

# ECONOTE

## Société Générale

Economic and Sectoral Research Department

### ASIA: GROWTH JEOPARDISED BY THE TRADE WAR

— Trade tensions between China and the United States represent a major risk for the export-oriented Asian region. Economies can be affected via the global value chain, Chinese growth and competitive devaluation (although the latter is unlikely). Only India is less vulnerable to this risk.

— External funding conditions have already tightened and may continue to do so. Furthermore, the exchange rate crisis in Turkey is ramping up risk aversion to emerging market.

— Asian economies are highly exposed to a trade slowdown, but should prove relatively resilient in the event of a financial shock, barring a few exceptions.

#### Emerging Asia and external risks

	CH	IN	KO	TW	MY	ID	TH	PH	VI
<b>Trade tensions</b>									
By Global Value Chain	0	-	-	-	-	0	0	0	0
China slowdown	0	-	-	-	-	-	-	-	-
Competitive depreciation	0	-	-	-	-	0	0	-	-
<b>Global financing conditions tightening</b>									
Current account balance	+	-	+	+	0	-	+	0	+
FX reserves / imports	+	+	+	+	+	+	+	+	-
FX reserves / short term debt	+	+	+	+	0	+	+	+	+
FX debt of Gov	0	0	0	//	0	-	0	-	//
FX debt of NFC	0	0	0	//	-	-	0	//	//
FX debt of HH	0	0	0	//	0	0	0	//	//
External debt of banks	0	0	0	//	-	0	0	0	0
Exposure of equity market to non-residents	0	0	0	0	//	0	0	0	//
Exposure of debt market to non-residents	0	-	0	//	-	-	0	-	//

Notes: "+" means favorable impact, "-" negative impact and "0" neutral. "//" indicates no available comparable data.

Bei XU  
+33 1 58 98 23 14  
bei.xu@socgen.com

Emerging Asia has been the fastest-growing region in the world virtually non-stop since 1980. The various periods of tension experienced over the years have done nothing to change that. Now uncertainties are on the rise again, such as growing trade tensions, tightening external funding conditions and rising risk aversion to emerging market spurred by the exchange rate crisis in Turkey.

Our aim in this report is to review the position of Asian economies to determine their resilience and/or vulnerability to these risk factors.

## I – ESCALATING TRADE TENSIONS

The measures imposed by the US against China consist of a 25% duty on US steel imports and a 10% duty on aluminium imports starting 23 March, a 25% duty on a first list of \$34 billion in US imports from China starting 7 July, and on a second list of \$16 billion starting 23 August. China has implemented its own equivalent retaliatory measures against the US.

Although the amounts involved represent only a small fraction of global trade, the increasingly hard-line stance taken by the US and China’s stern response have fuelled uncertainties over the development of US-China trade relations going forward. The office of the USTR (US Trade Representative) published a list of \$200 billion in Chinese goods subject to a 25% tariff, with an implementation date as yet to be determined. Then, on 18 June President Trump directed the USTR to tax another \$200 billion in imports of Chinese goods, and finally on 20 July, threatened to increase total duties on US imports from China to \$500 billion.

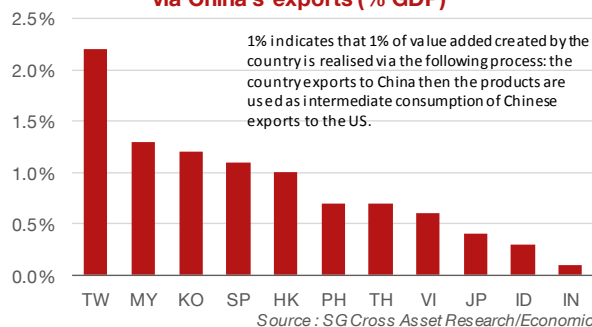
### ECONOMIES LINKED TO CHINA BY GLOBAL VALUE CHAIN HIT HARDEST

The immediate impact of trade tensions can be felt by Asian economies that participate in GVCs (global value chains). A drop in export volumes would be first evident in certain economies such as mainland China, with a ripple effect on Taiwan, Malaysia and South Korea (Chart 1).

By contrast, India, which is much less integrated with the Chinese economy, should be less susceptible to this risk. Vietnam and Japan should have less exposure to US-China trade tensions despite their strong

dependence on exports. Vietnam is at the lower end of the GVCs, while Japan - much more upstream - has already diversified its production sites in Asia.

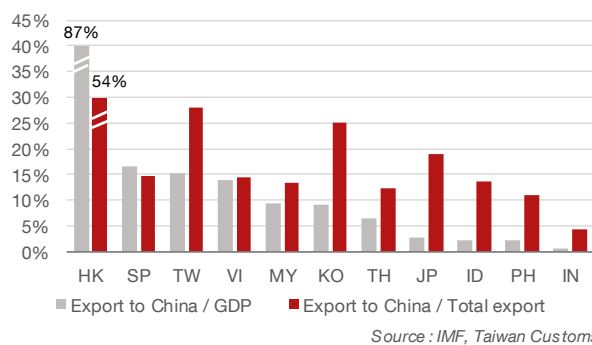
**Chart 1. Exposure of GDP to US final demand via China's exports (% GDP)**



### ECONOMIC GROWTH IN OTHER ASIAN COUNTRIES COULD BE AFFECTED IF CHINESE GROWTH SLOWS

If trade tensions turn worse, triggering a steep decline in Chinese growth, exporters highly exposed to the Chinese market would see their own growth affected (Chart 2).

**Chart 2. Exports to China**



### SIGNIFICANT DEPRECIATION OF THE RMB WOULD BE UNWELCOME, BUT UNLIKELY AT THIS POINT

China would be tempted to depreciate its currency if trade tensions become exacerbated. However, the country would have to manage the risk of capital outflows, as was the case in 2015-2016. Similarly, the depreciation of the RMB recorded since June is more related to the weakness of the Chinese economy rather than a deliberate response to trade tensions (Inset 1). After all, a crisis of confidence in the RMB would stand in the way of several objectives set by the Chinese authorities (financial stability, internationalisation of the RMB, etc.).

#### INSET 1 – THE DEPRECIATION OF THE RMB SO FAR HAS MORE TO DO WITH ECONOMIC SLOWDOWN

The RMB has lost 7% against the USD since mid-June, first and foremost reflecting the uncertainties weighing on Chinese growth. As a result of the deleveraging policy conducted in recent years, corporations have less access to funding and defaults are on the rise. Faced with growing financial risk and trade tensions with the

US, the PBoC has focused on easing its monetary policy. The interbank rate has trended down since the year began, and even more so since June. The widening gap between monetary policy in the US (tightening) and China (easing) is then behind the depreciation of the RMB since March. The RMB was also recently affected by foreign exchange turbulence triggered by the steep depreciation of the Turkish lira. While the RMB's depreciation may seem "timely" in that it offset the rise in US trade tariffs, it could also create a crisis of confidence amid weaker growth conditions. Depreciation would become difficult to contain. Faced with such a risk, in August the PBoC 1) instigated measures aimed at increasing the cost of short-selling the currency and, 2) introduced a counter-cyclical factor in the RMB's daily fixing mechanism.

Competitive devaluation by China is thus a risk scenario. It would trigger an escalating depreciation in several Asian currencies because China is either a big market for Asian economies or a great competitor for them.

Table 1. Comparative advantage of exports vs. China

	IN	KO	MY	ID	TH	PH	VI	JP	HK	SP
Food Products	0	x	0	0	0	0	0	x	0	0
Minerals	0	x	0	0	0	0	0	x	x	x
Chemicals	0	0	x	x	x	x	x	0	x	0
Plastic or Rubber	x	0	0	0	0	x	x	0	x	0
Textiles and Clothing	0	x	x	x	x	x	0	x	x	x
Metals	x	x	x	x	x	x	x	0	x	x
Mach and Elec	x	x	x	x	x	0	x	x	x	x
Transportation	0	0	x	0	0	x	x	0	x	x
Miscellaneous	x	x	x	x	x	x	x	x	0	x

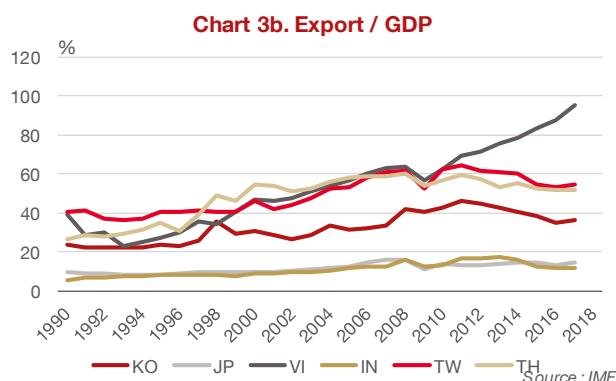
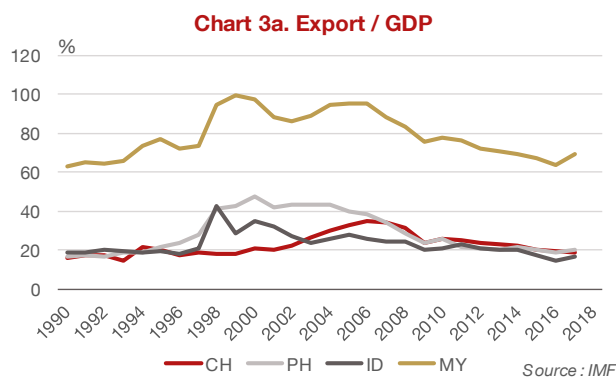
Sources: WITS (2015), Société Générale  
 Notes: "x" indicates that the country has a similar Revealed Comparative Advantage to China for a given sector; "0" indicates the country has a significant lower or higher Revealed Comparative Advantage than China, hence would not be heavily impacted by RMB depreciation.

Table 1 shows the similarity of various economies with China in terms of comparative advantages in different sectors. Many export-driven economies including South Korea, Malaysia, the Philippines and Vietnam, share comparative advantage with China in several sectors<sup>1</sup>. Taiwan's exports, which are very similar to Korea's exports, should also be affected. The currencies of these economies would tend to follow competitive devaluation. This would generate macrofinancial imbalances particularly in countries already vulnerable to the appreciation of the dollar (this is especially the case for Malaysia, analysed below).

**Less open countries will prove more resilient**

Resilience to external shocks hinges on the resilience of domestic demand. In the last 20 years since the Asian crisis, Asian economies have pursued an export-oriented development strategy. Since the Lehman crisis, only a few large countries have managed to gradually reduce the size of exports. Most have maintained a stable degree of openness. But Vietnam quickly became more open, having a development strategy based on FDIs and foreign trade. The region thus remains vulnerable to external demand shock. Vietnam, Malaysia, Taiwan, Thailand and South Korea will be the most impacted (Charts 3a/b).

<sup>1</sup> Hong Kong and to a lesser extent Singapore have very similar comparative advantages to China, but this is because of their status as places of transit for international trade.



**II – RISK OF EXCESSIVE TIGHTENING OF INTERNATIONAL FINANCIAL CONDITIONS**

The tightening of international financial conditions is a major risk for emerging countries that turn to the international market for funding. This is known as the risk of a sudden stop.

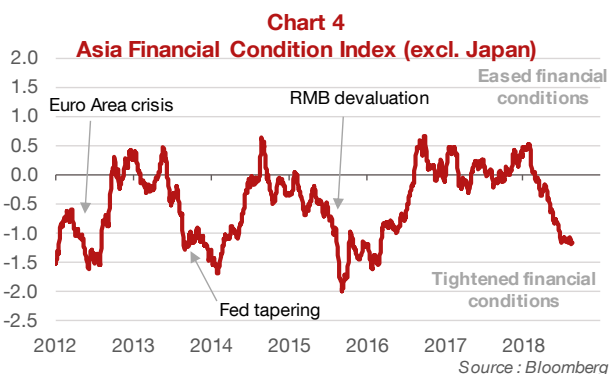
The Bloomberg Asia Financial Conditions Index<sup>2</sup> shows tightening since February 2018 (Chart 4). After hovering around the normal pre-crisis level between mid-2016 and end-2017, the index is moving away much as it did during taper tantrum and the RMB devaluation.

The worsening of financing conditions in emerging Asia appears to reflect impacts of monetary policy

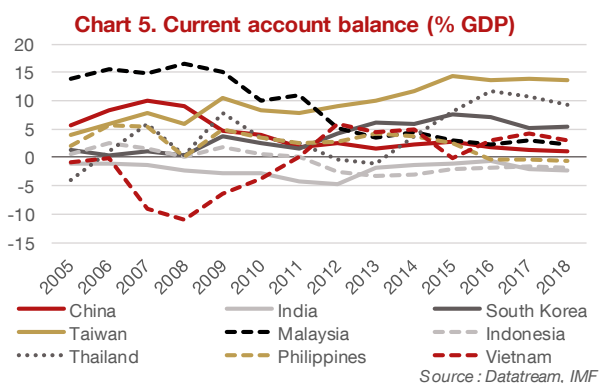
<sup>2</sup> This Bloomberg index measures the deviation of a set of indicators compared to normal. It factors in money market rates, bond market spreads, stock market indices and the carry trade indicator.

normalisation and uncertainties surrounding the development of trade tensions. This trend could intensify if uncertainties increase.

Below we focus on various indicators to get a better idea of each economy’s resilience/vulnerability to financial conditions tightening (capital outflows, dollar appreciation and US interest rate hikes).



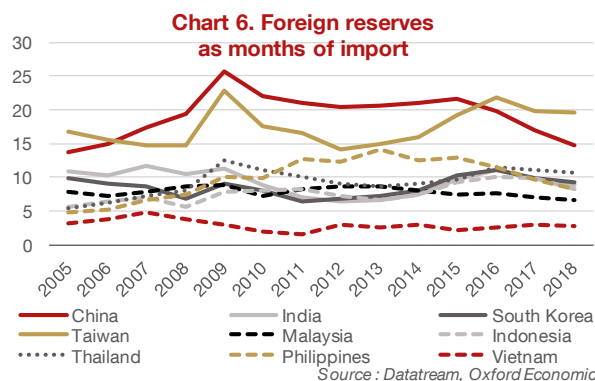
Most of these economies have structurally positive current account balance (Chart 5).



We have seen a significant improvement in Vietnam’s current account balance, which has risen from -10% in 2018 to 3% of GDP today. India and Indonesia have also reduced their current account deficits to around 2%. Malaysia, however, has seen its current account surplus decreasing significantly, from 15% to 3% in 10 years, in line with declining weight of exports in GDP. In addition, the Philippines’ current account balance has declined in recent years, and has been in deficit since 2016.

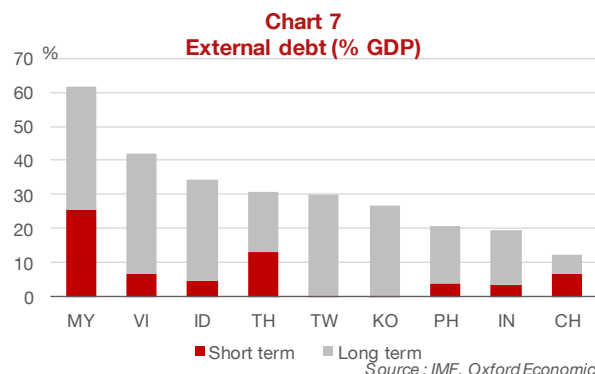
**Almost all Asian countries have built up substantial foreign exchange reserves (Chart 6).**

These reserves cover significantly more than 3 months’ imports (serving as a benchmark). Only Vietnam presents a mixed situation<sup>1</sup>.



Furthermore, the Chiangmai Initiative calls for multilateral swap arrangements (\$240 billion) among the members of ASEAN+3 (China, Japan and South Korea). This initiative was designed and established in the wake of the Asian crisis to help member countries meet their USD liquidity requirements. Consequently, emerging Asia may well hold up even in the event of a major shock.

**For most Asian countries, external debt is less than 30% of GDP, with a low percentage of short-term debt (Chart 7).**



Vietnam and Malaysia have the highest level of external debt in % of GDP. While Vietnam predominantly owes long-term debt including low-rate concessional debt, Malaysia’s situation exposes the country to greater risk than other Asian countries.

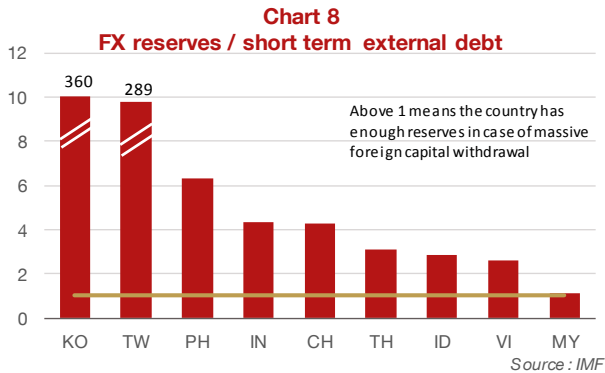
External debt exceeds 60% of GDP in Malaysia, nearly two-thirds of which is denominated in foreign currencies (mainly USD) and over 40% of which consists of short-term debt (10% of short term debt is non-resident deposits).

Moreover, despite being positive (3% of GDP), the current account balance has constantly been on the decline from a level representing 15% in 2008-2009. Meanwhile, foreign exchange reserves currently only

<sup>1</sup> Vietnam has improved its current account balance, which became positive in 2011. However, although they have climbed swiftly, foreign exchange reserves have thus far been unable to keep up with the expansion of imports. To support robust growth,

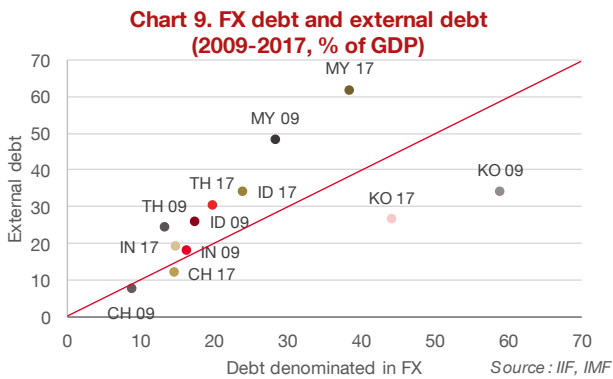
imports of capital and consumer goods doubled between 2012 and 2017.

cover 1.1x of the country's short-term external debt (Chart 8), the lowest ratio in the region<sup>1</sup>.



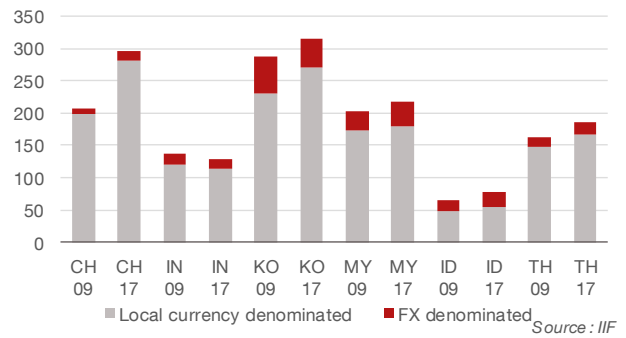
**Countries with USD-denominated debt are exposed to an increase in their financing cost. Some countries and economic sectors are more exposed than others.**

Emerging countries have more easily access to debt market, particularly in their own currencies. The level of external debt (owed to non-residents) is generally higher than that of foreign currency-denominated debt (Chart 9), which is relatively low in emerging Asia (Chart 10). South Korea and Malaysia may have higher sensitivity to the dollar appreciation given their levels of foreign currency-denominated debt. It should be noted, however, that thanks to its macroprudential policy, South Korea has reduced its external debt and foreign currency debt since Lehman crisis while almost all other countries have increased theirs.



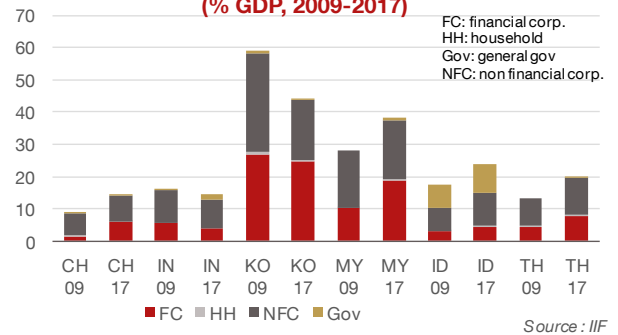
<sup>1</sup> We note that the Guidotti Greenspan rule recommends that the ratio of a country's foreign exchange reserves to short-term external debt should be higher than 1, meaning the country would

Chart 10. Debt % of GDP (2009-2017)



Foreign currency-denominated debt is mainly held by financial institutions and non-financial corporates (Chart 11). Emerging Asia's public sector has a relatively easy access to local currency debt market, except for Indonesia. Indonesia's foreign currency debt is relatively high relative to total outstanding debt, due in large part to public-sector and non-financial corporate debt.

Chart 11. FX denominated debt (% GDP, 2009-2017)



Malaysia has a high level of public debt (nearly 55% of GDP). But being denominated in local currency, the debt is not highly sensitive to the dollar appreciation. Meanwhile its financial institutions and corporations have issued foreign currency debt amounting to 37% of GDP. This makes financial intermediation and corporate financing among the most sensitive to the dollar in the region.

Malaysia and Indonesia, and to a lesser extent South Korea, have the highest exposure to dollar appreciation risk.

**Portfolio investment flows, by definition more volatile, make some financial markets more vulnerable to changes in international financial conditions.**

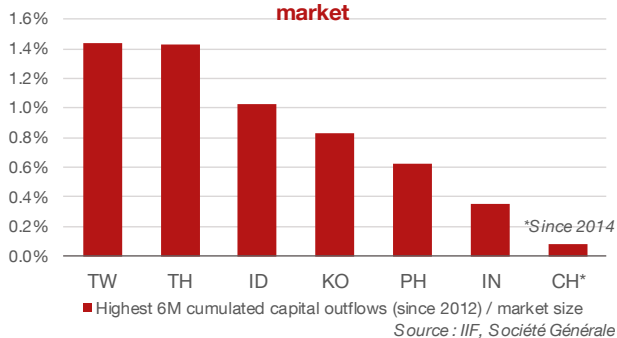
Foreign investors holding a high share of domestic securities can end up being a source of turbulence on

still have sufficient reserves to cope with massive capital outflows.

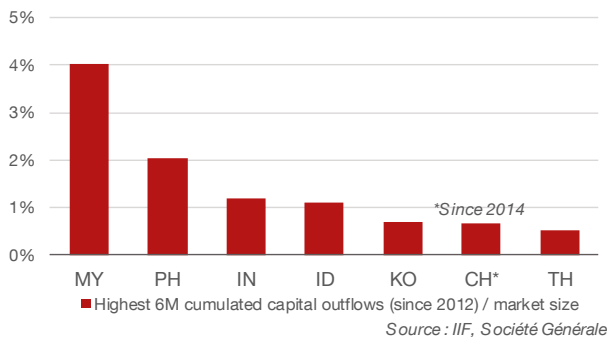
domestic financial markets, potentially generating repercussions on domestic financing conditions.

Capital markets are differently exposed to the behaviour of international investors in emerging Asia (Charts 12a/b). First, equity market outflows in the region are more moderate than bond market outflows when capital outflow peaks are compared to the size of the local markets. Second, the equity markets in Thailand, Taiwan, Indonesia and South Korea have the highest exposure to international capital fluctuations. Third, the impact of capital outflows is much higher in bond markets of exposed countries such as Malaysia and the Philippines, whose financing conditions may be particularly affected.

**Chart 12a. Capital outflows from equity market**



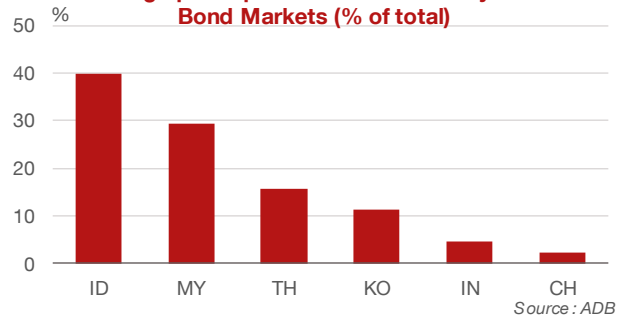
**Chart 12b. Capital outflows from debt market**



The risk of fluctuations in capital flows can also result in greater pressure to adjust interest or exchange rates. In Indonesia, for example, the central bank has raised its key rate by 125 bp since mid-May to shore up its exchange rate. Similarly, the Philippines increased its interest rate by 100 bp and India by 50 bp.

Above capital flow analysis can be completed by non-resident holding of local currency government bonds (see Chart 13).

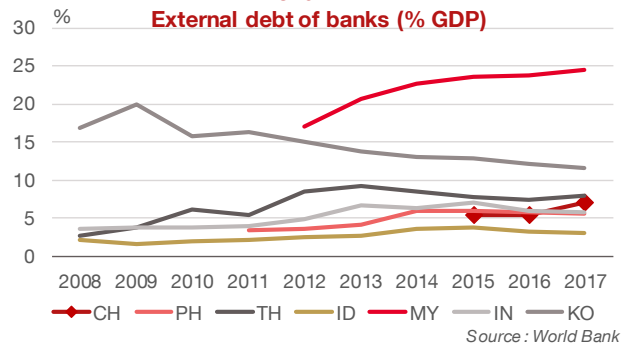
**Chart 13 Foreign participation in local currency Gov Bond Markets (% of total)**



**Highly favourable liquidity conditions have also increased the level of banks liabilities held by non-residents (Chart 14).**

Only South Korea has managed to reduce the foreign debt of its banks since the 2008 crisis. Although most countries have moderately increased their external debt, Malaysia's rose from 17% to 24% of GDP between 2012 and 2017. The deterioration of external financing conditions will affect the Malaysian economy accordingly.

**Chart 14 External debt of banks (% GDP)**



**If external financial conditions tighten excessively, domestic financial conditions may become more restrictive for countries dependent on external financing.**

Domestic interest rates tend to climb when the local currency depreciates: international investors demand higher yields and/or the country may increase rates to ease currency depreciation pressure. The case of Indonesia referred to earlier is a good example. The country has been hit with a twofold tightening effect. Only countries with little external debt and foreign currency debt are in a position to ease their monetary policy if needed. China is in this position, but has little room to manoeuvre due to already high domestic debt.

## CONCLUSION

Emerging Asia is facing on one hand the risk of rising trade tensions that would affect almost all economies, and on the other hand the risk of excessive tightening of external financial conditions, with some countries more vulnerable than the rest. However, as the region is relatively resilient thanks to improved fundamentals (it is notably less dependent on international financing), these risks are likely to result in macroeconomic adjustments such as depreciation and interest rate hikes, impacting growth rather than triggering a financial crisis.

### Recap: analysis of the vulnerability of Asian economies to external risks

	CH	IN	KO	TW	MY	ID	TH	PH	VI
<b>Trade tensions</b>									
By Global Value Chain	0	-	-	-	0	0	0	0	0
China slowdown	0	-	-	-	-	-	-	-	-
Competitive depreciation	0	-	-	-	0	0	-	-	-
<b>Global financing conditions tightening</b>									
Current account balance	+	-	+	+	0	-	+	0	+
FX reserves / imports	+	+	+	+	+	+	+	+	-
FX reserves / short term debt	+	+	+	+	0	+	+	+	+
FX debt of Gov	0	0	0	//	0	-	0	-	//
FX debt of NFC	0	0	0	//	-	-	0	//	//
FX debt of HH	0	0	0	//	0	0	0	//	//
External debt of banks	0	0	0	//	-	0	0	0	0
Exposure of equity market to non-residents	0	0	0	0	//	0	0	0	//
Exposure of debt market to non-residents	0	-	0	//	-	-	0	-	//

Notes: "+" means favorable impact, "-" negative impact and "0" neutral. "/" indicates no available comparable data.

### Below a summary of each economy facing the external risks:

#### China

Chinese economy has very little exposure to external funding. Trade tensions with the US pose the greatest risk to growth. With growth already slowing due to deleveraging, the Chinese authorities are adjusting course. Measures to facilitate financing were announced in August. Their purpose is to preserve financial stability and avoid hard landing. As a result, deleveraging will take longer and the profile of the slowdown will be smoothed out. For the rest of the region, this is more of a stabilising effect.

#### India

India is less exposed to the risk of exacerbated trade tensions, but is sensitive to the tightening of external financing conditions. Despite the reduced current account deficit until 2017, still high funding need of public sector has created several structural problems. In the case of an external shock, the risk is that the current account deficit will widen again due to the depreciation and rise in oil prices.

#### South Korea

Specialising in exports, South Korea is highly exposed to the rise in protectionism. Given its macroprudential policy, previously dependent on foreign currency financing, its non-financial corporations and banking

sector have significantly reduced foreign currency debt and external debt.

#### Taiwan

Taiwan is highly exposed to the risk of growing trade tensions, with exports representing nearly two-thirds of GDP. However, the economy presents robust external financial fundamentals.

#### Malaysia

The country still has a positive current account balance despite the significant decline since the Lehman crisis. However, even though Malaysian government debt is mainly denominated in MYR, its outstanding debt has continually increased since 2008-2009 to exceed 50% of GDP. The country also has one of the highest levels of external debt in the region (same for bank debt). Foreign currency corporate debt is substantial as well, making up 27% of corporate financing. Furthermore, the bond market has one of the highest exposures to international investor capital outflows. All in all, Malaysia is riddled with vulnerabilities to the afore-mentioned risks, calling for exchange and/or interest rate-based adjustments.

#### Indonesia

While noting the improvement in the country's fundamentals, we highlight its relative dependence on USD-denominated debt, both in the public and in non-financial corporations. Indeed, the level of debt relative to GDP is not so high compared to other countries in the region, but foreign currency debt (particularly USD debt) makes up 45% of corporate debt and 30% of government debt. With a negative current account balance, Indonesia is the most sensitive to USD appreciation of our analysis sample. The country is subject to a twofold monetary tightening effect in the event of interest rate hikes carried out to protect the currency's exchange rate.

#### Thailand

From a trade standpoint, the export-driven economy is subject to the same risk as neighbouring countries. From a financial standpoint, while Thailand is not yet as exposed as Malaysia or Indonesia, foreign currency corporate debt accounts for over 20% of corporate financing, making the corporates sensitive to USD appreciation.

#### Philippines

Philippines exports are not as exposed to the Chinese market, but in the event of competitive depreciation, the country would nevertheless be impacted given its degree of openness (20% of GDP). In addition, the reduction and then disappearance of the current account surplus heightens the foreign currency financing risk of its public sector and non-financial

corporates (close to 20% of GDP). This in turn increases the bond market’s sensitivity to capital flow volatility, and thus the sensitivity of the PHP and interest rate constraints.

**Vietnam**

The Vietnamese economy is becoming increasingly open, making the country vulnerable to a trade war. Although it has finally succeeded in generating a current account surplus, the country’s foreign exchange reserves are not growing as much as quickly to face soaring need for imports. Fundamentals are expected to consolidate further, particularly with regard to public finances.

**Appendix**

Acronyms	
CH	China
IN	India
KO	S.Korea
TW	Taiwan
MY	Malaysia
ID	Indonesia
TH	Thailand
PH	Philippines
VI	Vietnam
JP	Japan
HK	Hong Kong
SP	Singapore

**Glossary**

**External debt:** any debt owed by a country’s borrowers (government, banks, corporations) to non resident creditors (banks, investment funds, governments, multilateral organisations). This debt can take the form of conventional loans or bonds.

**Foreign currency external debt:** external debt denominated in a currency other than the issuing country’s currency, often in hard currencies such as the USD, EUR, JPY, etc. In such case, the issuer is exposed to foreign exchange risk. If the country’s currency depreciates against hard currencies, debt service costs and principal increase along with default risk.

**Local currency external debt:** external debt denominated in the issuing country’s currency. The borrower is exposed to interest rate risk, causing debt service costs to climb.

In this report, debt denominated in foreign (or local) currencies refers to the sum of domestic debt denominated in foreign (or local) currencies and external debt denominated in foreign (or local) currencies.



## NUMÉROS PRÉCÉDENTS ECONOTE

---

- N°40 Monetary policy: Back to normal?**  
*Marie-Hélène DUPRAT (April 2018)*
- N°39 Trade globalization: Going into reverse?**  
*Marie-Hélène DUPRAT (November 2017)*
- N°38 Italy: companies' difficulties are hampering investment and growth potential**  
*Danielle SCHWEISGUTH (April 2017)*
- N°37 “Super-aged” nations and inflation: Case studies**  
*Marie-Hélène DUPRAT (March 2017)*
- N°36 Housing in Europe: Are there any overheated markets?**  
*Emmanuel PERRY (December 2016)*
- N°35 Population aging: Risk of deflation or inflation?**  
*Marie-Hélène DUPRAT (November 2016)*
- N°34 Emerging markets' external debt: It's the same old song?**  
*Juan Carlos DIAZ MENDOZA (November 2016)*
- N°33 US public debt: Towards more domestic and private financing**  
*Amine TAZI, Clémentine GALLÈS (September 2016)*
- N°32 China: Assessing the global impact of a Chinese slowdown**  
*Sopanha SA, Théodore RENAULT (July 2016)*
- N°31 France: A private sector in better financial health, despite higher debt**  
*François LETONDU (June 2016)*
- N°30 A world without inflation**  
*Marie-Hélène DUPRAT (March 2016)*
- N°29 Low interest rates: the 'new normal'?**  
*Marie-Hélène DUPRAT (September 2015)*
- N°28 Eurozone: in the 'grip of secular stagnation'?**  
*Marie-Hélène DUPRAT (March 2015)*
- N°27 Emerging oil producing countries: Which are the most vulnerable to the decline in oil prices?**  
*Régis GALLAND (February 2015)*
- N°26 Germany: Not a “bazaar” but a factory!**  
*Benoît HEITZ (January 2015)*
- N°25 Eurozone: is the crisis over?**  
*Marie-Hélène DUPRAT (September 2014)*
- N°24 Eurozone: corporate financing via market: an uneven development within the eurozone**  
*Clémentine GALLÈS, Antoine VALLAS (May 2014)*
- N°23 Ireland: The aid plan is ending - Now what?**  
*Benoît HEITZ (January 2014)*
- N°22 The Eurozone: Falling into a liquidity trap?**  
*Marie-Hélène DUPRAT (November 2013)*
- N°21 Rising public debt in Japan: how far is too far?**  
*Audrey GASTEUILL (November 2013)*
- N°20 Netherlands: at the periphery of core countries**  
*Benoît HEITZ (September 2013)*

# ECONOMIC STUDIES CONTACTS

**Michala MARCUSSEN**

Group Chief Economist  
+33 1 42 13 00 34  
michala.marcussen@socgen.com

**Olivier de BOYSSON**

Emerging Markets Chief Economist  
+33 1 42 14 41 46  
olivier.de-boysson@socgen.com

**Marie-Hélène DUPRAT**

Senior Advisor to the Chief Economist  
+33 1 42 14 16 04  
marie-helene.duprat@socgen.com

**Ariel EMIRIAN**

Macroeconomic analysis / CIS Countries  
+33 1 42 13 08 49  
ariel.emirian@socgen.com

**François LETONDU**

Macro-sectoral analysis  
+33 1 57 29 18 43  
francois.letondu@socgen.com

**Claire ABBO**

Macro-sectoral analysis  
+33 1 42 14 19 46  
claire.abbo@socgen.com

**Constance BOUBLIL-GROH**

Central and Eastern Europe  
+33 1 58 98 98 69  
constance.boublil-groh@socgen.com

**Juan Carlos DIAZ MENDOZA**

Latin America  
+33 1 57 29 61 77  
juan-carlos.diaz-mendoza@socgen.com

**Aurélien DUTHOIT**

Macro-sectoral analysis  
+33 1 58 98 82 18  
aurelien.duthoit@socgen.com

**Elyas GALOU**

United States and United Kingdom  
+33 1 57 29 43 33  
elyas.galou@socgen.com

**Clément GILLET**

Africa  
+33 1 42 14 31 43  
clement.gillet@socgen.com

**Alan LEMANGNEN**

Euro Area, France, Germany  
+33 1 42 14 72 88  
alan.lemangnen@socgen.com

**Nikolina NOPHAL BANKOVA**

Macro-sectoral analysis  
+33 1 58 98 89 09  
nikolina.nophal-bankova@socgen.com

**Danielle SCHWEISGUTH**

Western Europe  
+33 1 57 29 63 99  
danielle.schweisguth@socgen.com

**Edgardo TORIJA ZANE**

Middle East, Turkey and Central Asia  
+33 1 42 14 92 87  
edgardo.torija-zane@socgen.com

**Bei XU**

Asie  
+33 1 58 98 23 14  
bei.xu@socgen.com

**Yolande NARJOU**

Assistant  
+33 1 42 14 83 29  
yolande.narjou@socgen.com

**Salma DAHIR**

Research assistant  
+33 1 57 29 07 15  
salma.dahir@socgen.com

**Sigrid MILLEREUX-BEZIAUD**

Information specialist  
+33 1 42 14 46 45  
sigrid.millereux-beziaud@socgen.com

# DISCLAIMER

This publication reflects the opinion of Societe Generale S. A.'s Economic and Sector Research department at the date of publication. This opinion is subject to change at any time without notice. It is provided for information purposes only, and does not constitute an investment recommendation or an investment advice within the meaning of current regulations. This publication has no contractual value.

Neither the information contained in, nor the analyses expressed therein constitute in any way an offer to sell or a solicitation to offer to subscribe, purchase, sell a product or execute a transaction and shall not engage the liability of Société Générale S. A. or any of its entities, in compliance with current regulations. Then, should a retail or a professional client, or eligible counterparty obtain this publication, they should not base any investment decisions solely on the basis of this publication, and must seek independent financial advice.

The accuracy, completeness or relevance of information derived from external sources is not warranted, even if it comes from sources reasonably believed to be reliable. Subject to the current regulations, Societe Generale S. A. does not accept any liability in this respect. The economic information mentioned in this document is based on data valid at a given time, and may therefore change at any time.

Societe Generale S. A. is a French credit institution authorized and supervised by the Autorité de Contrôle Prudentiel et de Resolution ("ACPR"), regulated by the Autorité des Marchés Financiers ("AMF") and under the prudential supervision of the European Central Bank ("ECB").

Societe Generale S.A. is also authorized by the Prudential Regulation Authority and subject to limited regulation by the Financial Conduct Authority and Prudential Regulation Authority. Details about the extent of our authorization and regulation by the Prudential Regulation Authority, and regulation by the Financial Conduct Authority are available from us on request.

Notice to US Investors: this document is issued by non-US SG economic analysts or affiliates on economics studies are issued solely to major US institutional investors pursuant to SEC Rule 15a-6. Any US person wishing to discuss this report or effect transactions should do so with or through SG Americas Securities, LLC. SG Americas Securities LLC has its registered office at 1221 Avenue of the Americas, New York, NY, 10020. (212) 278-6000.

Notice to Asian investors: this document is prepared for and intended to be distributed in Asia solely to sophisticated and professional clients. You should therefore be appropriately qualified as a professional, accredited, wholesale, expert or institutional investor (however defined in your local jurisdiction).

This publication may not in any way be reproduced (in whole or in part) or transmitted to any other person or entity without the prior written consent of Societe Generale SA.

© 2018