## **Foreword**

A research conference on "The price, real and financial effects of exchange rates" was co-hosted in Hong Kong, on 28–29 August 2017, by the Hong Kong Monetary Authority (HKMA) and the Bank for International Settlements (BIS). This conference was the culmination of the BIS Asian Office's two-year research programme on exchange rates, as endorsed by the Asian Consultative Council of the BIS in February 2016. The conference brought together senior officials and researchers from central banks, international organisations and academia.

Opening remarks at the conference were provided by HKMA Deputy Chief Executive Arthur Yuen. Sebastian Edwards (University of California, Los Angeles (UCLA)) delivered a keynote address. Six papers were presented, covering exchange rate puzzles; deviations from covered interest parity; devaluations and intraregional trade; exchange rates and corporate risk-taking; FX hedging and creditors' rights; and a risk-taking channel of FX reserves accumulation.

Four main lessons emerged from the discussions. First, nominal exchange rate fluctuations drive the real exchange rate, although the policy implications of this are not clear-cut. Second, weaker bankruptcy laws are associated with reduced hedging of FX exposures by firms. Third, the appropriate policy response to exchange rate changes depends on the source of the exchange rate change. Finally, definitive estimates of equilibrium exchange rates continue to elude researchers, in part because exchange rates depend on so many factors and their complex interaction.

This volume is a collection of the speeches, papers and prepared discussant remarks from the conference. This foreword summarises the contents of the conference and provides a synopsis of the discussions for time-constrained readers.

In "Exchange rate puzzles: evidence from rigidly fixed nominal exchange rate systems", Charles Engel (University of Wisconsin) and Feng Zhu (BIS) focus on six established exchange rate puzzles. They find that four of these (real exchange rates are too volatile and too responsive to real interest rate differentials, violate uncovered interest parity and are disconnected from fundamentals) are less puzzling under fixed nominal exchange rates, indicating the importance of nominal exchange rates in driving these puzzles. Some participants questioned whether the results indicated that fixed exchange rates are preferable over flexible ones, which most agreed to be a deeper question, going beyond the analysis of exchange rate puzzles.

The paper by Suresh Sunderasan (Columbia University) and Madhusudan Mohanty (BIS), "FX hedging and creditor rights", explores firms' incentives to hedge exchange rate exposures. Their empirical findings suggest that aggregate corporate credit spreads provide significant information on firms' FX exposures and that such exposures are negatively related to the strength of creditor rights of the countries where the firms are domiciled. Using loan-level data, they find that the introduction of a new bankruptcy code in India in 2016 increased firms' incentives to hedge FX exposures.

Rasmus Fatum (University of Alberta) and James Yetman (BIS) answer the question: "Does the accumulation of foreign currency reserves affect risk-taking?" against the backdrop of the large-scale FX reserve accumulation in EM Asia since the Asian crisis. Their empirical results suggest that there has been no clear link between reserve accumulation and risk-taking, measured using a range of financial market proxies, in the region.

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Alfred Wong and Jiayue Zhang (both HKMA) explore the question "Breakdown of covered interest rate parity: mystery or myth?" Their analysis suggests that the breakdown of CIP is no mystery as it reflects the new trading environment in which uncollateralised and collateralised transactions have ceased to be treated as equivalent (so that unsecured rates are no longer used to price secured transactions). Therefore, it is a myth that the breakdown of CIP reflects an unexploited arbitrage opportunity and market failure. Moreover, their analysis suggests that the breakdown of CIP was not purely a US dollar phenomenon but also appears in currency pairs without a US dollar leg, challenging the notion that it primarily reflects a dollar funding shortage or dollar strength.

The paper by David Cook (Hong Kong University of Science and Technology) and Nikhil Patel (BIS), "Dollar invoicing, exchange rates and international trade", shows how the impact of monetary shocks on bilateral trade flows is mitigated if the two countries are involved in global value chains. The follow-up discussions focused on the need to understand the implications of these results for optimal monetary policy frameworks.

The final paper, by Sebnem Kalemli-Ozcan (University of Maryland), Xiaoxi Liu (Chinese University of Hong Kong) and Ilhyock Shim (BIS), focuses on "Exchange rate appreciations and corporate risk taking".¹ The authors use ORBIS firm-level accounting data and the estimated firm-level FX debt for a sample of 10 Asian EMEs over 2002–15 to show that exchange rate appreciations induce firms with higher FX debt to take on more risk in the form of higher leverage. They also find that such effects are stronger for firms in the non-tradable sector than those in the tradable sector.

In his keynote address entitled "Finding equilibrium: the urgency of an old question", Sebastian Edwards (UCLA) asserted that, despite a long history of exploration and the continued relevance of the topic, the current state of models of equilibrium exchange rate determination is less than satisfactory. He identified several avenues for future research and expressed his preference for approaches to equilibrium exchange rate models that give a high weight to net international investment positions (NIIP) and the sustainability of current account balances.

The conference concluded with a panel discussion on "Exchange rate challenges: how should policymakers respond?" chaired by Grant Spencer (Reserve Bank of New Zealand). One issue related to the role of the flexible exchange rate as a shock absorber. While a flexible exchange rate, combined with inflation targeting, seemed to help economies to absorb external shocks, the impact depended crucially on the operation of the "financial channel" of the exchange rate, which can not only offset the traditional expansionary impacts of depreciation but also amplify them in the presence of large unhedged foreign currency debt. The development of local currency bond markets was not a panacea for insulating domestic monetary policy from external shocks in the context of currency and maturity mismatches in many EMEs.

A second issue was the extent to which central banks should respond to exchange rates, and whether the nature and the sources of shock should play a role in designing the response. There was a view that changes in exchange rates caused

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The paper is not included in this volume, but has been published as BIS Working Paper no 710. The discussant's remarks, containing a short summary of the paper, are contained herein.

by fundamentals (eg terms of trade shocks) call for a different response from those induced by short-term capital flows (eg due to changed attractiveness as a carry trade destination). In addition, there may be a case for augmenting monetary policy with other tools such as macroprudential or capital flow management measures and balance sheet policies, including FX reserve management, to mitigate the destabilising effects of exchange rate volatility.

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