EXANE BNP PARIBAS

INTERCEM HANOI 2016

What options for South-East Asian firms in a new world order?

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Yassine Touahri
+44 207 039 95 23
yassine.touahri@exanebnpparibas.com

Paul Roger, CFA
+44 203 430 84 15
paul.roger@exanebnpparibas.com

Exane BNP Paribas Building Materials

Yassine Touahri

Building & Materials
(+44) 207 039 9523
yassine.touahri@exanebnpparibas.com

Yassine Touahri, 33, has over nine years of experience in the Building Materials sector. In 2006, Yassine worked at Saint-Gobain, one of the world's largest building materials company and headquartered in Paris. He joined Exane BNP Paribas' Building Materials and Construction team in 2007. This role has seen Yassine in continuous contact with the management of international cement companies and their shareholders. The team also shares its analysis of the cement industry's prospects with over 1,000 building materials executives worldwide. Yassine is a regular speaker at industry events in various continents. He graduated with an MsC in Management from Grenoble's Ecole de Management, a French business school.

Paul Roger, CFA

Building Materials
(+44) 203 430 8415
paul.roger@exanebnpparibas.com

Paul Roger, 39, graduated from Durham University with First Class Honours in 1998 and has almost 15 years of experience covering the Building Materials sector at HSBC, ABN AMRO, Deutsche Bank and ING. He has also worked in Russia, where he spearheaded a top investment bank's global infrastructure research. Paul is a Chartered Financial Analyst and Chartered Accountant. He joined as Sector Head of Exane's Building Materials Team in 2010.

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OUR SCENARIO FOR 2016-2017

CHINA SLOWDOWN – THE CUSP OF A NEW ERA?

DEVELOPED MARKETS RECOVERY - WHAT WILL THE EUROPEAN MAJORS DO?

WHAT CHALLENGE AND OPORTUNITIES FOR ASIAN EXPORTERS?

WHAT OPTIONS FOR SOUTH EAST ASIAN FIRMS IN A NEW WORLD ORDER?

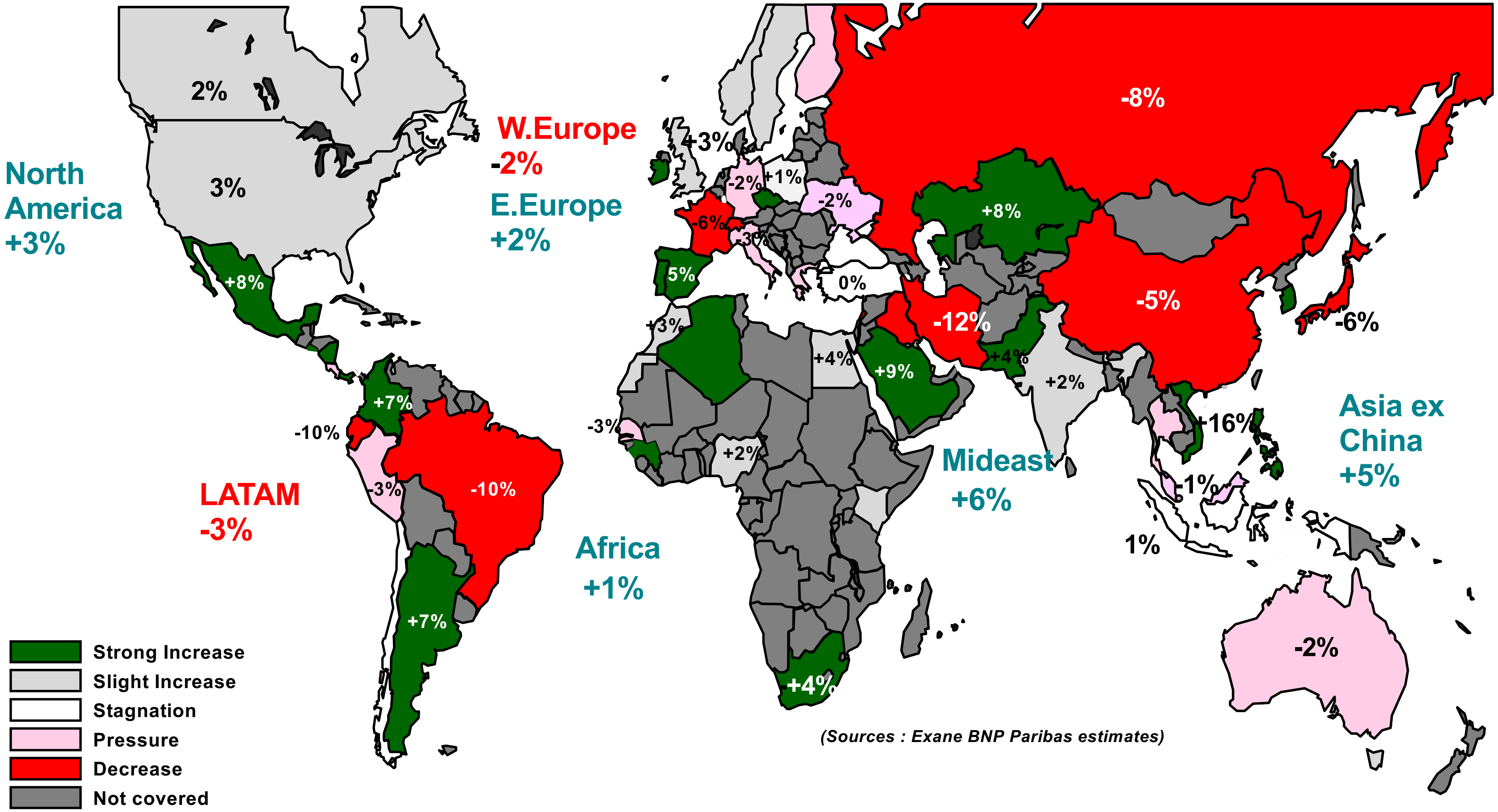
CONCLUSION

What happened last year: no volumes recovery

1) North America recovered slightly
2) European trends are stabilizing: France and Germany were weak but the periphery recovered (Spain, Portugal, Ireland) and UK is resilient
3) Emerging markets were disappointing
4) China cement volumes declined substantially for the first year since 30 years

Cement Volumes 2015e

% chg YoY / 1% in mature countries and EM ex. China / -3% excluding China



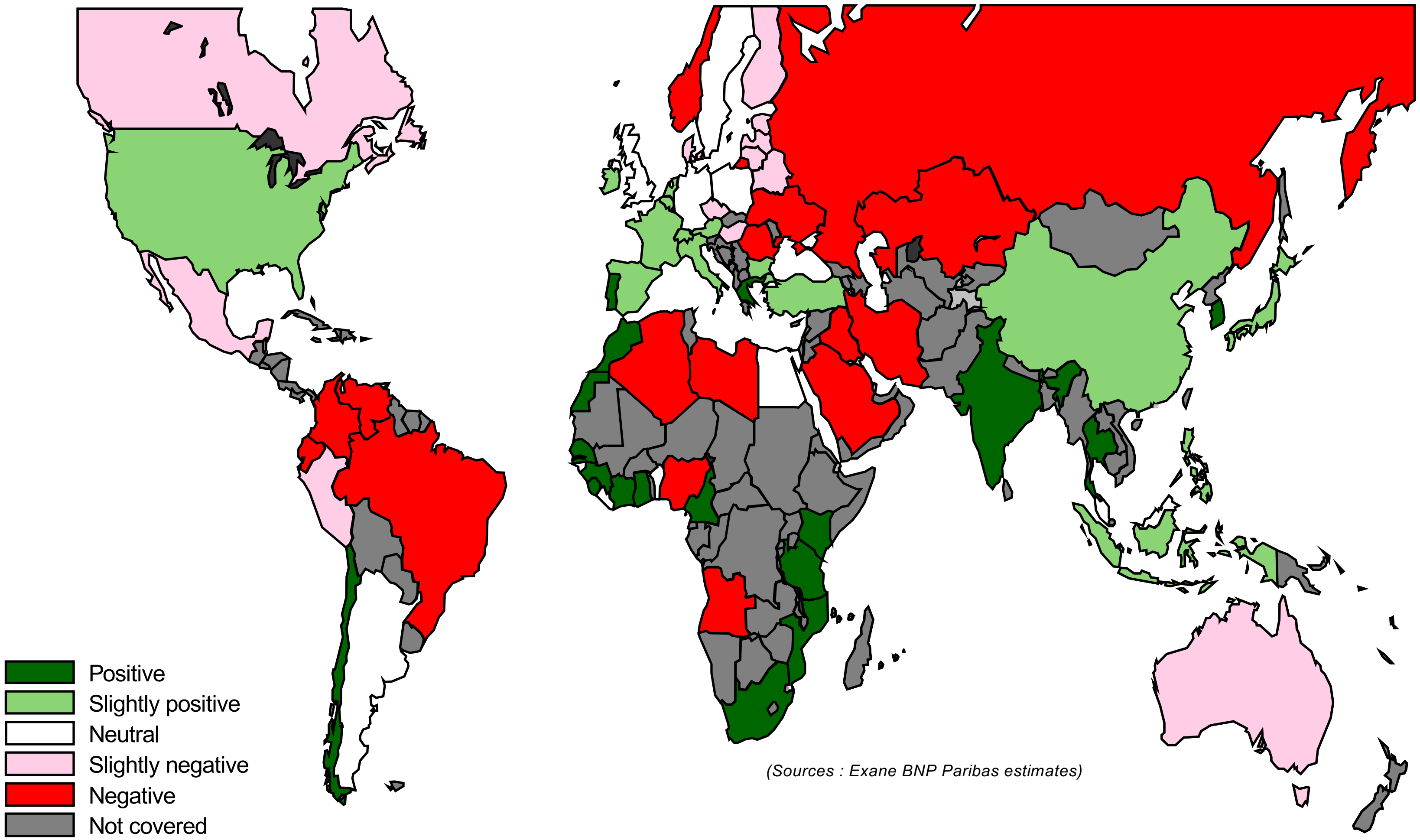
Source: Exane BNP Paribas estimates

Lower oil and commodities prices will impact growth in many countries

1) Lower oil and commodity prices is bad for many emerging markets.
2) DM consumers are benefiting from lower oil and commodity prices and lower inflation
3) Australia, Canada and some states in US (eg Texas) negatively impacted

Lower oil & commodity prices impact on GDP/construction outlook

Based on oil & commodity exports/imports as a % of GDP



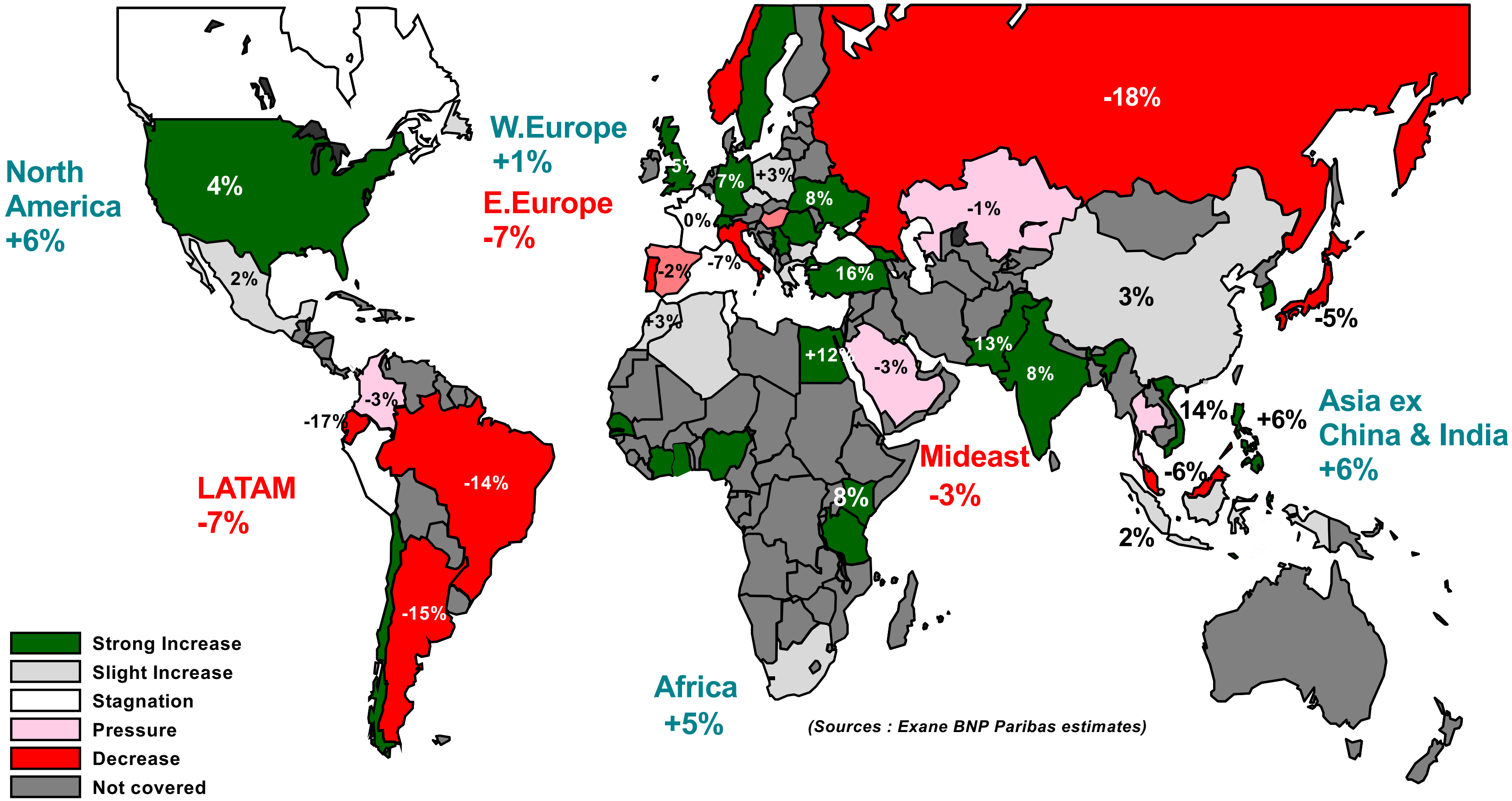
Source: Exane BNP Paribas estimates

What has happened so far this year?

1) US recovery has continued, Western Europe recovered slightly (helped by favourable weather conditions)
2) Difficult start of the year in Latam and Russia (impact of lower oil prices and political turmoil in Brazil) / Africa, India are growing.
3) Mixed trends in South East Asia (weak trends in Malaysia, slow growth in Indonesia, good trends in Vietnam and Philippines)
4) China has stabilised thanks to a recovery in housing and a bit more infrastructure spending

Cement Volumes YTD

% chg YoY

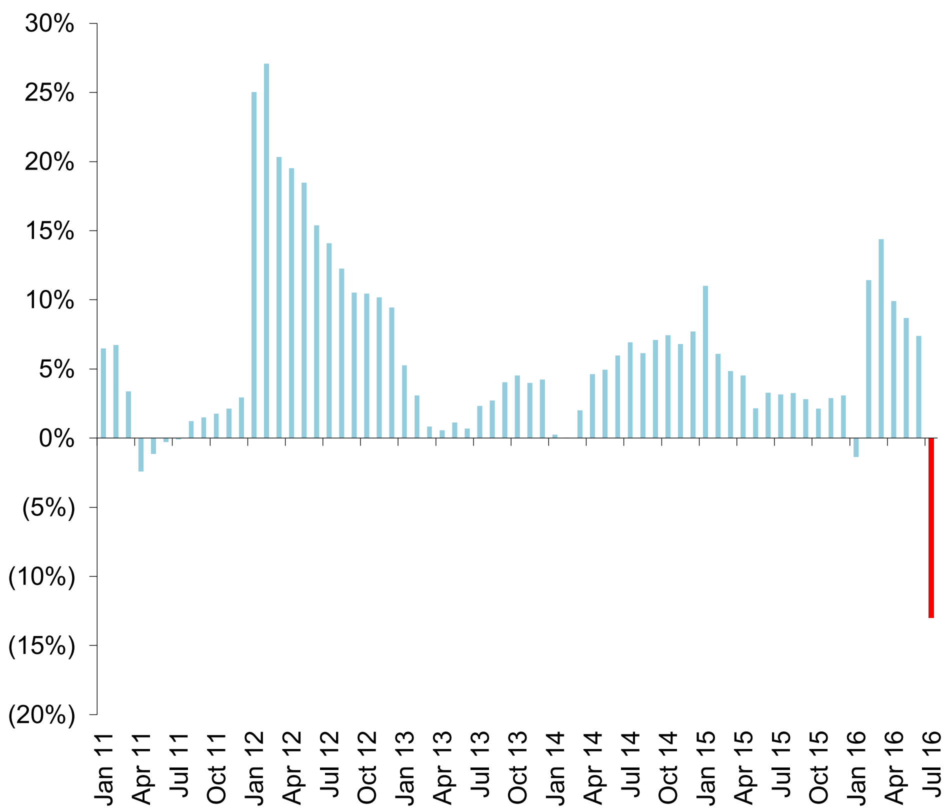


What has happened so far this year?

1) **US cement volumes were disappointing in July at -13% yoy. This is the first big decline since 2010. (weather / slowing housing / delays in infrastructure projects)**
2) **There is still a large growth potential in the US (good population growth / large infrastructure needs)**
3) **Recovery might not always be in a straight line though. Looking at the US presidential election, both Republicans and Democrats agree the country need more infrastructure spending but they disagree on how to finance it.**

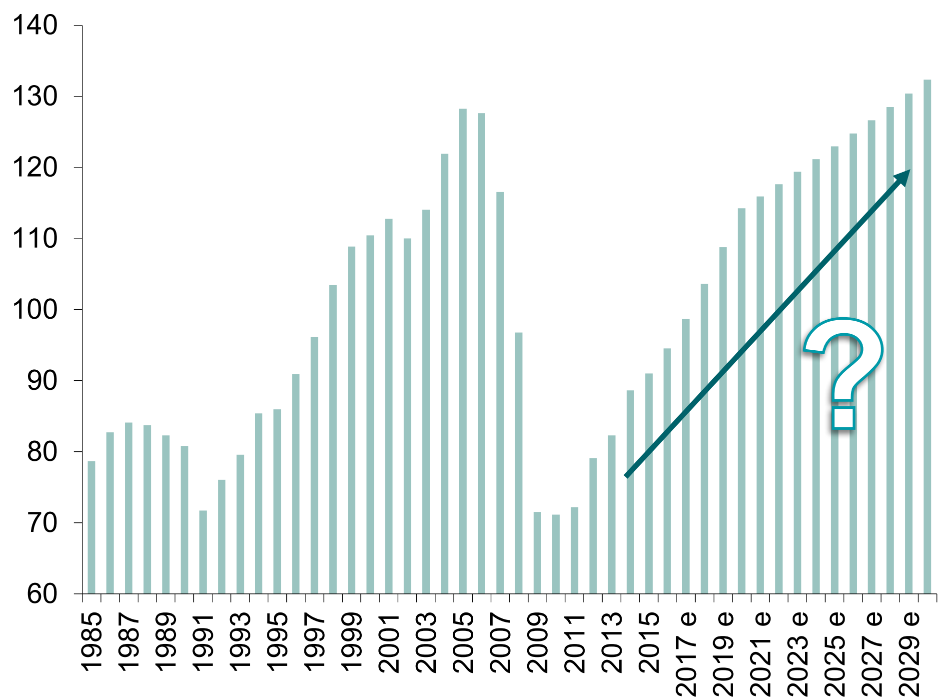
US volumes were quite disappointing in July

YoY % change in US cement shipments



Solid medium growth potential but the recovery may not always be in a straight line

US cement consumption medium term forecast (mt)

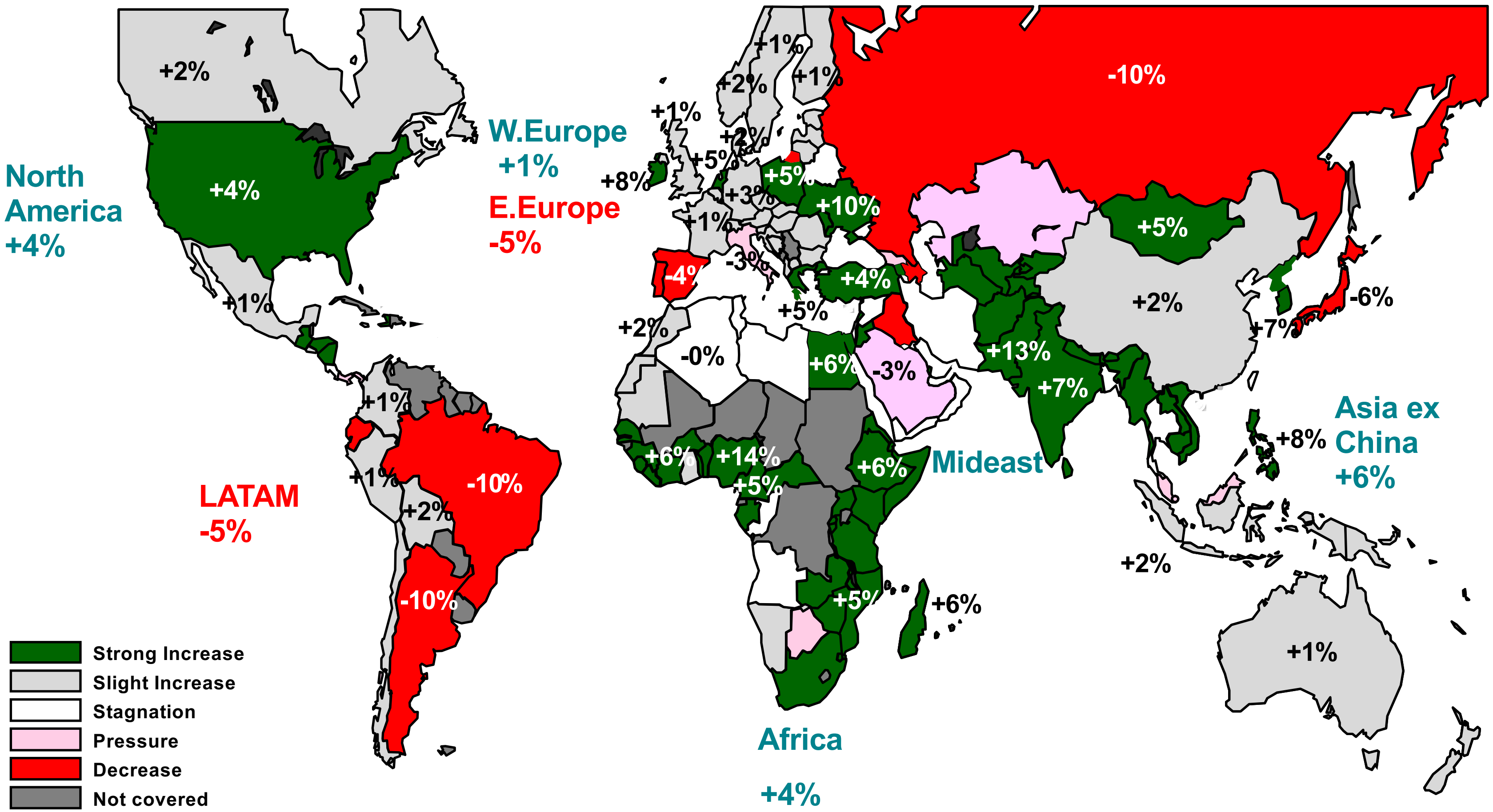


Our scenario for 2016: slow recovery in developed markets (DM), mixed trends in emerging markets (EM)

1) US demand continue to increase
2) recovery in Western Europe
3) Declines in many countries exporting commodities

Cement Scenario 2016

% chg YoY



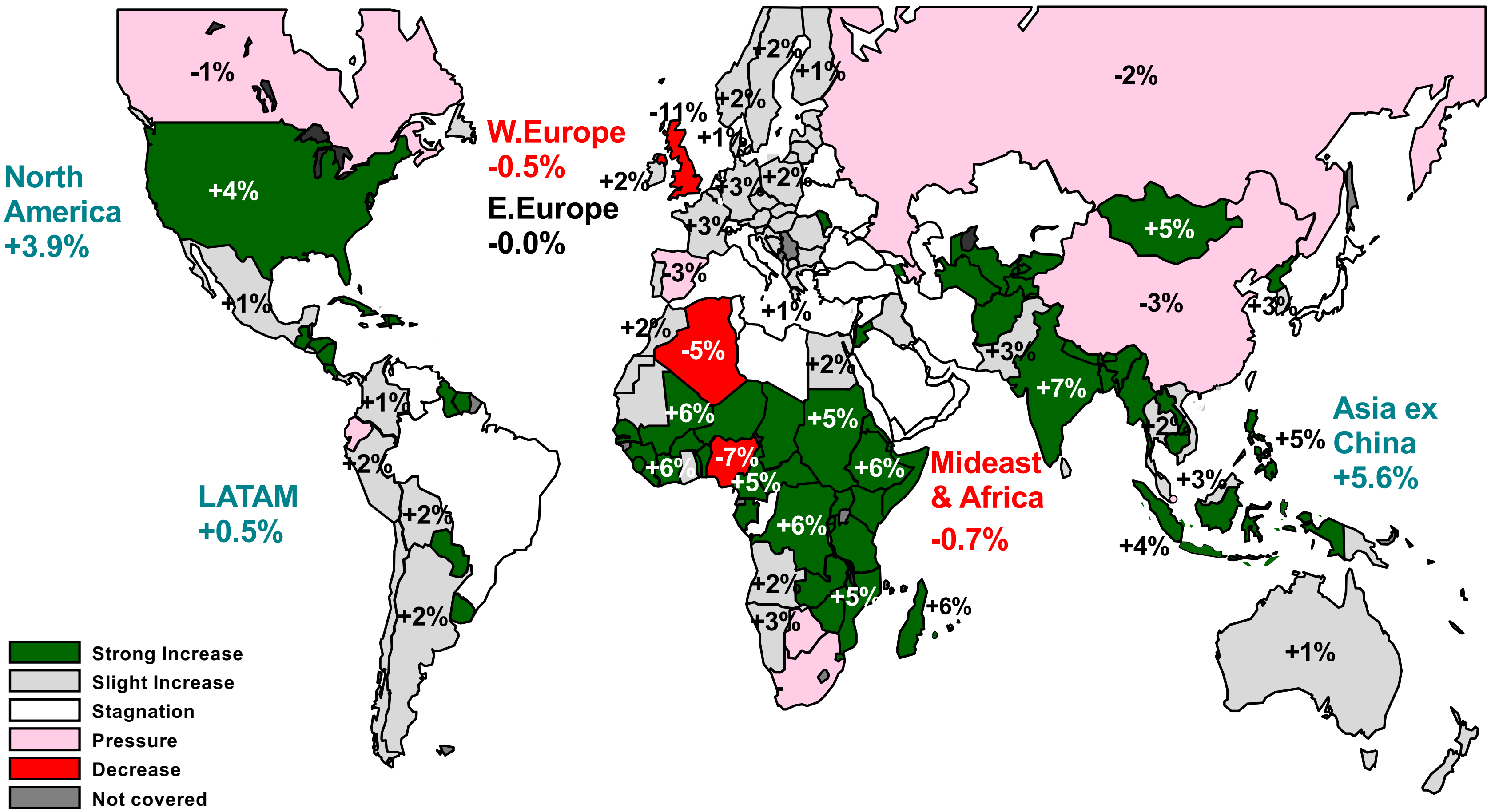
Source: Exane BNP Paribas estimates

Our scenario for 2017: further growth in DM, stabilisation in EM and a question mark on China

1) We expect that the US will continue to increase. Continental Europe should also grow modestly / UK trends may be impacted by the Brexit
2) Growth is unlikely to come back quickly in countries exporting commodities as serval governments will not be able to finance big infrastructure projects
3) In China, the level of infrastructure spending appear unsustainably high and we have assumed a small decline (but the government may decide to invest even if economic returns on new projects are diminishing)

Cement Scenario 2017

% chg YoY



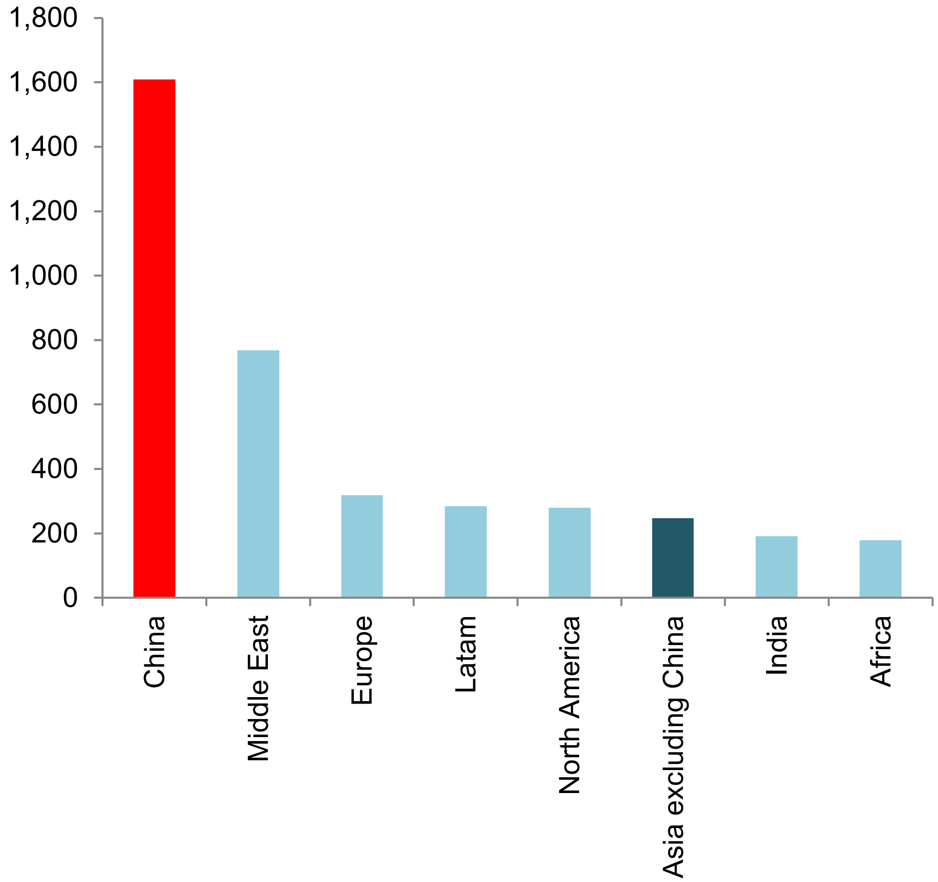
Source: Exane BNP Paribas estimates

Long term prospects: a big question mark on China

1) China has the highest cement consumption per capita in the world and a declining population. This suggests a very big decline is likely long term . We think a normalisation will be managed by the Chinese government.
2) Africa, South Asia and Latin American and the US have good long term growth prospect (low cement consumption per capita / high pop. growth)
3) Europe is unlikely to grow much in the long term

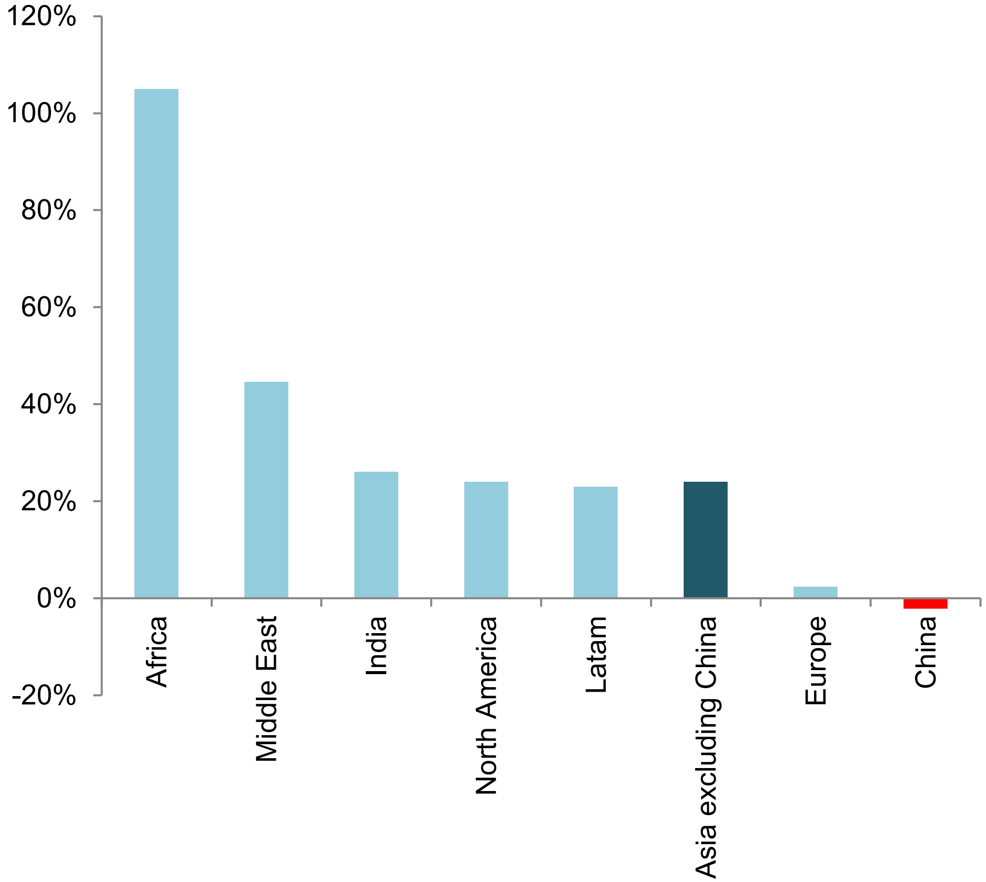
China has the highest cement consumption per capita in the world …

Cement consumption per capita in 2016



And the lowest population growth prospects…

UN population growth forecast 2050-2015



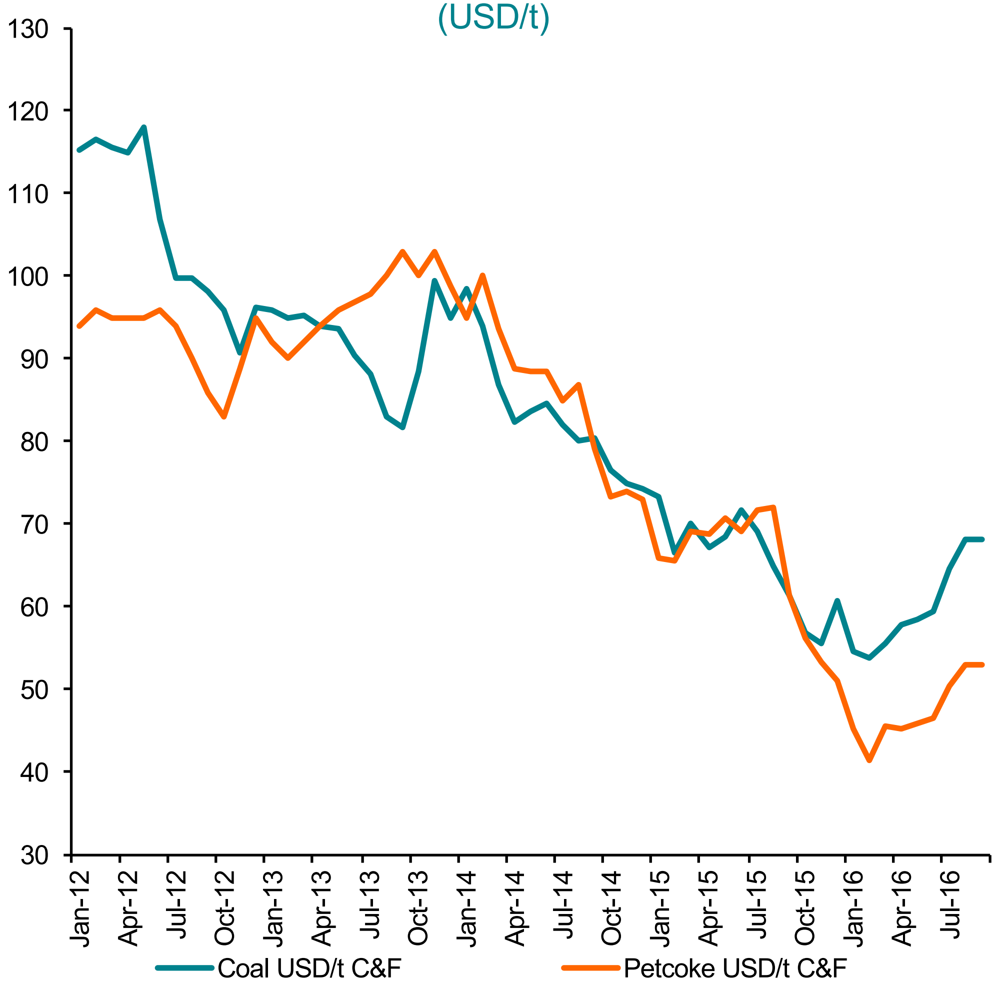
Source: Exane BNP Paribas estimates

Energy cost inflation is coming back

1) The decline in coal and petcoke prices has helped margins in the US and Europe. This was much less visible in countries with weak currencies
2) In 2016 cost inflation is limited in mature countries but is high in in many emerging markets
3) In 2017 cost inflation should be a bit higher in mature markets and remain high in developing countries

Coal and Petcoke prices

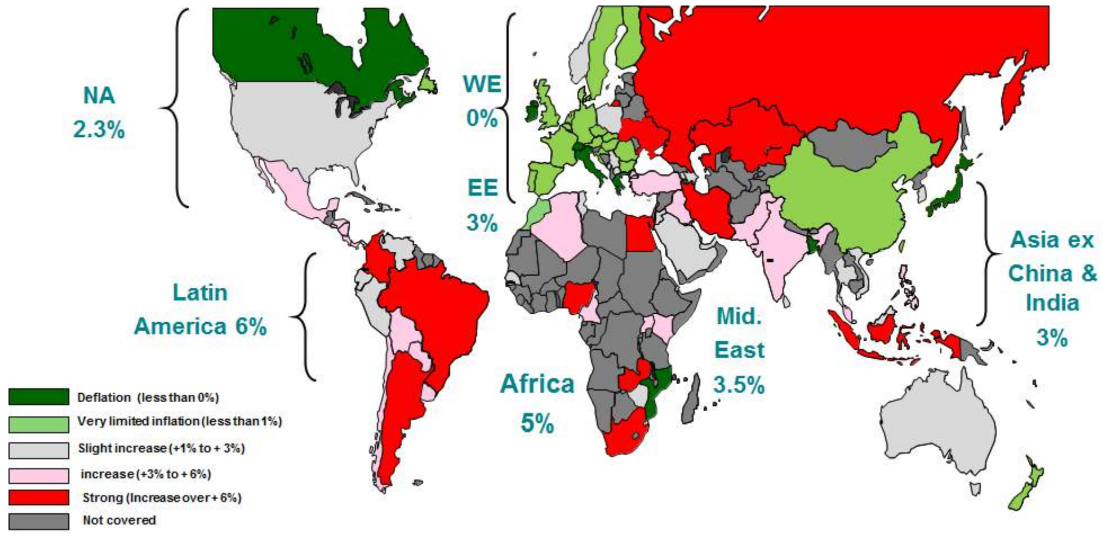
(USD/t)



Source: Exane BNP Paribas estimates

2016 Cement cost inflation

Cost inflation expectations



Weak currency in countries exporting commodities has been a key issue

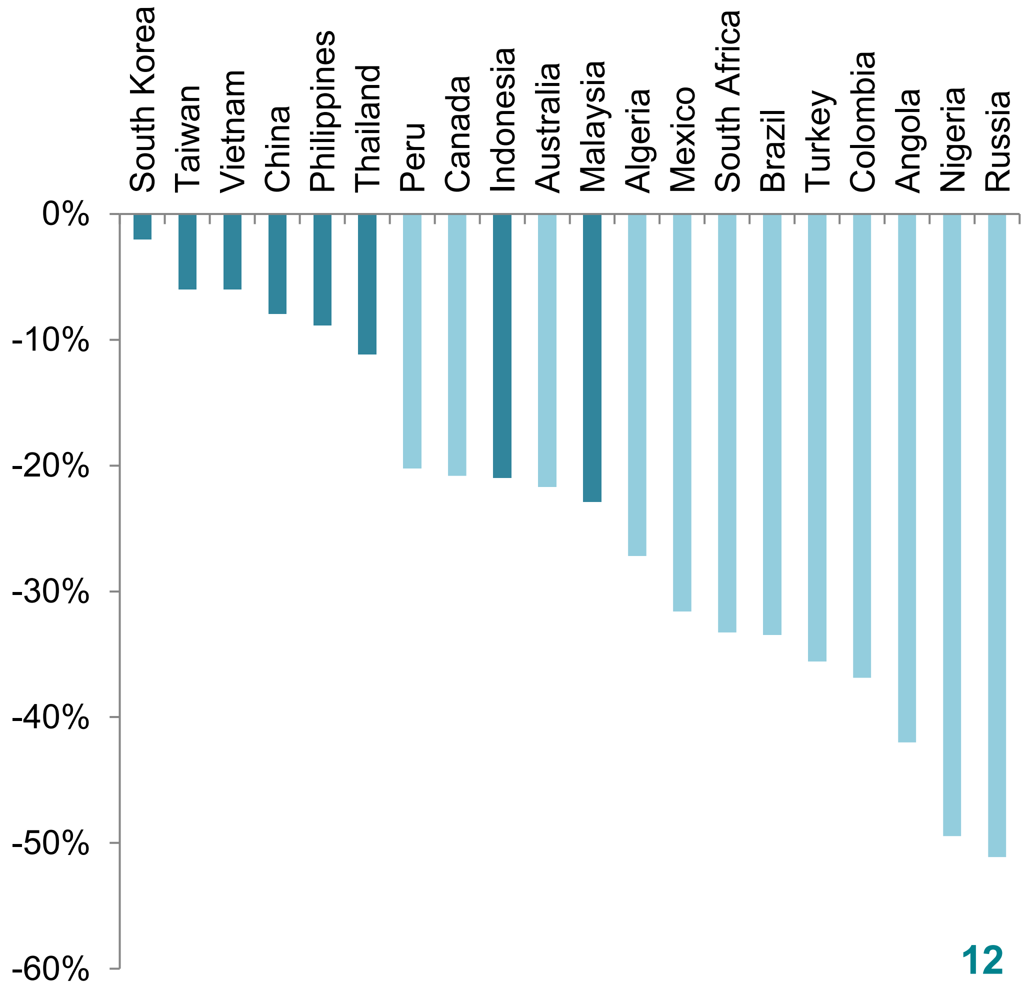
1) The fall in commodity prices has triggered a dramatic decline in the currencies of countries exporting commodities
2) This often means significantly higher cost inflation (e.g. imports of spare part and energy denominated in dollar)

Declining commodities prices…

Key commodities prices - base 100 in Jan 2006

..Led to big currencies deprecation

2016 vs. 2013 depreciation vs. the USD

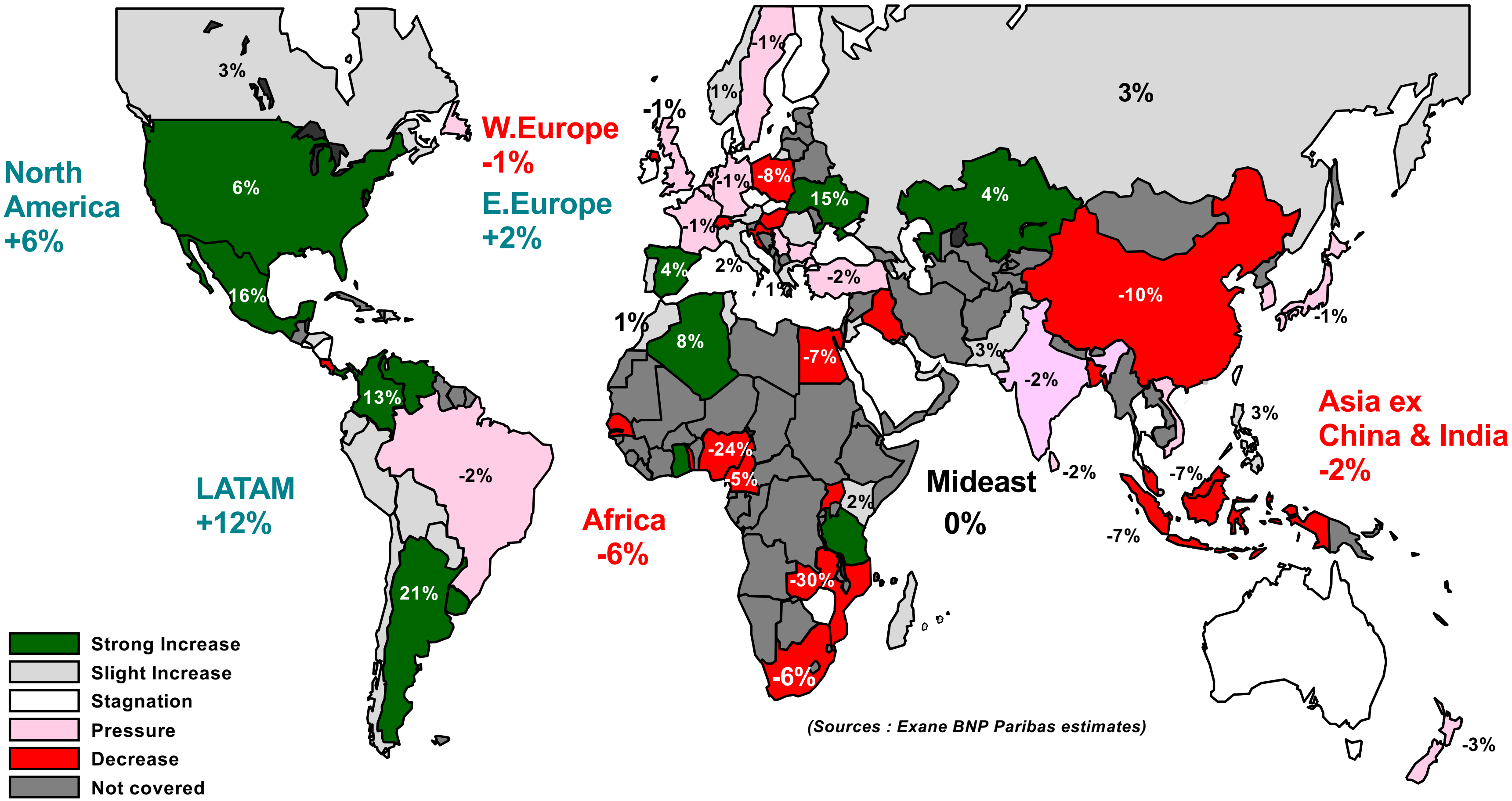


A mixed pricing environment

1) Pricing is strong in the US and relatively stable in Europe in an environment where cost inflation is limited
2) Latin American cement producers have increased prices substantially in reaction to high cost inflation and weak currencies. Brazil is the exception. However prices are down in dollar term in the region compared to a few years ago, despite efforts from the industry.
3) Pricing in Africa and Asia has been severely impacted impacted by new players entering the cement industry or weak utilisation rates

Cement Prices since the beginning the year

% chg YoY



Source: Exane BNP Paribas estimates

Conclusions on our scenario

- **1/ China slowdown: a key turning point for the world cement industry?**
  - For the first time in 2015 Chinese volumes dropped substantially. This led to the first decline in world cement consumption over the past thirty years (china is > 50% of the world cement demand)
  - Chinese demand has stabilised this year thanks to government intervention. We do not know whether infrastructure will remain a priority for the Chinese government in 2017 .
  - There is a big question mark medium term as Chinese cement consumption per capita is the highest in the world and the population is set to decline (due to the one child policy over the past few decades)

- **2/ US and European cash flows are recovering**
  - Volumes are recovering in the US and Europe is stabilising
  - Cost inflation has been limited thanks to lower coal and petcoke prices and cement pricing has been strong in the US
  - The cash generation of most American and European cement plants has been increasing over the past couple of years and is going up again in 2016

- **3/ Mixed trends in Emerging markets**
  - Countries exporting commodities are often under pressure (Latin America, Russia, part of Middle East and Africa)
  - Demand is growing in Sub-Saharan Africa but prices are under pressure due to currencies devaluation and capacity addition
  - There is a bit of growth in India and South East Asia but capacity addition are putting pressure on prices in some countries (notably in Indonesia, Malaysia)

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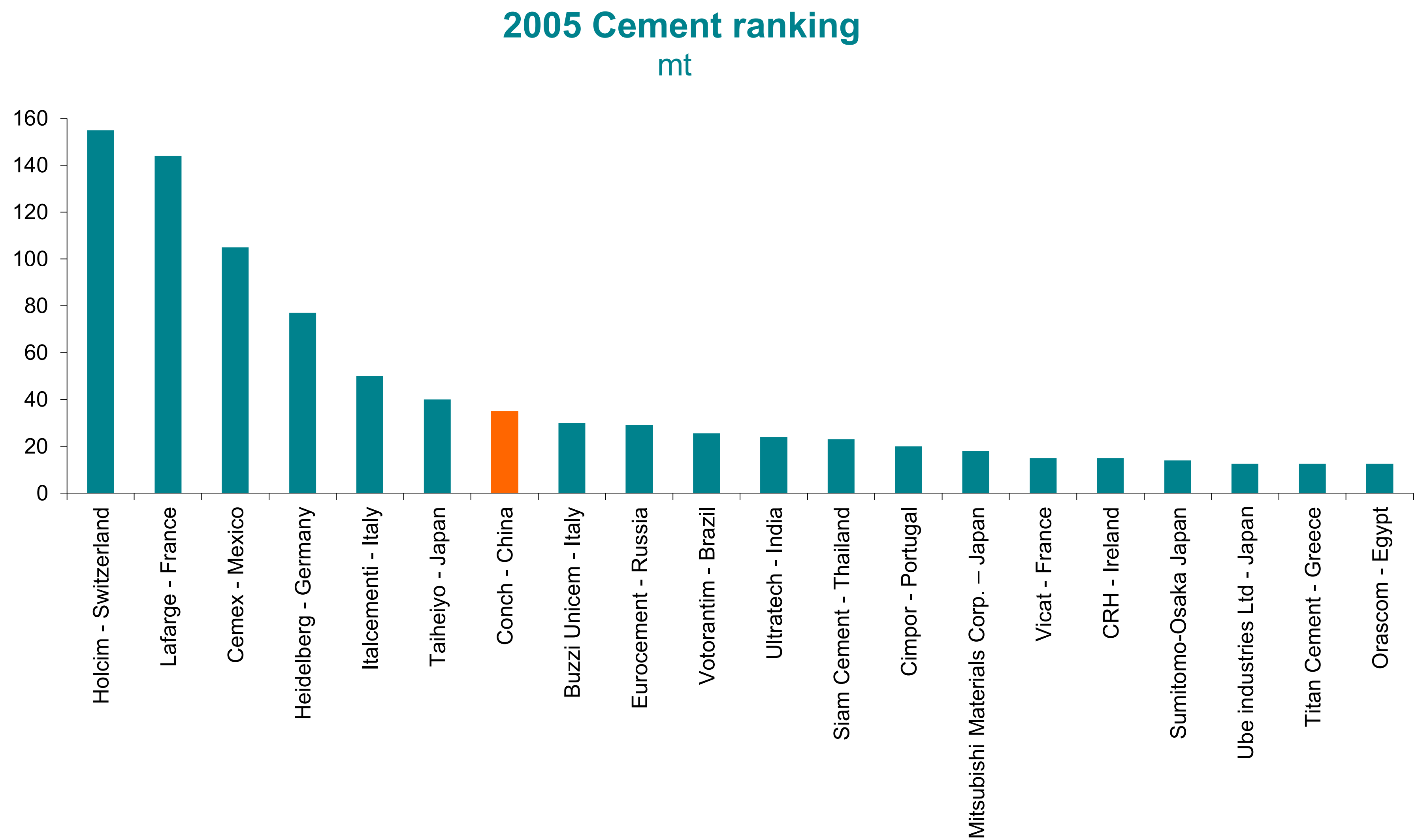
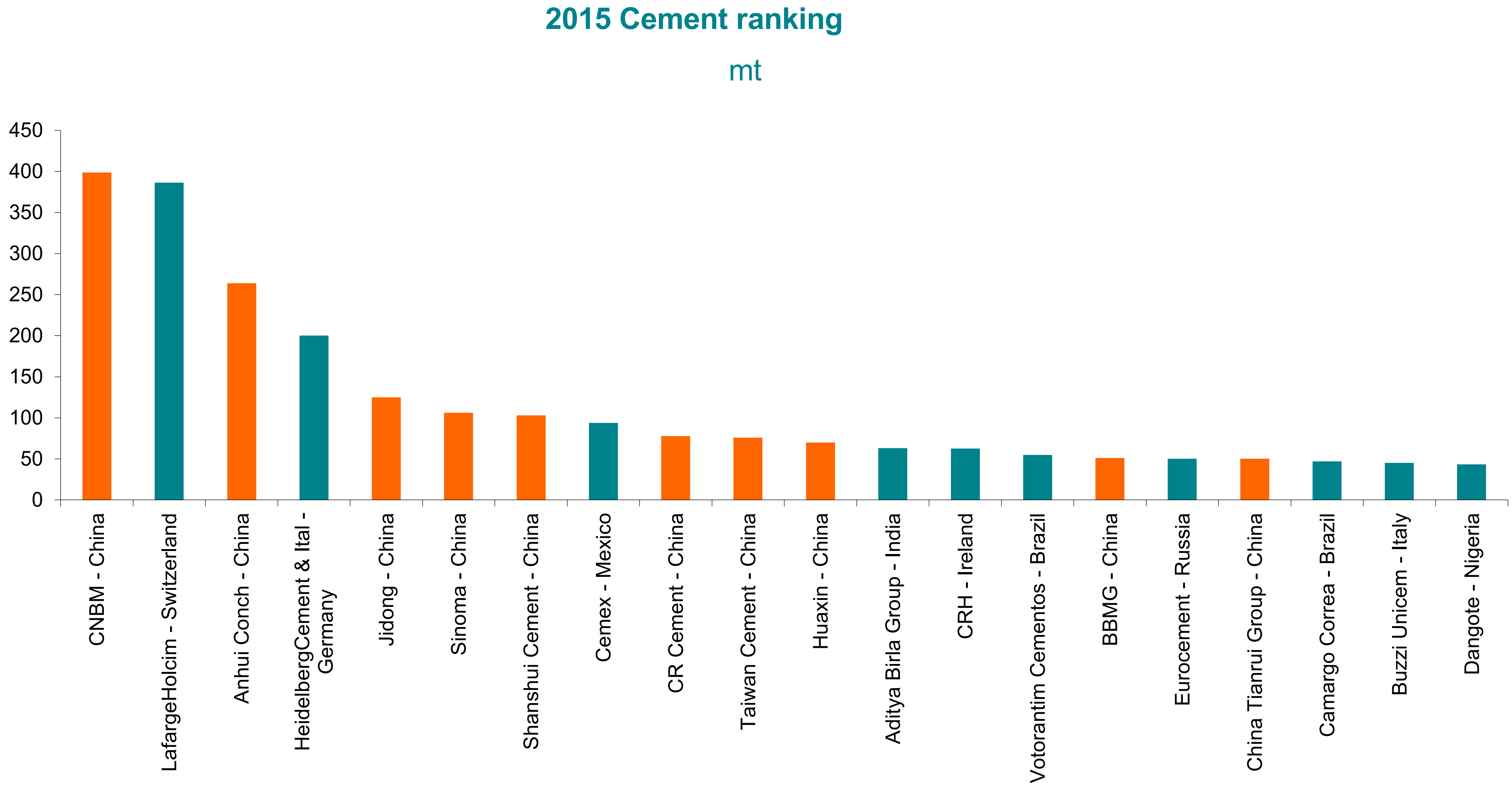
A decade ago, Chinese cement companies were relatively small

1) There was only one Chinese cement producer in the world top 20 ten years ago
2) The industry was dominated by the international majors Holcim, Lafarge, Cemex and Heidelberg
3) A big change in the past decade: the Chinese have grown on the back of a domestic boom. This didn't matter when they were focussed on China…



11 of the world's top 20 cement firm by capacity are now Chinese

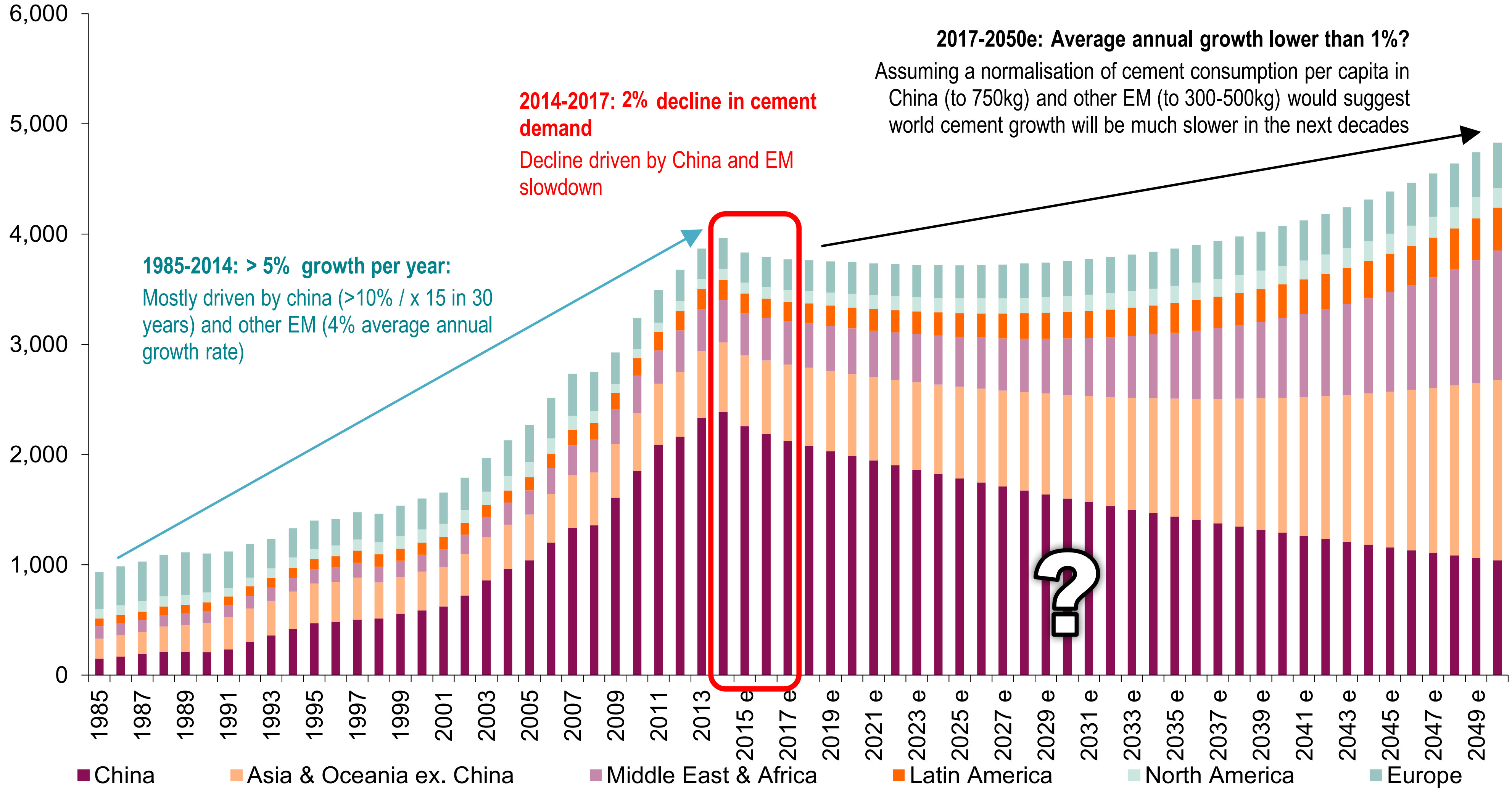
1) **There was only one Chinese cement producer in the world top 20 ten years ago**
2) **The industry was dominated by the international majors Holcim, Lafarge, Cemex and Heidelberg**
3) **A big change in the past decade: the Chinese have grown on the back of a domestic boom. This didn't matter when they were focussed on China…**



Recent developments raise two fundamental questions

1) Will cheap exports flood the global cement market? Could cement suffer the same deflationary fate as the steel industry?
2) What are the long term consequences of a downturn in the Chinese cement industry? The country represents >65% global demand and supply
3) We went to China to find out

A turning point in China. A gradual decline could drag down global growth



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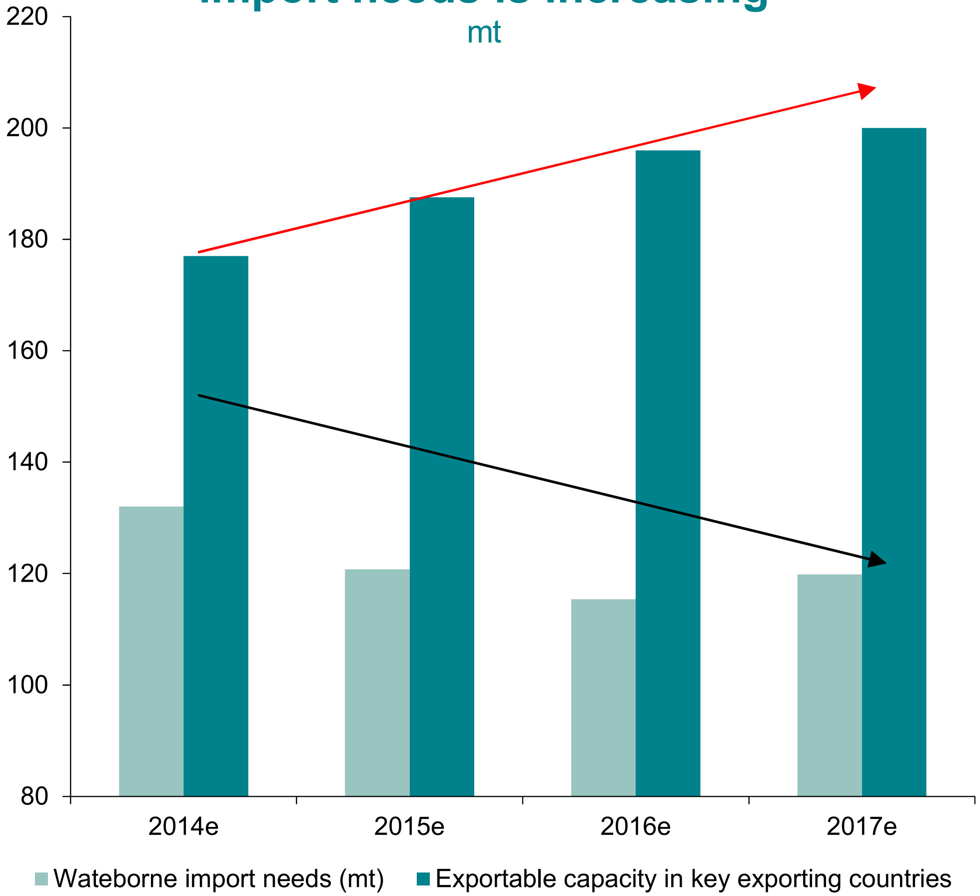
A glut of cheap cement

1) Tradable cement is very cheap (USD50-65/t vs USD70-100/t retail prices) because of excess supply, low energy costs and cheap freight rates
2) The gap between exportable surplus and import needs is likely to widen. It's not just about China
3) The impact will be deflationary in a few markets with independent terminals but not an Armageddon. There are barriers to imports in many countries

Cheap imports pose a risk in some cement markets

The gap between export capacity and import needs is increasing

mt



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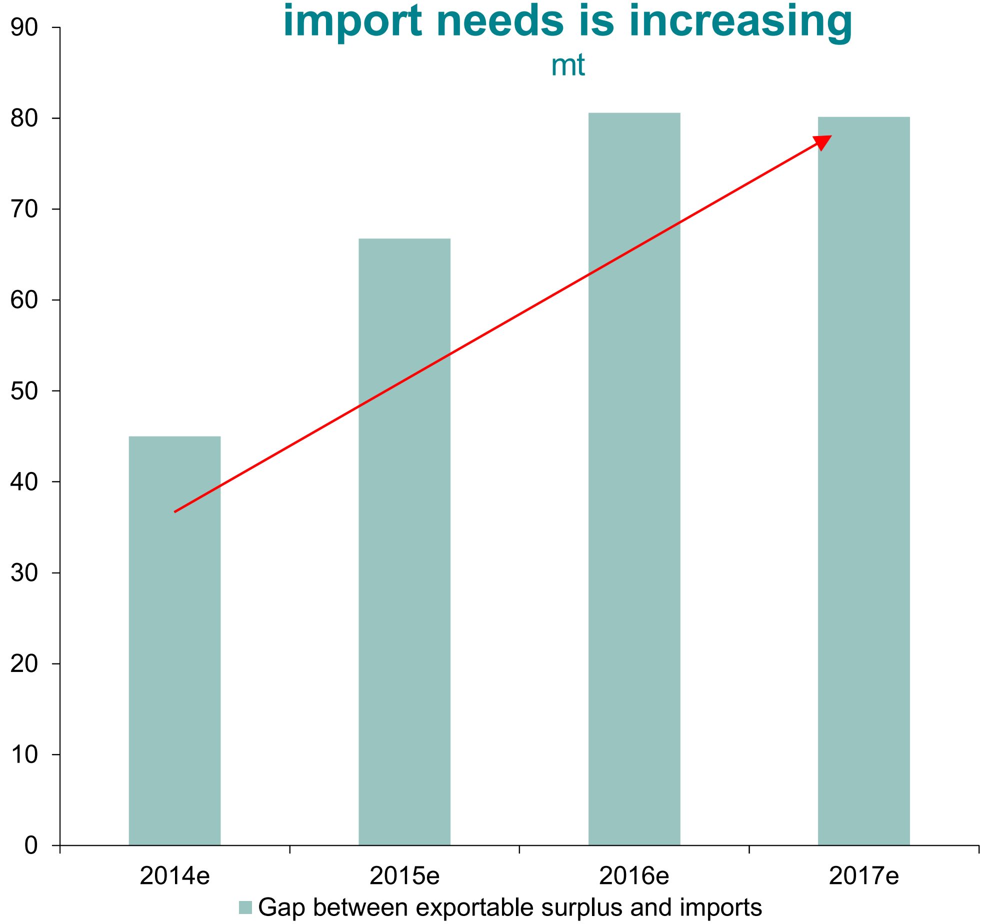
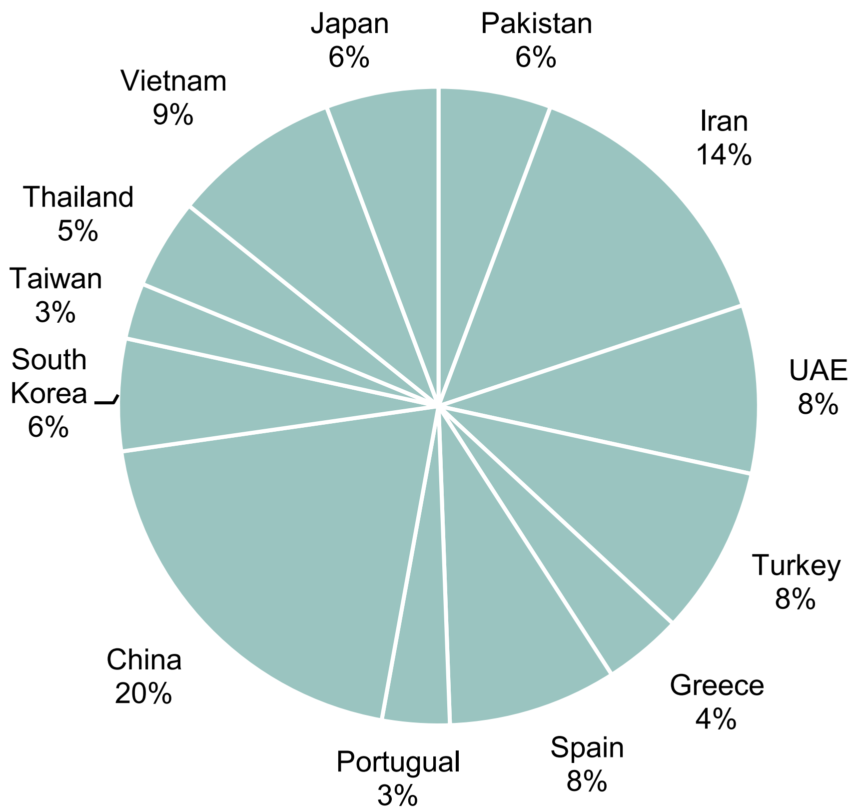


Source: Exane BNP Paribas estimates

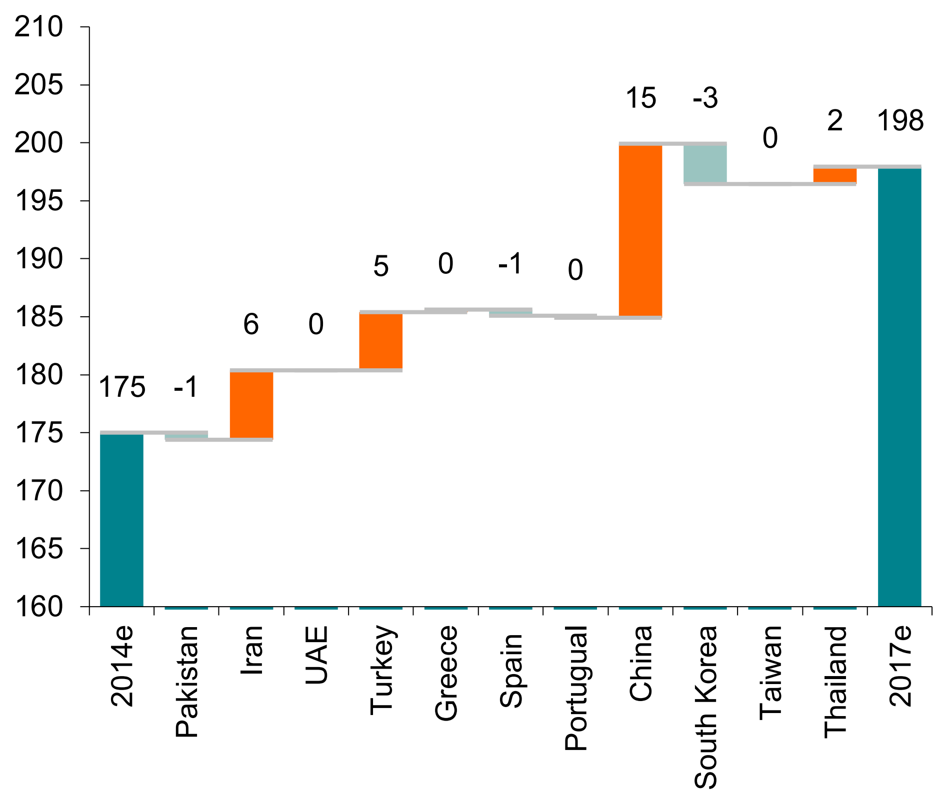
A glut of cheap cement

1) The exportable surplus is increasing because of China (demand slowing faster than capacity closures), Turkey and Iran
2) New capacity is also coming in Canada in 2018
3) The exportable surplus is increasing by >20mt in 2014-17e

Breakdown of surplus exportable clinker capacity (2014)

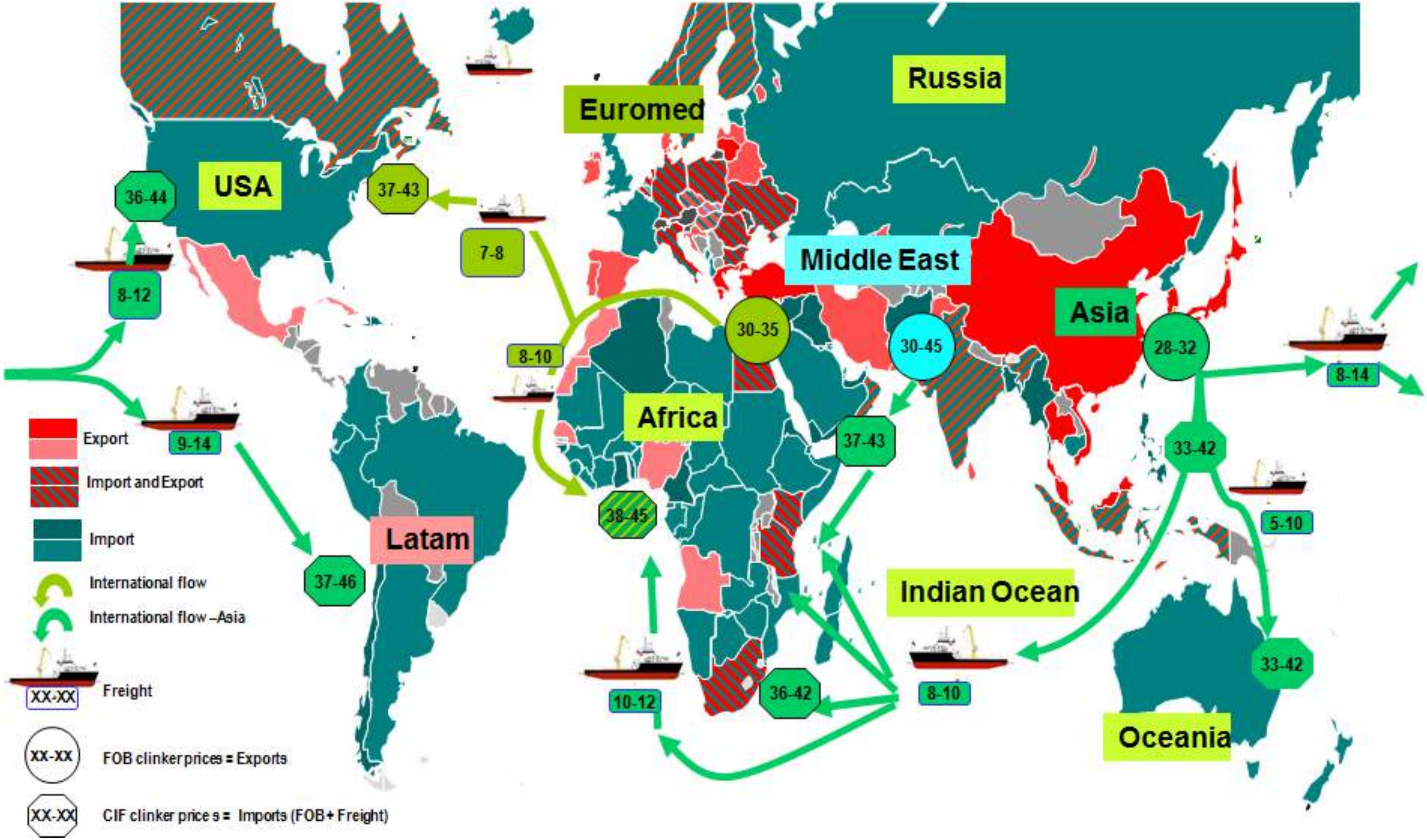


Evolution of the exportable surplus capacity (mt)



A glut of cheap cement

1) There is a lot of exportable capacity in Euro med region , in Asia, and in the Middle East
2) Clinker prices and freight rates are very depressed are and It is possible to import clinker for less than USD45/t CIF in most part of the world
3) Local logistical costs can vary considerably depending on the quality local infrastructure but the cost of producing one ton of bag cement with import can often be as low as USD60/t



Is Cement the next steel?

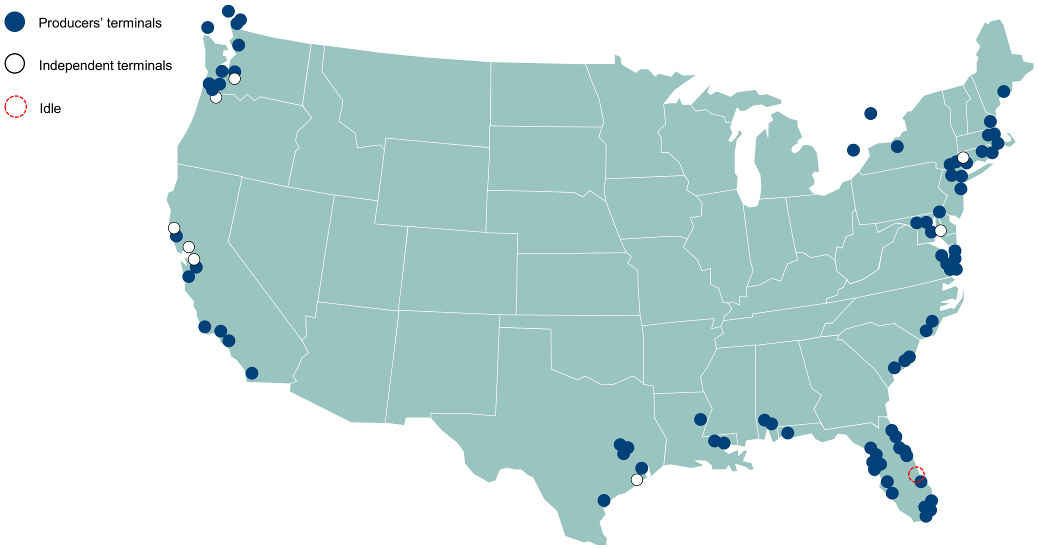
1) There are parallels…
2) … but also big differences
3) For cement the impact will be more localised than in steel

	Steel industry	Cement Industry	Comments
Chinese exportable capacity as a % world demand	c. 10-12%	c. 5-6%	High exportable Chinese surplus for both (higher in steel)
Commodities & energy as a % of costs	c50-60%	c. 30-40%	High for both but highest for steel. Iron ore & energy are falling in steel whereas it is only really energy deflation that is driving traded cement production costs down
Industry employees as a % of Chinese active workforce	0.5%	0.2%	The Chinese steel industry employs more than twice as many people as the cement industry
Who controls the terminals?	Mostly independent wholesalers in the US/largest producers and independent wholesalers in the EU	Mostly cement producers	In the cement industry, exporters cannot access a cement market with no independent terminals even if the price differential is high. An import arbitrage exists in most steel markets
Control of global trade flows	Mix of independent wholesalers & producers	Cement producers control over >70% of trading flows	
Value to weight ratio	> USD400/t	Average of USD70 ex China	Cement markets that are >300km away from the coast are often protected from imports. This is not the case in steel
Additional cost for 100km travel by truck	c. 5%	>15%	

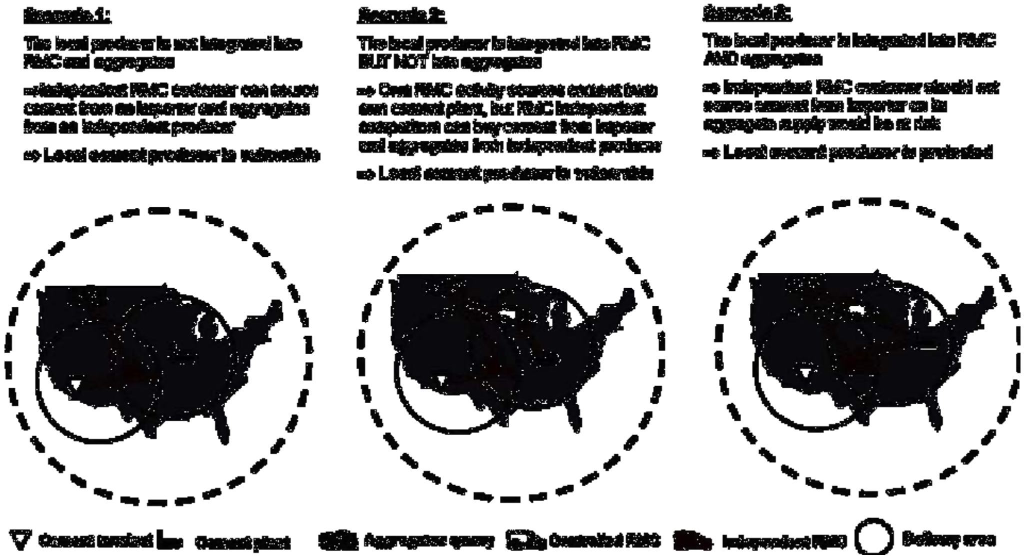
Mature markets are relatively protected

1) There are big barriers to entry in developed markets
2) In markets like US, UK and Australia the terminals are controlled by the producers
3) Vertical integration offers protection

Most DM terminals are controlled by cement producers



And Vertical integration offer a protection

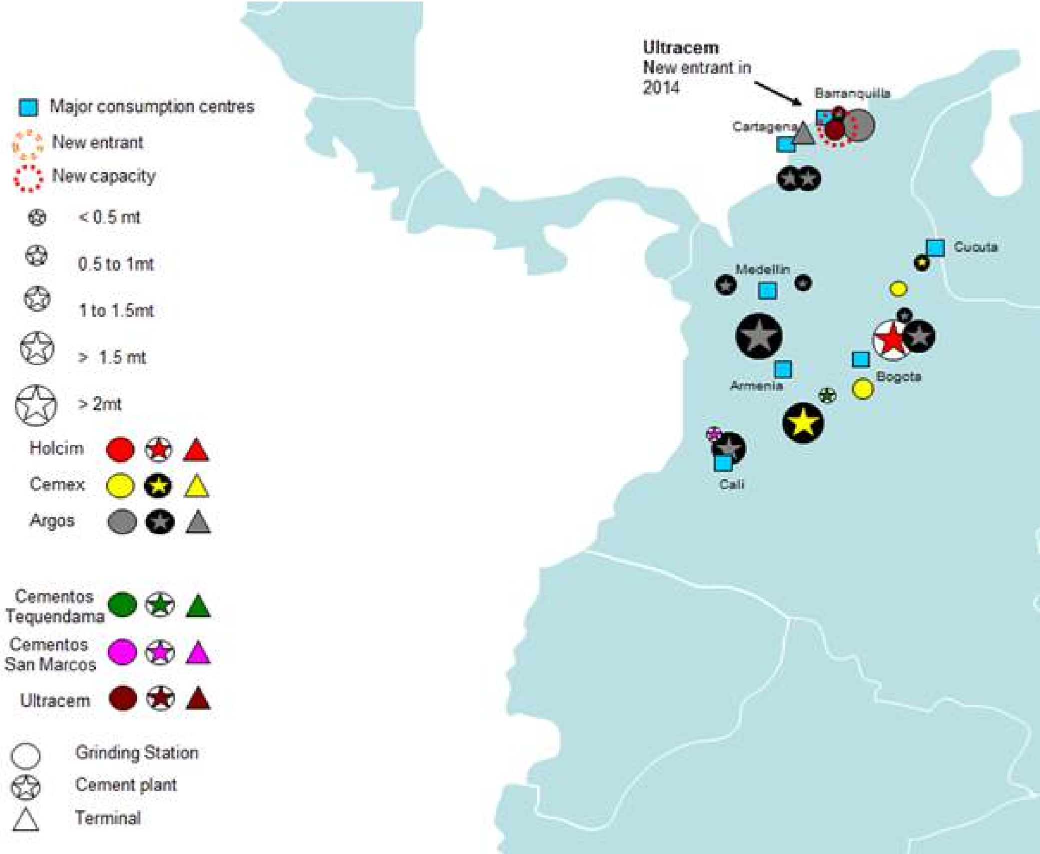


There are some limited risks in emerging markets

1) There are also barriers in EM
2) There are government intervention via mechanisms like import restrictions to protect the investment of domestic companies
3) Barriers can sometimes be overcome and when this happens there is a temporary risk

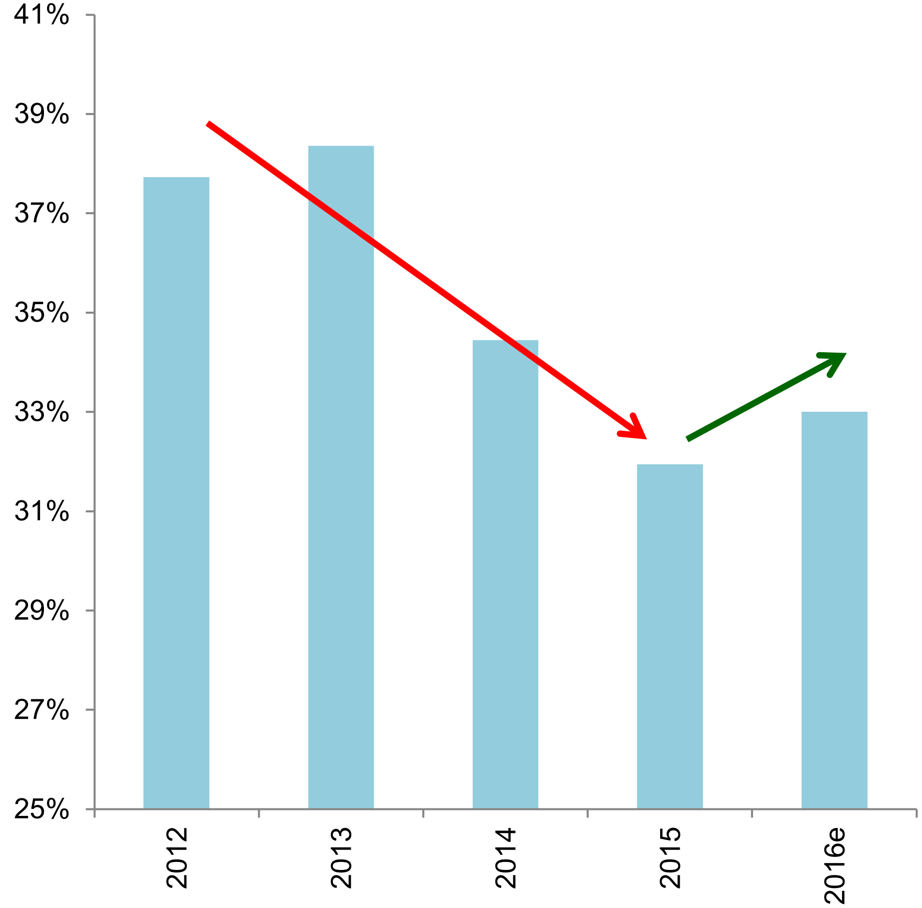
It is difficult to set up import operation is most EM but not always impossible

Map of Colombian cement plants



This can temporarily impact the industry profitability

Average EBITDA margins in Colombia

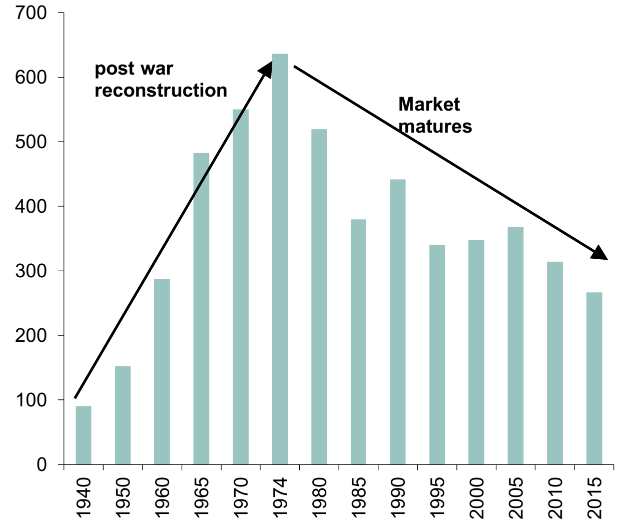


Source: Exane BNP Paribas estimates

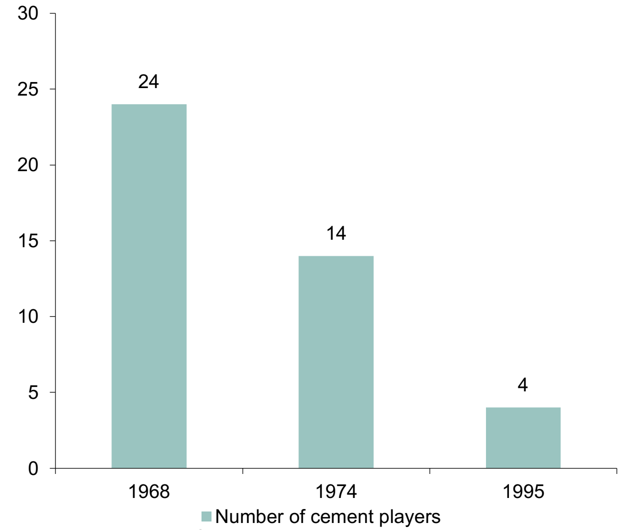
Is China actually the next France?

1) French cement consumption peaked in the 1970s and has been maturing ever since
2) The industry started to consolidate as the demand declined
3) The process took 30 years and was helped by technological changes (shift from wet to dry cement that made some players uneconomical)

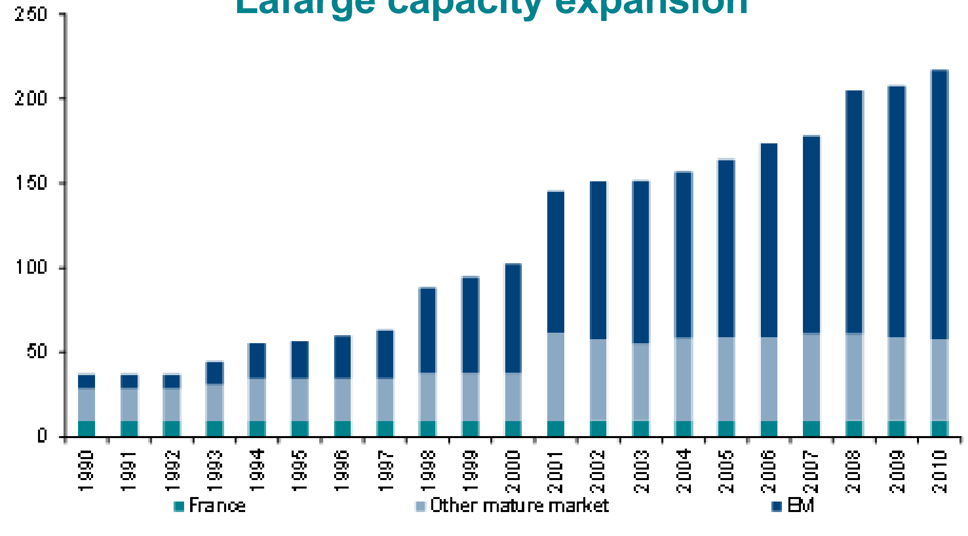
French cement consumption per capita



Market concentration



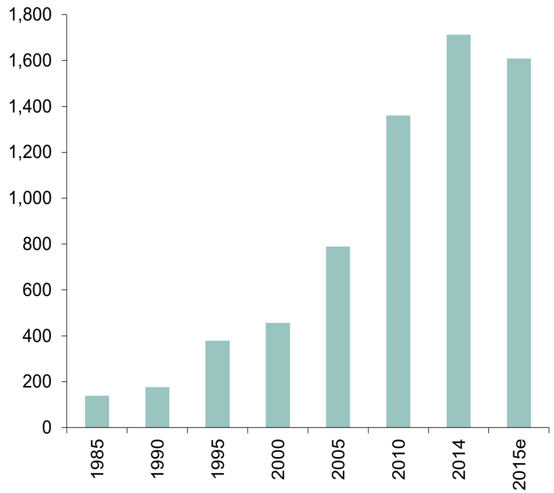
Lafarge capacity expansion



Is China actually the next France?

1) If prices recover to 2011 levels (cUSD80/t) the Top 10 producers could have cUSD22bn firepower every year from 2020
2) In a scenario where Chinese prices increase to the global average this firepower increases to cUSD40bn pa
3) Without an improvement in profitability cash firepower could be more limited to c5bn pa

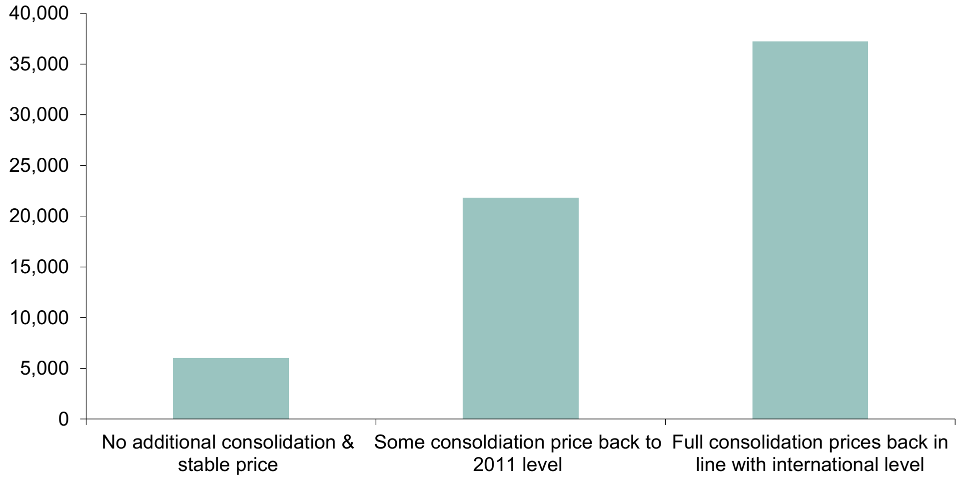
China consumption per capita



Market concentration

Top 10 players market share

Chinese majors P&L and cash generation

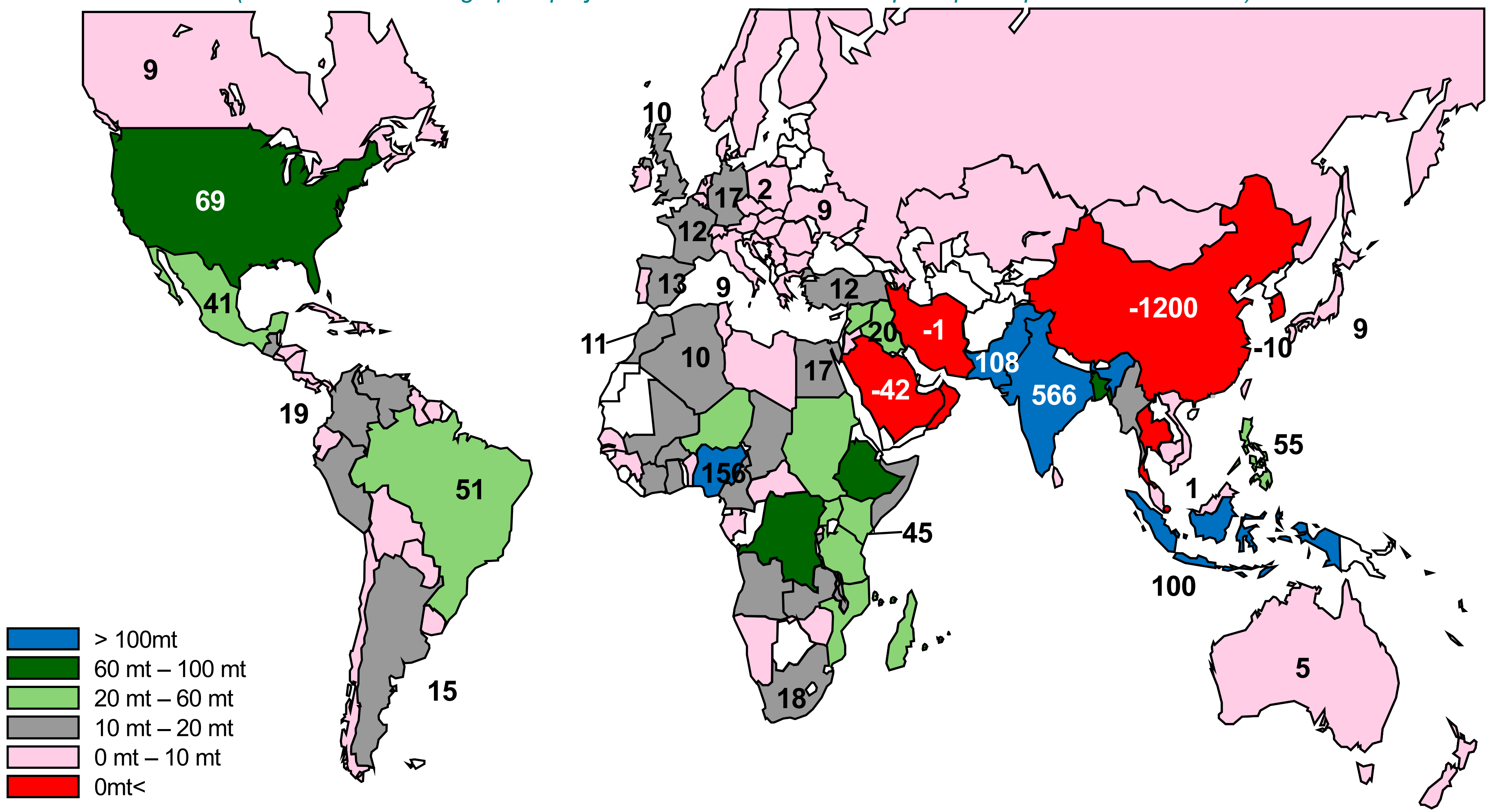


What are the potential targets or partners?

1) South East Asia and Sub-Saharan Africa are attractive area in which some Chinese companies have been operating
2) China could also consider expanding in Central Asia
3) India, Latin American (especially Brazil) and the US also have substantial growth potential

Growth in cement consumption 2015-50 (mt)

(based on UN demographic projection and cement consumption per capita mean reversion)



What are the potential targets or partners?

1) Chinese majors could look to acquire companies or form regional strategic alliances with the international companies
2) An acquisition or a partnership could bring new project management expertise, exposure to attractive markets, terminals and trading capabilities
3) A deal with one of the big international majors could make strategic sense long term

	HQ	Capacity (mT)	Inte. project management	Import terminals / operations: South East Asia & Oceania	Latin America	North America	East Africa / South Africa	Listed	Shareholder structure
Europe									
LafargeHolcim	Switzerland	387	Yes	x	x	x	x	Yes	Large ref. shareholders
Heidelberg	Germany	129	Yes	x	x	x	x	Yes	25% family
CRH	Ireland	62	Yes	x		x		Yes	100% free float
Titan Cement	Greece	25	Yes			x		Yes	Privately controlled
Buzzi Unicem	Italy	45	Yes			x		Yes	Privately controlled
Cementir	Italy	15	Yes			x		Yes	Privately controlled
Vicat	France	30	Yes			x		Yes	Privately controlled
Eurocement	Russia	50	Regional			x			Privately controlled
North America									
Ash Grove	USA	9	No			x			Privately controlled
Summit Materials	USA	2	No			x		Yes	Free float + PE
Latin America									
Cemex	Mexico	94	Yes	x	x	x		Yes	Large shareholder
Votorantim	Brazil	55	Yes		x	x			Privately controlled
Camargo Correa	Brazil	47	Yes		X				Privately controlled
Argos	Colombia	20	Yes		X	x		Yes	Privately controlled
Unacem	Peru	10	Regional		x			Yes	Privately controlled
Pacasmayo	Peru	3	Regional		x			Yes	Privately controlled
Yura	Peru	3	Regional		x			Yes	Privately controlled
BioBio	Chile	na	Regional		X			Yes	Privately controlled
Africa									
Dangote	Nigeria	43	Regional				x	Yes	Privately controlled
PPC	South Africa	7	Regional				x	Yes	Free float
ARM Cement	Kenya	3	Regional				x	Yes	Privately controlled
Tanga Cement	Tanzania	1	Regional				x	Yes	Privately controlled
WACEM	Togo	>2	Regional						Privately controlled
CIMAT/CIMAF	Morocco	>3	Regional						Privately controlled
Asia & Oceania									
YTL cement	Malaysia	6	Regional	x					Privately controlled
Semen Indonesia	Indonesia	32	No	x				Yes	Gvt. controlled
Eagle & North Cem	Philippines	4	No	x					Privately controlled
Siam Cement	Thailand	3	Regional	x				Yes	Privately controlled
Ad..Brighton	Australia	6	No	x				Yes	Free float
Boral	Australia	3	Not in cement	x				Yes	1 large shareholder
Ultratech	India	63	Regional	x				Yes	Privately controlled

Conclusions on China

- **1/ A normalisation in Chinese cement demand would substantially increase the world cement surplus**
  - If China demand normalise to 750kg per capita this could lead of a reduction of world cement consumption of over 1bnt
  - Most of the capacity in China is inland and therefore disconnected from the rest of the world
  - There is however c. 100mt of modern cement capacity on the coast that can theoretically send cement oversea
- **2/ Will Chinese companies focus on export?**
  - Chinese export will probably increase but are unlikely to flood the word in the current set-up
  - Most of the trading flows are controlled by the majors and local cement producers importing for their own needs
  - Most Mature market are relatively protected (imports terminal are controlled / vertical integration) / There are import restriction in many emerging markets
  - Could Chinese players decide to build their own import terminal network and global trading operations ? We understand this is not a priority for them today but such scenario cannot be completely excluded medium term even if it is unlikely to happen
- **3/ Chinese players are now focusing on consolidation. Will they go abroad once the process has ended?**
  - The Chinese government has given a clear mandate to leading domestic cement companies to consolidate the markets. More stringent environmental regulation will also force the closure of the smallest and least effective plants
  - In the medium term, once the market is consolidated, the largest cement companies in the world will be Chinese. They could decide to invest oversea to find new growth platforms. This would be the most important change in the world cement industry this century.
  - If this happen, we think they will first look at expansion in South East Asia, and Africa which are two regions with very strong growth potential. Also, Chinese equipment suppliers already have very strong positions in these areas. Acquisitions in the US or Latin America could make sense given the regions' good growth prospect. There is also an attractive network of import terminals in the US that could absorb part of the Chinese surplus.

[redacted]

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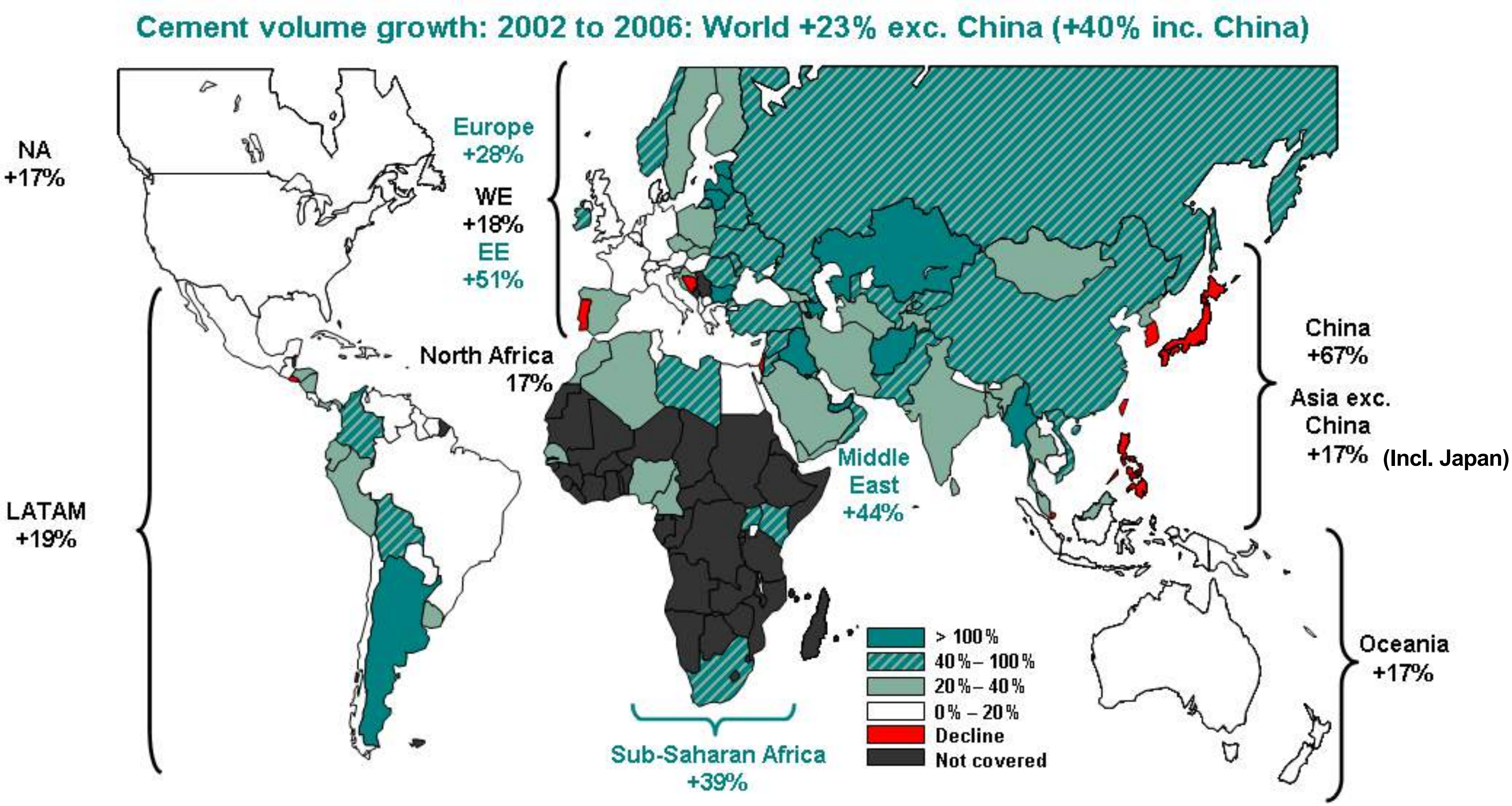
The last cycle experienced strong volume growth

1) Cement demand was driven by continued growth in residential construction, a rebound in non residential activity and solid infrastructure spending
2) Excluding China, World cement grew by 23% between 2002 & 2006 driven by both emerging markets (CAGR of 9%) and mature countries (CAGR of 5%)
3) Including China (more than half of the world's cement production), cement demand increased by 40% between 2002 & 2006

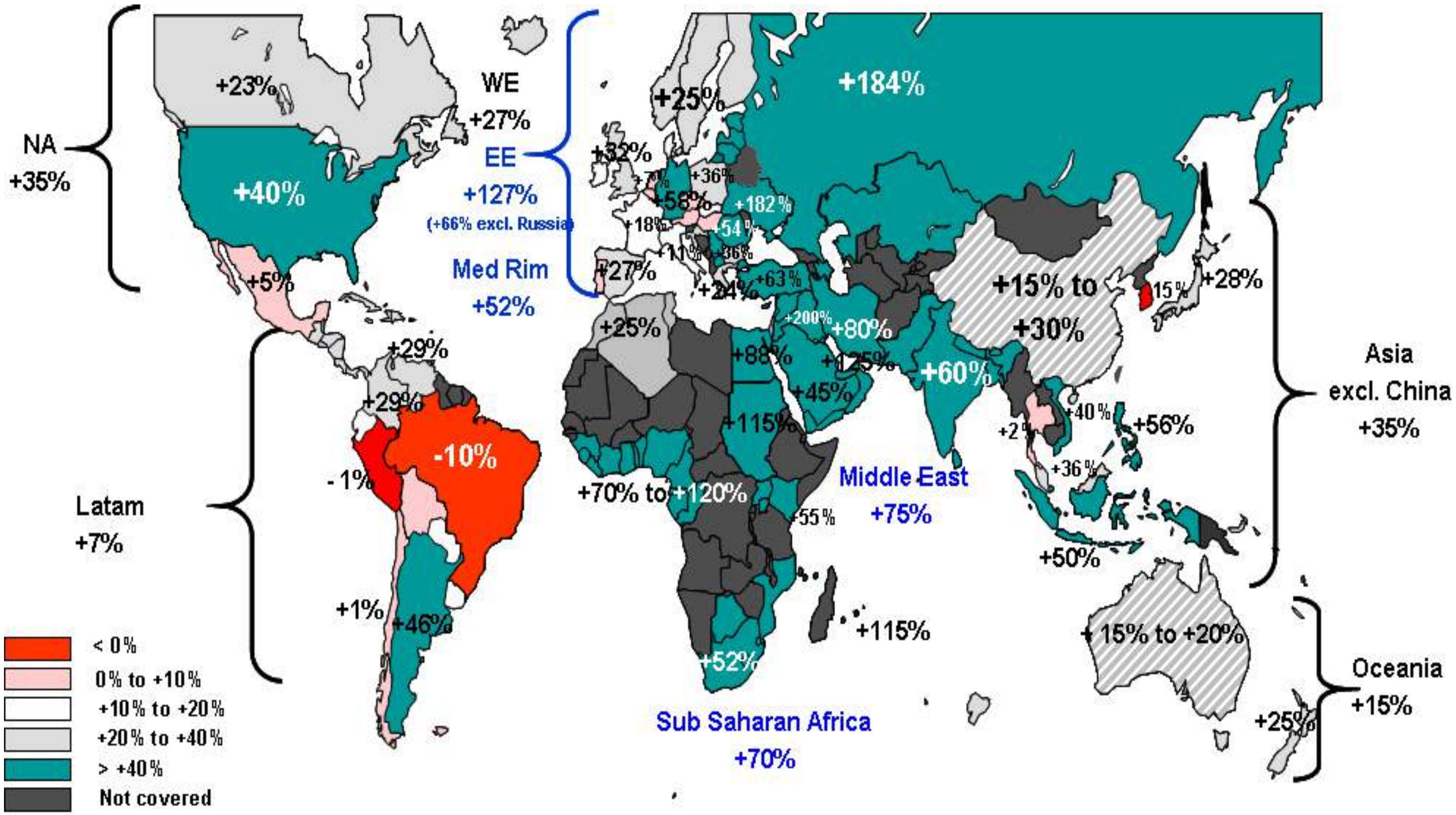


Pricing power enabled manufacturers to pass more than cost inflation

1) **Unprecedented Price increases: + 45% excl. China between 2003 & 2008 (+30% incl. China)**
2) **Absolute level of prices in USD were high in consolidated markets & in Sub-Saharan Africa (reflecting high local costs & local oligopolies)**
3) **Prices remained low in fragmented markets and markets where government interventionism created caps (China, Algeria, Saudi Arabia, Iran…)**

Price 2003-2008: +30%e (+45%e excl. China)

(estimated price variation in local currency)

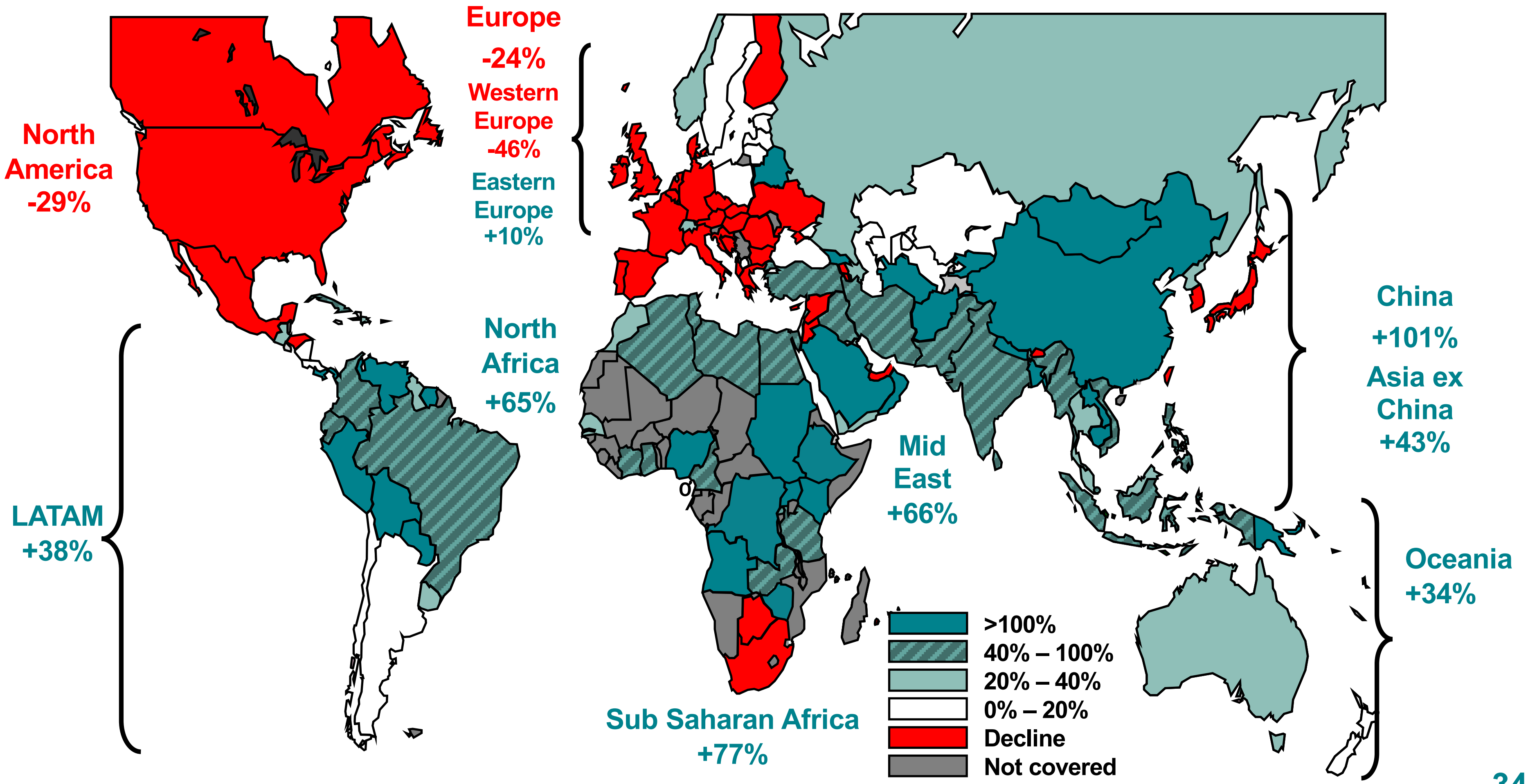


During the crisis cement demand collapsed in developed markets but remained strong in emerging countries

1) With the unprecedented crisis of 2009, North American demand dropped by 29% and Western European demand by 46% between 2006 & 2014
2) These regions were historically two main sources of cash flow for the cement majors
3) Emerging market growth continued : China (+101%), Rest of Asia +43%, Middle East +66%, North Africa +65%, Sub Saharan Africa +77%

Cement Volumes 2006-2014

World + +59% / World Ex China +22% (Mature markets -37 % and Emerging markets excl. China +44%)

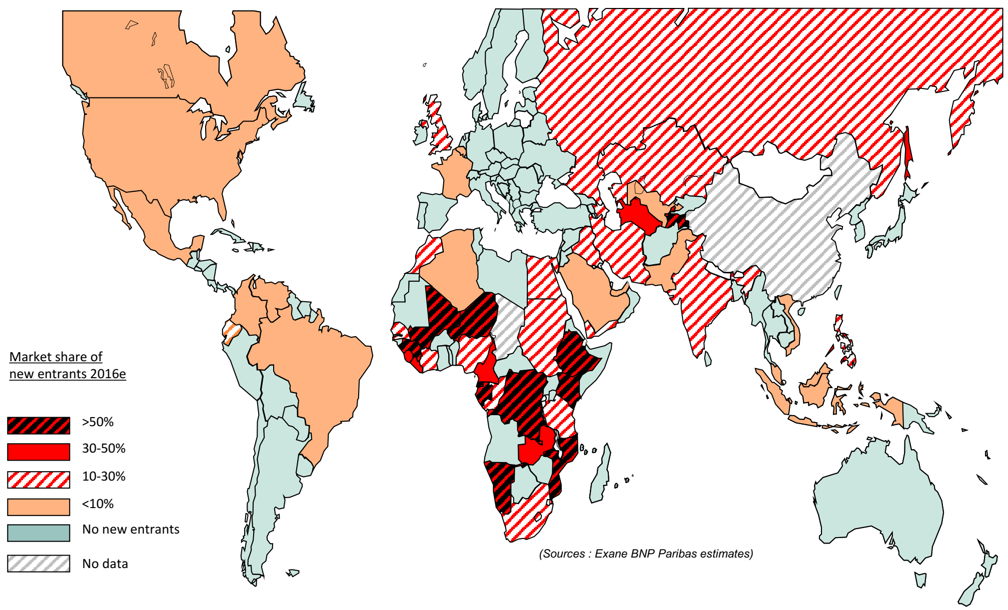


Pricing came under pressure in many markets over the past five years

1) The business model of the cement majors before the crisis was to use cash from DM to invest in EM growth opportunities
2) As cash flows in DM collapsed the majors cut back on investment allowing new entrants to enter many markets
3) New entrants have little goodwill and can live with lower returns for a period when building share
4) The industry was not able to pass on cost inflation as prices were under pressure all over the World since 2009

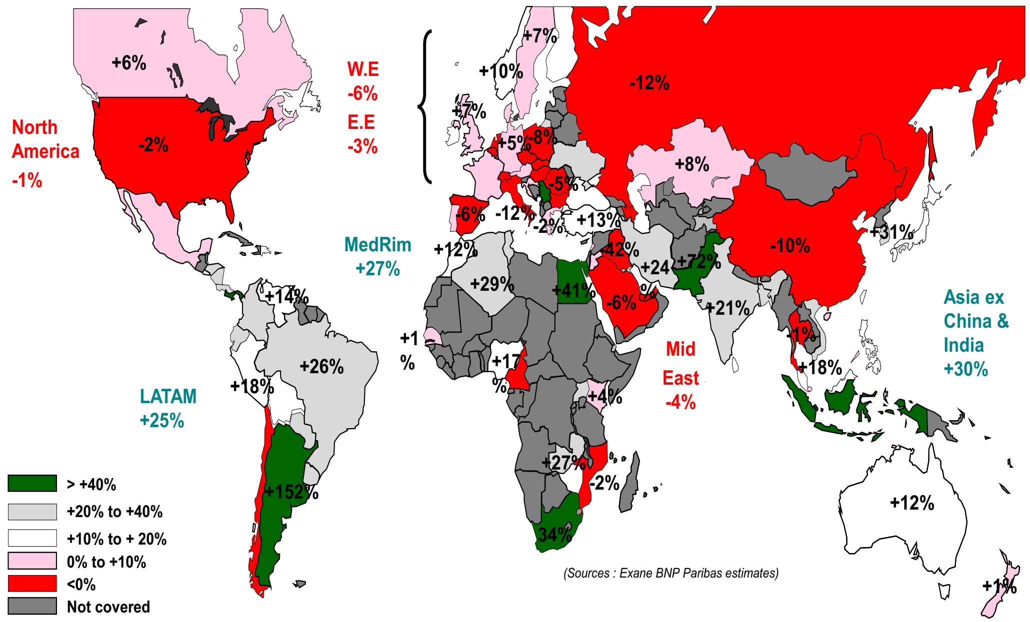
Estimated market share of new entrants in 2015

New entrants defined as companies not present in 2010
(as % of total existing capacity)



Cement prices variation between 2009 & 2014

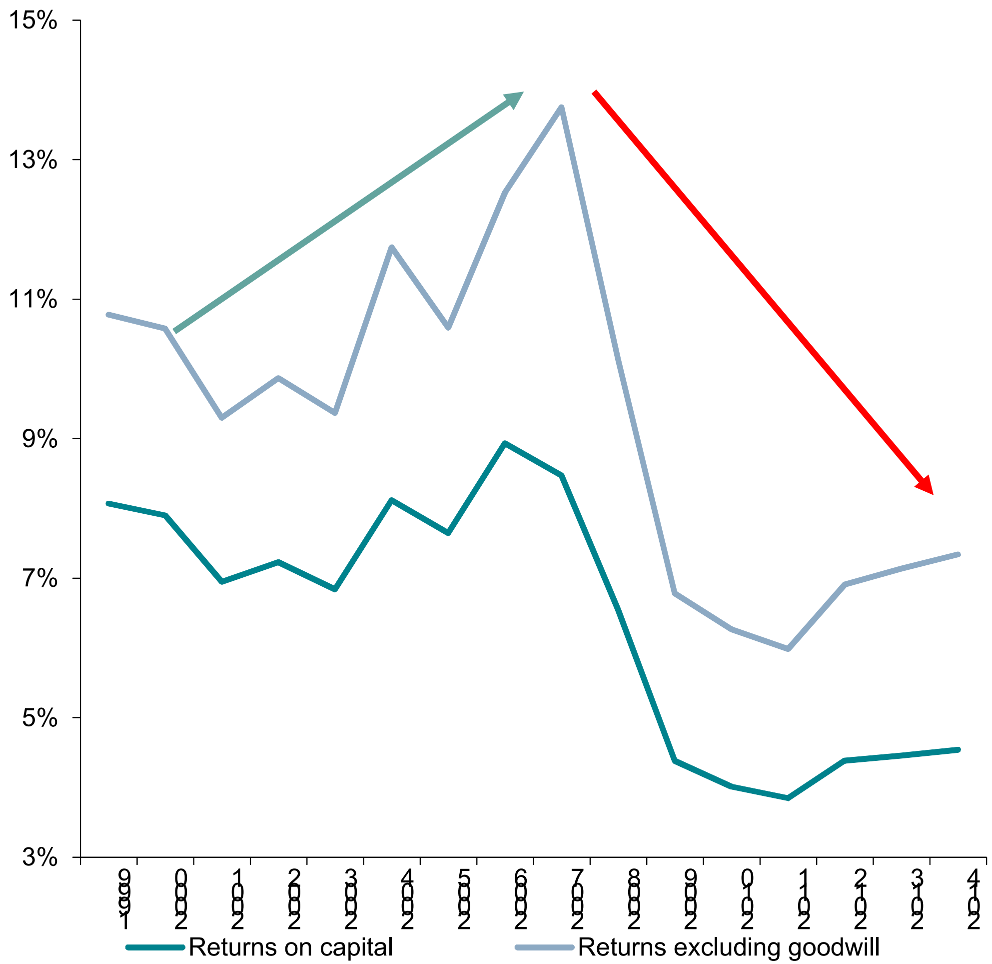
(estimated price variation in local currency)



Returns and dividend came under heavy pressure

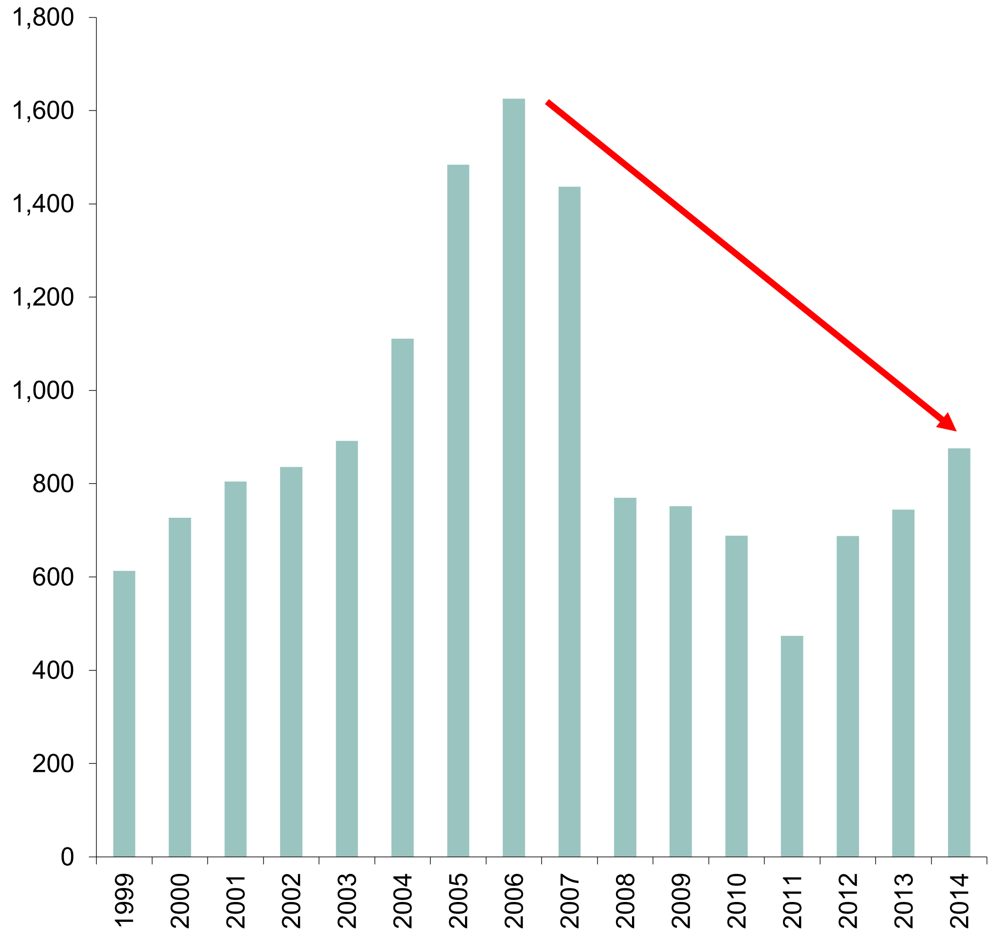
1) Industry returns collapsed : ROCE decreased from 9% in 2007 to 4% in 2014 …
2) … and so did cash returns to shareholders with dividends being halved over the period

Returns on tangible asset and ROCE



Source: Exane BNP Paribas estimates

Dividends paid by cement majors (EURm)



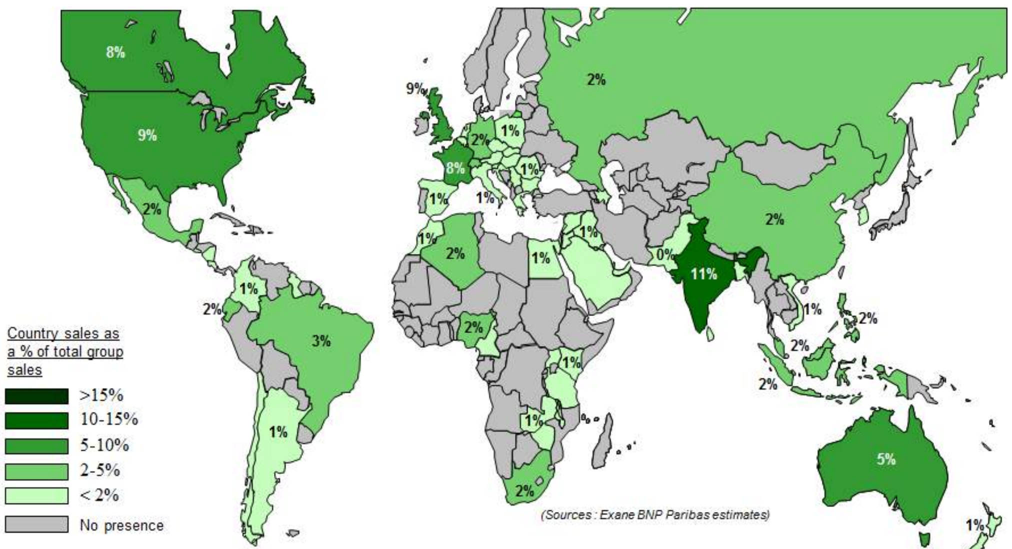
Source: Exane BNP Paribas estimates

LafargeHolcim: a shareholders deal?

1) The new group is truly global and does not need to do big acquisitions to improve the geographical footprint. The Group has selected its markets (important disposals made)
2) The new Group has more cash power to invest to protect its existing leadership/market shares (brownfield capex and bolt-on acquisitions)
3) LafargeHolcim will able to return more cash to its shareholders (who have been disappointed with their returns over the past 10 years)

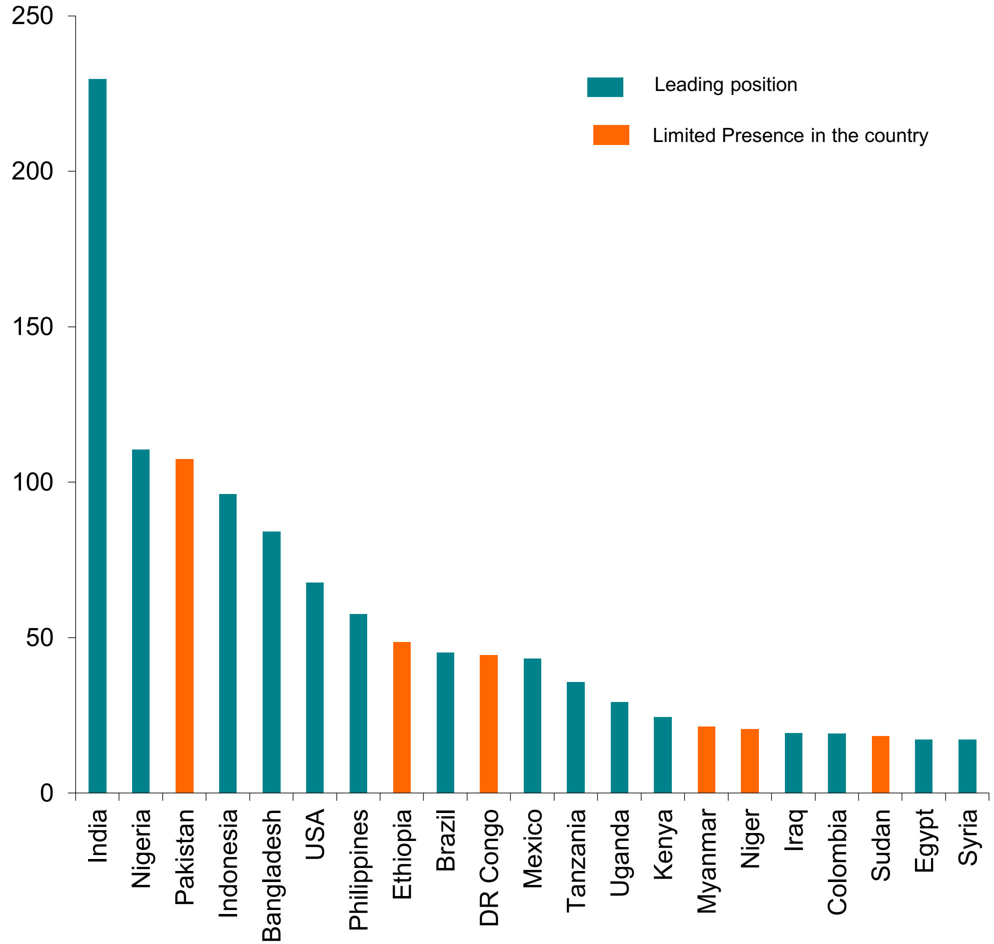
Combined (proforma) as % of 2013 sales

(Before disposals of assets to CRH)



EUR 29Bn Sales Proforma

Growth potential to 2050 (mt vs 2013)

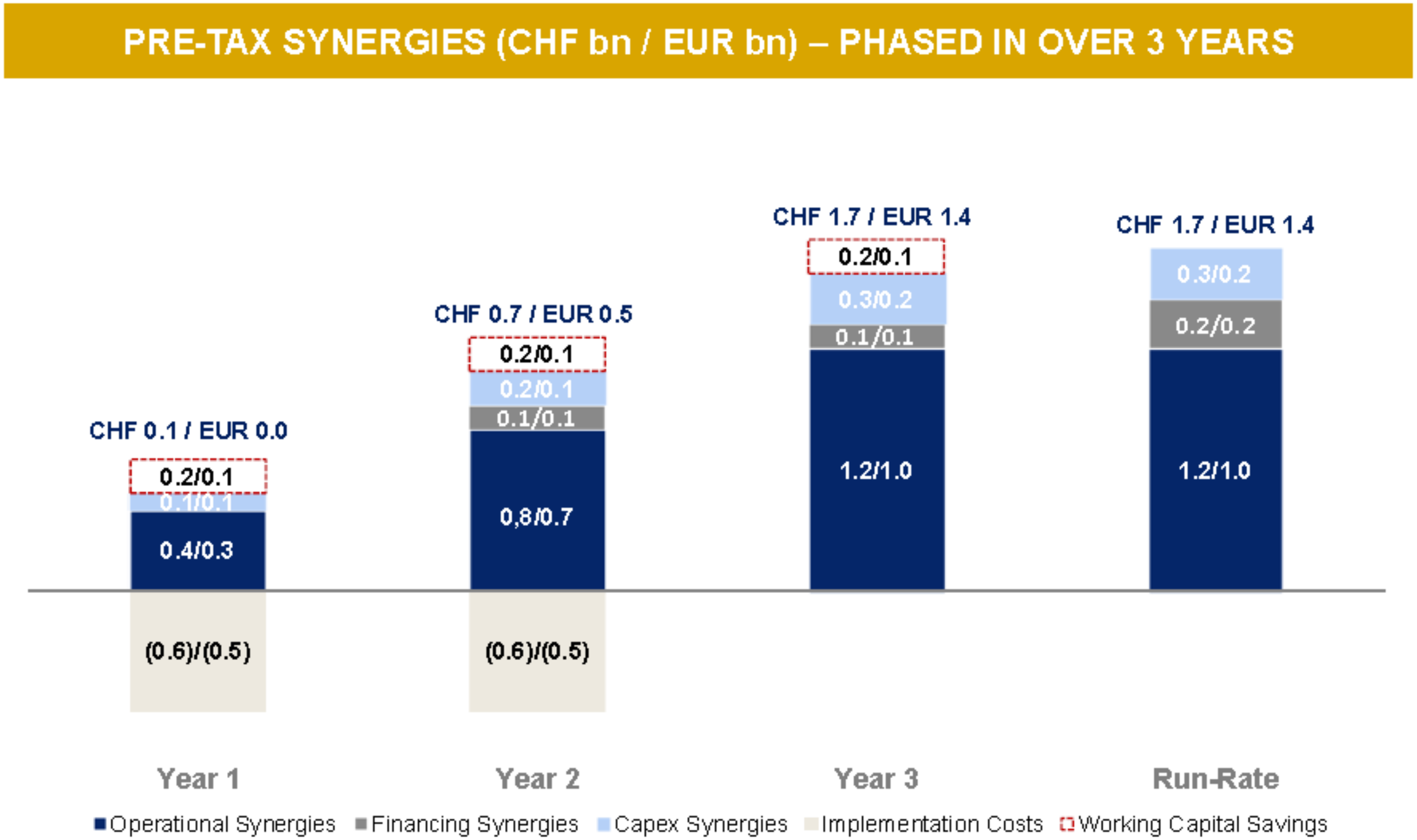


Source: Exane BNP Paribas estimates

LafargeHolcim: a shareholders deal?

1) The combination of the two Majors offers significant synergies
2) The new Group does not need to do big acquisitions to improve the geographical footprint. The Group has selected its markets (important disposals made)
3) The new Group will have more cash power to invest to protect its existing leadership/market shares (brownfield capex and bolt-on acquisitions)
4) The new Group will be able to return more cash to its shareholders (who have been disappointed with their returns over the past 10 years)

LafargeHolcim: synergies announced and phased over 3 years



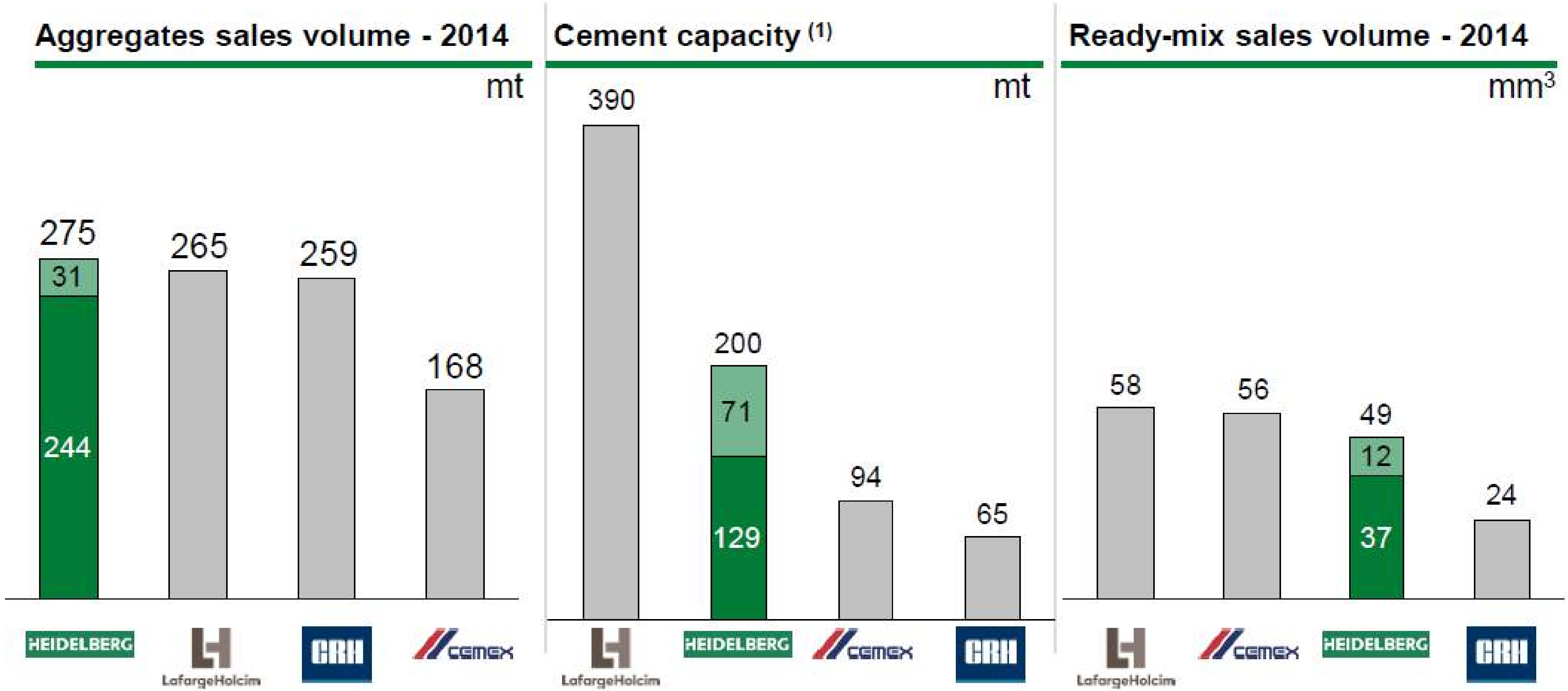
LafargeHolcim strategy: Lean capital spending

Looking forward, targeting significantly lower capex

HeidelbergCement Italcementi: A reaction to LafargeHolcim?

1) LafargeHolcim was more than three time bigger than HeidelbergCement
2) HeidelbergCement is partly bridging the gap

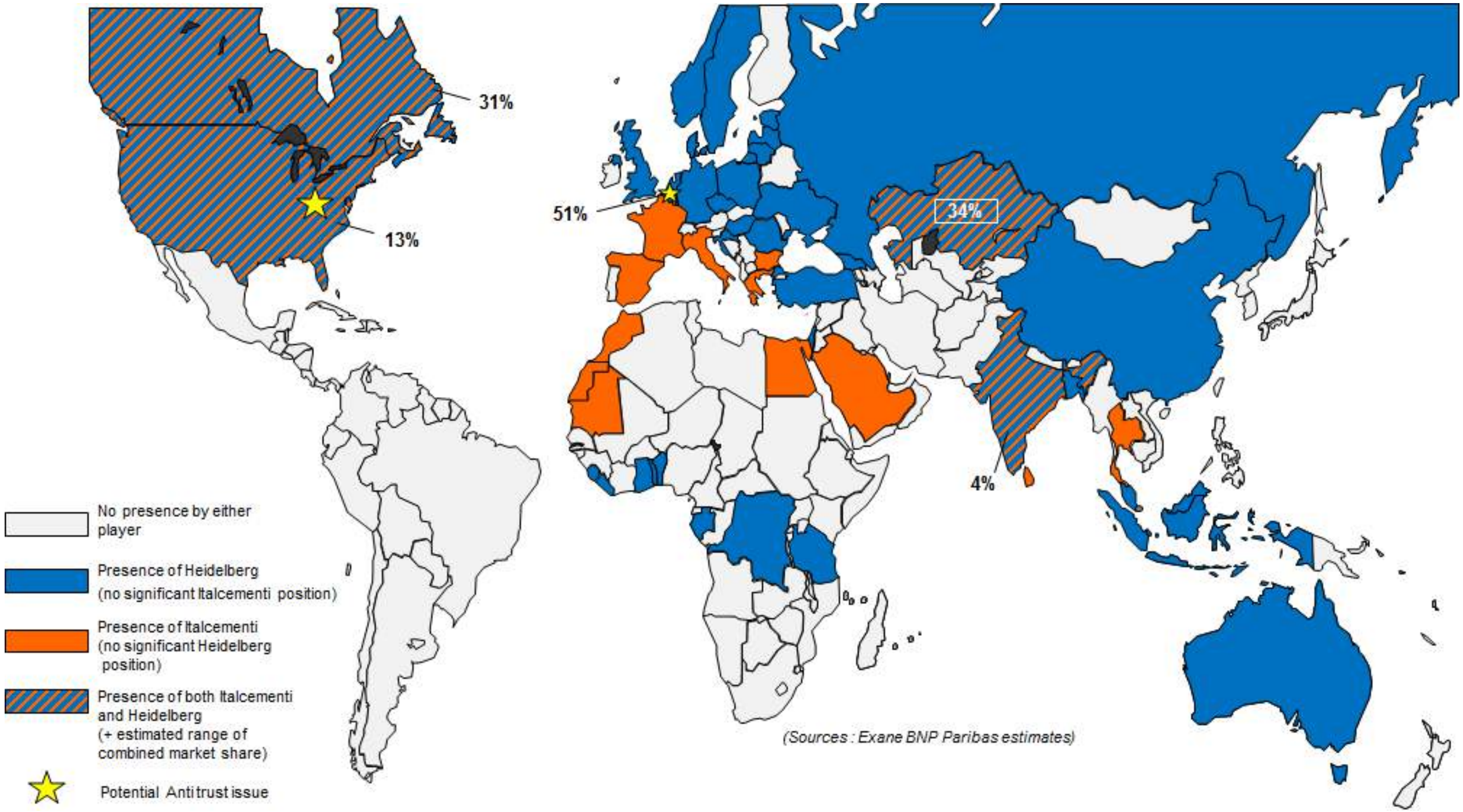
HeidelbergCement Italcementi: A reaction to LafargeHolcim?



HeidelbergCement Italcementi: a good geographical fit

1) HeidelbergCement increase its presence around Med Rim and gains a foothold into new Asian markets like Thailand
2) The transaction builds scale in India, has synergy potential in markets with overlap and could accelerate Italy restructuring
3) The groups need has sold EUR1bn of assets. NewCo will be global but have no platform in Latam

HeidelbergCement and Italcementi - overlap

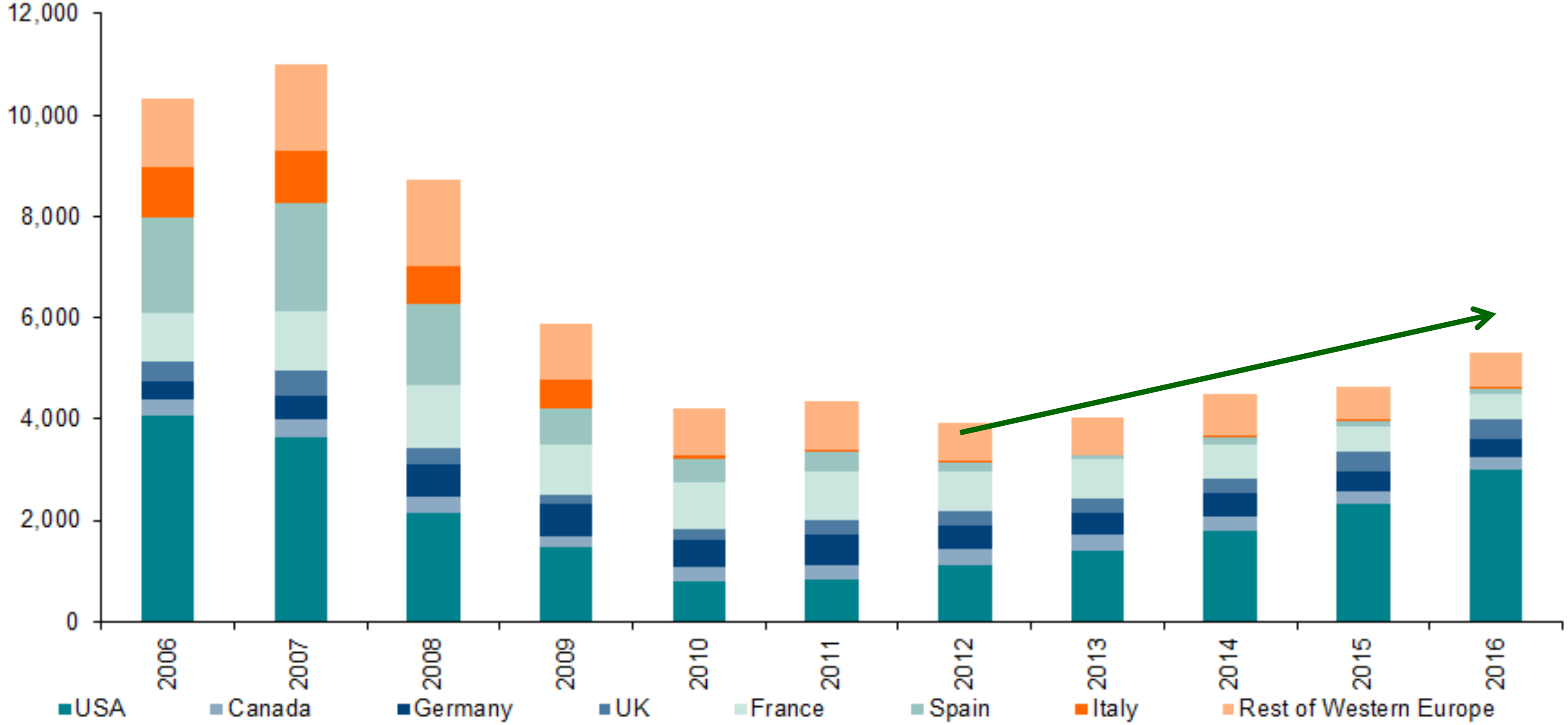


Cash flows are coming back

1) Adder collapsing during the crisis, cash flow are now recovery driven by a stabilisation in Europe and good trends in the US
2) European based companies have often reduced their debt level and are likely to have a substantial amount of cash to spend over by 2020

The cash flow generation of the majors is progressively recovering

Cement industry EBITDA generation in North American and Western Europe (USDm)

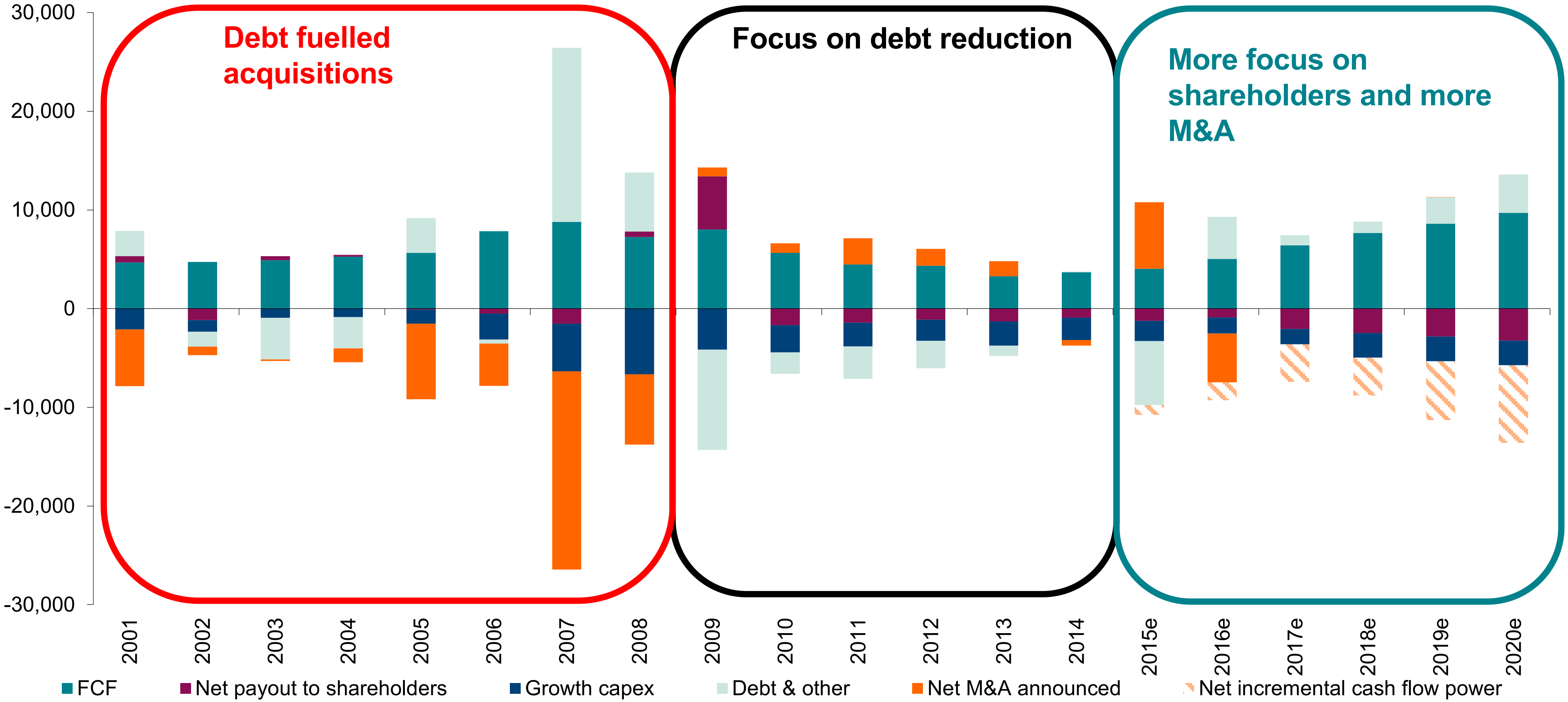


More focus on returns and sharholders but also and More M&A are likley

1) The Lafarge-Holcim merger sends a strong message on cash discipline and selective geographical diversification
2) At the industry level (companies covered by Exane BNP Paribas) there is over EUR15bn of surplus capital in the next few years
3) Will shareholder returns become the priority in the coming years? Or will competitors of Lafarge-Holcim react to the merger by doing more M&A?

Source and use of cash of cement majors – EURm

(net incremental cash flow power if the industry re-leverage to 2.5x net deb EBITDA)



Source: Exane BNP Paribas estimates

LafargeHolcim: a global footprint and asset-light strategy

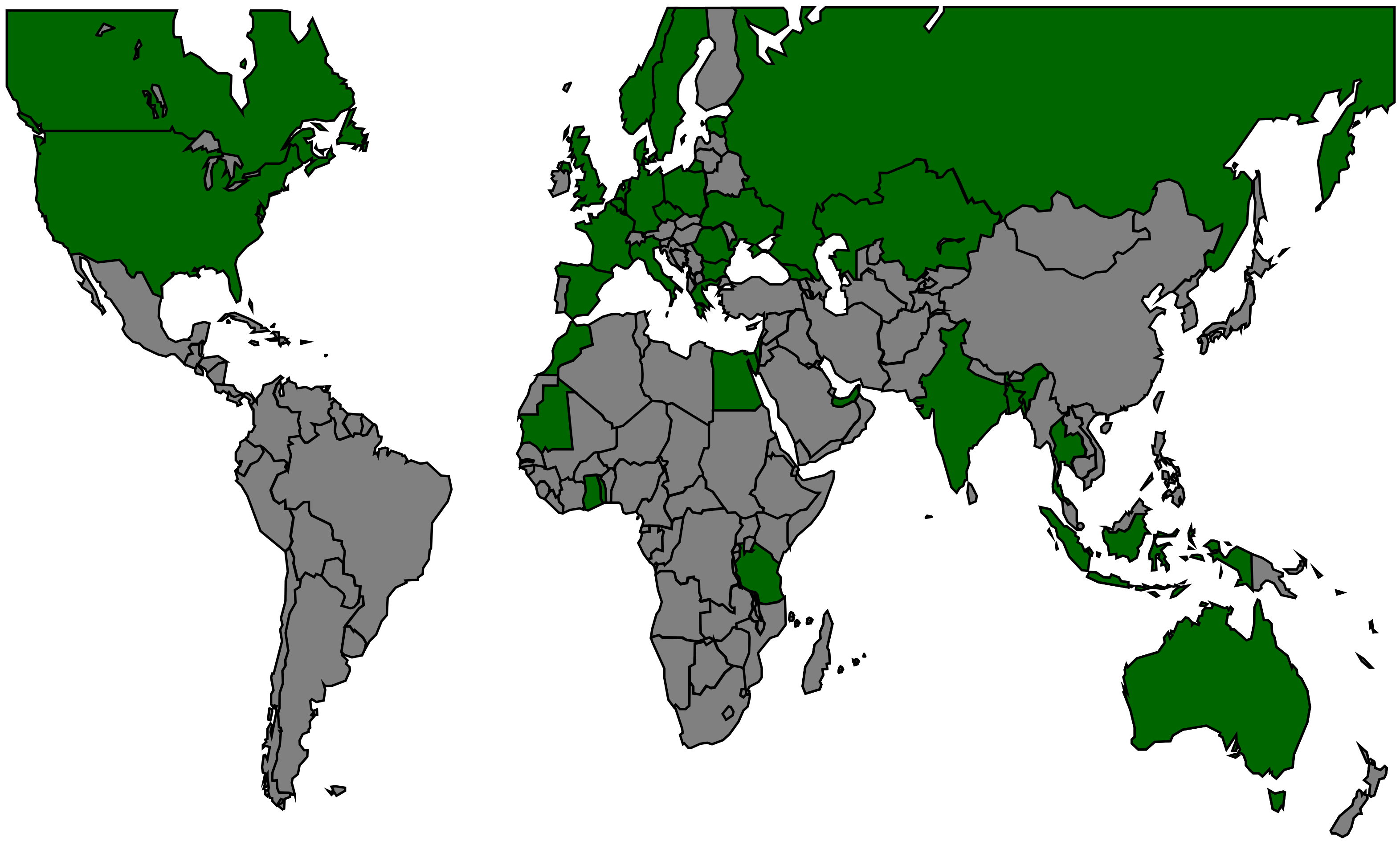
1) LafargeHolcim is already operating in most key countries
2) No need for large acquisition to complete footprint
3) Most likely scenario is more return to shareholders and a mix of Capex and bolt-on acquisition to capture growth opportunities in the market in which it operates

LafargeHolcim 2016 geographical footprint

HeidelbergCement: a gap in Latin America

1) HeidelbergCement is currently focusing on integrating the acquisition of Italcementi
2) The group could consider further expansion medium term once it has repaid the debt related to the Italcementi acquisition
3) There is a clear gap in Latin America in the group footprint

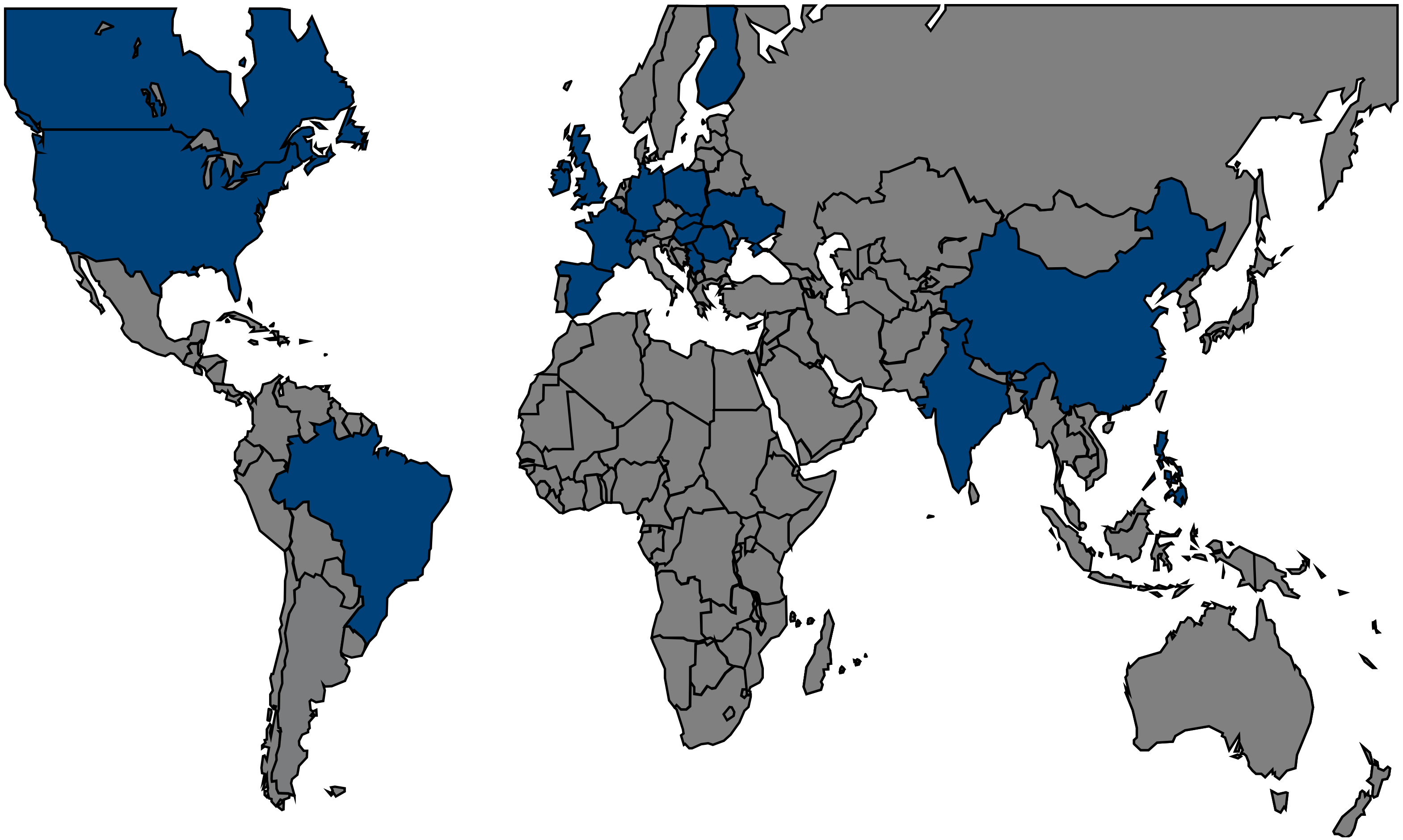
HeidelbergCement 2016 geographical footprint



CRH: selective acquisition in EM and DM

1) CRH has substantially increased its cement footprint last year after acquiring >30mt of cement capacity sold by LafaregeHolcim
2) The group has a JV in India, a stake in a large cement player in China and fully controlled operation in Philippines. We understand management has ambitions to expand in Asia
3) CRH position in Brazil is probably not core to the group strategy. In our view, management could either consider to sell or expand to get better scale.
4) CRH will continue its strategy of bolt-on acquisition in North America and Europe in its other businesses (distribution, aggregates, products, etc.)

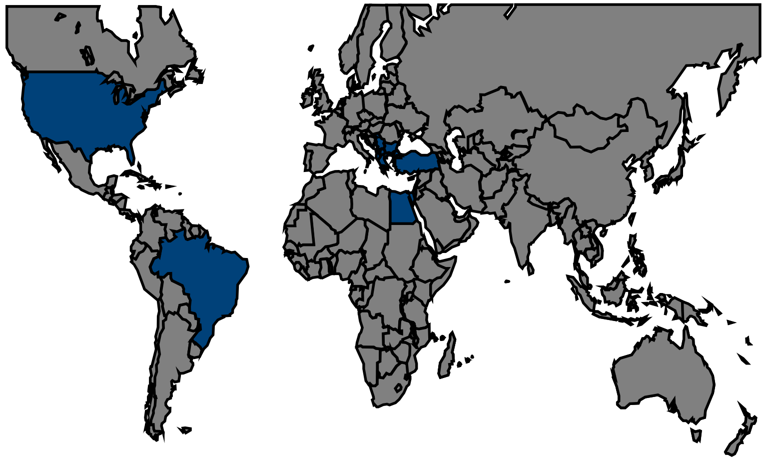
CRH 2016 geographical footprint in Cement



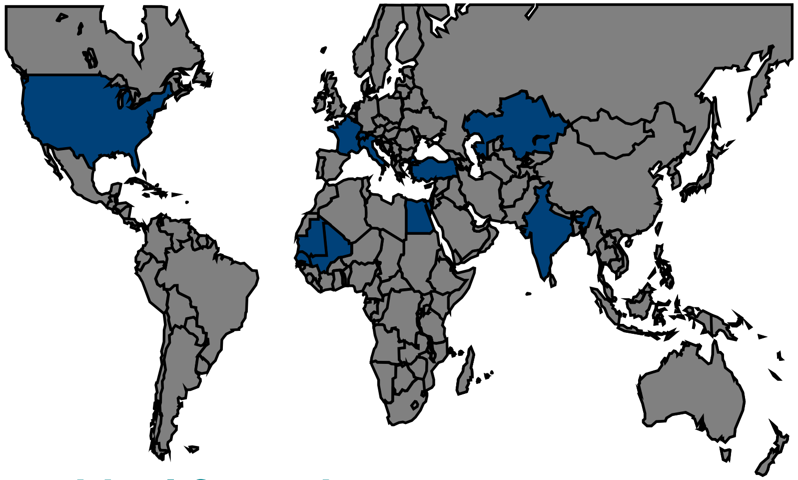
Vicat, Titan Cement and Buzzi Unicem: geographical expansion is set to resume

1) Vicat, Titan Cement and Buzzi Unicem are smaller but they are now generating cash are reducing their debt quickly
2) Titan Cement has just acquired a plant in Brazil, more expansion in Latin America could make sense medium term
3) Buzzi Unicem is focusing on restructuring Italy but could also look at expanding its footprint Latin America and reproduce the successful story of Moctezuma
4) Vicat management mentioned it will continue to develop its geographical footprint probably via an acquisitions in the next couple of years

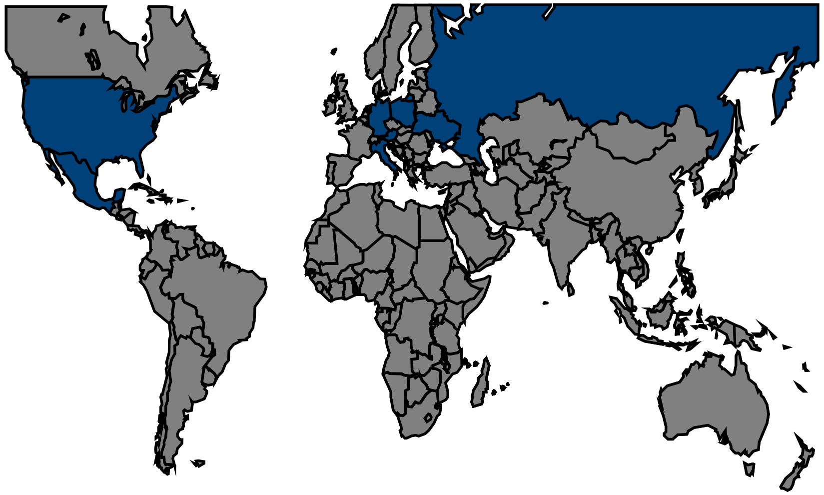
Titan Cement 2016 geographical footprint



Vicat 2016 geographical footprint



Buzzi Unicem 2016 geographical footprint



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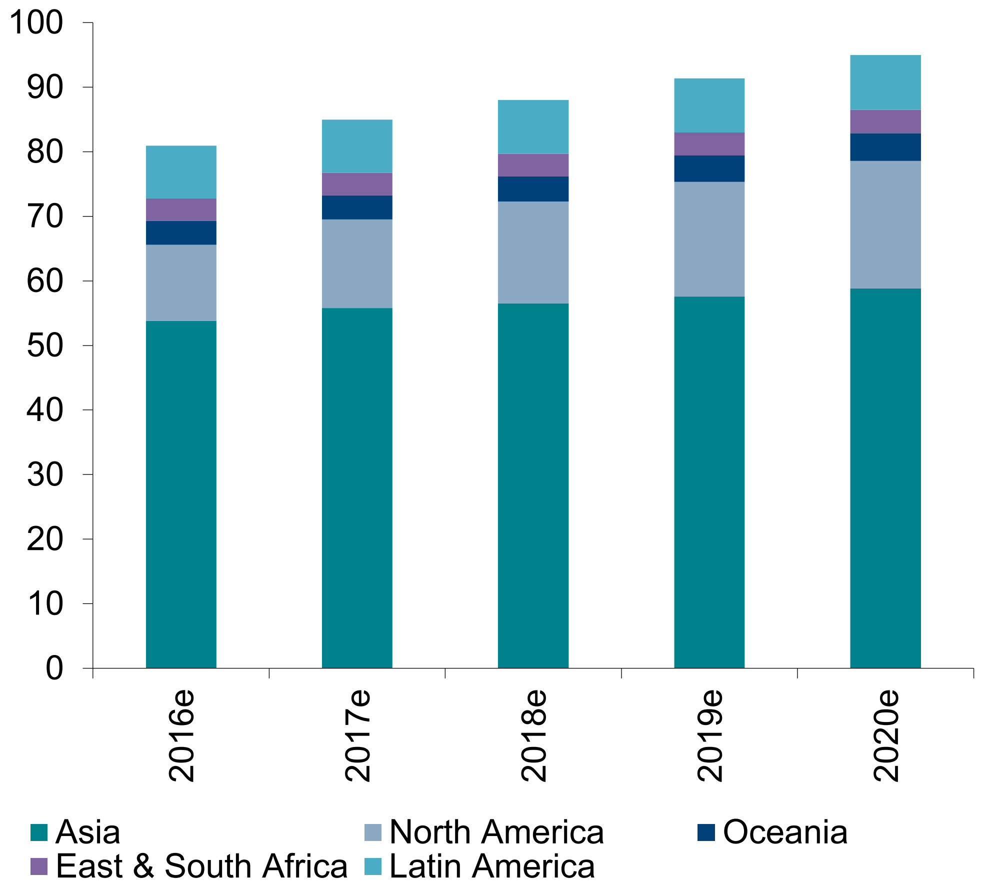
Where do we see imports needs coming from?

1) Demand growth will mostly comes from Asia with more needs from Bangladesh, the Philippines and Myanmar. Oceania is likely to remain stable
2) US will continue to progressively ramp up its import is demand growth continue. As highlighted previousy
3) We do not expect much growth in Latin America (slowdown in demand due to low commodities prices) or East Africa (local clinker capacity addition)

Import demand is likely to grow slowly in key markets for Asian exporters



Import needs estimates by country

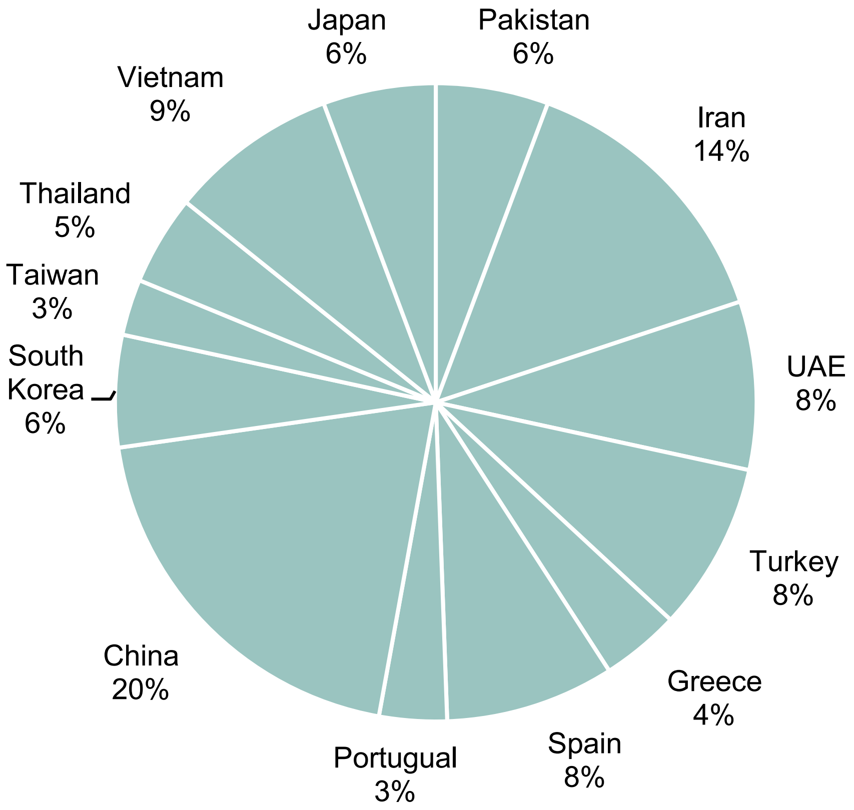
	2016e	2017e	2018e	2019e	2020e
Asia	**54**	**56**	**57**	**58**	**59**
Bangladesh	15	16	17	18	19
Singapore	5	5	5	5	5
Myanmar	6	7	7	7	8
Sri Lanka	5	5	5	5	5
Hong Kong	2	2	2	2	2
Cambodia	2	2	2	2	2
Malaysia	3	3	3	3	3
Indonesia	1	1	1	1	1
Philippines	2	3	3	4	4
North America	**12**	**14**	**16**	**18**	**20**
USA	10	12	14	16	18
Canada	1	1	1	1	1
Oceania	**4**	**4**	**4**	**4**	**4**
Sub-Saharan Africa	**32**	**32**	**33**	**34**	**36**
Ghana	6	6	6	6	6
Cameroon	3	3	3	3	3
Ivory Coast	2	3	3	3	3
Mali	1	2	2	2	2
Congo-Kinshasa	2	1	1	1	1
Angola	1	1	1	1	1
Benin	1	1	1	1	1
Congo-Brazzaville	1	1	1	1	1
South Africa	1	1	1	1	1
Mauritius	1	1	1	1	1
Kenya	1	1	1	1	1
Tanzania	1	1	1	1	1

A increasingly competitive landscape for Asian exporters

1) We estimate there is over 200mt of cement capacity that is available for export, with c. half of it located of in Asia . This compare to 120mt of import needs.
2) In Asia the exportable surplus will increase if China demand normalizes. There are also capacity addition in Vietnam and Thailand and Indonesia is turning from an importer of cement into and exporter

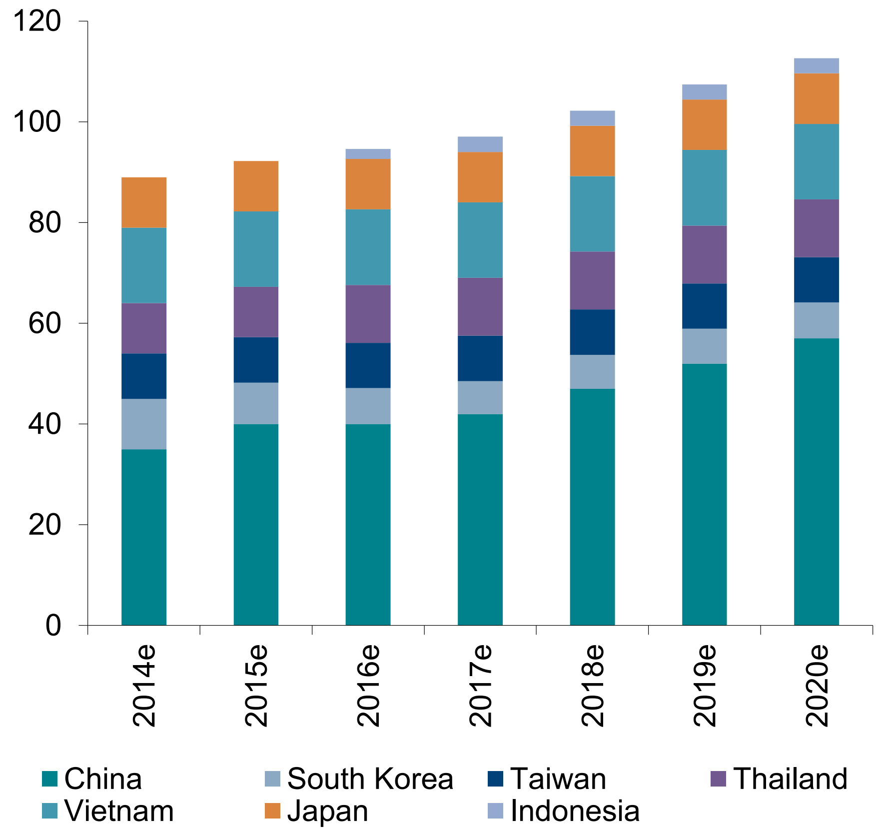
Over 200mt of exportable capacity worldwide

Exportable capacity in key countries



And the Asian exportable capacity is increasing

Unutilized capacity that is fit to export in Asia (mt)

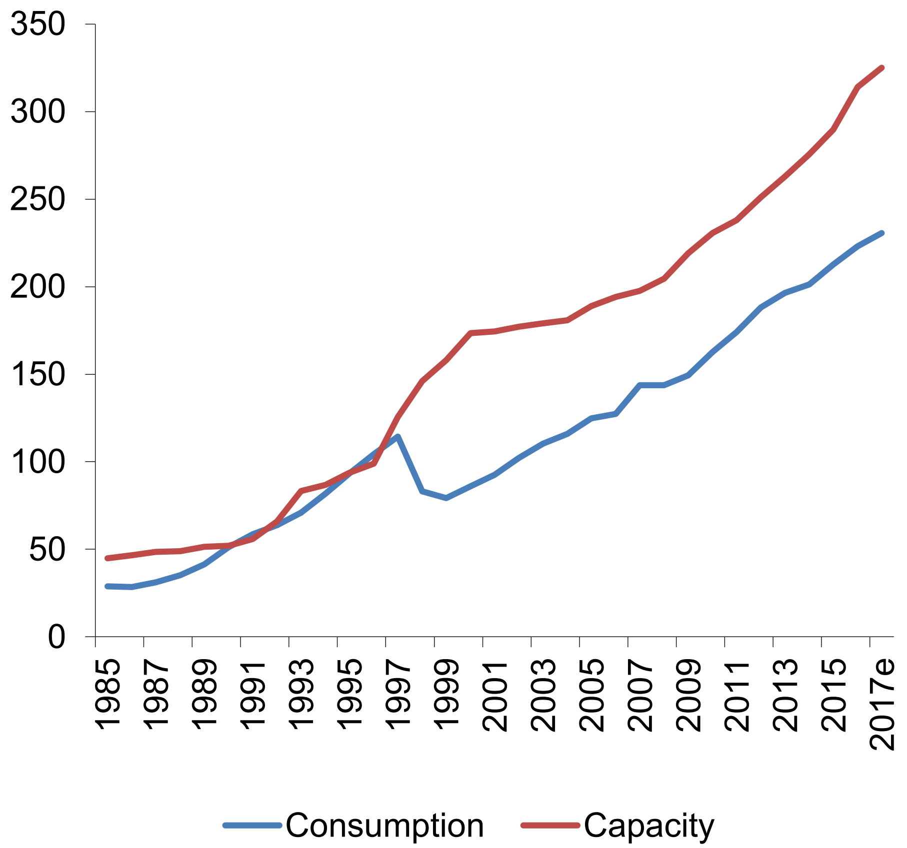


Returns on new capacity is likely to be low in countries with an exiting surplus

1) **FOB clinker and cement prices are depressed and returns on exports are very low. The high Investment cost a new cement plant and can be only justified when domestic prices are high.**
2) **Any new capacity built in markets have a structural surplus are likely to generate low returns. Increasing cost may further impact returns if cement price don't pick up**

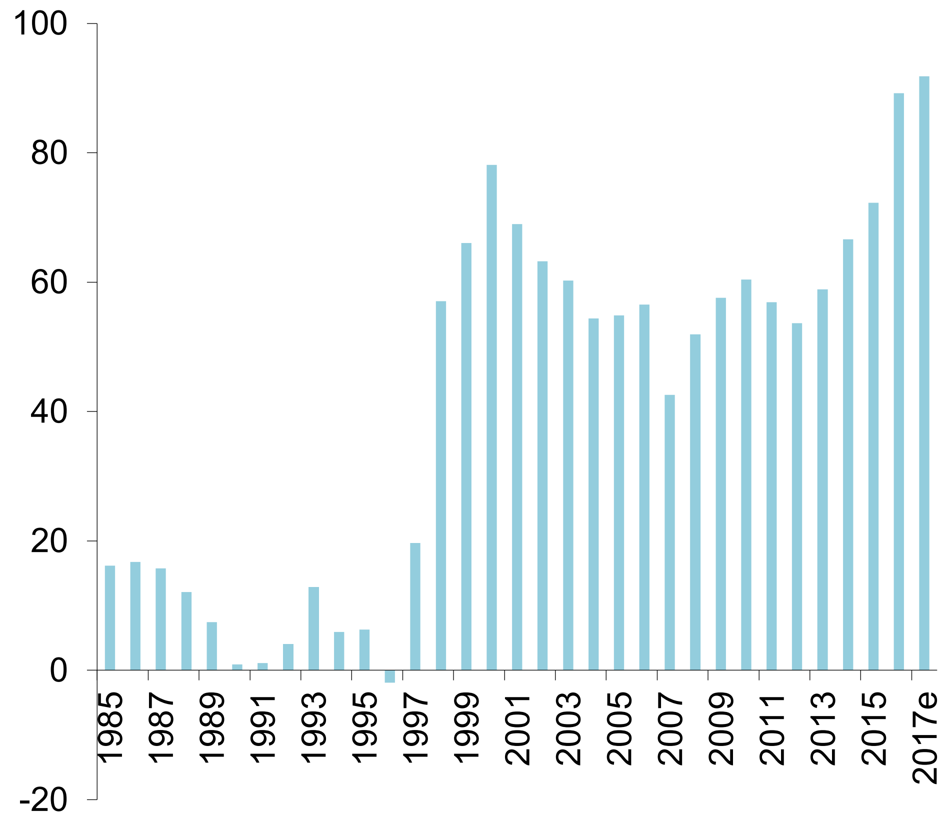
The pace of capacity addition has accelerated

South East Asian capacity and consumption (mt)



Increasing surplus likely to impact returns

South East Asian capacity minus production (mt)



Logistics and plant efficiency are key for competitiveness

1) Logistics is key: More investment from the Vietnamese government in state of the art port infrastructure would make the industry more competitive
2) Plant performance can often optimized : there is very often potential for cost reduction by apply best practices in terms of engineering and financial controlling
3) The ability to produce low Alkali cement at a competitive cost is important to supply the US market (largely limestone quality, partly engineering process)
4) In the recent increase in coal and petcoke prices is not fully reflected in higher FOB prices, the less competitive plant will be shut out of the export market.

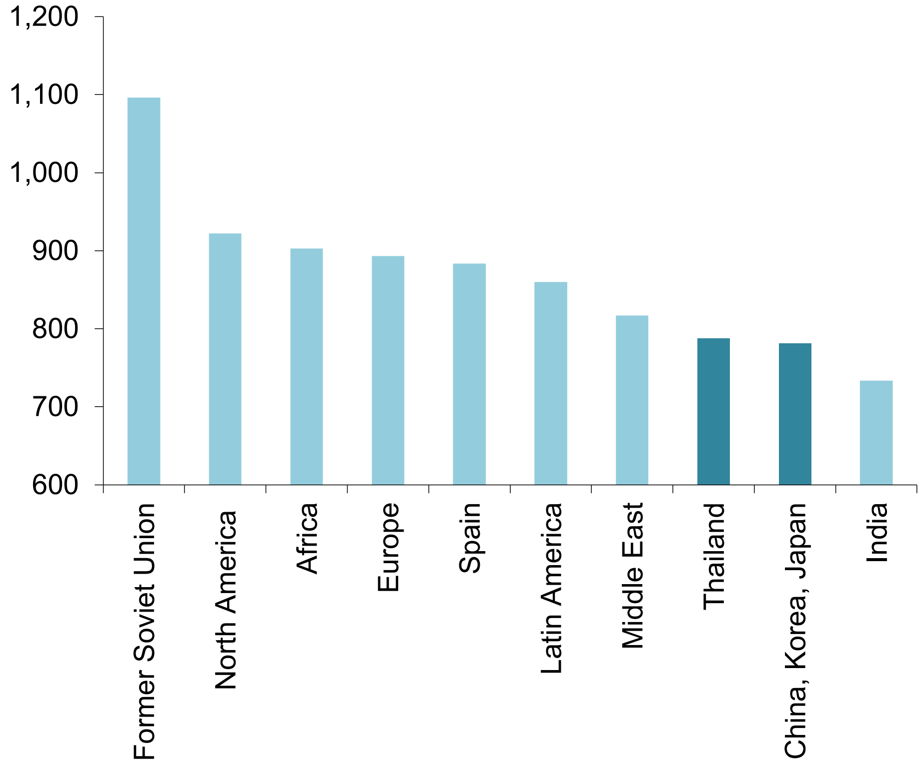
Cost leadership is key

Logistics often make a huge difference

Deepwater port in China

Plant efficiency if important

Regional thermal efficiency (Mcal/t)



Source: WCSI Database

Marketing excellence can be a differentiating factor

1) Apart from price quality of service is important (reliability, timeliness of shipment, consistency of material quality etc.) . The Vietnamese cement industry has already make great progress over the past few years.
2) Understanding the evolving need of large and small importers can make the difference. (e.g. LafargeHolcim asset-light strategy / HeidelbergCement acquisition of Italcementi / Capacity additions in Africa / Political development and capacity addition in Myanmar and Bangladesh / relationship with US importers)

An example of marketing intelligence : Monitoring and understanding the strategy of large importers

LafargeHolcim asset-light model illustration

Specific examples of cash spend reduction through the new asset-light model

	INITIAL OPTION	ASSET-LIGHT ALTERNATIVE	CASH SAVINGS VERSUS INITIAL OPTION
PHILIPPINES	**Bulacan Line 3 brownfield plant** • Extension of existing asset to add 2.5mt cement capacity	**Debottlenecking project** • Phase I (Rationalization Capex): additional 1.1 mt cement capacity • Phase II (Calaca Terminal Expansion): additional 1.5 mt cement capacity using imported clinker	90%
NEW ZEALAND	**Weston greenfield plant** • Construction of a new integrated plant • Coal and sand pit; and cement terminal • Clinker capacity: 800kt • Total cement capacity: 1.2 mt	**Greenfield terminals in Auckland and Timaru** • Construction of 2 new cement terminals • Dome silos of 30 kt • Shore-based unloaders • Cement imported from the region	85%

Conclusion on Asian exporters challenges and opportunities

1/ Imports needs will continue to grow but the exportable surplus is raising faster

- Medium term growth in imports will likely comes from Bangladesh, the Philippines Myanmar and the US.
- However, the global exportable surplus is increasing and competition will remain intense.
- The asset light model suggested by of LafargeHolcim could be replicated by other companies and help absorb part of the global surplus.

2/ Adding export oriented capacity in this environment is likely to deliver poor returns

- Any new capacity built in region that have a structural surplus are likely to generate low returns. Increasing coal cost may further depress margins.
- In market with no surplus, it is today more more profitable to build girding stations than an integrated clinker plant

3/ Logistics, plant efficiency and services quality will remain the key differentiating factors between exporters

- It would make sense for several Asian governments to help their industries by upgrading port and transportation infrastructure
- There is always scope to optimise cost management and quality of service to clients

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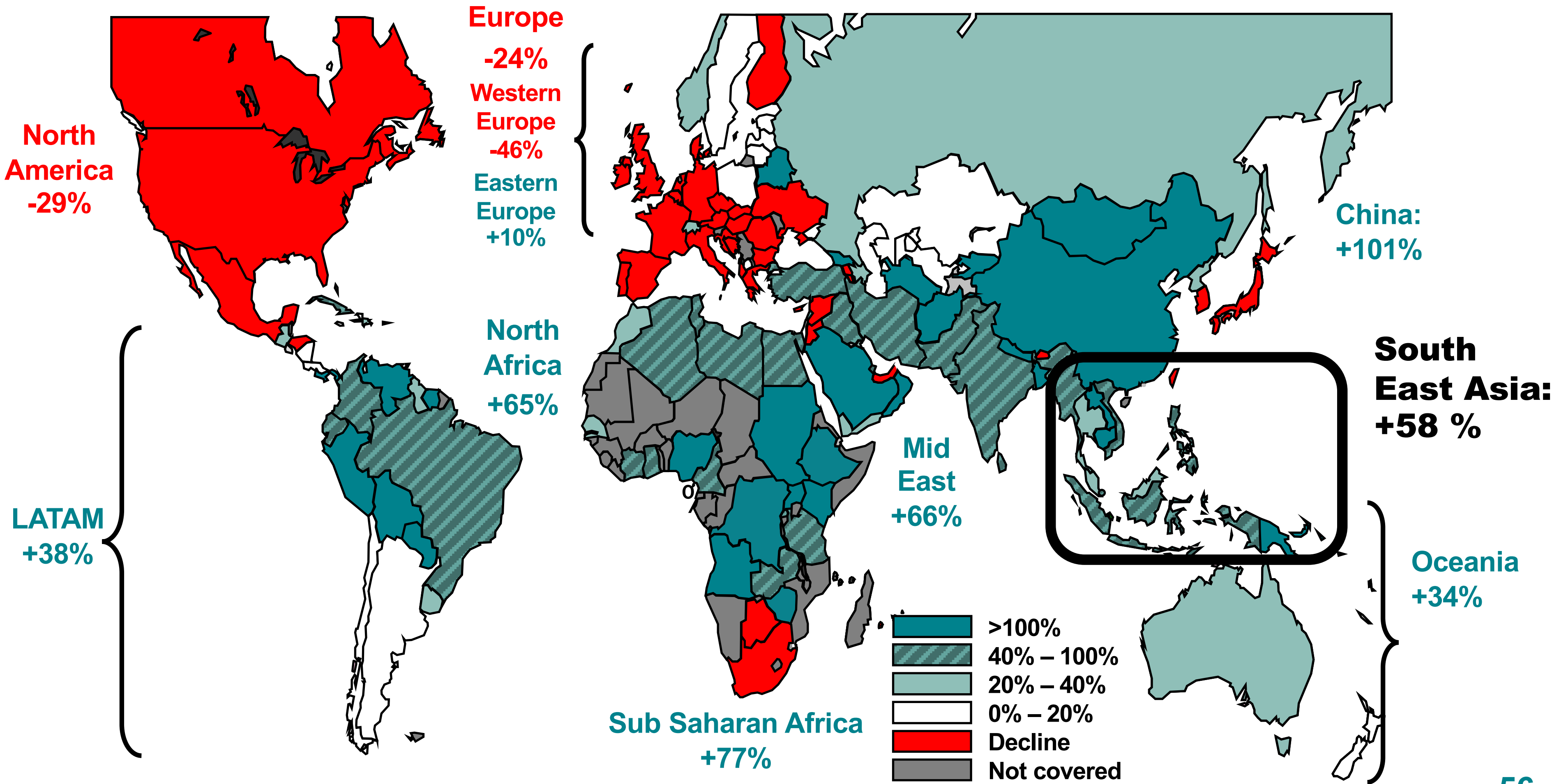
During the crisis cement demand collapsed in developed markets but remained strong in emerging countries

1) South East Asian volumes increased by nearly 60% between 2006 and 2014 while volumes declined by over 25% in Europe and the US
2) South East Asian companies expanded their geographical footprint when the European and US companies had to sell assets and cut capex

Cement Volumes 2006-2014

World + +59% / World Ex China +22% (Mature markets -37 % and Emerging markets excl. China +44%)

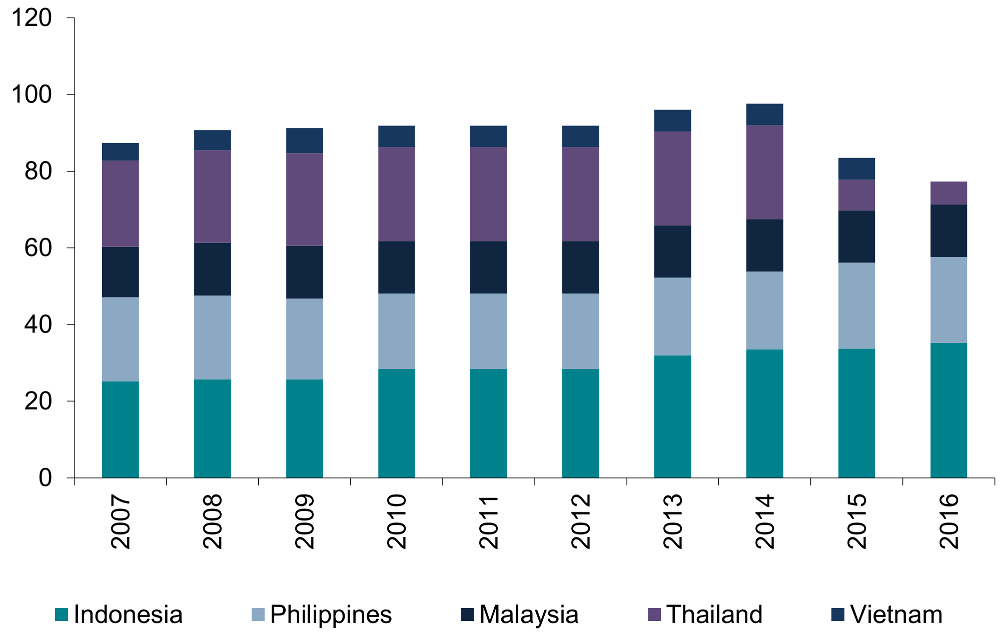


An ambitious expansion by South East Asian firms

1) International cement companies have slowdown their capex in South East Asia and sold asset (Holcim sold its stake in Siam City cement, LafargeHolcim sold its Vietnam operation a couple of months ago, Cemex sold its Thai operations, HeidelbergCement reduced its stake in Indocement, Cemex sold part of its participation in the Philippines)
2) Regional cement companies have continued to expand (Thai cement companies international expansion) and New entrants have captured some market share (San Miguel in Philippines, Hume in Malaysia, Ganda , Hui Shin and Panasia)
3) China has started to invest abroad (Indonesia). Conch ambition is to build or buy 50mt of capacity outside of China medium term and South East Asia is an area of focus

International companies have reduce their footprint in South East Asia

International companies capacity in south East Asia (mt)



Local firms and new entrants have gained market share

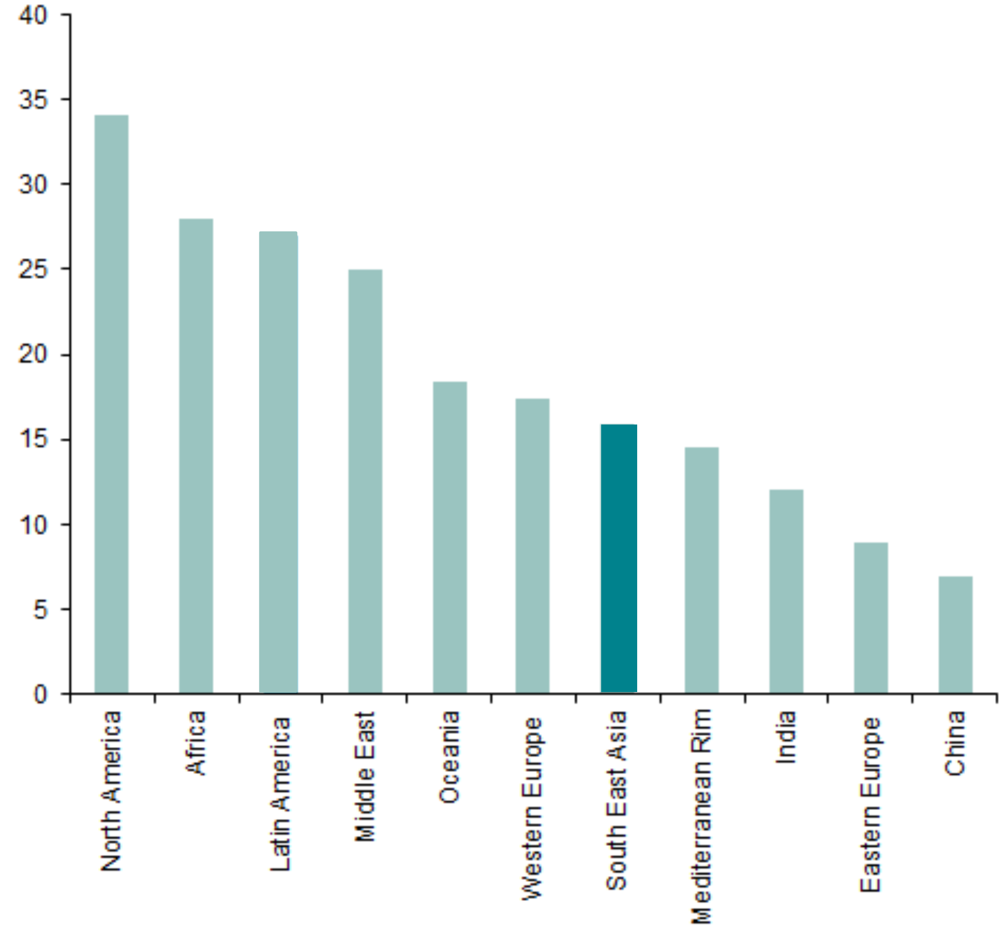
International companies capacity in south East Asia (mt)

South East Asia remains an attractive region long term

1) Margins and prices have come under pressure but profitability remain ok in a few markets (e.g. Philippines, Indonesia).
2) Cement consumption per capita is low and the population growth in high which suggests very good growth prospect long term. Indonesia, The Philippines and Myanmar are likely to see the highest absolute growth in terms of cement consumption in the next decades
3) Profitable South East Asian markets are likely to be coveted by cement companies that are not yet operating the region or by new entrants (Chinese firms, International companies and regional players will compete to capture growth in the region)

A mixed level of profitability today

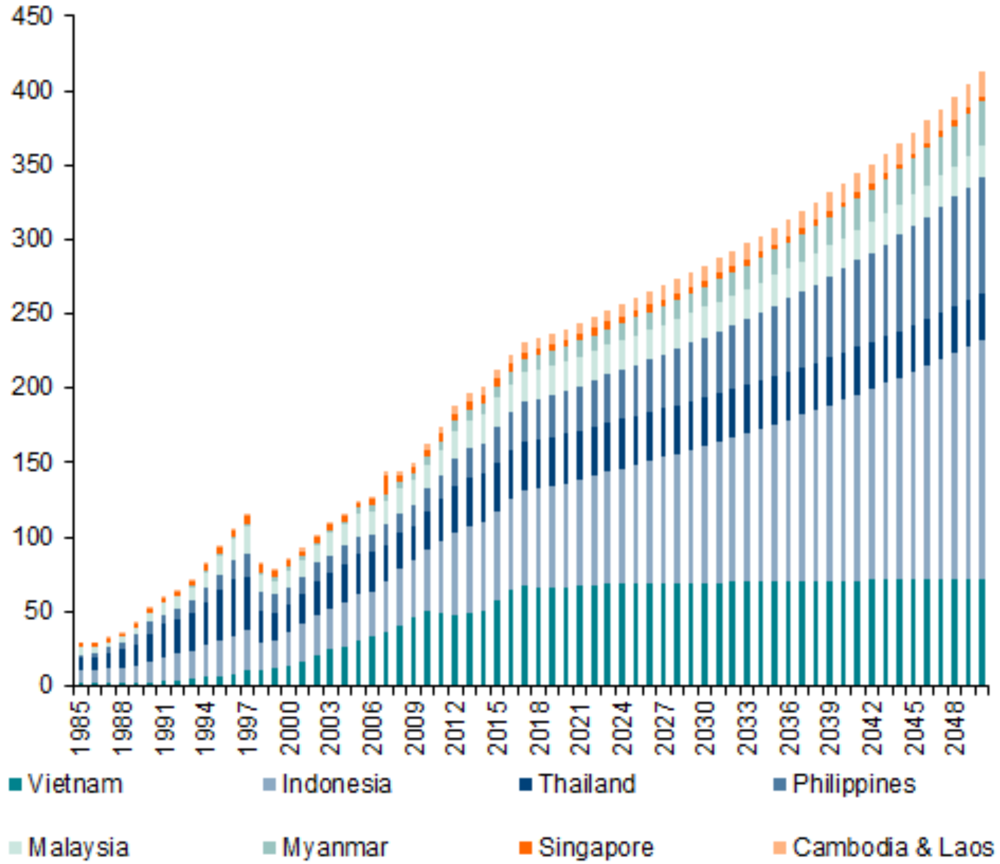
Regional EBITDA/t (USD)



But very attractive long term growth prospects

Cement demand in South East Asia (mt)

Long term forecast assumes normalisation of cement cons. per capita and UN pop. growth estimates



Conclusion on South-East Asian firms options

1/ Focus on capex and vertical integration to capture growth and deter new entrants

- Returns on grinding stations and import terminals are much higher today than on integrated plant given high regional surplus, low FOB clinker prices and low freight rates
- In specific regions where there are no surplus, it may still make sense to invest in clinker projects to capture the long term growth, solidify regional market shares and deter new entrants
- The success of the US and several European countries at mitigating the threat of uncontrolled imports might be reproduced medium term. Vertical integration into ready mix concrete and aggregates will be important when market matures

2/ Continued geographical diversification through acquisitions

- There are still a lot of assets for sale around the world that could provide opportunities for further geographical diversification
- LafargeHolcim has committed to another USD1.5bn of asset by the end of 2017
- Some new entrants and historical players in Africa, Eastern Europe and Asia may not be happy with their return given the recent decline in profitability and could consider selling their operations

3/ Merge or sell

- European based international companies could be interested Asian assets. Acquisition and merger may create value for Asian and European players
- Medium term, some Chinese majors are likely to consider South East Asia as a growth platform after they have consolidated their domestic market

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Overall Conclusion

- **Three conclusions on our scenario**
  - China is slowing down after three decades of strong growth.
  - Cash flows are progressively recovering the US and Continental Europe
  - Profitability remain under pressure in countries are exporting commodities (weaker demand and FX)
- **A slowdown in China could mark the beginning of a new era**
  - A progressive reduction in Chinese consumption to 750kg would imply a drop of 1bn ton in world cement demand
  - Chinese cement is unlikely to flood the world short term. Trading flows are controlled and export is not a strategic priority for China today
  - Chinese majors are focused on domestic consolidation. They could decide to diversify abroad once this is finished. If they decide to do so, this would probably be one the major change in the world cement industry this century
- **The cash flows of the cement companies based in Europe are recovering: what will they do?**
  - LafargeHolcim: No need for large M&A, focus on returning cash to shareholders, capex and small acquisition
  - HeidelbergCement: Focus Italcementi integration but the group will look to expand again. A clear gap in Latin America
  - CRH. Some ambition in Asia. A question mark on the group Latin American strategy (sell or expand?)
  - Vicat, Titan Cement and Buzzi Unicem : More M&A in EM likely medium term. Latam is an area of interest
- **What challenges and opportunities for Asian exporters?**
  - Demand growth will continue to come from Asia (Philippines, Bangladesh, Myanmar) and the US but the global exportable surplus is increasing and competition will remain intense.
  - Adding clinker capacity dedicated to export in this environment will deliver poor returns
  - Logistics, plant efficiency and the quality of product and services will be the key differentiating factors between exporters
- **What options for other South East Asian companies?**
  - Focus on capex in region with no large surplus to capture medium term growth and deter new entrants
  - Continued geographical expansion through acquisition (there are still a lot of cement asset are for sale worldwide)
  - Merge or sell: Chinese players and international cement companies will be looking for acquisitions in the region. Partnerships or disposals could sometimes be the most profitable outcome for local shareholders

Thank you / Cảm ơn

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