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# PANORAMA

SEPTEMBER 2015

## Asia challenged by China's slowdown

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By Coface Group Economists



**T**he Chinese economy has been in the spotlight for several months: devaluation of the yuan, stock market collapse, falling property prices, fears of an excessive economic slowdown, doubts about the reliability of published data and, more generally speaking, uncertainties about the rebalancing process the authorities have launched. In this anxiety-provoking environment, other Asian countries seem to be the first potential victims in the event of a hard landing for the Chinese economy. While they have benefited from their geographical proximity and sectoral specialisations to trade massively and grow in China's footsteps since the early 2000s, their integration now seems to be a risk

factor, as China has contributed close to 32% to global growth and 72% to growth in emerging Asia since 2000. In this overview we first look at the state of the Chinese slowdown and then identify in what way Asian countries are being affected by the competitiveness losses that have accompanied this reduced vigour of activity. We then identify the countries that are most vulnerable to this development, by mainly focusing on three transmission channels: trade, commodity prices and financing.

We can draw several conclusions from this study. First, the two financial markets and trade hubs Hong Kong and Singapore are particularly vulnerable to the Chinese slowdown, through the trade channel as well as

the financial channel. Other countries, first and foremost Mongolia, are also likely to be negatively affected by the fall in commodity prices but also by the reduction in Chinese investment in the related sectors. At the other end of the scale, two countries in the region currently seem more immune than the others, i.e. India and the Philippines. Between these two groups, Thailand, Malaysia and Indonesia are in an intermediate position: while their exposure to the Chinese slowdown through trade and financial flows is significant, it is not sufficient to derail their growth in the event of a soft landing for the economy, which remains Coface's main scenario (we expect Chinese growth to reach 6.7% in 2015 and 6.2% in 2016).

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FOR SAFER TRADE

## RESEARCH PAPER

September 2015

# ASIA CHALLENGED BY CHINA'S SLOWDOWN

## BY OUR ECONOMISTS



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## 1

## THE CHINESE SLOWDOWN: SIGN OF A FALTERING MODEL THAT MUST BE REINVENTED?

### The slowdown is partly explained by the decline in the country's potential growth

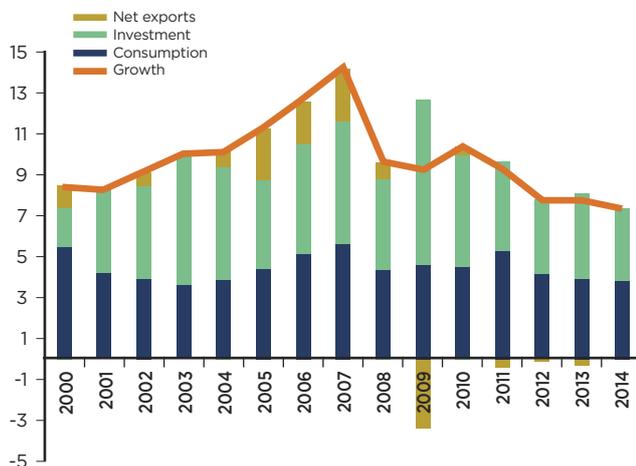
The Chinese growth rate has been decreasing continuously over the past 10 years. After reaching a peak at 14.2% in 2007, it lost around four percentage points of GDP between 2008 and 2011, before falling below 8% from 2012 (*chart 1*). In 2014, the growth rate was "only" 7.3%, the lowest level in a quarter of a century.

Beyond cyclical factors, this reduction has led to a decline in Chinese potential growth, which has been decreasing continuously since 2005, from 10.2% to 6.6% in 2013 according to the IMF (*chart 2*). This is due in particular to the weakening of the capital and technological catching-up process China has benefited from in the past <sup>(1)</sup>.

First, the productivity of the production factors has weakened because of the sub-optimal allocation of investments (which has generated real estate bubbles and overcapacity) and the benefits

Chart n° 1

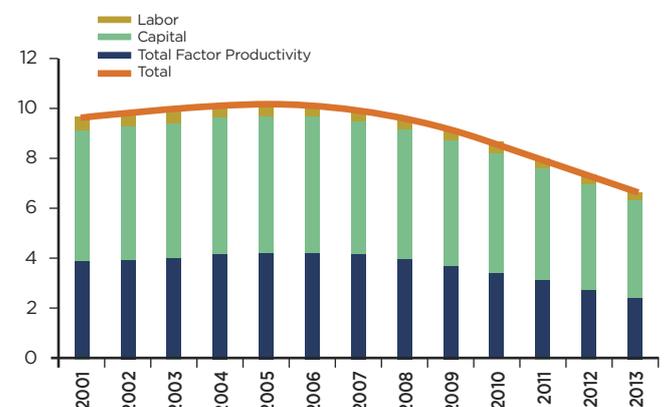
China: Contributions to GDP growth (%)



Source: IMF

Chart n° 2

Gradual decline in potential growth (%)



Source: IMF

(1) Anand R, K Cheng, S Rehman and L Zhang (2014), "Potential Growth in Emerging Asia", IMF Working Paper.

related to the reallocation of the labour force from the agricultural sector to the manufacturing sector are becoming less pronounced. Second, with a falling working-age population since 2010, a rising dependency ratio<sup>(2)</sup> and a falling population growth, demography is unfavourable in China. Also, the rapid rise in unit labour costs is denting China's cost competitiveness, which means the country has to move up the value chain. As a result, the government's implementation of structural reforms will be crucial to ensure a sustainable growth trajectory and to keep potential growth at a high level.

This structural slowdown has been accompanied by an increased role of consumption, and this rebalancing seems crucial in order to put growth on a sustainable path. The contribution of investment to growth, which has been the main driving force of activity for decades, has become less important, overtaken by consumption from 2011, a trend that is likely to gradually continue over the next years. The Chinese authorities have started a strategy of gradually rebalancing growth to the benefit of consumption and want to move towards a more efficient economy that gives a greater role to the market. This rebalancing is desirable when it comes to rectifying past imbalances, in particular due to excessive credit growth that has been used to finance investment, creation of overcapacity, development of shadow banking<sup>(3)</sup> and local government borrowing.

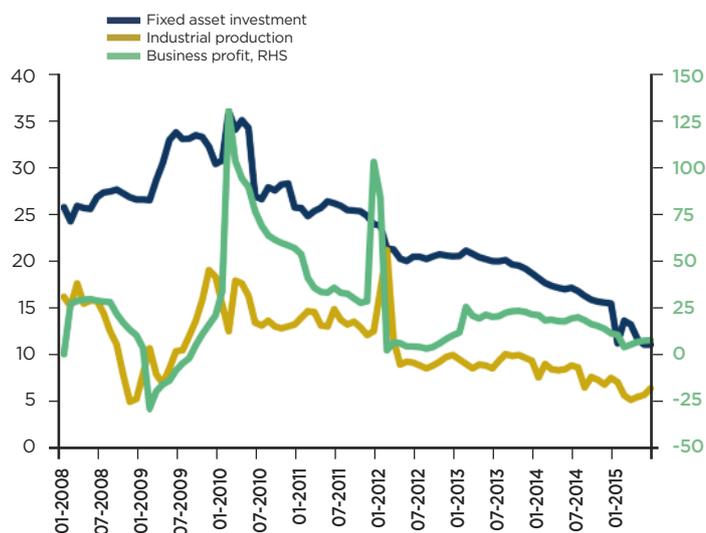
The determination to rebalance the growth regime is embodied in a series of fundamental reforms, including a liberalisation of the financial system, an overhaul of state-owned companies and a reduction in overcapacity. However, the effect of these reforms on growth is not neutral and the Chinese authorities have to deal with a short and medium term trade-off. Even though Beijing is prepared to accept a certain slowdown in growth to ensure a transition towards the "new normal", the authorities stand ready to intervene if the growth slowdown turns out to be too drastic. Even though economic stimulus package of the same scale as in 2008/2009, is not expected the implementation of a more flexible policy mix, a combination of fiscal and monetary policy, is already boosting growth<sup>(4)</sup>.

This growth rebalancing will probably have an adverse impact in the short term if consumption does not take over for investment quite rapidly. Coface expects the Chinese slowdown to continue, with a growth rate in the Chinese economy of 6.7% in 2015<sup>(5)</sup> and 6.2% the following year. This rebalancing would nevertheless be beneficial in the medium term if the authorities succeeded in implementing the structural reforms required to prevent an excessive decline in the country's potential growth<sup>(6)</sup>. This is all the more vital as according to some studies<sup>(7)</sup>, the level of potential growth could reach 4% by 2030, with an assumption of a marked rebalancing with an investment-to-GDP ratio of 34% in 2030 (versus 46% in 2014).

### Investment is no longer such a powerful growth driver

Investment, which the authorities have encouraged strongly, especially since 2008, seems to have reached its limits (chart 3), as shown by the gradual slowdown in fixed capital investment growth (+11.2% in the first quarter of 2015, i.e. half of the growth three years ago), corporate profits and industrial production (+6.3% as a monthly average between the beginning of the year and July 2015, versus +8.3% in 2014). The reason is that investment is suffering from the overcapacity present in many sectors such as the metal industry, construction and real estate, as well as a decline in the return on investment. In this respect, the fall in producer prices is symptomatic of the scale of the overcapacity (chart 4, page 4).

Chart n° 3  
Slowdown in fixed capital growth (year-on-year change, %)



Source: NBS

(2) The dependence ratio corresponds to the ratio between size of the population aged over 64 and the working-age population (aged 15-64).  
 (3) Shadow banking is an alternative financing method for the private sector, more opaque and not regulated by the central bank. It is made up of trust companies and small credit companies that practice usurious interest rates (from 20% with collateral to 70% without collateral). It has developed in response to the problems small and medium-sized enterprises (SMEs) have in obtaining access to credit, but also to provide a higher interest rate than bank deposits.  
 (4) Successive cuts in the reference interest rates (reduction by 25 basis point) as well as in the required reserve ratios (50 basis point reduction on the same date) by the People's Bank of China.  
 (5) In the first and second quarter of 2015, growth came in at 7.0% year-on-year.  
 (6) IMF "Regional Economic Outlook Asia and Pacific", April 2015.  
 (7) M. Albert, C. Jude, C. Rebillard, "The Long Landing Scenario: Rebalancing from Overinvestment and Excessive Credit Growth, and Implications for Potential Growth in China", February 2015.

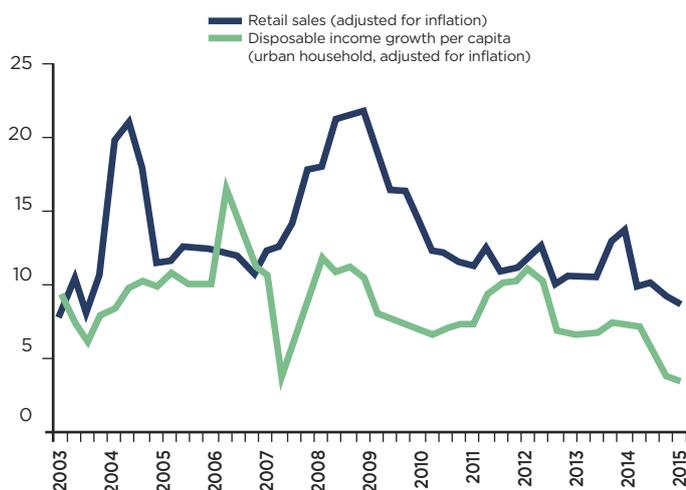
Chart n° 4  
Fall in producer prices (year-on-year change, %)



Source: NBS

In addition, property investment is being negatively affected by the large stocks of housing and the falling prices in the sector. An extended fall in property prices could affect both construction-related sectors (steel, cement, etc.), which account for 15% of GDP, and banks exposed to the property market. But a real estate collapse is unlikely as the authorities have the capacity to intervene in the event of a large-scale shock and property prices seem to have reached a trough. While new residential property prices fell continually (in year-on-year terms) from October 2014 in the main cities, they have been picking up in the last few months (since April 2015 in Shenzhen, June in Shanghai and July in Beijing).

Chart n° 5  
Growth of disposable income and retail sales (%)



Sources: NBS, Coface

In parallel, the incentives to invest have contributed to the increase in the total Chinese debt which has reached worrying levels<sup>(8)</sup> (from 158% of GDP in 2007 to 282% in the second quarter of 2014<sup>(9)</sup>): This is particularly the case for the private sector (207% of GDP in early 2014 according to the IMF) and is linked to the rather opaque financing methods used by shadow banking (estimated at 30% of total financing). This debt increase may ultimately weigh on future growth since it could hamper the financing of new investment projects. It could also threaten the economy's financial stability since a decline in the efficiency of investments (shown by the existence of overcapacity) poses a credit risk on companies.

### While consumption barely takes over from investment, it is underpinned by solid structural factors

The share of consumption in GDP remains low<sup>(10)</sup>, which indicates that a rebalancing of the growth model will still be a considerable challenge in the medium term. Household consumption has for several years benefited from the good performance of the job market and the significant growth in disposable income (chart 5). Income growth, and the ongoing urbanisation process have sustained household disposable income growth. But although disposable income growth remains positive for consumption, it has tended to slow down since 2013. It was only 5% in year-on-year terms in the first and second quarter of 2015, while it was twice more on average in 2014. In parallel, retail sales growth is also slowing down, from a quarterly average of 13.8% in 2014 to 10.2% in the second quarter of 2015 (i.e. from 11.8% to 8.8% when adjusted for inflation, which slowed in this period). However, a number of factors can be expected to boost consumption in the medium term: the Chinese economy has undertaken a transition from industry to the services sector, which is likely to be profitable for consumption since the tertiary sector is more labour intensive. Likewise, the urbanisation process, the low household debt level and the slight fall in savings over the past two years are positive support factors.

(8) Which includes public debt (including at the local level), household and private-sector debt (non-financial and financial companies).

(9) Source: Mc Kinsey Global Institute.

(10) Private consumption accounted for around 38% of GDP and final (private and public) consumption for 52% in 2014. Final consumption corresponds to spending on goods and services used to meet a need directly. It contrasts with intermediate consumption, which refers to the value of goods and services processed or completely consumed during the production process.

**The current account surplus has shrunk significantly since the crisis and is unlikely to return to its previous levels**

Since a peak of 10% of GDP in 2007, the current account surplus has deteriorated and returned to levels comparable to those seen after the turn of the century, to close to 2% in 2014 (chart 6). This considerable decline is not only explained by the crisis, but also by structural changes in the economy which challenges the idea of China as a simple "workshop of the world".

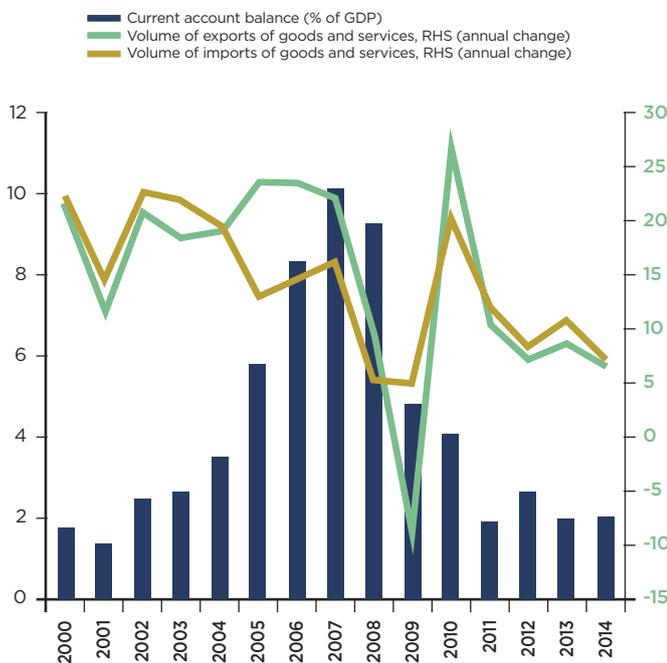
First, the rise in household purchasing power has led to significant and enduring growth in imports. They are characterised by the predominant share of commodities (hydrocarbons, ores, agricultural commodities) but also by the growth in consumer goods, which reflects both an increase in volume terms and in value terms via a move upmarket in terms of the product range (chart 7).

While the share of imports of high-end products has remained relatively constant since the early 2000s (around 30%), the share of midmarket products increased by 20% between 2000 and 2013 at the expense of low-end products.

In 2012, 70% of the consumer goods China imported were high-end goods versus 40% in 2006. And while agri-food products was the largest category of goods imported in the early 2000s, cars currently account for close to half of total consumer goods imports.

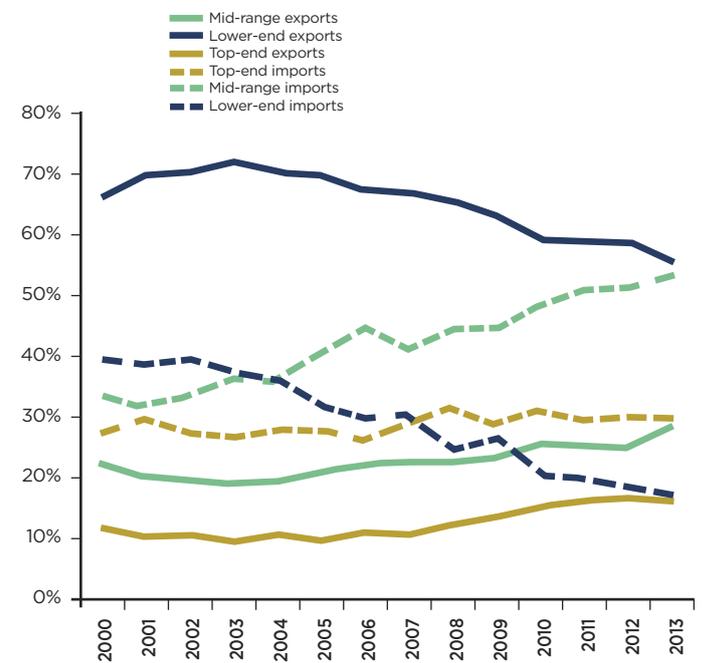
Second, the evolution in the structure of exporting industries has changed trade. The latter is divided into two sub-groups: on the one hand, industries integrated in the processing trade that assemble electronic and mechanical equipment, which traditionally have generated surplus. On the other hand, ordinary trade activities (textile, cast iron, iron, steel, furniture, fabricated metal products), which are chronically in deficit in China because of the weight of commodity imports. Since 2007, the long-run decline in the share of processing trade in Chinese trade (42% of exports in 2014 against 53% in 2007) has contributed considerably to the deterioration in the Chinese trade balance<sup>(1)</sup>. These activities (which until now have enabled the country to post a significant trade surplus) are suffering from the fall in demand from advanced countries, the low profitability of the companies involved in processing trade and the increase in labour costs. China may, accordingly, post a structural trade deficit in the long term.

**Chart n° 6**  
Significant reduction in the current account surplus



Source: IMF

**Chart n° 7**  
Gradual move upmarket (%)

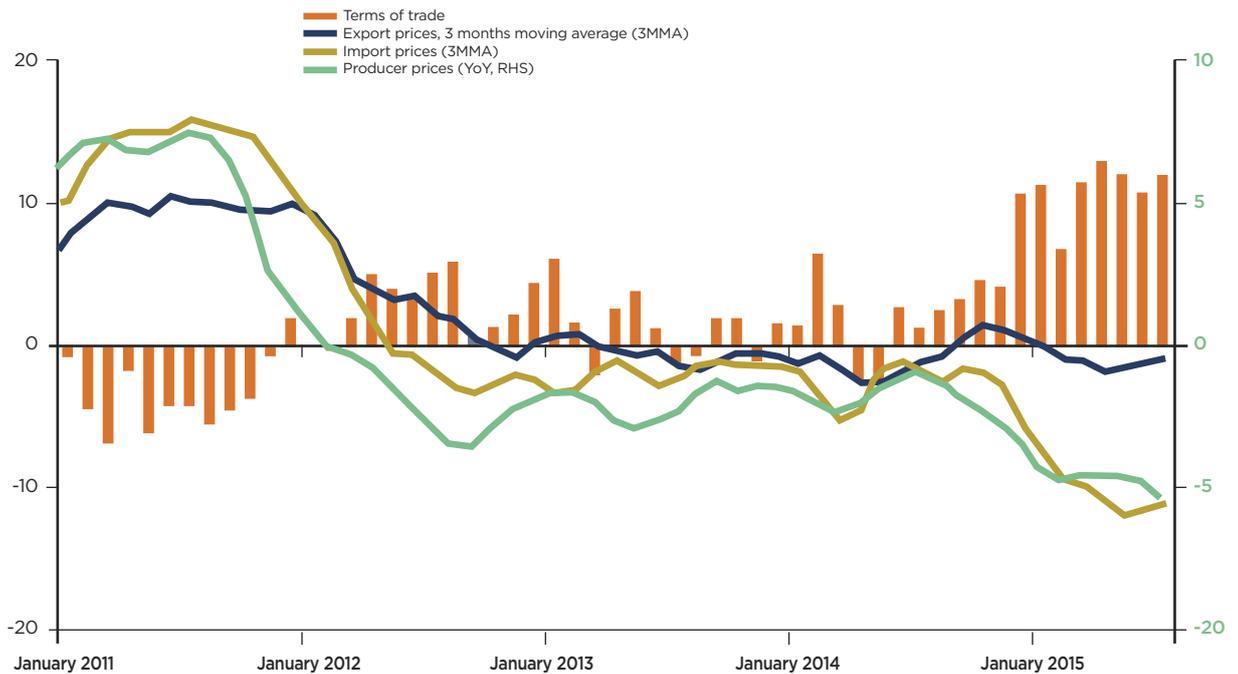


Source: CEPII

(1) While processing trade was the main contributor to the increase in trade surpluses (two-thirds between 2004 and 2007), this relationship was subsequently reversed with a reduction in the surplus linked to processing trade in favour of ordinary trade. This has also changed the structure of trade with Asia.

These structural changes have been accompanied by a deterioration in price competitiveness (see details in section 3), as well as an improvement in the terms of trade since 2012 and especially since a year. Import prices continued their fall in July (-11.3% year-on-year, due to the fall in producer prices), while export prices have declined very slightly since the start of the year and were 0.7% year-on-year in July, *Chart 8*).

Chart n° 8  
Chinese terms of trade



Sources: NBS, Coface calculation  
Last available data: July 2015

In the short term, trade should to be underpinned by the still strong US growth and a moderate European growth recovery, which can be expected to benefit the Chinese exporting sectors. The devaluation of the yuan on 11 August (which depreciated by 3% against the dollar over the next three days), carried out in a context of major concern among investors about the vigour of the Chinese economy, is likely to have only a limited impact on Asian exports. This is explained not only by the small scale of the move, but also by the fact that this devaluation will not offset the appreciation of the yuan against other currencies: China's real effective exchange rate (REER) appreciated by 36% between January 2010 and May 2015 and 14% in one year according to the IMF. Nevertheless, the elasticity of Chinese imports to the exchange rate is moderate: according to Thorbecke and Smith (2012)<sup>(12)</sup>, a 10% appreciation of the renminbi would increase imports by 3 to 4%. If we

make the assumption that the effects of an appreciation and a depreciation are symmetrical, we can therefore assume that in the event of a further devaluation of the yuan to stimulate growth, the effect would be noticeable on Asian economies only in the case of a large-scale move. At this stage, Asian economies are more likely to suffer from a slowdown in Chinese domestic demand than from a devaluation of the yuan.

In the medium and long term, the benefits from financial liberalisation (particularly with an internationalisation of the yuan) could exceed the costs of the loss of price competitiveness by both stimulating consumption (a stronger yuan boosts consumer purchasing power) and by helping the country move up the value chain. Besides, the IMF expects a gradual deterioration in the current account surplus (3% in 2015, 2.2% in 2017, 1.2% in 2019).

(12) Thorbecke and Smith (2012), "Are Chinese Imports Sensitive to Exchange Rate Changes?" RIETI.

Text box

## The Chinese statistics called into question

As raw material for the economist, statistics are crucial for making an economic assessment. In the case of China, the increasing number of divergences between official figures and economists' estimates raises the question of the reliability of Chinese statistics, fuelling a debate on the real magnitude of the Chinese slowdown. As regards GDP data, when the authorities published growth figures for the second quarter of 2015 (7% year-on-year), some observers rather estimated them to be close to 5%-6% and others even as low as 2%. Likewise, while the consumption-to-GDP ratio was officially estimated at 48% in 2014, some studies estimate that it could be at least 10 percentage points higher<sup>(13)</sup>.

The debate started by the revelation, in Wikileaks in 2010, of a discussion going back to 2007 between a US ambassador and the present Chinese Prime Minister Li Keqiang (at the time, secretary of the Communist party in Liaoning province). The latter indicated that official figures (in particular those on GDP) should be used "for reference only" as they are "man-made" and therefore unreliable. He indicated that he personally preferred to use a series of three more specific indicators to estimate the economic growth in his province (electricity consumption, rail cargo volume and bank lending). This method is now called the Keqiang index.

While the official figures might deliberately underestimate the magnitude of the country's slowdown in economic activity, we should also emphasise the objective difficulties in measuring economic performances<sup>(14)</sup>. On the one hand, the complexity of measuring lies in the very size of the economy, which makes it necessary to aggregate a substantial quantity of surveys and information stemming from local authorities. On the other hand, the rapid growth in the economy, as well as the changes in its structure (transition from an economic model based on exports and investment, is now rebalancing towards more consumption; a gradual apprecia-

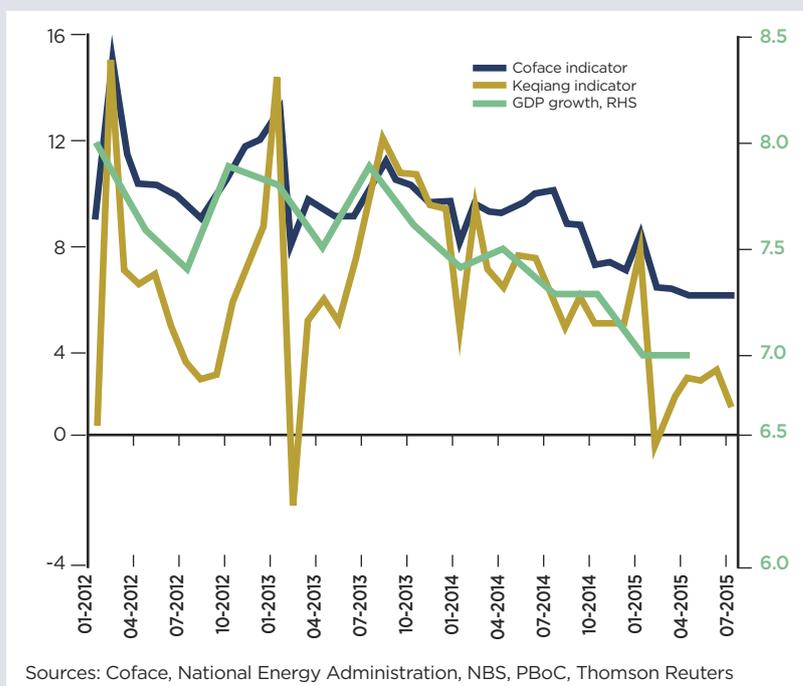
tion of the currency; technological transition), are a real challenge for statisticians, who constantly have to adapt their methodology.

Furthermore, households, companies and local leaders could yield to moral hazard that certain reporting methods can give rise to. For example, since local leaders are assessed according to the economic performances of the region they govern, they could be tempted to overestimate its activity. Likewise, households and companies could minimise the declaration of their income and spending since a part may stem from informal (or even illegal) activities or in order to pay less taxes. Despite the complexity involved in providing quality statistics, China is able to publish its figures far faster than most other countries<sup>(15)</sup>, which lends more credence to suspicions that the figures are implausible.

In the same way as for the Keqiang index, we have built a composite indicator to measure economic activity.

To this end, we have used nine variables capturing the vigour of the secondary and tertiary sectors<sup>(16)</sup> (accounting for respectively 44% and 48% of GDP in 2014). The agricultural sector has been excluded because of its high volatility. When the Keqiang index seems to be more volatile and shows a clear slowdown since the beginning of 2015, the Coface indicator seems more moderate. This is explained by the fact that the Keqiang index is based on industry activity, which is less dynamic than in services, while the Coface indicator takes into account both the secondary and tertiary sectors. On the other hand, the two measures highlight a certain and more marked fall in activity than official figures.

Chart n° 9  
Activity indicators (year-on-year, %)



(13) Capital Economics, "Is consumption being undercounted?" China Economics Focus, April 2014.

(14) Goldman Sachs, "Asia Economics Analyst", No. 15/20, June 2015.

(15) Growth data are generally published two to three weeks after the end of the quarter in China, versus one to two months elsewhere. Also, the revisions provided to these data are often very small except, for example, in the case of a census.

(16) The Coface indicator uses five variables to measure the vigour of the secondary sector (electricity production, rail cargo level, credit to private sector, industrial production and gross fixed capital formation of the secondary sector) and four variables for the vigour of the tertiary sector (retail sales, disposable income, household confidence and gross fixed capital formation of the tertiary sector). The weighting of each variable is identical within the sectors. Also, the two sectors are weighted according to their respective weight in GDP (excluding the agricultural sector).

## 2

TRADE <sup>(17)</sup>: THE MAIN TRANSMISSION CHANNEL  
OF THE CHINESE SLOWDOWN TO ASIA

**The slowdown in exports to China that has already started could continue and affect exports from many Asian countries**

Exports of goods in value terms from the main Asian countries to China have been multiplied by 5.4 between 2000 and 2014 and accounted for 27% of total exports in 2014. The regionalisation process gathered considerable momentum during this period, and resulted in sharp growth in intra-Asian trade. Nevertheless, the weakening of global trade in the past few years has also been noticeable in Asia, and a fall in exports from Asia to China was already seen in 2014 (-4% compared with 2013) for the first time since 2009 (-8%). Accordingly, the average annual growth rate of exports has decreased considerably for most Asian countries in the past few years compared with the pre-crisis period <sup>(18)</sup>.

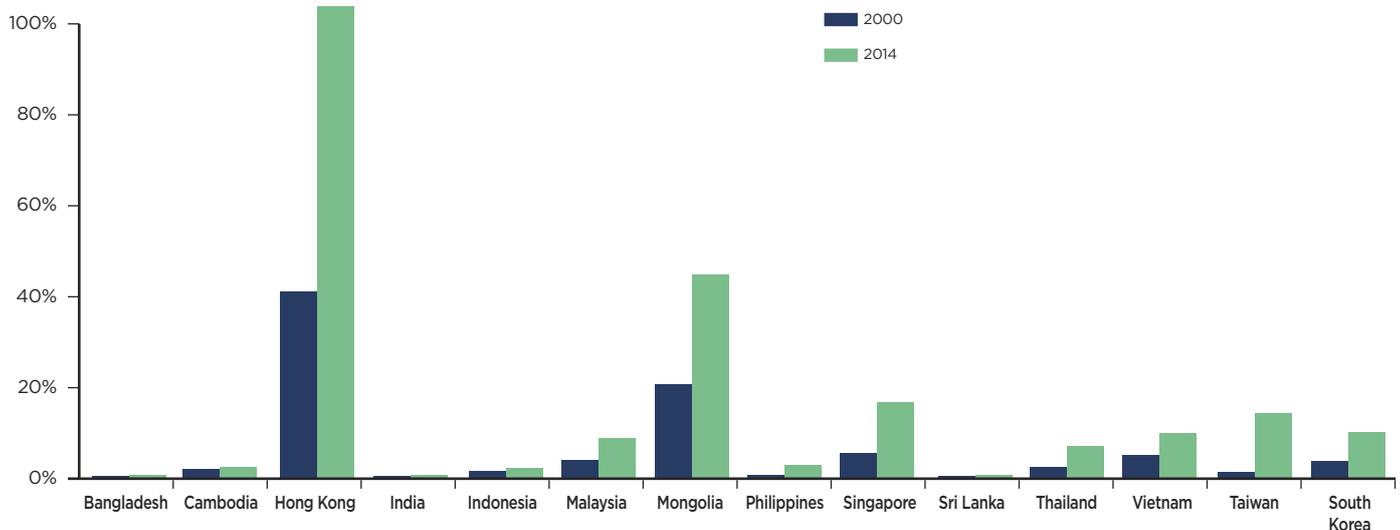
In the event of a major slowdown in activity in China that would trigger a fall in the country's imports, Asian trade would be significantly affected, especially in countries where the weight of Chinese exports in GDP is high, like Hong Kong and Mongolia in particular, but also Singapore, Taiwan, Vietnam, South Korea, Malaysia and Thailand to a lesser extent, where this weight in GDP more than doubled between 2000 and 2014 (*chart 10*). Note that India is not very dependent on external

demand (including from China) and therefore seems less vulnerable. Its economy may nevertheless be affected by negative second-round effects in the event of a slowdown in the Asian and Gulf countries affected by the declining buoyancy of the Chinese economy.

**Some countries would be particularly affected as they are exposed to sectors that are already in trouble**

Chinese imports were multiplied by nine between 2000 and 2014, those of the primary sector by thirteen (with a particularly marked increase in the metal and fuel sectors) and those of the manufacturing sector by seven (particularly in equipment). Currently, the main importing sectors in China are therefore those corresponding to machinery and equipment (37% of the total), miscellaneous manufactured articles (16%), fuels (16%), ores and metals (11%) as well as chemical products. These sectors are therefore the most exposed to the Chinese slowdown, while the situation has already worsened markedly in sectors linked to infrastructures and construction. Bangladesh, Cambodia, Hong Kong, Taiwan, South Korea and Sri Lanka are therefore more likely to be negatively affected by the weakening of Chinese demand for manufactured products.

Chart n° 10  
Exports to China (% of GDP)



Source: UNCTAD

(17) The scope considered here is goods in value terms (UNCTAD data).

(18) Moreover, the weakening of trade is explained, beyond the crisis, by more structural factors and in particular the results of changes in China's value chain: While processing trade was the main contributor to the increase in trade surpluses (two-thirds between 2004 and 2007), this relationship was subsequently reversed with a reduction in the surplus linked to processing trade in favour of ordinary trade. This has also changed the structure of trade with Asia.

Concerning commodities, Mongolia and India would suffer the most from a decline in demand in volume terms for ores and metals, and Indonesia and Mongolia for fuels (*table 1*).

All in all, the weight in activity of exports "at risk" to China (*chart 11 and 12*) (exports of ores, metals, fuels, chemical products and machinery and transport equipment) shows Hong Kong (74%), Mongolia (43%) and Singapore (15%) as the most vulnerable countries to the Chinese slow-down. The country group Taiwan, South Korea, Thailand, Vietnam and Malaysia is also sensitive to this, but to a lesser extent (between 4 and 10% of GDP). This seems relevant, given these economies' significant degree of openness and the strong integration in regional and global value chains. Consequently, a 10% fall in these countries' exports to China would lead in average to a loss of growth of around 0.7 percentage points of GDP for these economies.

Chart n° 11  
Exports "at risk" as % of GDP (2014)

Sources: UNCTAD, IMF

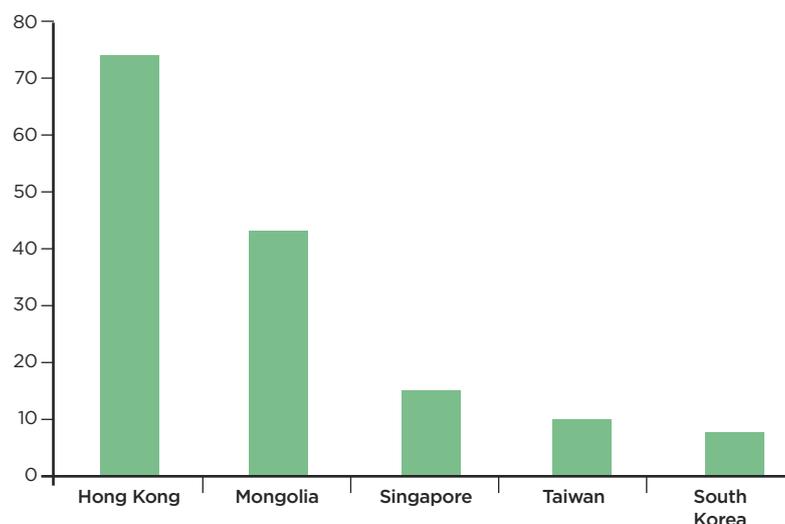
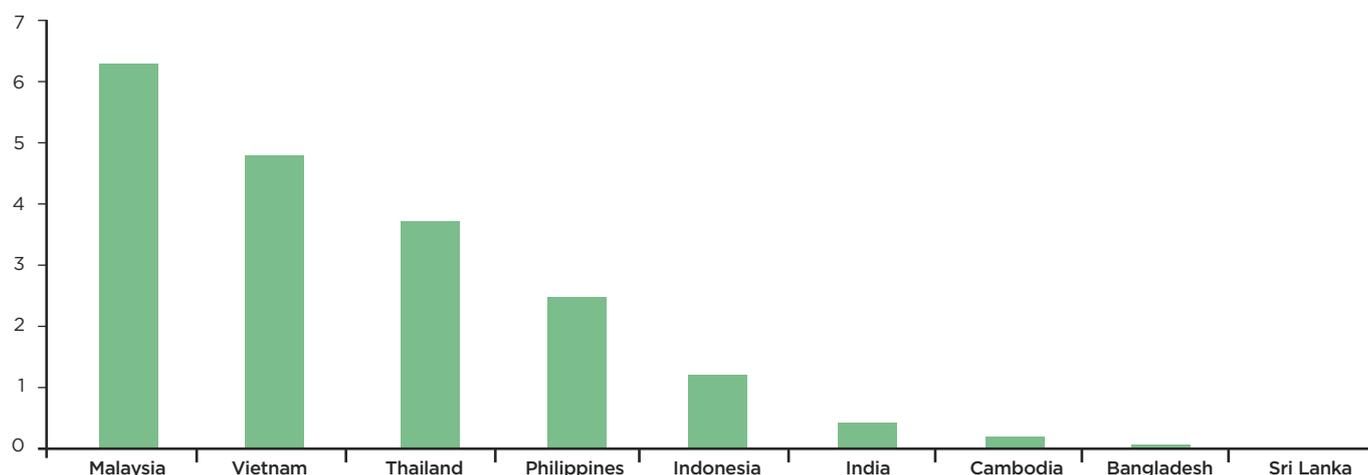


Chart n° 12  
Exports "at risk" as % of GDP (2014)



Sources: UNCTAD, IMF

Table n° 1  
Exports to China by sector

	Bangladesh	Cambodia	Hong Kong	India	Indonesia	Malaysia	Mongolia	Philippines	Singapore	Sri Lanka	Thailand	Vietnam	Taiwan	South Korea
<b>All allocated products</b>	<b>33%</b>	<b>50%</b>	<b>19%</b>	<b>58%</b>	<b>81%</b>	<b>29%</b>	<b>99%</b>	<b>37%</b>	<b>17%</b>	<b>48%</b>	<b>36%</b>	<b>51%</b>	<b>5%</b>	<b>11%</b>
Primary commodities, excluding fuels	10%	11%	1%	4%	20%	13%	1%	6%	2%	18%	13%	21%	1%	1%
Agricultural raw materials	17%	38%	1%	12%	12%	3%	4%	1%	0%	22%	17%	13%	1%	1%
Ores and metals	6%	1%	1%	28%	16%	4%	64%	26%	1%	4%	1%	1%	3%	2%
Fuels	0%	0%	0%	12%	34%	8%	31%	3%	14%	1%	5%	15%	1%	7%
Pearls, precious stones and non-monetary gold	0%	0%	16%	1%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
<b>Manufactured goods</b>	<b>67%</b>	<b>50%</b>	<b>81%</b>	<b>42%</b>	<b>19%</b>	<b>71%</b>	<b>1%</b>	<b>63%</b>	<b>83%</b>	<b>52%</b>	<b>64%</b>	<b>49%</b>	<b>95%</b>	<b>89%</b>
Chemical products	8%	2%	5%	13%	9%	9%	0%	5%	17%	3%	27%	9%	22%	18%
Machinery and transport equipment	2%	6%	65%	10%	3%	52%	0%	53%	57%	3%	23%	22%	45%	47%
Other manufactured goods	57%	42%	11%	19%	7%	10%	0%	5%	8%	45%	14%	18%	28%	23%
<b>Exports at risk (% of total exports to China)</b>	<b>16%</b>	<b>8%</b>	<b>71%</b>	<b>63%</b>	<b>61%</b>	<b>74%</b>	<b>95%</b>	<b>88%</b>	<b>89%</b>	<b>12%</b>	<b>56%</b>	<b>48%</b>	<b>71%</b>	<b>75%</b>
<b>Exports at risk (% GDP)</b>	<b>0%</b>	<b>0%</b>	<b>74%</b>	<b>0%</b>	<b>1%</b>	<b>6%</b>	<b>43%</b>	<b>2%</b>	<b>15%</b>	<b>0%</b>	<b>4%</b>	<b>5%</b>	<b>10%</b>	<b>8%</b>

Sources: UNCTAD, Coface calculations

Conversely, India, Cambodia, Bangladesh, Sri Lanka, Indonesia and the Philippines seem less affected, as India's trade relationship with China is less significant, and it is likely to benefit more from the fall in commodity prices. These results tally with those of Gauvin and Rebillard (2015)<sup>(19)</sup>, who believe the overall impact on activity in Asia of a Chinese hard landing scenario compared with a soft landing scenario would be significant. South East Asia would be among the hardest hit regions, with a cumulative growth loss of around 9.4% over five years for the ASEAN<sup>(20)</sup>. The hypothesis of a hard landing is nevertheless very strong (Chinese growth would decrease sharply from the first quarter of 2015 over a period of two years and stabilise at 3% per year with stable investment). The core scenario of soft landing corresponds to a growth rate of 7.4% in 2014 that would decrease to 6.4% out to end-2019, accompanied by a slight rebalancing in favour of consumption.

### The Chinese slowdown is pushing down commodity prices

For more than 15 years, Chinese growth has been highly commodity-intensive due to the vigour of investment and growing urbanisation. In 2013, China consumed more than half of global demand for metals, versus only 5% 20 years ago. At the time, it accounted for 47% of global demand for copper and 65% of total imports of iron ore, and China also remains the largest importer of soybeans in the world. The country has also contributed strongly to the vigorous demand for oil,

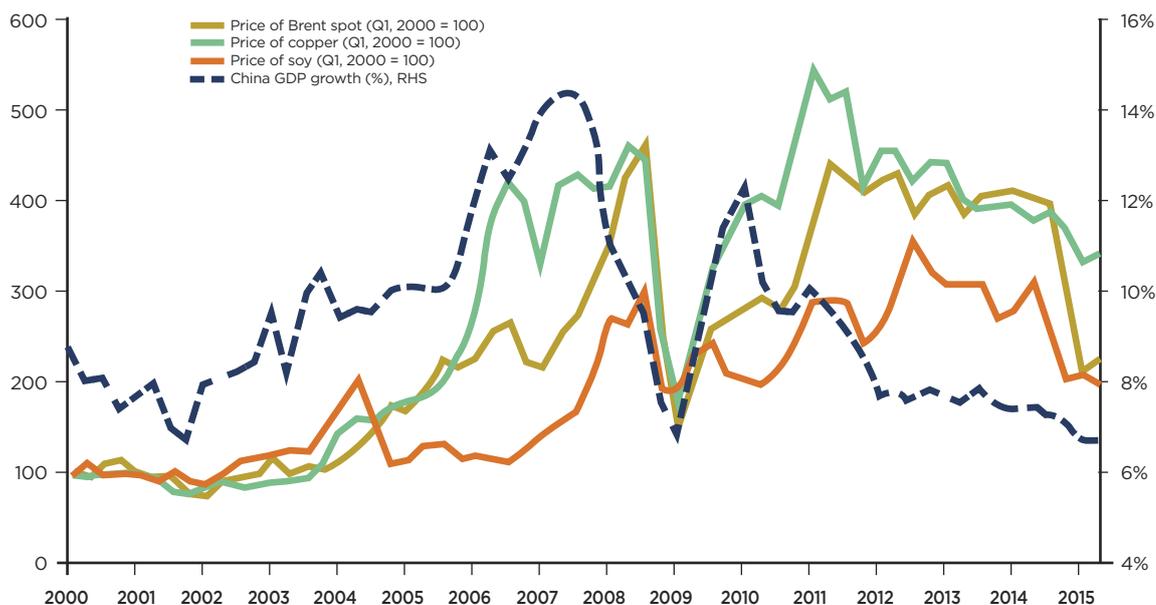
due to the development of the automotive sector, but its role in global demand is smaller than in the area of metals (11% of the total).

However, the boom cycle in commodities seems to have come to an end (*chart 13*), as the determinants that have kept prices high (increase in global demand accompanied by supply-side constraints) are gradually being reversed. Surplus supply is one of the main explanatory factors of the fall in commodity prices over the last few years (oil overproduction, overcapacity, good harvests, etc.). Nevertheless, there is major concern about the lack of vigour in the global economic recovery and especially the structural slowdown in China, given the role this economy plays in terms of demand for commodities. The rebalancing towards domestic demand is slow to materialise, and a future weakening of Chinese consumption and investment could therefore put further downward pressure on commodity prices.

This summer, the prices of a number of commodities reached new lows, particularly for oil (WTI reached USD 42 on 13 August, the lowest price since March 2009) but also copper, iron ore, etc., in particular after the devaluation of the yuan and the turmoil in global stock markets sparked by the drop in the Chinese stock market (the Shanghai Shenzhen composite index plummeted 37% between 8 June and 2 September). These moves reflect investor concern about the health of the Chinese economy, in addition to speculative effects.

Chart n° 13

Commodity prices and Chinese GDP growth



Sources: LME, EIA, department of agriculture, NBS  
Last available data: Q2 2015

(19) Gauvin and Rebillard (2015), Bank of France Working Paper, "Towards recoupling? Assessing the global impact of a Chinese hard landing through trade and commodity price channels".

(20) ASEAN: Association of Southeast Asian Nations.

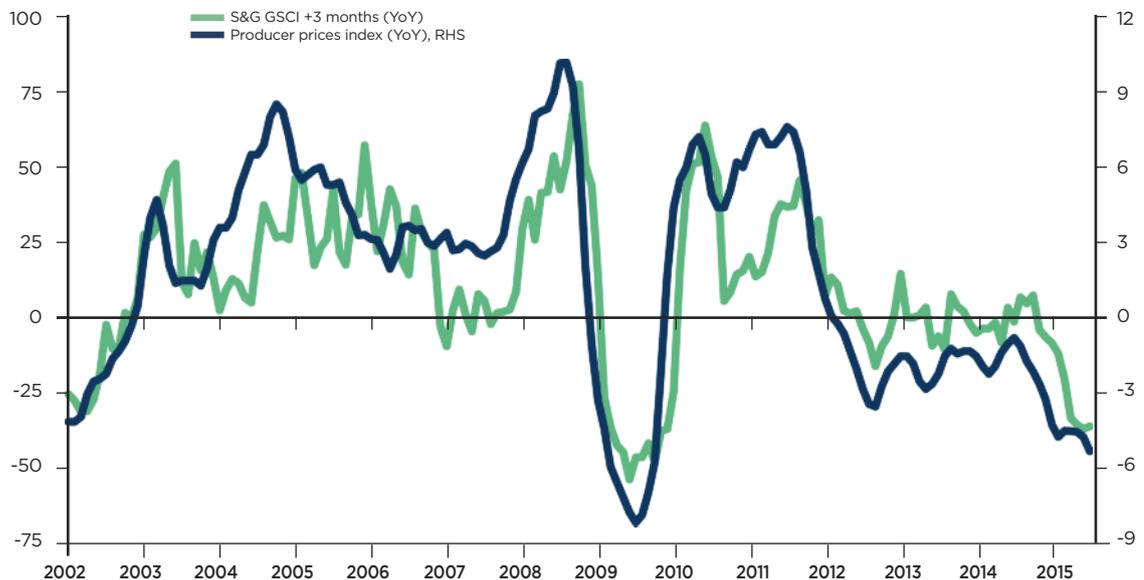
As explained above, activity in some Asian countries like Mongolia and Indonesia would, accordingly, be seriously affected given the large volumes of commodities exported to China, but could therefore be penalised twice over due to an unfavourable price effect. This deterioration could, nevertheless, be partially limited by the beneficial effect of the fall in commodity prices on the Chinese economy. In particular, companies upstream in the production process suffering from overcapacity (mines, steel industry) may take advantage of the reduction in input costs via the fall in commodity prices, which may help them rebuild their margins. This effect is particularly noticeable if we look at the close correlation between producer prices (IPP) and the trend in the S&P GSCI index - a synthetic

index that reflects moves in commodity prices - with a few months' lag (*Chart 14*).

All in all, Mongolia is the country that is most negatively affected by the fall in commodity prices. Even though countries such as Malaysia, India and Indonesia are large exporters of commodities, their exports to China remain moderate relative to their activity. Note that the study prepared by Gauvin and Rebillard (2013) also models the fall in commodity prices in the event of a hard landing and concludes that metal prices would be more affected than oil prices by a Chinese slowdown: they would fall by 66% after five years in this scenario (versus 12% in a soft landing scenario) and the oil price would fall by 41% (versus +13%).

Chart n° 14

Commodity prices and producer prices in China



Sources: NBS, GavikalDragonomics  
Last available data: July 2015

### 3

## THE END OF THE CHINESE "LOW-COST" MODEL: A KEY DETERMINANT FOR FOREIGN INVESTORS

### The deterioration in China's price competitiveness is positive for its Asian neighbours

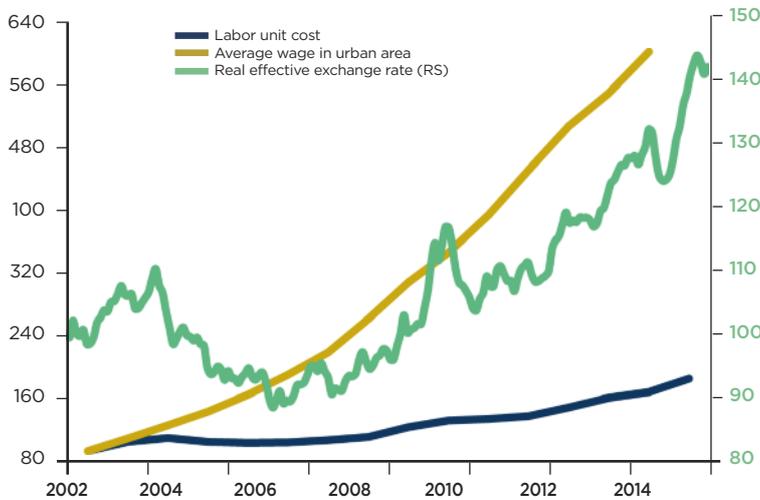
The loss of price competitiveness is explained by two key factors. The first is the trend in wages: over the past 10 years, the average wage has been multiplied by six in urban areas while unit labour costs<sup>(21)</sup> have doubled in the same period. In other words, Chinese employees' productivity is rising less rapidly than wages, leading to lower competitiveness gains. The second factor is the

consequence of the policy of gradual liberalisation of the exchange rate that started from 2005: China's price competitiveness has also been hurt by the appreciation of the Chinese currency. The yuan's real effective exchange rate<sup>(22)</sup> appreciated by more than 53% between July 2005 and June 2015, i.e. a far greater appreciation than among its Asian neighbours.

(21) This is the labour cost per unit of value added produced.

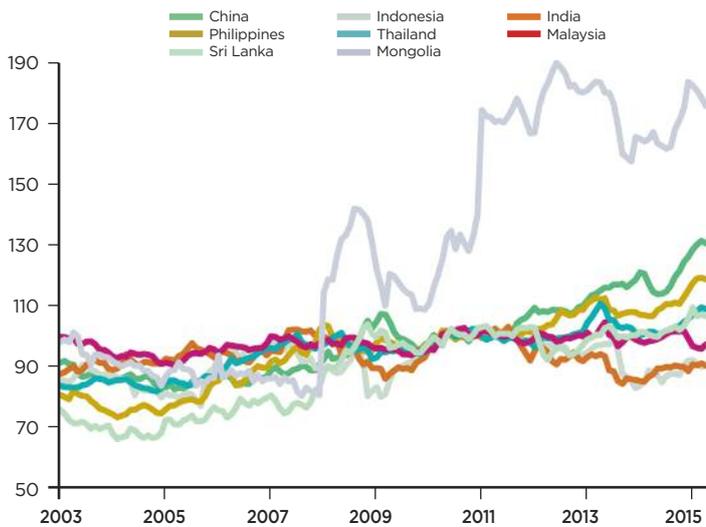
(22) The REER measures the change in an economy's nominal exchange rates against its trading partners adjusted for changes in prices.

Chart n° 15  
Deterioration in China's cost competitiveness (2000 = 100)



Sources: NBS, OECD, BIS

Chart n° 16  
Trend in the real effective exchange rate of the main Asian economies (2010 = 100 for all countries except for Mongolia, 2013 = 100)



Sources: BIS, national central banks

(23) This chart excludes Bangladesh and Vietnam as these countries' REER is not available. Their competitiveness in exchange-rate terms has been estimated by using a weighting of their currencies against the euro, the dollar and the pound sterling.

(24) As an example, the minimum wage would be twice as high in Beijing province than in Henan province according to WageIndicator.org.

(25) The supply chain includes all professionals (producer, distributor, wholesaler, transporter, processor) involved in making the product available to the consumer.

(26) This comparison does not include South Korea and Taiwan as labour costs are markedly higher in these two countries than in the other countries in the region. The minimum wage in South Korea and Taiwan is USD 1,100 and USD 890 per month, respectively.

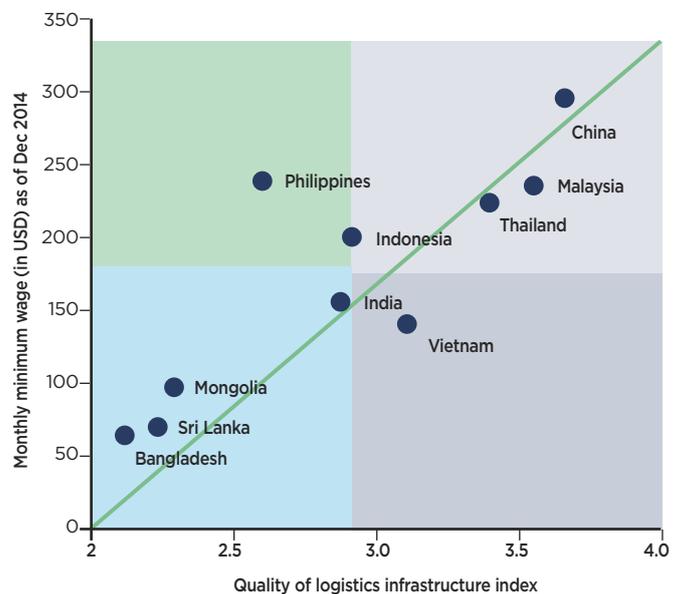
Some of China's neighbours are therefore benefiting from China's loss of price competitiveness. They benefit from their comparative advantages thanks to lower labour costs. The minimum wage in Bangladesh, for example, is 3.5 times lower than in China and that in Vietnam is half of the Chinese level, which is attractive for investors. In view of the rise in Chinese production costs, companies have several options:

- 1) offshoring their activities to lower-cost countries in Asia or in the rest of the world,
- 2) relocating production units to the west of the country where labour costs still remain moderate<sup>(24)</sup> but where infrastructures are insufficient,
- 3) stay in eastern China where the infrastructures, the quality of the supply chain and the proximity of the coast remain a comparative advantage.

**But other factors affect competitiveness: quality of logistical infrastructures, the population's skill level and governance**

For countries to be able to take advantage of their comparative advantages in terms of costs to increase their attractiveness, they have to invest in their infrastructures, particularly by improving the quality of their supply chain<sup>(25)</sup>. China has an indisputable comparative advantage in terms of infrastructure quality. We see a certain correlation between the wage level and the country's positioning in terms of logistical infrastructures. Nevertheless, some countries that have moderate labour costs are well-positioned in terms of infrastructure quality: Vietnam, India and Indonesia. Conversely, Bangladesh, Mongolia and Sri Lanka offer particularly low labour costs, but their shortcomings in logistical infrastructures are likely to penalise them.

Chart n° 17  
Minimum monthly labour costs<sup>(26)</sup> and quality of logistical infrastructures



Sources: National statistics, World Bank

Furthermore, human capital can also have an influence on the choices investors make. The Human Capital Index published by the World Economic Forum quantifies the use and development of human capital. It takes into account the education and employment of the working and the non-working population as well as the skills of people entering the labour market.

In addition, the quality of governance affects a country's attractiveness. Coface produces its own assessment of the business climate since 2008 in order to capture business-specific risks. It takes into account the quality of governance in its assessment of the business climate in 160 countries. This is a key component of its country risk assessment, in the same way as its payment experience

in the country in question and its assessment of macroeconomic and financial risk. Assessing the business climate consists of measuring the quality of a country's private governance, i.e. companies' financial transparency and the efficiency of courts in terms of debt settlement. At Coface, this assessment of the business climate is established on the basis of internal studies drawing all its entities worldwide as well as business climate assessments developed by international organisations. Coface uses its risks assessment and its microeconomic experience to determine whether:

- Companies' accounts correctly reflect the reality of their financial situation;
- In case of non-payment, the local legal system will enable fair and effective settlement.

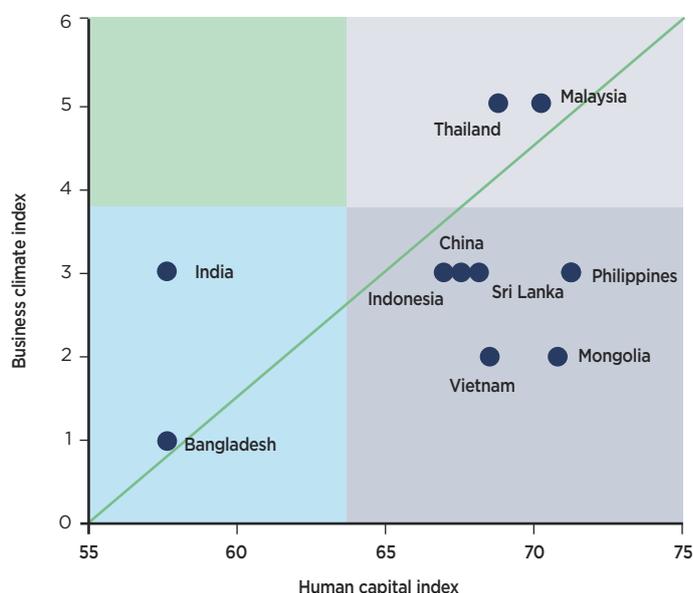
To do so, it carries out a survey once a year among its entities worldwide. This assessment is therefore based on its global network and expertise that provide it with its experience in the areas of risk underwriting, business information and receivables management. Like the results of country assessments, the results of business climate assessments are shown in a rating scale with seven levels, A1, A2, A3, A4, B, C, D, in ascending order of risk.

A company's confidence in the quality and stability of a country's regulatory framework is likely to influence its decision to invest, whether this investor is resident or non-resident.

Thailand and Malaysia have a high human capital index as well as a quality business climate.

All in all, while China's loss of price competitiveness is indisputable, the country therefore remains very well-positioned in terms of non-cost competitiveness.

Chart n° 18  
Level of human capital and quality of governance (27)



Sources: World Economic Forum, Coface

Table n°2  
Assessment of price and non-price competitiveness of Asian countries

	Wage cost	Exchange rates	Infrastructures	Gouvernance	Human capital
Bangladesh	●	●	●	●	●
China	●	●	●	●	●
India	●	●	●	●	●
Indonesia	●	●	●	●	●
Malaysia	●	●	●	●	●
Mongolia	●	●	●	●	●
Philippines	●	●	●	●	●
Sri Lanka	●	●	●	●	●
Thailand	●	●	●	●	●
Vietnam	●	●	●	●	●

	Indicator used	Good ●	Average ●	Poor ●
Wage cost	Average minimum labour cost (in USD)	< 225	≥ 225 / < 270	≥ 270
Exchange rates	Change in REER between January 2003 and April 2015	< 30%	≥ 30% / < 50%	≥ 50%
Infrastructures	Logistics Performance Index - World Bank	> 3	≤ 3 / > 2,6	≤ 2,6
Governance	Coface Business climate Assessment	> B	≤ B / > C	≤ C
Human capital	World Economic Forum Index	> 65	≤ 65 / > 60	≤ 60

Source: UNCTAD

(27) Coface Business climate assessment  
Conversion used for this panorama

A1	A2	A3	A4	B	C	D
7	6	5	4	3	2	1

## Foreign investors seem to give a higher priority to price competitiveness

Even though China has advantages in terms of quality of infrastructures and human capital, investors' trade-off seems to be increasingly influenced by price competitiveness. While foreign direct investments (FDI) in China remain very substantial, we are seeing a contraction in FDI inflows in the country and an increase in FDI to its neighbours with more moderate cost levels.

It is difficult to accurately assess the impact of China's deterioration in competitiveness on the trend in FDI flows. Some parameters that influence a country's attractiveness also changed between the period 2004-2007 and the period 2008-2013, first and foremost regulations regarding FDI, such as the bill adopted in Indonesia in 2007 that enabled equitable treatment between domestic and foreign investors as well as the lifting of the 30-year limit on authorisations relating to FDI.

Nevertheless, countries that have attractive cost indicators (wages and via the exchange rate) and which also enjoy a favourable positioning in certain aspects of non-cost competitiveness are seeing increasing FDI inflows. This concerns Indonesia, India and Vietnam. So the deterioration in China's price competitiveness is currently enabling its neighbours to attract new foreign investments. This process should enable Asian countries to post an acceleration in their activity thanks to an increase in industrial production and exports.

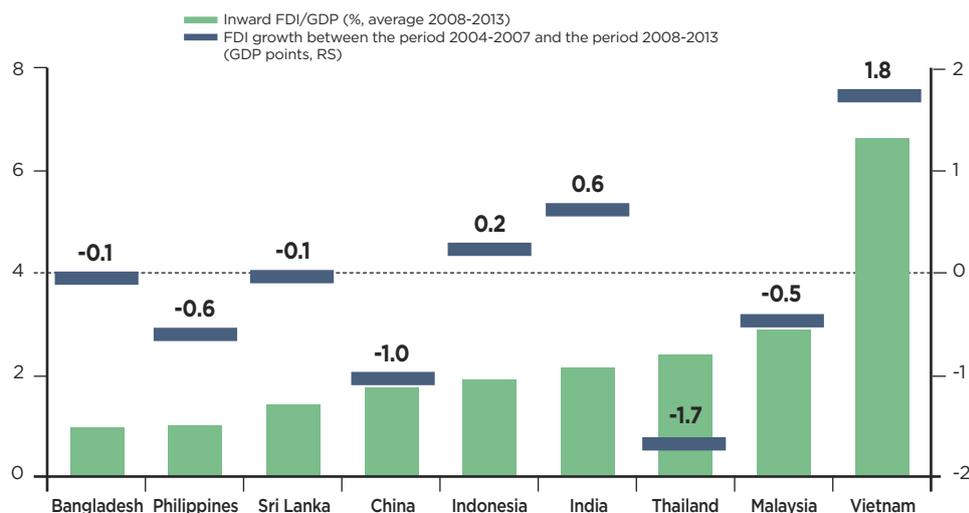
Vietnam, which has a favourable positioning in terms of costs, quality of infrastructures and human capital, is attracting substantial FDI, especially from Japan, Taiwan, Singapore and South Korea. Vietnam is moving up the value chain as the investments received are increasingly heading into the electronics industry. The country is becoming a hub for the production of smartphones.

In the event of a major slowdown in activity in China, growth of wages might sharply slow down. Such situation could impact China's neighbours which have benefitted from the deterioration in China's cost competitiveness.

In this scenario, it is the countries with the lowest wage differential with China that are the most fragile: Malaysia, Thailand, Philippines. Conversely, countries with very low minimum wages are likely to be spared by this impact and will continue to receive abundant FDI flows: Bangladesh, Sri Lanka. Three countries are in an intermediate situation: India, Indonesia and Vietnam. They have lower labour costs than China, but this level does not guarantee that they will be spared by the improvement in China's price competitiveness. Lastly, the Asian countries that are receiving significant FDI flows from China: Mongolia, Myanmar and Cambodia<sup>(28)</sup> could suffer from a reduction in investments from China in the event of a hard landing for the Chinese economy.

Chart n° 19

FDI inflows as a percentage of GDP and change between the period 2004-2007 and 2008-2013<sup>(29)</sup>



Sources: UNCTAD, Coface

(28) The IMF identifies these three countries as being the three main recipients of Chinese FDI in Asia in 2012 - IMF Multilateral policy issues report, 2014 spillover report.

(29) This chart excludes Mongolia, as the country's FDI inflows-to-GDP ratio is far higher than the other countries in the region because of the small size of its economy and the country's mining resources..

## 4 WHAT RISKS OF FINANCIAL CONTAGION?

In addition to foreign direct investments, other types of financial flows are likely to spread the Chinese slowdown to other Asian economies. There are mainly two types of such transmission channels: cross-border bank loans and contagion effects resulting from portfolio investments in equities or bonds and/or from the correlation of Asian financial markets.

### Contagion effects via banks seem to be limited, except for Hong Kong and Singapore

Cross-border bank loans<sup>(30)</sup> are a possible transmission channel from the Chinese economy to its neighbours, especially as they rebounded rapidly after their fall in the wake of the 2008-2009 crisis. Besides, Asia is an exception in this respect, as cross-border loans increased markedly less between 2009 and 2013 in Latin America and emerging Europe according to data from the Bank for International Settlements (BIS). A more detailed analysis shows that this positive growth since the crisis has primarily benefited China. Also, these new loans to Chinese borrowers are increasingly being granted by Asian banks: the percentage of cross-border loans to China granted by banks not located in

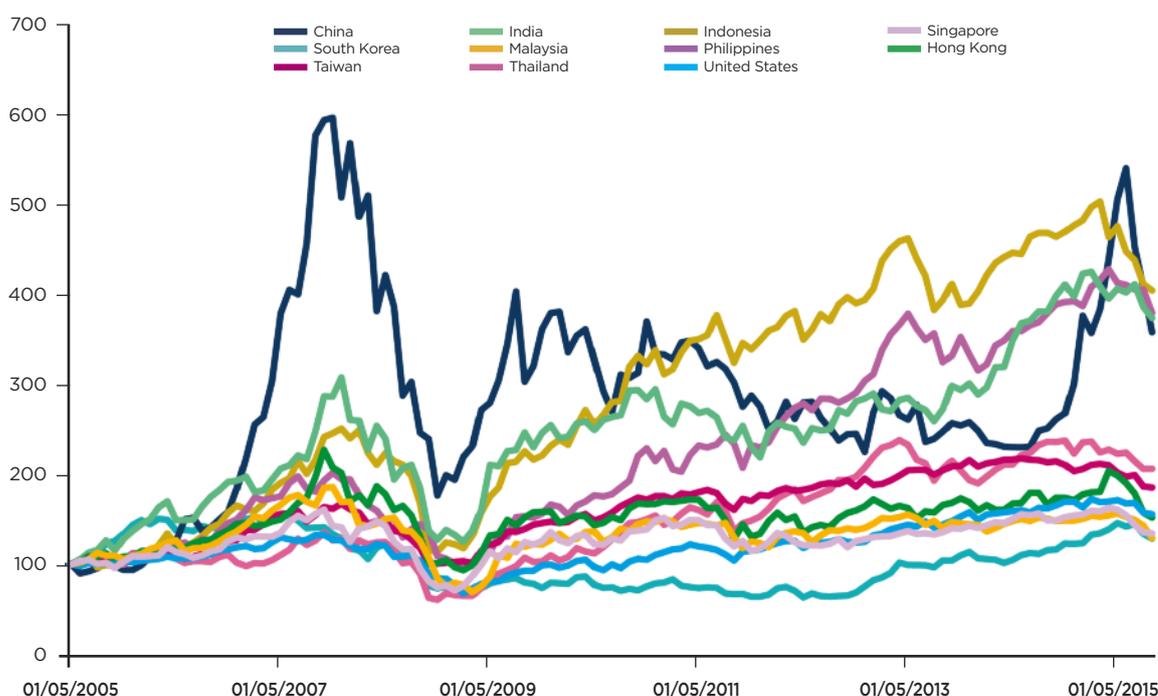
the United States, the United Kingdom, Japan or the euro zone reached 51% at end-2013. Banks based in Hong Kong have provided around 80% of these loans, with a large percentage of the remainder provided by Singapore banks<sup>(31)</sup>.

These two financial markets could therefore suffer from a marked deterioration in the solvency of already highly indebted Chinese companies if the country's growth slowed down at a faster pace than expected. The resulting deterioration in the financial accounts of the exposed banks would then go hand in hand with a tightening of lending conditions in the two cities.

### But the Chinese stock market is increasingly correlated to other Asian financial markets

Contagion effects from stock and bond markets are another transmission channel of the slow-down Chinese to Asian countries. Recent events seem to indicate that the correlation between them is strong: the drop in the Shanghai Stock Exchange index on 24 August was reflected by a similar trend in the other Asian financial markets.

Chart n° 20  
Stock Markets, Asia and United States (May 2005 = 100)



Sources: Reuters, National Sources

(30) They consist of cross-border loans from foreign banks, mainly denominated in foreign currency, or in loans denominated in local or foreign currency from subsidiaries of foreign banks in the local country.

(31) Shatil B. (2014): "A tale of two cities: Emerging Asia's shifting creditor base", JPMorgan Chase Bank, 15 August.

Long-term trends confirm these close links between Asian financial markets. For example, while a study published by the Federal Reserve Bank of San Francisco <sup>(32)</sup> concludes that the correlation between bond markets in the region is weak, it also emphasises the growing interdependence of the region's stock markets: during the post-Lehman period, the correlation of the Chinese stock market index with those of the other Asian markets increased compared with the 2005-2008 period <sup>(33)</sup>.

But if this trend is common to all Asian countries, the level of this correlation is different from one country to the next. Indian and Philippine stock markets still have a relatively weak correlation to the Chinese market (correlation coefficient lower than 0.3 during the post-Lehman period). At the other end of the scale, this coefficient is higher than 0.4 in Singapore and Taiwan. Indonesia, South Korea, Thailand and Malaysia are in an intermediate position (between 0.3 and 0.4). Hong Kong has not been studied, but the correlation coefficient between its stock market index and Shanghai's unsurprisingly indicates a strong connection between the two financial markets, whatever the period studied.

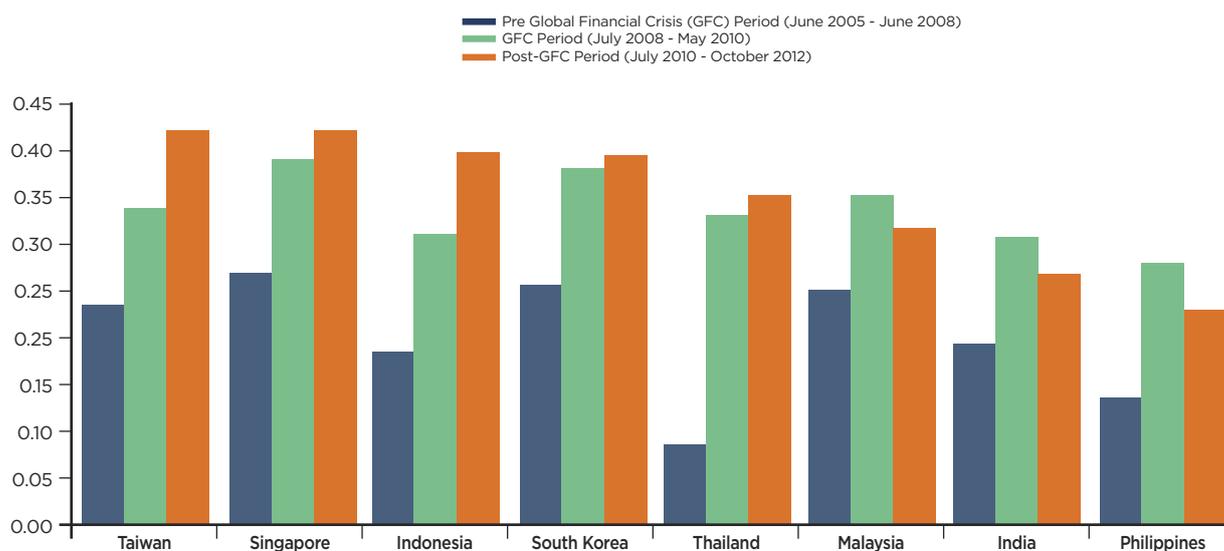
However, the secondary negative effects on the other Asian economies of a fall in the Chinese stock market through its correlation with its counterparts in the region depend on the existence of wealth effects, which refer to an increase (fall) in the propensity to consume as the value of the wealth increases (declines). Existing literature

confirms the existence of such wealth effects in the case of Asian countries, especially as regards financial wealth. According to a study by Peltonen and al. (2009) <sup>(34)</sup> carried out by using data from six Asian economies from 2000 to 2008 <sup>(35)</sup>, a 10% rise (or fall) in stock market prices corresponds to an increase (or reduction) in household consumption of 0.49% in Singapore, 0.37% in South Korea, 0.3% in Hong Kong, 0.2% in Thailand, 0.16% in Taiwan and 0.12% in China. So the transmission effects vary from 1.2% (in China) to 4.9% (in Singapore). Unsurprisingly, wealth effects therefore seem to be higher in countries with liquid stock markets which enjoy a high standard of living (apart from Taiwan). Against this backdrop, even though it is not possible to accurately verify it since they were not taken into account in the study, wealth effects relating to changes in the value of the financial assets of Indian, Indonesian and Philippine households should be close to or lower than China's. The level of those in Malaysia could be between the Hong Kong and Thai levels.

The two financial markets in the region, Hong Kong and Singapore, therefore unsurprisingly stand out as the two zones most at risk: their banks are the most exposed in the region to a rise in credit risk in China, the correlation of their stock market with the Shanghai market is relatively strong (higher than 0.4) and wealth effects are strong in these countries (transmission effect higher than or equal to 3%). Conversely, India and the Philippines seem to be immune against this type of risk. The other countries in the region are in an intermediate position.

Chart n°21

Correlations of stock market returns of Asian markets with China



Source: FRBSF

(32) Glick R. and Hutchinson M. (2013): "China's financial linkages with Asia and the global financial crisis", Federal Reserve Bank of San Francisco, working document, May.

(33) Conversely, the correlation between the indices of the different Asian equity markets and the US equity market index fell during the same period.

(34) Peltonen T., Sousa R. and Vansteenkiste I. (2009): "Wealth Effects in Emerging Market Economies", European Central Bank Working Paper n° 1,000, January.

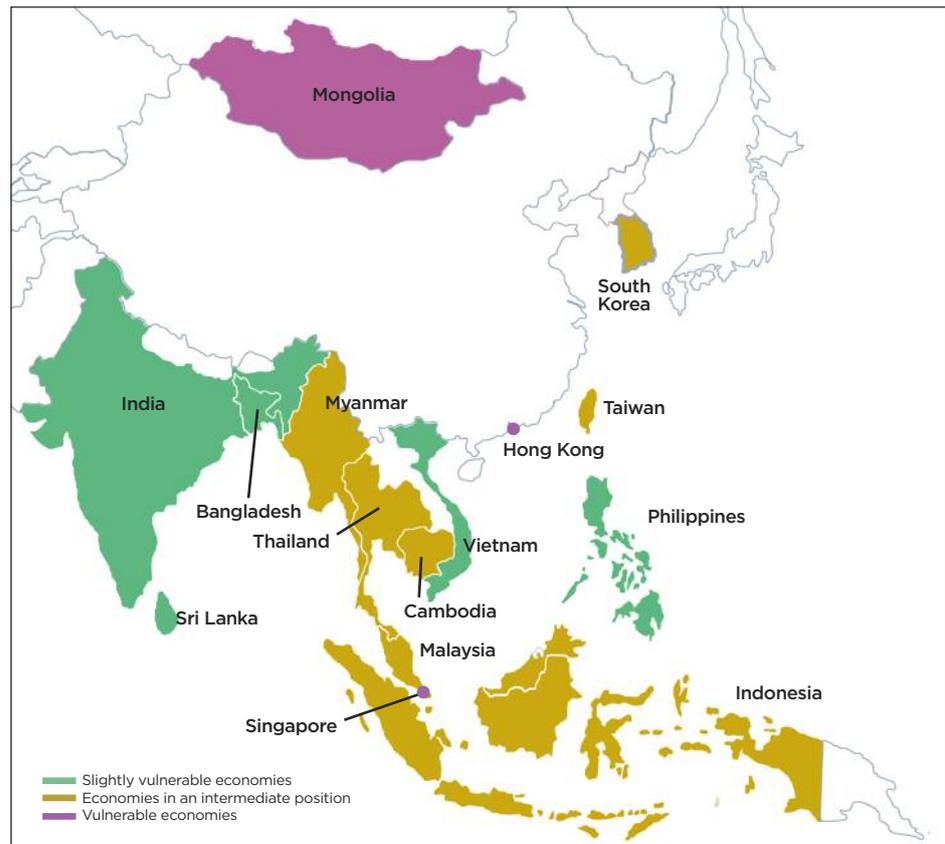
(35) China, Hong Kong, South Korea, Indonesia, Malaysia, Singapore, Taiwan and Thailand.

## CONCLUSION

By launching a rebalancing strategy, China is trying to return to a path of healthier and more sustainable growth, despite the negative short-term effects it implies (although they intervene on a regular basis, the authorities pay particular attention to avoid an excessive slowdown in activity). Furthermore, the decline in potential growth is an indication of the structural challenges the Chinese authorities are facing.

All Asian countries do not seem equal in terms of dealing with these prospects. Singapore and Hong Kong, by virtue of their close trade and financial links with China, are the biggest losers from the Chinese slowdown. Nevertheless, these countries enjoy solid macroeconomic fundamentals (low public debt, abundant foreign exchange reserves and large current-account surpluses) enabling them to cope with a large-scale shock.

On the other hand, Mongolia, which is also in this group, is heavily dependent on Chinese demand for commodities, which is being felt through trade and investment flows, and does not have the same safety nets. The country is suffering from high public debt and a marked imbalance in its external accounts. At the other end of the scale, India and the Philippines seem almost immune to the Chinese slowdown. Only a drastic slowdown that would offset the recent increase in labour costs in China could have a noteworthy effect on foreign direct investments in the Philippines. Lastly, Indonesia, Malaysia and Thailand are in an intermediate position: while their exposure to China is significant, especially because of their trade links, it is unlikely to derail their growth if Chinese growth has a soft landing.



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