Box I.2: Spill-overs from the slowdown in China on the EU economy- channels of contagion

Rebalancing in China

Growth in China has slowed from over 10% in 2010 to 7.3% in 2014 and is expected to slow further as China moves away from an excessively investment-dependent growth model. Concerns over the pace of the slowdown and the risk of a 'hard landing' have heightened in recent months amid the collapse of the equity bubble in Chinese markets in July, China's weak trade data in the first half of 2015, and a growing awareness of the practical difficulties of engineering a smooth rebalancing of the Chinese economy. Changes to the Chinese yuan (CNY) currency regime in August, which were made to align exchange rate movements closer to market forces, were read by many as a signal that the Chinese authorities were increasingly concerned by domestic economic weakness, leading to turbulence in global financial markets. The aim of this box is to examine the various channels of influence through which slower growth in China affects the EU. The box also considers contagion from a sharper slowdown in China than currently envisaged in the central scenario (see forecast text for China, Part II, Chapter 36).

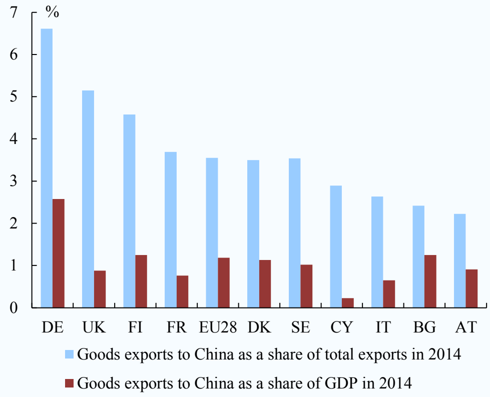
The potential spillovers of slower Chinese growth are complex and inter-linked. Apart from direct trade and financial linkages between the EU and China, there are indirect channels operating via countries heavily exposed to China. Vulnerable emerging markets and commodity producers may face a combination of lower export demand and low commodity prices and may see some downward adjustment in their exchange rates as global capital flows respond to the shifting environment. Given the fragile state of the global economy, in which recovery from the 2008-09 financial crisis remains tepid, there is a potential for more abrupt adustments in asset prices and global risk premia should sentiment about the global outlook worsen significantly.

Direct trade channel

China is the EU's largest trade partner, but only the second largest source of export demand, with China taking some 3.6% of total EU goods exports. While trade exposure to China remains limited, EU exports to China have grown twice as fast as the total EU exports over the past five years. At the same time, there are important differences among member states. Exports growth to China has been particularly strong in Latvia, Lithuania, Portugal, Bulgaria and the UK.

As shown in Graph 1, trade exposure to China is currently highest in Germany, the UK, Finland and France.

Graph 1: **Exports to China as a share of total exports**



To quantify the direct trade impact of slower Chinese growth on the EU as a whole, a version of DG ECFIN's QUEST III model is used, which includes both tradable and non-tradable sectors and five country blocks: China, the euro area, other EU countries, the EU's other emerging market trading partners (i.e. Brazil, Russia, India, South Korea, Turkey, Mexico, Middle East and Northern Africa) and the rest of the world. [(1)] The analysis assumes that monetary policy in advanced economies does not react to lower import demand from China and emerging market economies and the resulting lower price pressures by reducing interest rates. A slowdown in Chinese GDP growth of 1 pp. relative to the central scenario was simulated for 2016, with a further drop of 1 pp. in 2017. Results for the euro area are a reduction in output by 0.2 % in 2016 and 0.3 % in 2017 (0.1 % and 0.3 % for remaining EU countries). [(2)] [(3)]

(1) Details on the QUEST III model and its use for policy analysis are available at http://ec.europa.eu/economy_finance/research/macroeconomic_models_en.htm.

(2) The slowdown in China is modelled as a mixture of a slowdown in investment and consumption demand, which exerts negative pressure on domestic prices leading to a real depreciation of the CNY with respect to China's trading partners.

(3) This scenario leads to a reduction in output in emerging markets of 0.2% in 2016 and 0.4% in 2017.

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Box (continued)

The results obtained for the EU as a whole are broadly in line with those produced in similar exercises by other institutions [(4)]. These results suggest that the direct growth spillover from a slowdown in China is modest due to the relatively limited trade exposure of the EU economy to China. The model captures trade linkages and international financial flows to the extent that they are related to the real economy. It abstracts from modelling financial risks through the banking system, the effects of commodity prices and potential additional effects of contagion. Furthermore, the simulation does not capture shifts in the composition and level of import demand induced by China's rebalancing of the economy towards more consumption-led growth and the related downsizing of manufacturing and construction sectors.

Direct financial channel

Concerns about exposure to Chinese credit risk have been increasing as China has experienced a large and rapid increase in its total debt-to-GDP ratio since the financial crisis. [(5)] Direct European financial ties with China are nevertheless relatively limited, partly due to the remaining restrictions on cross-border financial transactions, investments and banking activities in China (see Graph 2). As a consequence, the direct impact on Europe via financial channels of slower Chinese growth are likely to be small. European Banks have relatively low direct exposure to China. Furthermore company disclosures by the largest European banks show moderate exposure to China, both in terms of outstanding exposures compared to balance sheet size and as a share of total revenues. [(6)] Exposure via FDI is also slight, with FDI stocks in China making up only 2% of total EU external FDI.

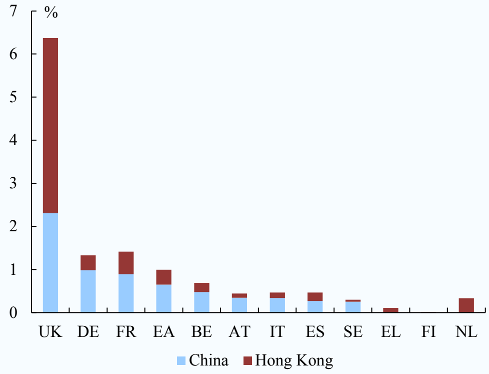
Despite this apparent limited exposure to China, European financial markets recently experienced high volatility linked to negative news on the Chinese economy and China's equity market turmoil in July/August.

(4) E.g. OECD Interim Economic Outlook, September 2015. http://www.oecd.org/eco/outlook/Interim%20EO%20handout%20Sep%202015.pdf.

(5) Private sector borrowing expanded from 116% of GDP in 2007 to 237% in 2014. Non-financial firms increased their indebtedness significantly, with debt rising from the equivalent of 72% of GDP to 125% over the period (McKinsey Global Institute, MGI Country Debt database).

(6) Company financial reports.

Graph 2: **Financial Claims on China and Hong Kong for selected EU countries (% of total foreign claims)**



The commodity price channel

China is an important source of world demand for commodities, in particularly for energy commodities and metals. [(7)] The recent slump in Chinese demand for commodities is already having a profound impact on commodity prices, in particular on metals (e.g. iron ore price has declined by nearly a third from its peak in 2011). As regards oil price developments, China's role remains relatively modest as China currently accounts for only about 11% of world oil consumption. The direct impact of low commodity prices on the EU economy is rather positive as it raises corporate profits and household incomes. The fall in commodity prices has already added strong downward pressure on inflation in the EU but the effects are expected to fade in 2016. While a more pronounced slowdown in China's growth and its shift towards consumption-led growth could exercise further downward pressure on commodity prices (mainly metals), it is likely that the main downward adjustment in many commodity prices has already occured.

Indirect impacts via other emerging markets

A feature of China's trade in 2015 has been a sharp deceleration of imports that is decoupled from headline growth rates and shows a particularly steep fall in imports from emerging markets and commodity producers (e.g. Brazil, Australia, South Africa, Peru, Chile, Russia). Nevertheless, the indirect impact on Europe via reduced demand for EU exports from affected emerging markets is expected to be rather modest given the limited trade

(7) China's metal and energy consumption tripled during 2000-14. China currently accounts for almost 50% of world metal consumption and 50% of world coal consumption.

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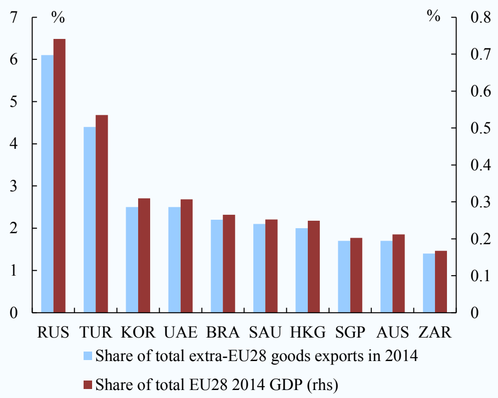
Box (continued)

exposures. Graph 3 shows main emerging export markets for EU28 goods [8] which (with the exception of Turkey) have at the same time strong trade links with China.

Graph 3: **Selected export markets for EU28 goods**



Among the selected countries, EU exports appear particularly vulnerable to a further slowdown in Russia, Turkey, South Korea and the United Arab Emirates as these markets represented 15% of total extra-EU goods exports and almost 2% of EU GDP in 2014. Exports to the selected group of emerging markets represent the largest share of extra-EU exports (over 50%) for the Baltic countries and Central Europe (due to their close trade links with Russia).

The current widespread slowdown in emerging markets, however, cannot be attributed solely to China. Many other factors are at play including unresolved structural problems, tightening financial conditions and political instability, which add to domestic vulnerabilities. Concerns about emerging market growth prospects have already led to significant adjustments in exchange rates, credit markets and volatility levels in 2015. In the context of the normalisation of monetary policy in the US, some emerging market economies are also particularly exposed to the risk of capital outflows and high corporate balance sheet exposure to USD-denominated debt. Slower Chinese growth intensifies these domestic pressures, and could trigger a rise in corporate defaults, increasing deleveraging pressures and financial market volatility.

European banks have more significant claims on counterparties in developing countries than in China. Euro area banks claims on these countries stand at almost 10% of their total foreign claims, of which exposures to Asian developing countries constitute 1.8%. [9] Therefore, if other developing nations are severely hit by problems in China there could be spillover effects affecting European banks.

Exchange rate adjustments

In contrast to most other emerging market currencies, the CNY real exchange rate has appreciated sharply over the past 12 months, pulled up by the peg to the US dollar. In early August the Chinese authorities announced changes to the CNY exchange rate regime, intended to allow the level of the CNY to more closely reflect market forces. From 11 August to end-September, the CNY depreciated by about 5% against the euro. The scope for the CNY to fall further is not straightforward to assess, as it hinges upon the Chinese central bank's determination to defend the currency's central parity vis-à-vis the US dollar. The central bank has already heavily intervened in recent months to stabilise expectations.

The Chinese CNY has an important signalling role not only for other Asian currencies but also potentially beyond, e.g. Latin America or commodity exporters like Australia or oil-producing Gulf states. The effect on the euro exchange rate could therefore be amplified if emerging market currencies came under additional pressure due to contagion from weaker-than-expected Chinese growth.

Commission estimates regarding exchange rate effects on the euro-area in general suggest that a 10% appreciation of the euro in nominal effective terms would lead to around 0.5 pps. lower inflation and growth in the first year ([10]). The impact will vary by member state. For example, France and Germany have significantly larger nominal effective exchange rate weights for the Chinese CNY whereas China has a significantly smaller share in the Baltics, Ireland, Slovakia and the Netherlands.

(8) The selected countries are Russia (RUS, 8%), Turkey (TUR, 1.8%), South Korea (KOR, 25%), United Arab Emirates (UAE, 7.7%), Brazil (BRA, 20%), Saudi Arabia (SAU, 14%), Hong Kong (HKG, 54%), Singapore (SGP, 13%), Australia (AUS, 34%) and South Africa (ZAR, 10%). Numbers in brackets represent China's share in the countries' total exports. Australia, Singapore and South Korea are not emerging economies but have close trade links with China.

(9) BIS Consolidated Banking Statistics; on an ultimate risk basis.

(10) China's weight in the euro's broad nominal effective exchange rate (NEER42) is about 15%.

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Box (continued)

Risks linked to financial contagion and economic sentiment

While slower Chinese growth may have limited direct effects on any single economy taken in isolation, the synchronisation of this effect across many smaller economies may lead to unexpectedly large adjustments at either regional or global level. For example, many smaller economies in the Asian region are highly exposed to a severe downturn in the Chinese credit cycle, which could affect the European financial system through indirect channels. More broadly, concerns over Chinese growth prospects may dove-tail with a broader reassessment by markets of emerging market growth prospects. The current global context is one in which global growth is tepid, interest rates remain low, balance sheets are fragile, and advanced economy stock market valuations are stretched. Financial markets may therefore find it difficult to find appropriate 'anchor points'.

A sharper-than-expected slowdown in China could therefore lead to an abrupt adjustment in global asset markets, as investor risk aversion adjusts. Lower global growth prospects could also have a direct impact on sentiment, hampering a recovery in investment.

Conclusions

Direct and indirect trade impacts from a sharper-than-expected slowdown in China would not be sufficient to derail a recovery in the EU, though the impact would differ greatly among member states, depending on the scale and structure of trade linkages. Direct financial linkages are limited by the relatively closed nature of Chinese financial markets. However, concerns over Chinese growth prospects and spill-overs to emerging markets could lead to increased financial market volatility and risk aversion with knock-on effects on the EU economy. Lower commodity and oil prices are supportive of EU recovery, but a weaker CNY and additional downward pressure on emerging market currencies more generally would tend to push up the euro's exchange rate. A more pronounced slowdown in China and emerging markets could therefore pose downside risks to both growth and inflation in the EU going forward, posing additional challenges for ongoing deleveraging.