Closing remarks

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This conference marks the completion of the two-year research programme on Globalisation and Inflation Dynamics in Asia and the Pacific conducted under the auspices of the BIS Asian Consultative Council.

This conference and the research programme more broadly sought to address three issues related to the overall theme of globalisation and inflation dynamics:

(i) Trade globalisation and inflation

(ii) Financial globalisation and inflation

(iii) Globalisation and monetary policy

We have covered quite a bit of ground during these one and a half days of presentations and discussions, so it will be impossible for me to do justice to all the insightful points that have been raised. Instead, I will try to summarise the progress we have made in increasing our understanding of these three topics, and share with you my views about what still remains to be done.

Let me start with trade globalisation and inflation. Many of us think of globalisation of trade as having lowered inflation through increased import competition from emerging markets. While the effects look like aggregate price changes, and may indeed be such in the short run, theory suggests that trade globalisation should mainly affect relative prices. And even if headline inflation rates do fall as a result of more intense import competition, the question arises: how long can such disinflationary pressures continue? Let me give you a tangible example. T-shirt factories are moving from China to Vietnam to Bangladesh. As they do, the prices of T-shirts fall. But the impact on the price of T-shirts will eventually run its course. And when it does, downward pressure on prices will abate.

A quite different type of impact on prices will arise from globalised supply chains, where different stages of manufacturing occur in different countries. Today, a typical factory producing electronic equipment in this region assembles products using parts imported from all over the world.

The research programme covered two areas relevant to the relationship of trade globalisation and inflation: supply chains and economic slack. On the first, Raphael Auer and Aaron Mehrotra conclude that cross-border cost spillovers in this region's manufacturing chains have an important impact on domestic producer prices. Moreover, the intensity of these spillovers is increasing in line with the growing use of imported intermediate inputs in various industries. One could conjecture, then, that supply chain globalisation leads to increased price flexibility. This, in turn, means lower inflation persistence and increased short-run inflation volatility. More generally, the evolution of supply chains is an important example of real factors affecting inflation dynamics, as mentioned by former Governor Shirakawa in his keynote address.

Turning to economic slack, the relationship of deviations of output from potential or natural output is a classic example of the link between real and nominal variables. But understanding that relationship requires that we have both a theoretical foundation for constructing a measure of potential output and the data

we need to carry out the analysis. Neither of these requirements is straightforward. Since we have competing, and largely insufficient, theories, it is difficult to know what to compute. Different models suggest different concepts, and their empirical counterparts vary accordingly.

When looking at the data, we must accept that data revisions are often quite large.[1] And, unfortunately, the initial estimates are the least reliable around business cycle turning points. That is, the data are at their worst when we need them the most. So, measuring economic slack is a formidable task; indeed, the challenge is made even the greater by globalisation, including the phenomenon that production is becoming global. How should we think about economic slack at the national level when trade is globalised?

In his paper presented at the conference, James Morley provides a measure of economic slack in a domestic context. His forecast-based model-averaged output gaps appear to be robust, which is important. However, as he goes on to show, the link between slack and inflation does not appear to be linear in many economies. This adds yet another layer of complexity to the use of output gaps in policymaking. Indeed, as Morley shows, slack is often a misleading indicator of future inflation.

Turning to the next topic, financial globalisation and inflation pose an important set of challenges for monetary policy. Given that increases in cross-border financial flows tend to boost policy spillovers, it is not surprising that this issue was the subject of much discussion during the last day and a half.

An intuitive way to think about financial globalisation is that the marginal unit of credit is cross-border. And this is probably what drives people to worry so much about the impact of external factors on financial conditions. Financial conditions become much more difficult to measure and to influence domestically in a world where credit is readily available from abroad.

It is interesting to ask how far financial globalisation can go. International asset positions currently stand at roughly 150% of GDP globally. This is much larger – about three times as large as a share of GDP – than was the case in the 1990s. My rule of thumb is that wealth is four times GDP. Then, perfect risk-sharing with all asset holdings in the form of equity would imply international asset positions of three times GDP. We're probably not going to get that far any time soon, but it gives you some idea how far we could move from where we are today.

On this topic, the work by Michael Devereux and James Yetman examines the impact of international risk-sharing on a monetary policy framework where interest rates are set to respond to domestic inflation, while at the same time sterilised FX intervention is used to stabilise the exchange rate. The authors find that increased risk-sharing is raising the cost of such a strategy. As a consequence, the policy responses that have been used to reduce exchange rate volatility and managing exchange rates more generally may have to change.

The third topic I will touch on is globalisation and monetary policy. Globalisation affects inflation dynamics, and therefore monetary policy, directly through commodity prices, inflation expectations and policymakers' responses.

As Andy Filardo and Marco Lombardi point out in their paper, commodity prices are increasingly driven by global factors. The authors emphasise the

[1] See eg Orphanides and van Norden (2002).

importance of global demand factors in particular, and the need to tailor policy responses to be consistent with the sources of the underlying shocks. This is especially relevant where food represents a significant fraction of consumer price indices, as it does in many emerging market economies. Policymakers who ignore a large and a highly persistent part of their inflation index do so at their peril.[2]

To be sure, the impact of globalisation on actual inflation dynamics depends on how stable inflation expectations are. Improved inflation performance in the region could be taken to suggest that inflation expectations have become more stable over time. An overriding theme in the study by Pierre Siklos is that average forecasts of inflation provide limited information to policymakers relative to the full distribution of the underlying forecasts. I think it may be increasingly relevant to construct portfolios of expectations rather than focusing on individual forecasts, given the loss functions of some of the forecasters. In particular, the way a forecaster becomes famous is by being right when nobody else is. And because this creates an incentive to be different, panels of forecasts may display artificial dispersion. But increased dispersion also provides relevant information for policymakers to the extent that it signals a drifting of expectations away from the central bank's target. One result that I think merits further study is that inflation targeting economies seem to be less influenced by inflation expectation spillovers than economies that manage their exchange rates.

Let me now turn to the issue of how central banks have responded to globalisation. The paper by Eric Girardin, Guonan Ma and Sandrine Lunven looks at the case of China. Given its rapid real and financial development, China provides an excellent case study for the effects of ongoing real and financial globalisation. Girardin, Ma and Lunven show how policy has evolved in the Chinese context; how policy has become more forward-looking; how the weight on inflation in the People's Bank's objective function has increased; and how the policy response seems to have become more gradual, resembling that of many other economies. The latter finding is probably not greatly surprising, considering the increasing diversity and size of the Chinese economy.

I often think of a research conference like this as a progress report on our thinking – nothing is the final word. So this leads to me to ask: where do we go from here?

On trade globalisation, has globalisation changed the relationship between real and nominal variables? Does it make sense to think about things such as economic slack at the national level? Or, do we need to focus on regional or global measures? And, more generally, how should we best include global considerations in our models?

On financial globalisation, there is no doubt that increased international risk-sharing has led to large policy spillovers. We need to understand better how large and costly those spillovers are, and how they can be identified in real time. Financial globalisation clearly has diversification, and therefore insurance, benefits. But are those greater than the costs of spillovers? This is related to the issue of whether central banks can control domestic financial conditions even when exchange rates are flexible. Put in another way, is the policy trilemma still out there? Or are we

[2] See eg Anand and Prasad (2012), who evaluate different inflation targeting rules in the presence of financial frictions.

losing degrees of freedom, with interest rates increasingly determined by global factors? This issue has been in increasing focus recently.[3]

Finally, are the benefits of policy coordination really first-order? There is an intuition arising from the envelope theorem that if you are close to optimal policy domestically, benefits from coordination are limited – even first-order problems will lead to second-order losses in terms of welfare. But sometimes, when you listen to policymakers, it appears that they do not fully buy into this story. Why is that? What are the externalities that render the welfare gains from changing the global policy framework so large? Or, alternatively, is it the case that we think of domestic policies as being far from optimal, so that coordination will lead to better outcomes?

To conclude, the presentations and discussions over the last day and a half have clearly increased our understanding about the complex relationships between globalisation and inflation dynamics. It is useful to investigate issues specific to the region and to learn from those. But ultimately, we need to think how these lessons can be applied globally. And I think we have already made quite a bit of progress on that front.

References

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[3] See eg Rey (2013).