Chapter 1
Introduction and Overview

After the 1997/1998 Asian financial crisis, many economies in the region set out to rebuild their savings, sometimes to excess. Capital inflows further boosted liquidity after interest rates in the US and Europe fell in early 2000. The resulting combination of large savings and lower borrowing costs spurred credit creation and economic growth, especially in emerging Asia. At the same time, appreciation pressures on exchange rates increased as did the overall risk to financial stability. Procyclicality risks are particularly high when capital flows reverse direction: Rapid liquidity growth can turn into a sharp contraction. So with plenty of liquidity and low borrowing costs, individuals, banks, and companies all shifted their preference toward more risky investments.

What started this trend? The 2000s began with easy money policies in advanced economies. Responding to the 2000 recession and the 11 September 2001 political shock, the US federal funds rate fell precipitously—from over 6 % in 2001 to just 1 % by the summer of 2003. Over the same period, the European Central Bank (ECB) rate dropped from over 4 to 2 %. Fears of asset bubbles subsequently brought interest rates back up in the US and Europe. By late 2007, on the eve of recession and the subprime crisis, rates had risen fivefold in the US and doubled in Europe. As the US recession began in December 2007, the US Federal Reserve (US Fed) shifted gears again, lowering rates steadily—from more than 5 to 2 % by mid-2008. The subsequent collapse of Lehman Brothers in September that year forced the US Fed to be more aggressive. Rates fell to 0.25 % and remained there, at least through the third quarter of 2014 (when this was written). Interest rates in the Eurozone fell just as dramatically—a steady decline from over 4 % in 2007 to 1 % shortly after the Lehman crisis, to 0.5 % in mid-2013, and 0.15 % currently.

Global liquidity responded accordingly. Massive amounts of capital surged out of advanced economies into emerging markets. Emerging Asia was among the biggest beneficiaries—estimated inflows between November 2008 and April 2013

I.J. Azis and H.S. Shin, *Managing Elevated Risk*,
DOI 10.1007/978-981-287-284-5_1

totaled $2.1 trillion. Early on, much of these inflows were intermediated through banks (throughout this book called "bank-led flows"). This was the first phase of global liquidity. Then, in 2008, the worst crisis since the 1930s Great Depression erupted. Capital flows plunged worldwide, but rapidly recovered. By autumn 2010, liquidity flows were surging again, although this time predominantly through capital markets, including local currency bond markets (called "debt-led flows" here). This was the second phase of global liquidity. Compared with what led to the 1997/1998 Asian financial crisis, the size of flows going to emerging Asia was larger and more volatile. If reversed, the impact would be quickly felt. For example, when the US Fed announced in May 2013 its intention to taper quantitative easing (QE), investors quickly pulled out of emerging markets. Some markets were clearly rattled, hitting affected economies with a double-punch—volatile capital markets and depreciated exchange rates. With the knowledge US monetary policy would soon begin to "normalize," risk perceptions toward emerging markets rose. Those with perceived vulnerabilities saw the greatest volatility. This is what we call the third phase of global liquidity.

This book describes these three phases of global liquidity and their impact on emerging Asia from conceptual and empirical perspectives. What stands out is the important role noncore bank liabilities played in the process. Together with the growing significance of capital markets in the second phase, it has changed the financial and monetary policy landscape sufficiently to warrant a new regulatory framework, alternative early warning indicators, and as a result a set of macroprudential policies to complement monetary policy.

After discussing conceptual and measurement issues related to this changing global liquidity, Chap. 2 presents the background and details of how global liquidity evolved from phase one to phase two and then phase three.

Permissive conditions in the US dollar wholesale market were behind the development of phase one—with liquidity transmitted via the global banking system to the rest of the world, including emerging Asia. This showed up in expanding bank balance sheets through increased noncore liabilities that facilitated more and larger lending, along with greater risk-taking behavior. Even nonfinancial institutions took on attributes of financial firms ("financialization"), as they increased the size of their balance sheets relative to generating sales. As a consequence, this contributed to the amplification of financial cycles. Currency appreciation further fueled inflows as borrowers' balance sheets were strengthened. To the extent rising noncore liabilities are highly procyclical and are an important transmission channel of global liquidity shocks to emerging Asia, the resulting financial cycles were out of sync with domestic business cycles. As a result, on top of the elevated risks caused by the bank-led credit boom, it also reduced the effectiveness of monetary policy—and this led to the call for separate macroprudential policy.

In phase two, the massive amount of inflows into emerging markets saw credit grow through corporate bond issuance by nonfinancial borrowers. In emerging Asia, governments used the opportunity of low-cost financing to increase their bond issuance, allowing them to make "maturity adjustments" (sovereign bonds replacing short-term debt). The region's capital markets boomed during this

phase. Local currency bonds outstanding reached $7.2 trillion by March 2014, a dramatic increase considering that some economies in the region had virtually no bond market prior to 1997. Also, the share of foreign ownership in local currency bond markets rose, as did bank holdings of sovereign bonds. With interest rates low, the issuance of international government and corporate securities in emerging markets also increased rapidly. If the vulnerability in the first phase caused by bank-led flows through noncore liabilities is linked with procyclicality effects, the second phase vulnerability caused by debt-led flows is associated with sporadic and sudden outflows.

The first and second phases of global liquidity set the stage for the third phase. Here, the story is about capital flow reversals. The bond market sell-off following the hint that QE would soon begin tapering in mid-2013 spread quickly to emerging markets, with an immediate impact of rising bond yields, higher interbank rates, and depreciating currencies, albeit not evenly across all markets. With banks holding large amounts of securities and equities, the link between banks and capital markets is strong. Any shock that causes asset prices to fall can worsen bank balance sheets. This complicates policy choices, especially in economies where the local investor base is small and macrofundamentals weak.

But even economies with relatively good fundamentals saw capital exit, as US market risk was perceived to be lower. All of these economies saw their exchange rates depreciate against the US dollar, with the exception of the renminbi and Philippine peso. Bond markets in economies with strong fundamentals (such as Malaysia; the Philippines; Hong Kong, China; and Singapore) also saw bond yields rise. Typically prone to "buying the rumor and selling the news," their respective equity markets also suffered.

Given the different circumstances of each phase, Chap. 3 argues that relevant early warning indicators should also evolve and be adjusted based on the main drivers of inflows and associated risks. In phase one, banks are center stage in credit growth, a focus on noncore liabilities of financial intermediaries will most likely yield timely signals. On the other hand, when spending and credit are funded by bond issuance in phase two, an appropriate early warning indicator would emphasize aggregate issuance. Tracking aggregate corporate cash holdings is also important to mitigate risks caused by "carry trade" activities. The bulk of the discussion in Chap. 3 is devoted to this. For phase three, the challenge is more complex. But as the stage was set by the first and second phases, the indicators proposed in phase one and phase two remain relevant for phase three.

Chapter 4 scrutinizes the extent to which emerging Asia's noncore liabilities have reached a level that makes them vulnerable. Although Asia's share of noncore liabilities in total liabilities remains relatively small, they have grown rapidly as a ratio to GDP. Consistent with findings based on the Flow of Fund analysis cited in Chap. 2, we show the increase significantly contributed to the expansion of bank assets. The important contribution of noncore liabilities to credit growth is also confirmed by the regression test we conducted, supporting our conjecture that a relevant early warning indicator should focus on noncore liabilities. More importantly, it limits the effectiveness of monetary policy. And if this

limitation is overlooked—existing monetary policy intensified by adding more—the probability of bank bankruptcies would increase as a bank's net worth tends to decline. Hence, an effective macroprudential policy that supplements standard monetary policy is needed to make monetary policy more effective, with financial stability added as an additional objective.

The extent that changes in global liquidity combine with a liberalized financial sector enhances the amount of liquidity flowing in. But it also increases the risk of instability. Thus, it would have helped had there been more global and regional cooperation in policymaking. In reality, however, even as economies become more interdependent, national policy continues to rule irrespective of spillovers on other economies and all the talk of cooperation and policy coordination. The ultra-easy monetary policies adopted in advanced economies ("financial nationalism") are a case in point. In turn, this forces policy makers in emerging markets to take unilateral policies to mitigate the resulting impact.

While the focus of the discussion so far has been on the implications of capital flows on financial and macroeconomic stability, their impact on development must be assessed. This is done in Chap. 5. By using a general equilibrium framework with a rather detailed financial module, we show that capital inflows are closely linked to income inequality. We argue that capital inflows not only increase the risk of financial instability, but also the inequality in household income distribution—particularly if banks with the new liquidity take on more risky investments. On the other hand, results of model simulations show that when banks act prudently by allocating loans to more productive investments in the real economy—rather than parking funds in risky financial instruments—capital inflows would improve income inequality. This is because output grows, and hence, the increase in factor income is higher than the increase in financial income accrued by retail investors from rich urban households. Therefore, the challenge is how to create a system where banks are discouraged from taking on risky investments. From this perspective, macroprudential policy would also work toward reducing income inequality in the case of rising capital inflows.

Typically, income inequality is never explicitly on the list of criteria for designing macro and financial policy. Yet inequality is rising in nearly all economies—advanced and emerging alike—and increasingly tops the development challenges faced by policymakers. How would adding another objective alter the priority of policy alternatives? Would adding the social goal of reducing income inequality change policy choices? And, in particular, would macroprudential policy remain relevant? We cite the benefits and advantage of imposing a levy on noncore liabilities as one potential macroprudential policy. How well would this work compared with other policies? Based on a perception model, the analysis in the final section of Chap. 5 shows the answer depends on whether or not we consider both upsides and downsides of each policy alternative. Encouraging capital outflows during tranquil periods—rather than assigning a levy to noncore liabilities—works better when only policy benefits are considered. But when the costs and risks are taken into account simultaneously with the benefits, assigning a levy on noncore liabilities makes better sense.

Thus, while this book argues throughout that in the midst of changing global liquidity macroprudential policy is needed to complement monetary policy, the analysis in Chap. 5 shows that certain type of macroprudential policy can also be favorable for reducing income inequality.

As there are many ways to group macroprudential tools, Chap. 6 classifies those tools by distinguishing between (i) asset-side tools that directly limit bank loan growth; (ii) liability-side tools that limit vulnerability to liquidity and currency mismatches; and (iii) bank capital-oriented tools that limit loan growth through altering bank incentives. Assigning a levy on noncore liabilities is among the liability-side tools we propose to address the buildup of vulnerabilities to liquidity and currency mismatches and the underpricing of global capital market risk. It mitigates pricing distortions that lead to excessive asset growth. The Financial Stability Contribution (FSC) recommended by the International Monetary Fund (IMF) on the bank levy to the G20 leaders in June 2010 is an example of such a corrective tax. We believe the levy could mitigate the buildup of systemic risk through currency or maturity mismatches by counteracting distortions to global funding conditions and the "supply push" from global banks.

So the main message is this: The dynamics of global liquidity since early 2000 has had ramifications worldwide, the most important a surge in capital flows. For emerging markets on the receiving end—which includes those in Asia—liquidity surged, first through banks' increased noncore liabilities and then via expanding capital markets. Both boosted investment and growth. But at the same time, they also elevated the risk of instability, worsened income inequality, and reduced the effectiveness of monetary policy. Without understanding the process and transmission mechanism that lower the effectiveness of standard policies, policy makers may be tempted to try bigger doses of the same monetary policy when intended results are not met. This will actually increase the risk of bankruptcies. Instead, the distinct characteristics of capital flows during the three phases of global liquidity point to the need for early warning indicators to evolve and be adjusted for each phase. Based on the analyses and the more relevant early warning indicators, we argue a set of macroprudential policies is needed to complement monetary policy.