1 The International Economy

- Global growth and inflation dynamics have worsened over recent months. CPI inflation came in significantly higher than expected in many economies, as supply frictions, alongside the recovery in domestic demand, continued to put significant upward pressure on costs and prices.

- Sustained inflation momentum, particularly in the AEs, has led central banks to continue hiking interest rates even though economic activity has started to plateau or slow. Concomitantly, China's growth has been restrained amid the ongoing correction in the real estate sector. There is thus some synchroneity emerging in the global economic cycle, with the slowdown in the US, Eurozone and China economies spilling over to some export-dependent Asian economies.

- The global economy has entered a precarious "disequilibrium phase", characterised by a growing divergence in growth and inflation outcomes. This will continue for at least several quarters, with global GDP growth moderating sharply and remaining below trend, and inflation staying elevated before easing in the latter part of 2023. The US economy could still avoid a sharp full year recession.

- A more adverse growth and inflation scenario in 2023 is a growing risk. Notably, inflation could remain elevated for longer leading to even higher interest rates and a subsequent sharper retraction in economic activity. In addition, the pullback in household and business spending, together with a further tightening in financial conditions, could interact with existing vulnerabilities in the financial system. This would exacerbate the economic downturn and potentially lead to disruptive capital outflows across many EMs.

1.1 Global Economic Developments

Global inflation surged, prompting a step-up in policy tightening by central banks

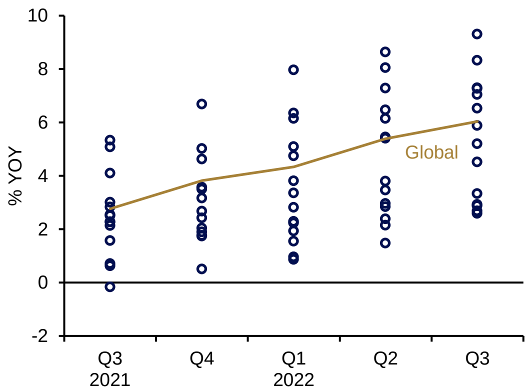
Global inflation[1] has accelerated in recent months, reaching its strongest pace since the late 2000s. Headline CPI inflation rose from 5.4% y-o-y in Q2 to 6.0% in Q3, compared with the high of 6.5% in Q3 2008 **(Chart 1.1)**. Supply frictions and a brisk recovery in demand, particularly for goods, have led to a rapid erosion of spare capacity and put significant upward pressure on costs and prices in many economies.

1 The global aggregate includes the G3 (US, Eurozone and Japan), NEA-3 (Hong Kong SAR, South Korea and Taiwan), ASEAN-5 (Indonesia, Malaysia, the Philippines, Thailand and Vietnam), as well as China and Australia. The weights used to calculate the aggregate are based on the size of Singapore's direct imports from the respective economies.

The increase in prices is the most pronounced in the US and the Eurozone, with headline inflation rising to 8.3% and 9.3% y-o-y, respectively, in Q3. In Asia ex-Japan, inflation has been lower, given the region's slower progress towards COVID-19 endemicity and full economic reopening, with supply chain pressures also less acute. However, headline inflation in the regional economies has still accelerated markedly this year, led by a surge in global oil and food prices, and weaker currencies. In the ASEAN-5, CPI inflation stepped up from 3.7% y-o-y in Q2 to 5.0% in Q3, with inflationary pressures intensifying sharply in Thailand and the Philippines (7.3% and 6.5% y-o-y, respectively, in Q3). In comparison, headline inflation rates were relatively subdued in China and Hong Kong, where significant COVID-related restrictions remain in force. Box Item A at the end of this chapter provides an econometric analysis of the drivers of inflation in the ASEAN+3 economies.

Chart 1.1 Global inflation has trended sharply upwards

Global headline inflation

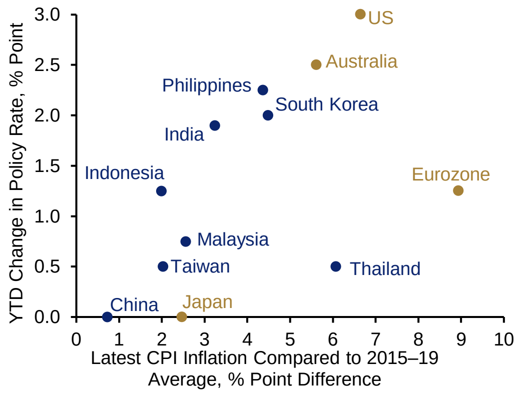


Source: Haver Analytics and EPG, MAS estimates

Note: Dots represent headline inflation in the G3, NEA-3, ASEAN-5, as well as China and Australia.

Chart 1.2 Central banks have adjusted monetary policy settings to varying degrees

Policy rates and headline inflation



Source: Haver Analytics and EPG, MAS estimates

Note: Dots in gold denote AEs while dots in blue denote EMs.

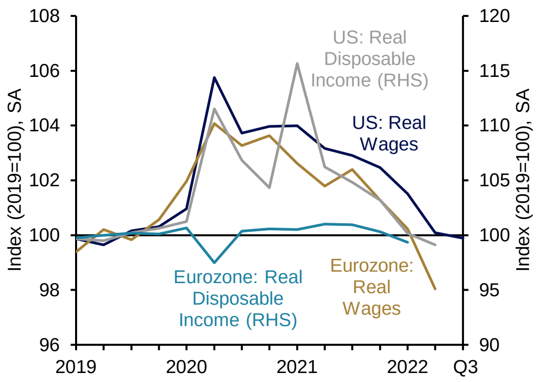
Central banks have responded to the pickup in inflation to varying degrees **(Chart 1.2)**. With US CPI inflation substantially above its 2% inflation target, the Federal Reserve has raised interest rates five times, by a total of 300 bps since March 2022, and retained a hawkish bias. While the ECB has only hiked interest rates twice, by 125 bps in total, since July 2022, it has recently affirmed its focus on ensuring that medium-term inflation expectations remain well-anchored. The monetary policy adjustment in emerging Asian economies has, on the whole, lagged most AEs as price pressures have been generally less intense. Bank Indonesia and Bank of Thailand, for example, only began to raise rates in August 2022.

The global economy is contending with declining real incomes, tighter financial conditions and falling consumer confidence

Inflation has led to an erosion of real incomes in the AEs. In the US, despite strong nominal wage growth, real wages have trended down over the past year. In the Eurozone, real wages slipped below pre-pandemic levels in Q2 2022 **(Chart 1.3)**. Mirroring the decline in real wages, real household disposable income growth in both the US and Eurozone turned negative, exacerbated by waning fiscal support. In response, households in these two economies have been compelled to significantly lower their savings from levels during the pandemic **(Chart 1.4)**.

Chart 1.3 Real wages and incomes are falling as inflation accelerates

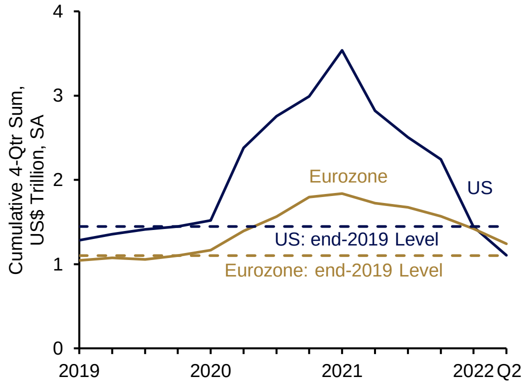
Real wages and disposable income



Source: Haver Analytics and EPG, MAS estimates

Chart 1.4 Household savings are declining

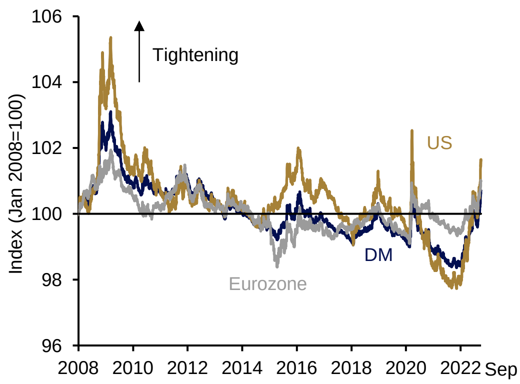
Gross household savings



Source: Haver Analytics and EPG, MAS estimates

Chart 1.5 Financial conditions have tightened alongside the increase in policy rates

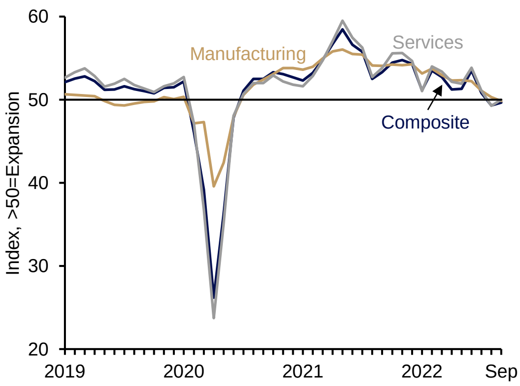
Financial conditions indices



Source: Goldman Sachs

Chart 1.6 The global composite PMI has dipped into contractionary territory

Global PMI



Source: Haver Analytics and EPG, MAS estimates

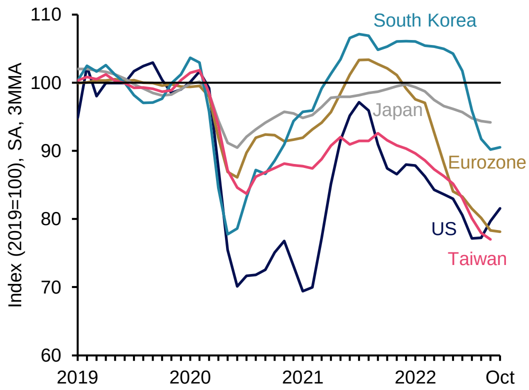
Rapidly rising interest rates and a strong appreciation of the US dollar have also tightened financial conditions to levels rarely witnessed in the 2010s, with rising borrowing costs and the impact of falling equity prices on household wealth and corporate balance sheets weighing on overall spending **(Chart 1.5)**.

Indeed, various high-frequency indicators indicate that the combination of deteriorating real incomes and tighter financial conditions have started to impair sentiment and dampen economic activity. At the global level, the composite PMI dipped into contractionary territory, declining from 52.0 in Q2 to 49.9 in Q3 with a broad-based deterioration across both the manufacturing and services sectors **(Chart 1.6)**.

Consumer confidence in major economies has also steadily worsened over 2022. **(Chart 1.7)**. In particular, that in the Eurozone faltered significantly at the onset of the Russia-Ukraine war early this year and has since weakened further.

Chart 1.7 Consumer confidence is falling

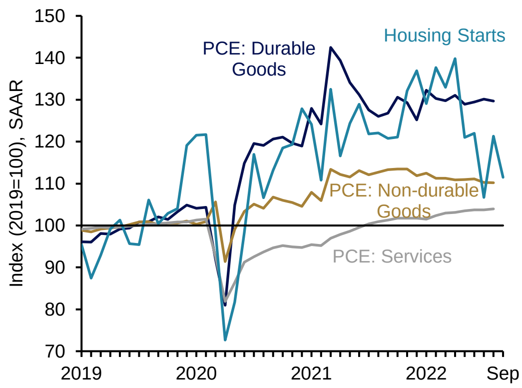
Consumer confidence



Source: Haver Analytics and EPG, MAS estimates

Chart 1.8 US GDP is being dragged down by non-durable goods spending and home construction

Real consumer spending and housing starts



Source: Haver Analytics and EPG, MAS estimates

Weaker spending in the AEs has begun to impact export-dependent Asian economies

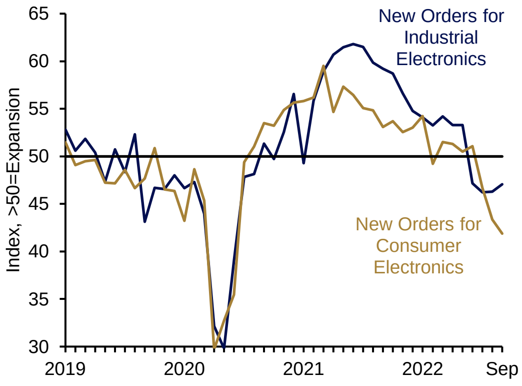
In the US, there has been cumulating evidence that the anticipated slowdown has begun in earnest, led by the interest rate-sensitive parts of the economy. Most notably, housing starts fell significantly in Q2 and remained weak over Q3 **(Chart 1.8)**. Concomitantly, the reopening-led rotation of demand from goods to services had waned in Q3.

Similarly, economic activity has started to slow in the Eurozone, in large part owing to the negative impact of the ongoing Russia-Ukraine conflict on inflation and confidence. Retail sales contracted sequentially by 1.1% in Jul–Aug, extending the 0.4% decline in Q2. Industrial production (excluding construction) fell by 0.7% in Jul–Aug, and core orders for several major economies such as Germany have also weakened.

The deterioration of demand in the AEs is imparting discernible spillovers to export-dependent Asian economies. In South Korea and Taiwan, production and exports have weakened as the pandemic-driven boom in consumer electronics has dissipated **(Chart 1.9)**. An inventory destocking cycle is also underway. Downstream firms anticipating softening demand have started to reduce chip inventories that were built as a buffer against the uncertainty in supply chains due to COVID-19 disruptions. Global new orders of electronics have subsequently declined significantly in Q3. Against this backdrop, inventories have started to accumulate upstream, with the semiconductors inventory-to-shipment ratios for South Korea and Taiwan both above their 2017–19 historical average in August **(Chart 1.10)**.

Chart 1.9 New orders for electronics have plunged

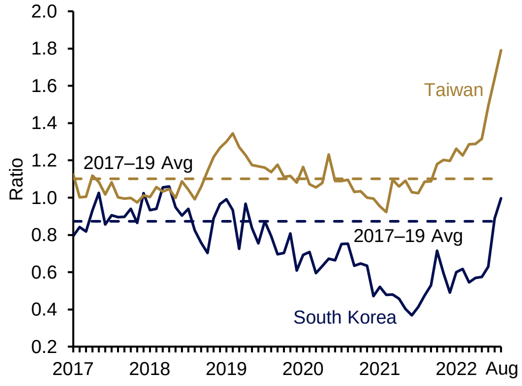
Global electronics PMI sub-indices



Source: Haver Analytics and EPG, MAS estimates

Chart 1.10 Semiconductors inventories are accumulating

Semiconductors inventory-to-shipment ratios



Source: Haver Analytics and EPG, MAS estimates

Differentiated pandemic control measures continue to shape growth outcomes in Asia

China's economy contracted sequentially in Q2 as the country experienced extensive COVID-related lockdowns, while the property market downturn also weighed on growth. Growth returned to positive territory in Q3, boosted by government policy support such as increased infrastructure spending, as well as a normalisation in activity as pandemic control measures were eased. However, the pace of recovery was modest as economic activity was hampered by a resurgence of new COVID-19 cases that prompted renewed lockdowns in numerous districts. Household demand also remained subdued as consumers stayed cautious with weak labour market conditions. Meanwhile, exports slowed due to softening external demand.

In comparison, the ASEAN-5 continued to experience tailwinds from the post-pandemic reopening of their economies and borders. The pickup in economic activity has engendered a gradual improvement in labour market conditions, which has in turn provided a further boost to private consumption. Indonesia and Malaysia, which are major commodity exporters, also benefited from sustained strong global demand for commodities, particularly mineral fuels.

1.2 Global Outlook

The global economy has entered a precarious disequilibrium phase with worsening growth and inflation dynamics

The global economy is at a complex juncture, characterised by worsening inflation and growth dynamics.

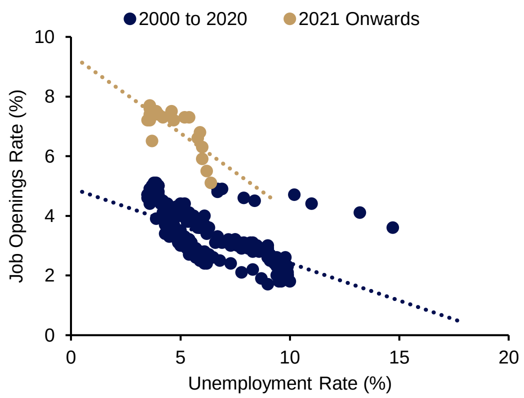
The most pertinent factor driving the prospects of AEs, especially the US, is the degree of output sacrifice required to rein in inflation and the eventual return to price stability. In the US, economic activity is likely to slow sharply, at least in the first half of 2023. However, while the risks have risen in recent months, the US may be able to achieve disinflation without a sharp, full-year recession.

First, the degree of internal imbalance in the US economy (i.e., the output gap) is relatively small in comparison with previous inflationary episodes. It is presently similar to that seen before the mild recessions of 1991 or 2001, rather than that of the 1970s and early 1980s.[2]

Second, amid a notably tight labour market, labour demand could stabilise without a sharp rise in unemployment to a level that would risk a self-reinforcing recessionary process. With labour demand recovering more quickly than supply after the COVID-19 recession, the ratio of job vacancies to unemployed persons has risen to 1.7 in the most recent data, up from the average of 1.2 in 2019. This implies that the labour market is likely to be at a steeper portion of the Beveridge Curve **(Chart 1.11)**. A cyclical weakening of demand could therefore affect the labour market primarily through a reduction of job openings, alongside a relatively small increase in unemployment. In effect, firms currently facing labour shortages are more likely to scale down or defer workforce expansion plans rather than increase layoffs significantly. Nevertheless, the return of workers who had exited the labour market during COVID-19 could lead to a rise in the unemployment rate even if job losses are contained.

Chart 1.11 The US Beveridge Curve has steepened

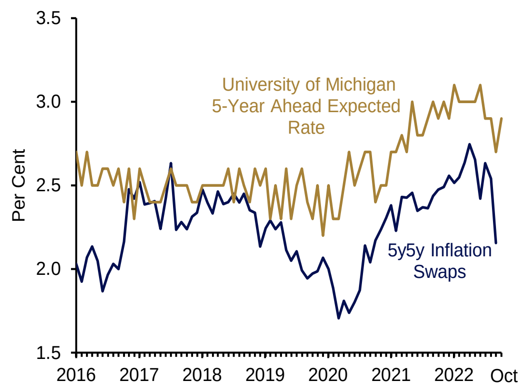
US Beveridge Curve



Source: Haver Analytics and EPG, MAS estimates

Chart 1.12 US inflation expectations have moderated

US inflation expectations



Source: Bloomberg and EPG, MAS estimates

2 The latest US Congressional Budget Office estimate is for a US output gap of +0.7% by end-2022, much closer to the estimated output gap for the upcycle before the mild 1991 recession (+0.2%) than the average for the high-inflation periods of 1969–71 (+3.4%), and 1973–82 (+2.7%).

Meanwhile, longer-term inflation expectations, both survey-derived and extracted from market pricing, peaked in Q2 2022, and have since fallen closer to the Federal Reserve's long-run inflation target of 2%. For example, the US 5y5y inflation swap fell by 59 bps from its peak in April, to 2.2% in September, which is not far above the average of 2.3% in 2017–19 **(Chart 1.12)**. As such, the degree of output sacrifice that is required to return inflation to target may not be unduly high.

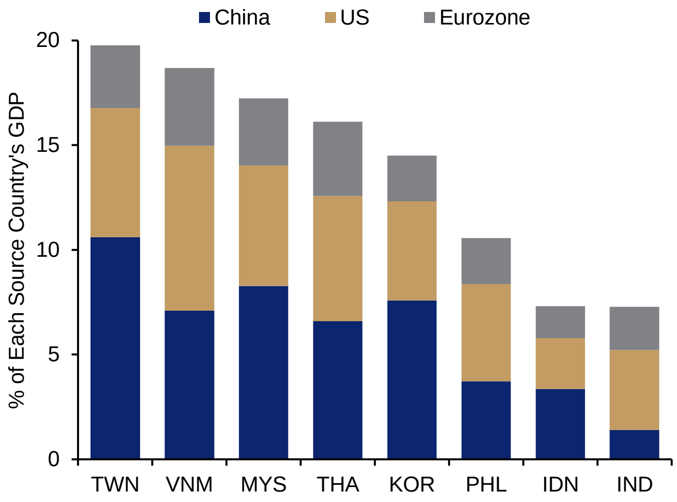
In comparison, there is a high likelihood that the Eurozone would dip into a technical recession due to the impact of significantly higher gas prices and general cost and price pressures faced by businesses and consumers. The agreement by European Union economies to cut electricity demand by an average of 15% could further drag down industrial activity. That said, various national policies implemented by the Eurozone countries, such as caps on the revenues of electricity producers, should partly mitigate the adverse effects of substantially higher gas prices. The shift away from gas (towards coal for instance) for electricity production should also help reduce gas usage and alleviate the upward pressure on gas prices. However, even with the recent stockpiling of natural gas, its availability may come under strain if the winter were colder than usual or if existing non-Russian gas flows to the Eurozone fail to replenish gas storages durably.

In China, the economy should continue to recover from the sequential contraction experienced in Q2, supported by the government's commitment to increase infrastructure spending. However, the pace of expansion is likely to be weighed down by the continuation of strict pandemic control measures and the government's pursuit of its aim of deleveraging the property sector.

Growth in the Asian economies, especially those that are externally oriented, is expected to ease in the coming quarters amid lacklustre external demand from the US, Eurozone and China. Notably, the NEA-2 economies (South Korea and Taiwan) are most susceptible to a global slowdown, given their significant exposures to these economies. Final demand from these three major markets accounted for 17% (simple average) of value-added in the NEA-2 and 14% in the ASEAN-5 **(Chart 1.13)**.

Chart 1.13 Final demand in the US, Eurozone and China account for a substantial share of GDP in Asian economies

Asian economies' exposure to final demand in the US, Eurozone and China



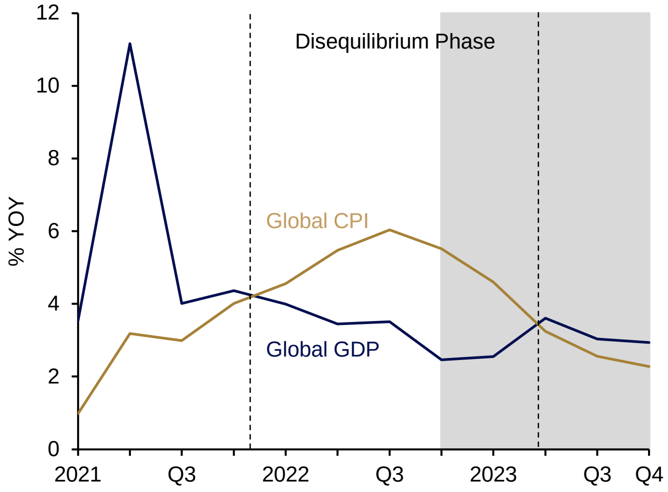
Source: Haver Analytics, OECD TiVA Database and EPG, MAS estimates

ASEAN-5 growth is expected to show some resilience even as the tailwinds from the reopening of their economies wane. Economic activity will be underpinned by sustained strength in household spending, supported by an ongoing recovery in labour markets and wage incomes. While growth in goods exports will slow, services exports will improve in line with a continued recovery in tourism.

In sum, global inflation and growth are expected to diverge further in the near term **(Chart 1.14)**. The underlying momentum in global inflation will likely remain elevated for some time, before easing in the latter part of 2023. On a y-o-y basis, global inflation is expected to reach a multi-decade high of 5.4% in 2022, before moderating to 3.2% next year.

Chart 1.14 Growth and inflation trajectories are expected to further diverge in the near term

Global GDP and CPI



Source: Haver Analytics and EPG, MAS estimates

Note: GDP data from Q3 2022 and CPI data from Q4 2022 are EPG, MAS forecasts.

Economies which are at a more advanced stage of the economic recovery from the pandemic are expected to see more broad-based price pressures. Further, in the Eurozone, disruptions to gas supply from Russia are expected to impart sustained upward pressures on energy inflation. In the ASEAN-5 economies as a whole, spare capacity should diminish as the post-pandemic recovery continues, resulting in firmer inflation momentum. Nonetheless, ongoing measures in some economies to cap prices of fuel and food will continue to shield consumers to some degree from elevated global commodity prices.

Global growth is projected to decelerate further and remain below trend, reflecting the synchronised weakness across the AEs and key Asian economies, before picking up gradually in H2 2023. Full-year growth is expected to slow from the previous year to 3.3% in 2022, and moderate further to 3.0% in 2023 **(Table 1.1)**.

Table 1.1 Global GDP growth, TiVA-weighted

	QOQ SA (%)			Annual (%)		
	2022 Q2	2022 Q3*	2022 Q4*	2021	2022*	2023*
G3	0.4	0.5	0.0	4.8	2.3	0.9
Asia ex-Japan	−0.1	1.9	1.6	6.3	4.1	4.8
ASEAN-5	1.6	−0.2	1.2	3.4	5.8	5.0
Global	**0.1**	**1.3**	**0.9**	**5.7**	**3.3**	**3.0**

Source: Haver Analytics, OECD TiVA Database and EPG, MAS estimates

Note: The G3 grouping refers to the Eurozone, Japan and the US, while the ASEAN-5 are Indonesia, Malaysia, the Philippines, Thailand and Vietnam. Asia ex-Japan comprises China, Hong Kong SAR, India, South Korea, Taiwan and the ASEAN-5. All aggregates are weighted based on Singapore's value-added by destination of final demand (using TiVA data).

* EPG, MAS forecasts

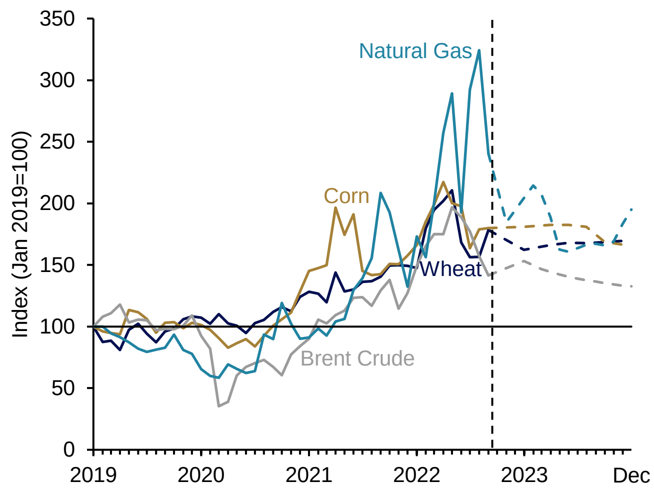
The risk that the global economy slips into a deeper and more protracted downturn is substantial

The depth and the duration of the disequilibrium phase is highly uncertain. A continuum of alternative outcomes arising from a deterioration in inflation and growth outturns would imply a more accentuated and protracted period of imbalance.

Global inflation remains subject to considerable upside risk. Although inflation expectations are generally stable at present, more upside surprises to inflation outturns in the future may cause expectations to reset higher, with the risk that wage-price spirals develop. While markets are expecting global commodities prices to remain stable in the near term, there remains a possibility that prices may escalate again, especially during the winter season **(Chart 1.15)**. In particular, the Eurozone is vulnerable to further disruptions to gas supplies, which will impart strong knock-on effects on global energy prices. In Asia, a further depreciation of local currencies against the US dollar could intensify imported inflationary pressures given the prevalence of the dollar in international trade invoicing, with stronger effects for economies that are net importers of food and energy.

Chart 1.15 Commodities prices could spike again despite market expectations of stable prices

Commodities prices



Source: Bloomberg and EPG, MAS estimates

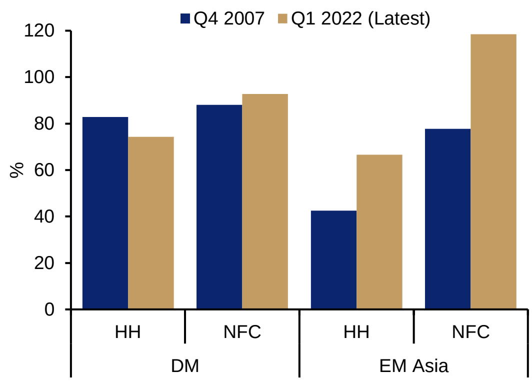
Note: Solid lines denote spot prices and dotted lines denote futures prices.

Risks to the global growth outlook remain dependent on the path of global inflation. Should inflation dynamics turn out to be more entrenched and persistent than expected, or if labour market pressures fail to ease, central banks may be compelled to adopt more restrictive policy settings. Persistently strong inflation would also lead to a larger erosion of real incomes and restrain private consumption. In this scenario, the US and Eurozone would be at risk of a deep and prolonged recession, with attendant spillovers to externally oriented Asian economies.

Under such a scenario, the sharper tightening in global financial conditions could trigger financial stresses, as it would lead to higher debt-servicing costs and potential refinancing difficulties. The non-financial corporate sector in both AEs and EM Asia, as well as the household sector in several economies, have taken on more debt (as a share of GDP) over the past decade. This could be prone to higher default risk as lending conditions tighten and economic growth slows **(Chart 1.16)**. For the household sector, negative wealth effects stemming from the correction in asset prices could add to stresses **(Chart 1.17)**.

Chart 1.16 Non-financial corporates have taken on more debt

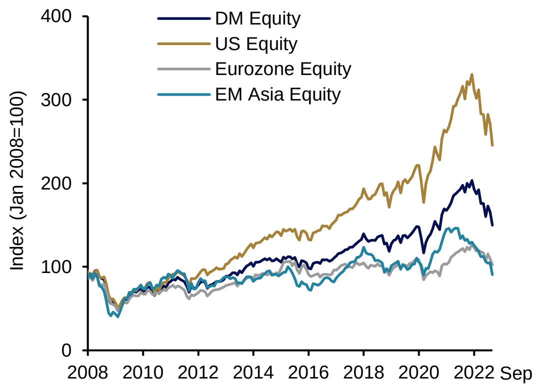
Debt-to-GDP ratios of households and non-financial corporates



Source: BIS

Chart 1.17 Asset prices have adjusted alongside policy tightening by central banks

Equity indices



Source: Bloomberg and Haver Analytics

Note: Equity indices are from MSCI.

A more accelerated pace of policy tightening by the Federal Reserve may further strengthen the US dollar, increasing the likelihood of disorderly capital outflows from EM economies. In such a scenario, a soft landing for these economies would be harder to achieve as currencies come under pressure and domestic interest rates increase abruptly. Nevertheless, Asian EM economies are better positioned today compared to previous stress episodes, such as during the 2013 taper tantrum episode. On the whole, external balances are stronger, while policy frameworks are also more coherent and credible. Thus far, ASEAN economies have adjusted to the shifts in the global economy and financial markets in an orderly fashion. As a testament to their economies' resilience in withstanding the pressures on the external accounts, ASEAN central banks have broadly managed to calibrate monetary policies in response to domestic developments rather than external factors.

The global economy may also be confronted with idiosyncratic shocks in specific regions which have the potential to reverberate more widely through international trade linkages, thereby triggering a significantly sharper global slowdown. Industrial production in the Eurozone and China risk being more severely disrupted by the shortage of gas supplies and recurrent COVID-related restrictions respectively, which will have repercussions for output in other economies through global supply chains. A deeper and more prolonged downturn of the property market in China would also have wider ramifications due to the significant linkages of the real estate sector to the rest of the economy and the financial system. This, in turn, would have implications for regional economies that have strong trade links with China.