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Research Institute

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Introduction

As conventional emerging world economies mature, investment opportunities in less-developed markets receive growing attention. Currently, frontier markets represent 16% of the global population, occupying 12% of the planet's landmass, generating 5% of world economic activity, while offering just 0.5% of the global equity market opportunities. Some of these economies already demonstrate superior growth, strong demographics and discounted valuations, whereas others show promising prospects. One of the overriding characteristics of the frontier universe is the heterogeneity of the group, with countries such as Oman, Argentina, Panama and Croatia approaching developed market living standards on a diverse set of metrics, while the likes of Bangladesh, Côte d'Ivoire, Kenya and Zambia remain among some of the poorest nations on the planet.

With International Monetary Fund projections for economic growth in the aggregate frontier market universe up to 2021 being highly optimistic, there are several frontrunners, notably in Asia and Sub-Saharan Africa, that are likely to significantly outpace the emerging world. Nevertheless, following five years of waning global commodity demand growth, frontier markets are navigating a problematic macro environment of elevated inflation, currency depreciation and significant external debt obligations.

Currently, the prevailing investment incentive for exposure to frontier markets is to participate in the region with the greatest scope for advance in administrative and corporate governance, economic and labor productivity, urbanization, technology utilization, penetration in financial services, education and healthcare. In this report, we examine the potential for this particularly diverse frontier universe of countries in order to deliver consistent risk-adjusted returns, identify the myths and challenges involved, as well as to caution against drawing parallels with the emerging markets. We also address several key investment uncertainties for these promising economies. Moreover, we introduce the Credit Suisse Frontier Markets (CS FM) group of 30 countries, which collectively account for USD 3.7 trillion of economic output equivalent to 15% of the USD 24.4 trillion Gross Domestic Product generated by emerging markets.

I hope this report provides you with valuable insights into this increasingly important group of countries and wish you an interesting read.

Urs Rohner
Chairman of the Board of Directors,
Credit Suisse Group AG
Chairman of the Credit Suisse Research Institute

COVER PHOTO: CREDIT SUISSE

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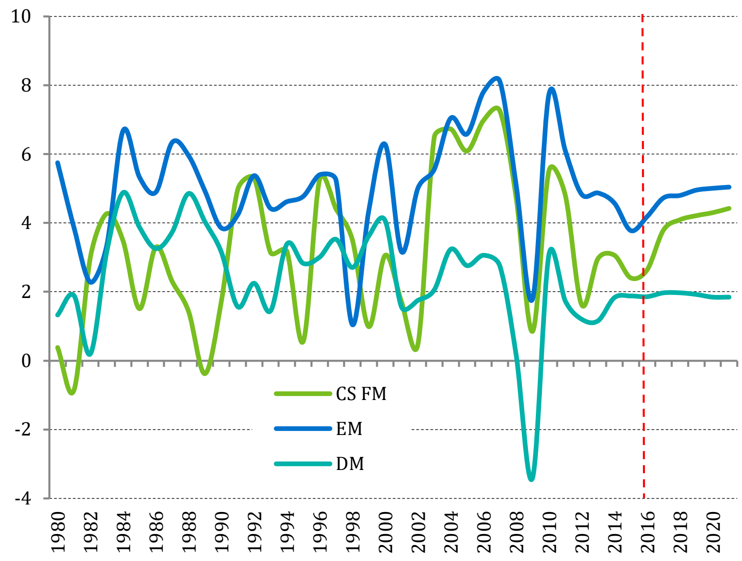
Will frontier market growth sustainably outpace the rest of the world?

The variety of macroeconomic drivers and dependency on exports yield a wide dispersion in projections for growth in economic activity across frontier markets. A select subgroup are on course for world-leading growth outpacing that of India or China, while a few will likely underwhelm even relative to developed economies.

We introduce a proprietary framework of 30 countries across four continents that we argue collectively best represent the core characteristics of superior growth and demographics, improving governance, convergence in productivity and discounted valuations typically associated with the frontier market universe.

Figure 1

Frontier versus emerging and developed markets real GDP growth (%)



Source: IMF World Economic Outlook, Credit Suisse research

Furthermore, we have created a focus group of frontier nations, the CS FM10, made up of the ten largest constituents selected by their respective simple ranking of current nominal Gross Domestic Product (GDP), population and equity market capitalization. This group of developing nations situated across four continents includes Argentina, Bangladesh, Egypt, Iran, Kenya, Morocco, Nigeria, Pakistan, Romania and Vietnam, which collectively represent between three-quarters and four-fifths of the total economic, demographic and equity investment opportunity set, and are highly representative of the larger group as a whole in terms of average GDP and population growth, per capita economic output, fertility rates and urbanization dynamics and growth. For reference, we expand upon the country selection criteria for the Credit Suisse Frontier Markets and how the universe is differentiated from other established index provider classifications in the appendix to this report.

Frontier markets in aggregate closely emulate the headline growth prospects for emerging markets excluding China, albeit with higher volatility

With a 35-year real GDP compound annual growth rate (CAGR) of 3.3% up to and including 2015, economic activity for the CS FM universe has been significantly swifter than that of developed markets (real GDP CAGR of 2.5%) for 23 years (or 66% of the time) out of 35 years since 1980.

However, over the same 35-year duration, CS FM growth has lagged behind that of emerging markets, with the latter delivering a real GDP

CAGR of 5.0% (or 3.8% excluding China) and outpacing CS FM in 30 out of the past 35 years, or 86% of the time (excluding China this equates to 49% of the time). Moreover, growth in economic activity has proved considerably more volatile within frontier markets relative to their emerging market peers. The normalized standard deviation in real GDP growth over the past 35 years is 0.6% for CS FM, double that of MSCI emerging markets, although excluding China raises the volatility for the rest of emerging markets to 0.5%.

Using International Monetary Fund (IMF) forecasts, the five-year (2016 through 2020) projected real GDP CAGR for CS FM is 3.8% (or 4.1% for the core CS FM10), significantly superior to that of developed markets at 1.9% and marginally stronger than that of emerging markets excluding China at 3.5%, while lagging behind overall emerging markets (including China), which are forecast to grow at 4.7%.

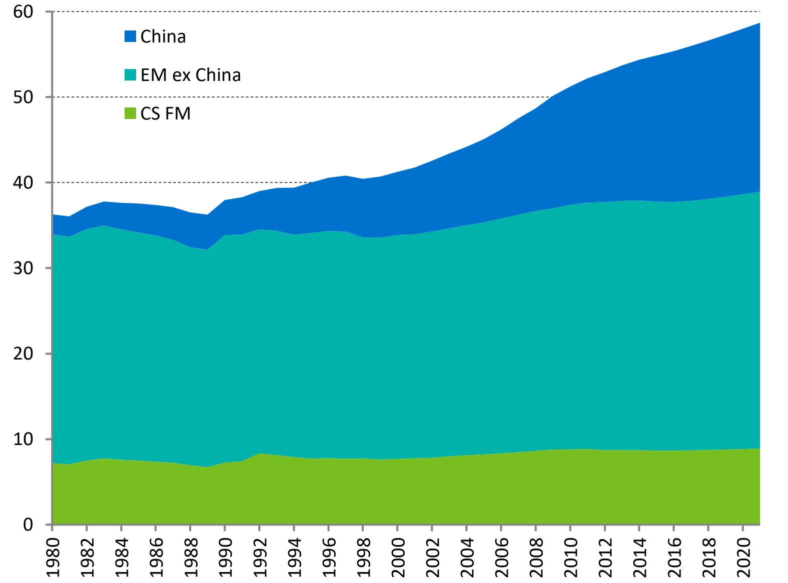
On a per capita (purchasing power parity (PPP) adjusted) basis, the IMF projection for CS FM 2016–20 real GDP CAGR is fractionally higher at 4.0% (or 4.3% for the core CS FM10 group), implying that the pace of PPP convergence for frontier markets over the duration will be swifter than that of its population growth. Nonetheless, on this metric, frontier markets still lag behind their emerging market peers, which the IMF forecasts to grow at 5.7% including China and 4.6% excluding China (a number of larger emerging markets still remain deeply discounted on PPP, for instance India at 76%, Indonesia at 70% and Russia at 65%). Developed market per capita (PPP-adjusted) real GDP growth is projected to average a more moderate 3.1% between 2016 and 2020.

This forecast rate of growth, though robust, is insufficient to meaningfully boost the frontier market contribution to total global PPP-adjusted GDP over the next five years from the current 8.7% (it would only rise marginally to 8.8%). However, over the same period, the IMF projections are for the overall emerging market contribution to PPP-adjusted global GDP to increase to 49.1% from the current 46.7%, although the lion's share of this gain (1.7 pp out of 2.4 pp) is due to China's growth.

Furthermore, despite an appreciable forecast 19% nominal gain in PPP-adjusted GDP per capita for the CS FM group of countries to USD 10,432 by 2020 from the current USD 8,766, this does not allow for a convergence with mainstream emerging markets (excluding China) which are forecast to rise by 22% over the next five years to USD 15,422 (from the current USD 12,661) or indeed with China itself, which is forecast to rise by a nominal 34% to USD 20,190 (from the current USD 15,095).

Figure 2

Frontier and emerging market* share of world total GDP (PPP terms, IMF forecasts)

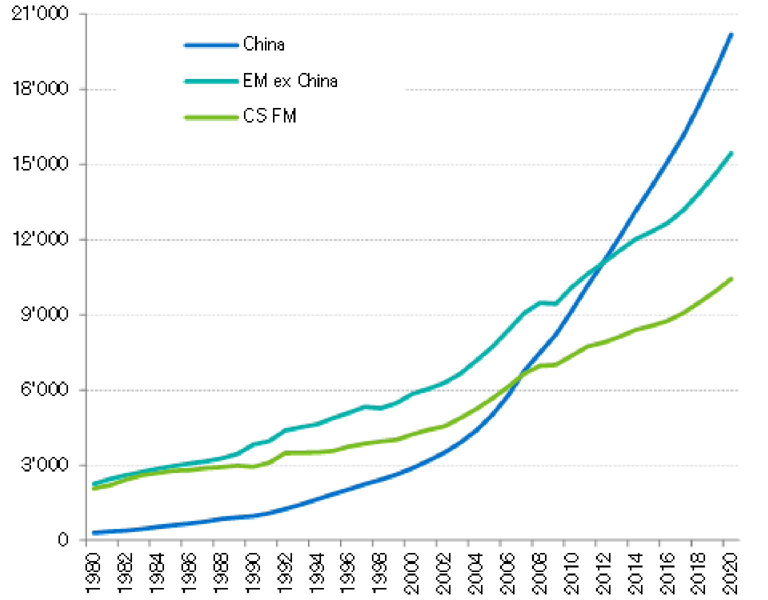


*Data for Russian Federation prior to 1991 is for Russian SSR

Source: IMF World Economic Outlook, Credit Suisse research

Figure 3

Frontier and emerging market GDP per capita (PPP terms, IMF forecasts)



Source: IMF World Economic Outlook, Credit Suisse research

But there are wide disparities in the frontier markets, with forecasts for a number of Asian and Sub-Saharan Africa countries exceeding those for emerging markets, including China

However, at an individual frontier market level (and indeed regionally within the CS FM universe), we note a wide dispersion in five-year (2015–20) real GDP CAGR forecasts by the IMF. At the upper end of the spectrum are a number of Sub-Saharan African nations led by Côte d'Ivoire (forecast to grow at 7.7%), Kenya (6.3%), Ghana (5.9%) and Namibia (5.2%). Also, at the higher end of IMF 2015-20 real GDP growth expectations, there are four Frontier Asia countries – Bangladesh (6.8%), Vietnam (6.2%), Sri Lanka (5.0%), and Pakistan (5.0%) which, with the Frontier Asia region (5.8%), are projected to outpace growth in emerging markets, either including China (4.7%) or excluding China (3.5%).

For the most part, countries in Frontier Latin America act as a burden on overall growth with the region's IMF forecast five-year real GDP growth of 1.8% lagging behind that of even the developed world at 1.9%. In particular, Ecuador (the only frontier market forecast to see its economy shrink in real terms at a rate of –1.9%), Trinidad and Tobago (1.3%) and Argentina (2.0%) show some of the slowest projected growth rates among CS FM countries together with Oman (1.5%) and Kazakhstan (1.7%) within the Frontier Europe and Middle East regions. Notably the frontier growth laggards are typically among the countries with the largest contribution of hydrocarbon production to GDP ratios.

While Frontier Latin America exhibits by far the highest regional per capita GDP, its growth prospects lag behind even those of developed economies

Regionally, on a PPP-adjusted basis, Frontier Latin America leads the field with a 2016 per capita GDP of USD 19,183, more than three and a half times that of both Frontier Asia and Sub-Saharan Africa, at USD 5,227 and USD 5,411, respectively. However, in terms of growth, Frontier Asia offers the most attractive prospects by some margin with an IMF projected five-year (2015–20) CAGR in PPP-adjusted per capita GDP of 6.1%, leading emerging markets (5.7%), Frontier Europe and Middle East (4.2%), Sub-Saharan Africa (3.2%), developed markets (3.1%) and Frontier Latin America (2.3%).

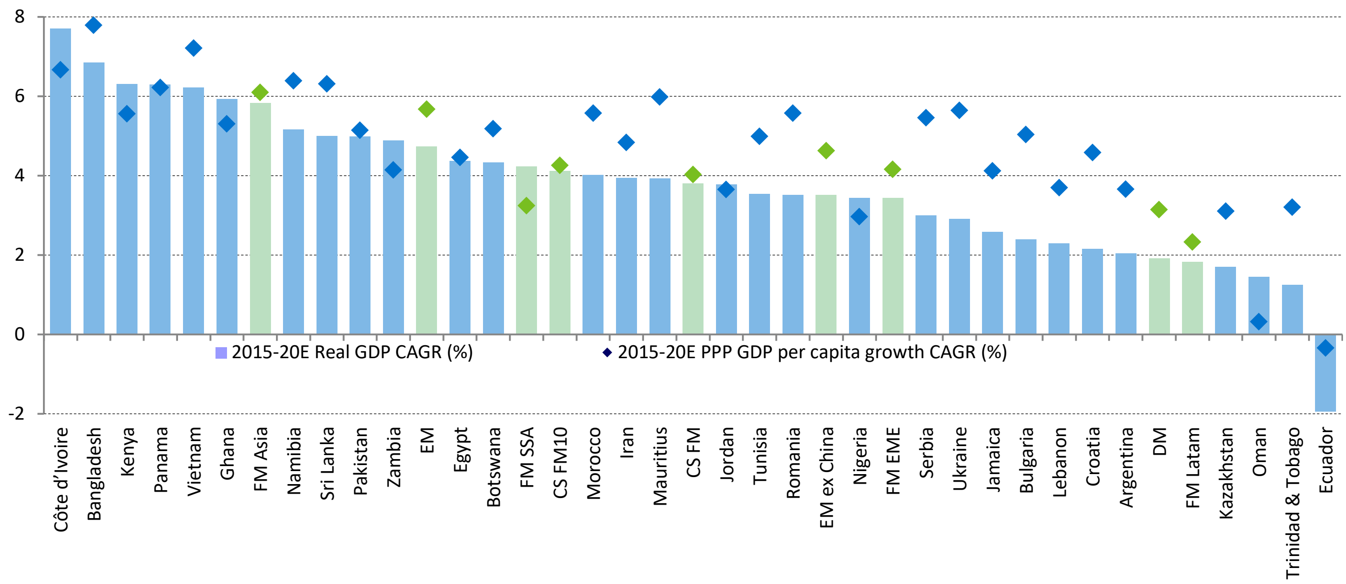
What is the composition of frontier economies?

Frontier markets exhibit a fairly high degree of economic dependency on commodities

Historically, the CS FM group of countries have collectively relied heavily on the extraction of raw materials as a primary generator of economic activity. There is a wide spectrum across the CS FM 30 countries in the contribution to GDP from industrial commodity production, but, in aggregate, it has averaged more than twice that for emerging markets (13.1% versus 5.8%, respectively) over the past 20 years.

Figure 4

Real GDP and PPP-adjusted GDP per capita 2015–20 CAGR (%)



Source: IMF World Economic Outlook database, Credit Suisse research

This gearing to swings in hydrocarbon pricing, in particular, has been a principal source of historical volatility in GDP growth experienced across the frontier market universe. This effect is amplified in countries such as Trinidad and Tobago, Oman, Iran, Kazakhstan, Nigeria and Ecuador, with 2015 oil and gas production shares of GDP ranging between 10% (Ecuador) and 40% (Trinidad and Tobago) and where, on average, these exposures were more than double these levels ten years earlier. In Zambia, copper production as a share of 2015 GDP has moderated to 13% from 17% recorded in 2005 (peaking at 25% in 2007) as demand primarily linked to China's rapid urbanization has cooled.

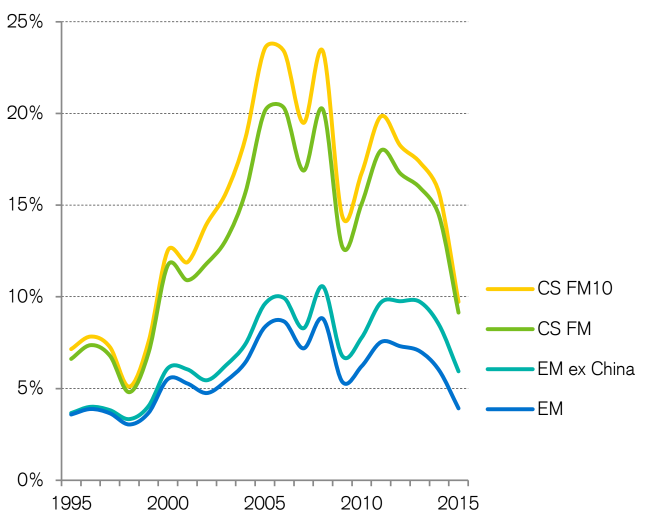
The four laggards among the IMF's five-year (2015–20) PPP-adjusted forecasts for per capita GDP growth among the CS FM are Ecuador (–1.7%), Oman (0.1%), Kazakhstan (1.9%) and Nigeria (2.4%), which share the common characteristic of petrodollar-driven economies and thus explain much of the regional deviation in five-year growth prospects, particularly Frontier Asia's significant lead.

Gross value added economic activity for the CS FM10 group of countries (2014 data) is in aggregate notably more skewed toward agriculture (14.2% of the total) in comparison to the GDP-weighted average levels seen in emerging (8.4%) and developed markets (1.6%). Moreover the agricultural contribution to GDP for the frontier markets has remained broadly unchanged over the course of the past two decades (1994 was 14.0% of the total), while mainstream emerging markets have undergone a substantial decline in their agrarian economies' share of total output from 12.3% in 1994. The second notable difference in GDP composition between the average frontier and emerging market is that the gross valued added contribution from manufacturing for the former (at 14.2% of the total, similar to developed markets at 14.9%) is little over half that of emerging markets (23.8%).

Lastly, it is worthy of mention that despite some conclusive observations to be made at the aggregate (GDP-weighted) level, there is a high degree of dispersion across the CS FM10 focus group of countries (let alone for the broader group of 30) in terms of their respective economic structures. More developed nations such as Romania (with a per capita PPP-adjusted GDP of USD 21,916) come close to mimicking the configuration of a more standard emerging market while the relatively poorer Sub-Saharan African and Indian Subcontinental countries offer a "truer" frontier economic make-up.

Figure 5

Commodity production share of GDP* for frontier and emerging markets

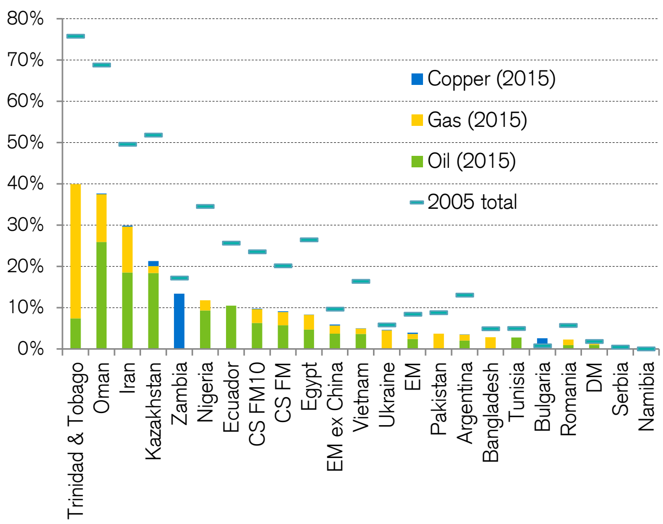


*Oil, natural gas and copper extraction

Source: Wood MacKenzie, BP Statistical Review of World Energy, Oxford Economics, Credit Suisse research

Figure 6

Commodity production share of GDP* for frontier and emerging markets

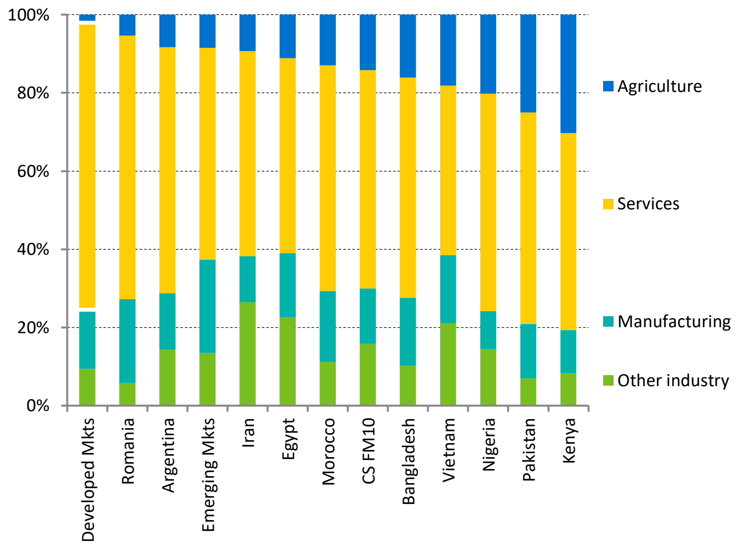


*Oil, natural gas and copper extraction

Source: Wood MacKenzie, BP Statistical Review of World Energy, Oxford Economics, Credit Suisse research

Figure 7

Gross value added GDP decomposition by sector for CS FM10, emerging and developed markets (2014, % of total)



Source: Credit Suisse

Investment is an increasingly important contributor to frontier market economic output

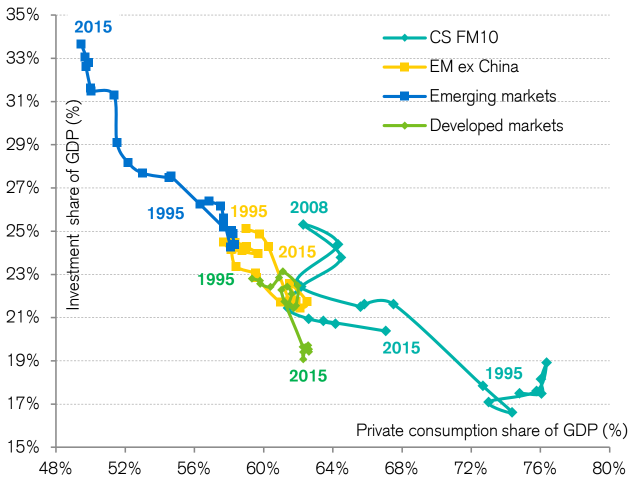
Utilizing an expenditure approach, in each year during the decade to 2001, the CS FM10 countries generated at least 73% of economic output via private consumption, with the investment share of GDP not exceeding 19% in any of the ten years. Then, commencing 2002, the investment contribution to GDP for frontier markets began a seven-year structural convergence toward more normalized levels for developed and emerging (excluding China) markets, peaking at 25% in 2008 (these years coinciding with the period of most rapid progression in China's urbanization).

Subsequently, the investment share of GDP for CS FM10 countries has stabilized at around 21% in the past five years, mid-way between developed markets at 19% and emerging markets (excluding China) at 24%. We typically consider a sustainable level of investment contribution to an economy allowing for sufficient growth in productive capacity for a developing nation to be around 25%.

China's unsustainable investment share of GDP (2015 at 44%) is responsible for elevating the overall (GDP-weighted) emerging market level to 34%, although we believe this marks the peak given the Credit Suisse forecast for a decline in China's investment contribution to GDP to 40% as soon as end-2017.

Figure 8

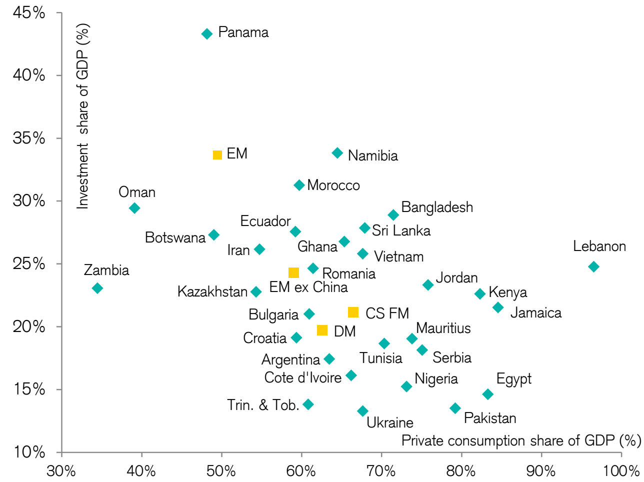
Frontier (FM10) versus emerging and developed market private consumption and investment share of GDP progression since 1995



Source: Oxford Economics, Credit Suisse research

Figure 9

Frontier market private consumption versus investment share of GDP (2015)



Source: Oxford Economics, Credit Suisse research

Among the CS FM10 nations, investment dynamics appear supportive for short- to medium-term growth in productive capacity among over half the group – for Kenya (23% share of GDP), Romania (25%), Vietnam (26%), Iran (26%), Bangladesh (29%) and Morocco (31%). They appear particularly challenging and threaten to impede the economic outlook for Argentina (17% investment share of GDP), Nigeria (15%), Egypt (15%) and Pakistan (14%).

Of all 30 CS FM group countries, Panama stands out with a 44% investment share of GDP (in line with that of China), which has been temporarily boosted by works to double the capacity of the Panama canal (which opened on 26 June 2016) and other large-scale infrastructure projects, such as the construction of the Panama Metro Line 2 and an extensive package of roadbuilding.

Frontier markets are forecast to deliver superior investment growth to emerging markets over the next five years

Growth in investment spending in real year-on-year (YoY) terms for 2015 was stronger in the CS FM10 countries (at 5.1%) relative to emerging markets (with or without China) and developed markets for the first time since 2008 (CS FM10 reached a 24% growth peak in 2006) and, according to projections of forecast company Oxford Economics, this will be maintained until at least 2020.

As China's economic growth model transitions from being investment- to consumption-led, so the Oxford Economics forecasts for overall emerging markets (including China) from 2016 through 2020 reflect a swifter recovery in real private consumption growth than in real investment growth. Indeed, for consumption, the forecasts are for real growth in emerging markets excluding China to converge with those of the CS FM10 by 2019 at 4.1%, while emerging markets including China maintain an approximately 1% positive real growth differential above the CS FM10 countries over the next five years.

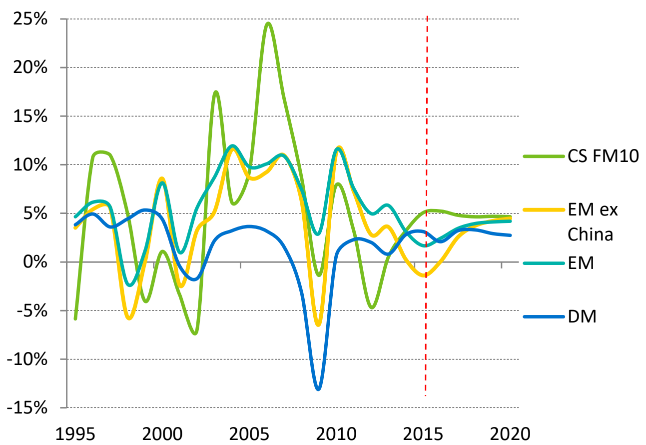
However, relatively low savings ratios in frontier markets ensure their continued reliance on foreign capital flows to fund investment

The savings ratio for the aggregate CS FM10 nations of 20% more closely mirrors that of developed markets (19%) rather than emerging markets, including China (36%) or excluding China (25%), on a GDP-weighted basis. There are only two CS FM10 countries, Kazakhstan and Iran (with savings ratios of 33% and 32%, respectively) that appear above the median of the larger eight emerging market economies.

For Kenya (3%), Egypt (4%) and Pakistan (10%), the savings ratios appear worryingly low, although in the case of Kenya with a PPP-adjusted per capita GDP less than USD 3,400, savings for the majority of the population is far from a priority. We say worryingly because, in isolation, such low savings impede the ability to channel necessary capital toward investment and infrastructure, which leaves the country dependent on inward foreign direct investment (FDI) to fund projects.

Figure 10

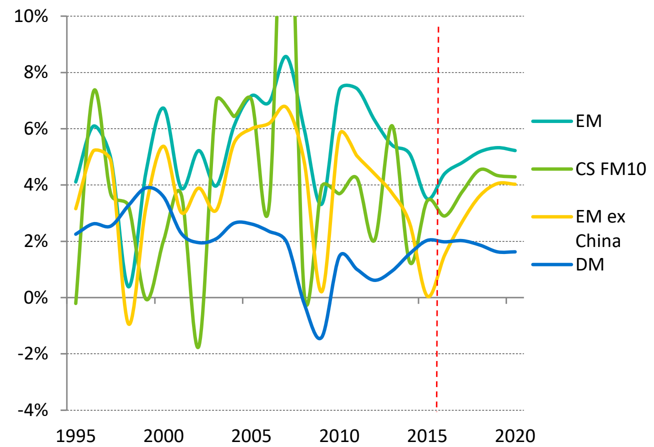
Frontier versus emerging and developed market real investment growth (% YoY)



Source: Oxford Economics, Credit Suisse research

Figure 11

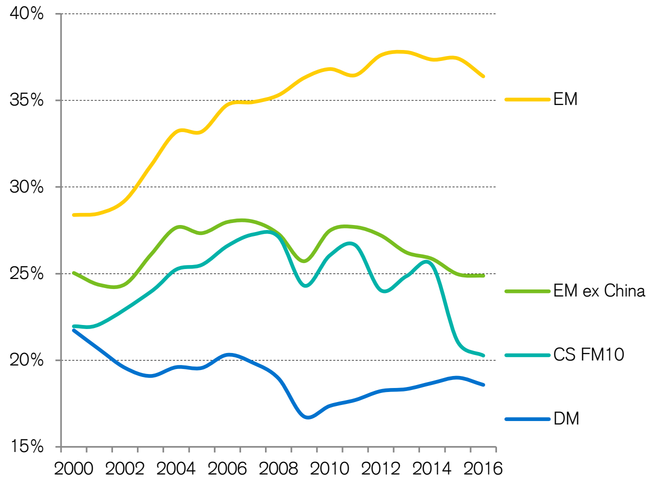
Frontier versus emerging and developed market real private consumption growth (% YoY)



Source: Oxford Economics, Credit Suisse research

Figure 12

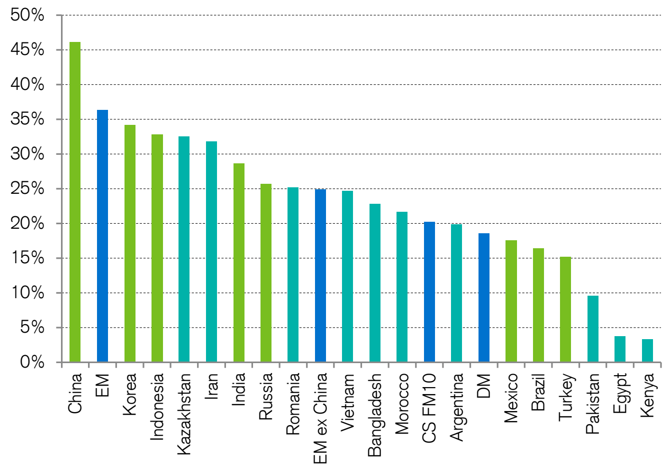
Regional savings rates for frontier vs. emerging and developed markets (gross national savings as a % of GDP)



Source: Oxford Economics, Credit Suisse research

Figure 13

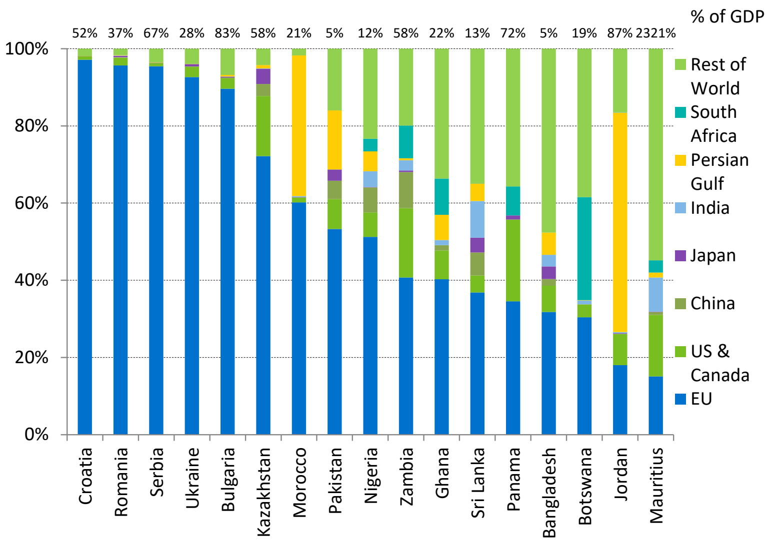
2015 savings rates for frontier versus emerging and developed markets (gross national savings as a % of GDP)



Source: Oxford Economics, Credit Suisse research

Figure 14

Gross inward stock of FDI to CS FM countries by source (% of total and headline % of GDP, 2014)



Source: IMF - Coordinated Direct Investment Survey, Oxford Economics, Credit Suisse research

European and Middle Eastern frontier markets have for the most part attracted more foreign investment than Asian and Sub-Saharan African peers, with the EU by far the largest investor across the overall CS FM region

In that vein, we note a broad spectrum in the stock of gross FDI as a proportion of GDP across frontier markets, ranging from just mid-single digit percentages in the case of Bangladesh (5%) and Pakistan (5%) to much more elevated levels in Panama (72%), Bulgaria (83%) and Jordan (87%).

At 2,321% of GDP, the stock of inward gross FDI to Mauritius is anomalous, as by far the largest share of these transfers are ultimately bound for India. Owing to a tax treaty between India and Mauritius, the island's preferential 3% capital gains tax, a well-developed financial services industry coupled with strong regulatory environment, geographical proximity, cultural affinities and historical ties, Mauritius acts as a particularly attractive conduit for investing in India.

The European Union dominates all other sources of direct investment into frontier markets with a median share of the total stock of FDI across the region of more than 51%. Other significant participants include North America (with a bias toward raw material exporters), the Persian Gulf countries (skewed toward the Islamic World), South Africa (principally within Sub-Saharan African nations) and increasingly China (with interests focusing on African commodity extraction and South Asian textile and apparel manufacturers).

How positive is the demographic dividend for frontier nations?

The bulk of the population-weighted frontier market universe is positioned in a demographic sweet spot, although the economic benefits are far from guaranteed

Relative to developed and mainstream emerging markets, frontier nation demographics are typified by high (and yet moderating) fertility rates, elevated population growth, a rising share of working-age population, improving life expectancies, low urbanization rates and a higher degree of ethnic and linguistic fractionalization.

The United Nations Population Division (UNPD) defines a country with the potential to reap a demographic dividend (usually a two-to-three decade boost in economic productivity) as one with both an increasing share of young people coupled with declining fertility rates. This places the bulk of the (population-weighted) frontier market universe in the demographic sweet spot characterized by a sharply declining age dependency ratio (as fertility rates fall due to significant reductions in infant mortality rates), with a large segment of the population moving into the productive working age cohort. Moreover, the secondary effect of a falling fertility rate is the additional rise in working population brought about by increasing female labor participation.

Naturally, the potential to realize the full benefit of this "demographic gift" is reliant on the ability of frontier market economies to absorb this fast-growing population into the workforce and is not automatically guaranteed. Thus the challenge to fully exploit the opportunity arising from burgeoning labor forces in frontier market economies should be foremost in policy-makers' decision process.

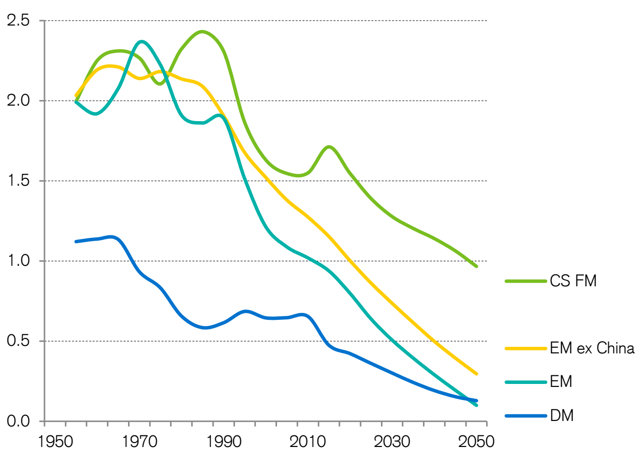
Overall population growth and the dynamics of working-age share of population favor the frontier economies relative to those of emerging and developed markets

Based on UNPD forecasts, the margin of superior population growth for the CS FM countries versus the rest of the world will increase over the next 35 years, although all global regions will undergo a decline in absolute growth levels. Year-on-year population growth in 2015 for the CS FM countries at 1.7% will decline to 1.0% by 2050. This compares with a decline from 1.2% to 0.3% for emerging markets (excluding China), from 0.9% to 0.1% for emerging markets (including China) and 0.5% to 0.1% for developed markets over the same 35-year period.

Nonetheless, these 30-country aggregate growth profiles mask some significant country (and continental) level deviations across the frontier markets. The CS Frontier Sub-Saharan African 2015-20 five-year compound annual population growth forecast by the UNPD of 2.5% includes estimates as high as 3.1% for Zambia, 2.6% for Nigeria and 2.5% for Kenya, which are collectively the three fastest-growing populations across our 30-nation study. In contrast, the CS Frontier Europe and Middle East region is the slowest-growing, with a 2015–20 CAGR of just 0.9%, and includes no fewer than five (all European) nations with UNPD forecasts for negative population compound annual growth rates over the next five years: Bulgaria

Figure 15

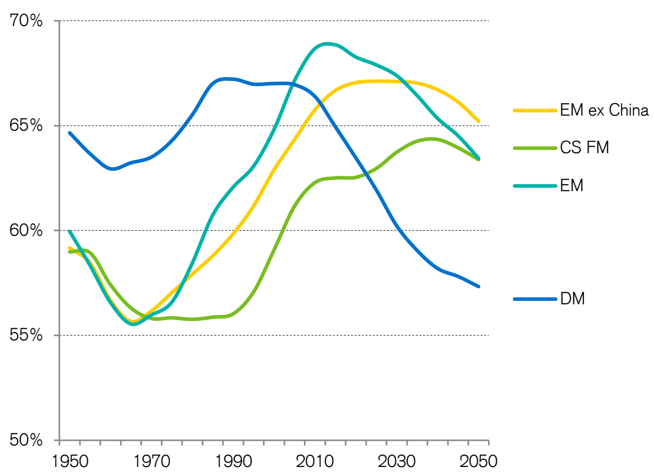
Frontier versus emerging and developed market population growth (1955–2050E, %)



Source: United Nations Department of Economic and Social Affairs - Population Division, Credit Suisse research

Figure 16

Frontier versus emerging and developed market working-age population ratio (1950–2050E, %)



Source: United Nations Department of Economic and Social Affairs - Population Division, Credit Suisse research

(–0.8%), Romania (–0.7%), Ukraine (–0.5%), Serbia (–0.4%) and Croatia (–0.4%).

Importantly, working-age (15–64) population dynamics projected by UNPD as far as 2050 for overall frontier markets are unambiguously positive relative to emerging markets (with or without China) and developed economies. The UNPD forecasts the aggregate 30 CS FM countries' working-age share of total population to increase from 62.5% in 2015 to 63.4% in 2050 (peaking at 64.3% around 2035). Meanwhile the projected declines over the 35-year period for particularly developed markets and overall emerging markets (including China) are comparably worrisome: from 64.9% to 57.3% and from 68.9% to 63.4%, respectively. Excluding China, the decline for the remainder of emerging markets (more heavily weighted toward India with favorable demographics) is milder, from a 2015 working-age population share of 66.7% to 65.2% by 2050.

Sub-Saharan African countries appear best positioned to 'reap' the frontier market demographic dividend, while Frontier European countries face significant challenges

Across all 20 CS FM group countries, seven in particular stand out as characterized by rising shares of working age populations in combination with high and falling fertility rates: Kenya, Nigeria, Zambia, Côte d'Ivoire, Ghana, Namibia and Pakistan (six of which are in Sub-Saharan Africa). These are forecast by the UNPD to increase their working-age populations by more than six percentage points of the total over the next 35 years and all have high (in excess of 3.6) but declining fertility rates.

In comparison, eight frontier markets (Oman, Romania, Croatia, Bulgaria, Ukraine, Mauritius, Vietnam and Iran) are projected to record declines in their share of working-age population out to 2050 of a greater magnitude than that of developed economies (at –8%) and (with one exception, Oman) to record fertility rates below the natural replacement level (2.1). Six of these countries are situated in the Frontier Europe and Middle East region.

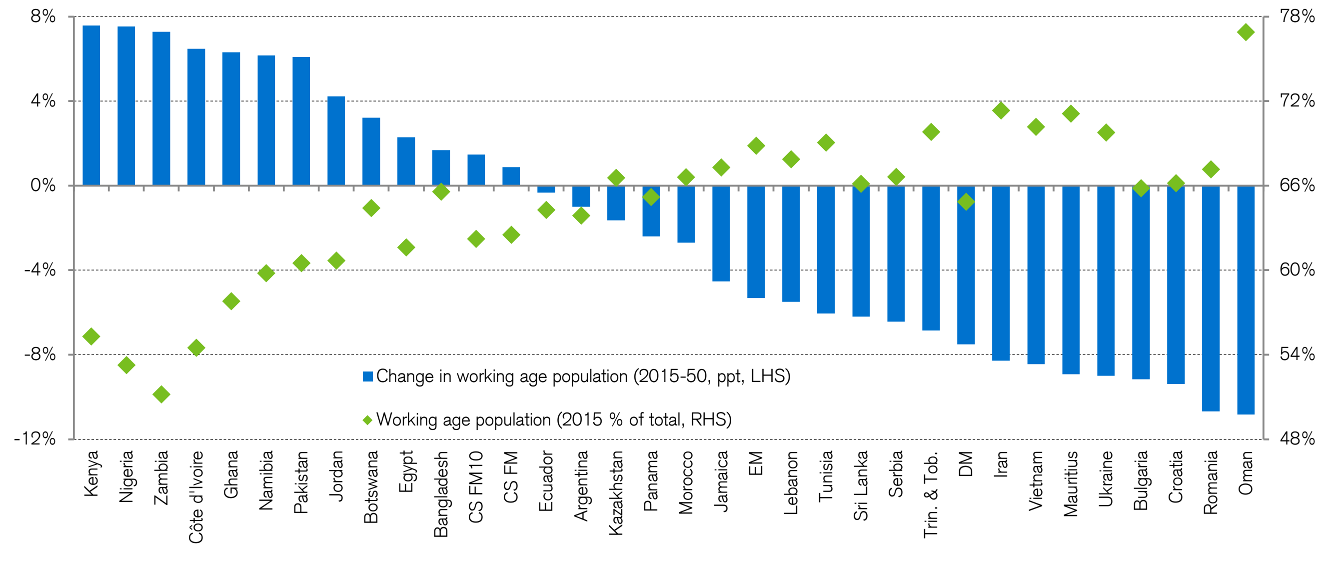
Healthcare expenditure as a proportion of total economic activity for the frontier markets has considerable scope for convergence with emerging and developed market levels

In order to sustainably erode frontier market fertility rates requires a collective societal confidence that infant and child mortality rates are irreversibly declining, which in turn is a function of the improving quality and delivery of healthcare resulting from higher health expenditure. Synonymous with the dispersion in PPP-adjusted per capita GDP across frontier markets is the wide spectrum of PPP-adjusted per capita healthcare expenditure (using the latest 2014 World Bank dataset). Indeed the r-squared between the two series across 30 country observations is 0.72.

No fewer than 17 CS FM nations have PPP-adjusted per capita healthcare expenditure greater than the USD 655 per annum average emerging market (in constant 2011 dollar terms), ranging

Figure 17

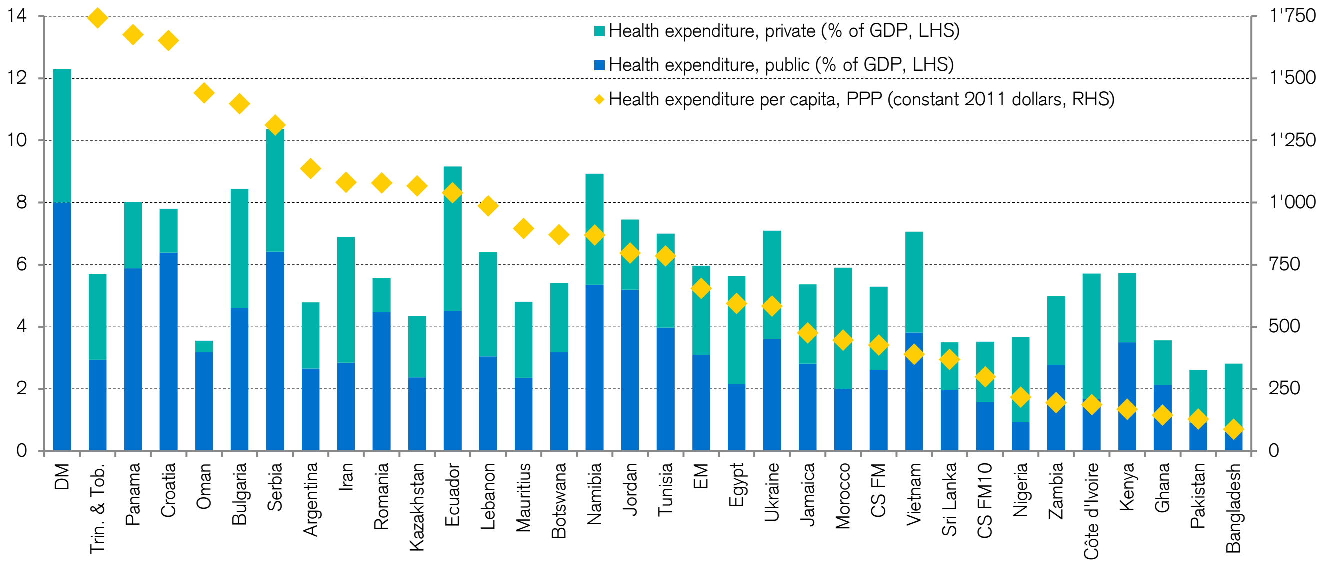
Frontier market working-age population dynamics, 2015 through 2050



Source: United Nations, Department of Economic and Social Affairs, Population Division (2015), Credit Suisse research

Figure 18

Frontier versus emerging market healthcare expenditure (2014)

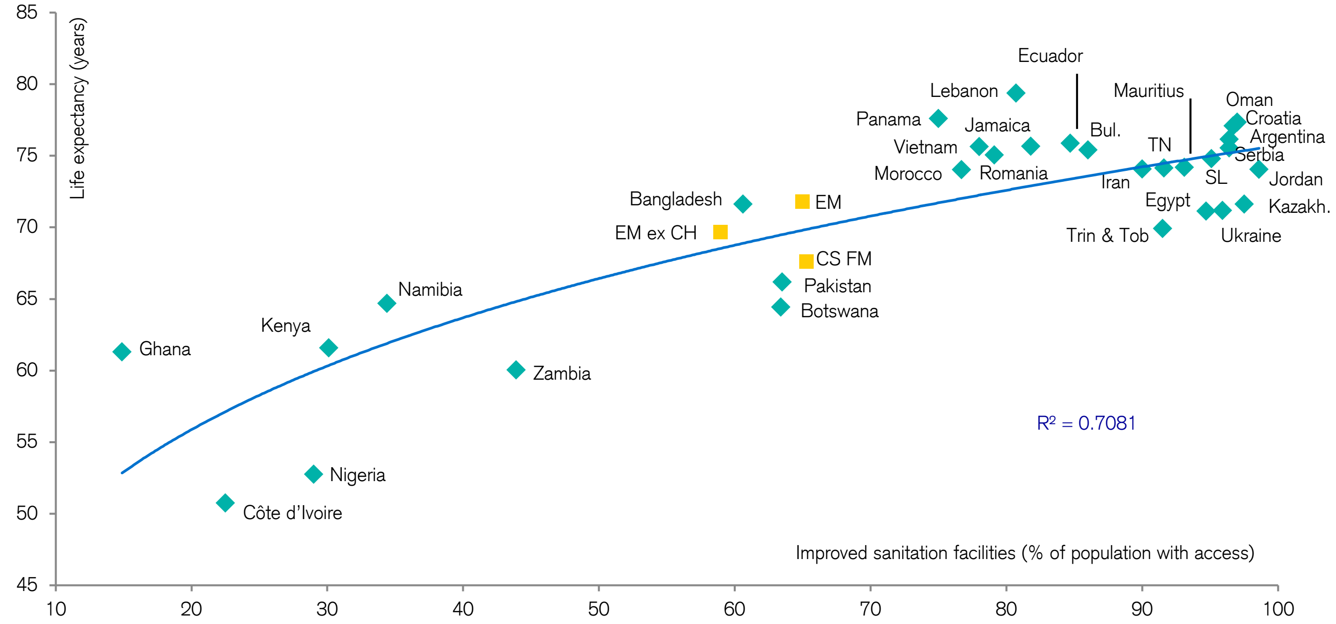


Source: World Bank, Credit Suisse research

from Trinidad and Tobago, Panama and Croatia with expenditure in excess of USD 1,500 per annum down to Bangladesh, Pakistan and Ghana with less than 10% of that (below USD 150), with the average CS FM healthcare expenditure at USD 427 per annum (with CS FM10 at a significantly lower USD 300 per annum). This compares with an average per annum PPP-adjusted per capita healthcare expenditure in developed markets of USD 5,458 (in constant 2011 dollar terms), which is eight times that of the average in emerging markets and 13 times that of frontier market average levels (or 18 times CS FM10).

Figure 19

Improved sanitation facilities versus life expectancy at birth (2015)



Source: The World Bank World Development Indicators, Credit Suisse research

However, as a proportion of GDP, healthcare expenditure for the CS FM countries at 5.3% (CS FM10 is a lower 3.5%) is less dissimilar to emerging market levels at 6.0%, although there is significant scope for convergence with developed economy levels of average expenditure at 12.3% of GDP (the EU, Japan and Canada is at 10%, the US at 17%). One of the notable differences in healthcare expenditure in the CS FM nations versus emerging and developed markets is how the greater burden falls on private individuals (2.7% of GDP or 1.9% for CS FM10) rather than the public purse (2.6% of GDP or 1.6% for CS FM10). This contrasts with a comparable private/public split of healthcare expenditure as a proportion of GDP in emerging markets of 2.9%/3.1% and in developed markets of 4.3%/8.0%.

Collectively, among the 30 CS FM countries, it is the seven Sub-Saharan African countries of Côte d'Ivoire, Nigeria, Ghana, Kenya, Namibia, Zambia and Botswana together with Bangladesh and Pakistan that have the most need for raising the proportion of their populations with access to improved sanitation facilities (extraction of waste) versus the average emerging market. This indicator has a strong association (r-squared of 0.71) with life expectancy, which in the case of these seven Sub-Saharan African countries is lagging behind the typical emerging market by an average 12.5 years.

There may be challenges presented by typically higher ethnic and linguistic fractionalization among the frontier markets

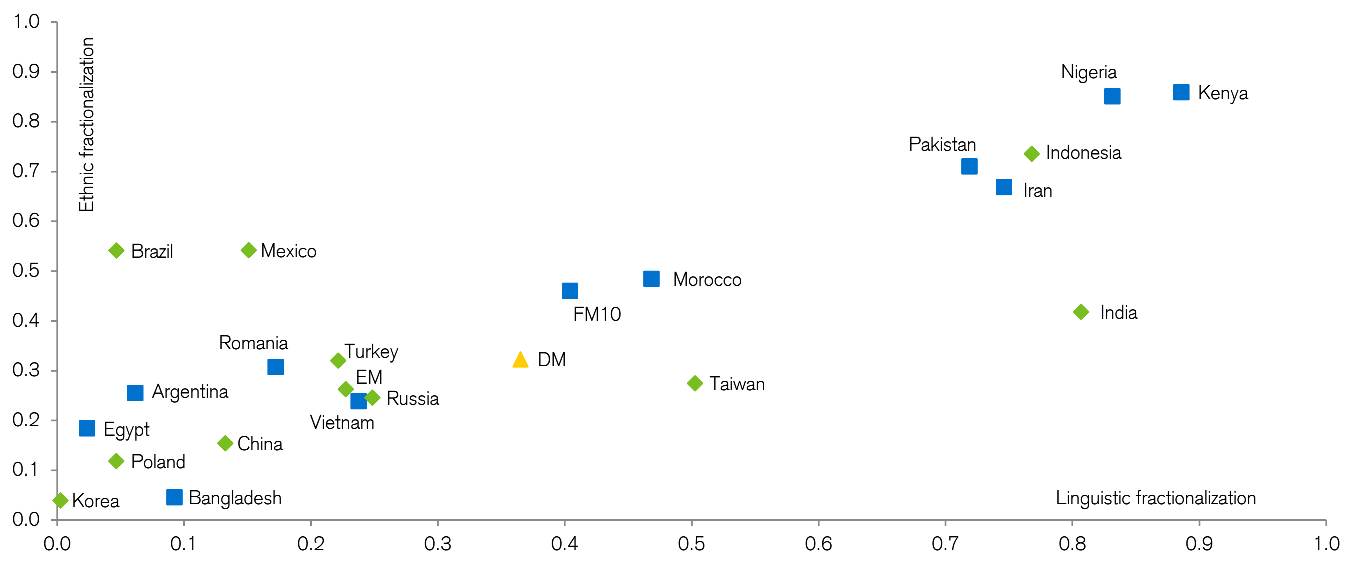
Lastly, when considering the demographic opportunities and challenges facing frontier markets, it would be negligent to gloss over the relative ethnic and linguistic heterogeneity of their populations versus the typical emerging or developed market. This greater degree of diversity does not necessarily present a hindrance to societal cohesion and democratic institutions (Indonesia, for example, has been a notable modern-era emerging market success story in this regard).

Nonetheless, a 2003 study of ethnic fractionalization (Alberto Alesina et al (2003) "Fractionalisation," Journal of Economic Growth) posits that ethnic conflict is an important determinant of the political economy of many nations, potentially leading to political instability, poor quality of institutions, badly designed economic policy and disappointing economic performance (in our view there has on average been insufficient net demographic shifts within the frontier markets to render the data collated within this academic study invalid over the interval).

Charting data from this study for the CS FM10 countries, the ten largest emerging market economies and their GDP-weighted averages together with that for developed markets reveals that Kenya, Nigeria, Pakistan and Iran have among the highest ethnic and linguistic fractionalization (the probability that two randomly drawn individuals are not from the same group) of 0.7 or above on both criteria (as does Indonesia). Moreover the typical (GDP-

Figure 20

Ethnic and linguistic fractionalization across frontier and emerging markets (2003)



Source: Journal of Economic Growth, Credit Suisse research weighted CS FM10) frontier market appears more ethnically and linguistically diverse than both developed and emerging markets (with developed markets on average offering more diversity than emerging markets). Equally there are examples of strong ethnic and linguistic cohesion among some of the larger CS FM10 countries, such as Bangladesh, Egypt and Argentina, which closely mimic the relatively low fractionalization evident in Korea, Poland and China.

How supportive are urbanization dynamics for economic growth?

Over 70% of the CS FM group population lies in countries with urbanization rates typically associated with elevated levels of real per capita GDP growth

Drawn by the superior economic, lifestyle and social opportunities of urban dwelling, the world's population is migrating from rural areas to cities. Urbanization continues to provide one of the most significant drivers of growth for the global economy. Indeed, one of the conclusions reached from an earlier study of urbanization in emerging markets (Redman and Sai (2012) "Opportunities in an urbanizing world," Credit Suisse Research Institute) is that as the share of a country's urban population rises by five percentage points, there is typically an associated gain in per capita economic activity of 10%.

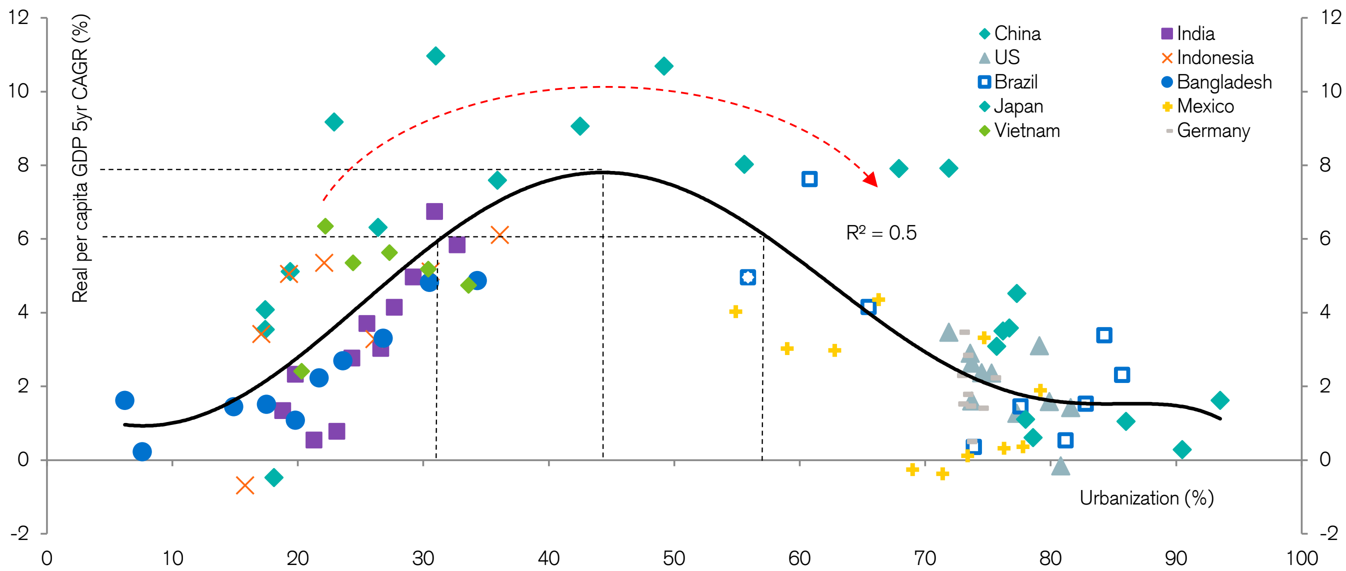
Moreover, when investigating the relationship between the level of urbanization and real per capita GDP CAGR at five-year time intervals from 1965 to 2010 for a selection of the world's most populous countries at different stages of urbanization, we found evidence of a sweet spot during the progress of urbanization when real per capita GDP growth peaks. The bell curve trend line suggests that as a country moves through around a 45% urbanization level, it typically achieves peak real per capita GDP growth of close to 8%. More broadly, the chart also suggests that urbanization in the range of around 30% to around 55% is consistent with in excess of 6% real per capita GDP growth.

Importantly, the population-weighted average level of urbanization in the CS FM10 group of countries is 45% (or 48% for the overall CS FM nations), i.e. at the urbanization "sweet spot" versus 52% for emerging markets and 82% for developed economies. Fully 14 out of the 30 CS FM countries under consideration (and six of the CS FM10) fall within the 30%–55% urbanization level associated with elevated (on average greater than 6%) real per capita growth in economic activity: Vietnam (34%), Bangladesh (34%), Pakistan (39%), Mauritius (40%), Zambia (41%), Egypt (43%), Namibia (47%), Nigeria (48%), Kazakhstan (53%), Ghana (54%), Côte d'Ivoire (54%), Romania (55%), Jamaica (55%) and Serbia (55%). These 14 countries collectively account for 71% of the total population of the 30 CS FM countries. Moreover, Kenya (a CS FM10 group country) with 26% of urbanized population is poised to move into the urbanization "sweet spot."

The remaining three CS FM10 countries (Morocco, Iran and Argentina) have urbanization rates in excess of 60%, with only Argentina (at 92% –

Figure 21

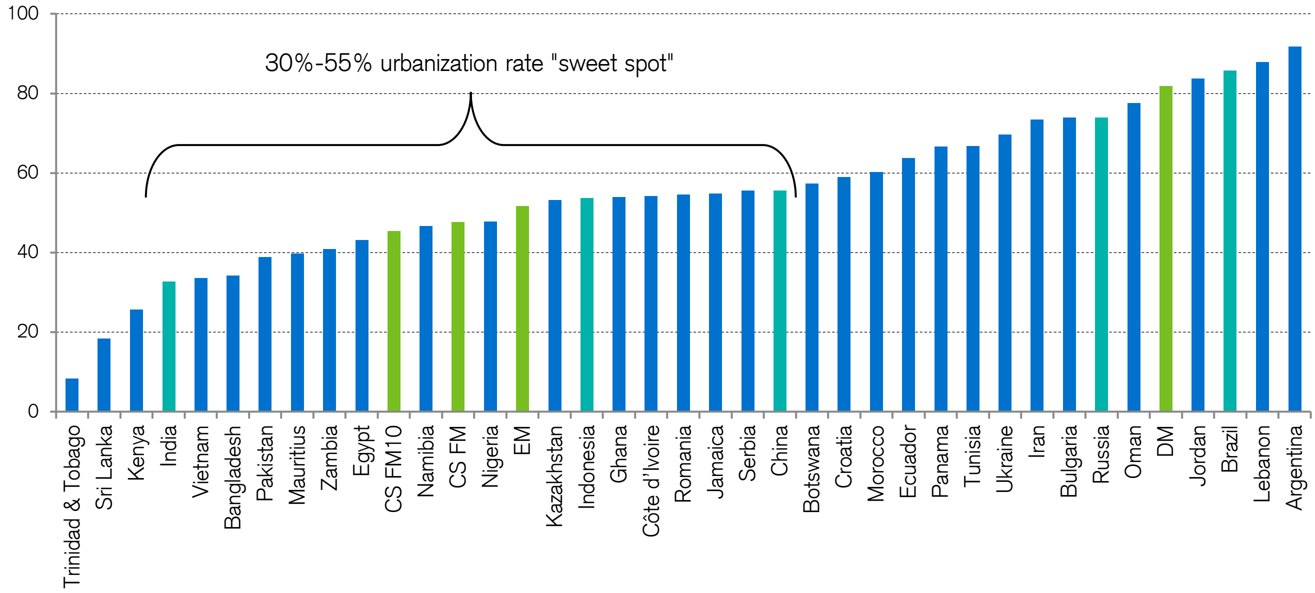
Level of urbanization versus real per capita GDP CAGR at five-year intervals from 1965 to 2015 for ten of the most populous countries at different stages of urbanizing



Source: Population Division of Department of Economic and Social Affairs of the United Nations Secretariat, Credit Suisse research

Figure 22

Frontier and emerging markets by ascending level of 2015 urbanization (%)



Source: Population Division of Department of Economic and Social Affairs of the United Nations Secretariat, Credit Suisse research

the highest in the CS FM countries and one of the most urbanized countries globally) being more urbanized than the developed market average.

How will frontier markets achieve productivity convergence with the developed world?

Technology leapfrogging affords considerable efficiency gains and offers frontier nations the ability to fast track into the globalized economy

The relatively swift transition of large swathes of the frontier market population from an essentially agrarian subsistence toward inclusivity within the 21st century age of internet-driven connectivity over the course of a single generation has been enabled by significant and advantageous technological leapfrogging.

Legacy economic infrastructure such as telephone landlines, high street banks, fossil fuel energies and physical digital data storage (which are still widespread across developed world economies) have to a great extent been circumvented in frontier nations via the use of wireless communications, internet banking, solar energy (in combination with other renewables) and cloud computing, respectively, among other examples. This affords these developing nations considerable efficiency gains and offers them the ability to fast track into the globalized economy.

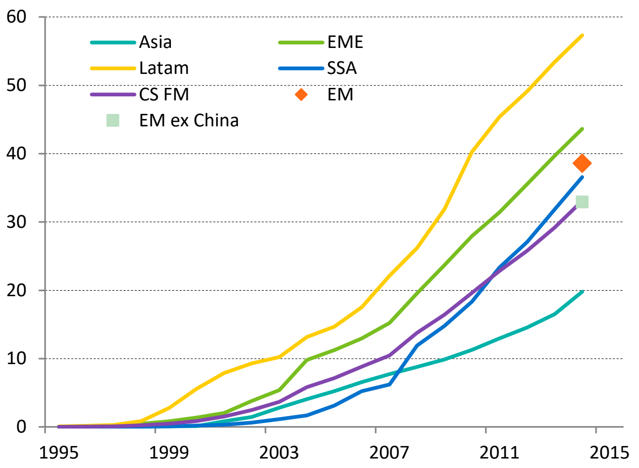
Indeed, internet penetration for the overall CS FM group of countries at 33% (end-2014) is equal to that of mainstream emerging markets excluding China (including China, the figure rises to 39%), while, regionally, Frontier Latin America and Frontier Europe and Middle East lead the field with (2014) penetration rates of 57% and 44%, respectively. Just ten years earlier, less than 6% of the CS FM population had internet connectivity (by comparison, the penetration rate for the US grew from 65% in 2004 to 87% by 2014). Frontier Asia, with an internet penetration rate of just 20%, is the clear laggard among frontier regions, held back in particular by Bangladesh and Pakistan at 10% and 14%, respectively, while in contrast Vietnam has achieved a far higher 48%.

Similarly, wireless communication subscriptions in frontier economies have converged rapidly with those of the developed world over the course of just one decade. Once again, it is Frontier Latin America and Frontier Europe and Middle East which have regionally achieved the greatest subscription rates (by end-2014) at 143% and 118%, respectively, relative to the overall rate for the CS FM countries of 100%, the latter being in line with the emerging market universe (with or without China), with the rate for the CS FM countries having grown from just 12% ten years earlier. Once again, for the sake of comparison, the USA has seen wireless communication subscription rates grow from 63% to 98% over the same decade.

The success of mobile banking in Kenya is a prime example of an innovative application of simple technology helping circumvent the impediments to growth due to the lack of traditional infrastructure. M-PESA, a mobile-phone-based platform for

Figure 23

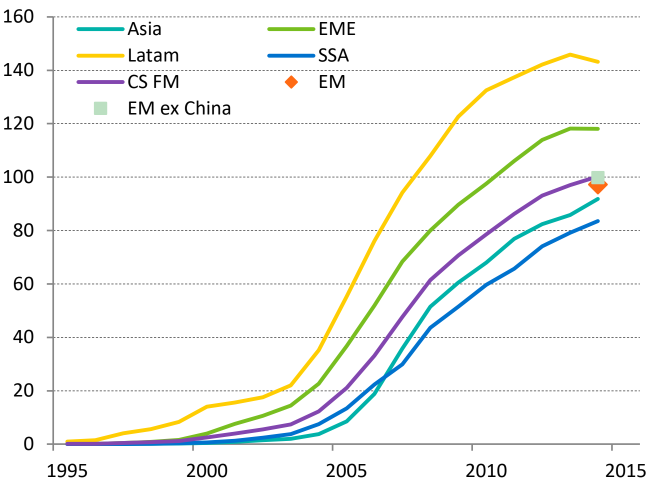
Internet users per 100 people



Source: The World Bank World Development Indicators, Credit Suisse research

Figure 24

Cellular telephone subscriptions per 100 people



Source: The World Bank World Development Indicators, Credit Suisse research

money transfer and basic financial services, boasts of 19 million active users in Kenya, with 4.1 billion transactions carried out in 2015. This low-tech solution that uses text-based communication and agents in corner shops has extended financial inclusion to millions (75% of adults now have access to bank or mobile-money accounts) and has facilitated creation of small businesses in a country underpenetrated by branch banking. The success of M-PESA has spurred the growth of other mobile-money service providers in other frontier economies, especially in East Africa, which is a region that now accounts for 80% of the global mobile-money transactions.

Productivity gains via education and investment in human capital

Critical to the growth and development of frontier market economies is the strong association between improved levels of education and the strengthening of a nation's human capital and gains in economic productivity. Growth in human capital delivered via investment in intangible infrastructure (education and research and development) is as critical to an economy's ultimate success as investment in physical infrastructure.

With advances in mechanized and more collective farming (and hence lower agricultural labor intensity), social adaptation (and declining fertility rates) enabling greater female participation, together with government-sponsored initiatives and investment in improving education and literacy rates, frontier nations have recorded measured gains in their tertiary education enrolment.

However, the expansion in the gross enrolment ratio[1] for CS FM countries to 25% (end-2014) from 14% a decade earlier masks a significant regional dispersion ranging from Frontier Latin America (64%) and Frontier Europe and Middle East (51%) at the upper end of the spectrum to Frontier Asia (16%) and Frontier Sub-Saharan Africa (just 3%) at the lower end. Importantly, however, tertiary education gross enrolment ratios for all four frontier market regions are progressing in the right direction and in the case of Frontier Asia and Sub-Saharan Africa have significant scope for further convergence with the mainstream emerging-market average of 32% (with or without China).

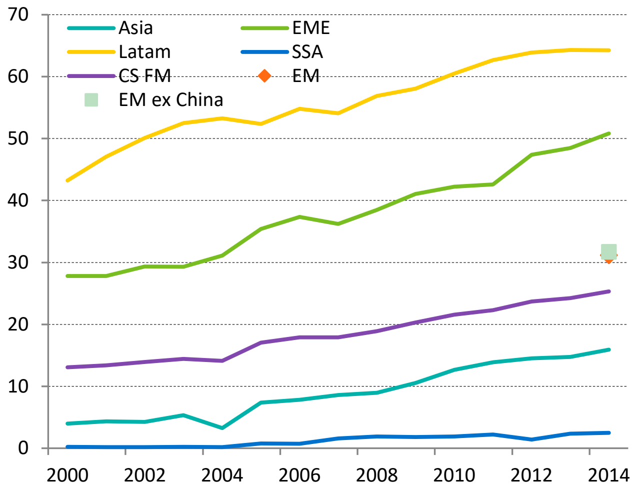
Encouragingly, governments in half a dozen frontier nations (Botswana, Namibia, Ukraine, Vietnam, Tunisia and Jamaica) spend 6% or more of GDP on education, which is a ratio significantly higher than expenditure in the USA (5.2%), the EU (4.9%) or indeed the average for emerging markets excluding China (4.4%).

Equally, the six frontier market governments spending less than 3% of GDP on education (Zambia, Sri Lanka, Bangladesh, Pakistan, Lebanon and Kazakhstan), significantly trailing even the frontier market (GDP-weighted) average of 3.9%, need to address this important priority for facilitating the country's productivity convergence with global norms.

[1] Gross enrollment ratio is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. Tertiary education, whether or not to an advanced research qualification, normally requires, as a minimum condition of admission, the successful completion of education at the secondary level. (Source: World Bank Development Indicators)

Figure 25

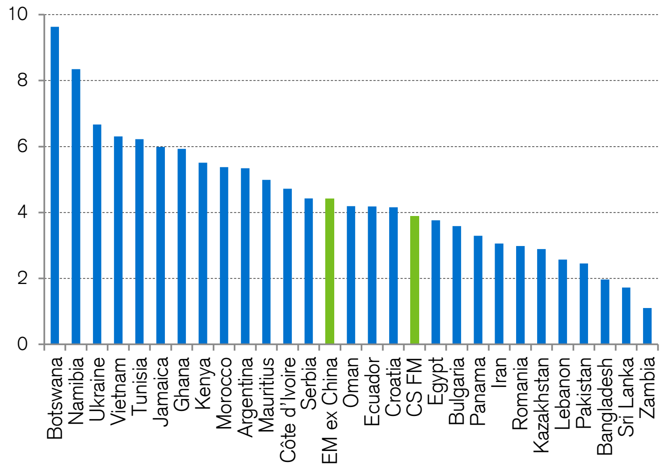
Tertiary education enrolment ratio (% of population)



Source: The World Bank World Development Indicators, Credit Suisse research

Figure 26

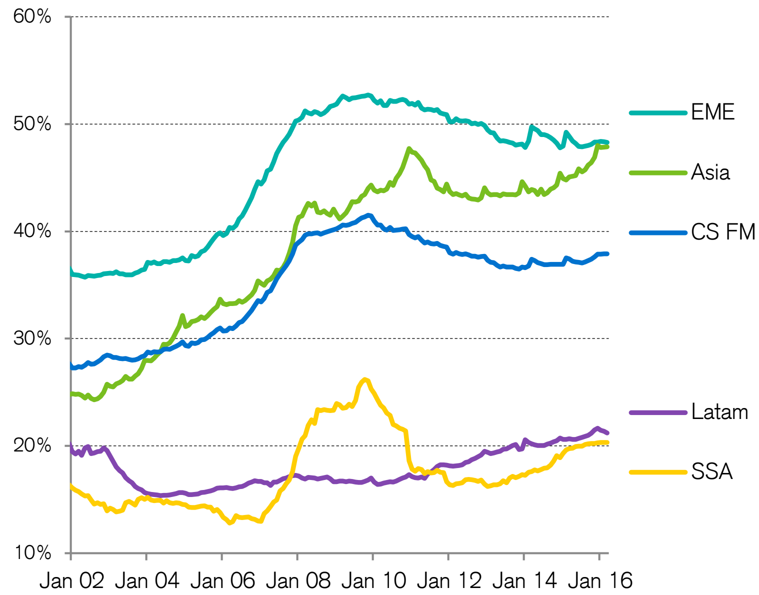
Government expenditure on education (% of GDP)



Source: United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics, Credit Suisse research

Figure 27

Frontier markets' regional domestic private sector credit to GDP ratios (%)



Source: IMF - International Financial Statistics, Oxford Economics, Credit Suisse research

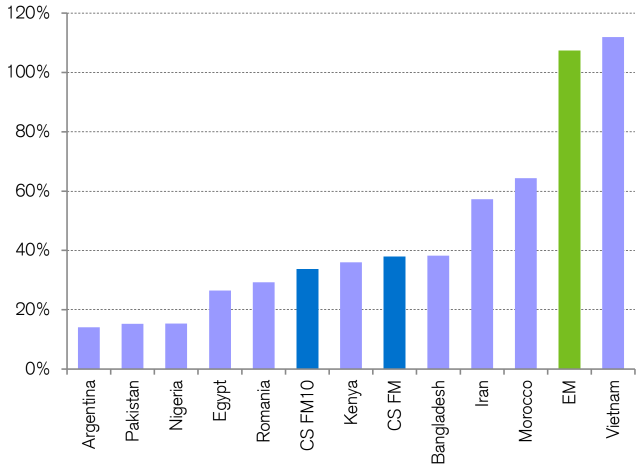
For the most part, modest private sector leverage combined with underleveraged banks allows for further frontier market credit extension, thus facilitating economic growth

Private sector credit extension is critical for growth in economic activity, facilitating household consumption, property purchases and investment in private enterprises, which in turn generates employment, earnings and wealth. Credit extended to households and businesses as a proportion of total economic activity remains subdued in frontier nations relative to that in mainstream emerging and developed economies, although it displays a pattern of long-run structural growth interrupted by a period of post-global financial crisis deleveraging (with the notable exception of Frontier Latin America), which abated through 2014.

At 38%, the private sector credit to GDP ratio for the aggregate CS FM group of countries has significant room for expansion toward the average emerging market level of 107%. Indeed, with the exception of Vietnam (112%), the remaining CS FM10 countries are significantly underleveraged relative to emerging market norms, with Argentina, Pakistan and Nigeria at private sector to credit GDP ratios of 15% or less. Moreover (and importantly), the capacity for lending and deposit-taking institutions in the CS FM10 countries to extend further credit to the private sector is not on the whole (with the exception of Vietnam) constrained by their balance sheets. Loan to deposit ratios range from just 40% in Egypt through to 91% in Romania (Vietnam is 107%) and at an aggregate level CS FM (79%) and CS FM10 (73%) have loan to deposit ratios lower than that for mainstream emerging markets (87%).

Figure 28

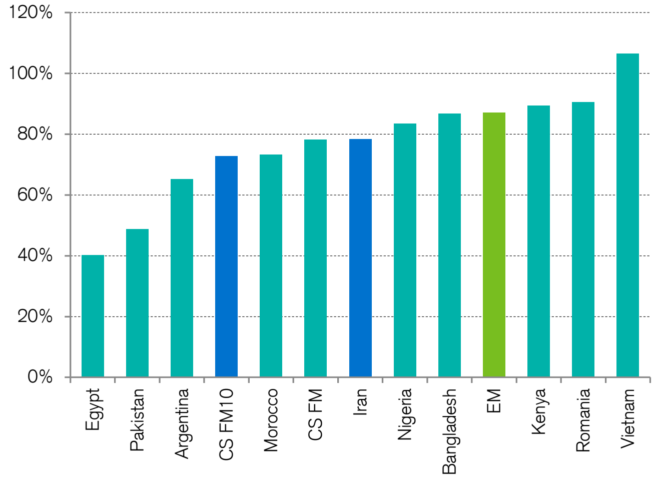
CS FM10 domestic private sector credit to GDP ratio (%, March 2016)



Source: IMF - International Financial Statistics, Oxford Economics, Credit Suisse research

Figure 29

CS FM10 loan to deposit ratio (%, March 2016)



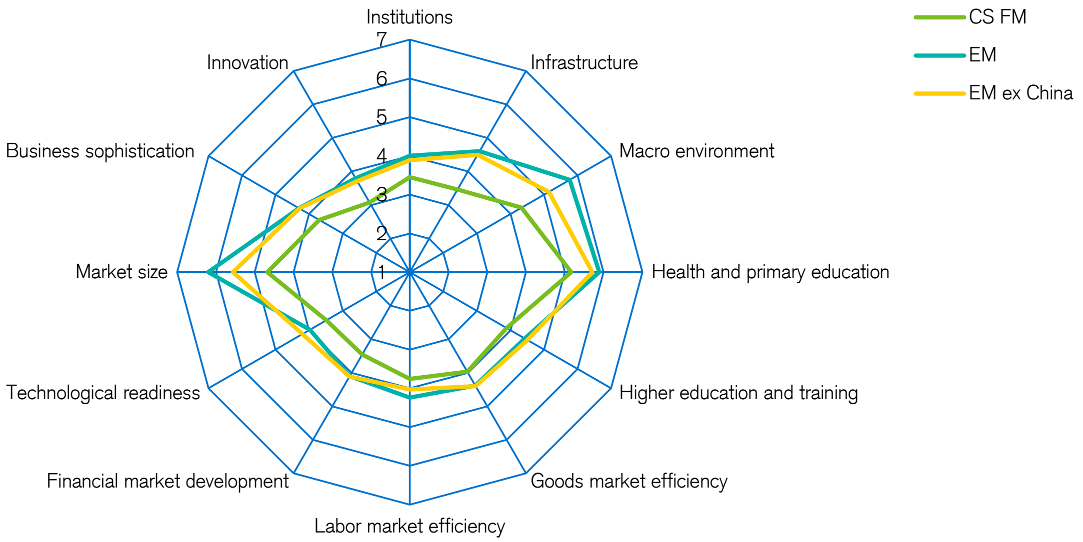
Source: IMF - International Financial Statistics, Oxford Economics, Credit Suisse research

Frontier market grading on competitiveness, human development and labor market flexibility has marked room for improvement toward emerging market norms

On all 12 pillars of the World Economic Forum annual Global Competitiveness Index, the 30 CS FM countries (on a GDP-weighted basis) have inferior scores than mainstream emerging markets (including or excluding China).

Figure 30

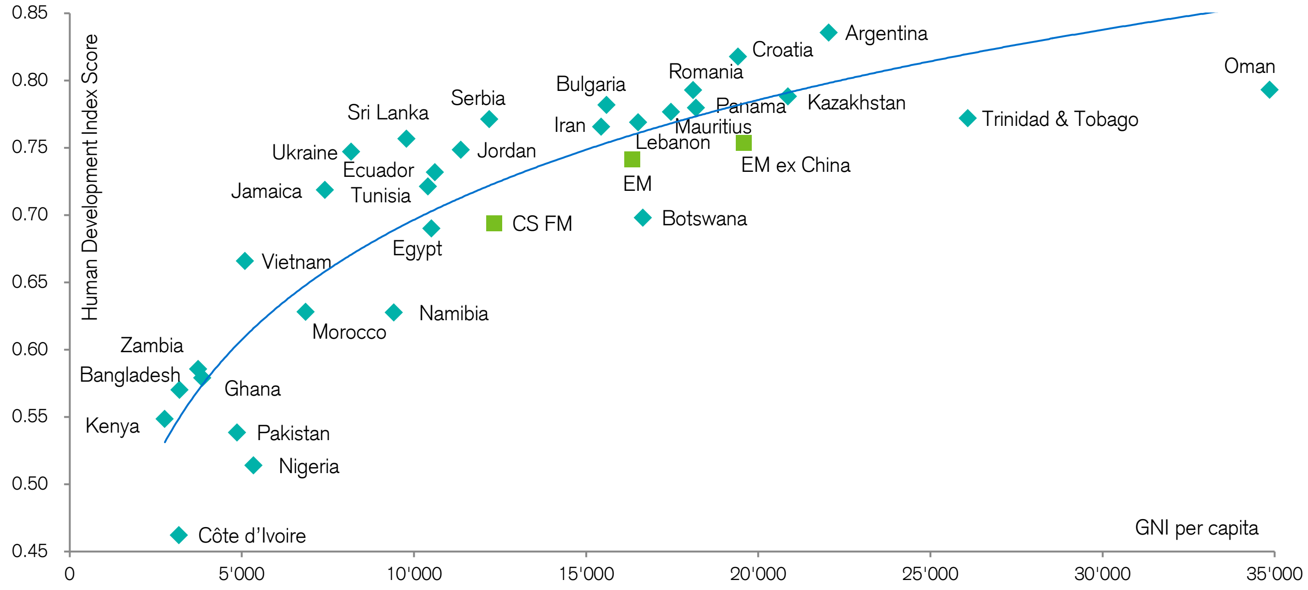
WEF Global Competitiveness Index 2015 (GDP-weighted)



Source: WEF, Credit Suisse research

Figure 31

Frontier markets' gross national income per capita versus Human Development Index (2014)

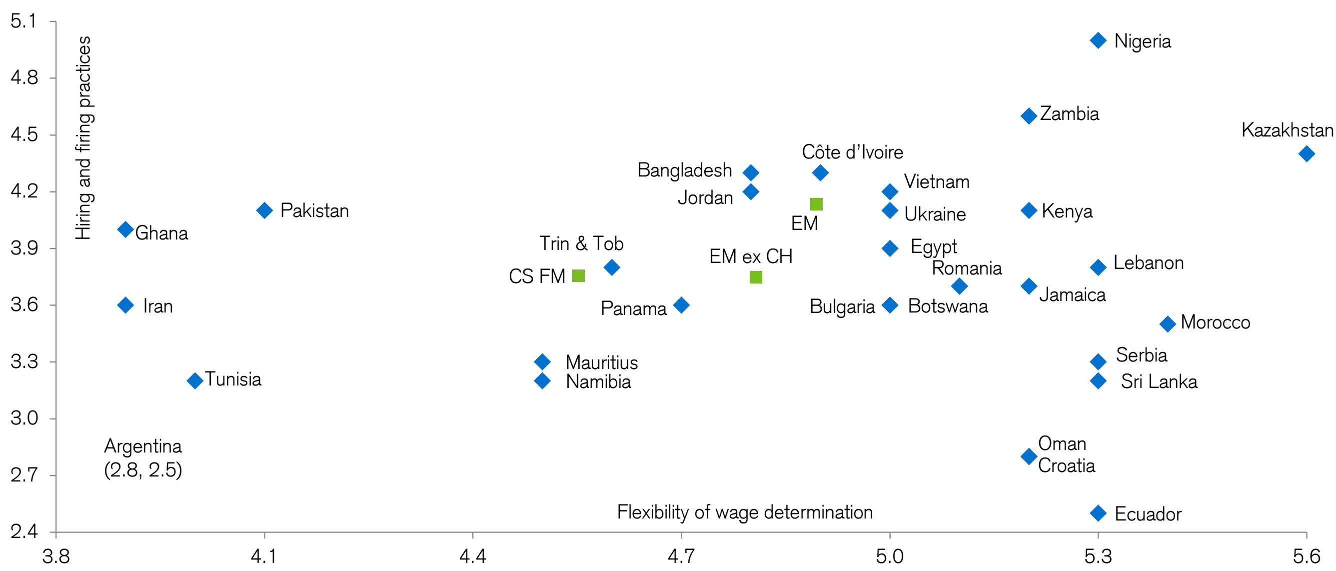


Source: UNDP, Credit Suisse research

The largest gaps for improvement are infrastructure, macroeconomic environment (government budget balance and debt, national savings, inflation and credit rating score) and market size (the score for frontier markets is 25% lower than for emerging markets on all three metrics). Where frontier markets fare well relative to emerging peers is on goods and labor market efficiency metrics (both within 12% of mainstream emerging market GDP weighted scores). In absolute terms, the poorest scores achieved by frontier markets across all 12 pillars are for innovation (3.1 out of a maximum of 7.0 and a minimum of 1.0) and institutions (3.5/7.0), while by the far the strongest is accomplished for health and primary education (5.2/7.0).

Figure 32

Flexibility of labor markets versus hiring and firing practices* (2015)



*Score (1- extremely weak; 7 - extremely strong)

Source: World Economic Forum, Credit Suisse research

The United Nations Development Programme Human Development Index (HDI) is a composite measurement of a nation's average achievement in three basic dimensions of human development: a long and healthy life (life expectancy at birth), knowledge (expected and actual years of schooling) and a decent standard of living (PPP-adjusted per capita gross national income (GNI)). As discussed earlier, the 30 CS FM group countries encapsulate a particularly broad spectrum in levels of per capita economic activity and this is reflected in a wide range of HDI scores across the frontier universe (from Côte d'Ivoire at 0.46 through to Argentina at 0.84) and the CS FM (GDP-weighted average) aggregate of 0.69 relative to the overall emerging market score of 0.75 (with or without China).

Plotted against each respective country's per capita GNI, the HDI score relative to the regression line of best fit reveals for that country the degree of variation in the average citizen's life expectancy and duration of education commensurate with national income. For instance, Oman, Trinidad and Tobago, Botswana, Namibia, Pakistan, Nigeria and Côte d'Ivoire have average life expectancies and education levels typically inferior to the average given their respective levels of national income. Argentina, Croatia, Serbia, Sri Lanka, Ukraine, Jamaica and Vietnam are achieving life expectancies and education levels greater than what is normally deliverable considering their per capita GNI.

Lastly, the CS FM group of countries are characterized by a high degree of dispersion in labor market flexibility as measured by the World Economic Forum's indices of flexibility of wage determination and hiring and firing practices ranging from the least flexible (Argentina, Tunisia, Iran, Ghana, Pakistan, Namibia and Mauritius) to the most flexible (Nigeria, Kazakhstan, Zambia, Kenya, Lebanon and Morocco). Nevertheless, in aggregate, the CS FM countries have further room for improvement in labor market flexibility (and hence productivity) relative to their emerging market peers.

PHOTO: ISTOCKPHOTO.COM/ NICOLAS MCCOMBER

Is frontier market governance improving?

Frontier markets have been characterized by a dual speed progression in the quality of administrative and corporate governance led by smaller nations, while those with larger more heterogeneous populations struggle to keep pace. Disappointingly, there is evidence of regression in financial market development.

We score the 30 CS FM nations across a spectrum of eight governance metrics, enabling comparisons both current and historical versus emerging market peers.

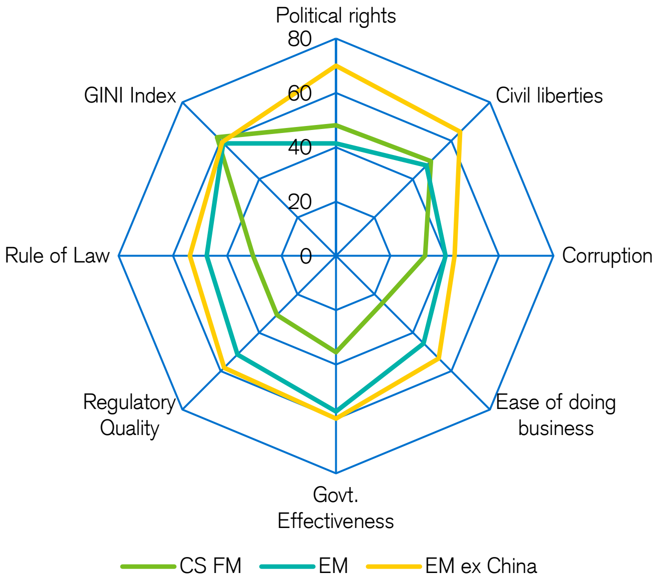
Supportive demographics, potential benefits of urbanization and convergence in productivity with the developed world notwithstanding, we believe that an economy's ability to sustainably generate equitable growth relies heavily on the quality of its institutions.

While there is no definitive list of factors that ensures the economic success of a nation (indeed something that has confounded developmental economists for decades), we have attempted to construct a framework with which to compare frontier markets today versus their emerging market peers and their progress (or lack thereof) over time, combining (1) political and (2) civil liberties as measured by Freedom House, (3) Transparency International's corruption perception index, (4) the World Bank's ease of doing business index, and (5) government effectiveness, (6) regulatory quality and (7) rule of law scores from the Worldwide Governance Indicators Project and (8) the GINI index as a measure of inequality.

Our governance framework clearly illustrates, in line with reason and recent evidence (Argentina's renationalization of oil producer YPF in 2012, Sri Lanka's 2011 nationalization law, Venezuela's nationalization of sectors of its economy including energy, telecoms and banking since 2007, among others), that the CS FM group of countries scores poorly compared to emerging markets on most metrics with the exception of the GINI index, political rights and civil liberties. However, on the latter two, the GDP-weighted emerging market (EM) average is skewed downward by China scoring particularly poorly. In comparison to emerging markets ex China, the contrast is even starker with CS FM lagging behind most in areas of ease of doing business followed by regulatory quality, government effectiveness and the rule of law.

Figure 1

Frontier versus emerging markets (GDP-weighted average) governance metrics (0=weak; 100=strong) (2015)



Source: Freedom House, Transparency International, World Bank, Credit Suisse research

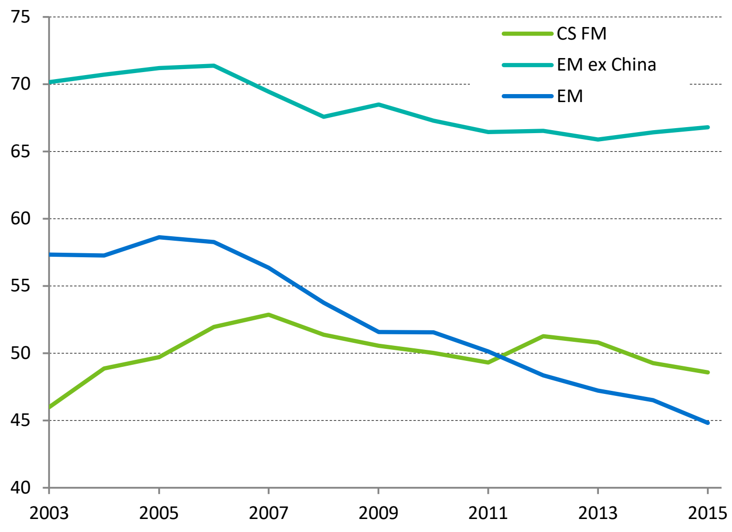
We identify a clear trend within the CS FM universe for smaller nations to achieve superior governance and quality of institutions relative to those with larger and heterogeneous populations

To compare overall governance standards within our CS FM universe, we calculate a combined z-score using our eight-factor governance framework. Ranked on this combined metric, we find that the larger FM10 group of countries fare poorly compared to the wider CS FM group of countries (populating seven out of the bottom nine positions in our table of 30 frontier markets).

A clear negative correlation between the population of the country and its quality of governance score emerges on our framework. This finding adds credence to the view that "small countries" have certain inherent advantages, especially in their early stages of development, achieving a higher quality of institutions and rule of law than in countries with large and heterogeneous populations. Indeed, the top half (rank 1 to 15) of our table accounts for only 12% of the total population. The only larger frontier market from our FM10 group of countries that manages to buck this trend is Romania, ranking third on our list. Among countries with populations of 20 million or more, only Ghana (ranked 6th) and Morocco (ranked 15th) make it into the upper half.

Figure 2

Frontier versus emerging markets' political rights and civil liberties* (nominal GDP-weighted)



*Score: 1- extremely weak; 100 - extremely strong

Source: Freedom House, Credit Suisse research

Also, there is considerable divergence within frontier markets on a regional basis, with Latin America and Europe and Middle East exhibiting superior overall standards of governance compared to Asia and Sub-Saharan Africa. The biggest areas of disparity between the regions are political and civil liberties where Latin America scores significantly stronger than the frontier (and the emerging) market average, with Asia lagging behind the most. The other is the yardstick "ease of doing business" survey, where Argentina's onerous operating environment restricts the Latin American aggregate to just above Asian standards (which in turn is dragged down by Bangladesh, the country ranked worst in the world for accessing electricity or enforcing contracts). Nigeria, Kenya and Côte d'Ivoire rank among the most challenging, making Sub-Saharan Africa the hardest frontier region in which to conduct business, while operating conditions in Eastern Europe are closer to their developed neighbors than any other frontier region.

Also critical is whether standards of governance have been improving among frontier (and emerging) markets over time. The trajectory in the combined political and civil liberty scores for CS FM on a GDP-weighted basis is largely flat in contrast to emerging markets where it has disappointingly deteriorated over the last 12 years. However, the considerable erosion in the score for emerging markets is more a function of China (with its differentiated "Beijing Consensus" economic model) gaining a larger GDP representation of the aggregate – excluding China, emerging markets fare better albeit slipping modestly.

While most of the CS FM group of countries have undergone improved political rights and civil liberties (with Tunisia, Côte d'Ivoire and Lebanon being the standouts), progress in governance standards over time cannot be taken for granted as illustrated by Iran, Sri Lanka and Kazakhstan, which have regressed noticeably on Freedom House's scores.

In the somewhat idiosyncratic case of Iran, the long-negotiated dismantling of the international sanctions regime paves the way for a marked improvement from the bottom rank based on our selected governance metrics. In January 2016, the International Atomic Energy Agency announced that the nation had adequately disassembled its nuclear weapons program to qualify for the relaxation of sanctions. Initially, this covers the release of Iranian frozen foreign assets and the derestriction of oil exports, thus permitting foreign investment in Iran's oil and gas, automobile, hospitality and other sectors, and the nation's re-inclusion within global banking systems such as SWIFT. Arguably, these developments will serve to bolster the country's ease of doing business, government effectiveness and regulatory quality.

Table 1

Frontier market governance metrics (ranked by a z-score of all variables, best on top, 2015)

Indicator	Political rights	Civil liberties	Corruption	Ease of doing business	Government effectiveness	Regulatory quality	Rule of law	GINI Index
Units	**Score (0- extremely weak; 100 - extremely strong)**	**Score (0- extremely weak; 100 - extremely strong)**	**Score (0 - highly corrupt; 100 - very clean)**	**Percentile Rank (0 - lowest rank; 100 - highest rank)**	**Percentile Rank (0 - lowest rank; 100 - highest rank)**	**Percentile Rank (0 - lowest rank; 100 - highest rank)**	**Percentile Rank (0 - lowest rank; 100 - highest rank)**	**Score (0- perfect inequality; 100 - perfect equality)**
Mauritius	95.0	86.7	54.0	88.2	75.6	79.4	78.2	64.2
Croatia	90.0	83.3	48.0	52.6	70.8	66.0	60.2	66.3
Romania	85.0	81.7	43.0	72.9	52.6	69.4	56.4	72.7
Bulgaria	82.5	76.7	43.0	81.4	59.3	67.9	51.2	64.0
Botswana	70.0	75.0	63.0	45.8	62.2	73.2	68.2	39.5
Ghana	92.5	78.3	48.0	49.2	50.7	55.5	56.9	57.2
Panama	87.5	78.3	37.0	66.2	63.6	62.7	47.9	48.3
Trinidad and Tobago	82.5	80.0	38.0	40.7	64.1	59.3	48.3	59.7
Tunisia	90.0	71.7	40.0	57.7	55.0	40.2	48.8	63.9
Serbia	77.5	81.7	41.0	33.9	50.2	51.2	44.5	70.4
Jamaica	85.0	66.7	38.0	59.4	54.5	58.4	43.1	54.5
Namibia	75.0	76.7	49.0	37.3	60.3	54.1	59.7	36.1
Oman	22.5	28.3	45.0	50.9	60.8	67.5	66.8	
Jordan	27.5	41.7	49.0	17.0	49.8	56.0	62.6	64.6
Morocco	37.5	45.0	39.0	47.5	51.7	46.9	47.4	59.1
Sri Lanka	40.0	41.7	38.0	28.9	45.9	47.8	46.4	61.4
Argentina	77.5	81.7	34.0	13.6	44.5	17.7	28.4	57.7
Ukraine	62.5	61.7	26.0	30.6	30.1	28.7	23.2	75.5
Zambia	65.0	56.7	38.0	23.8	38.3	34.4	45.5	42.5
Lebanon	35.0	50.0	27.0	27.2	42.1	49.8	25.1	
Kazakhstan	15.0	30.0	29.0	44.1	35.4	36.8	30.8	73.7
Vietnam	7.5	28.3	31.0	42.4	44.0	28.2	39.3	61.3
Ecuador	60.0	58.3	33.0	18.7	37.3	19.6	18.0	52.7
Egypt	20.0	30.0	37.0	22.1	19.6	26.3	34.1	69.2
Kenya	55.0	48.3	25.0	8.5	36.8	38.8	28.0	52.3
Pakistan	50.0	36.7	29.0	11.9	23.4	24.9	20.9	70.0
Bangladesh	52.5	48.3	25.0	0.0	22.5	20.6	22.7	67.9
Côte d'Ivoire	42.5	48.3	32.0	5.1	15.8	24.4	19.0	56.8
Nigeria	45.0	41.7	27.0	3.4	16.3	25.4	12.3	51.2
Iran	17.5	16.7	27.0	10.2	28.2	5.7	17.1	62.7
Asia	**37.9**	**38.1**	**29.4**	**18.9**	**31.3**	**27.1**	**29.3**	**66.1**
EME	**38.2**	**42.0**	**34.8**	**35.4**	**38.0**	**35.8**	**36.1**	**67.7**
Latam	**76.1**	**78.0**	**34.3**	**19.5**	**45.7**	**23.1**	**29.3**	**56.5**
SSA	**51.2**	**47.3**	**30.3**	**10.3**	**23.7**	**31.1**	**21.0**	**51.3**
CS FM10	**46.1**	**47.1**	**31.3**	**18.2**	**31.5**	**25.1**	**26.7**	**61.5**
CS FM	**48.1**	**49.4**	**32.8**	**24.3**	**35.5**	**30.7**	**30.6**	**61.9**
EMs	**41.4**	**47.1**	**40.3**	**45.6**	**57.3**	**51.3**	**47.6**	**58.6**
EMs ex China	**70.1**	**64.6**	**43.6**	**53.4**	**59.9**	**58.2**	**53.8**	**59.2**

Source: Freedom House, Transparency International, World Bank, Credit Suisse research

Disappointingly, from a purely financial market development perspective, there is stark evidence that, for the most part, CS FM countries have regressed over the past decade

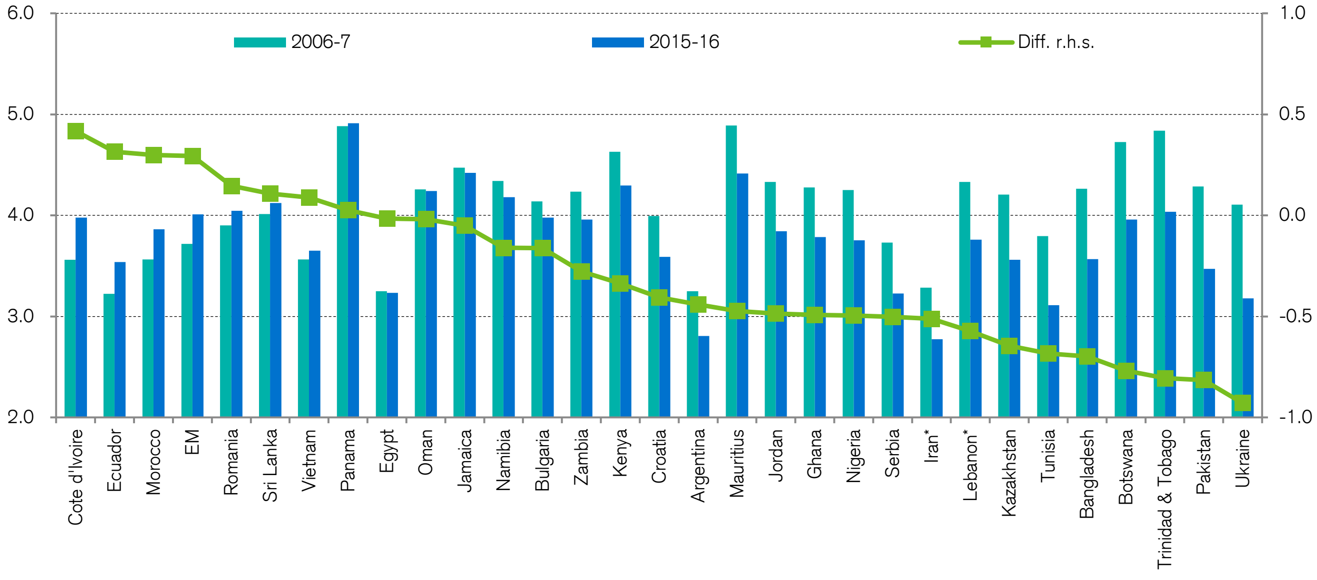
More specifically, examining the evolution of financial market development among the CS FM universe, reveals a more worrisome picture. In its 2016–2017 Global Competitiveness Report, the World Economic Forum quantifies the national level of financial market development derived from the availability and affordability of financial services, ease of access to capital and soundness of banks. Over the last decade, only seven nations among the 30 CS FM group of countries (and only Morocco, Romania and Vietnam among the FM10) have recorded an improvement.

Indeed, this mixed track record is reflected in MSCI's market reclassifications for its benchmark indices (which includes size, liquidity requirements and market accessibility among its criteria). Five of the CS FM group have been demoted from a previous MSCI EM classification – Sri Lanka (illiquidity, 2001), Pakistan (deterioration of investability, 2008), Jordan (illiquidity, 2008), Argentina (capital controls, 2009), and Morocco (illiquidity, 2013). In addition, Trinidad & Tobago (2011) and Bulgaria (2016) suffered a demotion from frontier market to standalone status due to deterioration of size and liquidity.

On the other hand, operational improvements and increased accessibility for foreign ownership has resulted in the promotion of Qatar and UAE from frontier to emerging market status in 2014. Pakistan's chequered history of MSCI reclassifications typifies the potential uncertainty in the evolution of nascent equity markets: previously an MSCI EM country constituent from 1993 until its demotion in December 2008, MSCI announced on 14 June 2016 that the market will again be included in mainstream emerging markets from June 2017 onward.

Figure 3

Frontier market financial market development survey^ progression from 2006 to 2016 (sorted by descending 2015–16 score)



Notes: ^scores are from 1 (weak) to 7 (strong) / *2010–11 used as 2006–07 unavailable
Source: World Economic Forum, Credit Suisse research

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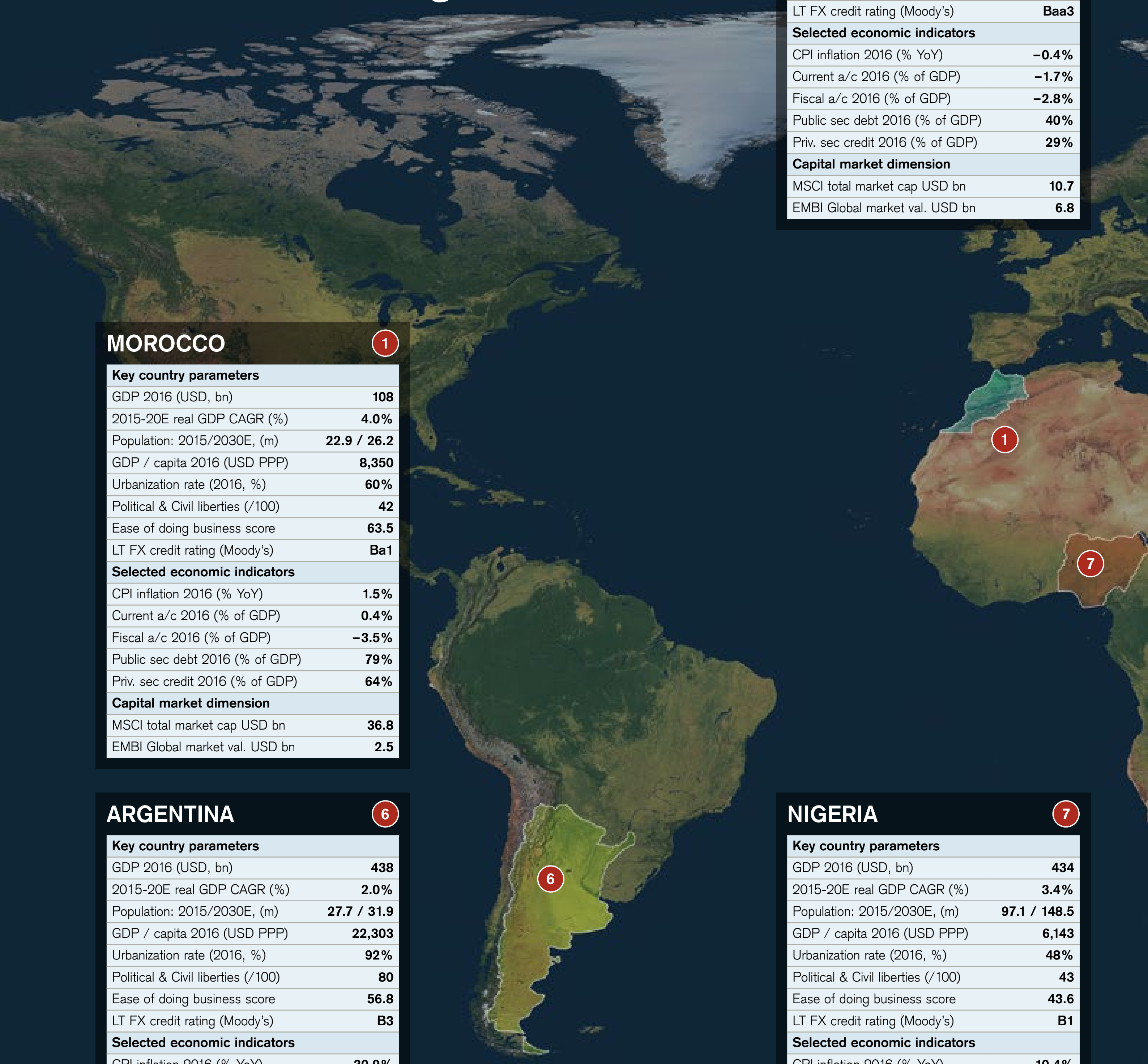
Credit Suisse Frontier Markets

10 countries at a glance

ROMANIA 2

Key country parameters	
GDP 2016 (USD, bn)	182
2015-20E real GDP CAGR (%)	3.5%
Population: 2015/2030E, (m)	13.1 / 11.4
GDP / capita 2016 (USD PPP)	21,916
Urbanization rate (2016, %)	55%
Political & Civil liberties (/100)	83
Ease of doing business score	73.6
LT FX credit rating (Moody's)	Baa3
Selected economic indicators	
CPI inflation 2016 (% YoY)	−0.4%
Current a/c 2016 (% of GDP)	−1.7%
Fiscal a/c 2016 (% of GDP)	−2.8%
Public sec debt 2016 (% of GDP)	40%
Priv. sec credit 2016 (% of GDP)	29%
Capital market dimension	
MSCI total market cap USD bn	10.7
EMBI Global market val. USD bn	6.8



MOROCCO 1

Key country parameters	
GDP 2016 (USD, bn)	108
2015-20E real GDP CAGR (%)	4.0%
Population: 2015/2030E, (m)	22.9 / 26.2
GDP / capita 2016 (USD PPP)	8,350
Urbanization rate (2016, %)	60%
Political & Civil liberties (/100)	42
Ease of doing business score	63.5
LT FX credit rating (Moody's)	Ba1
Selected economic indicators	
CPI inflation 2016 (% YoY)	1.5%
Current a/c 2016 (% of GDP)	0.4%
Fiscal a/c 2016 (% of GDP)	−3.5%
Public sec debt 2016 (% of GDP)	79%
Priv. sec credit 2016 (% of GDP)	64%
Capital market dimension	
MSCI total market cap USD bn	36.8
EMBI Global market val. USD bn	2.5

ARGENTINA 6

Key country parameters	
GDP 2016 (USD, bn)	438
2015-20E real GDP CAGR (%)	2.0%
Population: 2015/2030E, (m)	27.7 / 31.9
GDP / capita 2016 (USD PPP)	22,303
Urbanization rate (2016, %)	92%
Political & Civil liberties (/100)	80
Ease of doing business score	56.8
LT FX credit rating (Moody's)	B3
Selected economic indicators	
CPI inflation 2016 (% YoY)	30.9%
Current a/c 2016 (% of GDP)	−1.7%
Fiscal a/c 2016 (% of GDP)	−6.4%
Public sec debt 2016 (% of GDP)	41%
Priv. sec credit 2016 (% of GDP)	14%
Capital market dimension	
MSCI total market cap USD bn	25.9
EMBI Global market val. USD bn	31.1

NIGERIA 7

Key country parameters	
GDP 2016 (USD, bn)	434
2015-20E real GDP CAGR (%)	3.4%
Population: 2015/2030E, (m)	97.1 / 148.5
GDP / capita 2016 (USD PPP)	6,143
Urbanization rate (2016, %)	48%
Political & Civil liberties (/100)	43
Ease of doing business score	43.6
LT FX credit rating (Moody's)	B1
Selected economic indicators	
CPI inflation 2016 (% YoY)	10.4%
Current a/c 2016 (% of GDP)	−2.8%
Fiscal a/c 2016 (% of GDP)	−4.7%
Public sec debt 2016 (% of GDP)	15%
Priv. sec credit 2016 (% of GDP)	15%
Capital market dimension	
MSCI total market cap USD bn	24.9
EMBI Global market val. USD bn	1.5

Source: Thomson Reuters, WFE, BIS, Credit Suisse estimates

IRAN 3

Key country parameters	
GDP 2016 (USD, bn)	**386**
2015-20E real GDP CAGR (%)	**3.9%**
Population: 2015/2030E, (m)	**56.4 / 64.1**
GDP / capita 2016 (USD PPP)	**17,888**
Urbanization rate (2016, %)	**73%**
Political & Civil liberties (/100)	**17**
Ease of doing business score	**56.7**
LT FX credit rating (Moody's)	**NR**
Selected economic indicators	
CPI inflation 2016 (% YoY)	**8.9%**
Current a/c 2016 (% of GDP)	**–0.8%**
Fiscal a/c 2016 (% of GDP)	**–2.5%**
Public sec debt 2016 (% of GDP)	**19%**
Priv. sec credit 2016 (% of GDP)	**57%**
Capital market dimension	
MSCI total market cap USD bn	**–**
EMBI Global market val. USD bn	**–**

PAKISTAN 4

Key country parameters	
GDP 2016 (USD, bn)	**284**
2015-20E real GDP CAGR (%)	**5.0%**
Population: 2015/2030E, (m)	**114.3 / 156.3**
GDP / capita 2016 (USD PPP)	**5,174**
Urbanization rate (2016, %)	**39%**
Political & Civil liberties (/100)	**42**
Ease of doing business score	**51.6**
LT FX credit rating (Moody's)	**B3**
Selected economic indicators	
CPI inflation 2016 (% YoY)	**3.3%**
Current a/c 2016 (% of GDP)	**–1.1%**
Fiscal a/c 2016 (% of GDP)	**–4.1%**
Public sec debt 2016 (% of GDP)	**64%**
Priv. sec credit 2016 (% of GDP)	**15%**
Capital market dimension	
MSCI total market cap USD bn	**30.2**
EMBI Global market val. USD bn	**2.8**

BANGLADESH 5

Key country parameters	
GDP 2016 (USD, bn)	**226**
2015-20E real GDP CAGR (%)	**6.8%**
Population: 2015/2030E, (m)	**105.6 / 129.8**
GDP / capita 2016 (USD PPP)	**3,841**
Urbanization rate (2016, %)	**34%**
Political & Civil liberties (/100)	**50**
Ease of doing business score	**42.7**
LT FX credit rating (Moody's)	**Ba3**
Selected economic indicators	
CPI inflation 2016 (% YoY)	**6.7%**
Current a/c 2016 (% of GDP)	**–1.3%**
Fiscal a/c 2016 (% of GDP)	**–4.4%**
Public sec debt 2016 (% of GDP)	**21%**
Priv. sec credit 2016 (% of GDP)	**38%**
Capital market dimension	
MSCI total market cap USD bn	**9.5**
EMBI Global market val. USD bn	**–**

EGYPT 8

Key country parameters	
GDP 2016 (USD, bn)	**312**
2015-20E real GDP CAGR (%)	**4.4%**
Population: 2015/2030E, (m)	**56.4 / 74.5**
GDP / capita 2016 (USD PPP)	**12,113**
Urbanization rate (2016, %)	**43%**
Political & Civil liberties (/100)	**26**
Ease of doing business score	**54.2**
LT FX credit rating (Moody's)	**B3**
Selected economic indicators	
CPI inflation 2016 (% YoY)	**9.6%**
Current a/c 2016 (% of GDP)	**–5.3%**
Fiscal a/c 2016 (% of GDP)	**–11.5%**
Public sec debt 2016 (% of GDP)	**101%**
Priv. sec credit 2016 (% of GDP)	**26%**
Capital market dimension	
MSCI total market cap USD bn	**9.0**
EMBI Global market val. USD bn	**2.9**

KENYA 9

Key country parameters	
GDP 2016 (USD, bn)	**65**
2015-20E real GDP CAGR (%)	**6.3%**
Population: 2015/2030E, (m)	**25.5 / 39.2**
GDP / capita 2016 (USD PPP)	**3,338**
Urbanization rate (2016, %)	**26%**
Political & Civil liberties (/100)	**51**
Ease of doing business score	**53.6**
LT FX credit rating (Moody's)	**B1**
Selected economic indicators	
CPI inflation 2016 (% YoY)	**6.3%**
Current a/c 2016 (% of GDP)	**–8.3%**
Fiscal a/c 2016 (% of GDP)	**–7.3%**
Public sec debt 2016 (% of GDP)	**58%**
Priv. sec credit 2016 (% of GDP)	**36%**
Capital market dimension	
MSCI total market cap USD bn	**12.3**
EMBI Global market val. USD bn	**2.7**

VIETNAM 10

Key country parameters	
GDP 2016 (USD, bn)	**201**
2015-20E real GDP CAGR (%)	**6.2%**
Population: 2015/2030E, (m)	**65.6 / 71.0**
GDP / capita 2016 (USD PPP)	**6,400**
Urbanization rate (2016, %)	**34%**
Political & Civil liberties (/100)	**20**
Ease of doing business score	**60.4**
LT FX credit rating (Moody's)	**B1**
Selected economic indicators	
CPI inflation 2016 (% YoY)	**1.3%**
Current a/c 2016 (% of GDP)	**0.6%**
Fiscal a/c 2016 (% of GDP)	**–6.4%**
Public sec debt 2016 (% of GDP)	**61%**
Priv. sec credit 2016 (% of GDP)	**112%**
Capital market dimension	
MSCI total market cap USD bn	**24.3**
EMBI Global market val. USD bn	**1.9**

What are the prospects for the frontier macroeconomic environment?

Following five years of waning global commodity demand growth, frontier markets (in aggregate) are navigating a problematic macro environment of twin deficits, elevated inflation, a structural trend in nominal currency depreciation and significant external debt obligations. The more economically challenged frontier LatAm and EMEA nations act as a burden on growth for the overall universe.

Sound macroeconomic policy for developing economies is instrumental to ensure efficient capital allocation decisions, investment and sustainable growth. While it is generally accepted that countries in the early stages of their macroeconomic development will experience greater financial instability than their more developed counterparts, it is imperative that they learn from historical policy errors made by emerging and developed countries. This includes the building of strong institutions such as independent (ideally inflation-targeting) central banks, administrations ensuring fiscal discipline and transparency, and the targeting of sustainable external (balance of payments) and debt dynamics. Based on the 2015 World Economic Forum's Global Competitiveness Report, of the 12 pillars of competitiveness, it is macroeconomic stability where the CS FM group of countries (on a GDP-weighted basis) most comprehensively lag behind compared to more mainstream emerging markets.

Surveys conducted in frontier market economies reveal that poor government economic management ranks highly in respondents' list of most pressing concerns, although recently there is evidence of generally improving confidence

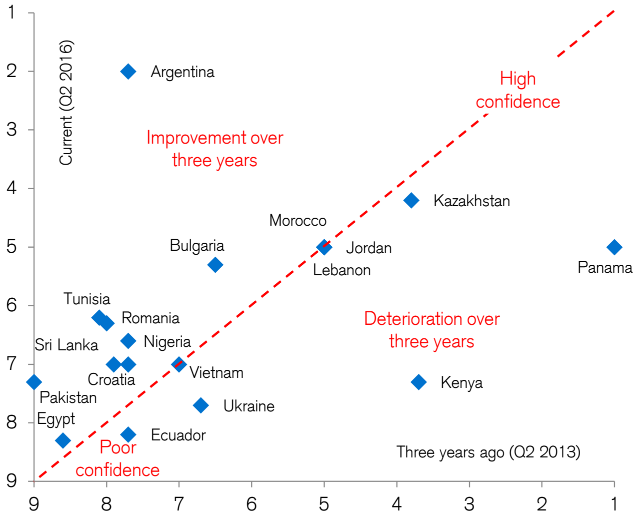
The IFO World Economic Survey assesses global economic trends by polling transnational as well as national organizations worldwide on current economic developments in their respective countries. The quarterly survey on domestic confidence in government economic policy extends to 18 of the 30 CS FM countries in this study and although the results are not encouraging on first inspection – respondents have typically cited lack of confidence in government economic policy as a very pressing issue on a scale of one (not so important) to nine (most important) – there are some grounds for optimism.

Ten of the 18 CS FM countries included in the survey results are clustered in the poor confidence end of the spectrum (score of six or higher out of nine) whether considering the current (Q2 2016) results or those of three years' prior, thus indicating a typically poor perception of frontier country governments' economic management. Nevertheless, there is evidence that opinions are improving. Over the course of the last three years, nine of the 18 countries surveyed have recorded lack of confidence in government economic policy as becoming a less important issue, while surveys in four countries registered no net change and those in five countries have recorded poor economic policy as becoming more pressing.

In aggregate (utilizing a simple average), the 18 frontier countries have recorded an improvement in their survey results for government economic competence over the past three years to 6.1 currently from 6.5 three years ago. The greatest positive changes in sentiment can be seen in Argentina, Romania, Pakistan, Tunisia and Bulgaria, while survey results have recorded the greatest deterioration in the view of economic management over the past three years in Panama, Kenya, Ukraine, Ecuador and Kazakhstan.

Figure 1

Frontier market survey of lack of confidence in government economic policy

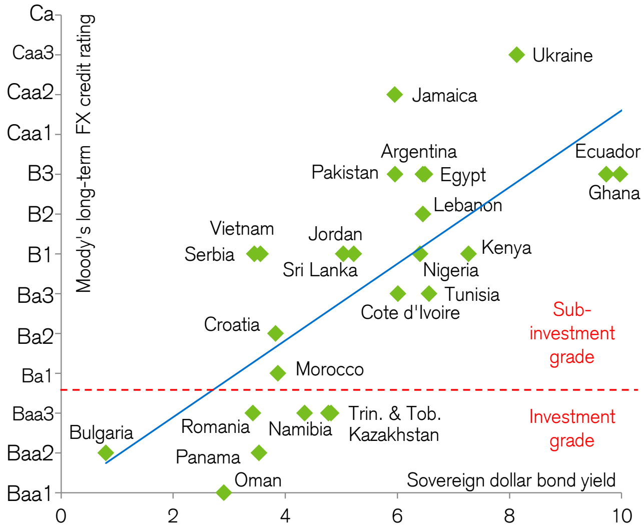


*Note: 1=High confidence, 9=Poor confidence

Source: World Economic Survey, IFO, Credit Suisse research

Figure 2

Frontier market sovereign dollar bond yields versus long-term foreign currency sovereign ratings



Source: JP Morgan, Moody's, Credit Suisse research

Just 8% of frontier market sovereigns (by total GDP) are rated investment grade in comparison to 87% of mainstream emerging markets

Of the 26 out of 30 CS FM countries for which there are liquid sovereign dollar bonds with corresponding long-term foreign exchange (FX) credit ratings (we use Moody's as the agency offers the broadest coverage of the frontier universe), we find that seven are investment grade including just a single CS FM10 country: Romania. At the other end of the scale, just two sovereign borrowers within the CS FM group (Jamaica and Ukraine) are rated by Moody's as having obligations that are highly speculative in nature, of poor standing and subject to very high credit risk.

Only four sovereigns among the 26 borrow at yields above 8%: Ecuador, Ghana, Ukraine and Zambia (representing just 8% of CS FM GDP), while eight countries borrow internationally in dollars at yields below 4%: Bulgaria, Croatia, Morocco, Oman, Panama, Romania, Serbia and Vietnam – which collectively account for 24% of the group of 26 countries' total GDP).

In comparison, at the time of writing, 18 out of the 23 mainstream MSCI Emerging Markets index country constituents (or 87% of MSCI EM nominal GDP) have long-term FX credit ratings by Moody's above investment grade (only Brazil and Russia are the principal sub-investment grade emerging sovereigns).

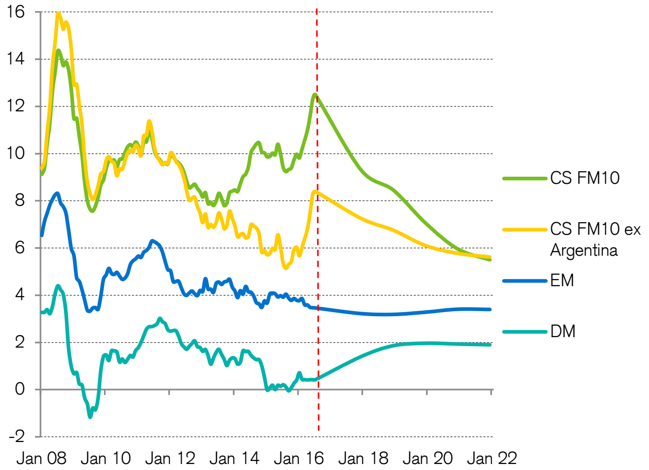
Consumer price inflation and monetary policy dynamics have been buffeted over the past year from the fallout of a number of failing managed exchange rate regimes

Frontier markets (CS FM10 excluding Argentina) have undergone a broadly disinflationary episode over the past decade similar in nature to that recorded in emerging and developed economies, while maintaining structurally higher Consumer Price Index (CPI) inflation due to their higher rates of growth, labor market rigidity, economic inefficiencies and typically a greater concentration of their respective CPI baskets in food and energy (which have strong externalities driving their prices). The GDP-weighted average year-on-year CPI inflation for the CS FM10 excluding Argentina is currently 8.4% (or 12.5% including Argentina), which is two and a half times that of emerging markets at 3.5% (developed markets are 0.4%), having moderated from a peak of 14.2% in Q3 2008.

The reversal in the disinflationary trend for CS FM10 countries (with or without Argentina) over the past 12 months may be attributed principally to inflationary pass-through from a mixture of steady currency depreciations and one-off successive currency devaluations including the Argentine peso (by 36%) in December 2015, the Egyptian pound (by 13%) in March 2016 and again (by 95%) in November 2016, and more recently the Nigerian naira (by 61%) between June and August 2016. Indeed, among the CS FM10 group of countries, Romania stands alone with deflation at -0.8% year-on-year CPI in July 2016.

Figure 3

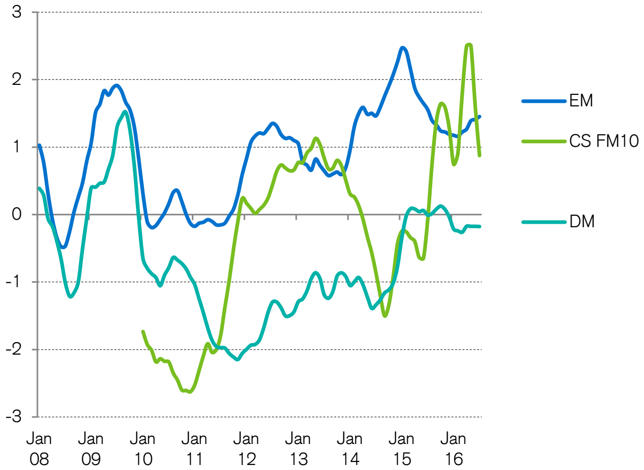
CPI inflation (nominal GDP-weighted) for frontier, emerging and developed markets (YoY % chg.)



Source: the BLOOMBERG PROFESSIONAL™ service, Credit Suisse research

Figure 4

Real interest rates (nominal GDP-weighted) for frontier, emerging and developed markets (3mma, %)



Source: the BLOOMBERG PROFESSIONAL™ service, Credit Suisse research

However, with the exception of Argentina – and recently Egypt – where central banks have been forced to hike benchmark interest rates by many hundreds of basis points (bp) to stave off compounding recent FX volatility, monetary policy for the remaining CS FM10 group of countries has been remarkably stable over the past decade. Thus, with a pattern of structural disinflation in conjunction with stable or tightening monetary policy, real interest rates for the aggregate CS FM10 (on a GDP-weighted basis) have risen from a low of –2.6% in Q4 2010 to a recent peak of +2.5% in Q2 2016, before moderating to the current (yet still elevated versus history) 0.9%. This compares to GDP-weighted real rates for mainstream emerging markets at 1.5% (their decade average is 0.9%) and for developed economies at –0.2% (versus a decade average of –0.7%).

This recent inflationary and rate tightening episode by a number of the CS FM10 countries reminds us of the consequences of central bank policy for running unsustainable FX regimes, which ultimately fail leading to severe currency volatility. There remain a number of CS FM group central banks that still employ a currency board or crawling peg system, including those of Bulgaria (as a prelude to joining the euro), Côte d'Ivoire, Egypt, Iran, Jordan, Lebanon, Morocco, Namibia, Oman and Vietnam, or indeed full dollarization as is the case for Ecuador and Panama.

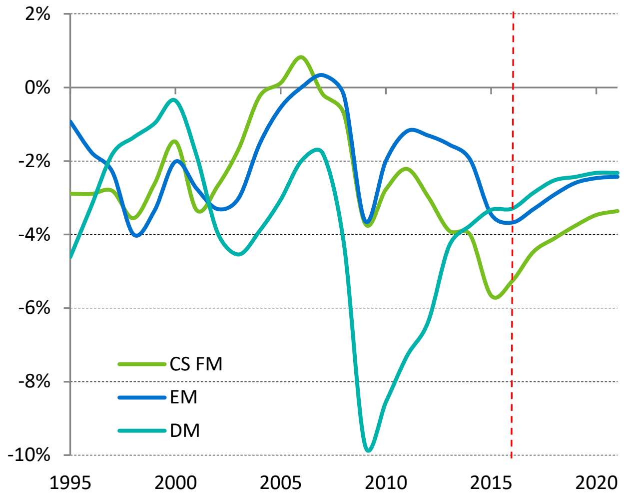
A relatively sound track record for fiscal discipline in the frontier markets has been tarnished following the global financial crisis owing to the region's high budgetary dependence on energy and mining production

For 53% of the time over the 15 years up to and including the 2008–09 global financial crisis, frontier markets maintained a superior fiscal balance on a GDP-weighted aggregate basis compared to mainstream emerging markets and for 67% of the time versus developed markets. The 15-year average fiscal deficit for the CS FM group of 30 countries over the 15 years up until 2009 was a manageable 1.8% of GDP, versus 1.9% for emerging and 3.2% for developed economies. Indeed, for the years 2005 and 2006, CS FM ran modest fiscal surpluses of 0.1% and 0.8% of GDP, respectively.

In recent years, however, the sustainability of frontier markets' fiscal accounts has come under threat owing to the dependency, pervasive across the larger frontier economies, of budgetary revenues on the total value of energy and metals production. While Nigeria, Iran and Kazakhstan (among the larger CS FM group economies) and indeed the CS FM10 group in aggregate generate 10% or more of their economic activity via commodity extraction, government revenues have historically had an even greater degree of dependency. For example, in the case of Nigeria, oil-related government revenues accounted for as much as 80% of the total in 2011 before slumping to 48% only five years later.

Figure 5

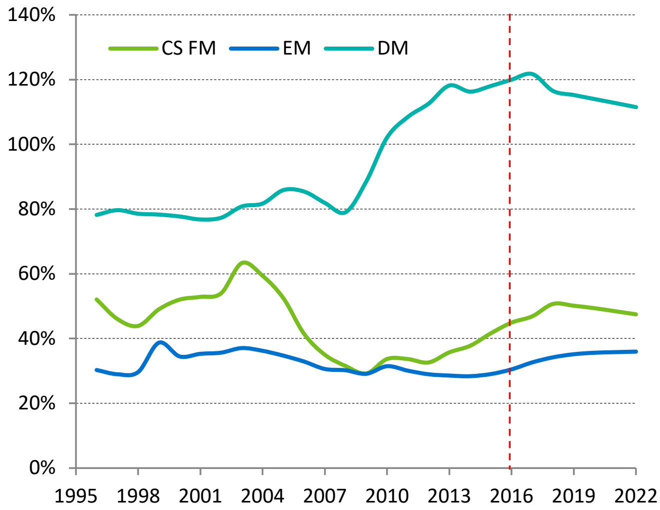
Frontier versus emerging and developed market fiscal deficit (% of GDP)



Source: IMF World Economic Outlook, Credit Suisse research

Figure 6

Frontier versus emerging and developed market government debt to GDP (%)



Source: Oxford economics, Credit Suisse research

Hence, by 2014, the GDP-weighted CS FM budget deficit had grown to 4.0% of GDP (inferior to the average for both emerging and developed economies), a level unmatched in two decades of history, and then subsequently deteriorated further to 5.7% of GDP in 2015. Among the larger CS FM10 economies responsible for depressing the aggregate data are Egypt (2015 fiscal deficit of 11.7% of GDP), Argentina (7.4%), Vietnam (6.5%) and Pakistan (5.3%). Analyzing the overall budget deficit for the CS FM group of countries reveals that compounding the enlarging primary fiscal deficit over the past five years has been a burgeoning interest expense, which, based on IMF forecasts, will structurally surpass the primary deficit from 2017 (until at least 2021) as the largest component of government expenditure, averaging 2.7% of GDP over the next five years.

Looking forward, the IMF is estimating a swift straight line repair in the GDP-weighted average primary fiscal deficit from a trough of 3.3% of GDP in 2015 to a more manageable 0.6% of GDP by 2021. Although, given the more significant burden of interest expense, this would reduce the overall fiscal deficit from 5.7% of GDP in 2015 to 3.4% of GDP by 2021, which would amount to a marked improvement, but nonetheless a degree of fiscal repair insufficient to reduce the deficit inside emerging and developed economies.

Frontier market public sector indebtedness has deviated above that of emerging economies post the global financial crisis, but for the most part remains manageable

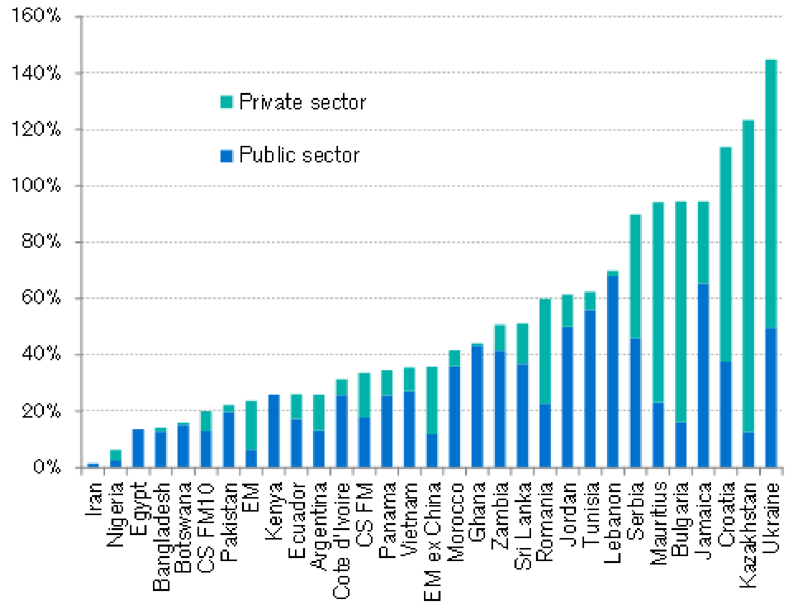
Seven successive years and a further six projected years (based on IMF forecasts) of running GDP-weighted fiscal deficits for the CS FM group of countries in the range of 2.2% to 5.7% of GDP have resulted in the stock of frontier market public sector debt increasing from 29% of GDP in 2008 to an estimated 51% by 2017, following which the IMF estimate government indebtedness as a share of GDP will gradually moderate to 47% by 2021.

Although frontier market debt dynamics have undergone markedly more expansion over the last seven years than those of mainstream emerging markets since being at an equivalent ratio to GDP in 2008, they remain significantly below the 64% of GDP level in 2002 in the aftermath of the Argentine crisis (the peak recorded in the time series history since 1995). By comparison, the public sector debt to GDP ratio for mainstream emerging markets is currently 33%, which the IMF forecasts to modestly increase to 36% by 2021, while the far more elevated ratio for developed economies of 122% will decline to 112% by 2021 on IMF projections.

Among the most publically indebted frontier markets are Lebanon (with a debt to GDP ratio of 166%), Egypt (101%), Jordan (90%), Croatia (89%) and Morocco (79%). Countries with the least government debt in relation to the size of the economy are Nigeria (15%), Iran (19%), Bangladesh (21%), Kazakhstan (23%) and Bulgaria (29%).

Figure 7

Frontier versus emerging market external debt by public and private sector (% GDP, 2016)



Source: World Bank International Debt Statistics, Oxford Economics, Credit Suisse research

For the most part, public sector foreign currency debt obligations for the larger frontier economies appear sustainable. For the likes of Lebanon, Jamaica, Tunisia, Jordan and Ukraine, the dynamics appear uncomfortable

Encouragingly, with a few notable exceptions (in typically the smaller economies) frontier market governments appear to have eschewed the temptation of emerging market "original sin" (borrowing in foreign currency in the mistaken belief that the lower interest expense will offset local currency depreciation), which has historically been the root cause of a catalogue of emerging market crises down the ages.

The public sector external debt to GDP ratio for the CS FM10 group of countries is just 12.9%, comparable to the emerging market (excluding China) GDP-weighted average of 11.7% (including China markedly reduces the EM ratio to just 6.4%). However, for the larger CS FM group of 30 countries, the ratio is a significantly greater 17.7%, indicative of a number of the smaller economies having far greater foreign-currency public-sector obligations. Indeed, government FX debt exposure for the likes of Lebanon (68% of GDP), Jamaica (65%), Tunisia (56%), Jordan (50%) and Ukraine (50%) are at levels which traditionally raise concerns over sustainability.

In contrast to emerging markets, most foreign currency obligations in frontier market economies are in the public rather than the private sector (17.6% versus 15.8% of GDP, respectively), which is a pattern even more evident in the CS FM10 group (12.9% versus 7.0%, respectively). For emerging markets, the brunt of external debt is borne by the private sector (17.2% versus 6.4% of GDP for the public sector), although these proportions have changed significantly since the Asia (1997) and Russia (1998) crises. Two decades ago (in 1996), the emerging market private sector external debt to GDP ratio stood at 12.2% of GDP, while the public sector FX debt ratio was 15.2% of GDP.

The strength of frontier market external positions has on average been severely eroded over the past five years commensurate with the price reductions seen in the commodity complex. But any deeper stress to the balance of payments has been negated by strong structural FDI inflows

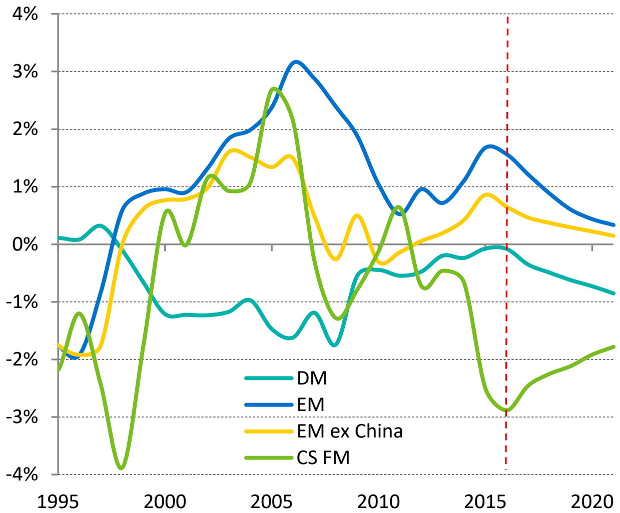
In summary, external dynamics for the frontier economies are characterized by terms of trade with a high degree of sensitivity to global commodity demand, structural and elevated net FDI inflows, significant remittances from overseas workers, and currencies that are heavily discounted on purchasing power parity. The almost five-year 52% price correction of the commodity complex between April 2011 and January 2016 (as per the diversified Thomson Reuters Equal Weight Continuous Commodity Index comprised of industrial and precious metals, agricultural and livestock products, and energy) has caused a substantial deterioration in the aggregate terms of trade for CS FM group countries owing to their high export exposure to raw materials (37% of the total by value based on 2014 data).

Over the same period, the CS FM GDP-weighted current account balance has slid from a modest 0.6% of GDP surplus for 2011 to an IMF forecast 2.9% of GDP deficit for 2016, which the IMF projects will undergo a gradual straight-line repair to a 1.8% of GDP deficit by 2021. Having run a current account position of a similar magnitude to that of emerging markets (with the exclusion of China) over much of the 20 years between 1995 and 2014, the external dynamics of the frontier markets have now diverged significantly and negatively away from their emerging market counterparts, the latter of which have (on a GDP-weighted basis) run modest – below 1% of GDP – surpluses since 2012 and, according to IMF projections, will continue to do so until at least 2021.

Furthermore, the frontier market current account dynamics have appeared weaker than those of developed economies since 2012, which, based on IMF estimates, will remain the case until at least 2021 as developed markets post modest current account deficits over the period not exceeding 1% of GDP.

Figure 8

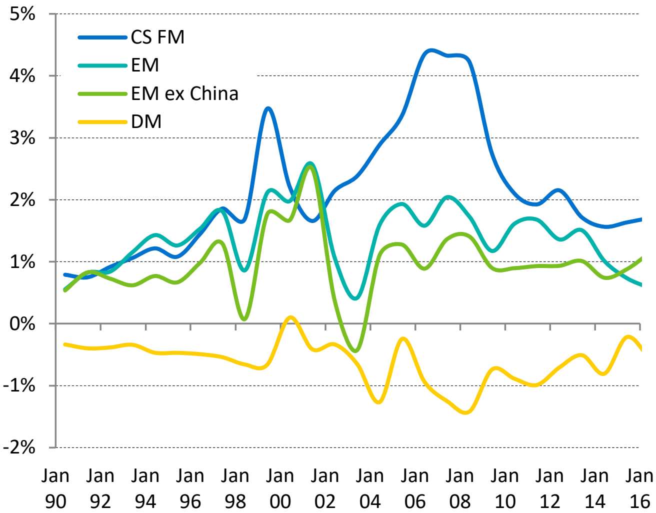
Frontier versus emerging and developed market current account balances (% of GDP)



Source: Oxford Economics, Credit Suisse research

Figure 9

Frontier versus emerging and developed markets' net FDI (% of GDP)



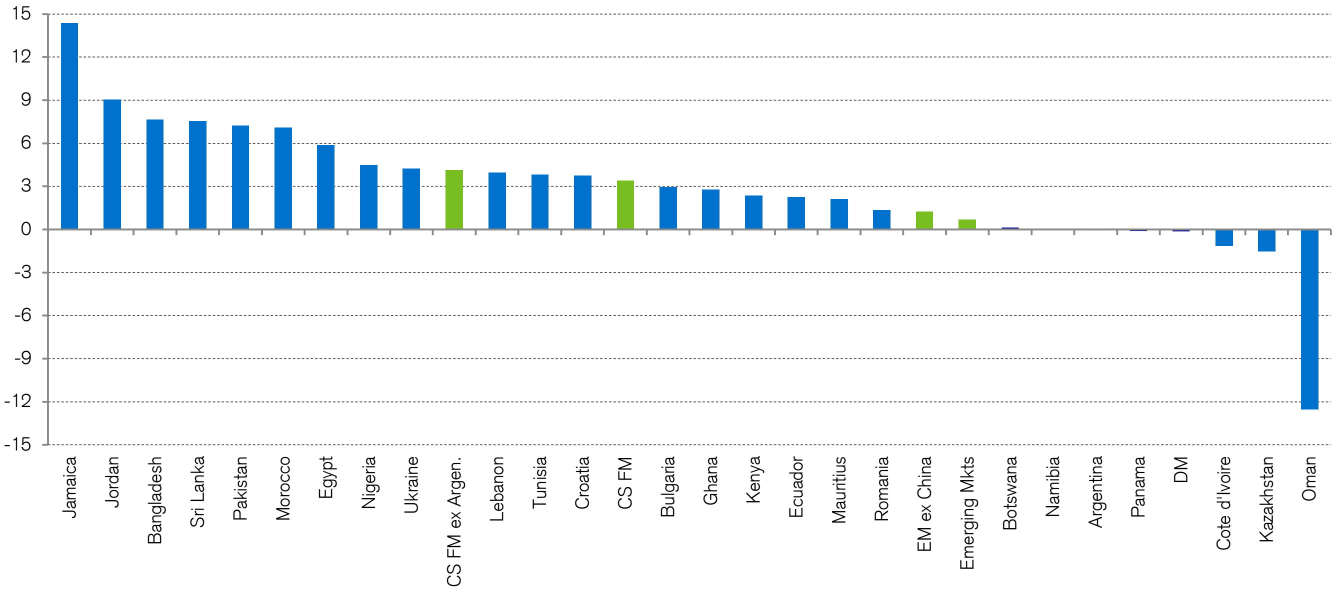
Source: Oxford economics, Credit Suisse research

However, frontier markets have for years attracted structural net inflows of foreign direct investment ranging between 1.5% and 4.5% of GDP over the past two decades, a magnitude typically far greater than that of mainstream emerging markets (with or without China). Indeed, as a consequence, the GDP-weighted basic balance (current account plus net FDI) for the frontier economies was in surplus for the 16 years between 1999 and 2014. Hence running a structural basic balance surplus has relieved frontier economies of the need to balance a current account deficit using the other remaining items on the capital account – net portfolio inflows, borrowing and foreign currency reserve depletion.

Since 2015, the frontier market basic balance has fallen into deficit for the first time since 1998 and will post a 1.1% of GDP deficit in 2016 – by no means an insurmountable issue for the aggregate balance of payments, but nonetheless an outcome which requires alternative funding as outlined above.

Figure 10

Frontier market net workers' remittances (% of GDP, 2016)



Source: Oxford Economics, Credit Suisse research

Forecasting FDI flows is notoriously difficult, but assuming that they remain steady for frontier markets at 1.7% of GDP over the next five years, this would be sufficient to bring the basic balance back into equilibrium by 2021.

Overseas worker remittances are integral to maintaining stability in frontier market external positions

The frontier market diaspora acts as a significant component of the respective nations' external positions, contributing (on a weighted-average basis) 3.4% of GDP to current account receipts (or excluding Argentina an even greater 4.1%), thus playing a far more significant role than overseas workers for mainstream emerging markets, which fund a more modest average 0.7% of GDP in current account receipts (or 1.2% excluding China).

These flows are particularly relevant for (in descending order of importance) Jamaica, Jordan, Bangladesh, Sri Lanka, Pakistan, Morocco and Egypt (four of which are CS FM10 countries), where net overseas worker remittances account for 6% or more of GDP in current account receipts. The notable exception is Oman (where worker remittances account for an outflow of 12.5% of GDP), which, together with a number of the other Persian Gulf nations, is a primary destination for frontier market expatriate labor. This relatively dependable foreign exchange income stream has been critical in stemming any further recent erosion of frontier market current account positions.

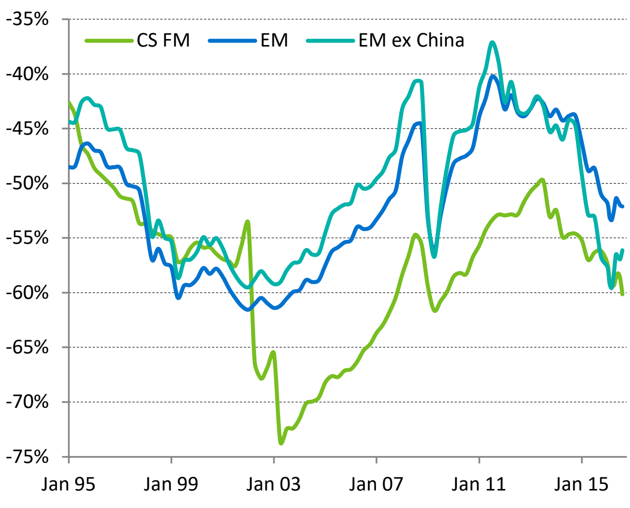
There is significant scope for real effective exchange rate appreciation in frontier markets given their significant PPP discount

On a purchasing power parity comparison basis, frontier market currencies (in a GDP-weighted blended series) appear more heavily discounted (60%) relative to overall emerging markets (52%), while only marginally so if excluding China. In fact, since 2003, the discount relative to the overall emerging market series has remained relatively stable at close to nine percentage points, while excluding China there has been a PPP convergence with frontier markets (emerging market currencies have become disproportionately "cheaper") over the past two years, albeit with a modest reversal of the trend in the past six months.

Economic theory suggests that the speed of PPP convergence is faster for those currencies with the greatest deviation. The individual 30 CS FM group countries populate a broad spectrum of PPP discounts ranging from Pakistan (71%), Egypt (71%), Ukraine (70%), Tunisia (68%) and Iran (67%) at the more extreme end of the range to Trinidad and Tobago (35%), Panama (40%), Ecuador (42%), Jamaica (45%) and Croatia (46%) among the less discounted of the group. Both Panama and Ecuador operate dollarized economies.

Figure 11

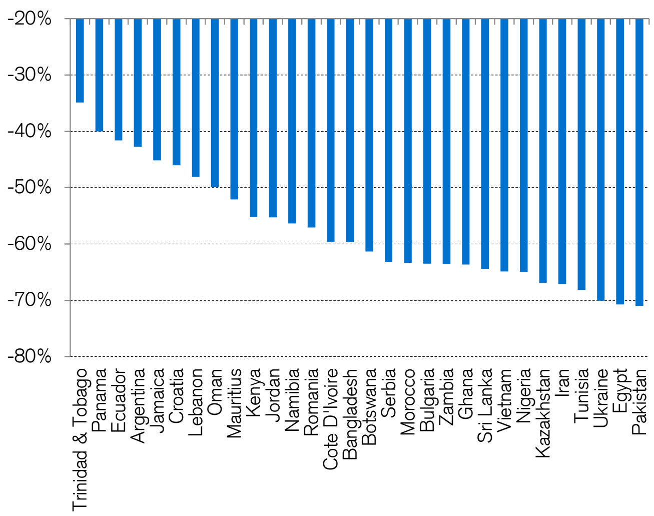
Frontier markets' (GDP-weighted average) deviation from PPP



Source: Oxford Economics, Credit Suisse research

Figure 12

Frontier market currencies' deviation from PPP



Source: Oxford Economics, Credit Suisse research

The structural trend of frontier market nominal-currency depreciation presents an ongoing challenge for those countries with poor foreign reserve coverage of their external debt obligations

In nominal terms, the equity market capitalization-weighted US dollar exchange rate for the CS FM group countries (excluding Argentina) has devalued by 46% over the past two decades in line with the depreciation recorded in mainstream emerging markets. Including Argentina increases the devaluation since 1996 to 63% owing to Argentina's January 2002 abandonment of its US dollar currency board, at which point its equity market capitalization weight in the CS FM currency index was 56% versus the current 16%.

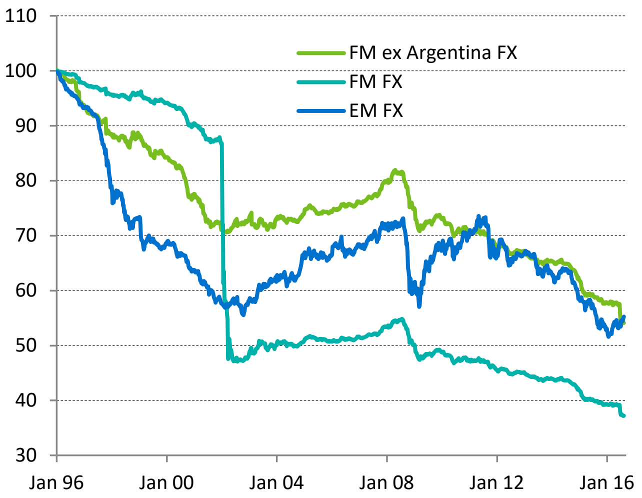
In a protracted environment of subdued global commodity demand growth and thus a structural twin deficit (current and fiscal account) for the CS FM countries, as well as elevated inflation and a US Federal Reserve interest rate tightening cycle, there is a strong risk of further nominal currency depreciation across the frontier market universe.

The implications for continued local currency weakening for those frontier markets with significant foreign currency obligations are worrisome. A dozen CS FM countries have foreign exchange external debt coverage ratios (FX reserves divided by FX debt) below 25%. The count for those countries with ratios below 50% rises to 19. The CS FM weighted average ratio is 36%. Indeed, just four frontier markets (Iran, Botswana, Trinidad and Tobago, and Oman) have sufficient foreign exchange reserves to cover their foreign currency-denominated debt in addition to a coverage ratio greater than that of emerging markets at 105% (although excluding China this falls to 64%). A fifth, Mauritius, satisfies the former criteria (with a coverage ratio of 102%), but not the latter.

In the case of Ecuador (coverage ratio of just 6%) and Panama (17%), this does not pose a threat given the dollarization of their economies. However, Ukraine (8%), Sri Lanka (11%), Kazakhstan (14%), Argentina (18%) and Jamaica (20%) appear as most vulnerable to facing difficulties in servicing their foreign currency obligations. For Ukraine and Jamaica, a significant share (50% and 65% of their respective GDPs) of this external debt is made up of sovereign obligations, thus contributing to their position as having the lowest long-term foreign currency credit rating scores among the CS FM countries and among the highest sovereign yield spreads over US treasury bonds.

Figure 13

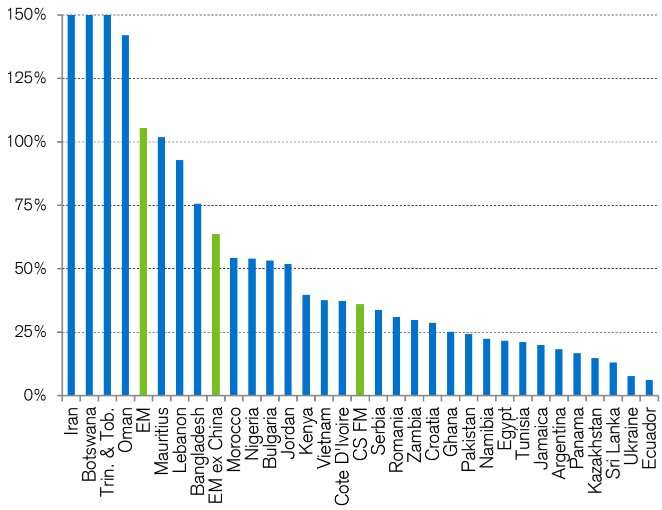
Frontier versus emerging market nominal exchange rates (market-cap-weighted, rebased to 100 in Jan. 1996)



Source: MSCI, Credit Suisse research

Figure 14

Frontier markets' foreign exchange external debt coverage ratios (%)



Source: Oxford Economics, Credit Suisse research

PHOTO: ISTOCKPHOTO.COM/ TBRADFORD

Will frontier markets become the next global export engine?

Given the rapid expansion of manufacturing export sectors in open economies (Vietnam) with a high proportion of finished goods exports (Bangladesh), frontier markets with low labor costs are well positioned to acquire global export market share as emerging markets progress up the value chain. Preconditions for success remain, such as improvements in education and infrastructure.

We address whether frontier markets meet the necessary preconditions to anchor their growth model on the manufacturing export sector

A fundamental question facing frontier markets today is whether they will be capable of emulating the export-led growth model successfully employed by the East Asian Tigers (Hong Kong, Singapore, South Korea and Taiwan) in the 1970s and subsequently the Tiger Cubs (Indonesia, Malaysia, Philippines and Thailand) in the 1990s, Mexico post the 1994 introduction of NAFTA, and finally China following its accession to the World Trade Organization (WTO) in 2001.

There are two facets to this question: first, can the export-led growth model be as effective as it has been in the past in view of potentially stagnating global demand, large developed market output gaps, firmly entrenched globalized supply chains removing easy one-off gains and growing resistance in some quarters to further globalization with the rise of populist protectionism; and, second, do frontier markets meet the necessary preconditions to employ this model successfully?

While conceding that the efficacy of this growth model has indeed diminished compared to when it was successfully adopted by a number of emerging markets and is only a part of the solution to delivering sustainable growth in a developing economy (the other being stimulating domestic demand), we focus on the latter part of the question for the purpose of this report.

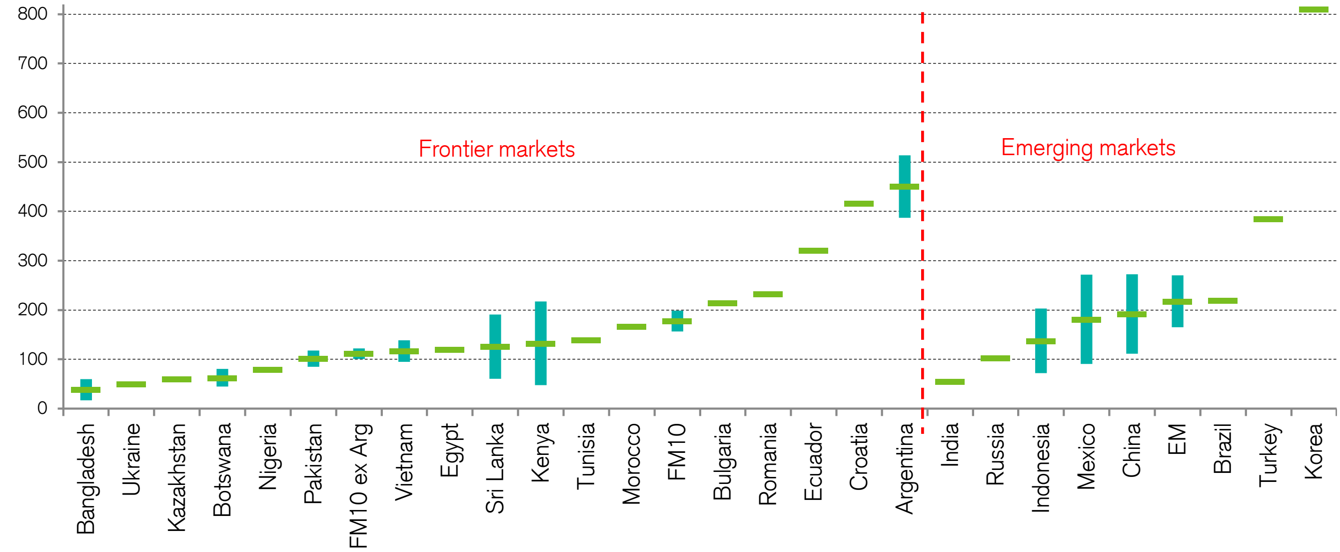
Although labor cost and supply dynamics appear extremely favorable for manufacturers, inadequate education may present an obstacle for required skills

Frontier markets benefit from an abundant pool of comparatively cheap (albeit mostly unskilled) labor. The working age population of the 30 CS FM group countries totals 730 million (or 790 million by end-2020) based on United Nations estimates and, according to data compiled by the Wage Indicator Foundation, the GDP-weighted average minimum monthly wage for the CS FM10 countries of EUR 173 (using June 2016 exchange rates) is 21% below the emerging market average. Excluding Argentina (with an average minimum monthly wage of EUR 450), the CS FM10 group's GDP-weighted average minimum monthly wage falls to EUR 110, or 50% below that of the emerging market average.

However, favorable labor dynamics in isolation are insufficient to guarantee a frontier economy a successful and sustainable manufacturing export engine of growth. This must ideally be combined with adequate investment in education (to deliver necessary skill sets), infrastructure and communications (ensuring the smooth flowing of supply chains), commercial and judicial institutions (as the guarantor of property rights, enforcing contracts and to encourage foreign investment) and the regulation and inducement of financial services (to facilitate credit for enterprise). As we discuss above, when tackling issues relating to frontier market governance and productivity, there are significant advances to be made across multiple disciplines.

Figure 1

Minimum wages* (and min/max spreads where applicable) for frontier and emerging markets (in EUR terms, monthly, June 2016)



*Note: regional aggregates are GDP weighted
Source: WageIndicator.org, Credit Suisse research

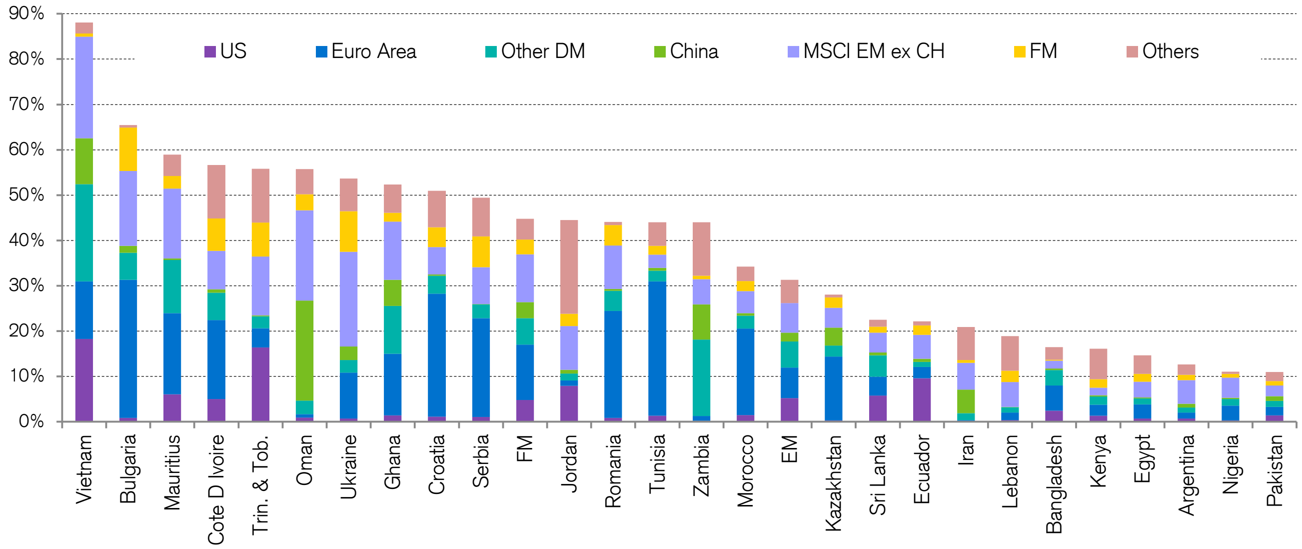
In aggregate, frontier economies are more open to trade than emerging markets although this must be accompanied by improved governance to attract foreign investment

Encouragingly, the CS FM group economies are in aggregate already more open than those of emerging markets, with a gross exports to GDP ratio of 45% compared to 31% for emerging economies.

The major export destination for the CS FM countries is emerging and other frontier markets (41% of total versus 37% for emerging markets) followed by the euro area (27% versus 22% for emerging markets), with the USA accounting for only 11% of exports (versus a larger 17% for emerging markets). Also, with a larger commodity component of exports, frontier markets are more exposed to China as an export destination (8% of the total) than the emerging markets (6% of the total).

Figure 2

Frontier market exports by destination (% of GDP, last 12M rolling)



Source: IMF Direction of Trade Statistics, Credit Suisse research

Across the CS FM group, there is considerable diversity in openness of economies with Vietnam (88% of GDP), Bulgaria (65%) and Mauritius (59%) at the higher end of the spectrum with the most closed economies being Pakistan (11% of GDP), Nigeria (11%) and Argentina (13%).

Furthermore, (with the notable exceptions of Vietnam and Côte d'Ivoire), there is significant evidence for a strong correlation between governance standards (as measured by our eight-factor framework discussed earlier) and exports expressed as a ratio of GDP. Moreover, the CS FM10 group, which typically scores poorly on governance standards, is collectively much more closed in comparison to the wider CS FM group (indeed only Vietnam among the CS FM10 group is more open than the overall export-weighted CS FM average). This further highlights the importance of building institutions and credibly improving standards of governance if the larger frontier economies are to sustainably attract foreign investment and increase their market share of global exports by emulating their emerging market peers.

The export composition of frontier markets has considerable scope to move up the value chain from raw materials into finished goods and intermediate products

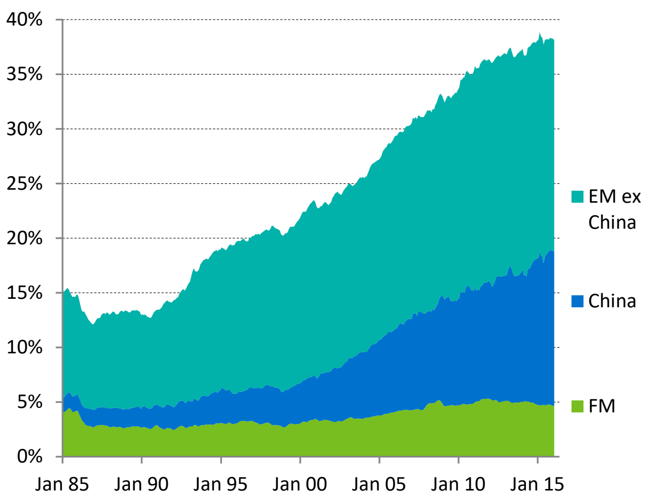
Thus far, frontier markets have struggled to meaningfully increase their global export market share over the course of three decades, from 4.4% of the total in 1985 to 4.7% currently, while emerging markets (excluding China) have more than doubled their market share from 9.5% to 19.4%. We also note China's exceptional export growth (particularly following the country's 2001 WTO accession), which has seen the nation's global export market share grow from 1.3% to 14.0% over the same period.

Moreover, most CS FM10 exports comprise raw materials and consumables (53.7% of the total compared to 29.6% for emerging markets), rather than products higher up the value chain. Nigeria, Iran, Kenya and Argentina fare especially poorly in exporting value-added products, with their exports being dominated by energy and (in the case of Kenya and Argentina) agricultural produce in stark contrast to Bangladesh (apparel), Vietnam (electricals, apparel) and Romania (vehicles, electricals), which have the highest proportion of value-added exports among the CS FM10 nations.

Reassuringly, although frontier markets have a significant catch-up margin before reaching emerging market levels in their proportion of value-added exports, the momentum in composition of these exports over the past 12 years is at least in the right direction. While growth in the CS FM10's intermediate and finished goods share of exports over the last four years is exaggerated by the slump in commodity prices, the gradual shift up the value chain is confirmed by the CAGR over the past 12 years in the dollar value of CS FM10 intermediate and finished goods (20% and 16%, respectively) outpacing that of mainstream emerging markets (15% and 13%, respectively).

Figure 3

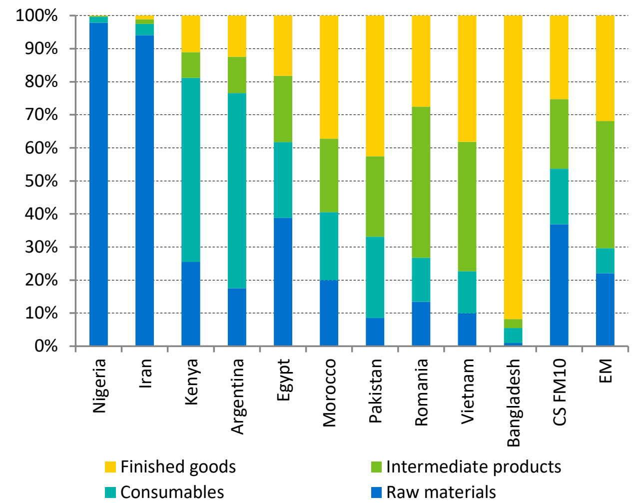
Frontier versus emerging markets' share of world exports (%)



Source: IMF direction of trade statistics, Credit Suisse research

Figure 4

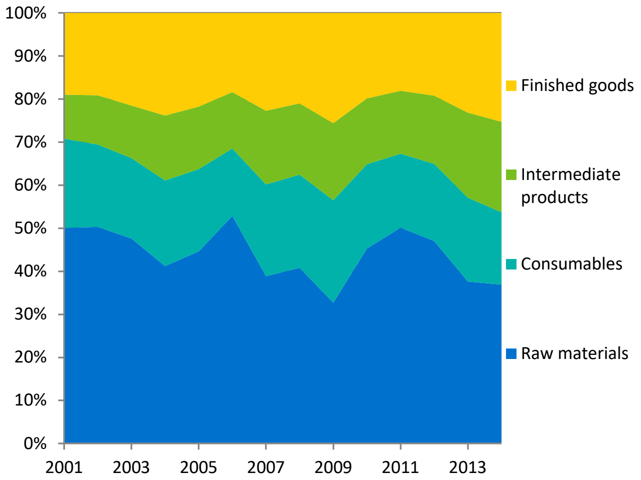
Frontier markets' (FM10) composition of gross exports (2014, % total)



Source: International Trade Centre, Credit Suisse research

Figure 5

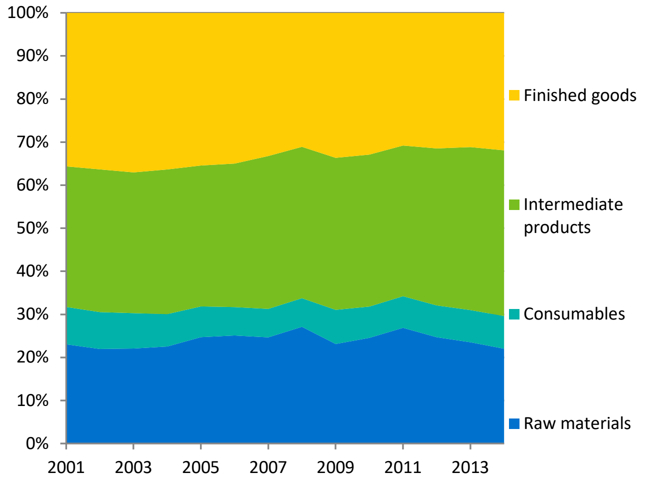
Frontier market (FM10) composition of gross exports progression since 2001 (% total)



Source: International Trade Centre, Credit Suisse research

Figure 6

Emerging market composition of gross exports progression since 2001 (% total)



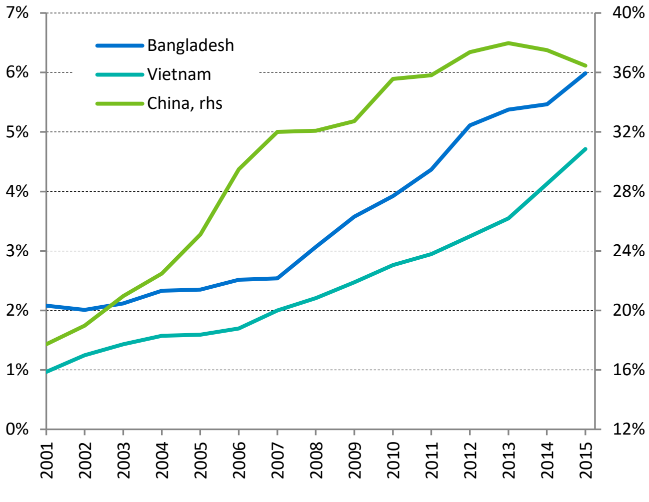
Source: International Trade Centre, Credit Suisse research

In particular, frontier market export manufacturers stand to benefit incrementally from the emerging markets' progression further up the value-chain through the vacation of those labor intensive production sectors rendered uncompetitive as a result of elevated wage growth.

For example, Bangladesh and Vietnam have already gained market share from China's advancement up the value-chain from low-cost standardized electrical equipment and apparel to sophisticated electronics and capital goods.

Figure 7

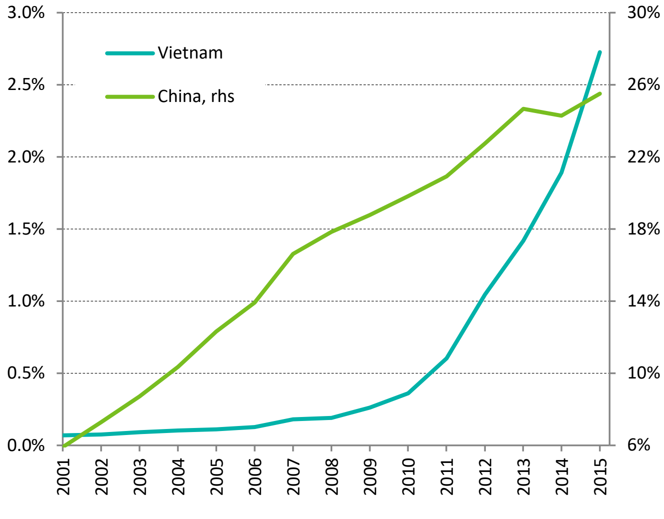
China versus Bangladesh and Vietnam: Market share of apparel exports (%)



Source: International Trade Centre, Credit Suisse research

Figure 8

China versus Vietnam: Market share of electrical and electronic equipment exports (%)



Source: International Trade Centre, Credit Suisse research

Over two decades, frontier markets have attracted just shy of half a trillion dollars of inward M&A investment, a major part of which is directed toward manufacturing

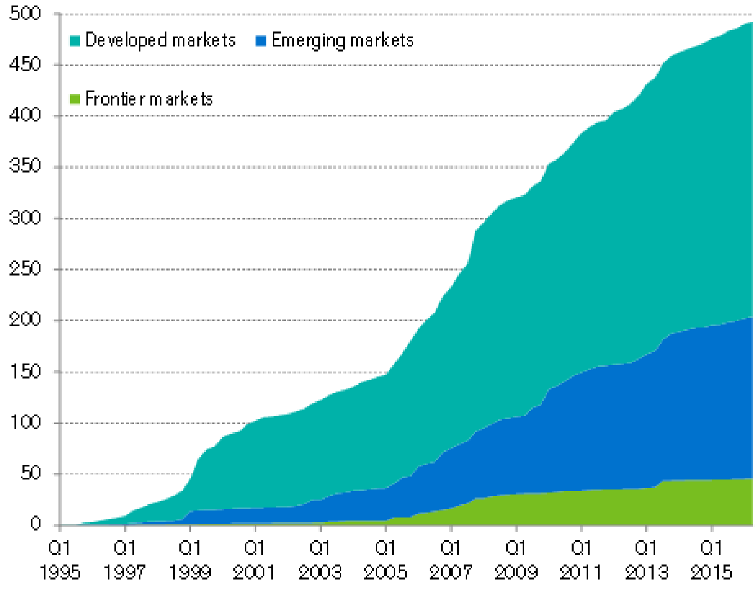
In reality, the growing appeal of frontier economies as a manufacturing export base has been instrumental in attracting cumulative inward gross acquisitions worth USD 492 billion of frontier market assets (as measured by financial platform Dealogic) over the past two decades, of which USD 345 billion (or 70%) has been recorded in the past ten years. The bulk of these assets (59%) have been acquired by developed market enterprises, with emerging market companies accounting for a further third (32%) and the remaining (9%) cross-border acquisitions originating from other frontier markets.

Regionally, these acquisitions have been heavily targeted in Frontier Europe and Middle East countries, accounting for more than half (52%) of the total, or 60% if only the last decade is considered. In the previous decade, Latin America was the target of most acquisitions in frontier markets, accounting for 59% of the total between 1996 and 2005. Indeed, over the last two decades, Argentina has by some margin been the largest target for inward merger and acquisition (M&A) investment, accounting for 22% (or USD 110 billion) of the frontier markets' total, with Egypt in second place (11%) followed by Kazakhstan (8%), Ukraine (7%), Romania (6%) and Bulgaria (6%).

More recently, the Frontier Asia and Sub-Saharan Africa regions have attracted a growing share of inward M&A investment to frontier markets, accounting for only 8% and 9%, respectively, of the two decade total of which almost all (88%) has been concentrated in the last ten years. In fact, in the first two quarters of 2016, Frontier Asia accounted for 62% of the USD 6.5 billion of recorded acquisitions of frontier market assets.

Figure 9

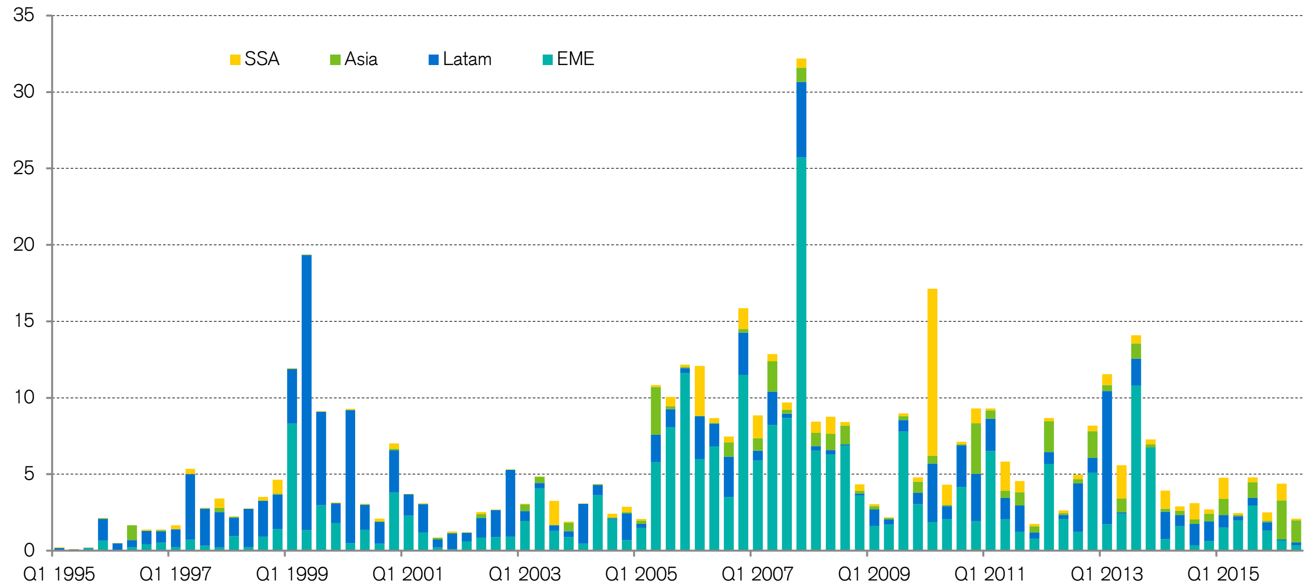
Total cross-border acquisition of frontier market assets by acquirer region since 1995 (cumulative, USD bn)



Source: Dealogic, Credit Suisse research

Figure 10

Total cross-border acquisition of frontier market assets by target region since 1995 (quarterly, USD bn)



Source: Dealogic, Credit Suisse research

PHOTO: ISTOCKPHOTO.COM/ SYLWIA KANIA

How to gain portfolio investment exposure to frontier markets

The equity and fixed income investment opportunity remains concentrated within about a dozen countries offering sufficient size and liquidity. However, the underdeveloped ratio of frontier equity and bond market capitalization to GDP confirms how much scope remains for the broadening of domestic capital markets.

Frontier market exchange trading traces its roots back more than 130 years on three continents with the 1854 founding of the Buenos Aires Stock Exchange, the 1882 inauguration of the Bucharest Stock Exchange (which was closed between 1945 and 1995) and the Alexandria Stock Exchange, established in 1883. Relative newcomers include the Lusaka Stock Exchange opening in February 1994, the Bourse Régionale des Valeurs Mobilières serving Côte d'Ivoire (which started operations in September 1998) and the Ho Chi Minh City Stock Exchange, where trading commenced in July 2000.

Despite abundant examples of a relatively long pedigree for frontier capital markets, they remain significantly under-represented among global equity and bond indices

Nonetheless, for the most part, equity investor access to the frontier universe of companies has historically been channeled via indirect emerging and developed market-related investments or through private equity funds owing to the scarcity of (and/or poor liquidity of) local exchange-traded stocks or internationally listed depository receipts. For fixed income investors, the opportunity set offered by frontier capital markets is broader and more established. Yet, generally, it remains limited to dollar-denominated, particularly sovereign (with some corporate) instruments as relatively few frontier markets offer tradable local currency government debt, and domestic corporate bond markets remain either extremely shallow or, more typically, non-existent.

As of August 2016, the frontier (CS FM) equity market opportunity set as captured by MSCI (or Standard & Poor's for those markets not included in MSCI indices) was USD 240 billion, slightly below a thirtieth of mainstream emerging markets at USD 7,733 billion or just 0.6% of MSCI global equity market capitalization, of which USD 184 billion (or 77%) is attributed to the CS FM10 countries. Adjusted for free float, the investible portion falls by two-thirds to USD 82 billion, of which USD 59 billion (or 72%) lies within the CS FM10. Neither of these sets of figures includes Iran due to its current exclusion by all major index providers and hence an inability to provide a similar methodology comparison.

By country constituents, the largest representation within this USD 82 billion frontier market equity capitalization is Argentina (at 17.5% of the total), followed by Pakistan (10.9%), Morocco (9.4%), Nigeria (9.0%), Egypt (8.1%) and Kenya (5.9%), with the ten largest frontier equity markets accounting for 78% of the total CS FM group of 30 countries (less Iran). Aggregated by region, Frontier Europe and Middle East accounts for the largest equity opportunity at USD 30.4 billion, with the remainder almost equally divided between Latin America (USD 18.3 billion), Sub-Saharan Africa (USD 17.2 billion) and Asia (USD 16.5 billion).

In terms of determining industry sector representation, we tally the USD 82 billion of free float-adjusted frontier market equity capitalization using Global Industry Classification Standard (GICS) Level One categories to reveal a remarkably concentrated investment universe. More than half of the frontier equity opportunity (50.1%) is comprised of financials, while adding just two more sectors – telecommunications (13.5%) and energy (10.8%) – accounts for close to three quarters of total index capitalization. Indeed, 93% of the frontier opportunity set is made up of five sectors by adding consumer staples (10.1%) and materials (8.3%) to the largest three, while the smallest five sectors (utilities, healthcare, industrials, information technology and consumer discretionary) account for the remaining 7%.

Relative to mainstream emerging markets, the most under-represented industry sectors in frontier markets are information technology (22.7% of emerging versus just 1.4% of frontier markets), consumer discretionary (10.5% EM versus 1.0% FM) and industrials (6.2% EM versus 1.5% FM).

Table 1

Frontier equity, sovereign and non-financial corporate bond markets (August 2016)

Country	Equity				Sovereign bonds (international dollar bonds)		Non-financial corporate international bonds	
	MSCI total market cap^ USD bn	MSCI free float market cap^ USD bn	Weight in CS FM (%)	Total market capitalization to GDP ratio (%)	JPM EMBI Global market value USD bn	Weight in CS FM (%)	Int'l debt securities market value USD bn	Weight in CS FM (%)
Bangladesh*	9.5	2.3	2.8%	4.2%	-	-	-	-
Pakistan*	30.2	9.0	10.9%	10.6%	2.8	1.7%	-	-
Sri Lanka	3.3	1.6	1.9%	3.9%	8.4	5.2%	0.2	0.5%
Vietnam*	24.3	3.6	4.3%	12.1%	1.9	1.2%	0.4	1.2%
Asia	**67.4**	**16.5**	**20.0%**	**8.5%**	**13.1**	**8.1%**	**0.6**	**1.7%**
Bulgaria	0.3	0.1	0.1%	0.5%	1.4	0.9%	1.1	3.0%
Croatia	2.1	1.3	1.5%	4.3%	8.9	5.5%	2.7	7.3%
Egypt*	9.0	6.7	8.1%	2.8%	2.9	1.8%	-	-
Iran*	-	-	-	-	-	-	-	-
Jordan	6.7	1.1	1.3%	16.9%	0.5	0.3%	-	-
Kazakhstan	4.3	1.5	1.8%	3.7%	16.8	10.3%	11.8	32.6%
Lebanon	5.5	3.1	3.8%	10.4%	17.2	10.6%	-	-
Morocco*	36.8	7.7	9.4%	34.0%	2.5	1.5%	2.7	7.4%
Oman	10.1	4.0	4.9%	19.5%	-	-	-	-
Romania*	10.7	3.2	3.9%	5.9%	6.8	4.2%	-	-
Serbia	1.2	0.2	0.2%	3.2%	5.8	3.6%	-	-
Tunisia	1.3	0.5	0.6%	3.0%	1.0	0.6%	-	-
Ukraine	2.1	1.0	1.3%	2.5%	15.7	9.7%	1.1	2.9%
Europe and ME	**90.1**	**30.4**	**36.9%**	**5.9%**	**79.5**	**49.0%**	**19.3**	**53.2%**
Botswana	1.3	0.6	0.7%	10.4%	-	-	-	-
Côte d'Ivoire	2.1	0.8	1.0%	6.1%	4.2	2.6%	-	-
Ghana	0.3	0.1	0.2%	0.8%	2.3	1.4%	-	-
Kenya*	12.3	4.9	5.9%	19.0%	2.7	1.6%	-	-
Mauritius	3.7	2.9	3.5%	31.5%	-	-	0.8	2.1%
Namibia	0.9	0.3	0.4%	7.7%	1.3	0.8%	-	-
Nigeria*	24.9	7.4	9.0%	5.7%	1.5	0.9%	0.6	1.6%
Zambia	0.2	0.1	0.1%	1.2%	2.6	1.6%	-	-
Sub-Saharan Africa	**45.7**	**17.2**	**20.9%**	**7.3%**	**14.6**	**9.0%**	**1.3**	**3.7%**
Argentina*	25.9	14.5	17.5%	5.9%	31.1	19.1%	9.2	25.5%
Ecuador	0.8	0.3	0.4%	0.8%	4.0	2.5%	-	-
Jamaica	1.6	0.5	0.6%	11.5%	4.6	2.8%	3.4	9.3%
Panama	6.8	2.7	3.3%	12.2%	13.9	8.6%	0.4	1.2%
Trinidad & Tobago	1.5	0.3	0.4%	6.4%	1.5	1.0%	2.0	5.5%
LatAm	**36.6**	**18.3**	**22.2%**	**5.9%**	**55.1**	**33.9%**	**15.1**	**41.5%**
CS FM10	**183.5**	**59.3**		**7.0%**	**52.2**		**12.9**	
CS FM	**239.8**	**82.4**		**6.7%**	**162.3**		**36.3**	
EM	7,733	3,932		31.7%	505.1		425.8	
DM	37,726	33,005		83.2%				

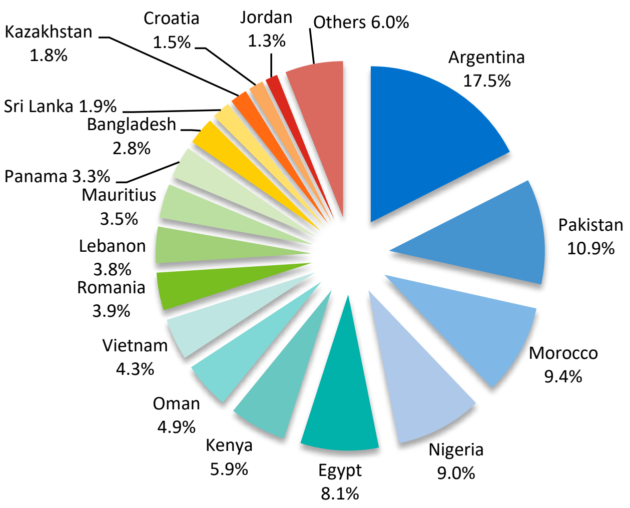
* Frontier 10 countries

^ Market cap based on S&P BMI for Côte d'Ivoire, Ecuador, Namibia, Panama and Zambia

Source: MSCI, S&P, BIS, JP Morgan, Thomson Reuters, Credit Suisse research

Figure 1

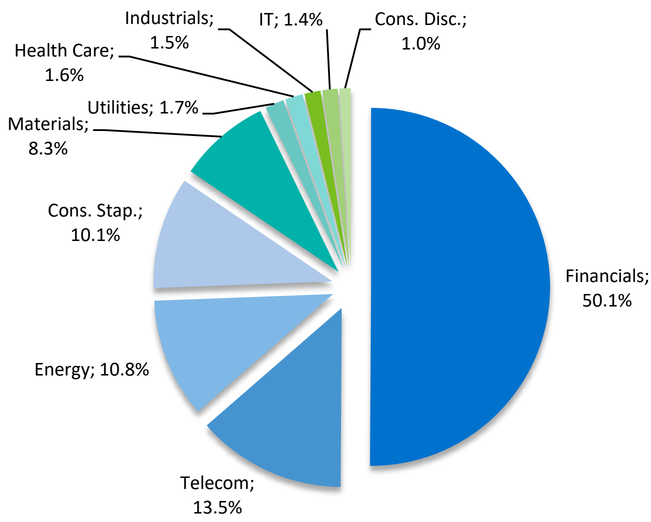
CS FM equity investible universe by country (total USD 82.4 bn, excluding Iran, August 2016)



Source: MSCI, S&P, Credit Suisse research

Figure 2

CS FM equity investible universe by sector (total USD 82.4 bn, excluding Iran, August 2016)



Source: MSCI, S&P, Credit Suisse research

For fixed income investors, the investment opportunity available within frontier markets is broader and more established than for their equity counterparts. According to quarterly international market debt securities statistics from the Bank of International Settlements (BIS), the only frontier markets with a sizeable and liquid domestic local currency government bond market are Pakistan (market value of USD 123 billion), Lebanon (USD 43 billion) and Croatia (USD 14 billion), totaling USD 180 billion as of August 2016.

Although the market value of the investible sovereign dollar debt universe, based on the JP Morgan Emerging Market Bond Index (EMBI) benchmark, is a somewhat lower USD 162 billion (of which just USD 52 billion – or 32% – of outstanding bonds are in the CS FM10 countries), its distribution across the frontier universe is far broader, including 25 of the 30 CS FM countries. Moreover, in contrast to the equity and local currency government debt universe, the investible market value of frontier sovereign bonds is more comparable with that of mainstream emerging markets, the latter of which stands at USD 505 billion, or slightly over three times greater. Importantly, however, emerging market governments benefit from being able to raise more debt in local currency via deep domestic bond markets with an aggregate outstanding market value of USD 6,163 billion (or USD 3,783 billion excluding China), more than 12 times the amount raised internationally by emerging markets using sovereign dollar debt.

Once again, the country breakdown of the frontier investible sovereign dollar debt universe reveals a relatively concentrated pattern, with just four countries accounting for half of the outstanding market value: Argentina (19.1%), Lebanon (10.6%), Kazakhstan (10.3%) and Ukraine (9.7%), of which only one country, Argentina, is included in the CS FM10 group. A further five countries take the total up to three quarters of the investible sovereign dollar debt market value for CS FM countries: Panama (8.6%), Croatia (5.5%), Sri Lanka (5.2%), Romania (4.2%) and Serbia (3.6%), of which again only one country, Romania, is in the CS FM10.

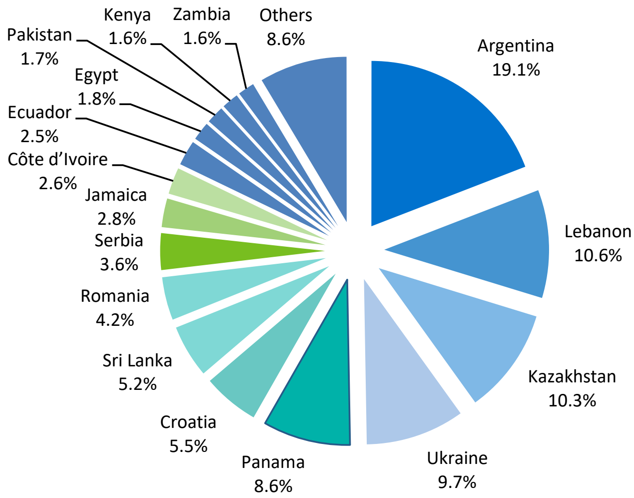
Regionally, Frontier Europe and Middle East accounts for almost half (49.0%) of the outstanding investible sovereign dollar debt universe, followed by Latin America at a third (33.9%) and the remaining two regions at less than a tenth of the total apiece – Sub-Saharan Africa (9.0%) and Asia (8.1%).

Lastly, by far the smallest asset class under consideration is (non-financial) corporate debt, where just four frontier markets account for three-quarters of the BIS international corporate dollar bond market value: Kazakhstan (32.6%), Argentina (25.5%), Jamaica (9.3%) and Morocco (7.4%). However, this is drawn from a smaller group of just 13 CS FM countries, with companies issuing dollar bonds captured by the BIS debt universe.

In aggregate, frontier market international non-financial corporate debt offers an investment opportunity set totaling USD 36 billion, just over a third of which has been raised in CS FM10 countries, and which compares with a figure of USD 426 billion (almost 12 times greater) raised in emerging market dollar corporate bonds.

Figure 3

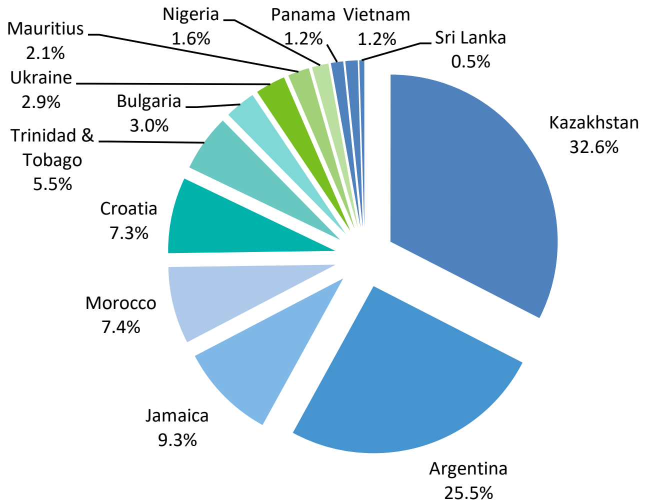
CS FM sovereign dollar bond investible universe by country (total USD 162.3 bn, August 2016)



Source: JP Morgan, Thomson Reuters, Credit Suisse research

Figure 4

CS FM corporate dollar bond universe by country (total USD 36.3 bn, August 2016)



Source: BIS, Credit Suisse research

As a proportion of total economic activity, frontier equity and fixed income markets have substantial scope for convergence in size toward emerging market norms

Over the past two decades, the development (growth in equity and debt capitalization) of frontier capital markets has approximately kept pace with expansion in economic activity, although the ratio of the size of the equity and (total – local and foreign currency) bond markets to GDP remains diminutive versus that of mainstream emerging markets.

The current investible frontier market equity capitalization to GDP ratio of 6.7% compares with a 20-year average of 9.3%, peaking at 21.5% in October 2007. However, in comparison, the (same methodology) ratio for emerging markets is 31.7% (the 20-year average is 33.7%), four-and-a-half times that of frontier equity markets, and indeed thus far there appears to be little sign of any structural convergence between the two.

For dollar sovereign bonds, the market value to GDP ratio for frontier markets has been greater than that of emerging economies for much of the past two decades (averaging 3.0% of GDP versus 2.0% for emerging), although, as clarified above, emerging market governments utilize domestic local currency bond markets as their primary vehicle for issuing debt.

Hence, in reality, although the current sovereign dollar bond market value to GDP ratio of 4.0% for frontier markets is double that of emerging economies (2.0%), the total (local and foreign currency) government bond market value to GDP ratio for emerging markets at 26.8% dwarfs that for frontier markets of just 8.9% (including the USD 180 billion of local currency government bonds issued in Pakistan, Lebanon and Croatia).

Ultimately, this confirms how much scope remains for the broadening of domestic frontier capital markets, facilitating the much-needed public and private investment growth. However, critical to achieving this goal is not only improving the governance, institutional and regulatory framework of frontier nations, but also the stimulation of domestic demand for financial instruments via channels such as pension, insurance, mutual and sovereign wealth funds, which is a particular challenge for a set of countries with typically depressed savings ratios.

Figure 5

CS FM versus emerging market equity market capitalization (% GDP)

Source: MSCI, Thomson Reuters, Credit Suisse research

Figure 6

CS FM and MSCI EM sovereign dollar bond market value (% GDP)

Source: JP Morgan, Thomson Reuters, Credit Suisse research

The longer-term (post 2001/2 Argentina crisis) outperformance of frontier equity markets has been significantly more mixed post the global financial crisis

When considering the long-term US dollar equity and bond market total return performance of the CS FM countries in both absolute and relative terms versus emerging and developed markets, we rebase the indices to 1 July 2002. This is to avoid distortions arising from the crushing (and arguably abnormal) impact on the (then far more concentrated) frontier sovereign debt market value resulting from the December 2001 Argentina public sector debt default and the subsequent January 2002 abandonment of the US dollar currency board. Indeed, prior to this event, Argentina accounted for between half and three-quarters of the total CS FM sovereign debt universe and more than half of CS FM total equity market capitalization.

Over the past 14 years, the capitalization-weighted CS FM US dollar index has delivered a total return of 450% (a compound annual return of 12.9%), outperforming both the MSCI Emerging Markets index with a US dollar total return of 310% (or 10.5% CAGR) over the duration and MSCI World (developed markets) with a US dollar total return of 175% (or a 7.4% CAGR).

The US dollar compound annual price returns (i.e. excluding reinvested dividends) over the same 14-year period for CS FM, MSCI EM and MSCI World are 8.3%, 7.5% and 4.7%, respectively, which highlights the greater annual compounded contribution from dividend distributions within the CS FM universe relative to MSCI EM and World at 4.6%, 3.0% and 2.7%, respectively.

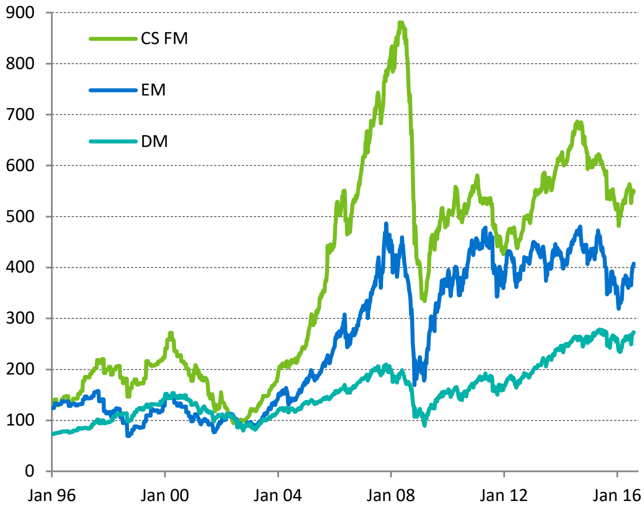
More recently, however, the relative total return performance for the CS FM universe has been notably more mixed, particularly versus developed world equities. In the post-global financial crisis environment, the CS FM index has underperformed MSCI Emerging Markets over a seven-, three-, two- and one-year time horizon, while outperforming over a six-, five- and four-year time horizon. Relative to MSCI World, the CS FM index has underperformed on all previous seven-year time horizons.

In line with intuition, US dollar sovereign bond market performance for frontier, emerging and developed world indices has been significantly less volatile over the past two decades. The only notable episodes of pronounced volatility being the December 2001 Argentina public sector debt default for frontier markets, the August 1998 Russian ruble and debt default for emerging markets, and the 2008/09 global financial crisis for both regions.

Over the past 14 years, the market value-weighted CS FM US dollar sovereign bond index has delivered a total return of 245% (or 9.2% on a compound annual return basis), underperforming the JP Morgan Emerging Market index (rebalanced for the same country constituents as the MSCI EM equity index), which posted a total return of 279% over the duration (or a 9.9% CAGR). Both frontier and emerging market sovereign bond total returns outperformed developed markets over the 14-year duration, with the latter delivering 106%, or a 5.3% compound annual return.

Figure 7

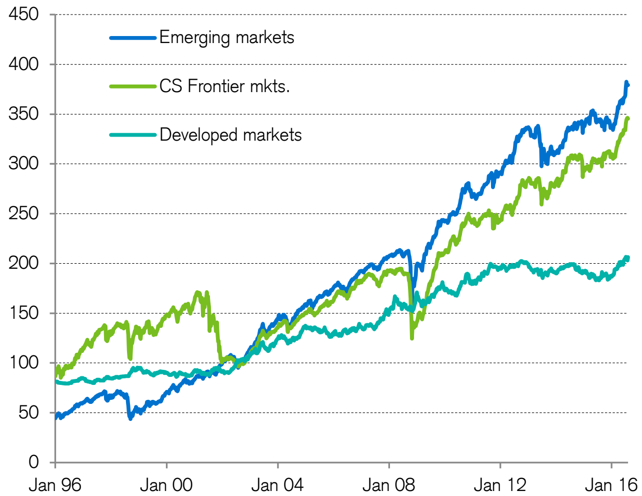
CS Frontier Markets versus emerging and developed equity markets total return performance (in USD terms, rebased to 100 on 1 July 2002)



Source: MSCI, Thomson Reuters, Credit Suisse research

Figure 8

CS Frontier Markets versus emerging and developed sovereign bond markets total return performance (in USD terms, rebased to 100 on 1 July 2002)



Source: MSCI, JP Morgan, Credit Suisse research

Over the past five-and-a-half years, there has been little to differentiate between the closing US dollar total returns of four of the five largest CS FM countries by equity market capitalization (Egypt, Argentina, Morocco and Nigeria) with the exception that Nigeria's performance was considerably more volatile, appreciating by 87% until August 2014 before finishing with a 33% loss (or a negative compound annual return of 7.0%) over the duration since January 2011 (Egypt, Argentina and Morocco lost 1%, 13% and 23%, respectively, over the same period – equating to negative compound returns of 0.3%, 2.5% and 4.6%). The standout performance among the largest CS FM equity markets since January 2011 has been delivered by Pakistan with a 92% US dollar total return (or a 12.3% CAGR) over the duration.

Within frontier sovereign bond markets, it is Argentina where US dollar total return has deviated most considerably over the course of the past 5.5 years above that for the remaining largest five countries by market value, delivering 98% (or a 13.0% CAGR) over the duration. The other four largest CS FM sovereign bond markets (which together with Argentina comprise more than 58% of the asset class market value) have delivered more comparable total returns since January 2011 with Panama (51%), Kazakhstan (45%), Lebanon (36%) and Ukraine (34%) all nevertheless deep in positive territory (with equivalent CAGRs of 7.6%, 6.9%, 5.6% and 5.3%, respectively).

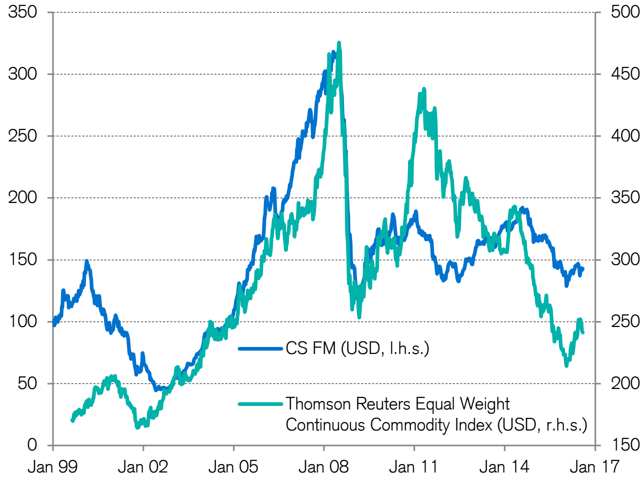
Frontier equity market performance remains tied to momentum in the global commodity complex despite the relatively low resource sector index representation

The less-rewarding absolute and relative frontier equity price return environment (excluding reinvested dividends) pervasive for much of the duration since the global financial crisis may be attributed mostly to the lackluster performance of the commodity complex since the Q2 2011 peak in the diversified Thomson Reuters Continuous Commodity Index, which had depreciated by 51% in US dollars on reaching the Q1 2016 trough – we note a close historical association between the two series going back a couple of decades.

Although a relatively modest 19.1% of the CS FM investible equity universe is resource-related by industry, the indirect effects as a consequence of the deterioration in the value of energy and mining exports on overall economic activity are nonetheless highly detrimental to the revenue stream of the bellwether financials sector in addition to consumer staples and telecoms (essentially a consumer discretionary). In this regard, the lower commodity production share of GDP for Pakistan (3.7% based on 2015 data) relative to that of Nigeria (11.8%) and Egypt (8.3%) is consistent with the former's significant equity market outperformance over the latter two countries in the past two years, principally due to meaningful currency devaluations in Nigeria and Egypt as their respective terms of trade have weakened amid slowing commodity demand growth.

Figure 9

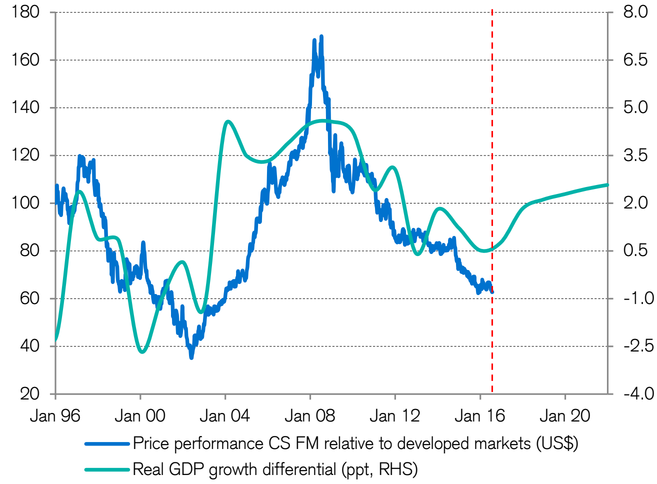
FM versus Thomson Reuters Equal Weight Continuous Commodity Index



Source: MSCI, Thomson Reuters, Credit Suisse research

Figure 10

CS FM relative to developed market GDP growth differential versus relative equity market performance (in USD terms)



Source: IMF, Thomson Reuters, Credit Suisse research

Consistent with this explanation for less profitable post-global financial crisis aggregate frontier market US dollar price returns is the relative underperformance of developed market equities synchronous with the real GDP growth differential of CS FM countries over that of developed economies, diminishing from a peak of 4.6% in 2008 to 0.5% by 2015 (the commodity production share of GDP for aggregate developed economies is just 1.7% versus 9.1% – over five times greater – for CS FM). Encouragingly, the IMF forecasts that, commencing 2016, the frontier overdeveloped economy real GDP growth differential will undergo expansion to reach 2.6% by 2021, which, given the two-decade close association with relative equity returns, implies a consistent re-emergence of CS FM US dollar equities' outperformance.

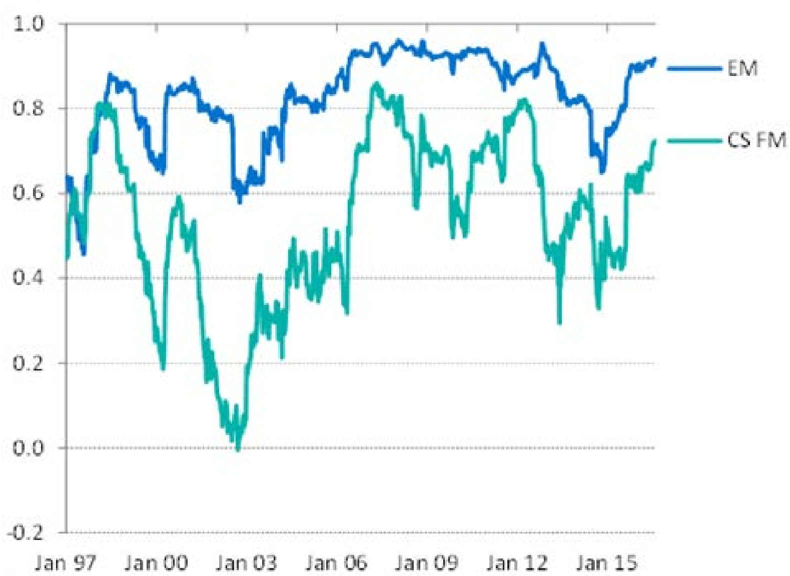
Frontier markets offer fund managers potential to boost their risk-adjusted returns with the benefit of diversification and scope to generate alpha with a larger dispersion in returns than emerging markets

Frontier markets offer a significant opportunity for global and emerging equity portfolio managers to boost their risk-adjusted returns through potential diversification benefits. The 52-week correlation coefficient (Pearson's r) of frontier with global equity returns is an attractively low 0.72 compared with emerging markets at 0.92. Historically, frontier markets' correlation with global equities has been lower still, with a two-decade average co-efficient of 0.53 versus 0.83 for emerging markets.

Moreover, with a larger dispersion in returns in the frontier market universe, active fund managers have more scope to generate alpha, thus differentiating their performance from the benchmark. Indeed, a steadily declining mean absolute deviation (the monthly average of the deviation of the constituent countries' returns from the benchmark weighted by market capitalization) has been one of the factors accounting for the rise in popularity of passive index trackers at the cost of actively managed funds in emerging markets. In contrast, frontier markets with more idiosyncratic drivers of performance continue to offer greater opportunity for picking potential winners and losers within the asset class.

Figure 11

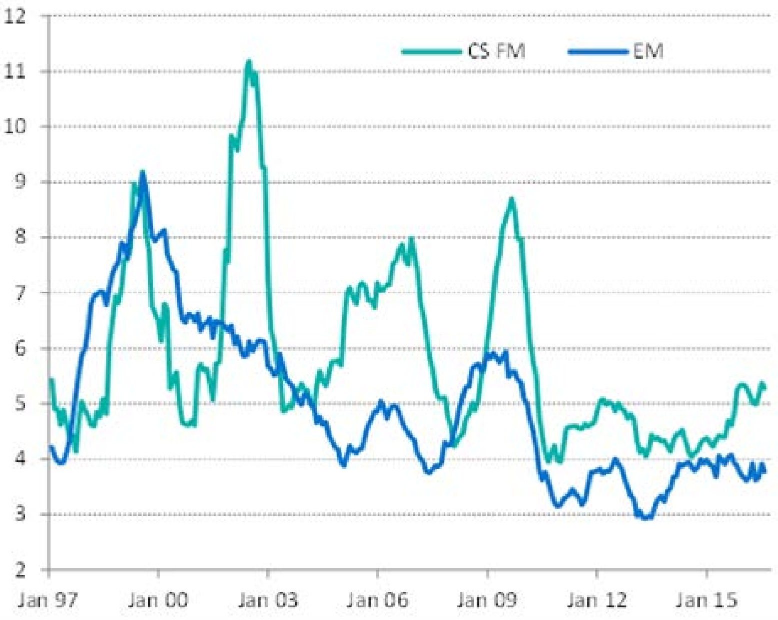
CS Frontier versus emerging markets' correlation coefficient to global equities (in USD terms)



Source: MSCI, Thomson Reuters, Credit Suisse research

Figure 12

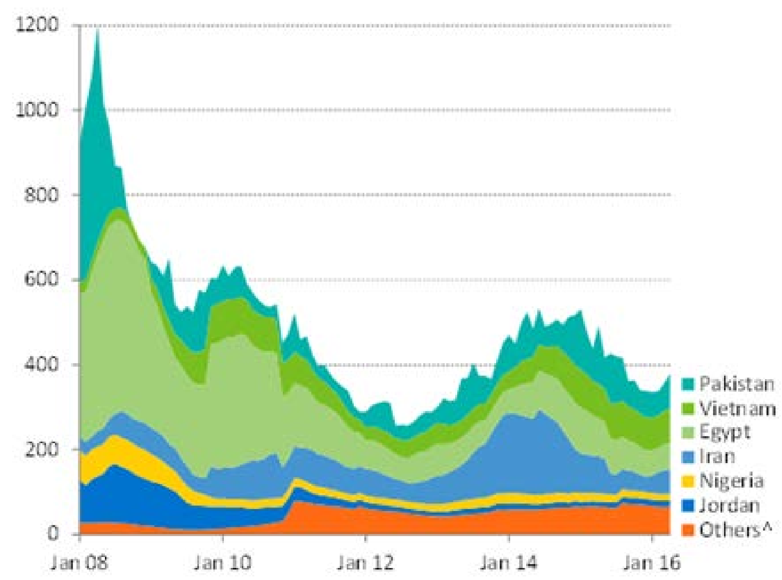
CS Frontier versus emerging market countries' absolute deviation (MAD) of monthly price change (%, 12M mav)



Source: MSCI, Thomson Reuters, Credit Suisse research

Figure 13

Larger frontier equity markets average daily traded value (USD m)



^Argentina, Kazakhstan, Mauritius, Morocco, Oman, Sri Lanka

Source: WFE, Credit Suisse research

Relatively poor market liquidity continues to present a challenge for investors accessing frontier equity markets

Market access, liquidity and elevated transaction costs present a veritable set of challenges for investors wishing to gain exposure to frontier markets. With a low equity market capitalization free float of 34% (in comparison with emerging markets at 51% and developed equities at 88%) and the absence of a broad sophisticated domestic institutional investor base, the average daily traded value in frontier markets is currently a modest USD 380 m (which represents only 0.1% of the global average daily trading volume (ADTV) for an asset class that comprises 0.5% of global equities).

Pakistan (ADTV of USD 83 million), Vietnam (USD 82 million), Egypt (USD 62 million) and Iran (USD 57 million) record the highest frontier market trading volumes, collectively accounting for three-quarters of CS FM's daily traded value. Other frontier markets that trade at least USD 10 million a day are Argentina, Nigeria, Kazakhstan, Jordan and Oman.

However, the aggregate daily traded value of the frontier group of countries remains 70% below its pre-2008 crisis peak of USD 1.2 billion – a function of the declining market capitalization of frontier market equites in conjunction with a swift fall in share turnover velocity (which has historically been depressed in frontier markets as a consequence of low equity free floats). The latter is especially troubling as an increase in share turnover velocity typically leads to improved liquidity dynamics, reduced bid-ask spreads and transaction costs that attract additional funds in the absence of artificial capital controls, thus potentially creating a virtuous cycle.

The eight-year spell in the regression of frontier trading volumes can be attributed partially to a succession of market impactful events – led initially by the Karachi Stock Exchange's market "floor" rule as a market-stabilization measure leading to its demotion from the MSCI EM index in December 2008 followed by geopolitical uncertainties in Egypt in the aftermath of the 2011 Arab spring.

Moreover, examples of restrictive foreign exchange capital controls continue to frustrate frontier market investment flows. For instance Argentina, the largest CS FM equity market by weight, maintains a 120-day minimum holding term for the repatriation of non-resident funds (reduced from 365 days in December 2015). Nigeria, the fourth largest CS FM equity market, incrementally tightened foreign exchange controls through 2015 until mid-June 2016 in an ultimately unsuccessful bid to support the naira, which was under pressure from declining foreign currency revenues and central bank reserves owing to the decline in hydrocarbon prices.

The momentum of inflows into dedicated frontier equity market funds has been stronger than that for emerging market peers, but off-index frontier market positions in global and EM funds show signs of capitulation

More than a decade of historical monthly fund flow data appears to illustrate a pattern of heightened investor interest in frontier market equity assets in preference to their emerging market peers over the course of the past six years, prior to which momentum in their cumulative inflows moved in tandem.

Dedicated frontier market equity funds have been subject to cumulative inflows of 39% of current assets under management (AUM) since January 2005 (the point from which EPFR – a fund flow database source – maintains a consistent data set), although momentum in inflows has trended negatively over the past three years, having peaked at 57% of AUM in August 2013. For dedicated emerging market equity funds, cumulative inflows over the almost 12-year duration are markedly less at just 11.5% of AUM, although this has also decreased (i.e. recorded net outflows) since the March 2013 peak of 27%.

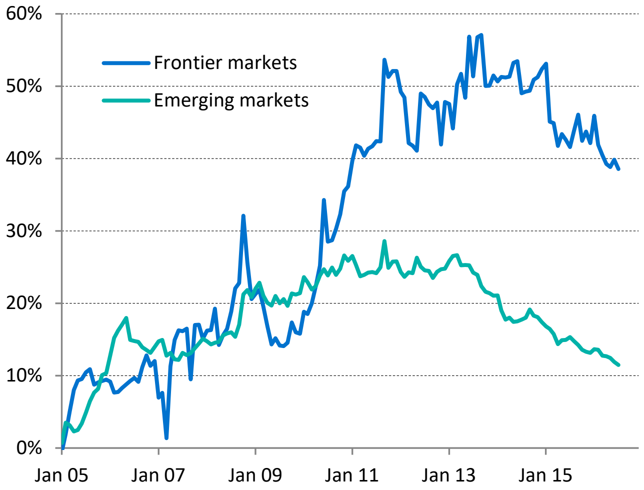
Expressing cumulative flows in relation to AUM is necessary to adjust for the absolute US dollar fund flows and assets for mainstream emerging markets evidently being greater than those for frontier markets. Dedicated emerging market equity fund AUM at USD 1.12 trillion (as of end-July 2016) dwarf those of frontier markets by 65 times (USD 17.5 billion), although frontier market equity fund cumulative flows since January 2005 at USD 6.7 billion appear a somewhat more respectable 19 times less than those of emerging market equity funds at USD 129 billion.

An alternative methodology for monitoring appetite for frontier market equity assets is tracking the off-index weight of emerging market and global funds toward the frontier universe, which, at current levels, has fallen to multi-year lows, albeit with a recent stabilization in negative momentum. In fact, for global funds, the current exposure at just 7 bp of portfolio weight (from a February 2012 peak of 49 bp) allows little room for a further reduction in exposure after a 4.5-year steady decline. Frontier exposure within emerging market equity funds is at an understandably greater 114 bp, but represents close to the lowest level in at least 15 years.

Typically, this degree of multi-year capitulation by the active institutional investor community toward frontier market equity assets would signal an interesting entry point to a seasoned contrarian portfolio manager.

Figure 14

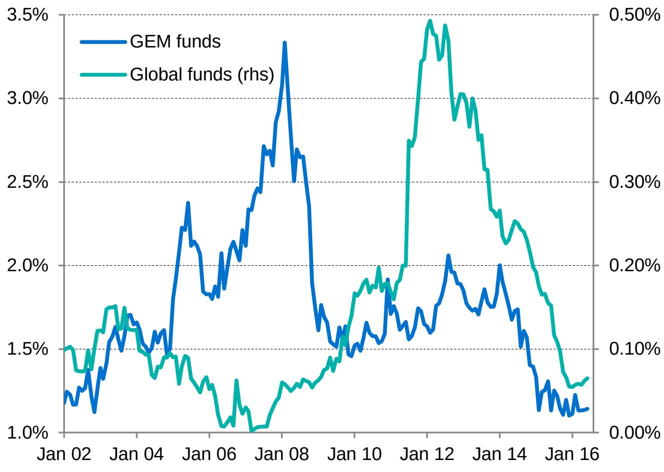
Cumulative flows into dedicated emerging and frontier market equity funds (% of AUM)



Source: EPFR, Credit Suisse research

Figure 15

Global and emerging markets dedicated equity funds' exposure to the Frontier 30 (% of AUM)



Source: EPFR, Credit Suisse research

The pace of frontier market equity issuance has slowed noticeably in the period since the global financial crisis, while private equity deal value has kept a similar pace with history

Lastly, we contrast activity levels in frontier primary markets (initial and secondary equity issuance) with private equity deals over more than 15 years.

Cumulative equity issuance since January 2000 amounts to USD 64.8 billion (split almost equally by USD 32.6 billion of IPOs and USD 32.2 billion in SPOs) versus a total of USD 51.3 billion in frontier market private equity deals over the duration, although in the case of private equity a significant proportion (55%) of the close to 1,000 frontier market transactions captured by Bloomberg over the past 15 years did not have publicly announced deal values, thus understating the true total (although typically the unreported deal values tend to be among the smaller ones).

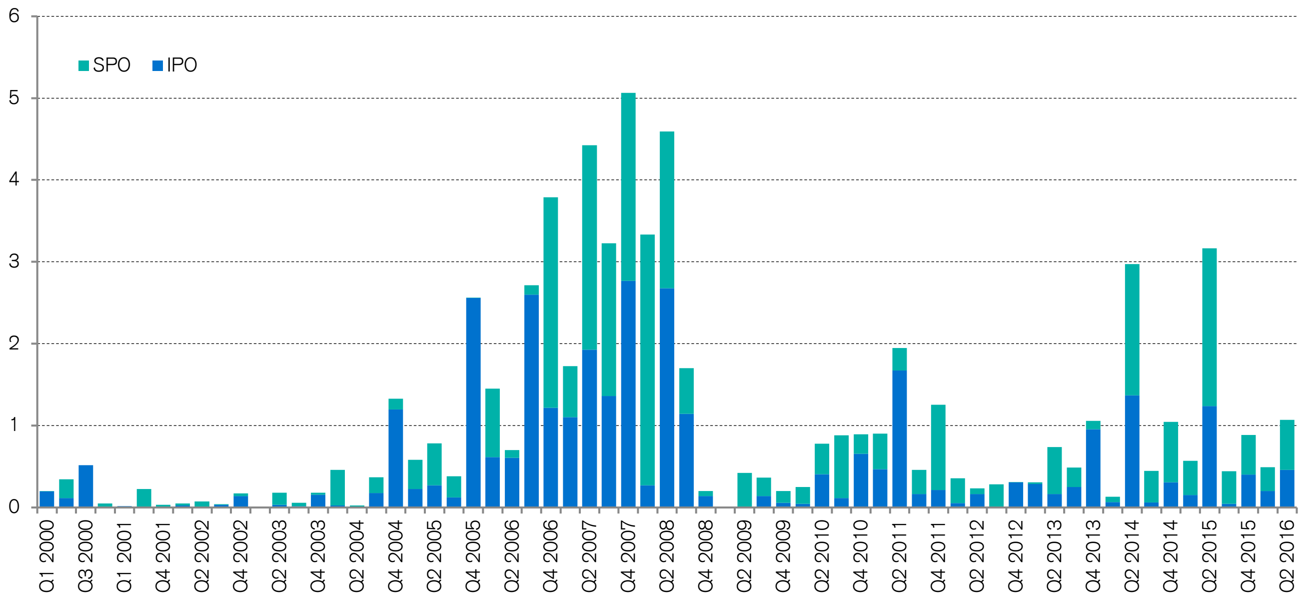
However, the surge in equity issuance prior to the global financial crisis has yet to be replicated since, while activity levels in private equity deals have been more persistent. Equity issuance for the 34 quarters leading up to and including Q3 2008 totals USD 41.3 billion (or 64% of the >15-year total), while for the 31 quarters since, the total is a smaller USD 23.5 billion, or 36% of the total. For private equity deals, the pace of activity has actually increased after the global financial crisis with USD 29.0 billion (or 57%) of total transactions booked in the period since the commencement of Q4 2008, a level some 23% greater than equity issuance over the duration.

Frontier market equity issuance has been heavily concentrated with just eight of the 30 CS FM group countries accounting for 80% of the total since January 2000: Nigeria (20.5%), Argentina (12.3%), Egypt (10.8%), Kazakhstan (10.3%), Pakistan (7.0%), Morocco (6.4%), Ukraine (6.3%) and Romania (6.0%), six of which are CS FM10 countries. Apart from deals in the above countries, the list of the ten largest frontier market equity transactions over the past 15 years, ranging in size between USD 0.81 billion and USD 2.26 billion includes a USD 0.85 billion IPO in the Kenyan telecommunications sector.

Of the USD 51.3 billion frontier market private equity deals with publicly announced deal values, 80% have transacted in just nine out of 30 CS FM countries: Egypt (25.1%), Nigeria (11.7%), Argentina (12.0%), Vietnam (7.2%), Morocco (5.8%), Bulgaria (5.5%), Lebanon (4.8%), Romania (4.4%) and Pakistan (4.3%).

Figure 16

Primary and secondary public offering deal value in frontier markets (quarterly, USD bn)



Source: Dealogic, Credit Suisse research

PHOTO: ISTOCKPHOTO.COM/ PEETERV

Profitability and valuation dynamics for frontier market equities

Frontier markets contain large clusters of highly profitable value-creative corporates (in Kenya, Morocco, Pakistan, Vietnam and Nigeria, among others) and in aggregate trade on attractive earnings-based valuations and offer superior yields in comparison with developed and emerging equities.

Essential to the performance prospects of equities as an asset class is their ability to sustainably generate positive value creation (measured as the spread of return on equity over that of cyclically normalized cost of equity). Moreover, it is the ability of frontier markets to deliver incrementally superior value creation that ultimately determines their asset-based valuation convergence with developed market equities from the current 25% price-to-book multiple discount.

Although frontier markets in aggregate have a mixed track record in delivering shareholder value creation, a number of country constituents offer excellent profitability dynamics, in our view

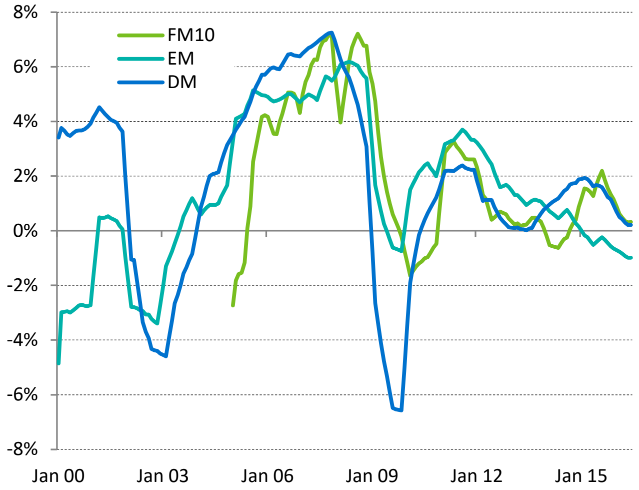
To analyze the track record of value creation for frontier markets and to compare and contrast with emerging and developed markets, we have constructed for the CS FM10 countries (excluding Iran and Bangladesh due to limited data availability) a spread of delivered return on equity over their respective cyclically normalized (three-year moving average) cost of equity. We calculate the latter metric by beta adjusting our long-run dividend discount model-derived equity risk premium for mainstream emerging market equities, to which is added the appropriate frontier market US dollar risk-free rate (EMBI sovereign bond yield).

Over the past decade, value creation generated by aggregate frontier markets has typically been pro-cyclical and yet more volatile in comparison with emerging and developed equities (although having withstood the 2008 global financial crisis–associated downturn in better shape than developed markets). From a cyclical high of 720 bp during the peak of the commodity boom in mid-2008, frontier market value creation has been eroded to nearly zero in line with that of developed markets and around 100 bp superior to emerging markets, which are, in aggregate, currently value destroying. The lack of a sustained period of superior value creation is consistent with frontier markets' underperformance of both emerging and developed equities (by 35% and 42%, respectively) over the past decade in US dollar terms.

However, there is a wide dispersion of profitability within the frontier universe, with Kenya, Morocco, Pakistan, Vietnam and Nigeria all continuing to create value in excess of 500 bp (placing them among the most value-creative countries globally), while the aggregate is suppressed to more downbeat levels due to Argentina, Egypt and Romania's inability to generate profitability that exceeds their respective costs of equity. Indeed, Kenya (the only FM10 country to continue to deliver in excess of its already high five-year average value creation) and Pakistan (having consistently delivered value creation in a tight elevated range) have outperformed the remainder of the CS FM10 group of countries by a significant margin over the past five years (returning 99% and 43% in US dollar terms compared to a loss of 12% for the overall CS FM10 group).

Figure 1

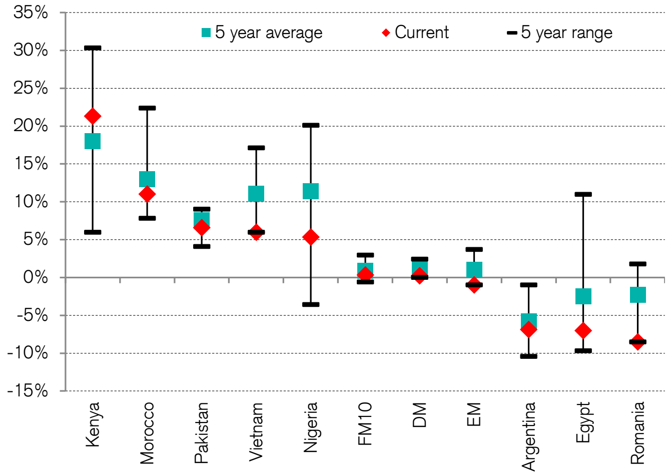
Frontier, emerging and developed market value creation (ROE less COE, %)



Source: Thomson Reuters, Credit Suisse research

Figure 2

Larger frontier markets' value creation (ROE less COE, %)



Source: Thomson Reuters, Credit Suisse research

What is now crucial to the frontier market investment case is a recovery in profitability driven by margin expansion

Frontier market value creation has eroded by 470 bp over the past decade, despite the 330 bp contraction in the aggregate cost of equity over the same period due to declining profitability. Although generating consistently superior returns on equity relative to emerging and developed equities, frontier markets have nonetheless undergone considerable slippage in profitability from the December 2005 peak ROE of 22% (or 25% for the non-financial sector) to the current 13% (12% for the non-financial sector).

Using a three-stage DuPont model analysis to disaggregate profitability of the non-financial sector over the past decade (this model is inappropriate for examining bank return on equity) reveals that the decline in ROE is driven principally by margin depletion (although the more recent convergence of asset turns with emerging and developed market levels has also contributed, albeit to a lesser degree, moderating from the July 2013 peak of 84% to the current 64%).

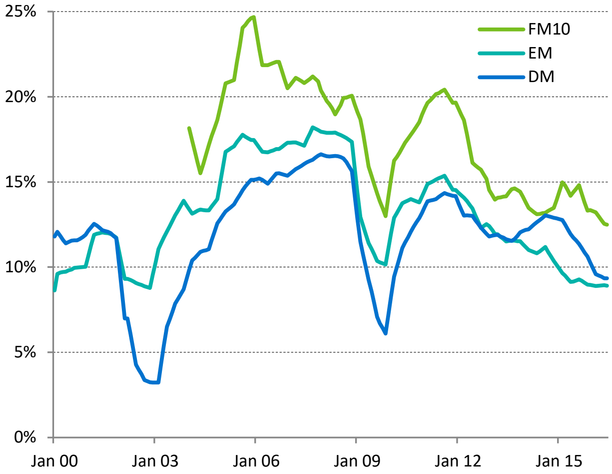
While both mainstream emerging and, to a lesser extent, developed market equities have also suffered a deterioration in non-financial net profit margins over this period (driven – in emerging markets – by softening commodity prices, a secular decline in global industrial production growth and real wages outpacing productivity growth), the frontier markets' disproportionate exposure to the commodity complex has ensured that margin erosion has been yet more precipitous (to 8%), albeit from a higher starting point (17% in December 2005).

Furthermore, with potential gains in financial leverage (total assets relative to shareholder equity) having been exhausted already, with a sharp rise from below 200% in 2006 to 260% currently (in line with that for emerging markets), it is imperative that frontier markets are able to not only protect existing levels of margins, but also undergo a recovery moving forward in order to boost profitability.

Although, in the long run, it is inevitable that frontier market margins (and hence profitability) converge with emerging and developed market levels, a structurally higher profitability profile is crucial to the frontier market investment case to compensate for a higher cost of equity until such time as improving transparency, corporate governance, liquidity and reduced macroeconomic and political uncertainties warrant a lower cost of equity hurdle.

Figure 3

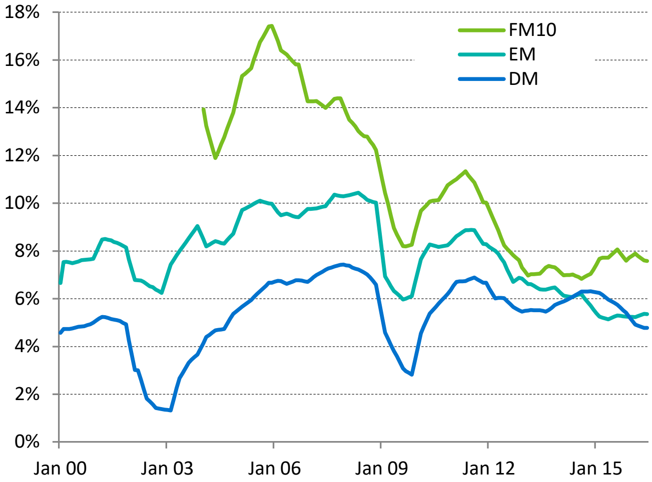
Frontier, emerging and developed market non financials: Return on equity (%)



Source: Thomson Reuters, Credit Suisse research

Figure 4

Frontier, emerging and developed market non financials: Net income margin (%)



Source: Thomson Reuters, Credit Suisse research

Frontier market asset-based valuation appears heavily discounted relative to that of developed equities (despite the former's superior profitability) due to the structurally higher frontier cost of equity

Trading on a price-to-book (P/B) multiple of 1.6 times equates to the capitalization-weighted equity for the CS FM10 countries being priced at a 25% discount to that of developed equities despite the former's 44% superior profitability (return on equity of 13% and 9%, respectively). Adding to the apparently compelling asset-based valuation argument is that the relative P/B discount is at levels not recorded in a dozen years, that in absolute terms the CS FM10 markets have not traded on a significantly cheaper P/B multiple since early 2003, and that the current 1.6 times book multiple is some 23% cheaper than the 20-year average of 2.0 times.

Nevertheless, investors must remain aware of the significantly higher cost of equity for the CS FM10 countries (12.5% versus 8.6% for developed equities) as necessitating an appropriate valuation discount (albeit at multi-year lows) that serves to diminish an otherwise attractive investment entry point to the asset class. Relative to MSCI Emerging Markets, the CS FM10 countries are trading on a marginal P/B premium of 8%, while offering a 20% superior return on equity (13% versus 11%, respectively), albeit on a more comparable cost of equity (12.5% for frontier markets versus 11.7% for emerging markets).

There is perhaps surprisingly little to differentiate between current or indeed two-decade average levels of local currency year-on-year EPS growth for frontier, emerging or developed market equities, other than that historically EPS growth for the frontier markets has been delivered with significantly greater volatility over the duration. Nonetheless, current 12-month trailing year-on-year EPS growth does appear particularly depressed versus history for all three regions with frontier, emerging and developed markets all delivering negative growth of 12%, 7% and 9%, respectively, versus 20-year average levels of +13%, +10% and +7%.

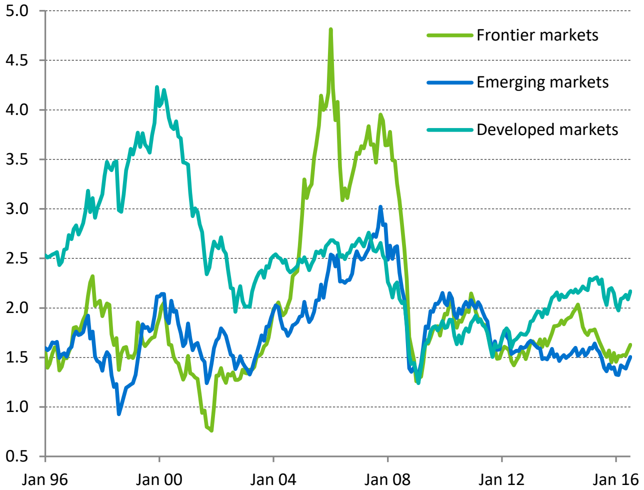
Consistent with IMF forecasts for 2016 marking the start of a re-acceleration in frontier market GDP growth and its differential above that of developed markets, we would expect a concurrent improvement in the momentum of absolute and relative local currency EPS growth for the CS FM10 countries given the strong representation of domestic growth-oriented industry sectors (financials, telecommunications, consumer staples and utilities) in their equity indices.

Similarly, frontier markets offer attractive earnings-based valuations and superior yields in comparison with developed and emerging equities

Frontier market earnings are currently priced at an even greater discount relative to developed and emerging markets than their equity. The current CS FM10 12-month trailing price to earnings per share (P/E) ratio at 11.6 times is trading at a 45% discount to that of MSCI World (developed markets – 21.0 times) and a 19% discount to that of MSCI Emerging Markets (14.4 times). Moreover, these discounts appear significantly more attractive than the two-decade average discounts of 28% to developed equities and 4% to emerging markets, which have persisted due to the frontier markets' more volatile earnings stream and higher cost of

Figure 5

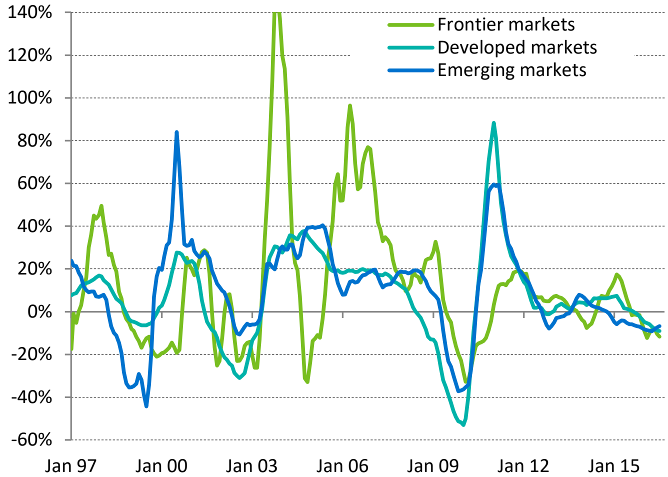
Frontier markets' price to book ratio versus emerging and developed markets (x)



Source: MSCI, Thomson Reuters, Credit Suisse research

Figure 6

Frontier market EPS growth (% YoY) versus emerging and developed markets (in local currency terms)



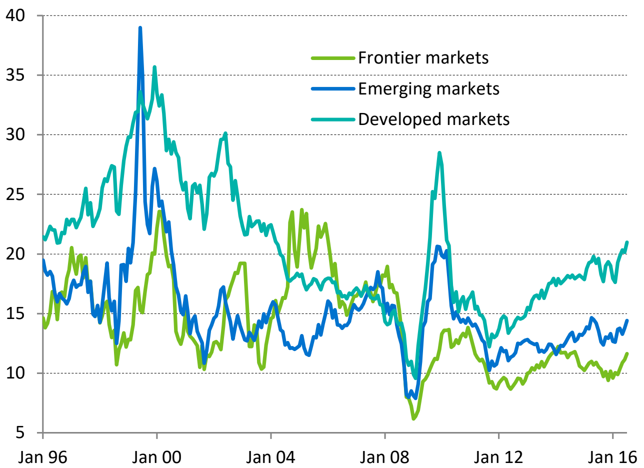
Source: MSCI, Thomson Reuters, Credit Suisse research

equity. In absolute terms, the P/E ratio for the CS FM10 countries has been cheaper than the current 11.6 times for only 30% of the time over the past 20 years.

Lastly, frontier market equities have historically offered a noticeably more attractive yield relative to developed and emerging markets. This attribute has been true for some 86% of the time over the past two decades, with long-term averages of 3.8%, 2.2% and 2.5%, respectively. The current valuation is no exception, with the CS FM10 12-month trailing dividend yield at 3.9%, a substantial 50% more rewarding than developed and emerging equities, both yielding 2.6%. The superior yield offered by frontier market equities is not simply a result of discounted pricing, but also a factor of structurally higher shareholder distributions by frontier corporates. The two-decade average CS FM10 dividend payout ratio is 51% (the current ratio has slipped marginally to 45%) versus 44% for MSCI World and 36% for MSCI Emerging Markets.

Figure 7

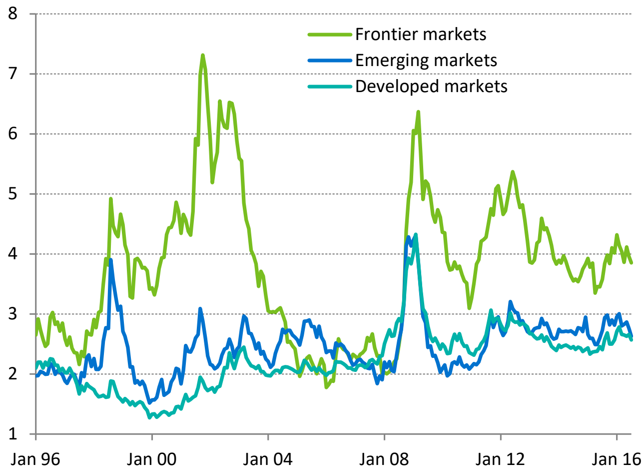
Frontier markets' price to earnings ratio versus emerging and developed markets (x)



Source: MSCI, Thomson Reuters, Credit Suisse research

Figure 8

Frontier markets' dividend yield versus emerging and developed markets (x)



Source: MSCI, Thomson Reuters, Credit Suisse research

Appendix: The Credit Suisse Frontier Market Universe

We introduce a proprietary framework of 30 countries across four continents, which we argue collectively best represent the core characteristics of superior growth and demographics, improving governance, convergence in productivity and discounted valuations typically associated with the frontier market universe.

To populate our frontier investment universe of nations, we have leaned on established index provider classifications (MSCI, S&P, FTSE, Dow Jones and Russell) while introducing our own criteria to restrict the list to 30 countries – the Credit Suisse Frontier Markets (or "CS FM"). In practice, we excluded countries typically classified as frontier and yet members of the European single currency bloc (Cyprus, Estonia, Latvia, Lithuania, Malta, Slovakia and Slovenia) in addition to countries with PPP-adjusted per capita GDP above the USD 46,700 developed world average threshold (Bahrain, Kuwait, Qatar, Saudi Arabia and United Arab Emirates).

Material discrepancies between the CS FM country constituents and the current and pro forma MSCI Frontier Markets country classification include (1) the omission from CS FM of Kuwait (17% of MSCI index weight) – Kuwait's per capita GDP in PPP terms in excess of USD 70,000 places the country among the world's five wealthiest adjusted for the cost of living; moreover, the FTSE excludes Kuwait from its Frontier universe, (2) the inclusion of Egypt as a frontier market – as per the Russell index classification – despite its status as an MSCI emerging market since 1997, (3) maintaining Pakistan as frontier although MSCI announced on 14 June 2016 that the country will be promoted from frontier to emerging market status on 1 June 2017 (Pakistan was previously an MSCI EM country constituent from 1993 until its demotion in December 2008 following the August 2008 imposition by the Karachi Stock Exchange board of the market "floor" rule[2]).

In addition, the following countries have in the past been classified by MSCI as emerging markets until their respective demotions: Argentina (from 1988 until 2009), Jordan (from 1988 until 2008), Morocco (from 1997 until 2013) and Sri Lanka (from 1994 until 2001). Lastly, we are monitoring the implementation of announced market accessibility enhancements by the Saudi Arabian Capital Markets Authority, which could lead to the country's promotion by MSCI to emerging market inclusion from its current stand-alone (non-frontier) status. None of the other established index providers currently classify Saudi Arabia as a frontier market.

Furthermore, we have created a focus group of frontier nations, the CS FM10, made up of the ten largest constituents selected by their respective simple ranking of current nominal GDP, population and equity market capitalization. This group of developing nations situated across four continents includes Argentina, Bangladesh, Egypt, Iran, Kenya, Morocco, Nigeria, Pakistan, Romania and Vietnam, which collectively represent between three-quarters and four-fifths of the total economic, demographic and equity investment opportunity set and are highly representative of the larger group as a whole in terms of average GDP and population growth, per capita economic output, fertility rates and urbanization dynamics and growth.

Economically, on 2016 IMF projections, nominal GDP for the broad CS FM universe totals USD 3.7 trillion, or 15% of the total emerging market (MSCI country classification) economic output of USD 24.4 trillion. As a proportion of total 2016 global

[2] MSCI Barra to remove the MSCI Pakistan Index from the MSCI Emerging Markets, 10 December 2008 https://www.msci.com/resources/pressreleases/20081210_pr.pdf

GDP of USD 74.0 trillion, the CS FM universe represents a modest 5% share versus 32% for emerging markets.

Geographically, the 30 countries of the CS FM universe make up 12% of the world's landmass, of which the core CS FM10 countries occupy slightly more than half, with the remainder occupied by emerging markets (39%), developed markets (24%) and the remaining quarter by countries falling outside these classifications.

Demographically, the CS FM universe extends to a population of 1.17 billion – larger than that of the developed world (936 million), but little more than a quarter of that in emerging markets (4.1 billion) – but nonetheless accounting for some 16% of the world total.

Regionally, by far the largest economic bloc of frontier market economies (42% of GDP or USD 1.5 trillion) is located in Europe and the Middle East, comprising 13 out of the total 30 CS FM countries. However, Europe and the Middle East ranks a distant second on population across the four frontier regions with 336 million inhabitants or 29% of the CS FM total. By far the largest population regionally is located in Asia (464 million or 40% of CS FM) concentrated within Pakistan and Bangladesh, the first and third current largest demographic opportunities within the frontier markets, respectively, with the second largest being Nigeria. Collectively, the four Asian markets in this study represent 22% of the CS FM GDP, or a total of USD 797 billion, resulting in the lowest regional per capita GDP (just USD 5,227) on a PPP-adjusted basis versus USD 14,680 for the Europe and Middle East region.

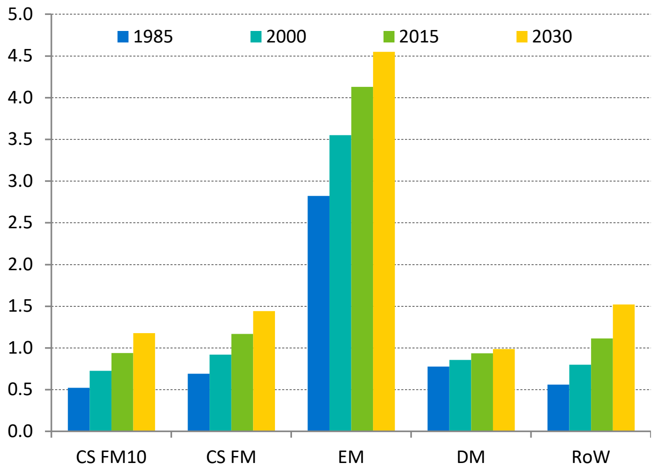
The Latin American frontier region's per capita GDP is the highest at USD 19,183 (PPP-adjusted), with five countries contributing the lowest share of CS FM current economic output (just 18% of the total or USD 625 billion) and with just 6% of the population (68 million). Sub-Saharan Africa's eight CS FM countries generate the second smallest share of GDP at 18% (or USD 626 billion), with 26% (or 301 million) of the frontier market population for a PPP-adjusted per capita GDP of USD 5,411 – just USD 183 more than the Asian frontier region.

Indeed, the range of per capita economic output (PPP-adjusted) across the CS FM universe is decidedly broad: from as little as USD 3,338 in Kenya to USD 44,531 in Oman, thus illustrating the diversity of this most heterogeneous group of developing nations. The population-weighted average figure of USD 8,766 per capita for the CS FM universe is two-thirds that of emerging markets (USD 13,497) and less than a fifth of that of the developed world (USD 46,718).

The equity opportunity for the CS FM universe (using MSCI index methodology unadjusted for free floats) is USD 240 billion, or just 0.5% of global market capitalization, compared with USD 7.7 trillion (17% of the total) for emerging markets and USD 37.7 trillion for the developed world. As a proportion of the underlying size of the economy, the market capitalization to GDP ratio for the CS FM countries is a very modest 6.7%, representative of the shallowness of capital market penetration within the region relative to a ratio of 32% for emerging markets and 83% for developed markets.

Figure 1

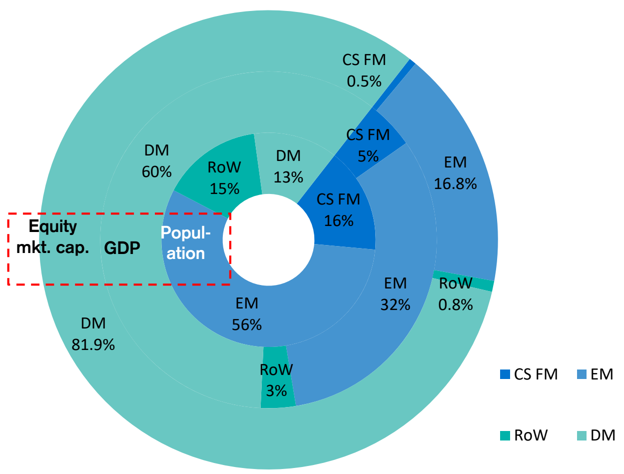
Frontier versus emerging and developed market total populations (1985 through 2030E, bn)



Source: United Nations Department of Economic and Social Affairs - Population Division, Credit Suisse research

Figure 2

Population, GDP and equity market capitalization* split by CS FM, EM, DM and RoW (2016)



*MSCI free float adjusted index definition

Source: United Nations Department of Economic and Social Affairs - Population Division, Oxford Economics, MSCI, Credit Suisse research

Table 1

Frontier market key economic and demographic metrics and forecasts

Country	Nominal GDP (2016, USD bn)	2015-20E Real GDP CAGR (%)	Population (2016, m)	2015-20E population growth CAGR (%)	GDP per capita (2016, PPP terms)	2015-20E PPP GDP per capita growth CAGR (%)	Fertility rate (2016, %)	Urbanization rate (2016, %)	2015-20E change in urbanization rate (pp)
Bangladesh*	226.3	6.8	161.0	1.1	3,841	7.6	2.2	34.3	+3.7
Pakistan*	284.4	5.0	188.9	2.0	5,174	4.7	3.7	38.8	+2.4
Sri Lanka	84.8	5.0	20.7	0.4	11,127	6.1	2.1	18.4	+0.4
Vietnam*	201.4	6.2	93.4	1.0	6,400	6.9	2.0	33.6	+3.2
FM Asia	**796.8**	**5.8**	**464.1**	**1.4**	**5,227**	**6.1**	**2.8**	**35.2**	**+3.0**
Bulgaria	49.4	2.4	7.1	-0.8	19,839	4.8	1.5	73.9	+1.6
Croatia	49.9	2.2	4.2	-0.4	22,296	4.3	1.5	59.0	+1.7
Egypt*	312.1	4.4	91.5	1.9	12,113	4.1	3.4	43.1	+0.7
Iran*	386.1	3.9	79.1	1.1	17,888	4.5	1.7	73.4	+2.3
Jordan	39.8	3.8	7.6	1.5	12,358	3.3	3.5	83.7	+1.1
Kazakhstan	116.2	1.7	17.6	1.1	24,177	1.9	2.6	53.2	+0.2
Lebanon	52.8	2.3	5.9	0.1	18,426	3.1	1.7	87.8	+0.6
Morocco*	108.1	4.0	34.4	1.2	8,350	4.8	2.6	60.2	+2.4
Oman	51.7	1.5	4.5	1.4	44,531	0.1	2.9	77.6	+2.1
Romania*	181.9	3.5	19.5	-0.7	21,916	5.5	1.5	54.6	+1.0
Serbia	37.4	3.0	8.9	-0.4	14,047	4.8	1.6	55.6	+0.7
Tunisia	44.0	3.5	11.3	1.0	11,652	4.3	2.2	66.8	+1.1
Ukraine	83.6	2.9	44.8	-0.5	8,185	4.9	1.5	69.7	+1.1
FM Europe and ME	**1512.9**	**3.4**	**336.4**	**0.9**	**14,680**	**4.2**	**2.3**	**61.1**	**+1.2**
Botswana	12.7	4.3	2.3	1.7	16,938	4.9	2.9	57.4	+1.5
Côte d'Ivoire	34.7	7.7	22.7	2.4	3,542	6.8	5.1	54.2	+3.3
Ghana	38.2	5.9	27.4	2.2	4,391	5.1	4.2	54.0	+3.2
Kenya*	64.7	6.3	46.1	2.5	3,338	5.2	4.4	25.6	+2.3
Mauritius	11.9	3.9	1.3	0.3	20,443	5.7	1.5	39.7	-0.4
Namibia	11.2	5.2	2.5	2.1	11,904	6.1	3.6	46.7	+4.6
Nigeria*	433.6	3.4	182.2	2.6	6,143	2.4	5.7	47.8	+3.9
Zambia	19.1	4.9	16.2	3.1	3,918	3.5	5.5	40.9	+2.4
FM Sub-Sahara Africa	**626.0**	**4.2**	**300.6**	**2.5**	**5,411**	**3.2**	**5.3**	**45.0**	**+3.4**
Argentina*	437.9	2.0	43.4	0.9	22,303	2.7	2.3	91.8	+0.6
Ecuador	94.0	-1.9	16.1	1.4	10,698	-1.7	2.6	63.7	+1.3
Jamaica	14.1	2.6	2.8	0.3	8,991	3.8	2.1	54.8	+1.3
Panama	55.8	6.3	3.9	1.5	22,861	6.0	2.5	66.6	+1.5
Trinidad & Tobago	23.8	1.3	1.4	0.3	32,432	2.5	1.8	8.4	-0.3
FM Latam	**625.5**	**1.8**	**67.6**	**1.1**	**19,183**	**2.3**	**2.4**	**80.2**	**+0.8**
CS FM10	**2,636**	**4.1**	**939.5**	**1.7**	**8,179**	**4.3**	**3.4**	**45.5**	**+2.7**
CS FM	**3,561**	**3.8**	**1,168.7**	**1.5**	**8,766**	**4.0**	**3.3**	**47.7**	**+2.3**
EM	24,370	4.7	4,130.6	0.8	13,497	5.7	2.1	51.7	+3.0
DM	45,344	1.9	935.7	0.4	46,718	3.1	1.7	81.9	+1.1

* Credit Suisse Frontier 10 countries

Source: IMF World Economic Outlook database, UN population division, Credit Suisse research

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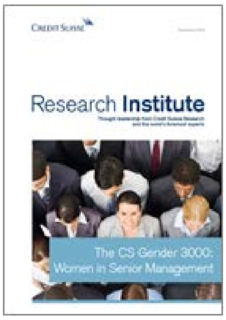

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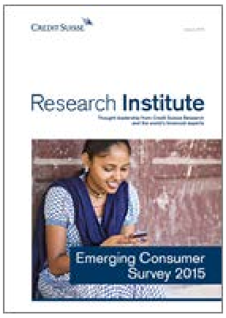

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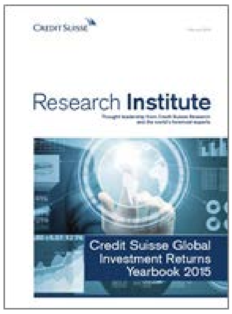

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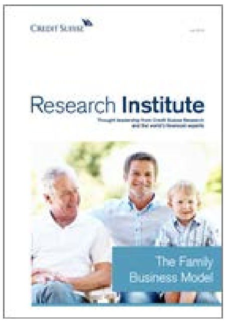

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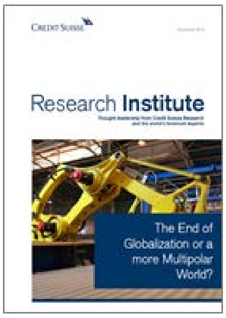

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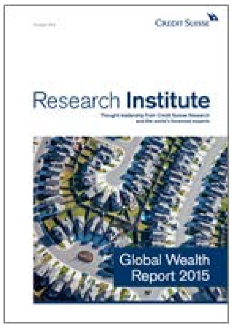

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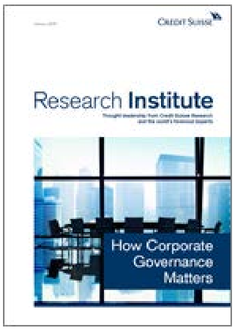

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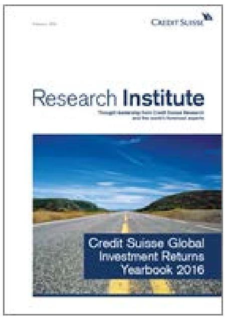

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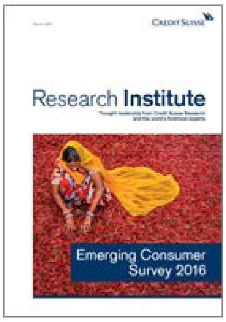
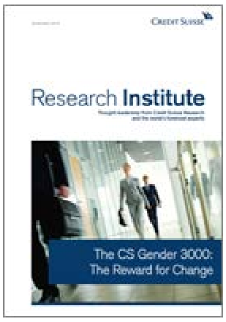
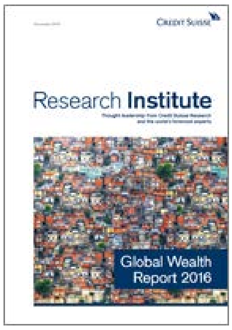


Emerging Consumer Survey 2016
March 2016



The CS Gender 3000: The Reward for Change
September 2016



Global Wealth Report 2016
November 2016

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