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Research Summaries

The Rise and Fall of Current Account Deficits in the Euro Area Periphery and the Baltics

Joong Shik Kang and Jay C. Shambaugh

One feature of the economic crisis in Europe is that a number of countries ran very large current account deficits heading into the crisis. While increases in domestic absorption explain some of the deficits, there were also important movements in transfers and net income balances for many countries. When transfers declined, households and firms borrowed so as to maintain the same level of spending. This was part of a persistent failure to adjust to trade deficits, which, along with rising net-income payments, led to growing current account deficits. Since the crisis, tangible progress has been made through lower wages and/or higher productivity relative to trading partners ("internal devaluation"), contributing to narrowing deficits. Going forward, these countries still need to continue adjustment to generate growing tradable sector employment and to prevent imbalances from returning as output gaps close. Doing so against a backdrop of austerity, low growth in the euro area, and low inflation in their trading partners has been very challenging.

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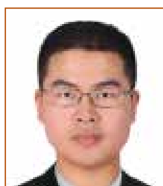
Two Sides of the Same Coin? Rebalancing and Inclusive Growth in China

Il Houng Lee, Murtaza Syed, and Xin Wang



China's remarkable growth has been hailed as the greatest development story of all time. However, its success is somewhat undermined by a sharp rise in income inequality. While most countries have also become less equal since 1990, the deterioration has been especially severe in China's case and has left it among the most inequitable societies in the world. Could China's growth model—with its emphasis on exports and investment, and its more recent dependence on credit—itself be at fault?

Since embarking on its reform and opening-up policy, China has made remarkable strides in lifting incomes and reducing poverty. On the eve of its reforms, nearly 85 percent of its population lived on less than $1.25 a day, the fifth

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The Rise and Fall of Current Account Deficits in the Euro Area Periphery and the Baltics

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On the eve of the global financial crisis, a number of euro area periphery countries (Greece, Ireland, Portugal, and Spain) along with the Baltic countries (Estonia, Latvia, and Lithuania) faced large and growing current account deficits. Our first research paper (Kang and Shambaugh, 2013) untangles some of the different developments across countries. Two main explanations in the literature are: (i) deteriorating export performance due to a steady deterioration of competitiveness and (ii) a domestic demand-driven boom stemming from excessive optimism, capital flow-driven cheap credit, as well as fiscal excess.

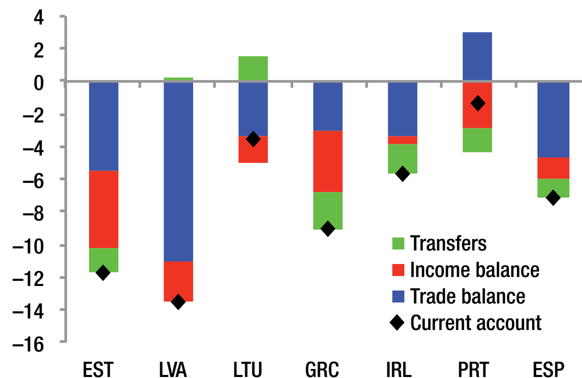
Conventional price indicators show deterioration of their competitiveness since the inception of the euro: significant appreciation of the CPI-based real effect exchange rates (REER) and sizable increase of unit labor costs (ULCs) in these countries increased sizably relative to other euro area countries. However, several quantity measures indicate that export performance remained stable before the recent global crisis. The exports-to-GDP ratio for many of these countries remained relatively stable or increased in the 2000s. The merchandise export market share declined in the 1990s, but was flat in the euro era (1999–2007) except for Ireland, whose economy was shifting toward a service economy. The Baltics' market share grew throughout.

These patterns hint that other factors may have driven large current account deficits. The seemingly contradictory pattern between large increases in ULC (economy-wide) and non-deteriorating export sector performance can be partly understood by looking at ULC for tradable and non-tradable sectors separately. There was a limited increase in tradable sector ULC, consistent with the export sector maintaining its performance in most of these countries. But, a sizable increase in non-tradable sector ULC led to a large deterioration of economy-wide ULC. Thus, the trade balance may have deteriorated due to surging imports arising from a domestic demand boom while exports remained strong. In fact, the Baltics and, to some extent, Spain, Greece, and Ireland, experienced large capital inflows and optimism-driven booms, which raised ULCs in the non-tradable sector and increased imports.

However, the current account worsened far more than the trade balance in many of these countries (Figure 1). In fact, Portugal's trade balance improved over this period. The current account moved for reasons beyond trade: declining transfers and rising net income payments contributed to a worsening current account balance even without much deterioration of the trade balance. This substantial deterioration of non-trade components of the current account has received less attention thus far in the literature than movements in the trade balance.

Figure 1. Current Account Development

(in percent of GDP, 1999–2007)



Source: IMF, *World Economic Outlook*.

"However, several quantity measures indicate that export performance remained stable before the recent global crisis."

In theory, a transfer of wealth from abroad should lead to an increase in consumption and investment and a shift toward trade deficit. A decline in these transfers should lead to a reduction in consumption and a return to trade account balance as the country adjusts to its lower income. However, that does not happen if there is habit persistence and households and firms maintain the same level of spending by borrowing when transfers decline. Output and ULC would remain flat, but the current account would deteriorate as consumption and imports do not decline. For example, in Portugal and Greece, loans replacing declining transfers led to a persistent failure to adjust to trade deficits that were present and led to growing current account deficits through both declining transfers and subsequently rising net income payments. In both countries, trade deficits have been in excess of 5 percent of GDP since the early 1980s. At many

times, though, current accounts have been close to balance. When the transfers declined, however, the trade balances did not.

Additionally, by running persistent current account deficits, all of these countries saw rising net income deficits as they had to pay more to support their growing external debt as well as FDI-related income outflows. Nearly all of these countries had large current account deficits when the euro launched. As these deficits accumulated, the cost of financing external debt became a larger and larger feature of the current account. The net income balance worsened by an average of 2 to 3 percent of GDP over this period. Thus, even if countries returned trade balances to their 1999 levels, the current account deficits would be much larger than before.

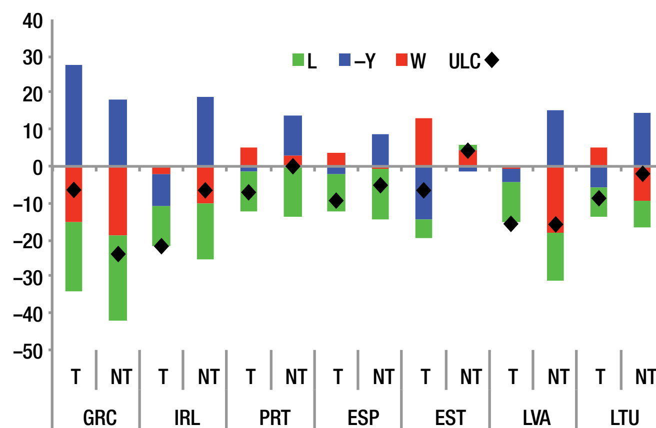
Our second research paper (Kang and Shambaugh, 2014) discusses the need for relative prices to adjust for these countries, the progress that so far has been made, and the link between the different paths to the imbalances and the adjustment path.

Regardless of the underlying causes of external imbalances, as the crisis hit, they needed depreciation to reduce the large current account deficits. Although deterioration of competitiveness in their export sector was not a major factor behind large deficits, they still needed depreciation for a number of reasons. First, for some economies, the large trade deficits have been a persistent problem for several decades. Thus, while trade performance did not worsen during the 2000–07 period, it still needed to improve. Second, the persistent large deficits generated large net income payment needs, requiring improved export sector performance to meet these net income payment needs. Third, as output remains below potential, export improvements are needed to avoid a reemergence of external imbalance as they recover toward full potential output. Fourth, as unemployment rates still remain very high, the production and employment in the tradable sector need to be increased.

To achieve both internal and external balances, they need real depreciation in order to shift spending toward domestic goods and services, to reorient productive resources to the tradables sector, and to increase output to their potential levels. However, given that they use the euro (or fix their currency to the euro), depreciation has to be achieved via a fall in domestic prices relative to trading partners' prices ("internal devaluation"). One way to achieve these goals is for tradable goods ULCs to fall. This makes them more attractive to produce relative to non-tradables and makes them less expensive than foreign tradable goods.

Figure 2. ULC Adjustment Between Tradable and Non-Tradable Sectors

(log difference, peak to the latest)



Peaks: GRC(09Q4),IRL(08Q4),PRT(09Q1),ESP(09Q2),EST(08Q4),LVA(08Q3),LTU(08Q3).
Latest: IRI (12Q1), GRC (13Q1), Others (13Q2).
Sources: Haver Anlytics. IMF staff calculations.

We find that there has been considerable variation across countries in the ULC adjustment process with some early adjusters (Ireland and the Baltics) cutting wages more rapidly and others only slowly improving productivity (largely through labor shedding). Comparing wage dynamics before and after the crisis, it is apparent that countries with large wage run-ups prior to the crisis have experienced more compressed wages after the crisis. Looking across sectors, in every country but Greece, ULCs have declined more in the tradables sector, and real outputs in the tradables sector are higher than the pre-adjustment levels (Figure 2). But, employment remains below the precrisis level even in the tradables sector in all countries, implying that internal devaluation is taking place, but against the backdrop of a prolonged period of low growth. Low global and regional growth is making the adjustment far more difficult.

ULCs in these economies have declined more relative to those in trading partners, with economy-wide ULC-based REER depreciating by about 10 to 25 percent since the beginning of the adjustments with nearly all the improvement coming from relative ULC changes, not the nominal exchange rate. GDP deflator-based REERs also depreciated, though somewhat less than ULC-base REERs, implying that relative prices have not declined as much as relative labor costs possibly due to larger profit margins. These price effects are also seen in the trade account. A rebound of real

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The Rise and Fall of Current Account Deficits in the Euro Area Periphery and the Baltics

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exports, together with import compression, has contributed to significant improvement in current account balances.

Have the relative price adjustments been sufficient enough to rebalance external accounts? Maybe not. Unemployment rates still remain very high in most of these countries. That is, the adjustment is not yet triggering benefits to the overall economy, partly because the adjustment is taking place within an environment of low growth, and partly because the adjustment itself is not generating enough demand to strengthen the economies. We find that output gaps could be quite large when we use the estimates of country-specific Okun's law coefficients and even relatively high estimates of the steady state level of the unemployment rate, implying that cyclically-adjusted current account deficits could still be fairly sizable in many of these countries. Large output gaps would be good news for fiscal adjustment as there is more room for growth recovery, but it implies a greater need for relative price adjustment (either falling prices in these countries or faster price growth in trading partners) to avoid a reemergence of large external imbalance and to reach full employment.

References

Kang, Joong Shik and Jay Shambaugh, 2013, "The Evolution of Current Account Deficits in the Euro Area Periphery and the Baltics: Many Paths to the Same Endpoint," IMF Working Paper 13/169 (Washington: International Monetary Fund).

Kang, Joong Shik and Jay Shambaugh, 2014, "Progress Towards External Adjustment in the Euro Area Periphery and the Baltics," IMF Working Paper, forthcoming (Washington: International Monetary Fund).

Two Sides of the Same Coin? Rebalancing and Inclusive Growth in China

(continued from page 1)

largest poverty incidence in the world. Today, this proportion has fallen to around 13 percent, well below the developing country average.

However, a subtext to this success is that it has come at the cost of rising inequality. According to the World Bank, China's Gini index—which ranges from 0 (perfect equality) to 100 (perfect inequality)—increased from 0.29 in 1981 to over 0.42 in 2005. Notwithstanding a downtick since 2009, official Chinese estimates report a Gini coefficient of over 0.47 in 2012, higher than in the United States. Over this period, geographical and wage disparities have increased sharply, as have capital incomes—from property and entrepreneurial activity—which are always more unequally distributed but were virtually non-existent in China prior to its reforms. As a result of this rise in inequality, those in lower parts of the income distribution have not seen their living standards rise as much as others.

Of course, rising inequality has been a near global phenomenon in the last two decades, with the important exception of Latin America. Across the globe, there is increasing dissatisfaction with the quality of recent economic growth, which is often seen as benefiting certain groups more than others. This is clearly reflected in rising disparities between different groups, with the rich getting richer and faster than the poor. The economics literature has attributed this mainly to globalization, skill-biased technological change, and the decreasing bargaining power of workers.

Even within this global setting, however, China stands out. The rise in inequality has been particularly pronounced, leaving China—which was a highly equal society on the eve of its economic reforms—among the most unequal countries in the world today (Figure 1). Its experience is also a departure from Asia's past record, contrasting sharply with the three-decade record of equitable growth in Japan, the Newly Industrialized Economies, and the ASEAN countries between the 1960s and 1980s. "Growth with equity" was the mantra during this period, as the Asian tigers, unlike Latin America, successfully combined speedy economic growth with relatively low—and in many cases falling—inequality. This ensured that the economic gains from growth were shared widely.

To summarize, China's development has been highly proficient in lifting people out of poverty but has tended to benefit the relatively well-off even more. As a result, China's growth has been less inclusive than in most other developing regions, including Latin America and a number of its Asian peers (Balakrishnan, Steinberg, and Syed, 2013). This is a worrying phenomenon. The academic literature and recent events in different parts of the world have highlighted the detrimental impact of high inequality on economic and social stability and the sustainability of growth.

Our recent paper (Lee, Syed, and Wang, 2013) uses the Shapley value decomposition technique to assess the factors behind the rise of inequality in China. This procedure addresses shortcomings of older techniques, notably that only certain measures of inequality could be used and simultaneous decomposition into different factors was difficult. In broad terms, the Shapley procedure allows the derivation of an exact additive contribution for each factor to total inequality.

We find that, in many ways, inequality may have been an inevitable by-product of China's investment and export-led growth model. As described below, the model that China has followed in the last three and a half decades has to some extent involved a trade-off between rapid rates of growth and worsening inequality (see also Fan, Kanbur, and Zhang, 2009; and Dollar, 2007).

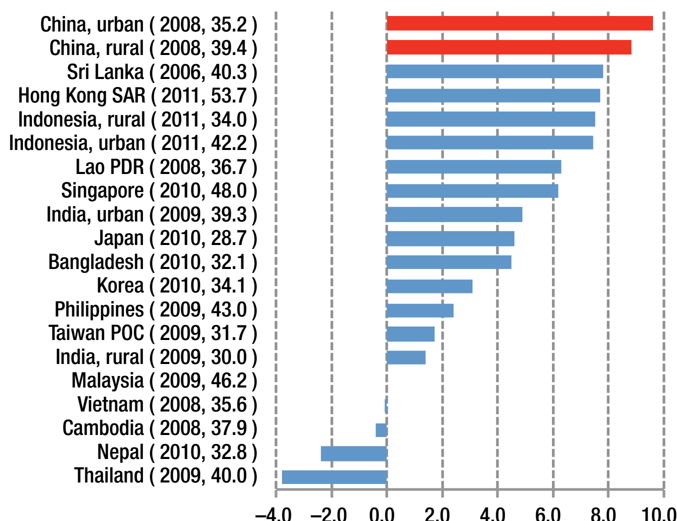
China's growth model has created wealth through investment-induced capacity growth, largely in the manufacturing sector. In terms of sectors, this rapid capital accumulation in manufacturing has kept the value added per worker in the industrial sector high throughout the last few decades. A large share of this value added, however, went to the corporate sector as wages were suppressed by the strong influx of young workers into the labor market associated with China's demographics and the move of migrant workers into urban centers, where industries were concentrated. More broadly, by favoring capital, China's growth model has tended to benefit the corporate sector more than workers, and thus less of the benefits of growth, accrued to household income.

"We find that, in many ways, inequality may have been an inevitable by-product of China's investment and export-led growth model."

The east coast developed first for geographical reasons, benefitting from trade and foreign direct investment. This unbalanced growth strategy in turn propagated income gaps based on skills, sectors, and location. Between Chinese households, those who were living in urban centers had access to better education and medical facilities, by virtue of residing in industrial centers where wealth was generated. Moreover, coastal provinces—China's export heartlands—also provided more opportunities for nonagricultural employment and

Figure 1. Asia: Change in Gini Index, Last Two Decades[1]

(*in Gini points, since 1990*)



Sources: World Bank, national authorities, and IMF staff calculations.
[1]In parentheses, the latest available year and corresponding Gini coefficients.

income. Thus, the central and western regions historically have had a slower pace of income growth when compared to the export heartlands on China's eastern coast, and this adds to the widened income gaps between provinces.

Explicit policies also contributed to rising disparities within geographical areas. Because of the household registration system (hukou), migrant workers had less access to social services. Larger corporations could afford to pay their employees better, not only because of gains from natural economies of scale but also because they enjoyed better and cheaper access to financing under China's state-led banking system.

In addition, this model has become more dependent on liquidity rather than productivity gains during the period around the global crisis, exacerbating disparities. Monetary policies that create excess liquidity beyond that warranted by cyclical considerations can have a differential impact on different sectors of the economy, benefiting those with access to credit and those holding assets whose price rises beyond fundamentals (Han and Lee, 2012). Ample liquidity in China has also facilitated investments in some inland provinces that have become less efficient and wasteful, generating relatively more profit for the corporate sector, with relatively temporary and limited spillover onto household incomes (Lee, Syed, and Xueyan, 2013). Yet another channel is through controls in the financial system, under which resources on the order of

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Seven Questions on the Monetary Transmission Mechanism in Low-Income Countries

Andrew Berg, Luisa Charry, Rafael A. Portillo, and Jan Vlcek

Many central banks in low-income countries (LICs) are attempting to modernize their monetary policy frameworks, having largely overcome earlier challenges of fiscal dominance, multiple exchange rates, and high inflation. But the way forward for monetary policy is clouded by uncertainty about the monetary transmission mechanism (MTM). Do the attributes of many LICs imply that forward-looking monetary policy frameworks are unfeasible or unwise in these countries? A narrative approach to identifying monetary policy shocks in four countries reveals a clear MTM and suggests that much of the observed variation in the MTM may be due to differences in the policy framework.

Question 1. Why worry about the monetary transmission mechanism (MTM) in low-income countries (LICs), in particular?

The environment for monetary policy in many LICs has undergone a fundamental transformation in recent decades, with much lower inflation, fewer signs of fiscal dominance, and an end black market exchange rate premia. And now, as we describe in Berg and others (forthcoming), many central banks in low-income countries in Sub-Saharan Africa are modernizing their monetary policy frameworks.

At the same time, their economies are profoundly different from those of emerging market and advanced countries, with among other features much smaller financial sectors, a high incidence of supply shocks, and a large share of food in consumption. Monetary policy frameworks have also been very different, with greater reliance on monetary aggregates to conduct policy.

Some variant of inflation targeting is the obvious benchmark for those countries with an independent currency. But how can a central bank emphasize an inflation objective as its nominal anchor if it does not know how monetary policy influences the macroeconomy?

Question 2. What is the evidence that transmission in LICs is radically different?

Mishra and others (2012) argue that transmission in LICs is "weak and unreliable." They note that the correlation between short and long rates is generally much weaker in LICs than in emerging markets or advanced countries, and that vector-auto-regression (VAR) based evidence in developing countries tends to find insignificant effects of "monetary policy shocks" on inflation and output.

In ongoing work, we are investigating the question posed in Mishra and others (2012) as to whether this evidence reflects the techniques or the "facts on the ground." Early results suggest that there are indeed reasons to worry about the application of some standard empirical techniques in conditions typical of LICs. In particular, data scarcity and regime changes imply that periods of consistent policy regime with adequate data are very short, rarely longer than say 10 years. Simulations suggest that 10 years is generally too short to get significant coefficients in a standard small VAR quarterly data, even if data are measured correctly and monetary policy is correctly identified. And indeed the regimes in the region have not been stable (Berg and others, forthcoming).

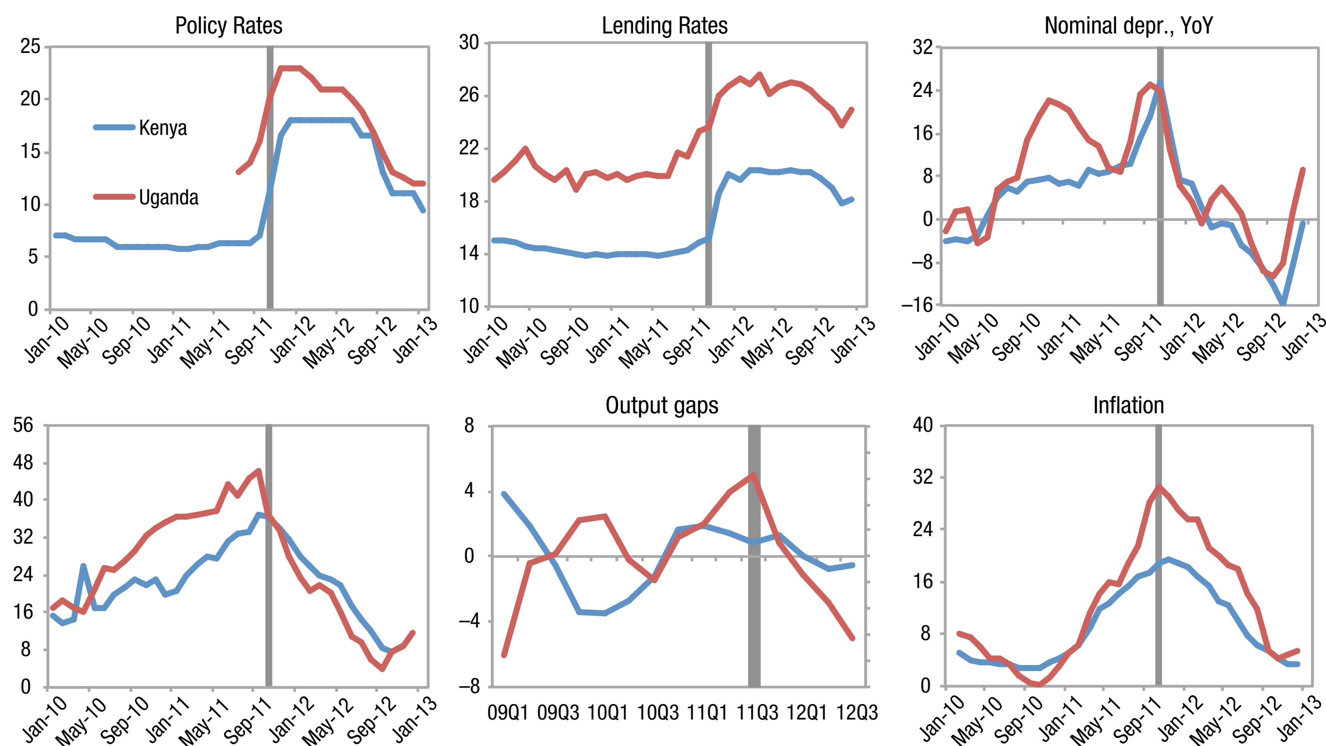
It is worth remembering that even in the United States, where data series are long and structural change less important, it took many years and dozens of papers before anomalies such as the "liquidity puzzle" (that a monetary policy tightening seemed to lower interest rates) and the "price puzzle" (that a monetary tightening seemed to increase subsequent inflation) were solved in VARs.

Question 3. What else can be done to identify the MTM?

As Summers (1991) and Romer and Romer (1989) argue, views on the real effects of monetary policy in the United States have been more influenced by the narrative arguments of Friedman and Schwartz (1963) and by reference to the real effects of the "Volcker disinflation," than by formal statistical analysis. Thus, much of our research has focused on country-specific analyses rooted in detailed consideration of particular episodes.

In Berg and others (2013), we examine a significant tightening of monetary policy that took place in October 2011 in

Figure 1. Kenya and Uganda: Selected Macro-Variables Jan. 2010–Dec. 2013



Source: IMF Working Paper 13/197.

four members of the East African Community (EAC): Kenya, Uganda, and Tanzania, as well as the somewhat different experience of a fourth EAC country, Rwanda. The events we studied took place in the context of sizeable commodity price shocks, one peaking in 2008 and the second in 2010–11, as well as the global financial crisis. Policymakers generally did not tighten in the face of the first shock, a response validated by the collapse of these prices and of external demand in 2009. The second boom was more persistent and, perhaps inspired by the earlier episode, policy remained accommodative in most of the countries in question.

Throughout 2011, concerns increased about the adequacy of the policy stance. However, it was unclear when a tightening might come or how strong it would be. Thus, when it came it was at least partly unexpected—"unusual" in the language of Friedman and Schwartz (1963). We can thus ask, what did this large monetary policy tightening shock do?

Question 4. What happened, then, when policy was tightened?

We find clear evidence of the monetary policy transmission mechanism, especially in Kenya and Uganda: after a large policy-induced rise in the short-term interest rate, lending and other interest rates rise, the exchange rate tends to appreciate, output growth tends to fall, and inflation declines (Figure 1).

Question 5. But what about the special features of LIC economies?

There can be no question that the unusual features of LIC economies can make a large difference to the MTM. The trick, however, lies in figuring out what matters when.

For example, in our narrative case studies in Berg and others (2013), there were several "dogs that didn't bark," i.e., features that did not manifest themselves as critical but which had received substantial attention from policymakers and analysts. For example, the depth of the financial sector did not distinguish the two countries with the clearest transmission (Kenya and Uganda) from the two others. In terms of the size of the financial sector, Kenya is the outlier, with a much larger financial sector than the other three (Figure 2). Yet the MTM looks quite similar in Kenya and Uganda and somewhat different in the other two countries.

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Seven Questions *(continued from page 7)*

Question 6. What did seem to influence the MTM?

The feature that seems to most clearly distinguish the four countries we examined was the nature of the policy regime itself. Uganda had just officially announced an "Inflation Targeting-Lite" regime in July 2011, after attempting "flexible money targeting" from late 2009. Kenya, meanwhile, also announced in September 2011 operational reforms designed to emphasize the role of the central bank policy interest rate in the conduct of policy. Meanwhile Tanzania and Rwanda during this period placed primary emphasis on reserve money growth as an operational target with broad money aggregates as intermediate targets, while also announcing a central bank policy rate. Rwanda added substantial exchange rate intervention to the mix, such that the nominal exchange rate exhibited little volatility around a steady rate of depreciation.

We argue in the paper that these differences in regime may have shaped the MTM. In Tanzania, for example, the observed increase in the policy rate (and tightening through quantity instruments) did not translate into higher lending rates, but other aspects of the MTM (credit growth, exchange rate, inflation, possibly output) seemed to respond.

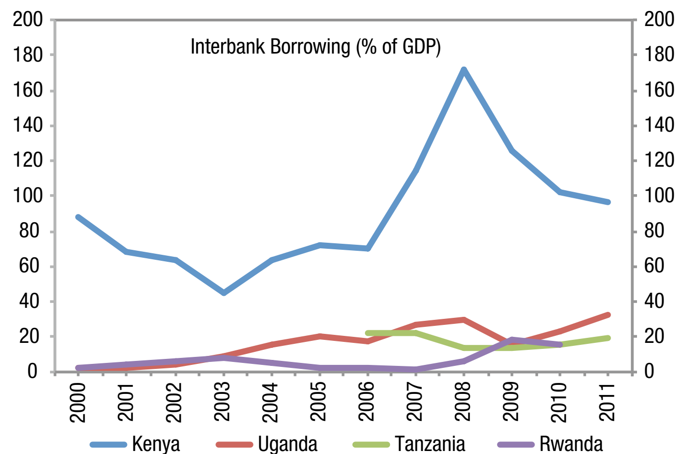
Question 7. Does this mean that the monetary policy problem is very similar in LICs and Emerging Markets (EMs)?

Not so fast. It surely remains the case that, while the main elements of the MTM seem to be there in recognizable form in some important cases, LIC central banks face a number of unusual, albeit not unprecedented, challenges.

Other work in the IMF's Research Department has focused on the role of food price shocks (Andrle and others, 2013) and of money targeting (Andrle and others, 2013b) in a forward-looking policy framework. The bank-dependent financial systems shaped the nature of and response to the global financial crisis in LICs, which manifested in sudden stops of capital, increases in the country risk premium, adverse movements in the terms of trade, and a flight to safety domestically (Baldini and others 2012). One important implication is that various credit and money aggregates moved in complex and superficially contradictory ways, complicating the task of inferring the stance of monetary policy from these aggregates. Another is that monetary policy may have fairly limited scope to buffer the real effects of such shocks.

More work remains to be done on the role of limited financial markets and the banking system. Research under-

Figure 2. Kenya, Rwanda, Tanzania, and Uganda: Size of the Financial Sector



Source: IMF Working Paper 13/197.

way jointly with the Bank of Uganda involves collecting a large set of loan-level observations to understand some aspects of the MTM that cannot be readily observed with the aggregate data, such as the role of credit rationing.

Finally, the topic of exchange rate management is an important one in LICs, perhaps even more so than in more developed countries. Central banks have been using sterilized intervention along with more standard instruments, and Benes and others (2013) and Ostry and others (2012) are beginning to come to grips with the question of when and how to do so effectively. A related and under-researched topic is the strength of monetary transmission and the role of monetary policy in pegged regimes with limited capital mobility (See for example Blotevogel, 2013).

Despite these important uncertainties, we believe that our results should be encouraging for those central banks that are attempting to move toward more forward-looking policy frameworks. It also suggests that models that embed the standard MTM, albeit carefully modified and augmented to capture critical country-specific features, can be useful.

References

Andrle, M., A. Berg, A. Morales, R. Portillo and J. Vlcek, 2013, "Forecasting and Monetary Policy Analysis in Low-Income Countries: Food and Non-Food Inflation in Kenya," IMF Working Paper 13/61 (Washington: International Monetary Fund).

Andrle, M., A. Berg, E. Berkes, R. Portillo, J. Vlcek, A. Morales, 2013b, "Money Targeting in a Modern Forecasting and

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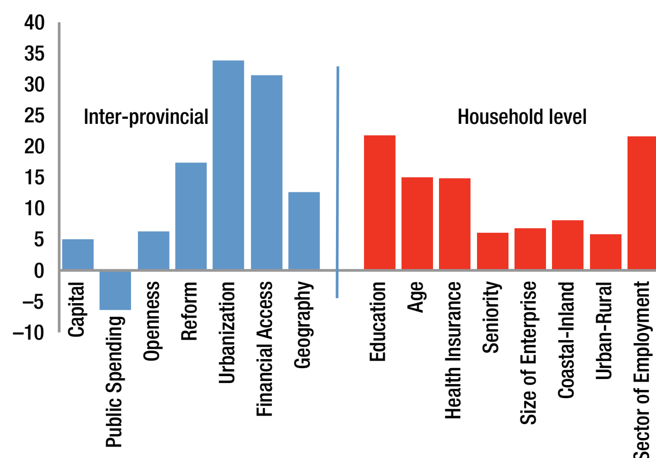
Figure 2. Inequality in China: Contribution of Factors
(*in percent of overall Gini during 2000s*)



Source: IMF staff calculations.

4 percent of GDP are transferred from households and small and medium enterprises (SMEs) to large corporations every year (Lee, Syed, and Xueyan, 2012).

Income gaps were inevitable under the growth model described above. Rising skill premia pushed up the wages of managers who were in relatively short supply compared to the large influx of young and migrant workers, larger corporations were able to pay better due to stronger competitiveness and better access to finance, while those in the manufacturing sector received higher pay than those who remained in the agricultural sector because of productivity differences. Geographically, being at the source of wealth creation, those in urban centers received better wages and social services than in rural areas, while those in the east coast areas prospered relative to inland provinces because of external trade and their larger productive capital stocks.

Consistent with these effects, we find that among Chinese households, the most important factors explaining income inequality are education, access to health insurance, and labor market variables, including sector of employment and enterprise size (Figure 2). Across China's provinces, differences in per capita incomes are driven by the relative level of urbanization, financial access, privatization, and capital-intensity. Importantly, we find that public spending can dampen geographic disparities, as it has done since the "Go-West" Policy of 2000.

Based on these findings, a number of policies could help broaden the benefits of growth in China. These include prudent monetary policy, higher public spending on health and education, deregulation and reforms to increase competition, measures to raise labor incomes and assist vulnerable workers, and better access to finance for both households and SMEs, including in rural areas.

Apart from arresting the rising tide of inequality in China, many of these policies also have the potential to rationalize savings and boost household incomes, reducing the bias toward capital and large corporations, and unshackling consumption. In this way, they would have the positive side effect of facilitating the needed rebalancing of China's growth model toward households, workers, and consumption.

References

Balakrishnan, R., C. Steinberg, and M. Syed, 2013, "The Elusive Quest for Inclusive Growth: Growth, Poverty, and Inequality in Asia," IMF Working Paper 13/152 (Washington: International Monetary Fund).

Dollar, D., 2007, "Poverty, Inequality, and Social Disparities during China's Economic Reform," World Bank Policy Research Working Paper 4253 (Washington: World Bank).

Fan, S., R. Kanbur, and X. Zhang, 2009, "Regional Inequality in China: An Overview," in Regional Inequality in China: Trends, Explanations and Policy Responses, (London: Routledge).

Han, L. and I. Lee, 2012, "Optimal Liquidity and Economic Stability," IMF Working Paper 12/135 (Washington: International Monetary Fund).

Lee, I., M. Syed, and L. Xueyan, 2012, "Is China Over-Investing and Does it Matter?" IMF Working Paper 12/277 (Washington: International Monetary Fund).

———, 2013, "China's Path to Consumer-Based Growth: Reorienting Investment and Enhancing Efficiency," IMF Working Paper 13/83 (Washington: International Monetary Fund).

Lee, I., M. Syed, and X. Wang, 2013, "Two Sides of the Same Coin? Rebalancing and Inclusive Growth in China," IMF Working Paper 13/185 (Washington: International Monetary Fund).

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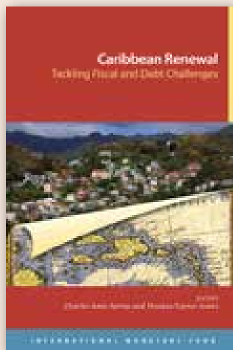

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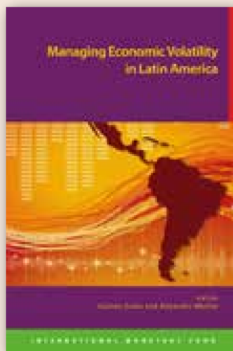

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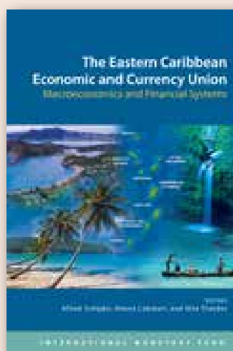

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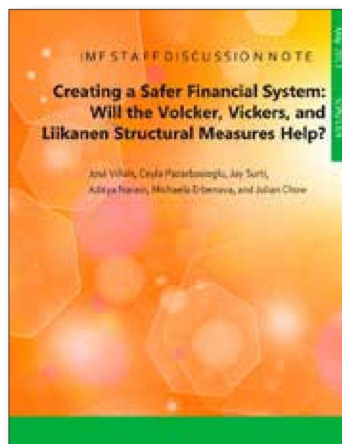

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Baldini, A., J. Benes, A. Berg, M. Dao, R. Portillo, 2012, "Monetary Policy in Low Income Countries in the Face of the Global Crisis: The Case of Zambia," IMF Working Paper 12/94 (Washington: International Monetary Fund).

Benes, J., A. Berg, R. Portillo and D. Vavra, 2013, "Modeling Sterilized Interventions and Balance Sheet Effects of Monetary Policy in a New-Keynesian Framework," IMF Working Paper 13/11 (Washington: International Monetary Fund).

Berg, A., S. O'Connell, C. Pattillo, R. Portillo, and F. Unsal, forthcoming, "Monetary Policy Issues in Sub-Saharan Africa," in Celestin Monga and Justin Yifu Lin, eds., *Oxford Handbook of Africa and Economics*, (Oxford: Oxford University Press).

Berg, A., L. Charry, R. Portillo, and J. Vlcek, 2013, "The Monetary Transmission Mechanism in the Tropics: A Narrative Approach," IMF Working Paper 13/197 (Washington: International Monetary Fund).

Blotevogel, R., 2013, "Measuring and Mending Monetary Policy Effectiveness Under Capital Account Restrictions—Lessons from Mauritania," IMF Working Paper 13/77 (Washington: International Monetary Fund).

Friedman, M. and A. Schwartz, 1963, *A Monetary History of the United States of America*, (Princeton: Princeton University Press).

Mishra P., P. Montiel and A. Spilimbergo, 2012, "Monetary Transmission in Low-Income Countries: Effectiveness and Policy Implications," *IMF Economic Review*, Vol.60, No. 2. pp. 270–302

Ostry, J. D., A. Ghosh, and M. Chamon, 2012, "Two Targets, Two Instruments: Monetary and Exchange Rate Policies in Emerging Market Economies," IMF Staff Discussion Note 12/01 (Washington: International Monetary Fund).

Romer, C. and D. Romer, 1989, "Does Monetary Policy Matter? A New Test in the Spirit of Friedman and Friedman." In *NBER Macroecononomics Annual*, Vol. 4, pp. 121–84. (Cambridge: National Bureau of Economic Research).

Summers, L., 1991, "The Scientific Illusion in Empirical Macroeconomics." *Scandinavian Journal of Economics,* Vol. 93, No. 2, pp. 129–48.