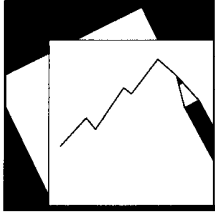


The Big Split: Why Did Output Trajectories in the ASEAN-4 Diverge after the Global Financial Crisis?



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Abstract

The global financial crisis originated in advanced economies, but had a major impact on emerging markets. The impact, however, was not uniform. Even in a relatively homogenous group of countries such as ASEAN-4 (Indonesia, Malaysia, the Philippines and Thailand), there were considerable differences both in terms of instantaneous impact of the crisis and in terms of output performance relative to trend. There are several main reasons for the divergence. First, trade shocks had a larger impact on more open economies (Malaysia and Thailand). Second, countercyclical fiscal stimulus in Indonesia and the Philippines was larger and was sustained longer. Third, idiosyncratic factors pushed output up in Indonesia and down in Thailand. Such factors include investment-friendly structural reforms and fortuitously timed election spending in Indonesia, as well as political instability and natural disasters in Thailand.

JEL Classification Numbers: E60; F44.

Keywords: Global Financial Crisis; ASEAN; Countercyclical Policies.

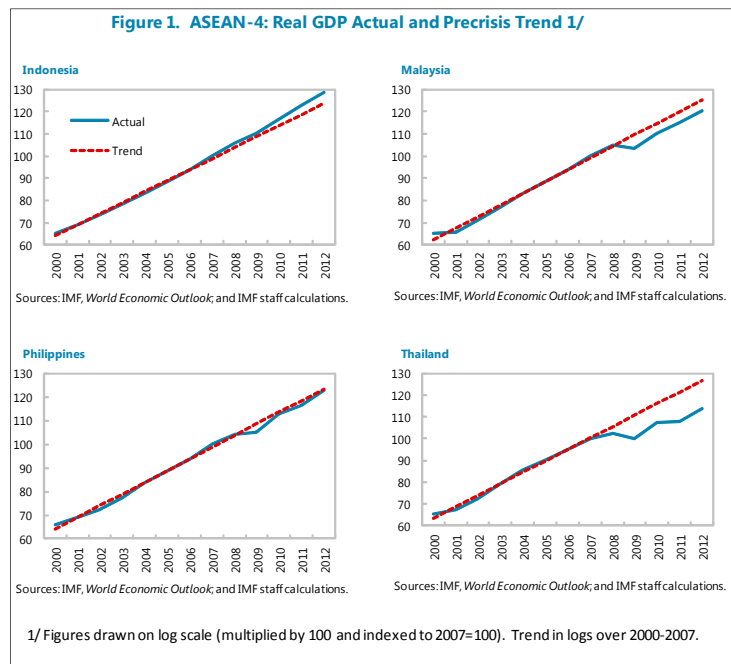
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I. INTRODUCTION

The global financial crisis (GFC) originated in advanced economies, but had a major effect on emerging markets. Its impact, however, was not uniform. The World Economic Outlook (e.g., IMF (2010a)) documents differences among various groups of economies, such as, for example, emerging Asia, where most countries have regained their brisk pace after the initial shock, and emerging Europe, where growth has slowed considerably after the crisis. But even in such a relatively homogenous and highly integrated group of countries as ASEAN-4 (Indonesia, Malaysia, the Philippines and Thailand), there are considerable differences both in terms of the instantaneous impact of the crisis and in terms of output performance relative to the precrisis trend.² This paper documents those differences and explores likely explanations.

Figure 1 and Table 1 demonstrate the diversity of experiences among the ASEAN-4 countries. Figure 1 compares the actual output level with a counterfactual based on continuation of precrisis trends.³ Indonesia stands out in the group as it went through the crisis almost intact and reached an output level above the precrisis trend. The other three countries all experienced output losses. However, the Philippines recovered to the precrisis trend level, while the output losses in Malaysia and Thailand appear to be permanent.



² ASEAN stands for the Association of Southeast Asian Nations. ASEAN currently includes 10 members. Our grouping—ASEAN-4—includes the four members at broadly similar levels of development, linked through trade and sharing many structural and institutional features.

³ Given that the trend is taken over the generally propitious period of 2000–07 rather than a full business cycle, it should not be equated with potential output. By extension, the distance from the trend should not be interpreted as the output gap. The trend serves to establish a common benchmark for our comparative analysis.

Table 1 looks deeper into the varied post-crisis performance across ASEAN-4. In the five years before the crisis, the four countries grew at nearly identical rates of 5 percent per annum.⁴ The crisis hit Malaysia and Thailand much harder than the two island nations, with

	Change in real GDP (2009Q1/2008Q3)	Time to regain pre-crisis peak (quarters) ^{1/}	Average growth 2000-07	Average growth 2010-12	Deviation from pre-crisis trend in 2012 ^{2/}
Indonesia	1.3	No decline	5.1	6.4	5.3
Malaysia	-6.4	5	5.1	5.3	-4.7
Philippines	-2.2	3	5.0	5.2	-0.6
Thailand	-7.2	5	5.1	3.2	-11.8

Sources: Haver Data Analytics; and IMF staff calculations.
 1/Time from precrisis peak quarter until the quarter when that level was achieved again or exceeded.
 2/Trend over 2000-2007.

peak to trough output declines of 6 and 7 percent, respectively, and it took them 5 quarters to bounce back to the precrisis levels of output. The Philippines experienced only one quarter of negative growth and in Indonesia output did not decline at all, although the growth rate did go down significantly in 2008Q4. After rebounding from the crisis, the average growth rates over the last two years spanned a much wider range than before—from just over 3 percent in Thailand to nearly 6½ percent in Indonesia. By 2012, the Philippines found itself broadly on the precrisis trend line. Indonesia was 5 percent above the trend line, while Malaysia was 5 percent below. Finally, Thailand had the largest output drop during the crisis and the slowest growth after the crisis.⁵ Consequently, its real GDP was 12 percent below trend in 2012—by far the worst outcome among the group.

What explains these cross-country differences in performance? Several broad categories of factors could be at play. Given the context, it is natural first to look at the size of the external shock. The magnitudes of trade or financial shocks could have varied across countries. Next, the transmission of shocks to domestic economy depends on the degree of trade openness, the composition of exports, the degree of financial development, and the strength of bank, corporate and household balance sheets. Lastly, policy responses may have also played an important role in post-crisis recovery. Countries that had stronger fiscal and monetary stimulus may have weathered the crisis better.

We pay considerable attention to the crisis years, including the initial shocks and the early policy responses. While one might think that only permanent shocks and structural changes may shift output trajectory in the long run, empirical analysis shows that the initial decline in output during a crisis is an important predictor of the medium-term output loss relative to the trend (IMF, 2009a). Possible explanations for this regularity include “(1) bankruptcies that lead to fire sales of capital assets that have significant sunk costs and take time to rebuild, (2) an impaired financial system that needs time to heal before it can intermediate financial capital effectively, and (3) labor and product market rigidities that impede the necessary

⁴ Differences in *per capita* GDP growth rates before the crisis were more notable. However, there was no sharp change in demographic trends around the time of the crisis, hence divergence in post-crisis performance of these four countries relative to their precrisis trends remains stark in *per capita* terms as well.

⁵ Also, unlike the other three countries, Thailand was already below the trend line in 2007—its slowdown started before the GFC.

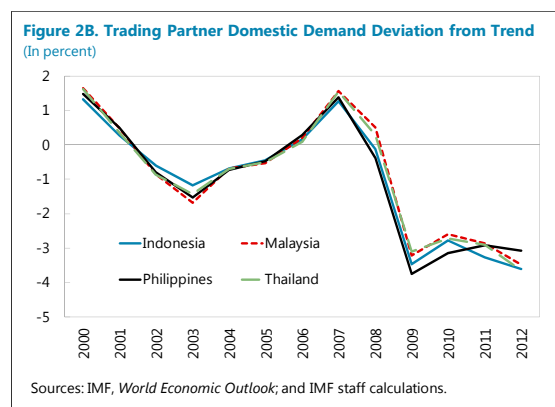
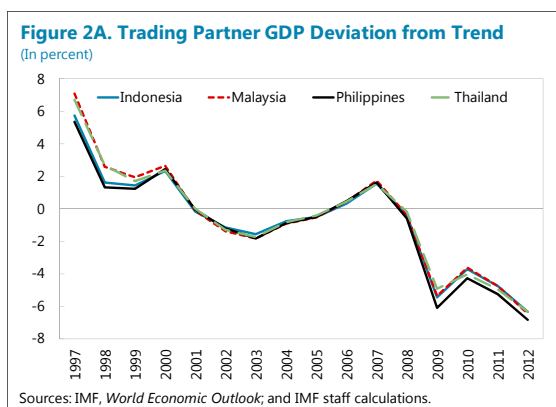
reallocation of labor and capital following a crisis.”(*op.cit.*, p.138). In our group of countries, the rankings by initial output decline and by eventual loss are perfectly correlated.

The rest of the paper is organized as follows. Section II looks at the size of external shocks on both real and financial sides. Section III explores the transmission of external shocks and their interaction with structural characteristics of the economy. Section IV compares domestic policy responses across countries. Section V concludes.

II. THE MAGNITUDE OF EXTERNAL SHOCKS

Trade Shocks

The four countries in this study are located in the same geographic region and share trade linkages with broadly the same group of partners. Hence, it is not surprising that they experienced external demand shocks of very similar magnitude. Figure 2A shows the deviation of trading partner GDP from its precrisis trend for each country. The index for trading partner GDP is a weighted average based on export shares. The lines are nearly indistinguishable for the four countries implying an identical deterioration of the external environment on the real side. Deviations of domestic demand in the trading partners—which arguably serve as a better representation of external demand shocks for the four ASEAN economies than GDP deviations—are also aligned very closely (Figure 2B).



In addition to their destination, the composition of exports may also matter for the size of a trade shock. Table 2 documents differences across the group. Malaysia and especially Indonesia export considerably more fuel than the other two countries. Demand for energy stayed fairly robust in real

Table 2. Export Composition, 2007
(In percent of total)

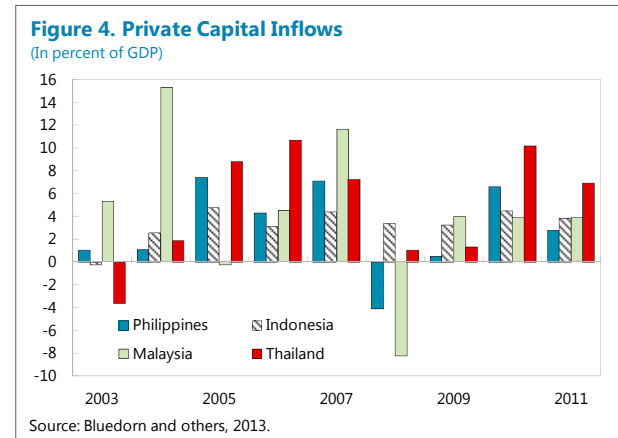
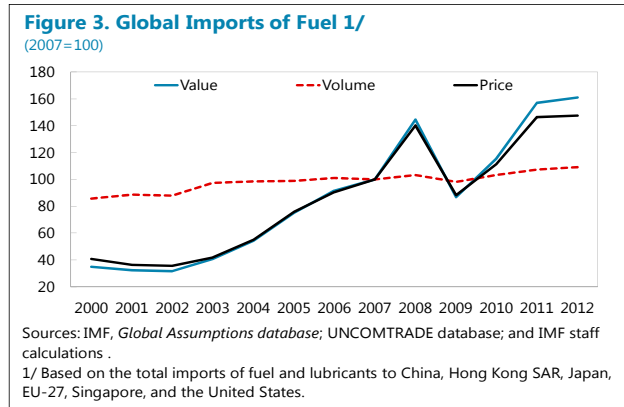
	Indonesia	Malaysia	Philippines	Thailand
Food and beverages	12.2	7.2	4.6	9.1
Industrial supplies	33.1	16.8	10.9	23.8
Fuels and lubricants	22.0	12.2	2.4	3.4
Capital goods excl. transportation equip	7.6	39.7	53.1	25.2
Transportation equipment	3.8	2.0	5.6	10.7
Consumption goods and other	11.4	7.8	7.2	11.5
Services	9.9	14.3	16.2	16.4

Sources: UNCOMTRADE database; IMF, *World Economic Outlook*; and IMF staff calculations.

terms through the crisis, while the prices, after wild fluctuations over the course of 2008 and 2009, rebounded vigorously and by 2011 were almost 50 percent higher than the 2007 average. It was primarily price movements that drove developments in global import demand for fuel (Figure 3). Steady demand helped maintain production in the energy sector, whereas higher prices stimulated investment and boosted income in energy-rich economies. At the same time it should be noted that global demand for many other goods (e.g., automobiles) also bounced back quite nicely after 2009, even if the drop in 2009 was deeper than that for fuel. Moreover, even though it is important, the energy sector does not play a dominant role in Indonesia or Malaysia. Hence we do not believe that export composition was a key factor differentiating the performance of ASEAN-4 economies during and after the GFC.⁶

Financial Shocks

ASEAN countries also came under pressure through financial linkages. Their financial institutions had few securitized products on balance sheets, so the direct hit from the subprime crisis was rather limited. However, they experienced a large decline or even reversal in capital flows (Figure 4). The sudden stop was most pronounced in Malaysia, where foreign investors sold government bonds and got almost completely out of central bank securities. Total capital outflow amounted to 8 percent of GDP at the height of the crisis.⁷ In the Philippines, the capital flight was less pronounced in 2008, but it took until 2010 for capital inflows to bounce back. Thailand had two years of subdued inflows. In contrast, Indonesia experienced only a mild moderation compared to precrisis numbers, although the base was smaller than in the other countries.



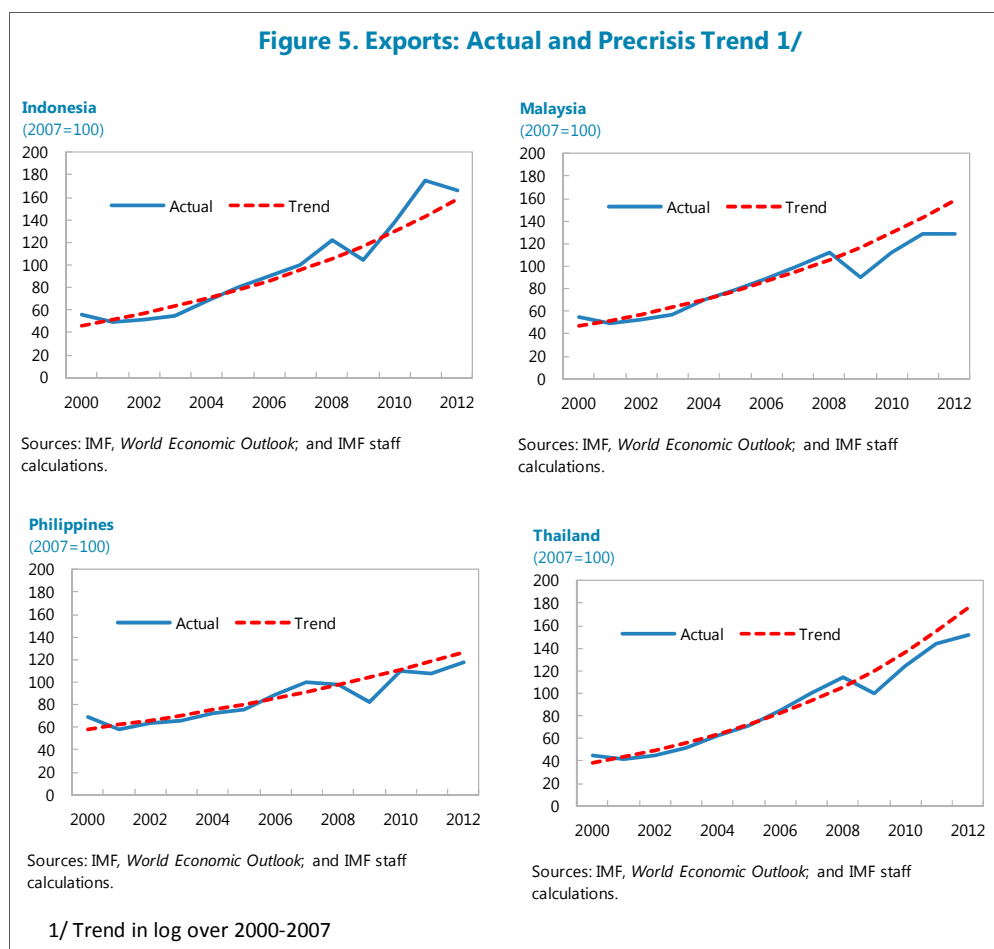
⁶ The evolution of non-oil GDP around its trend is very close to that of total GDP for all the countries except Malaysia, where non-oil GDP deviated from its precrisis trend less than total GDP while oil production declined after 2007. Results are available from the authors upon request.

⁷ It should be noted, however, that repatriation of domestic capital invested abroad helped offset capital outflows from Malaysia (IMF, 2013a).

III. STRUCTURAL CHARACTERISTICS AND TRANSMISSION OF SHOCKS

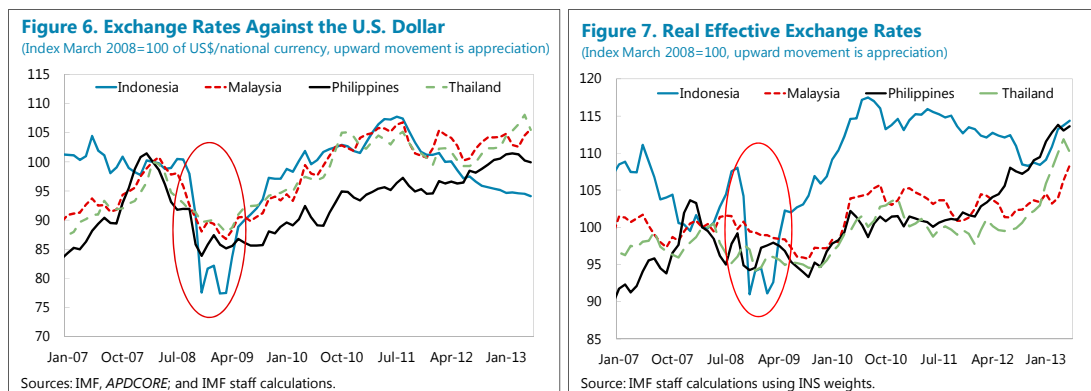
Transmission of Trade Shocks

As discussed in Section II, the four countries experienced external demand shocks of similar magnitude from trading partners. The initial impact on exports in 2009 was therefore also close in magnitude (Figure 5). However, the recovery paths differed significantly. While exports largely bounced back in Indonesia and, at least temporarily, in the Philippines, they remained far below trend in Malaysia and Thailand. This could stem from differences in exchange rate movements and, as discussed above, the composition of exports.



Reflecting the interaction of external pressures and exchange rate policies (which will be explained in detail in the policy response section), the Indonesian rupiah depreciated considerably more than the other three currencies during the crisis, which might have offset the negative demand shocks to some extent, and helped exports to gradually recover (Figure 6). It should be noted that the spike in inflation—partly induced by depreciation—was larger in Indonesia and the Philippines than in Malaysia and Thailand, so the differences in real depreciation were less pronounced, but still substantial (Figure 7). In subsequent

years, as the rupiah recovered while inflation stayed high, Indonesia's real exchange rate appreciated significantly, contributing to a deterioration in the country's current account.



The extent to which external demand shocks and changes in exports translate into output movements depends on the degree of trade openness.⁸ Malaysia is the most open economy in the group, with the export-to-GDP ratio above 100 percent (Table 3). Next to it is Thailand, where exports account for about 70 percent of GDP. The decline in exports therefore disproportionately affected these two economies.

Table 3. International Trade Exposure, 2007
(In percent of GDP)

	Indonesia	Malaysia	Philippines	Thailand
International trade	54.7	192.5	83.5	139.3
Exports	29.3	106.2	39.7	73.4
Imports	25.4	86.3	43.8	65.9
Domestic value added induced by exports 1/	23.6	59.5	20.5	45.7

Sources: IMF, *World Economic Outlook, Direction of Trade Statistics*; World Bank, *World Integrated Trade Solution*; OECD.Stat; and IMF staff calculations.
1/ 2008 data; value added by each country in the production of goods and services that are consumed worldwide.

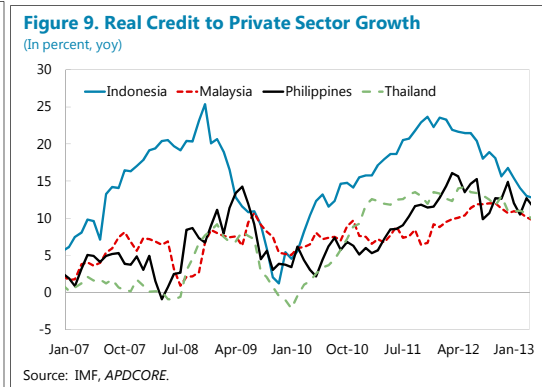
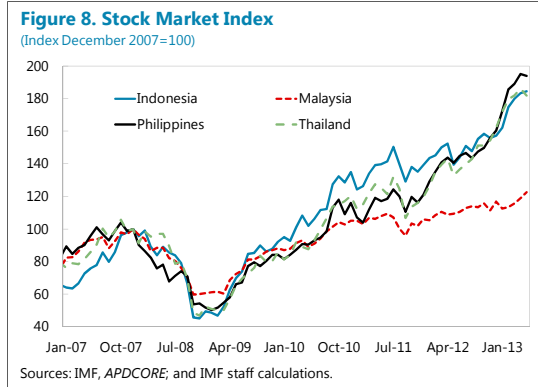
Indonesia and the Philippines are much more closed, with the export-to-GDP ratios in the 30–40 percent range. Moreover, since their exports declined somewhat less, the impact of the external shock on the economy was further dampened.

Transmission of Financial Shocks

Reflecting capital flight and confidence spillovers, the financial shocks led to some turmoil in the financial market across the ASEAN-4. Over the course of 2008, the stock market index fell nearly 40 percent in Malaysia and by about 50 percent in the other three countries (Figure 8).⁹ Government bond yields also jumped at the beginning of the crisis, especially in Indonesia and the Philippines. However, the turmoil in the financial market was relatively short-lived, as both stock markets and bond yields recuperated strongly after the introduction of quantitative easing by the U.S. Federal Reserve.

⁸ Blanchard and others (2010) document the large role that export shares and output declines in trading partners played in explaining output declines in a broader set of emerging markets at the peak of the crisis.

⁹ Of course, these declines reflected all the factors mentioned above, not just confidence spillovers or increases in risk aversion.



The impact of financial shocks on credit growth was also relatively mild. Real credit growth contracted across the board in 2008, but started to recover strongly in 2009 and rose to precrisis level by 2012 (Figure 9). This partly reflects abundant global liquidity after the start of quantitative easing, but also the strong bank and corporate balance sheets in the ASEAN-4 region. As shown in Table 4, banks were well capitalized when they entered the crisis, and corporate leverage was quite low.

Table 4. Vulnerability Indicators, 2007

	Indonesia	Malaysia	Philippines	Thailand
Banking Indicators (in percent)				
Capital to risk-weighted assets	20.2	14.8	15.7	14.8
Capital to assets	9.2	7.4	11.7	9.8
Nonfinancial Corporate Indicators (in percent)				
Debt/Asset	30.1	24.3	15.7	24.1

Sources: IMF, *World Economic Indicators*; Bloomberg Data LP.; IMF, *Global Financial Stability Report*; CEIC Data Co. Ltd; and IMF staff calculations.

The real impact of financial shocks may have been larger in countries with greater financial depth. As shown in Table 5, both the credit to GDP ratio and market capitalization of bond and stocks are much higher in Malaysia and Thailand. This implies the wealth effect from the financial turmoil may have therefore been larger in these two countries. In contrast, the significant drop of private credit growth in Indonesia may not have translated into a major shock for the real economy because the credit to GDP ratio was rather low.

Table 5. Financial Depth, 2007
(In percent of GDP)

	Malaysia	Thailand	Indonesia	Philippines
Private credit	112	140	32	32
Bond market capitalization	104	75	15	36
Stock market capitalization	160	80	46	69

Sources: IMF, *World Economic Outlook*; and AsianBondsOnline.

In sum, the slowdown in trading partner output and demand growth was similar across the four ASEAN countries, but the degree to which this affected their GDP depended on their openness and the extent of exchange rate depreciation. Both of these factors favored Indonesia and the Philippines. While portfolio outflows were largest from Malaysia, it was Indonesia and the Philippines that experienced the largest declines in their asset prices and credit growth. However, the impact of financial volatility in these countries on the real economy was mitigated by the relatively small size of their banking systems and capital markets. It should be noted that various measures taken after the Asian Financial Crisis by the ASEAN-4 allowed them to strengthen public and private balance sheets and to build large

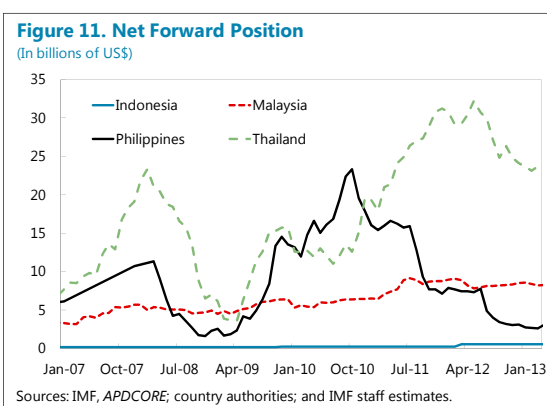
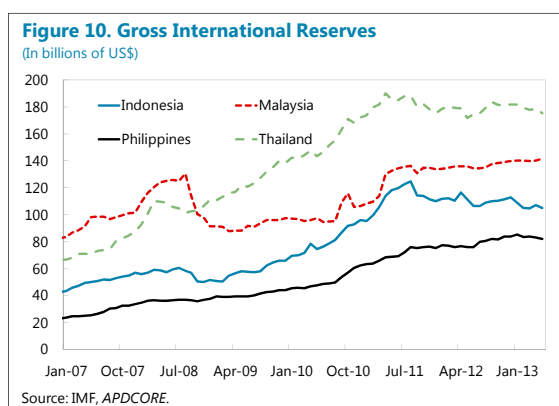
international reserves and other buffers. This reduced considerably their vulnerability to shocks and helped them withstand the impact of the global financial crisis.

IV. POLICY RESPONSES

Taking advantage of the buffers built since the late 1990s, all four countries mounted a forceful policy response to the global financial crisis. However, the timing and magnitude of their responses varied significantly, which likely contributed to the differences in post-crisis recovery.

Exchange Rate Policy—Immediate Reaction to Financial Shocks

In the early stages of the crisis, the shock was largely financial. Capital outflows put pressure on the exchange rates. All countries leaned against the wind, intervening in foreign exchange markets. Malaysia spent by far the most reserves—over US\$40 billion (nearly a third of its stock). Intervention was more modest in the other three economies (Figures 10 and 11). Thailand reduced its net international reserves by nearly US\$20 billion between March and October 2008, with about two-thirds of that amount coming from reducing the Bank of Thailand’s net forward position. Indonesia lost about US\$10 billion of reserves in the second half of 2008, while the Philippines reduced its net forward position by a similar amount while bringing reserve accumulation to a halt over the course of 2008.¹⁰ These differences likely contributed to the fact that the Philippine peso and particularly the Indonesian rupiah depreciated substantially more than the Malaysian ringgit and the Thai baht—thus supporting the exports in the Philippines and Indonesia.

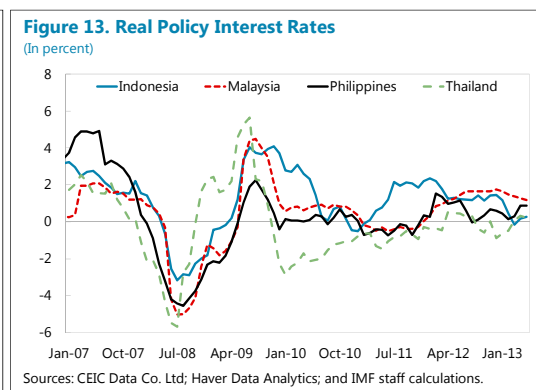
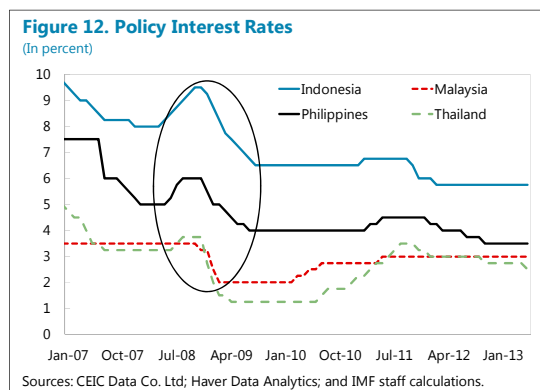


Monetary Easing—Reaction to Real Shocks

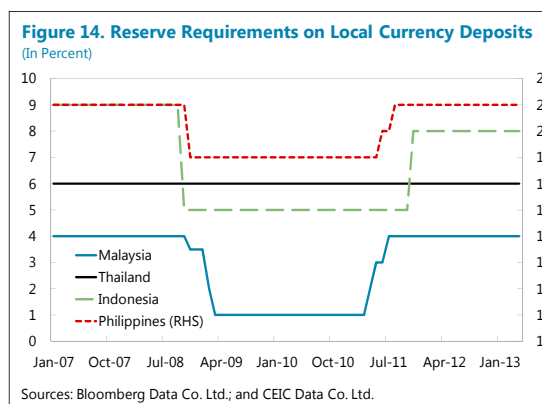
As financial pressures subsided and the demand shock (both external and domestic) became the main concern, the policy rates were lowered significantly in all four countries in late 2009

¹⁰ These numbers represent 17, 7, 2 and 6 percent of Malaysia’s, Thailand’s, Indonesia’s and the Philippines’ 2008 GDP, respectively.

and early 2010, all moving to historically low levels (Figures 12 and 13). The difference from the precrisis rate was the largest in Indonesia and Thailand, while Malaysia had the least easing and was the first to start normalizing rates.

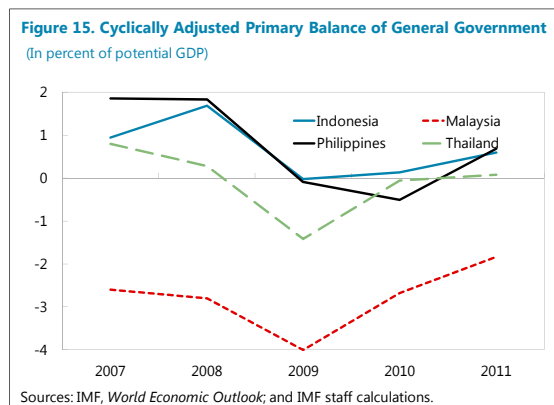


All four countries took steps to maintain liquidity provision, although some were more aggressive than others. For example, all but Thailand lowered reserve requirements (Figure 14); Indonesia and the Philippines also undertook foreign exchange liquidity injections (Ishi and others, 2009). All four supported their financial systems (e.g., via increases in deposit insurance limits, some regulatory forbearance). It is difficult to compare the magnitude of these measures across countries. It does appear, however, that Indonesia provided the most support to exporters via depreciation and was the most aggressive in both conventional and unconventional monetary easing, but these outcomes reflect not only policy choices, but also exogenous pressures.

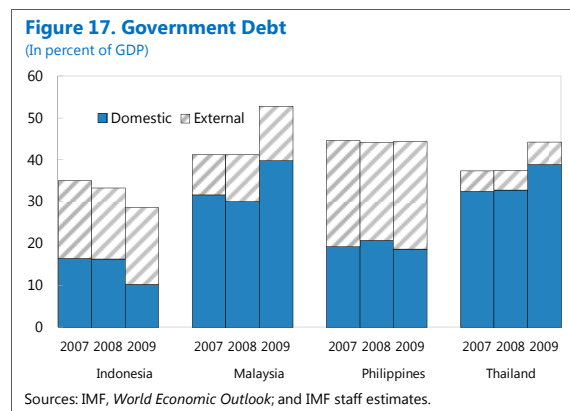
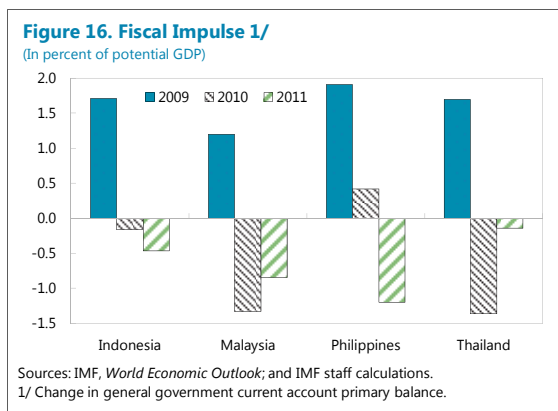


Fiscal Stimulus

Fiscal policy reaction differed considerably among the four countries (Figure 15). Initially they all responded with a significant loosening of the fiscal stance, as measured by the decline in the ratio of the cyclically-adjusted general government primary balance to potential GDP in 2009 (Figure 16). On that measure, the fiscal impulse ranged from 1.2 percentage points in



Malaysia to 1.9 percentage points in the Philippines.¹¹ However, Thailand and particularly Malaysia were much quicker to withdraw fiscal stimulus than the other two countries.¹² In Malaysia the turn toward consolidation may have been triggered by concerns about running out of fiscal space, with government debt and deficits noticeably higher than in the other three countries (Figure 17).¹³ In Thailand plans for a second round of fiscal stimulus (that was supposed to center on infrastructure projects as opposed to income support in the first round) were shelved amid political turmoil that marked the year 2010. In contrast, Indonesia was able to roll out its fiscal stimulus particularly swiftly because first, a corporate income tax had already been planned for 2009, and second, large election-related spending in early 2009, which otherwise would have exacerbated overheating, turned out fortuitously timed to offset a decline in external demand.



To summarize, there were considerable differences in policy responses, which could help explain the differences in growth performance. The most noticeable was in the size of the fiscal stimulus and how long it was sustained. Malaysia had the smallest impulse and withdrew it after one year. Thailand had the second-smallest stimulus and withdrew most of it after one year. In contrast, the countries that went through the crisis with less damage—Indonesia and the Philippines—had considerably more supportive fiscal policies. The differences in how much the exchange rate was allowed to depreciate may also have played a role. The Indonesian rupiah depreciated the most, and the Philippine peso stayed weak the longest, even though Indonesia and the Philippines are less dependent on foreign trade than Malaysia and Thailand. Malaysia spent a considerable amount of reserves limiting the depreciation, even though a weaker currency could have supported exports. Finally, there were some differences in the degree of monetary loosening, with Indonesia doing the most

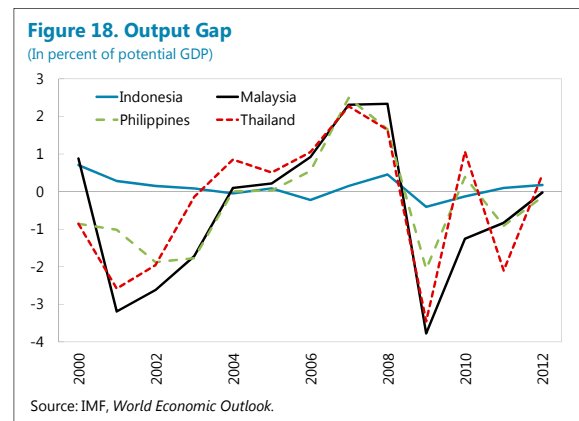
¹¹ Of course, as pointed out in Guajardo and others (2011), estimating a cyclically adjusted fiscal balance is challenging during deep recessions and periods of sharp movements in asset prices.

¹² Part of the increase in the deficit in 2009 and the decrease in 2010 was due to commodity price movements, but the non-oil balance also exhibited similar swings. See, for example, IMF (2010b).

¹³ Fitch downgraded Malaysia's local currency sovereign bond rating in June 2009. Thailand's local and foreign currency ratings were downgraded in December 2008 and in April 2009, respectively.

through conventional and unconventional channels and Malaysia and Thailand at the other end of the spectrum.

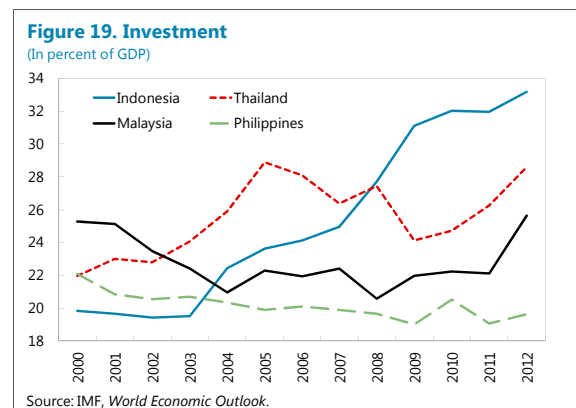
One possible interpretation of the postcrisis divergence is that some countries had larger positive output gap before the crisis, so it was natural for them to experience a bigger decline once the conditions fueling overheating were removed. Another is that in some countries policies were applied to artificially maintain output above potential in the face of the crisis. Testing these hypotheses requires estimates of the output gap, which are highly uncertain, particularly around sharp turning points. Available IMF staff estimates do not support either of these interpretations (Figure 18). They suggest that on the eve of the crisis, in 2007–08, Indonesia was roughly at potential, and it has stayed close to potential during and after the crisis, which is consistent with relatively small fluctuations of Indonesia’s GDP around a slightly accelerating trend. On the other hand, the other three countries had positive output gaps of around 2 percent right before the crisis, and then experienced sharp cyclical contractions, although for reasons discussed above the contraction was less pronounced in the Philippines. Finally, by 2012 all the ASEAN-4 were broadly at potential. Hence, it does not appear that the strong and lasting countercyclical response in Indonesia and the Philippines was excessive. Of course, as already mentioned, output gap estimates are highly uncertain, and the recent market pressure on Indonesia suggests that its policies might not have been entirely sustainable.



V. OTHER FACTORS

In addition to the real and financial shocks associated with the global financial crisis, the ASEAN-4 countries were subject to various other external and domestic shocks and influences. In this subsection we focus on Indonesia and Thailand, given that the trajectories of their output deviated the most from what could be attributed to the crisis.

In Indonesia, more important than the timely but temporary fiscal stimulus were structural reforms implemented in the mid-2000s. These wide-ranging reforms aimed at improving the investment climate and facilitating foreign direct investment. Figure 19 is a testament to the success of those reforms. Between 2005 and 2011 the investment to GDP ratio surged in Indonesia, while it moved broadly sideways in Malaysia and the Philippines, and declined in



Thailand. A considerable part of the Indonesian surge was foreign investment in the commodity sector (prompted, of course, by buoyant prices in addition to an improved business environment), which slowed but did not stop during the crisis.¹⁴

In Thailand, on the other hand, investment growth slowed after 2005. More broadly, while the other three countries were accelerating just before the crisis hit, with output about one percent above trend in 2007, Thailand was already slowing. Even though the reasons are difficult to pinpoint exactly, political uncertainty and, at times, turmoil (e.g., in 2010) that took toll on private sector confidence is likely among them.

In addition, in 2011 Thailand suffered from two major shocks that delayed its recovery further. In the first half of the year Japan was broadsided by a devastating earthquake accompanied by a tsunami. Among Japan's trading partners, Thailand was affected disproportionately because of the integration of its automobile industry with that of Japan

(Table 6).¹⁵ Because of these linkages, Thailand suffered not only because it could not sell its output to Japan, but also because its access to key inputs into production was disrupted. And in the second half of the year Thailand itself was hit by its worst floods in half a century, lasting for nearly six months, resulting in major destruction of life and property and bringing production to a halt in many parts of the country.

	Indonesia	Malaysia	Philippines	Thailand
Exports and imports	8.4	16.7	7.6	18.3
Exports	3.6	8.4	3.9	6.4
Imports	4.8	8.4	3.7	11.9
Industrial supplies&capital goods	0.4	6.9	3.1	9.2
Domestic value added induced by exports 1/	3.1	4.8	2.7	4.3

Sources: UNCOMTRADE database; IMF, *World Economic Outlook*; OECD.Stat; and IMF staff calculations.
1/ 2009 data.

The importance of temporary shocks should not be underestimated, particularly in a fast-growing economy. An output decline caused by a temporary shock could be reversed relatively easily, but it is much harder to make up for lost growth. Emerging markets grow fast because of high rates of capital accumulation, technology absorption or development, and human capital upgrading, including through learning-by-doing. All these processes are stalled or slowed during a crisis, and with limited absorptive capacity, the lost time cannot be regained fully. For that reason, unless the drop in output is very short-lived, emerging markets do not tend to bounce all the way back to their earlier trajectories. In other words, temporary shocks have permanent level effects, as documented in Aguiar and Gopinath (2007). In a similar vein, IMF (2009b) notes that in Asia “deep recessions have resulted in

¹⁴ It should be noted, however, that the flip side of the investment boom was a deterioration in the current account balance—increasing Indonesia's reliance on foreign financing and thus its vulnerability—as higher investment was not matched by a rise in domestic saving.

¹⁵ The role of trade linkages with Japan was also illustrated in IMF (2013b), Figure 1.29.

substantial declines in potential output growth, meaning that their effects are not just cyclical but permanent.”

VI. CONCLUSION

This paper highlights the differences in the performance of four emerging ASEAN economies in the aftermath of the global financial crisis. Before the crisis they were broadly on similar trajectories. After the crisis Indonesia accelerated relative to the earlier trend; the Philippines rebounded to the precrisis trend; Malaysia started growing parallel to, but below the trend; and Thailand drifted considerably below its precrisis trajectory.

To explain these differences in postcrisis growth, we explore four categories of explanatory factors. First, we look at the magnitude of external trade and financial shocks that each country faced. Second, we examine how these shocks were transmitted into the domestic economy depending on structural characteristics, such as trade and financial openness, export composition, the degree of financial development, and the state of bank and corporate balance sheets. Third, we identify cross-country differences in policy responses, including fiscal, monetary, and exchange rate policies. Lastly, we look into structural policies and country-specific shocks that might explain the growth divergence.

We find that the immediate trade shock was similar for the four countries, but had a bigger impact on GDP in Malaysia and Thailand because of their higher degree of trade openness. The faster recovery of exports in Indonesia later on might have benefited from a larger depreciation of its currency and from resurging demand for oil. On the financial side, despite larger capital outflows from Malaysia, subsequent financial turmoil was more pronounced in less liquid financial markets, such as those of Indonesia and the Philippines. At the same time, the spillover of the financial turmoil to the real economy was dampened in the latter countries by the much lower financial depth (reflected in low stock market capitalization ratios and credit-to-GDP ratios).

On the policy front, fiscal stimulus was considerably shorter in duration and somewhat smaller in Malaysia and Thailand than in Indonesia and the Philippines.¹⁶ The reduction in policy rates was the smallest and most short-lived in Malaysia. Thailand also started normalizing its monetary policy stance relatively early, and it was the only country in the group not to have lowered reserve requirements. More sizable foreign exchange intervention in Malaysia and Thailand limited depreciation of their currencies, reducing the support provided to exports by that automatic stabilizer. Indonesia had the largest reduction in policy rates and the broadest array of other measures aimed at supporting liquidity provision.

¹⁶ It should be noted, however, that fiscal multipliers tend to be smaller in more open economies. For that reason, both fiscal stimulus and its withdrawal would have a bigger impact in Indonesia and the Philippines than in Malaysia and Thailand.

In terms of idiosyncratic factors, structural reforms taken prior to the crisis in Indonesia had improved investment climate, which together with commodity boom fueled investment and contributed to the acceleration of growth (but also led to falling current account balances). On the other hand, political instability in Thailand negatively affected private demand, while the natural disasters of 2011 brought growth to a halt that year, accounting for a substantial share of the gap with the precrisis trend.

While it is difficult to quantify the contribution of each factor, we believe that the degree of trade openness and the strength of policy response (particularly the magnitude and duration of fiscal stimulus) primarily account for the differences between Indonesia and the Philippines, on the one hand and Malaysia and Thailand on the other. Within these two groups, Indonesia's superior growth is mostly due to investment-friendly structural reforms introduced in the mid-2000s, while Thailand's underperformance can be explained by a battery of negative shocks that hit the country in 2010 and 2011.

The growth divergence of the ASEAN economies demonstrates that trade and financial openness brings opportunities, but also creates vulnerabilities. More open economies are more exposed to external shocks, and therefore need to manage domestic demand more carefully to offset external shocks. According to IMF (2009b), recoveries after deep recessions have typically been weak in Asia as they have tended to rely on exports as the main engine. Unsurprisingly, the countries that managed to sustain or reinvigorate domestic demand better—Indonesia and the Philippines—fared better in the global financial crisis. In this regard, the timing and magnitude of policy responses seem to be crucial, especially when the recovery is still fragile. It is therefore essential to build policy space during normal times, so that a strong and sustained policy stimulus is possible when a crisis comes.

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