

**MacroPlus
Comment**

Betting on cities

- *Urbanisation is set to continue, and economic growth increasingly to be city-focussed*
- *Rapid urbanisation, notably in Asia and Africa, will require massive infrastructure investment*
- *Many of the fastest-growing cities are in areas particularly vulnerable to climate change*
- *Physical capital development will, therefore, need increasingly to be climate resilient*
- *Burgeoning green bond markets provide one early indication of cities set to prosper*

To the cities

Growth is likely increasingly to take place in cities

It is widely recognised that the global population will continue to expand in the decades ahead and, in conjunction with capital accumulation and technological progress, drive overall economic growth. Given the advantages that agglomerations confer, including networks in labour, transportation, and innovation, growth is likely to be increasingly rooted in cities.

Urbanisation has been rapid and global

Urbanisation is proceeding briskly, and is global: the world’s urban population has increased by a billion since the turn of the century, reaching some 3.9bn today. By 2030 this figure is expected to have risen to over 5bn (Figure 1).

Not all cities will be equally prosperous, however: while some will grow into ‘megalopolises’, others will stagnate, or even wither to become ‘necropolises’.¹ Determining factors will include the ability to prepare for, and adapt to, numerous challenges, notably climate change.

Safety in numbers?

Economies’ capital stock is becoming more concentrated

As urbanisation proceeds, an economy’s capital stock becomes more geographically concentrated. Already 600-odd urban centres generate around 60% of global GDP,² with their capital assets worth three or four times that. This increasing concentration raises the potential cost of damage from natural events, e.g. earthquakes; and cities, particularly those which are coastal, are also increasingly at risk from climate-change-related events, e.g. sea-level increases.

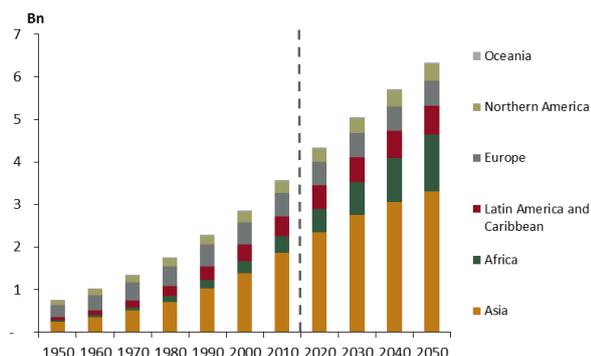
Buildings, and infrastructure more generally, are almost invariably constructed in the light of historical regional climate and weather patterns, often at or near sea level to facilitate transport and trade links. As weather patterns change, however, existing capital stocks become increasingly unsuitable: drainage systems are unable to cope with far-greater volumes of water, and roofs are unable to withstand higher wind speeds, to take but two examples.

Developing cities

Cities in developing countries are the fastest growing

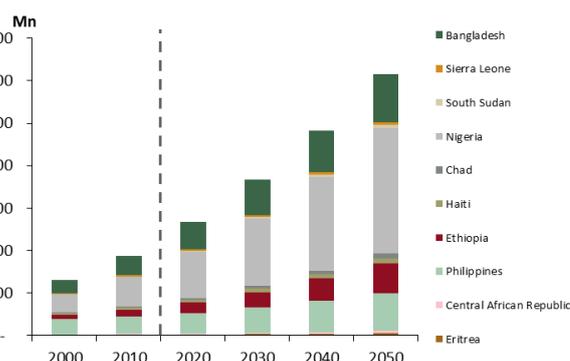
Many of the largest and fastest-growing cities are in developing regions and countries. To 2050, India, China, and Nigeria are expected to account for nearly two-fifths of the projected growth in urban areas, alone adding some 900m people to the world’s cities.³

Figure 1: Population in urban areas, by world region, 1950-2050



Source: UN World Urbanization Prospects 2014, the 2014 revision

Figure 2: Population in urban areas, selected countries, 2000-2050



Source: UN World Urbanization Prospects, the 2014 revision

Notes: The selection represents the top ten countries most vulnerable to climate change as identified by Maplecroft⁴

These areas are also at most risk from climatic change

Unfortunately, burgeoning cities in developing countries also tend to be in the areas most at risk from climate change. Rapidly-urbanising Nigeria and India are categorised as at ‘extreme’ risk from climate-related events. Moreover, the top ten countries most vulnerable to climate change⁴ are expected to see their urban populations more than double between 2010 and 2030, from 168 million to 364 million (Figure 2). At the sub-national level, a number of cities at risk – including Mumbai, Kolkata, Shenzhen, and Guangzhou – are coastal cities in Asia.⁵

In addition, the damage from extreme weather events for low- and middle-income economies is often disproportionately large, if not overwhelming. Hurricane Tomas wiped out the equivalent of 43% of St Lucia’s GDP.⁶ That said, high income per capita cities are also at risk, as Hurricane Sandy showed in the US. Future costs are likely only to increase, due *both* to the growing concentration of the stock of capital *and* the increasing frequency and intensity of such events.

Greening infrastructure

Urbanisation alone will require massive investment

The scale of expected urbanisation alone will require vast infrastructure investment. Indeed, on some estimates, more outlays will be required than the value of the current stock of such assets. McKinsey, for example, projects that around \$57 trillion of spending on transport, power, water and telecommunications infrastructure will be needed to 2030.⁷ Some estimates are even higher.⁸

Needs for new infrastructure to be climate resilient are compelling

In addition, there is a growing need for new infrastructure to be climate-change resilient. Progressively more cities and other sub-sovereigns have begun to recognise this, and to address it by issuing green bonds. So far, such instruments have been confined mainly to Europe and the US, with Ile de France (Paris), Massachusetts, Gothenburg, and Stockholm some of the pioneers. Johannesburg has also issued similar securities.

The market for green bonds, while small, is expected to triple this year, to \$40bn.⁹ Some estimates suggest that issuance could reach \$100bn in 2015.¹⁰ The recent announcement of a Green Bond Index from Barclays MSCI¹¹ could widen the market’s appeal further: there is an analogy with local governments and municipalities in the US, which have a history of issuing bonds to finance infrastructure. More generally, such emerging classes of ‘green’ investment have the potential to contribute to cities’ broader requirement to embrace the continual processes of structural adjustment.

Race to the top

There are historic examples of urban transformation

This is not the first time that cities have transformed their urban environment in order to grow and develop. In the 19th century the mayor of Birmingham, Joseph Chamberlain, used a combination of public and private money to transform Birmingham’s infrastructure: parks were built, roads paved, slums cleared, and safe drinking water provided. Living conditions improved; and so in turn did workers’ health and productivity. Death rates fell. Birmingham flourished as the workshop of the world.¹² 19th century London, by contrast, with its squalid conditions was likened by Sir Arthur Conan Doyle to a “great cesspool”.

Today’s cities will need to meet multiple objectives

The cities most likely to prosper and to outperform their peers in attracting skilled labour, entrepreneurship, and investment in the 21st century will be those that meet multiple (often reinforcing) objectives, including: physical and human capital development; climate resilience; decarbonisation; and sustainable economic growth and development. Such clean, quiet, and safe cities will, it seems evident, grow more sustainably than those that leave much to chance.

‘Watch fors’

Against this background there are three broad developments to watch for:

- First, cities and regions wanting, and being given, more control over their affairs, including major elements of fiscal policy i.e. taxation, spending, and borrowing;
- Second, cities increasingly competing on the provision, quality, and robustness, of their infrastructure; and
- Third, continued development of green bond markets, as cities and other sub-sovereign entities, particularly in areas at risk from climate change, raise finance to meet infrastructure and climate resilience requirements. ■

Disclaimer

The information, tools and material presented herein are provided for informational purposes only and are not to be used or considered as an offer or a solicitation to sell or an offer or solicitation to buy or subscribe for securities, investment products or other financial instruments. All express or implied warranties or representations are excluded to the fullest extent permissible by law.

Nothing in this report shall be deemed to constitute financial or other professional advice in any way, and under no circumstances shall we be liable for any direct or indirect losses, costs or expenses nor for any loss of profit that results from the content of this report or any material in it or website links or references embedded within it. This report is produced by us in the United Kingdom and we make no representation that any material contained in this report is appropriate for any other jurisdiction. These terms are governed by the laws of England and Wales and you agree that the English courts shall have exclusive jurisdiction in any dispute.

©Copyright Llewellyn Consulting LLP 2014. All rights reserved. The content of this report, either in whole or in part, may not be reproduced, or transmitted in any form or by any means, electronic, photocopying, digitalisation or otherwise without the prior written permission of the publisher.

¹ Lewis Mumford, 1961. *The City in history: its origins, its transformations and its prospects*.

² McKinsey & Company, 2011. *Urban world: Mapping the economic power of cities*.

³ UN, 2014. See: http://esa.un.org/unpd/wup/PressRelease/WUP2014_PressRelease.pdf

⁴ Maplecroft, 2014. See: <http://maplecroft.com/portfolio/new-analysis/2014/10/29/climate-change-and-lack-food-security-multiply-risks-conflict-and-civil-unrest-32-countries-maplecroft/>

⁵ Maplecroft, 2013. See: <http://maplecroft.com/portfolio/new-analysis/2013/10/30/31-global-economic-output-forecast-face-high-or-extreme-climate-change-risks-2025-maplecroft-risk-atlas/>

⁶ World Bank, 2013. *Building Resilience – Integrating Climate and Disaster Risk into Development*.

⁷ McKinsey & Company, 2013. *Infrastructure productivity: how to save \$1 trillion a year*.

⁸ The New Climate Economy puts the base-case figure (pre climate change considerations) at around \$89 trillion.

⁹ Bloomberg New Energy Finance, 2014. *Green Bonds Market Outlook 2014*.

¹⁰ Climate Bonds Initiative, MSCI ESG Research, and Barclays Research.

¹¹ MSCI, 2014. See: http://www.msci.com/resources/factsheets/Barclays_MSCI_Green_Bond_Index.pdf

¹² Szreter, S., 2005. *Health and Wealth: Studies in History and Policy*. See Chapters 7 and 8.