasting only mild recessions in advanced economies – and given the labour shortages that firms have experienced in

recent years – we think that labour markets will hold up fairly well in the next year or two compared to previous downturns. But with vacancy rates still so elevated, unemployment rates at multi-decade lows, and labour shortages so acute, experience suggests that the problem of excess demand that is at the root of firms' abnormal pricing power will not be resolved without a cooldown in labour market conditions. In other words, **scope for a compression of corporate margins should not convince central banks that they can take their feet off the brakes anytime soon.**

In fact, from the point of view of central banks, the value of breaking down inflation into its profit and wage contributions is that it can shed light on whether second-round price effects have taken hold. Cases like the current situation, where producers and workers demonstrate that market conditions have granted them the power to effectively bid up costs and prices reactively, require a 'decisive' policy response, as ECB President Christine Lagarde acknowledged in her [speech](#) at the 2023 Sintra forum.

Non-monetary policy implications of greedflation
As the cost-of-living squeeze drags on and the cost-of-borrowing squeeze intensifies, political pressure on governments to act against corporate profitability is mounting. This presents risks to equity prices, especially in staple sectors, the demand for whose goods are more inelastic and thus politically sensitive.

Indeed, in June, UK politicians summoned supermarket bosses to discuss their companies' profitability and how this related to grocery inflation. This came just weeks after the UK's competition watchdog concluded an investigation into supermarkets using illegal land agreements to stifle competition. In France, the government recently agreed a deal with food retailers to cut the prices of a wide range of foodstuffs. Meanwhile, at the start of 2023, Oxfam called on governments to levy windfall taxes on the 'excess profits' of food companies.

From an equity market standpoint, any structural reforms to redress market concentration or other impediments to competition in certain industries would probably play out over years, so any near-term hit would be small. Rather, **the more immediate risks to corporates stem from a more extensive use of price controls and windfall taxes**, which have so far been restricted to some energy companies.



There is often a temptation for governments to reach for price controls (effectively profit controls) when inflation damages electoral prospects. But aside from extreme circumstances in markets where there is inelastic demand for relatively homogeneous goods, price controls are rarely a good idea. In most cases, bureaucratic controls would do a worse job than market price signals at rationing demand, incentivising supply, and ultimately resolving the price shock more quickly and more sustainably. So, **in addition to the direct effects for the firms involved, price controls would in most cases fail to yield their intended benefits for the wider economy.**

As for windfall taxes, they would clearly be bad news for the companies in question, but they would at least offer governments the chance to fund non-distortionary, welfare-enhancing, fiscal transfers to (low-income) households. Indeed, while lumping ad hoc taxes on profits arising from firms' endeavours would be economically damaging, taxing profit from unforeseen and extreme market conditions (which has little distortionary impact on firms' incentives) can be an attractive proposition to fiscal authorities.

As inflation falls in the year ahead, governments may miss their window of opportunity to enact such extraordinary regulatory and fiscal measures. But **if inflation stays high for longer than we expect, the calls for such policies would probably grow louder.**

Conclusion

In addition to highlighting the many empirical and conceptual pitfalls in the greedflation debate, we have presented our own evidence that inflation would have been lower had unit profit margins not been so resilient, but also set out why it doesn't make sense to argue that profits *cause* inflation.

For all of the heat in this politically charged debate, we conclude that there are fairly limited policy implications for central banks, who should focus on tackling the root cause of inflation, and not so much on how it shows up in the national accounts between profits and wages. Meanwhile, given the relevance of the greedflation debate to politicians, there is a risk for corporates that redistributive and regulatory policies will be introduced that could hurt equity prices of affected firms, most likely in staple sectors with high profit margins.

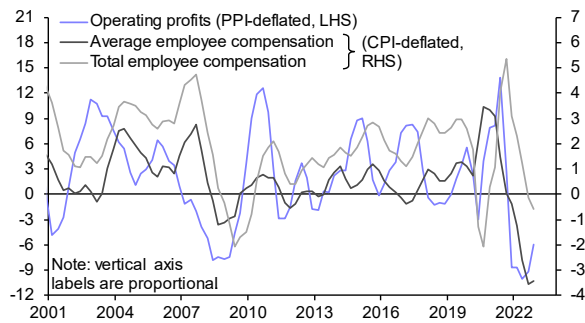


Box 1: Debunking common greedflation myths

Myth #1: Falling real wages prove greedflation

There is a widespread idea that the flipside of falling real average wages is rising real profits. However, this assumes that there are only two sides to the coin – wages and profits – and omits employment and imports. Even if the real average wage is falling, jobs growth could mean that real total wage costs for firms keep rising. Indeed, while real labour compensation per employee fell in advanced economies from the start of last year, on average, total real compensation of employees began to fall in y/y terms only towards the end of 2022. (See black vs. grey lines in Chart 11.)

Chart 11: Average Real Operating Profits & Employee Compensation in Five Major DMs (% y/y, 2Q MA)



Sources: Refinitiv, RBA, Capital Economics

What’s more, when CPI is used to deflate wages, and PPI to deflate corporate profits, then measures of real labour and capital income can be affected as much by the price of imports as they are by the division of the

national economic pie between profits and wages. Workers are not alone in having higher import prices dent their purchasing power lately – most firms have too. In fact, real operating profits have fallen more sharply than total real compensation of employees, partly reflecting the fact that firms purchase more imported commodities than end-consumers. (See blue and grey lines in Chart 11.) All in all, this popular observation about falling real average wages does not reveal much about greedflation.

Myth #2: High profit margins prove greedflation

When corporates have reported high net income in recent quarters, it has often been quoted as evidence of inflationary profiteering. The idea is that if costs are going up but profit margins are staying high or even rising, then that must be because of price hikes.

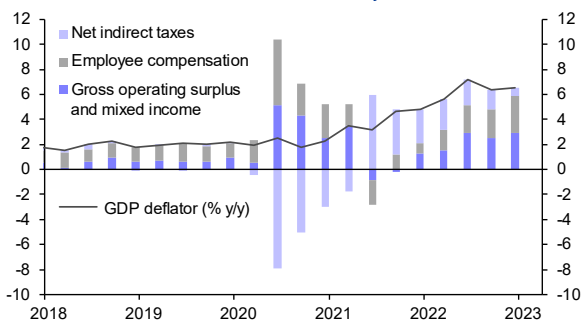
But, in most cases, profit (or, more precisely, the revenue underpinning it) is driven by the volume of sales as well as unit prices. For firms with some degree of fixed costs, additional sales volumes at prevailing prices will typically cause marginal costs of production to fall and hence marginal profit to rise. In other words, pointing to cases of high profitability in recent years does not tell you what has driven it – units sold or profit per unit. From the standpoint of analysing inflation, it is unit profit that matters, not total profit. And unlike total profit margins, which are readily quoted in the media, firms’ unit profits are not always discernible from quarterly earnings reports.



Box 2: The income decomposition of inflation

When assessing the contributions of wages and profits to inflation, one place to look is the income breakdown of GDP. Instead of decomposing GDP into its expenditure components (like investment and exports) or output components (such as industry and services), the income breakdown comprises taxes less subsidies on production, labour compensation, and a residual called ‘gross operating surplus and mixed income’. This residual is often referred to as the profit portion of GDP. This supposedly allows for a decomposition of inflation – as measured by the GDP deflator – into contributions from unit net taxes, labour costs, and profits. Most recently, the IMF did exactly this in an [analysis](#) of euro-zone inflation. On this basis, the profit contribution of inflation rose from one to above two percentage points during 2022 in advanced economies, on average, supposedly suggesting that profiteering has driven inflation higher. (See Chart 12.)

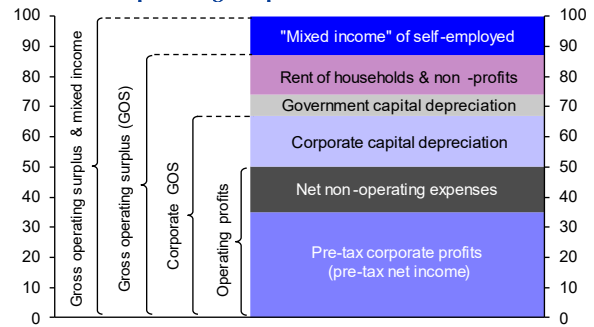
Chart 12: Percentage-Point Breakdown of Average GDP Deflator in Five Major DMs



Sources: Refinitiv, Capital Economics

However, gross operating surplus and mixed income is far removed from corporate profits, as understood by pre-tax net income. (See Chart 13.) For one thing, it includes mixed income of the self-employed, actual and imputed rent earned by households, as well as the capital depreciation costs of government. Some studies do at least isolate the gross operating surplus of the corporate sector, but this still includes corporate depreciation costs (which are stripped out of operating profits in P&L accounting) as well as net non-operating expenses such as net interest costs. The upshot is that what is sometimes referred to as ‘unit profit’ grossly overstates actual corporate profit. Indeed, our estimate of the profit contribution to DM inflation – the pink bars in Chart 1 – are much smaller than the blue bars in Chart 12.

Chart 13: Stylised Breakdown of Economy-Wide Gross Operating Surplus & Mixed Income (%)

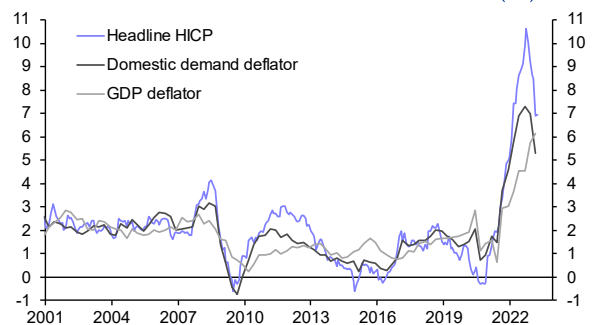


Source: Capital Economics

What’s more, studies tend to assess the drivers of the GDP deflator measure of inflation, which ignores the important role that import prices have to play. Just as GDP includes exports but strips out imports, the GDP deflator – the price index used to deflate nominal into real GDP – includes the prices of exports and ignores import prices. But when we think of inflation, we are usually interested in the prices of the goods and services *consumed* in an economy, not those *produced* and potentially exported elsewhere.

So, we think that it makes more sense to analyse the drivers of the ‘domestic demand deflator’ measure of inflation from the national accounts, which includes import prices and excludes export prices. Chart 14 takes the example of the euro-zone to show how, compared with the GDP deflator, domestic demand inflation has been a closer approximation of HICP consumer price inflation, which is the measure most closely watched by analysts and targeted by the ECB. This approach allows us to isolate the contributions to inflation from the terms of trade and the various forms of domestic income like profits and wages.

Chart 14: Measures of Euro-zone Inflation (%)



Sources: Refinitiv, Capital Economics



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