No respite

Introduction

There is no respite for the global economy. Two years ago, it was shaken by the onset of the pandemic, as an overwhelming health crisis turned into an overwhelming economic crisis. While the after-tremors of the pandemic still reverberate, two new shocks hit home in the year under review: the unexpected resurgence of inflation and the tragic war in Ukraine. Last year's Annual Economic Report (AER) raised the prospect of a bumpy pandexit; bumps have turned out to be a one-two punch.

These tumultuous events are bound to have far-reaching consequences. Are we perhaps witnessing a regime change, from a low- to a high-inflation regime? Is the global economy flirting with stagflation? And are we seeing signs of an end to the post-World War II globalisation era? Meanwhile, the crypto universe is in turmoil, reminding us that there are important developments in the monetary system that we cannot neglect.

On the macro front, policy is facing daunting challenges. In some ways, they are not new; but in others, they are unique. As Mark Twain quipped, "History does not repeat itself, but it often rhymes." The world economy experienced stagflation in the 1970s, following a shift away from a low-inflation regime. The new element is that, against the backdrop of historically low interest rates, debt levels – private and public – have never been as high. This is far from inconsequential. Moreover, the monetary and financial system is in the throes of the digital revolution. This, too, albeit in a different way, is far from immaterial.

Our AER tackles these issues head-on. What happened in the year under review? What are the risks ahead? What can policy do? And where is the monetary system heading as the digital revolution proceeds? What vision should guide policy?

Never say never

Resilient but losing momentum and buffeted by non-economic forces: in a nutshell, this is how global growth evolved over the review period.

Growth proved resilient for much of 2021.

In fact, in 2021 as a whole, the world economy expanded at its fastest rate in almost 50 years. And the expansion was broad-based. This confirmed the unique nature of the Covid-19 recession. An artificial suppression of activity due to the health emergency gave way to a strong rebound once the containment measures were lifted. In addition, the outsize policy support, both monetary and fiscal, provided a major impulse. The scenario in which economic scars would have held back growth did not materialise.

Growth lost momentum as the review period progressed.

First was the spread of a new virus variant (Omicron) in late 2021, which prompted countries to put in place new containment measures. As it turned out, the impact was smaller than initially feared. The virus proved milder than expected and so did the necessary policy-induced restraint on activity. The main exception was China. The strict anti-Covid measures caused a major slowdown in growth, adding to the effect of regulatory measures designed to rein in the real estate sector.

Then was the outbreak of the Russia-Ukraine conflict in February 2022. Probably the most significant geopolitical event since the fall of the Iron Curtain, the war is first and foremost a humanitarian tragedy. But its near-term impact on economic activity is also substantial. The impact has not been felt so much through the sanctions-induced drop in Russia's GDP – although the imprint on world growth is material. Nor has it been felt, so far, through its direct financial consequences – although more may be in store (see below). Rather, it has operated mainly through soaring commodity prices – notably energy and food – as well as concerns about the war's broader ramifications.

This shock is inherently stagflationary. To be sure, its impact on growth is uneven across the world. Commodity exporters fare better than importers. But, for the world as a whole, the outcome is unambiguously contractionary. Since commodities are a key production input, an increase in their cost constrains output. At the same time, soaring commodity prices have boosted inflation everywhere, exacerbating a shift that was already well in train before the onset of the war.

Indeed, the most remarkable development during the review period was the return of inflation. The biggest challenge for central banks post-Great Financial Crisis (GFC) had been to lift inflation back to target. As events unfolded, however, what initially appeared a temporary blip, driven by Covid-induced idiosyncratic price adjustments, turned into a much broader surge, across prices and countries. By April 2022, three quarters of economies were experiencing inflation above 5%. Inflation was back, not as a long-sought friend, but as a threatening foe.

Just like most observers, we at the BIS did not quite anticipate the strength and persistence of the surge. To be sure, in last year's AER we did explore a plausible high-inflation scenario. In the end, however, the scenario fell short of reality.

Why the miss? Humility is in order. But probably the best explanation involves the confluence of three forces – an explanation that necessarily cannot do justice to cross-country differences (see Chapter I for details). First, the surprisingly strong rebound in aggregate demand, beyond what was implicit in the scenario. The huge policy stimulus combined with households' pent-up spending turbocharged activity. Second, a surprisingly persistent "pivot" or rotation of demand from services to goods. Although people did spend, they did not flock back to contact-intensive services, such as restaurants and hotels, as widely as expected. Finally, there were some surprising difficulties in adjusting supply. Their most visible manifestation are the "bottlenecks" that held back production around the world. Think, in particular, of those that hit raw materials and semiconductors as well as freight and transport. While, initially, the disruptions reflected primarily pandemic-related measures, demand strength then took over.

Bottlenecks in global value chains aggravated these constraints. Complex production networks, sprawling across the world and structured to cut costs, betrayed their fragility as the disruptions hit them. Moreover, firms started hoarding inventories as a precaution. The shift from just-in-time to just-in-case inventory management exacerbated shortages.

Against this backdrop, central banks started to normalise policy, albeit at speeds that partly reflected varying country-specific conditions. First off the blocks were several central banks in emerging market economies (EMEs), mostly in central and eastern Europe and in Latin America. Because of the slower recovery and a better inflation record, those in Asia moved later and more cautiously. Among advanced economies (AEs), the Federal Reserve was one of the first to respond as inflation pressures intensified. The ECB signalled that it would start removing accommodation later in 2022 while the Bank of Japan stuck to its exceptionally accommodative policy. The main exception was the People's Bank of China, which eased policy to support flagging growth.

Near-term prospects

What are the near-term prospects for the global economy?

Context is of the essence. For the first time in the post-World War II era, the global economy is facing the threat of higher inflation, and hence the need to keep it in check, against the backdrop of elevated financial vulnerabilities. Looming large among these are historically high debt levels, both private and public, and rich valuations, notably for residential property.

There is a narrow path ahead. It is possible to envisage a smooth resolution of the economic tensions. In this scenario, inflationary pressures ease spontaneously due to an end to bottlenecks alongside a reversal in the war-induced increases in commodity prices. This reduces the size of the required monetary policy tightening and mitigates the associated slowdown in economic activity – a soft landing. But the outcome could be less benign. The worst-case scenario would be stubborn inflation pressures that prompt a stronger tightening. This could trigger a larger slowdown, including a recession, alongside financial stress – a stagflationary hard landing.

Hence a natural sequence of questions. Will higher inflation become entrenched? How far could growth falter? Will the financial sector come under strain?

Inflation

Policy response aside, whether inflation becomes entrenched or not ultimately depends on whether wage-price spirals will develop. The risk should not be underestimated, owing to the inherent dynamics of transitions from low- to high-inflation regimes.

Three reasons stand out. First, we have already seen outsize and persistent increases in especially salient prices, such as those of food and energy. Households and workers' perceptions of inflation and expectations of its future evolution are especially sensitive to them. Second, given the broadening of price pressures, inflation in general has no doubt moved out of the zone of "rational inattention", within which it has little impact on behaviour, into that of sharp focus, in which it starts to influence behaviour more substantially. Finally, price-induced cuts in real wages are likely to prompt workers to seek to recoup the loss of purchasing power. Similarly, firms should find it easier to translate higher wages into higher prices given how generalised wage and cost pressures are.

We may be reaching a tipping point, beyond which an inflationary psychology spreads and becomes entrenched. This would mean a major paradigm shift.

These observations underscore some stylised features of the inflation process, as analysed in detail in Chapter II. For a start, low- and high-inflation regimes are very different animals. When inflation settles at a low level, it reflects mainly changes in sector-specific, or relative, prices as opposed to more synchronised ones. In addition, it exhibits self-equilibrating properties, as these price changes, including those of "salient" items such as oil and food, tend to leave only a temporary imprint on inflation. One reason is that, as the idiosyncratic fraction of price changes is greater, differences in the price indices that matter for individual agents – households and firms – are commensurately larger. Not only is economy-wide inflation less noticeable, it is also less relevant. High-inflation regimes are the mirror image of low-inflation ones. In particular, they don't exhibit self-equilibrating properties, price changes are much more synchronised and inflation is much more of a focal point for the behaviour of economic agents, exerting a major influence on it.

This also means that transitions from low- to high-inflation regimes tend to be self-reinforcing. As inflation rises and becomes a focal point for agents' behaviour, behavioural patterns tend to strengthen the transition. Agents redouble their efforts to protect themselves from losses in purchasing power or profit squeezes, both actual and, increasingly, prospective ones. And wage negotiations tend to become more centralised, while demands for indexation proliferate and contract lengths shrink.

Put differently, when changes in relative prices are large and persistent enough, they test the self-equilibrating properties of the low-inflation regime. All the more so if labour and product markets are tight, which puts further upward pressure on both prices and wages.

From this perspective, so far, the signs are not entirely reassuring. True, wage growth has been uneven across countries. It has been especially strong where aggregate demand pressures have been more in evidence, not least in countries that have made large terms-of-trade gains or have a history of high inflation. Hence the differences between Latin America and Asia. But in many countries, a substantial part, if not the bulk, of wage renegotiations are still to come. And in some of them demands for higher indexation and more centralisation of wage bargaining have already surfaced. Moreover, terms-of-trade losses may actually strengthen cost-push inflationary pressures with a lag: when the cake becomes smaller, the fight over it becomes bigger.

Growth

Two specific factors darken growth prospects at the current juncture: much of the impact of developments in commodity markets is still to be felt, and macro-financial vulnerabilities loom large. These factors matter in and of themselves. But they are especially significant against the monetary policy tightening under way.

So far, the effect of commodity market ructions has operated mainly through higher prices. It would become much bigger should supply constraints kick in as well.

As regards energy, embargoes and price caps are on the horizon or being implemented. Furthermore, investment in fossil energy sources has been remarkably subdued, not least owing to the uncertainty-fraught transition towards zero emissions.

As regards food, a crisis looms ahead. The war has wreaked havoc with the supply of staples, such as wheat, and of fertilisers, which will greatly curtail crop production. In addition, the tendency to cut food exports to favour the domestic market inhibits distribution across the world and discourages production. Finally, soaring food prices threaten to trigger major social and political unrest, especially in lower-income countries. A food crisis is a humanitarian calamity that may also have crippling consequences for the economy.

What about the conjunction of historically high private debt levels and elevated asset prices? Much will depend on the evolution of interest rates and their knock-on effects on financial markets, since high indebtedness heightens the sensitivity of expenditures and the risk of financial strains.

A simple, highly stylised statistical exercise developed in Chapter I sheds some light on this question, suggesting that the sensitivity of the economy to interest rates is substantial. At one extreme – used purely as an analytical reference – in a scenario in which interest rates are held constant, asset prices continue to rise alongside debt levels, pointing to a further build-up in vulnerabilities. In one in which interest rates follow the market-implied path, by 2025 GDP could be roughly 1.5% lower relative to the constant-rate baseline. And if they follow the steeper path of the early 2000s, by 2025 debt service ratios could climb back to their GFC levels while both house and equity prices would see steep declines. As a result, the shortfall of GDP relative to the baseline is around 3%.

Naturally, these results are purely illustrative. They are based on average relationships since the mid-1980s for a number of AEs and are subject to substantial uncertainty. That said, they provide a sense of the orders of magnitude involved and hence of the trade-offs faced by policymakers.

Moreover, macro-financial vulnerabilities need not weigh down on growth only if interest rates increase. This is the case in China, where the authorities have sought to contain the build-up of risks in the real estate sector – a key driver of growth for the country – so as to make growth more sustainable. Indeed, the combination of financial imbalances and stringent lockdowns casts a long shadow on China's growth prospects and hence on those of the global economy.

Financial system stress

Against this global backdrop, the resilience of the financial system will be tested. Here, while deeply interconnected, it is useful to make a distinction between banks and non-bank financial intermediaries (NBFIs).

Thanks to the wide-ranging post-GFC financial reforms, the banking sector is now in a much stronger financial position. Above all, banks are much better capitalised. This is what allowed prudential authorities to temporarily relax the regulatory and supervisory constraints in the early stages of the Covid crisis, thereby supporting economic activity.

But there is no room for complacency. For one, although banks' direct exposures to developments in Russia are comparatively small and manageable, indirect exposures are more opaque. More importantly, macroeconomic prospects are a major source of risk. Stylised simulations suggest that credit losses could be material. Based on past relationships, along the market-implied interest rate path, bank credit losses would be broadly in line with historical averages across AEs. But they would be substantially higher in the scenario in which interest rates rise more steeply.

Vulnerabilities in the NBFI sector are more significant. Not only do they matter for banks, as they represent potentially large and opaque exposures. The losses from the failure of a leveraged fund (Archegos) in 2021 are a case in point. These also matter in and of themselves. This was underscored by the financial market turmoil in March 2020. At the time, an abrupt "dash for cash" prompted massive central bank intervention to stabilise markets. Structural vulnerabilities in the form of hidden leverage and liquidity mismatches loom large in the asset management sector. Hence the urgent need to redouble regulatory efforts in this area.

Policy challenges

Just as the policymakers were breathing a sigh of relief with the end of the pandemic in sight, the flare-up of inflation and the Russia-Ukraine conflict have raised new and daunting challenges. It is useful to distinguish the near-term from the longer-term ones, although the dividing line between the two is quite fuzzy.

Near-term challenges

The overriding near-term challenge is to prevent the global economy from shifting from a low- to a high-inflation regime. In doing so, policymakers will need to limit the costs to the economy as far as possible and to safeguard financial stability. Some pain, however, will be inevitable. As historical experience has shown time and again, the long-term costs of allowing inflation to become entrenched far outweigh the short-term ones of bringing it under control.

This is not just an economic challenge about policy calibration; it is also, importantly, a political economy one. Ever since the GFC, and even more so following the Covid crisis, both monetary and fiscal policies have worked to boost economic activity. With inflation languishing stubbornly below targets, there was no obvious trade-off between easy policy and inflation. Indeed, fiscal policy was invoked more than once to relieve some of the burden placed on monetary policy. To be sure, trade-offs did not magically vanish. The exceptionally low interest rates that persisted for so long did contribute to the gradual build-up of financial vulnerabilities. But now trade-offs have come into view much more starkly.

Take fiscal policy first. The economic slowdown will further widen public sector deficits. While this will cushion the blow to economic activity, it will also further raise government debt from its historical peaks. And as the cost of living soars in the wake of the sharp increases in the prices of food and energy, pressures to provide additional support will mount. It is essential that this support be targeted and temporary so as not to endanger fiscal sustainability further. So far, however, governments have relied more on untargeted measures, which are more costly and harder to reverse.

For monetary policy, the self-reinforcing nature of transitions from low- to high-inflation regimes heightens the calibration difficulties (Chapter II). In general, the self-equilibrating properties of inflation in a well established and credible low-inflation regime allow the central bank to accept moderate, possibly persistent deviations, from narrowly defined targets. Indeed, this is desirable, since there is evidence that, in such a regime, monetary policy loses traction owing to the large role played by sector-specific (idiosyncratic) price changes. The more vigorous actions required would increase any associated costs, such as those of interest rates that remain exceptionally low for long. But, crucially, once the regime is tested hard, as it is now, the transition can gather speed. This puts a premium on a timely and decisive response – all the more so given the well known lags with which monetary policy affects expenditures and then inflation.

In such a context, two sources of uncertainty complicate the calibration.

The first concerns the evolution of inflation. The key problem is that leading indicators have not proved fully fit for purpose (Chapter II). The broadening of price pressures or the pickup in underlying measures of inflation can help, but they provide relatively little information beyond short horizons. Measures of inflation expectations can also be useful, but they have their own drawbacks. Those derived from financial asset prices need not reflect the expectations of the economic agents that matter most – workers and firms. And those derived from household and firm surveys tend to be very backward-looking. In addition, more formal models, which are necessary to chart the inflation path at longer horizons, are least reliable precisely when needed most – during transitions. So far, these sets of indicators are sending mixed signals. Broadening price increases and higher expectations provide reasons to worry, at least for the near term; models tend to paint a more benign picture, but arguably an overly rosy one.

By far the most reliable indicator is evidence of wages chasing prices – second-round effects. But by the time these are clearly visible, inflation may already be becoming entrenched. Hence the need to focus on softer information, such as signs of changes in inflation psychology and attitudes to price increases.

The second source of uncertainty concerns the strength of policy transmission. As discussed, private debt levels at historical peaks and elevated valuations could make expenditures especially sensitive. And after a long spell of unusually low interest rates and ample liquidity, financial markets could overreact. While, so far, financial conditions have tightened, sharper adjustments could be in store. In fact, inflation-adjusted (real) interest rates have been falling as inflation has picked up.

Hence a policy dilemma opens up. Uncertainty about the evolution of inflation, about financial market reactions and about expenditure decisions may counsel caution. But the risk of inflation becoming entrenched calls for a more pre-emptive and vigorous response. In navigating this dilemma, good communication may help, but only up to a point. The overriding priority is to avoid falling behind the curve, which would ultimately entail a more abrupt and vigorous adjustment. This would amplify the economic and social costs of bringing inflation under control.

Against this backdrop, and cross-country differences aside, EMEs are especially vulnerable. They are more at the mercy of global financial conditions, which are likely to tighten further, including through dollar appreciation, and they have less room for policy manoeuvre. So far, capital flows have been less disruptive than in previous episodes, such as the taper tantrum. No doubt, more comprehensive policy frameworks have helped, involving a judicious reliance on foreign exchange intervention and macroprudential measures. And so has pre-emptive tightening where incipient inflationary pressures were stronger. Also helpful is the fact that the share of foreign investors in domestic markets has already shrunk. But the tougher tests may still lie ahead.

Longer-term challenges

As policymakers struggle to meet the urgent near-term challenges, they should not lose sight of a key longer-term one – regaining policy safety margins. As discussed in detail in last year's AER, over time the room for policy manoeuvre has narrowed substantially. Government debt levels are at historical peaks, interest rates, both nominal and real, have been falling to historical troughs and central bank balance sheets have risen to levels previously seen only in wartime. The recent tightening of monetary policy has, so far, only marginally changed this picture, at least in AEs. Economies operating without safety margins are exposed and vulnerable.

The current challenging environment does have one silver lining: it provides an obvious opportunity for monetary policy to finally normalise. That said, it has also highlighted a conundrum. Since regaining policy headroom is a joint task, the two policies tend to work at cross purposes along the normalisation path. Now, monetary policy tightening is materially raising the government's financing costs at a time when further demands on spending, both short- and longer-term, are growing.

Moreover, where central banks have engaged in large-scale asset purchases, higher interest rates will also reduce central bank remittances to the government (see last year's AER). These central banks have de facto replaced long-term debt with debt indexed to the overnight interest rate – the rate on bank reserves. As a result, in the largest advanced economies, as much as 30–50% of marketable government debt is effectively overnight. In the process, losses could heighten political economy risks for central banks.

In part, this long-term joint normalisation challenge is itself the reflection of a deeper problem. For far too long, there has been a temptation to turn to fiscal and monetary policy to boost growth, regardless of the underlying causes of weakness. For fiscal policy, in particular, loosening during contractions has not given way to consolidation during expansions. The temptation to postpone adjustment has been too strong. Such a strategy has arguably generated unrealistic expectations and demands for further support.

As discussed in more detail in Chapter I, the only way of promoting robust long-term growth is to implement ambitious structural reforms. Unfortunately, such reforms have been flagging for too long. These reforms are more important than ever at the current juncture, given the signs that globalisation may go into reverse, partly due to geopolitical considerations.

The future monetary system

Digital innovation will also surely play a key role in the long-term growth story, not least through its impact on the shape of the future monetary system (Chapter III). Policymakers face both urgent and important tasks. Some of these important tasks do not always figure in the breathless commentary of market observers. A critical one is to put in place the components of a future monetary system that serves the public interest.

As a case in point on the twin dimensions of urgent and important policy challenges, this AER comes out at a time of turmoil in the crypto universe. The recent implosions of the Terra stablecoin and its twin coin Luna are only the most spectacular collapses in the crypto sector. As we write, many lesser-known coins have seen their prices drop by more than 90% relative to their peaks last year. Traditional financial stability concerns stemming from run risk are an urgent policy challenge. However, focusing on prices diverts attention away from the deeper structural flaws in crypto that make it unsuitable as the basis of a monetary system that serves society. We should also keep these longer-term structural issues on our radar.

For one, the prevalence of stablecoins in the crypto universe indicates a pervasive need for crypto to piggyback on the credibility of central bank money. Only the central bank can provide the nominal anchor that crypto craves. Crypto started by turning its back on central bank money, but it has quickly rediscovered the need for the unit of account function of central bank money. The same goes for the medium of exchange function of money. Stablecoins are used to facilitate transactions across more than 10,000 crypto coins, all competing for the attention of speculative buyers.

The proliferation of coins also highlights the fragmentation of the crypto universe, with many incompatible settlement layers jostling for a place in the limelight. Gone is any pretence that money serves a coordination role. Money is the pre-eminent example of network effects, which give rise to the virtuous circle of greater use and greater acceptance. Rather than a single money gaining general acceptance, thousands of different coins proliferate. Under the plausible-sounding motto of "decentralisation and democratisation of finance", crypto platforms have mushroomed, all claiming to offer settlement of financial transactions. But the congestion and high costs of these platforms have only opened the way for new entrants, which cut corners on security in order to offer greater transaction capacity.

Money and its network effects should have the property of "the more, the merrier": the more money meets general acceptance, the more useful it becomes in serving the public interest. Instead, the crypto universe heads in the opposite direction: "the more, the sorrier". The only participants who profit are the crypto insiders, who extract rents from the speculative market on the back of new entrants left holding the bag.

Having said all of this, the rise of crypto highlights the place of technology in the popular imagination, and its galvanising role in debates on the shape of things to come. In spite of its well documented flaws, crypto offers a tantalising glimpse of potentially useful technical features that could enhance the capabilities of the current monetary system. Notable examples include composability and automatic execution, which represent features with a potential to deliver instantaneous settlement of transactions and transform the efficiency of economic arrangements.

The vision for the future monetary system set out in Chapter III is a fusion of these enhanced technical capabilities with the core of trust provided by central bank money. The traditional strengths of the two-tier system and the division of labour between the central bank and the private sector can be translated into a setting with wholesale CBDCs, tokenised deposits and other tokenised securities or assets. The classical notion of settlement via the book entries of intermediaries can find new expression in DLT platforms on which tokens are transferred in settlement. The economics remain the same, but the technological medium is transformed. Retail fast payment systems with interoperability powered by application programming interfaces, or APIs, bear a strong family resemblance to retail CBDCs.

The metaphor for the future monetary system is that of a tree. With a solid trunk provided by the central bank, the tree hosts a rich and vibrant ecosystem of private sector service providers serving users in order to meet their economic needs. And this ecosystem is rooted, figuratively speaking, in settlement on the central bank's balance sheet.

Central banks, as guardians of the monetary system, are embarked on a long journey to fulfil the vision of making it versatile and robust. This journey is necessary to put in place arrangements that anticipate future developments rather than merely react to past developments. So, while the sound and fury of collapsing crypto prices grabs all the attention, it is incumbent on us in the central bank community to look ahead to these longer-term goals. For if we do not start today, we will never get there.