Global Macro Trends: Today & Tomorrow
James Carrick / Chris Jeffery
Global Economist / Asset Allocation Strategist
Legal and General Investment Management
Global Macro Trends: Today & Tomorrow

Globalisation, Technology, Demographics, Populism
Notes from a Small Island

GDP (2017)

- $3 trn
- $17 trn
- $80 trn

Source: IMF
The impact of four waves

GLOBALISATION

TECHNOLOGY

DEMOGRAPHICS

POPULISM
Global growth… we’ve never had it so good?

Source: IMF, Maddison Project Database, LGIM
Driven by specialisation and trade

Globalization over 5 centuries (1500-2011)
Shown is the sum of world exports and imports as a share of world GDP (%)
The individual series are labeled with the source of the data

The interactive data visualization is available at OurWorldinData.org. There you find the raw data and more visualizations on this topic.
Licensed under CC-BY-SA by the author Max Roser.

Source: https://ourworldindata.org/wp-content/uploads/2013/05/ourworldindata_world-trade-over-5-centuries.png
Globalisation and urbanisation

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tokyo</td>
<td>38</td>
<td>37</td>
</tr>
<tr>
<td>Delhi</td>
<td>26</td>
<td>36</td>
</tr>
<tr>
<td>Shanghai</td>
<td>24</td>
<td>31</td>
</tr>
<tr>
<td>São Paulo</td>
<td>21</td>
<td>28</td>
</tr>
<tr>
<td>Mumbai</td>
<td>21</td>
<td>28</td>
</tr>
<tr>
<td>Mexico City</td>
<td>21</td>
<td>28</td>
</tr>
<tr>
<td>Beijing</td>
<td>20</td>
<td>27</td>
</tr>
<tr>
<td>Osaka</td>
<td>20</td>
<td>27</td>
</tr>
<tr>
<td>Cairo</td>
<td>19</td>
<td>25</td>
</tr>
<tr>
<td>New York</td>
<td>19</td>
<td>25</td>
</tr>
<tr>
<td>Dhaka</td>
<td>18</td>
<td>24</td>
</tr>
<tr>
<td>Karachi</td>
<td>17</td>
<td>25</td>
</tr>
<tr>
<td>Buenos Aires</td>
<td>15</td>
<td>25</td>
</tr>
<tr>
<td>Kolkata</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>Istanbul</td>
<td>14</td>
<td>19</td>
</tr>
</tbody>
</table>

Source: UN Urbanisation Prospects, 2014
The cost advantage in emerging markets is hard to ignore

Source: IMF, LGIM
Catch-up of emerging markets

The future’s bright … the future’s emerging

GDP at market exchange rates, Constant 2016 prices, Trillion US$

Source: PWC, The World in 2050
Energy… a scarce resource or a technology?

Source: Getty images
Global warming...
Massive changes needed to limit global temperature rise

Source: https://commons.wikimedia.org/wiki/File:Global_Warming_Predictions.png
Energy mix revolution…
Has been done before…coal, wood, animals

Source: Ayres and Warr (2007)
Solar and battery prices
Trend decline in prices due to technological improvement

Source: Bloomberg New Energy Finance
Battery technology
Inverse relationship between density and price

Source: http://batteryuniversity.com/learn/archive/battery_statistics
Other technology prices falling too

 Collapse in data storage -> big data -> AI-> autonomous driving

An IBM 14-in HDD from the early 1980s next to today’s highest capacity 3.5-in HDD. The 14-in HDD holds 200MB; the 3.5-in HDD from Western Digital holds 10TB of data or more than 50,000 times the amount of data.

By Grendelkhan [CC BY 4.0 (https://creativecommons.org/licenses/by-sa/4.0)], from Wikimedia Commons
Disruption from falling data storage prices

Will the robots destroy all the jobs?

(Nand Flash = SD card, DRAM = computer memory)


Price of storage and memory costs through the years
Disruption is happening quicker?
Smartphone 4 years, computer 16 years, phone 43 years

Source: https://ourworldindata.org/technology-adoption
Don’t underestimate the potential for technological change

“There is a world market for maybe five computers”
Thomas Watson, IBM Chairman, 1943

“There’s no chance that the iPhone is going to get any significant market share”
Steve Ballmer, Microsoft CEO, 2007

“The telephone has too many shortcomings to be seriously considered a means of communication”
William Orton, Western Union President, 1876
Demographics – Population Pyramid Scheme
Running out of workers!

Western Europe Population Pyramids

1980

2015

2050

Source: UN WPP 2015
In 1908, life expectancy was BELOW pension age.
In 1940s, the gap was 7 years.
Today, the gap is 17 years.

Source: ONS
More retirees than school leavers!

Net effect = shrinking domestic born workforce

Net change in domestic-born workforce (nb this excludes retiring immigrants!)

Source: ONS
UK story the same globally…

Global labour force slowing

Global labour force growth
(adjusted for age and gender productivity)

Countries weighted by size of economy
Countries weighted by population

Source: OECD, UN, Macrobond, LGiM estimates
Tax and spend
Middle-aged taxpayers fund children and pensioners

Source: LGIM, Macrobond, OBR
Public finances under pressure
Lower taxes and higher health/pension costs to boost deficit

Cumulative impact on public finances (% of GDP) from ageing

Source: OBR, LGIM estimates.
Global inequality has fallen due to rise of China

But developed market middle class has suffered

Source: “Global Income Distribution: From the fall of the Berlin Wall to the Great Recession” Lakner and Milanovic, World Bank Economic Review, September 2015
Inflation impact of populist shift clearer than growth impact

“An ideology that pits a virtuous and homogeneous people against a set of elites and dangerous ‘others’ who are together depicted as depriving (or attempting to deprive) the sovereign people of their rights, values, prosperity, identity, and voice”

Albertazzi & Duncan (2008), Twenty-First Century Populism

Source: LGIM
Trade war?
US often raised tariffs… but 1930s was first time we saw retaliation

Sources: Imlah, Economic Elements
Trade war?
Let’s keep it in context

10% tariff on all Chinese imports is still only an average tariff of 1.7%
CPI impact of tariffs is small but noticeable…
Tariffs so far amount to ¼% of GDP

Source: IMF, BEA, LGIM
Who needs high immigration?

US population outlook

EU population outlook

Who wants high immigration?

35% of Americans described immigration as having a “very or fairly positive” impact on their country

16% of Europeans* described immigration as having a “very or fairly positive” impact on their country

Source: “Global Views on Immigration and the Refugee Crisis” Ipsos, Sep 2017. European data are an unweighted average of Hungary, Italy, Belgium, France, Poland, Germany, Sweden, Spain and the United Kingdom.
Rise of nationalism in Europe

% of votes won by nationalist party in most recent national elections

- Finland: The Finns 18%
- Sweden: Sweden Democrats 13%
- Germany: Alternative for Germany 12.6%
- Denmark: Danish People’s Party 21%
- Czech Republic: Freedom and Direct Democracy 11%
- Netherlands: Freedom Party 13%
- France: Front National 13%
- Switzerland: Swiss People’s Party 29%
- Austria: Freedom Party 26%
- Slovakia: Our Slovakia 8%
- Bulgaria: United Patriots 9%
- Hungary: Jobbik 19%
- Italy: The League 17.4%
- Cyprus: ELAM 3.7%
- Greece: Golden Dawn 7%

In many countries nationalists got higher scores in European Parliament elections and opinion polls.

Last updated: June 2018

Source: BBC
So what?

Source: LGIM
Keeping in touch through our blogs

Explore insights on the future of investment from across LGIM’s investment teams

Subscribe at futureworldblog.com

Follow @LGIM to be notified of our latest posts
The views expressed in this [publication/presentation] are those of invited contributors and not necessarily those of the IFoA. The IFoA do not endorse any of the views stated, nor any claims or representations made in this [publication/presentation] and accept no responsibility or liability to any person for loss or damage suffered as a consequence of their placing reliance upon any view, claim or representation made in this [publication/presentation].

The information and expressions of opinion contained in this publication are not intended to be a comprehensive study, nor to provide actuarial advice or advice of any nature and should not be treated as a substitute for specific advice concerning individual situations. On no account may any part of this [publication/presentation] be reproduced without the written permission of the IFoA [or authors, in the case of non-IFoA research].