UniCredit

Economics Research

UniCredit Global Themes Series

Economics & FI/FX Research
Credit Research
Equity Research
Cross Asset Research

No. 30
19 January 2016

"Global Challenges and Prospects for Emerging Markets: Commodity, China, and Capitals"

- 2015 marked a turning point in external conditions for emerging markets: **1.** Real commodity prices have reached a low in the last ten years; **2.** China's growth rate has eased considerably and entered a "new normal"; and **3.** Capital flows have turned into negative territory for the first time in more than twenty years.
- We argue that these external shocks have been exhausted in 2015 and no further severe deterioration of external conditions is expected for the next year. However, emerging markets have to adjust to the new environment of lower commodity prices, lower growth in China, and less abundant capital inflows.
- We highlight that while the first two shocks can provide an incentive to reallocate resources towards more productive activities with higher value added, especially in manufacturing, external financing conditions pose a challenge to emerging market corporations that have strongly increased their hard currency debt over the last few years.
- We estimate a novel measure of output gap that discounts these external factors. We find that the CCC-neutral (Commodity, China, and Capitals) growth rate of potential GDP is about 5.2-6%. This implies that the underlying dynamics of emerging economies are still vibrant. However, during the adjustment process to the new external conditions, emerging markets will suffer an output gap of about 20%.
- Investors interested in emerging markets will have to face some headwinds for the next 1-2 years. However, rapidly growing emerging economies with a low degree of adjustment to external factors can provide valuable opportunities for investors and exporters interested in these countries, especially in frontier markets. We expect Vietnam, India, and Philippines in Asia, plus Kenya and Ethiopia in Africa, (the KE-VIP countries) to perform particularly well in terms of GDP growth for the next couple of years.

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Executive Summary

2015, a year of shocks, the C.C.C. factors

In 2015, emerging markets experienced a significant deterioration in key external conditions: Commodities, China, and Capitals (the C.C.C. factors). Commodity prices plunged, China's growth moved significantly downwards, and capital flows turned into negative territory for the first time in over two decades.

2016, fewer shocks and adjustment phase

We expect that these shocks have bottomed out. Commodity prices are forecasted to stay within one standard deviation of their historical real value. We expect that China will stay sufficiently close to the new 6.5% GDP growth target. Finally, capital flows to emerging markets, with the exception of China, are likely to be positive in 2016.

A "new normal"

However, commodity prices, especially oil, and China's growth are unlikely to return to the levels of the last few years. The increased capacity of oil production developed in recent years plus the possible increase of supply from Iran and eventually Libya are likely to prevent a return of prices to previous levels. As for China, the sharp drop of TFP growth that the country experienced in the last few years is the main driver of the slowdown. Productivity is unlikely to rise enough in the next couple of years to restore growth to previous levels.

Opportunities and challenges

Emerging markets have to adapt to a new environment of external conditions. This can provide incentives to reallocate resources towards sectors with higher value added, like manufacturing, which can also generate positive productivity growth in future years. Nevertheless, firms in emerging markets, which sharply increased their external debt since 2010-11, are vulnerable to changes in external financing conditions. This remains an important element of emerging markets' external fragility.

A novel approach to measure output gaps in emerging markets

We estimate the output gap of emerging markets using an empirical approach that allows us to account for the key role that commodities, China, and capital flows play in emerging markets. Our estimates deliver a CCC-neutral output gap measure which captures the performance of the economy once we discount these underlying factors.

Emerging markets are still vibrant, but output is below potential

Our forecast of CCC-neutral potential output is about 5.2-6%. We show that emerging markets will experience a negative CCC-neutral output-gap, so that actual GDP growth will be about 20% below potential. This implies that the underlying dynamics of emerging markets are still vibrant and there is room for higher growth in the future. In the meantime, the negative output gap of emerging markets is going to negatively affect aggregate demand in emerging markets and contribute to the low global inflation environment.

A leading indicator for a timely entry moment

A time-preceding test (Granger test) of the output-gap and the MSCI Emerging Markets equity index shows that our CCC-neutral measure of output gap significantly precedes equity movements, whereas more standard measures based on HP filter tend to follow markets' movements. This implies that investors with risk appetite and a medium-term horizon should closely watch emerging markets in the next couple of years. As soon as our CCC-neutral output gap starts to revert, that is likely to be a profitable entry moment.

KE-VIP countries will enjoy strong and stable growth

Emerging markets in aggregate are unlikely to see much upside for the next couple of years. Nevertheless, some countries will experience fast and stable growth with limited need of adjustment to the new external conditions. These countries can provide interesting opportunities for investors and exporters interested in emerging markets. We call this group of countries KE-VIP and they include Vietnam, India, and Philippines in Asia and Kenya and Ethiopia in Africa.

Global challenges: the C.C.C. factors

Emerging markets were quite resilient during the Great Recession[1], when they benefited from a boom in commodity prices, high and certain growth in China, and a bonanza of capital inflows. But 2015 marked a turning point in all these factors: commodity prices declined sharply after their peak in 2014[2]; China's growth came into question both in terms of its economic sustainability and of the reliability of its numbers[3]; finally, for the first time since the late 1980s, emerging markets suffered net capital outflows rather than inflows.[4]

Does the C.C.C. shock (Commodities-China-Capitals) represent a structural shift in external conditions for emerging markets or is it a temporary shock? Will external conditions get worse in the coming years or have they stabilized?

We expect the adjustment of commodity prices and China to be structural. Commodities are not going to return to the 2011-13 peaks and China's growth will not resurge to double digits anytime soon. The World Bank forecasts a slight increase of commodity prices for 2016-17 and we expect China's growth to stabilize at around 6%.

However, the shock of capital outflows is likely to be more temporary in nature. Flows adjusted to the hike of US rates, and, excluding China, they should revert into positive territory already in 2016. Nevertheless, the exposure of the corporate sector to foreign liabilities remains the main source of external fragility of emerging markets.

- **Commodity prices:** Chart 1 shows real commodity prices on a historical perspective. In the early 2000s, prices started increasing sharply and picked up during the Great Recession: the price of energy commodities was two standard deviations higher than its historical average[5], whereas the price of agriculture and mineral&materials was above one and 1.5 standard deviations, respectively.

In 2015, prices moved closer to their historical average with a sharp decline in the second half of the year. The World Bank forecasts a slight recovery in respect to the current value around USD 30/barrel. However, our expectation is that the price will stabilize around this level with a downside risk. We expect stable demand, as the decline associated with China's slowdown will be offset by the recovery in the US and partly in Europe. However, changes in supply remain uncertain. The lifting of Iran's sanctions and an eventual ceasefire in Libya can lead to a dramatic increase in supply with a strong effect on prices. Nevertheless, OPEC is likely to respond to severe supply shocks by cutting production in the next year. The main point though is that emerging markets will not be able to rely on the bonanza of commodity prices of past years.

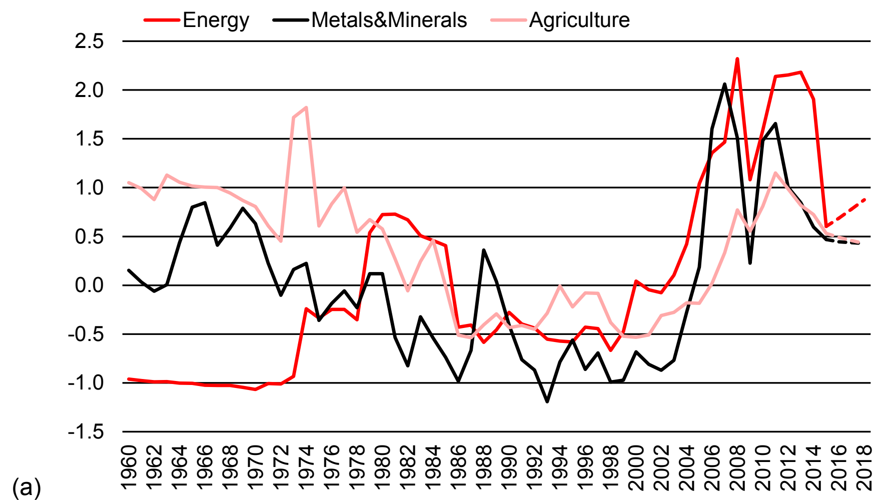
This can put pressure on the public finances of countries that rely heavily on fiscal revenues from commodity's production, especially for those that did not set up a stabilization fund during the previous boom.[6] In terms of impact on growth, the effect will differ across emerging countries according to their exposure to the different classes of commodities, with countries relying on energy commodities having to go through a higher degree of adjustment.

[1] Since 2008, the average growth rate of GDP was 5.35% for Emerging Markets and 0.8% for Advanced Economies (IMF).
[2] In 2015, energy, agriculture, and metal&mineral prices declined about 48%, 12%, and 14% in respect to their average value in 2014 (World Bank).
[3] For further details of UniCredit Research on these two points, please consult Valli and Campanella (2015) and Vernazza (2015)
[4] The IIF (2015) projects negative net capital flows to emerging markets of USD 540bn for 2015 after a positive net inflow of USD 32bn in 2014.
[5] Energy commodities include oil, coal and gas. The aggregate price is a weighted average of these items where weights come from average world consumption shares.
[6] Chile's Copper Stabilization Fund, which has been replaced by the Economic and Social Stabilization Fund, is an example of a stabilization fund that will reduce the fiscal strain on the country as the price of copper declines.

Nevertheless, in the medium term lower commodity prices can create a better environment for a more sustainable growth path. In fact, commodity booms are often associated with an appreciation of the real exchange rate, a crowding out of manufacturing, and rent-seeking behavior in political institutions (van der Ploeg, 2011). Having prices closer to historical real levels for several years can favor the reallocation of resources towards manufacturing activities, which have higher value added and are more strongly correlated with future productivity growth.

COMMODITY PRICES: MORE TO COME?

Chart 1: Real commodity prices (standardized 1960-2014. Dotted lines are World Bank's forecasts.)



Source: World Bank, UniCredit Research

- **China's slowdown:** After decades of double-digit growth rates[7], China's growth rate has declined and GDP growth moved below 7% in the third and fourth quarter of 2015 (chart 2). The sustainability of China's growth came under question and markets' reaction during Summer 2015 led to a collapse of the Shanghai Stock Exchange by 43% between June and August, putting an end to the rally that began in the second half of 2014. Valli and Campanella (2015) analyze the causes of China's slowdown in detail. The question now is what we should expect in the coming years. Will China experience a hard landing; will it just enter a new phase of slower economic growth; or will it restore the growth rate at a higher level?

We believe that China has the proper fiscal and monetary space to sustain the economy and avoid a hard-landing. The 13th 5-year plan sets a new growth target at 6.5%. This is ambitious, but the policies the plan proposes go in the right direction: it puts innovation and ICT investment at its core, stresses the importance to raise consumption's contribution to growth, and it switches to a two-children policy, terminating the decades-long one-child policy, which had a relevant impact on the savings pattern in China.[8] There is still uncertainty about the actual implementation of these policies; but, if properly put in place, they have the potential to preserve such a growth rate. We think that for the next couple of years China's economy will be able to expand by around 6%.

[7] Between 1980 and 2010 China experienced an average yearly GDP growth rate of 10.05 (World Bank).

[8] The one-child policy led to an imbalanced gender ratio of about 1.14 man per woman. Wei and Zhang (2011) argue that this puts pressure on the marriage market; so Chinese parents with a son raise their savings to increase the attractiveness for marriage of their son. They show that this motive can explain up to 50% of the increase in savings of China between 1990 and 2007. Jin (2015) argues that the Confucian tradition of filial piety implied that parents could rely on their sons for support after retirement. However, decades of one-child policy undermined this tradition and parents had to increase their savings for their retirement period, given the lack of a well-developed pension system.

In the short run, the main question is about China's financial cycle and its potential downturn in terms of both a financial and banking crisis. The Shanghai Stock Exchange declined by 15% in the first ten days of 2016; it is down 40% since the pick in June 2015 but is still up 30% in respect to the beginning of 2014. This volatility, which seems disconnected from changes in fundamentals, is certainly disturbing for investors, but it is unlikely to have severe spillovers to the real economy, given that the stock market represents 5% of Chinese GDP and less than 15% of household financial investment (that's excluding real estate).[9] The banking sector is another source of potential fragility, given the increase of private debt to above 200% of GDP and the cronyism that characterizes the sector. However, debt is mostly dominated in local currency, banks are public, and China has a large amount of reserves and the fiscal room to rescue the banking sector and avoid a banking crash for the next year.

In the medium term, the main challenges concern increasing productivity and raising consumption. If we look at GDP from the expenditure side, the objective should be to increase consumption relative to investment. As Jin (2015) argues, this can be particularly challenging given the need of households to save for retirement and preserve their purchasing power. If we focus on GDP from the output side, the main challenge that China faces is to raise productivity. Chart 3 shows how the contribution of TFP to GDP growth has significantly shrunk over the last fifteen years. This is particularly worrying because TFP growth is the historical driver of the increase of China's GDP (Zhu, 2012). Moreover, an additional concern is that capital accumulation was concentrated mainly in physical capital and very little in ICT and soft capital, which are key inputs to long-run productivity growth (Bloom et al., 2012).

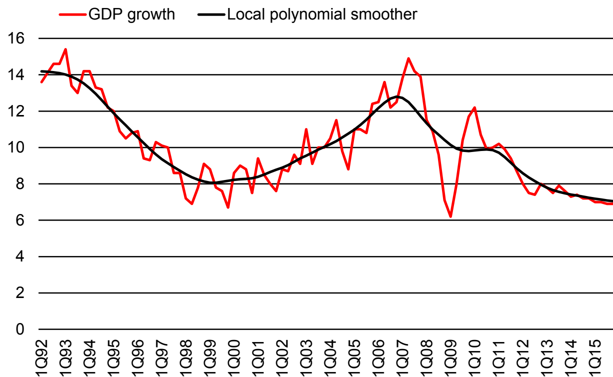
Nevertheless, China's TFP is still only 13% that of the US, so there is certainly much room for catching up (Zhu, 2012). Moreover, China's GDP per capita in PPPs is just 21% that of the US, this is equivalent to Korea in 1977, Japan in 1951, or Singapore in 1967 (Lin, 2016). Hsieh and Klenow (2009) estimate that TFP in China can increase by 30% by reducing resource misallocation across firms within a given sector. Brandt et al. (2012) show that TFP in the non-agricultural economy would increase by 20% by eliminating distortions of factor markets across provinces and between the state and non-state sectors. Reforms aimed at reducing firm-level misallocation and boosting productivity will be key for China's long-term growth.

One thing to keep in mind is that China's slowdown can feed back into commodity prices. We find a significant correlation between China's industrial production and the price of metals&minerals, but not a significant coefficient with the price of agriculture and energy. This is consistent with Roache (2012) who finds that aggregate activity in China has some short-term impact on the price of some base metals and oil only, but that China's impact, although rising, is significantly lower than that of the United States. Hence, we look at commodities and China as two distinct global challenges.

[9] I thank Erik F. Nielsen for highlighting these points.

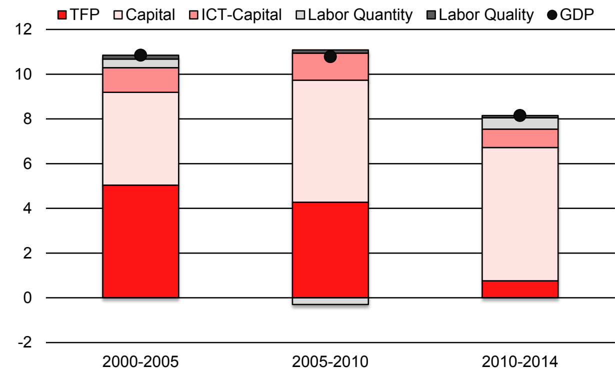
CHINA'S SLOWDOWN

Chart 2: GDP growth, quarterly SA (%)



GROWTH BREAKDOWN

Chart 3: GDP Growth Decomposition



Source: Haver, National Bureau of Statistics of China, The Conference Board Total Economy Database, UniCredit Research

- **Capital outflows:** In 2015, for the first time since the late 1980s, emerging markets experienced net capital outflows (chart 4). Global financial conditions are greatly influenced by US monetary policy and the expected rise in US interest rates played a prominent role in this decline of capital flows, even if this was not the only factor as lower growth prospects in emerging countries mattered as well. [10]

Nevertheless, if we look at chart 4, we can see that the decline of capital flows to emerging countries is driven mainly by China. Once we exclude China from our sample, capital flows turn out to be marginally negative in 2015 and are expected to move into positive territory in 2016. Thus, the actual shock can be less severe than what is perceived, with most of the adjustment having already taken place in 2015.

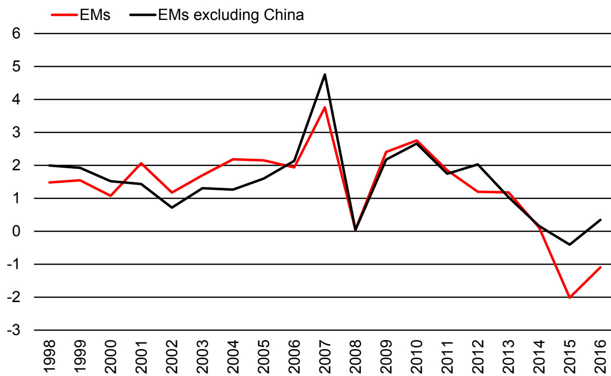
The key question, however, is the implication that lower capital flows have on emerging markets. After the East-Asian crisis of 1997-98, emerging markets have greatly improved their external balances, increasing their resilience to global financial shocks. They did so through current account surpluses, higher reserves, and shifting the composition of their external liability from debt to equity (Lane and Milesi-Ferretti, 2007; Lane and Shambaugh, 2010).

Nevertheless, since 2010, the international balance sheet of the private sector in emerging markets experienced a sharp rise of international bonds for both financial and nonfinancial corporations (chart 5).[11] If we exclude China from our sample of emerging markets, the level of such increase looks even more remarkable.[12] Acharya et al. (2015) and Chui et al. (2014) argue that this was favored by easy global financial conditions and nonfinancial firms acting as financial intermediaries, pursuing carry trade activities. Hence, higher leverage and currency mismatch, if not properly hedged, can make the balance sheet of emerging market corporations more fragile.

[10] For the influence of US monetary policy on global capital flows, see McCauley et al. (2015), Miranda-Agrippino and Rey (2015) and Bruno and Shin (2013a,b).
[11] International securities are identified by nationality of issuer. Emerging markets in Chart 5 and 6 include: Argentina, Brazil, Bulgaria, Chile, China, Colombia, Czech Republic, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Romania, Russia, South Africa, Thailand, and Turkey.
[12] China had a sharp increase in private debt, but that is mainly in local currency.

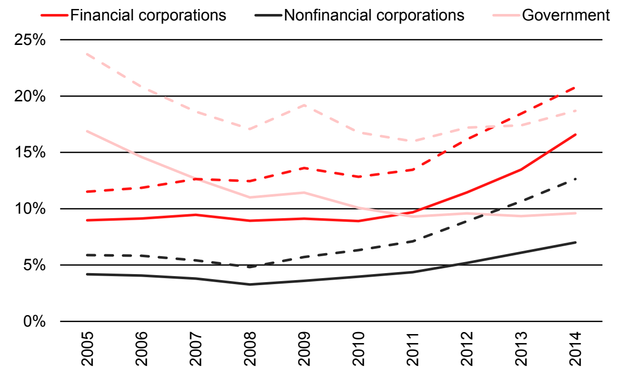
CAPITAL OUTFLOWS IN EMERGING MARKETS

Chart 4: Financial Account (% of GDP)



BUILDING UP FOREIGN LIABILITIES

Chart 5: International Debt Securities Outstanding, (% of GDP – Dotted lines excluding China)



Source: BIS, Bloomberg, Haver, UniCredit Research

Acharya et al. (2015) emphasize that international bond issuance increased strongly, but that it remains relatively small in absolute terms and relative to domestic currency debt. However, it can still be a source of financial instability through the amplification mechanism that firms play when financial shocks hit a country. Therefore, we should pay attention to both the trend and the level of companies' international debt.

It is generally stressed that countries with a flexible exchange rate are more resilient to capital outflows because they can devalue their currency and boost exports, whereas countries with a fixed exchange rate will be under more pressure and will devote resources to defend parity. Nevertheless, higher exposure to foreign currency debt implies that also countries with flexible exchange rates can suffer severe consequences from capital outflows, as a currency devaluation might undermine companies' balance sheets before they can benefit from a lower exchange rate and increase their volume of exports.

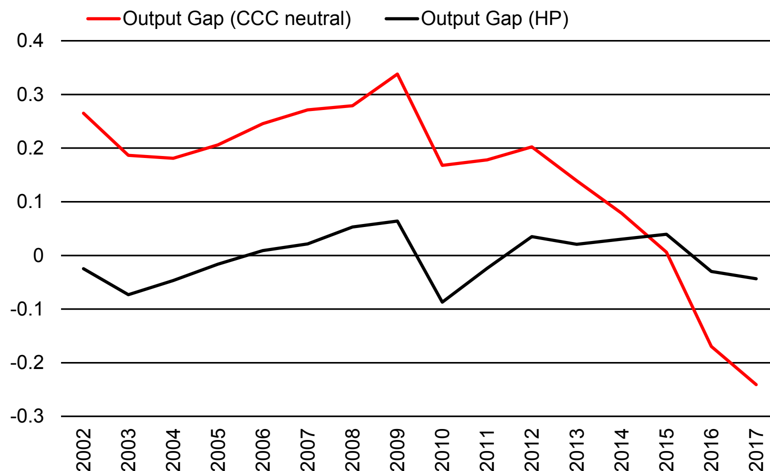
Emerging Markets' Output Gap: a C.C.C. neutral approach

In the previous section, we analyzed the details of the CCC shocks. Now, we want to understand to what extent the new environment of these external factors undermines the growth prospects of emerging markets, taken as an aggregate entity, for the next couple of years. We know that commodity prices, capital flows, and China are critical factors for GDP growth in emerging markets. Therefore, in order to properly measure output gaps and assess the sustainability of GDP patterns, it is important to incorporate information about CCC factors. For this reason, relying on the methodology developed by Borio et al. (2014), we use an empirical approach that allows for estimates of output gap where the CCC factors play a central role. We describe the methodology in Box 1; in summary, it consists of a Kalman filter estimated with a Bayesian approach, where, in respect to the standard HP filter, the measurement equation is augmented to account for the CCC factors. Our estimates deliver a "CCC-neutral" output gap, which captures the performance of the economy once we discount these underlying factors.

In Chart 6, we plot the results of our methodology and compare it to the more standard measure of output gap based on HP filter. The chart shows that, according to the CCC-neutral measure, during the years of CCC's boom, GDP growth was 20% higher than potential output growth. This would have suggested an unsustainable growth pattern driven by CCC-factors, which couldn't be detected with the more standard HP-measure. The decline in CCC leads to a decrease of the CCC-neutral output gap, which is zero in 2015 and is expected to turn into negative territory in 2016-17. Importantly, also the HP filter delivers a negative output gap estimate for 2016-17, even if of a smaller magnitude.

OUTPUT GAP IS COMING TO EMERGING MARKETS

Chart 6: Output gap estimates



Source: Haver, IIF,World Bank, UniCredit Research

A negative output gap means that actual GDP is growing below its potential; this gap becomes particularly sizable once we account for CCC. The IMF forecast of GDP growth for emerging markets in 2016 is 4.5%, while our estimate of potential output growth is between 5.2-6%; this implies that the underlying dynamics of emerging economies are still vibrant and there is margin for higher growth in the future. Hence, GDP growth in emerging markets is likely to accelerate in the medium term (2 to 5 years), when actual output will converge with its potential.

The negative output gap will impact advanced economies through macro connectivity as emerging markets account for about 29% of advanced countries' exports. On top of a trade linkage, there is also a financial channel so that falling equity prices or an increase in volatility will have a negative income effect on advanced countries' investors. The MSCI Emerging Markets Index declined by 16% over the last year and we do not expect a bull year for emerging markets as an aggregate. All these elements will have a negative impact on advanced countries' aggregate demand and will contribute to the low inflation environment that characterizes them.

As we discussed earlier, we expect CCC-shocks to have bottomed out in 2015. So why does output fall below potential in the coming years? The point is that the slowdown in China and in commodity prices is likely to be structural in the medium term. Therefore, after many boom years in those external factors, emerging markets need to adjust to the new environment by reallocating resources and reorganizing their businesses; this readjustment process is likely to keep output below potential. It's like an athlete who uses some special substance (hopefully legal) that enhances his performance; once he stops using the substance, his body needs to readapt, but in the meantime he is likely to perform below his true potential. He will rebound, but it takes some time.

Our model cannot deliver reliable output gap estimates after 2017 because we do not have enough data points of GDP in the new environment of CCC factors. This means that we cannot predict when the output gap will reach the minimum.

However, a time-preceding test (Granger test) of the output gap and the MSCI Emerging Market Equity Index shows that, while equity movements tend to anticipate the HP output gap, our CCC-neutral measure of output gap tends to precede the equity index.

This implies that investors with risk appetite and a medium-term horizon should closely watch emerging markets in the next couple of years. As soon as our CCC-neutral output gap starts to revert, that is likely to be a profitable entry moment.

Box 1: Measuring the output gap

The most familiar benchmark of output gap is the univariate HP filter, which relies on observations of real GDP to incorporate information on potential output and output gap.

The HP filter can be expressed in a state-space setting using the Kalman filter such that the state and measurement equations are:

$$\Delta y_t^* = \Delta y_{t-1}^* + \varepsilon_{1,t} \quad (1)$$

$$y_t = y_t^* + \varepsilon_{2,t} \quad (2)$$

Where y_t is the log of real GDP; y_t^* is potential output; $\varepsilon_{i,t}$ are the residuals which are assumed to be independently and normally distributed with mean zero and variance σ_i^2.

The Kalman filter is an algorithm that computes linearly the least squares forecasts of the variables in the system, minimizing jointly the squared residuals of (1) and (2). The solution of y_t^* coincides with the HP-filter as long as the ratio between the residuals' variance (the noise-to-signal ratio) is calibrated to match the standard views of business cycles length (approximately 8 years).

Following the methodology of Borio et al. (2014), we augment the measurement equation in order to account for the C.C.C. factors and we also include an autoregressive component of real GDP to allow for GDP's serial correlation; therefore rather than (2) we use:

$$y_t = y_t^* + \beta\,(y_{t-1} - y_{t-1}^*) + \theta_1 \Delta pc_t + \theta_2 \Delta ych_t + \theta_3 \Delta cf_t + \varepsilon_{3,t} \quad (3)$$

Where Δpc_t is the growth rate of real commodity prices; Δych_t is the growth rate of China's real GDP; and Δcf_t is the growth rate of real capital flows.

In order to preserve the same business cycle duration of the standard HP filter, we iterate the noise-to-signal ratio of (1) and (3) up to the point where:

$$var(y_t - y_{HP,t}^*)/var(\Delta y_{HP,t}^* - \Delta y_{HP,t-1}^*) = var(y_t - y_{CCC,t}^*)/var(\Delta y_{CCC,t}^* - \Delta y_{CCC,t-1}^*) \quad (4)$$

Where $y_{HP.t}^*$ and $y_{CCC.t}^*$ are the potential output from the HP filter and equation (3) and (1) respectively.

We estimate (3) adopting a Bayesian approach. We use the Kalman filter to form the likelihood of the system using gamma distributed priors on the parameters. We assume the parameters to have a prior mean of 0.7 and a standard deviation of 0.3. We restrict the auto-regressive parameter to be between 0 and 0.95, so we avoid unit-roots output gaps. Our variables do not exhibit persistent one-sided trends, but they have a high degree of cyclicality which can be problematic given our small sample. To mitigate this issue we use Cesàro means that have the property to converge faster to the population mean.

The estimates of (3) deliver a positive and significant coefficient for China's growth and commodity prices and a positive but not significant coefficient of capital flows. This might reflect the fact that capital flows matter more for the financial cycle rather than the business cycle of emerging markets.

Picking the winners: the KE-VIP frontier

Investors interested in emerging markets will face some headwinds for the next 1-2 years. The adjustment to the new external conditions will bring output below potential and this is likely to depress the prices of this asset class.

This can generate interesting opportunities in strong performing emerging countries, so that picking the right winners can be particularly profitable for investors with appetite for this asset class. This is the case especially for some frontier markets that we expect to grow particularly fast. These include the VIP countries in East Asia – Vietnam, India, and Philippines – plus Kenya and Ethiopia (KE) in Africa.

Emerging markets are often bundled together under a unique umbrella, but there is relevant heterogeneity across emerging countries. Chart 8 provides a snapshot of the CCC exposure for a large set of emerging countries. We look at oil&mineral exports over total exports, exports' share to China, and share of external debt over GDP.

The countries that have to go through a higher degree of adjustment because of exposure to commodities and China are Latin American and Western African countries, South Africa, Malaysia, Indonesia and to some extent also Thailand. Eastern European countries are more exposed to external debt and potential disruption from capital outflows.

EMERGING MARKETS AREN'T ALL THE SAME

Chart 7: Oil and minerals exports (% total exports)

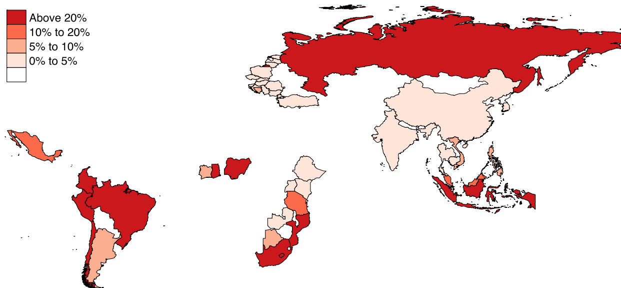


Chart 8: Exports to China (% total exports)

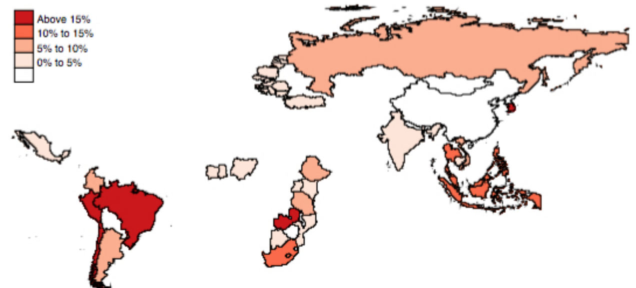
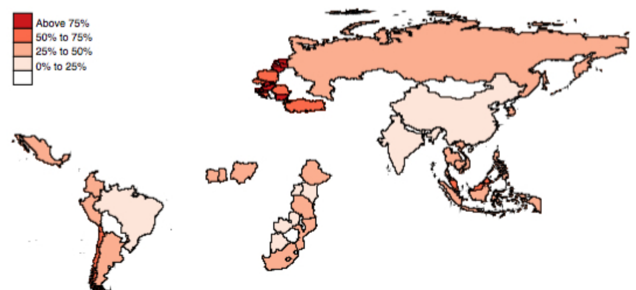


Chart 9: External debt (% of GDP)



Source: BIS, Bloomberg, Comtrade, UniCredit Research

Given their limited exposure to the CCC factors, the KE-VIP countries will need to go through a low degree of adjustment to the new external conditions (table 1).

TABLE 1: KE-VIP LITTLE EXTERNAL ADJUSTMENT NEEDED

KE-VIP, exposure to the CCC factors

	Oil&Mineral Exports (% tot. exp.)	Exports to China (% tot. exp.)	External Debt (% of GDP)
Vietnam	6.9	8.9	38
India	1.6	4.6	22.1
Philippines	7	12.2	25.1
Ethiopia	0.05	8	26.4
Kenya	0.85	0.7	24.5

Source: BIS. Comtrade, Haver, UniCredit Research

The KE-VIP are fast growing economies where real GDP growth is expected to be above 6% for the next couple of years and have vibrant perspectives also beyond this period. Vietnam is expected to go through further economic liberalization in 2016 and the TPP deal will have positive effects on trade in the coming years. India and the Philippines are experiencing fast productivity growth and relevant infrastructure improvements; moreover, they will soon start benefiting from a demographic dividend thanks to the decline of the fertility rate and the increase of working-age population of the last few years. Finally, Ethiopia and Kenya have very active entrepreneurial activities across different sectors and they are attracting investment from Western firms and funds.[13]

It is important to stress that these economies are growing fast in a relatively stable macroeconomic environment for emerging market standards (table 2). Government debt and deficits are in a sustainable range; exchange rates have a low degree of volatility; and inflation rates are under control, although a bit too high in Ethiopia. However, large current account deficits are a common feature of African countries: Kenya and Ethiopia are no exception.

TABLE 2: KE-VIP FORECASTS, FAST GROWTH AND RELATIVELY STABLE MACRO OUTLOOK

KE-VIP, key macroeconomic indicators

	Real GDP growth*	Inflation rate*	Government net lending/ borrowing (% of GDP)*	Government gross debt (% of GDP)*	Current account (% of GDP)*	Exchange rate volatility**
Vietnam	6.2%	3.4%	-6.2%	64%	-0.5%	2%
India	7.5%	5.4%	-6.8%	63.3%	-1.7%	5.2%
Philippines	6.4%	3.4%	-0.6%	33%	4.2%	4.1%
Ethiopia	7.8%	8.4%	-2.6%	23.7%	-8.9%	5.6%
Kenya	6.9%	5.4%	-6.6%	55.6%	-8%	3.3%

*2016-17 forecast; **Average 60 days exchange rate volatility, 2013-15. Source: Bloomberg, IMF, UniCredit Research

As for the political outlook, the main risk concerns terrorist attacks in Kenya by radical groups entering from Somalia. However, the country, which suffered a few attacks in recent years, showed strong resilience and it improved intelligence surveillance. In addition, the Philippines has a general election in May 2016, which will put an end to the current presidency because of term limits. This can generate some tension in the transition phase, but we do not expect particular disruption to the economy.

Investing in the KE-VIP countries remains risky and in some cases difficult because of foreign investment regulations. However, these countries will provide a reliable and sizable source of growth for the next few years. Investors and exporters interested in emerging markets should look carefully at opportunities in these countries.

[13] For instance, KKR & Co. made their debut in Africa choosing Ethiopia for their first investment on the continent (USD 200mn in Afriflora).

Concluding remarks

Emerging economies have benefited from a prolonged bonanza in commodity prices, growth in China, and capital flows. 2015 marked a turning point in all these external conditions, which significantly deteriorated.

The decline in commodity prices and China slowdown are likely to be more structural in nature, whereas the shock on capital flows is likely to be temporary. Nevertheless, capital flows are still an element of fragility that must be closely monitored, because the increased exposure to external debt that characterizes both financial and non-financial corporations poses a serious challenge.

Nevertheless, this new environment in external conditions can shift resources' allocation towards the production of manufacturing goods that tend to have higher value added and lead to higher productivity growth. In any case, this process will need a few years before being completed.

The adjustment process that emerging economies have to undergo will bring output below potential, having also a negative impact on aggregate demand in advanced economies. However, the medium-term prospects for economic growth in emerging markets remain sound.

One could wonder if emerging markets are slowing down because of the "middle income trap". We believe that, while this is possible for some countries especially in Latin America and South Africa, it is not a general feature of all emerging countries. Global value chains facilitate the industrialization of developing countries as they enhance their capability to increase production's value added. Eastern European and frontier East Asian countries are close enough to Europe and Japan and still have low relative wages to benefit from such processes. Moreover, Sub-Saharan countries still have significant room to catch up.

Investors interested in emerging markets should look at countries with rapid and stable growth potential that will not suffer much from the required external adjustment. These include the KE-VIP countries that we expect to perform particularly well for the next couple of years.

References

- Acharya, V., S.G. Cecchetti, J. De Gregorio, S. Kalemli-Özcan, P.R. Lane, and U. Panizza, (2015). "Corporate Debt in Emerging Economies: a Threat to Financial Stability?", The Brookings Institute, Washington D.C.
- Bloom, N., R. Sadun, and J. Van Reenen (2012). "Americans Do IT Better: US Multinationals and the Productivity Miracle." *American Economic Review*, 102(1): 167-201.
- Borio, C., P. Disyatat, and M. Juselius, (2014). "A parsimonious approach to incorporating economic information in measures of potential output", BIS Working Papers no. 442.
- Brandt L., J. Van Biesebroeck, and Y. Zhang (2012). "Creative accounting or creative destruction? Firm-level productivity growth in Chinese manufacturing." *Journal of Development Economics*, 97(2): 339-351.
- Bruno, V. and H.S. Shin (2013a). "Capital Flows, Cross-Border Banking and Global Liquidity", NBER Working Paper n. 18942.
- Bruno, V. and H.S. Shin (2013b). "Capital Flows and the Risk-Taking Channel of Monetary Policy." BIS Working Paper Series n. 400.
- Chui, M., I. Fender and V. Sushko (2014). "Risk Related to EME Corporate Balance Sheets: The Role of Leverage and Currency Mismatch." BIS Quarterly Review (September): 35-47.
- Hsieh, C.T., and P.J. Klenow (2009). "Misallocation and Manufacturing TFP in China and India." *Quarterly Journal of Economics*, 124(4): 1403-1448.
- IIF (2015), "October 2015, Capital Flows to Emerging Markets." IIF, Washington D.C.
- Jin, K. (2015). "China's Unwilling Consumers." Project Syndicate, 11 November 2015.
- Lane, P.R. and G.M. Milesi-Ferretti (2007). "The External Wealth of Nations Mark II: Revised and Extended Estimates of Foreign Assets and Liabilities, 1970-2004." *Journal of International Economics*, 73(2): 223-250.
- Lane, P.R. and J. Shambaugh (2010). "Financial Exchange Rates and International Currency Exposures." *American Economic Review*, 100(1): 518-554.
- Lin, J.Y. (2016). "Will China Continue to Be the Engine of Growth in the World?", American Economic Association Conference, San Francisco.
- McCauley, R., P. McGuire and V. Sushko (2015). "Global Dollar Credit: Links to US Monetary Policy and Leverage." *Economic Policy*, 30(82): 187-229.
- Miranda-Agrippino, S. and H. Rey (2015). "World Asset Markets and the Global Financial Cycle", London Business School, mimeo.
- Roache, S.K. (2012). "China's Impact on World Commodity Markets." IMF Working Paper 12/115.
- van der Ploeg, F. (2011), " Natural Resources: Curse or Blessing?", *Journal of Economic Literature*, 49(2): 366-420.
- Valli, M. and E. Campanella (2015). "Growth uncertainties in China – What it means for the Eurozone." UniCredit Global Themes Series no. 27.
- Vernazza, D. (2015). " China growth: not as bad as you might think." UniCredit Economics Special, 25-09-2015.
- Wei S.J. and X. Zhang, (2011). "The Competitive Saving Motive: Evidence from Rising Sex Ratios and Savings Rate in China." *Journal of Political Economy*, 119(3): 511-564.
- Zhu, X. (2012). " Understanding China's Growth: Past, Present, and Future." *Journal of Economic Perspectives,* 26(4): 103-24.

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