Comments on "A spectral perspective on natural interest rates in Asia-Pacific: changes and possible drivers"

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The paper by Feng Zhu is a coherent and timely overview of the major policy concerns on the "new neutral" lower equilibrium real interest rates, also known as the natural or neutral interest rate, following a world of "new normal" lower trend growth after the Global Financial Crisis of 2008–09 (GFC). The paper utilises an empirical (statistical) approach to estimate equilibrium real interest rates in Asia-Pacific and their relationship to population characteristics, globalisation, financial variables, and the long-run components of real GDP growth.

The paper provides a lucid overview of several competing theories behind the decline in equilibrium real interest rates and proposes a hypothetical question regarding the relevance of the arguments to Asia-Pacific economies. As has been discussed, the real interest rate is simply a benchmark for measuring the monetary policy stance. Therefore, to use monetary policy rules such as the Taylor rule (Taylor (1993)), a feasible estimate of the equilibrium of real interest rates is required. As there have been, hitherto, very few attempts to estimate and assess the equilibrium real interest rates of emerging economies, and even fewer for emerging Asia, the paper attempts to fill the gap by providing a number of simple estimates and in doing so to shed light on the evolution of equilibrium real interest rates in a number of Asia-Pacific economies.

The paper also elaborates a relevant assessment and its implication for monetary policy implementation across Asia-Pacific countries. In the same spirit as several previous studies (Laubach and Williams (2003); Clark and Kozicki (2005); Canzoneri et al (2013), Hamilton et al (2015)), the paper shows that, in general, the estimates of the equilibrium interest rates in Asia-Pacific vary substantially over time and across economies and further perceives a sizeable degree of imprecision and uncertainty. It simply suggests that the use of the natural rate framework to implement monetary policy poses numerous risks.

Feng Zhu conducts robust empirical exercises and shows that the ageing population, global financial integration, financial sector developments and lower GDP growth potential could potentially lower the equilibrium real interest rate in Asia-Pacific in general. While Feng Zhu humbly concedes one important caveat about the estimates of equilibrium real interest rates, that they are estimated filtered trends rather than true equilibrium values, my discussion will touch more upon the bigger-picture central bank policy issues, rather than the technical aspects of the paper.

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To what does "equilibrium" refer?

The first issue that needs to be considered is: to what does "equilibrium" refer? Does equilibrium relate to internal balances, or does it also relate to external balances? Standard theory suggests that it is the rate consistent with full employment and aggregate price stability. The literature that deals with the measurement of equilibrium real interest rates (for example, refer to Laubach and Williams (2003)) has used closed economy models, with large open economies treated as closed economies, and has not addressed the open economy case. Clarida (2009) also pointed out that the neutral equilibrium real interest rate for an open economy could not be defined, modelled or proxied without reference to an explicit global framework.

However, empirical facts from the past decade and lessons of the GFC show that the challenges of future monetary policy, especially in the case of a small open economy that poses structural weaknesses (ie lack of financial deepening), will be more complex. Hence, macroeconomic stability still faces both global and domestic challenges, involving a trade-off between internal and external stabilisation objectives (ie lowering the interest rate to maintain economic growth vs. holding the interest rate to address external vulnerabilities). Amidst widespread global uncertainty, monetary policy should also pay attention to external stability. In this case, lowering the policy rate would likely weaken the domestic currency and exacerbate external vulnerabilities for corporations indebted in foreign currencies and could amplify the impact of external shocks.

Therefore, from a central bank policy perspective, we have to continuously strengthen policy communication in order to manage market confidence and seek an appropriate time to change (shift) the policy stance, as addressing external vulnerabilities also plays a key role in maintaining leeway for monetary policy to pursue macroeconomic stabilisation objectives. Based on these considerations, the question is whether the equilibrium real interest rate that is consistent with internal balances can guarantee accomplishment of the external balance, so that we as central bankers should follow the rate.

A new normal and the implication of the inflation-output nexus

Another issue relates to the monetary policy implication of a change in the behaviour of the inflation-output nexus, namely a flatter Phillips curve, in many emerging economies. Amidst the tendency of the global economy to move towards a lower new normal in the long run, a flatter Phillips curve phenomenon may imply that inflation is less responsive to domestic demand. Rather, it is comparatively affected more by a supply response, such as a temporary cost-push shock related to the exchange rate, commodity price movements or weather anomalies (Bayoumi (2014)). A flatter Phillips curve could imply a lower equilibrium real interest rate. However, as demand management is less effective, the implication of a lower equilibrium real interest rate for monetary policy should be scrutinised. In that regard, policy coordination between the central bank and the government to cope with structural issues is sufficient.

In the case of Indonesia, for instance, an estimation of the NKPC reveals interesting findings on the role of output (Juhro (2015)). While the role of output in determining inflation increased in the early stage of ITF (especially during the GFC), it has subsequently declined in the post-GFC period. Another factor contributing to the flattening of the Phillips curve is also worth noting, namely policy credibility garnered by Bank Indonesia in terms of controlling inflation. One noteworthy point is the success of policy coordination between Bank Indonesia and the government in terms of controlling inflation, especially from the supply side, over the past decade.

Global financial integration and the role of the exchange rate

Feng Zhu, in line with Blanchard and Summers (1984), Barro and Sala-i-Martin (1990), and Bosworth (2014), shows that one potential driver of the decline in equilibrium real interest rates is global economic (trade and financial) integration. By eliminating the barriers to cross-border trade and financial transactions, a country has more space to secure its growth potential and reduce the equilibrium real interest rate. Globalisation, however, including financial integration, has also led to the emergence of an economy's risk exposure in line with the volatility that has beset global financial markets. As one may see, with a domestic financial system that is becoming increasingly integrated with the global financial market, an economy is potentially vulnerable to global volatility, which can put pressure on the exchange rate as well as on inflation as the monetary policy target.

The next question is: how do we incorporate the role of exchange rates in monetary policy formulation?

The prevailing view expressed in the literature on ITF generally suggests that the exchange rate plays only a limited role in the implementation of monetary policy strategy . The arguments are implicitly based on assumptions regarding the role of the exchange rate as an economic shock absorber. However, with the long-run tendency of the global economy to move towards a new normal, it can be construed that the assumption based on the limited role the exchange rate plays in monetary policy strategy is somewhat weak. As such, more volatile short-term capital flows in a more integrated financial system, coupled with a dominant foreign debt structure, have indicated the growing contribution of nominal shocks to shifts in the exchange rate. Concomitantly, high inflation further weakens the role the exchange rate plays as a shock absorber.

What does this imply for monetary policy formulation? While we have recognised that the real interest rate is simply a benchmark for measuring the monetary policy stance, we may ask how to measure the role of the exchange rate using the Taylor rule principle. This slight bending of the rule takes on an interesting format since it takes into account the flexibility of the exchange rate's role. Although doubt may emerge when using such a format, which is considered inconsistent with the basic substance of ITF, several empirical observations of economies characterised by large exchange rate pass-through as well as relatively high and unstable inflation accords merit to this rule-bending (Edwards (2006)). Taking such a standpoint, Bask (2006) also concluded that, technically, for small open economies the addition of an

exchange rate variable in the Taylor rule design offers the possibility of achieving system stability, providing that the data used are contemporaneous.

At a more tactical level, it is interesting to explore the nexus between interest rates and the exchange rate and its implication for the equilibrium real interest rate. Several emerging countries indicate that policy orientation in the midst of high global uncertainty is tactically directed not only towards controlling inflation but also at managing the exchange rate through active and measurable intervention on the foreign exchange market. Most recent assessments also provide empirical evidence that there is a tendency for monetary policy strategy to move away from that which is hypothesised by the monetary policy trilemma. Therefore, central banks have choices when maintaining the balance between interest rates and exchange rate management, since it is not only the interest rate that responds to external dynamics; a portion is absorbed by the exchange rate.

Post-GFC monetary policy strategy and the policy instrument mix

The GFC has challenged the existence of monetary policy strategy. Consistent with Feng Zhu's paper, we agree that there are reasons why financial sector developments, along with sustained changes to regulatory policy, such as those we see in the aftermath of the Global Financial Crisis, may matter for the evolution of the equilibrium real interest rate. Feng Zhu also mentions that concerns with financial stability and the impact of regulatory changes may therefore factor into monetary policy considerations. However, the paper does not have more space to discuss the issue.

In fact, there is a great deal of ambiguity about how actual (tactical) central bank behaviour fits into the theoretical literature on monetary regimes, especially the inflation targeting framework (ITF) that uses the interest rate as a key monetary policy instrument to deliver policy signals and manage inflation expectations. The GFC provided a valuable lesson in that the financial sector plays a pivotal role in macroeconomic stability because of its role in triggering excessive procyclicality. Due to its procyclical nature, the financial sector can potentially escalate macroeconomic instability by developing output fluctuations. When an economy moves through an expansionary phase, characterised by macroeconomic stability and escalating growth, investor confidence raises optimism when assessing the economy. This risk-taking behaviour, initially triggered by monetary policy, will eventually push up credit demand and asset prices. Changes in the financial sector, as reflected by adjustments in financial variables (financial stability), influence aggregate outcomes such as economic growth and employment, which are directly linked to monetary stability. The complexity of the problems accompanying procyclicality in financial sector ultimately takes its toll on the workings of the monetary policy transmission mechanism.

From this standpoint, the more complex the challenges facing an economy, the greater number of policy instruments should be utilised by the authorities (within the policy instrument mix). In this regard, it is not just the interest rate that is expected to drive the level of economic activity, a number of unconventional measures could also possibly influence the level of employment and prices. Therefore, when assessing the

equilibrium real interest rate, the coordinated implementation of a policy instrument mix is ultimately part of an important strategy in the current climate blighted by ubiquitous uncertainty. Coordination is critical, not only to address sources of external and internal imbalances, but also to optimally manage the impact of monetary policy, while avoiding overkill and mutual exclusivity. Within that policy perspective, the achievement of macroeconomic stability is tied not only to monetary stability (price stability) but also to financial system stability.

Closing notes

In summary, Feng Zhu has delivered sound research on the equilibrium real interest rate and its implication for monetary policy in Asia-Pacific countries. I fully concur that the use of the natural interest rate framework to implement monetary policy poses many risks, given the numerous uncertainties surrounding natural rates. However, we should not only consider the precision of estimation but we should also seek to understand how different factors in different situations influence the equilibrium real interest rate and why this is important for monetary policy formulation. Here, I see some room for enhancement that should be incorporated in the paper. My suggestion is that the paper could discuss a broader scope of the monetary policy domain, especially in the post-GFC era, such as the trade-off between internal-external balances, the role of the exchange rate as well as risk perception/behaviour that could potentially impact the equilibrium real interest rate lift-off, as in the case of Indonesia, Malaysia, and some other emerging countries. This would provide a more rigorous assessment of the strategic role of interest rate policy and thus the practical relevance of equilibrium real interest rates in monetary policy formulation.

Given the practical usefulness of equilibrium real interest rates, I generally support the arguments proffered by Orphanides and Williams (2002) that recommend against relying excessively on these intrinsically noisy indicators when making monetary policy decisions, and Hamilton et al (2015) who inject more inertia into the monetary policy reaction function. To conclude the discussion on this issue and anchor the theme of the conference, namely "expanding the boundaries of monetary policy", we should put a proper weight on interest rate policy along with other instruments under a credible central bank policy mix strategy. This implies that the equilibrium real interest rate estimation should not statistically stand alone, since the determination of equilibrium real interest rates should be consistent with the macroeconomic balance and the related policy mix response. Consequently, while there is no guarantee that structural estimates would fare better, I would prefer to address the issue using a structural approach.

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