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ASEAN Economics

Dollar Tantrums & Original Sin

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Stronger Dollar & Rising US Yields Trigger Tantrums

Emerging market currencies and assets have been selling-off on fears of a strengthening US dollar and higher US treasury yields. The sell-down has been more selective in Asia, targeted largely at countries with current account deficits and reliant on external financing, particularly the Philippines, Indonesia and India. The current sell-off is so far not as severe as the 2013 taper tantrum (which lasted about 4 months). Countries with current account surplus, such as Thailand and Malaysia, have been more resilient versus the 2013 tantrums.

Revenge of Original Sin

We construct an *original sin* index to assess whether emerging Asian countries have increased their proportion of foreign currency borrowings, given the temptations of low US interest rates and a weak US dollar (during QE and last two years). We detect increases in "original sin" in Indonesia and the Philippines in recent years, but find no visible increase in Thailand, Malaysia or India. This may partly explain the larger sell-off in both the currencies and asset prices in the Philippines and Indonesia.

Since the 2013 Taper Tantrums

We take stock of resilience indicators since the 2013 taper tantrums. Thailand and Indonesia have shown the most improvement in terms of resilience indicators. This includes the foreign reserves level and cover; current account position; and inflation. Malaysia's metrics are more mixed: a healthier current account position, but external debt is higher while FX reserves are lower. The Philippines shows a broader slippage in metrics, including reserves cover, current account and inflation.

Rising Oil Prices & Divergent Fortunes

Rising oil prices are also aggravating the dollar tantrums and current account deficit concerns, as most of Asia are net oil importers. Malaysia is the exception, with a net oil & gas export surplus (+3.5% of GDP), a stabilizing force at a time of leadership transition. India, Philippines and Thailand, in that order, are the more vulnerable in terms of negative oil shocks to the current account (although Thailand runs a massive surplus).

Better Fundamentals & Stronger Global Economy

The 2013 taper tantrums and market sell-off which lasted for about 4 months, in hindsight, represented a good buying opportunity. We think the recent dollar tantrums and market sell-off may also be an over-reaction against the risks of a more aggressive Fed rate policy and stronger US dollar. The global economy is in a far more solid footing than the situation in 2013. Sell-offs in Indonesia, Thailand and Vietnam, in particular, look disproportionate relative to the improvement in their fundamentals, resilience and growth prospects.

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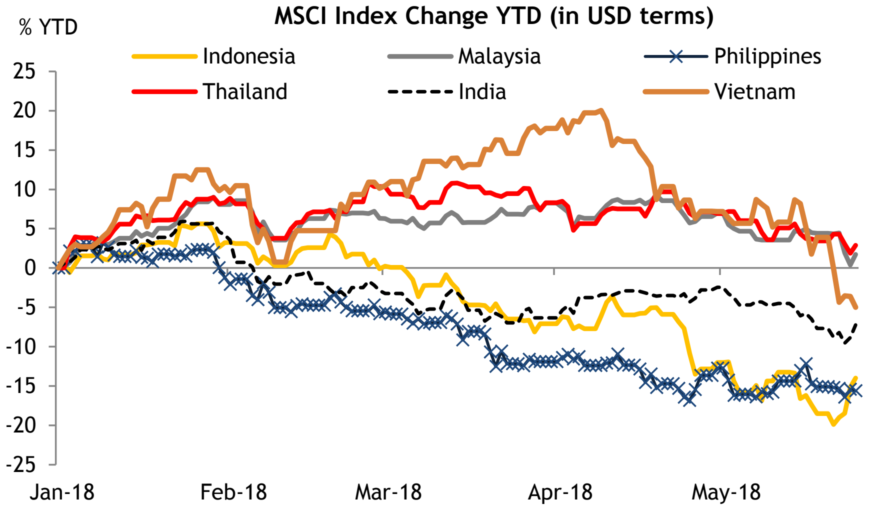
Dollar Tantrums & Original Sin

Emerging market currencies and assets have been hit hard by fears over dollar strength and higher US yields. Argentina, Turkey and Russia are some of the worst hit, seeing sell-offs that are even more severe than the 2013 “taper tantrums” episode. The “dollar tantrums” have started to spread to emerging Asia, targeted largely at countries with current account deficits and a reliance on foreign funding.

Figure 1: Equity Sell-offs Most Severe in Indonesia, Philippines & India



Source: Bloomberg

The worst equity sell-offs in emerging Asia year-to-date include the Philippines (-15.6%), Indonesia (-14%), and India (-8%), compounded as well by a weakening currency (see Fig 1). Bond yields have likewise jumped, with Indonesia (+107bps), Philippines (+96 bps) and India (+41bps) seeing the largest increase in yields.

Table 1: Year-to Date Performance of Emerging Asia Equities, Currencies and Bonds vs. Taper Tantrums (May to Sep 2013)

	Unit	Phil	Indonesia	India	Vietnam	Malaysia	Thailand
Current Episode							
Equity (MSCI Index)	%YTD	-15.6	-14.0	-8.0	-5.0	+1.7	+2.9
Currency	%YTD	-5.3	-4.3	-6.3	-0.2	+1.0	+2.1
Bond (10Y yield)	bps	+96	+107	+41	-58	+36	+34
Taper Tantrum 2013							
^Equity (MSCI Index)	%	-28.9	-37.7	-28.5	-16.6	-15.4	-26.4
^Currency	%	-8.8	-16.6	-21.8	-1.5	-11.2	-9.2
*Bond (10Y yield)	bps	+158	+323	+207	0	+108	+107

^Refers to the % difference between the peak and trough between May and Sep 2013.

**Refers to the difference between the highest level reached by Sep 2013 and the level at the start of the taper tantrum (22 May).*

Source: Bloomberg, Maybank Kim Eng estimates

We compare the current market sell-off against the “taper tantrums” episode in the summer of 2013. The surge in volatility and selling then occurred on news that the US Fed would start winding down its bond-buying program and tighten monetary policy[1]. The “taper tantrums” lasted for about 4 plus months (May to Sep 2013) and, in retrospect, represented a good buying opportunity. The current “tantrums” in a similar fashion is being triggered by fears over a more aggressive Fed rate hike cycle and a strengthening US dollar.

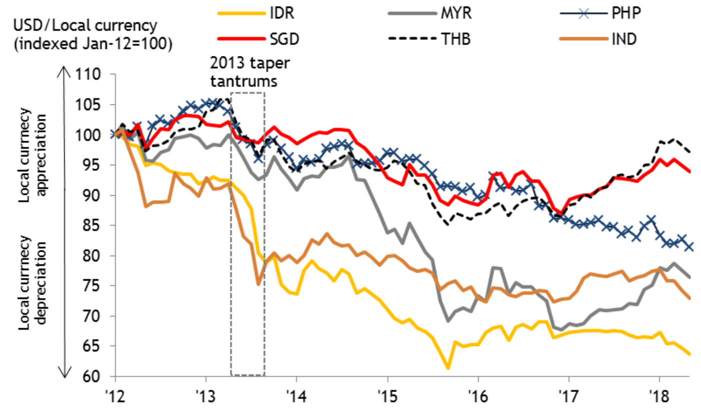
The current <u>equity</u> sell-off is not as severe as the 2013 taper tantrum episode (see Table 1). During the 2013 episode, – Indonesia (-38%) and Philippines (-29%)

[1] See IMF (2014), “*Emerging market volatility: lessons from the taper tantrum*,” for an interesting discussion on the fallout, market reaction and lessons.

stocks were the worst performers. Malaysia (-15%) and Thailand (-26%) also saw sharp corrections, but have been relatively resilient in this episode so far.

During the 2013 taper tantrums, currencies that were the worst hit include the Indian rupee (-22%), Indonesian rupiah (-17%) and Malaysian ringgit (-11%). The Malaysian ringgit appears to be more resilient this time, partly because global oil prices are rising currently versus collapsing in 2013 (see Fig 2). During the 2013 tantrums, bond yields that saw the largest jump included Indonesia (+323 bps), India (+207 bps) and Philippines (+158 bps). Malaysian and Thai bonds are seeing a more modest rise in bond yields this time (see Fig 3).

Figure 2: More Discriminating Currency Sell-off in Current "Tantrums" – PHP & IDR Weaker; SGD, THB & MYR Resilient



Source: Bloomberg

Figure 3: Risk of Tantrums Again?

Source: Bloomberg

Tracking Foreign Investment Outflows

We take stock of the foreign investment flows for both equities and bonds, comparing the year-to-date outflows to 2013 (taper tantrums) and recent years. Overall, ASEAN has seen a massive withdrawal of foreign funds from both the equity and bond markets in 2018.

For equity, Thailand (-$3.7bn), Indonesia (-$2.9bn) and the Philippines (-$0.9bn) have witnessed the largest foreign investment outflows (see Table 2). The foreign equity outflows in Indonesia year-to-date are much larger than even during 2013, year of the "taper tantrums". Thailand's equity market has interestingly held up relatively well given the magnitude of the foreign equity outflows for two consecutive years, both 2017 and year-to-date 2018.

For bonds, India (-$4.4bn), Indonesia (-$460m) and Malaysia (-$436m) have seen the largest foreign investment outflows. For the whole of 2013 (year of taper tantrums), only India saw an overall net foreign bond investment outflow. For Indonesia and Malaysia, the outflows year-to-date are much worse than in 2013. For the Philippines, foreign bond investment flows remain positive and larger than in 2013.

Table 2: Foreigners Have Turned Net Sellers in ASEAN Equities (except Vietnam) and Bonds (for India, Indonesia & Malaysia) in 2018

Net Foreign Investment Flows in Equities (USD mn)							
	2012	2013	2014	2015	2016	2017	YTD2018 (as of 25 May)
Indonesia	1,712	-1,806	3,766	-1,580	1,259	-2,960	-2,911
Malaysia	4,432	1,136	-2,011	-5,068	-637	2,455	-194
Philippines	2,548	678	1,256	-1,194	83	1,095	-928
Thailand	2,504	-6,211	-1,091	-4,372	2,240	-796	-3,670
Vietnam	160	263	135	95	-361	1,009	1,693
India	24,548	19,754	16,162	3,274	2,903	8,014	161
Net Foreign Investment Flows in Bonds (USD mn)							
	2012	2013	2014	2015	2016	2017	YTD2018
Indonesia	4,852	4,583	10,633	7,621	7,653	12,062	-460
Malaysia	8,796	2,475	2,564	4,597	1,851	-621	-436*
Philippines	-285	1,218	-372	1,553	812	440	2,425*
Thailand	29,281	14,078	6,492	-644	9,455	10,621	2,943
India	6,862	-8,489	26,252	7,560	-6,459	22,970	-4,394

**Malaysia (as of end April) and Philippines (as of end March) provide data on a monthly basis.*

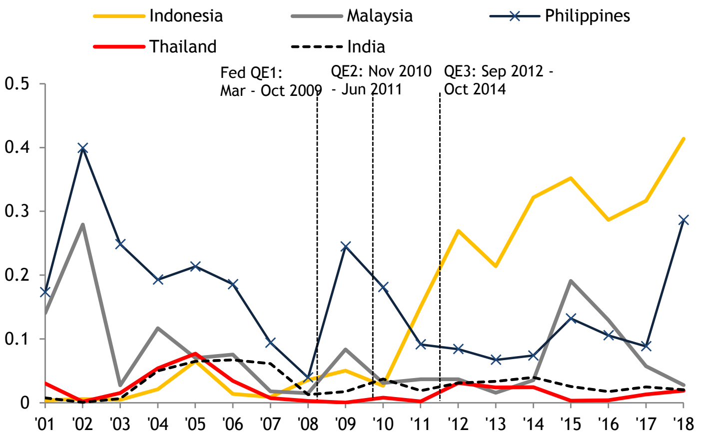
Source: Bloomberg

The Revenge of Original Sin

Original sin, a term coined by Eichengreen and Hausman (1999), is a situation in which the residents (or government) of a country faced difficulties in borrowing in their own domestic currency[2]. An emerging market country is often forced to borrow funds denominated in foreign currency (eg. the US dollar, euro or yen), as markets may not be receptive to the currency risks and domestic interest rates may be exorbitant. This becomes problematic when the US dollar or foreign currency appreciates, as borrowing countries then face huge difficulties in repaying the debt.

Original sin and the currency mismatch was one of the factors behind the severity of the Asian financial crisis. Since then, most Asian countries have developed the local currency bond markets to reduce their dependence on external and foreign currency funding. Still, with Quantitative Easing (QE) and near zero policy rates at the Fed and other major central banks, governments and corporations have often been tempted to borrow at these low US interest rates despite the currency risk.

Figure 4: Indonesia and Philippines Have Seen an Increase in "Original Sin"; No Rise in Thailand, Malaysia or India



Note: Last datapoint refers to YTD2018.

Source: Bloomberg, Maybank Kim Eng estimates

Figure 5: Indonesia – "Original Sin" Index Climbing Since 2014

Note: Last datapoint refers to YTD2018.

Source: Bloomberg, Maybank Kim Eng estimates

[2] *Eichengreen, Barry; Hausmann, Ricardo (1999), "Exchange rates and financial fragility" (PDF). Proceedings, Federal Reserve Bank of Kansas City: 329-368.*

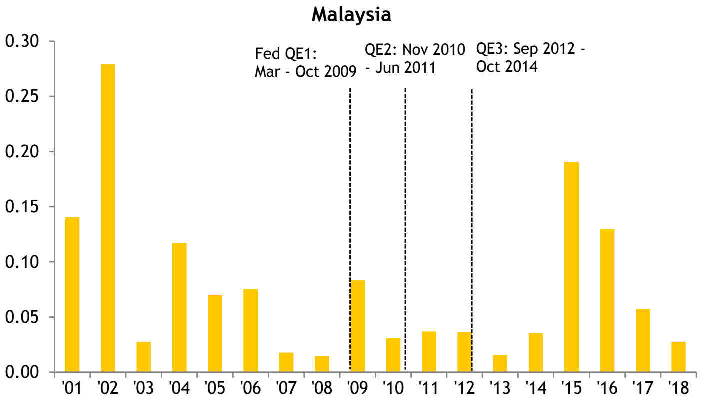
We construct metrics of "*original sin*" to assess whether Emerging Asian countries have increased their proportion of foreign currency borrowings, given the temptations of low US interest rates and a weak US dollar (during QE and over the last two years)[3]. Note that original sin is a *flow* measure (not *stock*), capturing the proportion of foreign currency funding for that *year*.

The *Original Sin* index ranges from zero ("sinless") to one ("sin-full" or fully dependent on foreign currency debt). We focus on *sovereign and corporate bond issuance* in ASEAN and India, and track how the index behaved during the Quantitative Easing periods and after the taper tantrums.

We detect increases in "original sin" in Indonesia and the Philippines in recent years, but find no visible increase in Thailand, Malaysia or India (see Figures 4 to 9).

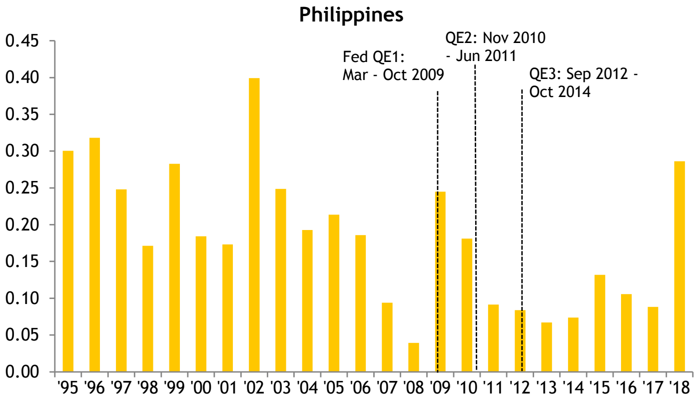
Indonesia's original sin index has been steadily rising, with a peak of 0.41 as of May 2018 (see Fig 5). This suggests that Indonesia corporations and the sovereign are borrowing more in foreign currencies in recent years, as the Fed normalizes policy rates. For Philippines, the original sin index rebounded in 2018 to 2009 levels after declining for the past two years (see Fig 7). This suggests that the financial stress is a more recent phenomenon, as investors are more worried about the peso risks (on higher inflation and widening current account deficit).

Figure 6: Malaysia - "Original Sin" Index Falling Since 2016



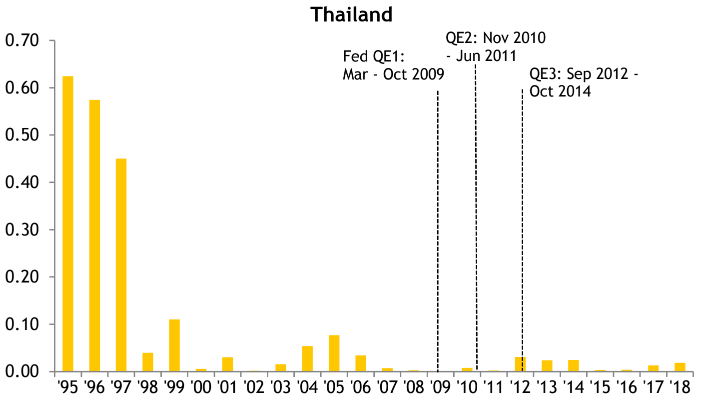
Note: Last datapoint refers to YTD2018.
Source: Bloomberg, Maybank Kim Eng estimates

Figure 7: Philippines - "Original Sin" Index Has Returned to 2009 Levels in 2018



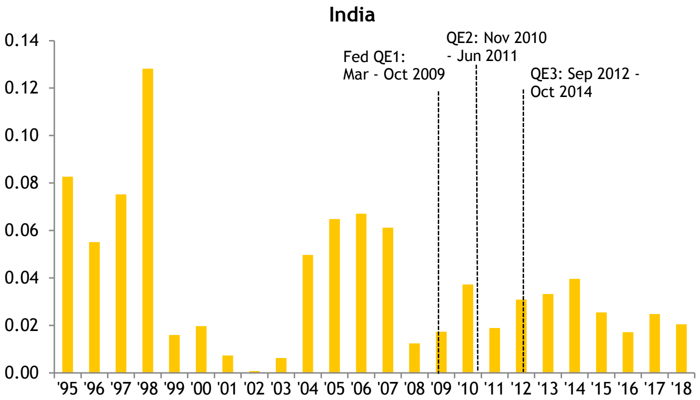
Note: Last datapoint refers to YTD2018.
Source: Bloomberg, Maybank Kim Eng estimates

Figure 8: Thailand - "Original Sin" Index Low



Note: Last datapoint refers to YTD2018.
Source: Bloomberg, Maybank Kim Eng estimates

Figure 9: India - "Original Sin" Index Have Fallen Since 2015



Note: Last datapoint refers to YTD2018.
Source: Bloomberg, Maybank Kim Eng estimates

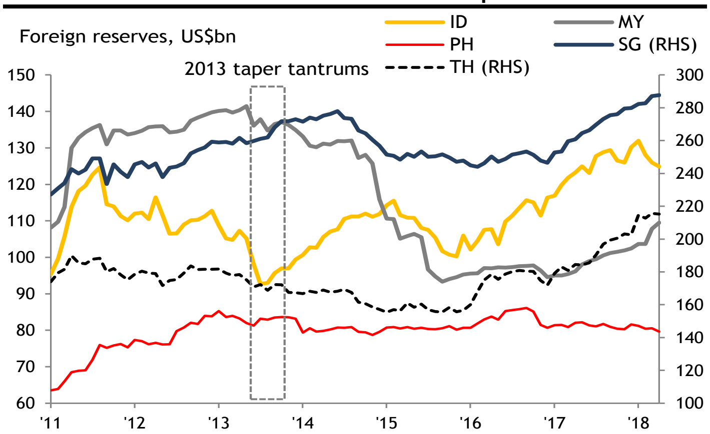
[3] We refer to the methodology in *Eichengreen, Barry; Hausmann, Ricardo; Panizza Ugo (2003), "The Pain of Original Sin" (PDF)*, Chicago University Press.

On the other hand, Malaysia and India have seen a decline in their original sin index, suggesting a gradual reduction in their foreign currency exposure in recent years (see Figures 6 & 9). Thailand's index has been very low since the early 2000s, barely reaching 0.1, reflecting its low interest rates and abundant domestic liquidity, given the massive current account surplus (see Fig 8).

Since the 2013 Taper Tantrums

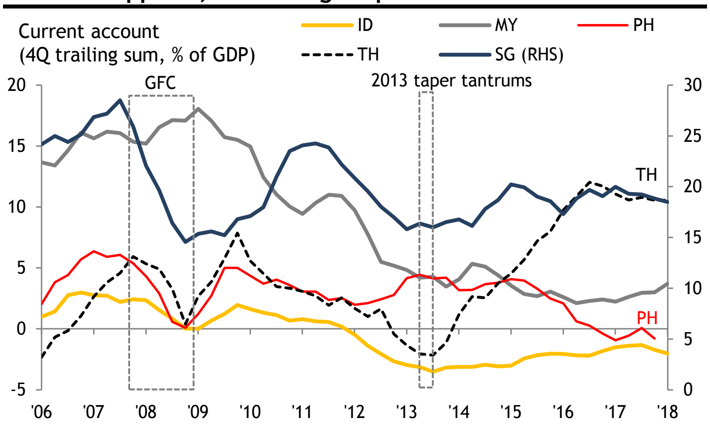
We take stock of ASEAN's resilience and leverage metrics, including foreign reserves and cover to imports and short-term external debt; current account; and positioning (see *ASEAN Economics – "Resilience Health Check", 20 Jan 2017*, for the earlier medical).

Figure 10: ASEAN Foreign Reserves - Indonesia & Thailand Reserves Have Risen the Most since the Taper Tantrums



Source: CEIC

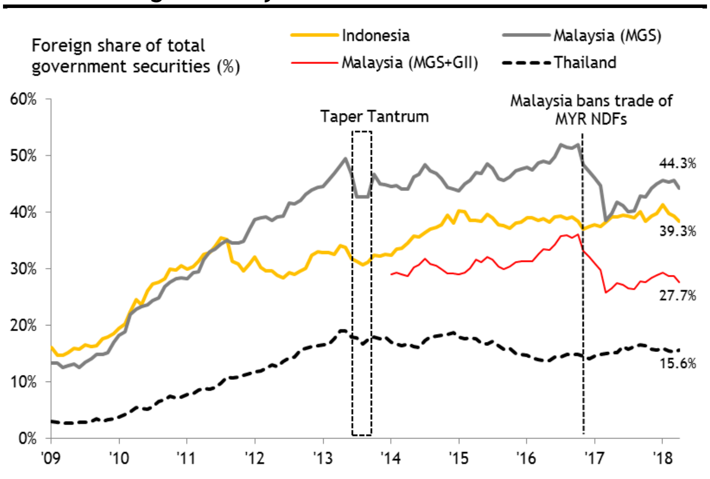
Figure 11: Contrasting Fortunes - Current Account Worsening in the Philippines, Ballooning Surplus in Thailand



Source: CEIC

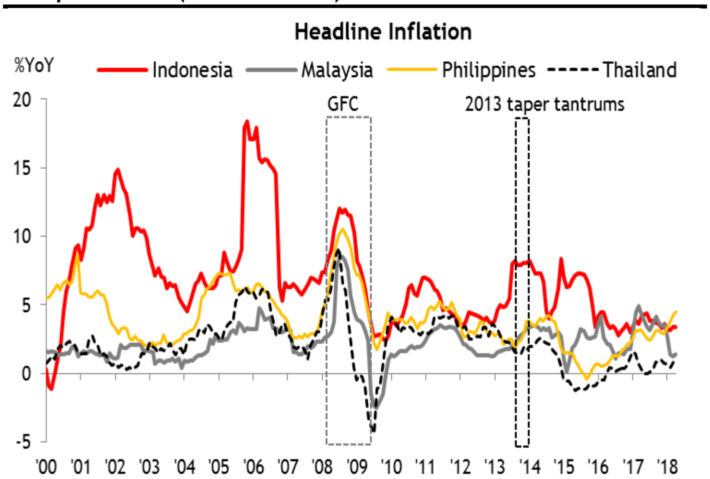
Thailand's and Indonesia's resilience shows the strongest improvement since the "taper tantrums" in May 2013. Thailand's (+$48bn) and Indonesia's (+$25bn) foreign reserves have increased the most since 2013 (see Fig 10). Thailand's current account has ballooned to more than 10% of GDP from a small deficit (2% of GDP) during the 2013 tantrums (see Fig 11). Indonesia's current account deficit has narrowed to 2% of GDP from 3.5% during the tantrums.

Figure 12: Foreign Ownership of Outstanding Government Bonds Still High in Malaysia & Indonesia



Source: CEIC

Figure 13: ASEAN Inflation Has Eased from Their Highs in 2013 Except for Phil (Due to TRAIN)



Note: Philippines' CPI series was rebased to 2012 prices for data starting in 2012.
Source: CEIC

Foreign ownership of local currency governments is still relatively high for Indonesia (39%) and Malaysia (28%) (see Fig 12). For Indonesia, the fall in the foreign holdings of local bonds appear to be of the similar magnitude as the 2013 tantrums episode already. For Malaysia, foreign ownership had fallen quite sharply after Bank Negara banned the trade of non-deliverable forwards in November 2016. Foreign positioning on MGS is therefore not as high as then as a result, limiting the extent of any foreign sell-off.

We also take stock of standard resilience metrics such as FX reserves cover to imports and short-term external debt cover. All the ASEAN countries have a reserves cover more than 3 month cover of imports (see Table 3).

The foreign reserves cover to short-term external debt is more mixed: the ratio remains below 1 for Vietnam and India, and only slightly above 1 for Malaysia. The foreign reserves cover has improved and increased for Thailand (3.2x), Philippines (5.7x) and Indonesia (2.5x) since the 2013 taper tantrums.

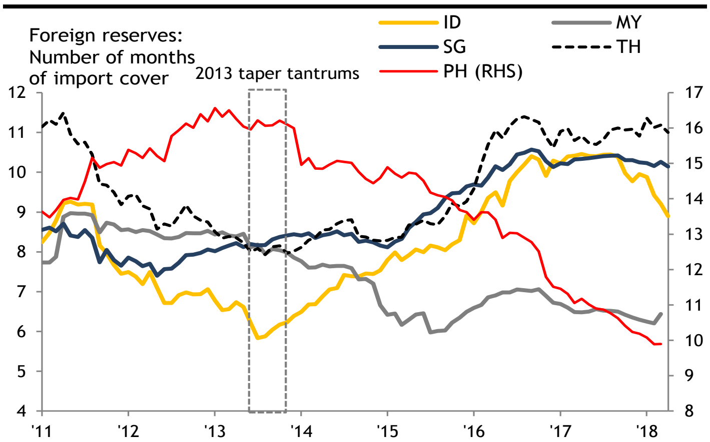
Table 3: Since the Tantrums – FX Reserves Cover to Imports & Short-Term External Debt in 2009 (GFC), 2013 (Tantrums) and Current

	Import Cover			Short-term External Debt Cover		
	GFC - 2009	Taper tantrum - 2Q13	Current	GFC - 2009	Taper tantrum - 2Q13	Current
Indonesia	8.2	6.2	**8.9**	2.7	2.2	**2.5**
Malaysia	9.4	8.1	**6.4**	2.0	1.4	**1.1**
Philippines	12.3	16.0	**9.9**	11.1	5.3	**5.7**
Singapore	9.2	8.4	**10.1**	0.3	0.3	**0.3***
Thailand	12.4	8.0	**11.0**	4.2	2.7	**3.2**
Vietnam	2.7	2.4	**3.1**	0.5	0.4	**0.4**
India	12.1	6.2	**10.4**	1.0	0.6	**0.8**

*Note: Short term external debt series for Philippines was revised starting from 2013. *Ratio for Singapore may not be meaningful given its role as an international financial center.*

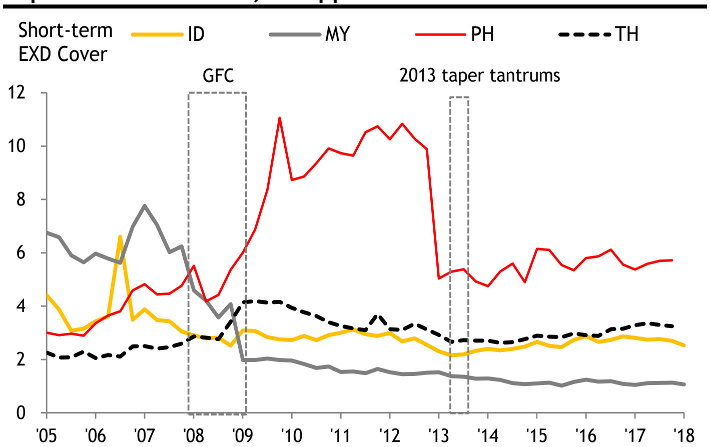
Source: CEIC, Maybank Kim Eng estimates

Figure 14: Reserves Cover to Imports Generally Adequate



Source: CEIC

Figure 15: Reserves Cover to Short-Term External Debt Has Improved for Thailand, Philippines & Indonesia since 2013



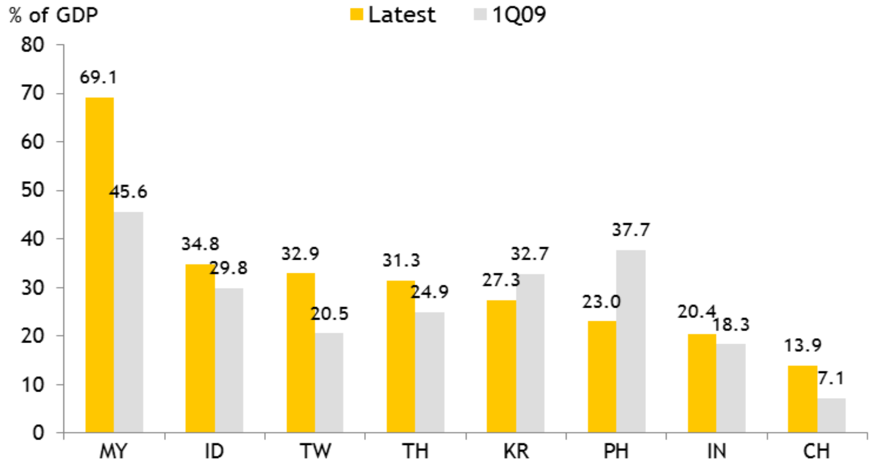
Source: CEIC

Some ASEAN countries have seen a rise in external debt as share of GDP compared to the pre-QE (2009) period, including Malaysia, and to a lesser extent, Indonesia and Thailand. External debt includes foreign currency debt and foreign holdings of local currency debt.

Most of the external debt ratios across emerging Asia remain relatively moderate (and below 40%), with the exception of Malaysia (see Fig 16). In particular, Malaysia's external debt has risen to 69% of GDP as of 1Q 2018 from 46% of GDP in 1Q 2009. Around two thirds of Malaysia's external debt is in foreign currency. Based on Bank Negara Malaysia data, the share of USD-denominated external debt has fallen to 51% of total external debt as of end 2017 compared to

54% in 2016. The share of MYR-denominated has risen slightly from to 34.3% (vs. 34% in 2016)[4].

Figure 16: External Debt Ratios Across Asia, Pre- and Post-QE



Source: CEIC, Maybank Kim Eng estimates

Table 4: Balance Sheet & Leverage Ratios in ASEAN-5 (ASEAN Crisis, Global Financial Crisis & Current)

As % of GDP	Indonesia			Malaysia			Philippines			Singapore			Thailand		
	2Q97	4Q07	Latest	2Q97	4Q07	Latest	2Q97	4Q07	Latest	2Q97	4Q07	Latest	2Q97	4Q07	Latest
Public Debt	72.5*	34.1	**28.7**	31.4	41.0	**51.8**	52.4	66.9	**45.2**	69.1	89.3	**110.5**	40.5^	37.4	**42.8**
Govt debt - Foreign	26.3	14.4	**11.3**	3.1	2.9	**3.8**	23.3	30.8	**15.8**	-	-	**-**	8.8	3.0	**1.1**
External Debt	56.1	32.7	**34.8**	43.6	28.8	**69.1**	44.2	36.9	**23.0**	-	508	**440**	-	26.4	**31.3**
Household Debt	-	10.9	**16.2**	-	63.6	**84.3**	-	2.0	**9.4**	68.0	63.5	**72.3**	-	51.7	**77.5**
Domestic Credit	-	39.4	**40.5**	156	113	**146**	-	53.5	**66.2**	66.6	71.3	**144**	-	104.5	**128**
Foreign Bank Claims	26.2	15.5	**15.2**	35.3	56.9	**51.0**	21.0	20.7	**13.1**	241	139	**150**	42.9	19.5	**34.6**
Corporate Debt	-	14.7	**22.0**	-	58.2	**68.6**	-	36.8	**42.0**	-	103	**118**	99.8	46.4	**49.4**
Current Account	-2.7	2.4	**-2.0**	-6.5	15.4	**3.7**	-3.5	5.4	**-0.8**	16.3	26	**18.5**	-6.2	5.5	**10.6**

*Note: *Indonesia public/govt debt as at end 1997. **Indonesia foreign govt debt as at end 1996. ^ Thailand public debt as of 3Q97.*

Malaysia household debt figures as at end of respective year. Indonesia and Philippines household debt estimated using outstanding consumer loans. Thailand household debt includes loans from commercial and state banks, credit card companies, saving corporations and other non-bank institutions.

All international claims and domestic credit as of 3Q17.

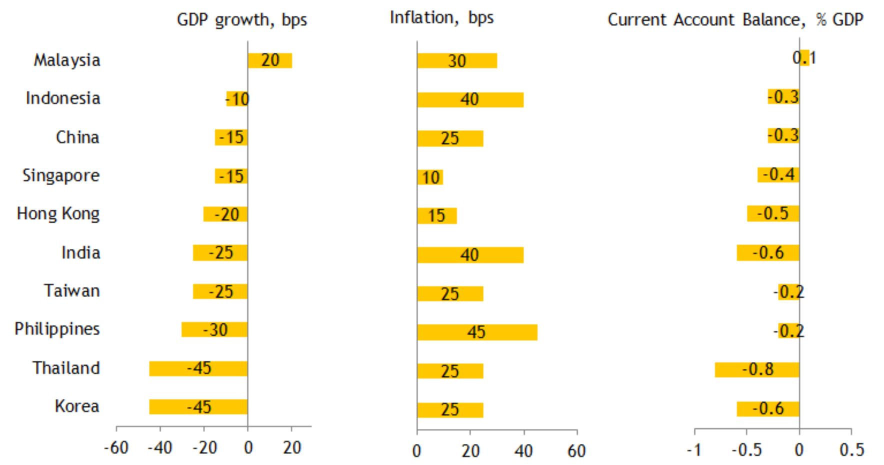
Source: BIS, CEIC, World Bank, Maybank KE estimates

[4] BNM provides breakdown for external debt currency composition by MYR, USD, JPY and 'others'. The share of 'others' category saw a rise from 9.7% in 2016 to 12.4%.

Oil Shocks & Divergent Fortunes

Asia is an overall net energy importer and is negatively impacted by rising oil prices, Malaysia being the only exception (see *ASEAN Economics – Commodity Resurgence*, 24 Feb 2017). Rising oil prices may therefore aggravate the current sell-off and intensify the pressures on the external balances, especially for countries already facing capital outflows and a widening current account deficit. India, Philippines and Thailand are more vulnerable to negative oil price shocks given their large oil imports as % of GDP (see Fig 17 & Table 5).

Figure 17: Impact of 10% Rise in Oil Prices on GDP, Inflation & Current Account Balance



Source: Maybank Kim Eng estimates

Malaysia is a large net oil & gas exporter (3.5% of GDP) and will benefit from rising oil prices. The oil support is moreover coming at a critical time, supporting both fiscal revenue and exports, in a period of leadership transition. Higher oil & gas tax revenue and Petronas dividends is being counted on to help cover part of the fiscal gap left by reducing the 6% GST to zero (see *Malaysia Macro & Strategy: GST to be zero-rated*, 17 May 2018).

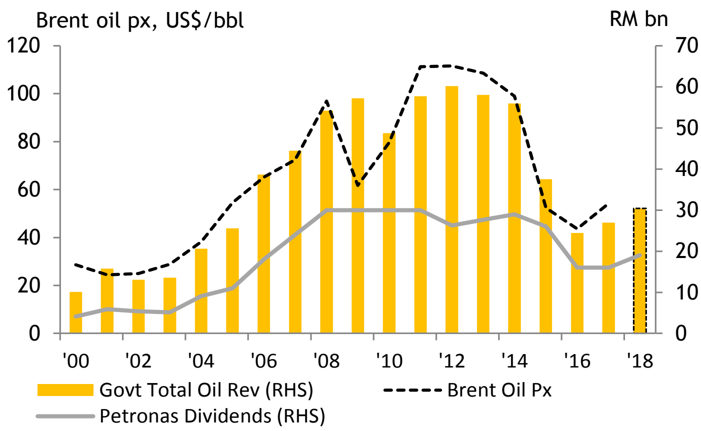
Indonesia, historically a net energy exporter, has turned into a net oil & gas importer in recent years and no longer benefit as much from rising oil prices. Indonesia's gas exports are now smaller than its oil imports. Indonesia is currently seeing a widening oil trade deficit which is offsetting the smaller increase in its gas trade surplus (see Fig 20).

Table 5: Asia ex-Japan Net Exports of Oil & Gas - Malaysia is the Only Exporter and Beneficiary from Rising Oil Prices

	Oil & Gas Net Exports (2017)	
	US$ billion	% of GDP
Malaysia	11.0	3.5
Indonesia	-8.6	-0.8
Korea	-13.4	-0.9
China	-192.2	-1.6
Thailand	-8.0	-1.8
Philippines	-6.2	-2.0
Singapore	-7.0	-2.2
India	-64.2	-2.5
Hong Kong	-10.4	-3.1
Taiwan	-22.6	-3.9

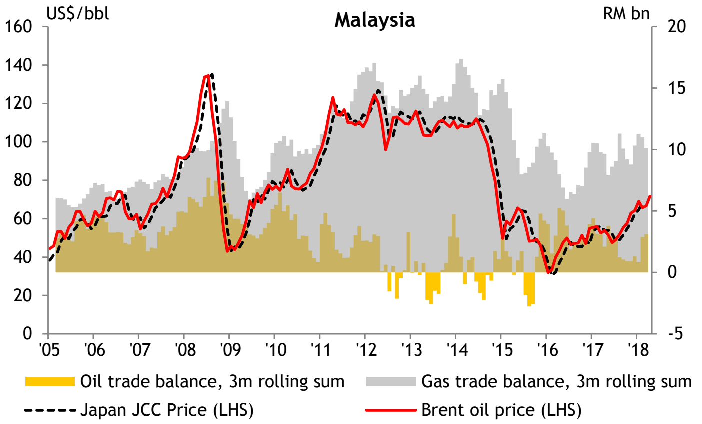
Note: Oil includes crude oil, petroleum products and petrochemical products.
Source: CEIC, Maybank Kim Eng estimates

Figure 18: Malaysia - Fiscal Oil Revenue Sensitive to Oil Prices



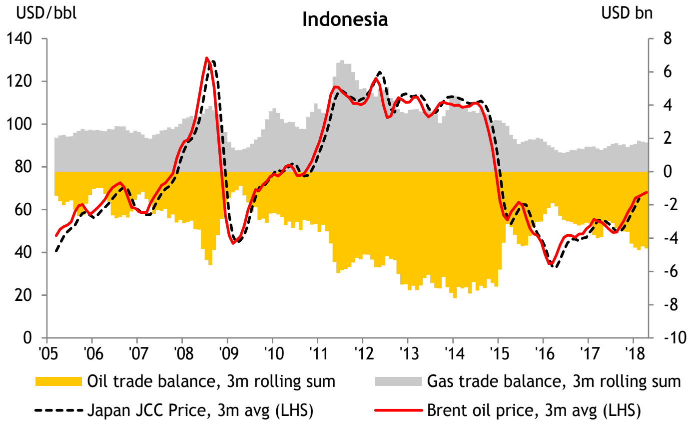
Note: 2018 number refers to Budget estimate.
Source: Bloomberg, MOF Budget 2018

Figure 19: Malaysia - Oil & Gas Trade Balance Rising with Commodities Surge



Source: Bloomberg, CEIC

Figure 20: Indonesia - Oil Trade Deficit Widening as Oil Prices Edge Up Higher



Source: Bloomberg, CEIC

The return of fuel subsidies, particularly in Indonesia and Malaysia, may however complicate the dynamics. Rising oil prices will increase the fiscal burden from fuel subsidies. Fuel subsidies will also encourage excessive energy consumption and smuggling, which could also hurt the current account.

Malaysia's new government Pakatan Harapan has promised to introduce *targeted* fuel subsidies within the first 100 days as part of their 10 promises. Details are still lacking on the design of these fuel subsidies. Prices of petrol and diesel have not changed since 22 March, despite rising crude oil prices, suggesting that the managed float system is suspended. Current "blanket" fuel subsidies are at odds with "targeted" fuel subsidies, as proposed in Pakatan Harapan's alternative Budget 2018 manifesto.

Table 6: Indonesia's State Budget Allocation for Energy Subsidies vs. Actual Realization

	State Budget Allocation: Subsidies				Actual Realization
	Energy	Fuel and LPG	Electricity	Crude Oil Price Assumption	Energy
Unit	IDR trn	IDR trn	IDR trn	USD/Barrel	IDR trn
2005	43.8	39.8	4.0	35	104.4
2006	95.5	64.2	31.2	64	94.6
2007	88.0	55.6	32.4	60	116.9
2008	187.1	126.8	60.3	109	223.0
2009	99.9	52.4	47.5	61	94.6
2010	144.0	88.9	55.1	80	140.0
2011	195.3	129.7	65.6	98	255.6
2012	202.4	137.4	65.0	105	306.5
2013	299.8	199.9	100.0	108	310.0
2014	350.3	246.5	103.8	105	341.8
2015	137.8	64.7	73.1	60	119.1
2016	94.4	43.7	50.7	40	106.8
2017	89.9	44.5	45.4	48	97.6
2018	**94.5**	**46.9**	**47.7**	**48**	

Source: CEIC, Maybank Kim Eng

In **Indonesia**, President Jokowi has capped the prices of subsidized fuel until the end of 2019 and is planning to raise and double diesel subsidies to IDR1k/litre (from IDR500/litre)[5]. This would be the first increase after the government cut the subsidy to IDR500/litre in 2016. The 2018 budget allocated **IDR94.5trn** to energy subsidies for 2018, based on the crude oil price assumption of only US$48/barrel (see Table 6). With oil prices touching US$80/barrel, energy subsidies realization may substantially exceed the budgeted amount. We are concerned that the return of generous fuel subsidies, in the longer term, may widen the net oil & gas trade deficit, and weigh on the currency.

[5] Nikkei Asian Review, "*Indonesia's Widodo backtracks on fuel aid as elections near*", 3 Apr 2018.

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