



2H 2016 Economic Update

The World's Deadly Obsession With Monetary Economics

BREXIT & More "EXITs"?

July 2016

Francis Tan

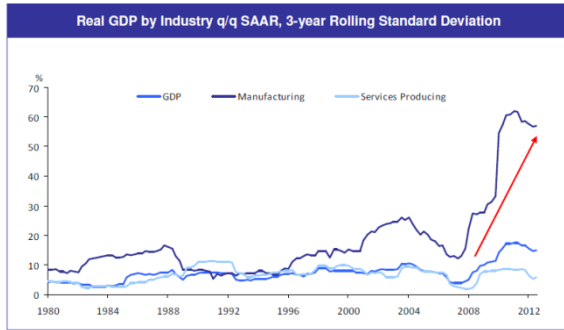
UOB Global Economics & Markets Research

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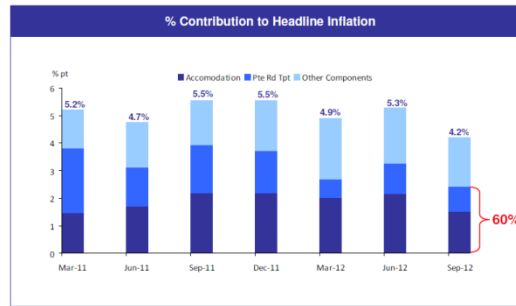
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Recap: 2013 → Will Growth-Inflation Puzzle Continue

Manufacturing Sector Contributed To Volatility In GDP



Accommodation & Pte Road Transport Explain 60% of Headline Inf.



Healthcare Costs Are Rising

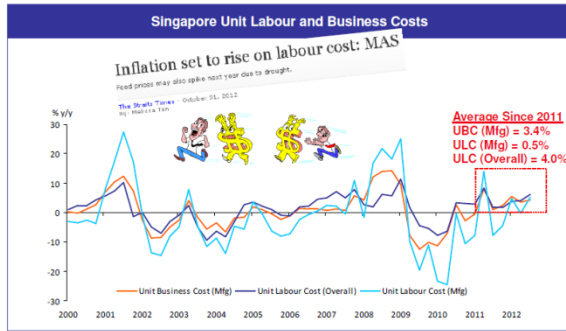


Singapore Consumer Price Index - Components

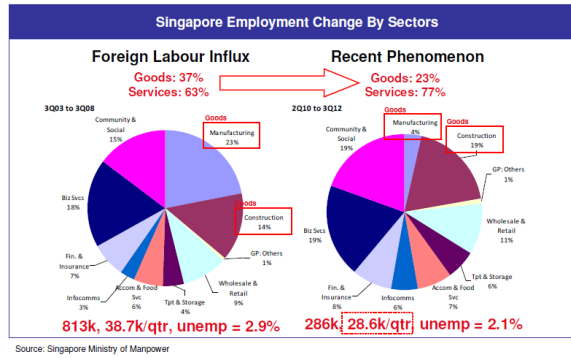
Component	Weight	2012 % y/y	Latest (2009=100)
Food	22.1%	2.33%	107.60
Housing	25.5%	7.75%	121.10
Private Rd Tpt	11.7%	7.69%	149.10
Public Td Tpt	3.7%	4.91%	105.80
Education & Stationery	7.4%	3.38%	110.00
Recreation & Others	15.6%	1.81%	106.10
Healthcare	5.9%	4.49%	110.50
Communications	4.8%	-0.10%	95.00
Clothing & Footwear	3.4%	1.45%	102.30

Source: Singapore Department of Statistics

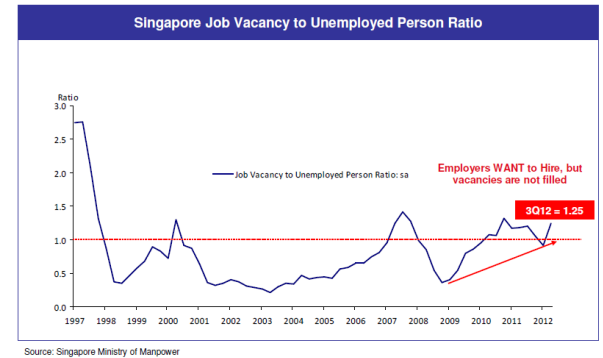
What's More Important Is Business Costs



Low Unemployment Was Due To Strong Hiring In Services Sectors



... But Job Vacancies Increasing...

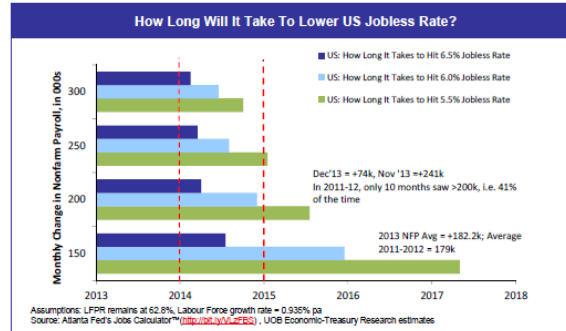


Recap: 2014 → Of US Rates & Asian Trade

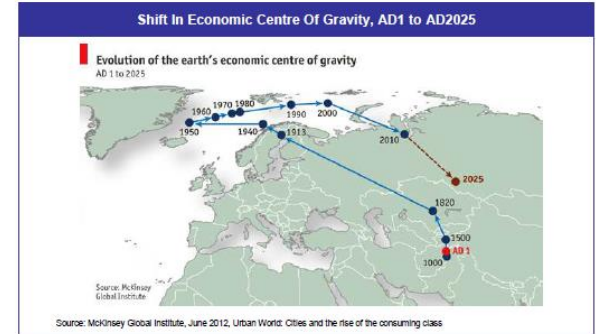
Timeline of Fed's Actions Since Global Financial Crisis



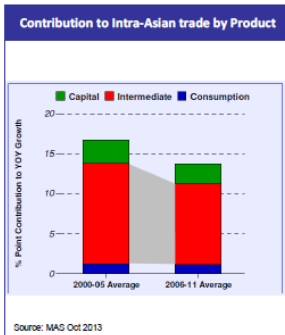
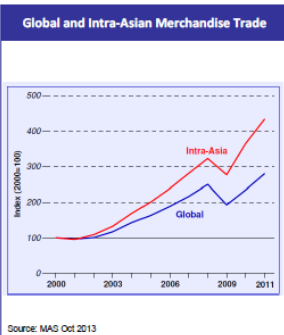
Fed to maintain near-zero interest rates till unemployment reaches 6.5%



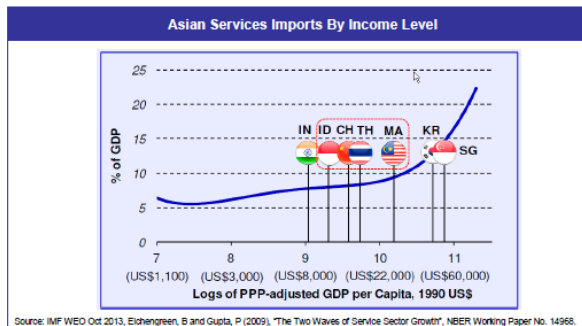
This Is The Century For Asia



Strong Intra-Asian Trade, But Where Is The Slowdown & Why?



A lot More Opportunities In Services As Income Rises



Structural Disruptions To (almost) All Industries



Industries	% Share of GDP (2012)	Disruptors
Manufacturing	27%	Stratasys
Utilities	1%	SUNPOWER, First Solar
Wholesale/Retail	15%	Qoo10, amazon.com, FOODMIA
Tpt/Storage	8%	sharetransport.sg
Accomd/Food	2%	airbnb, rooomorama, 8lets.com
Infocomms	4%	napster.
Finance/Insurance	12%	KICKSTARTER, zopa
Biz Svcs	11%	99 designs, MinuteApplians
Other Svcs	9%	microfranchise.sg

* Not inside the list: Construction industry

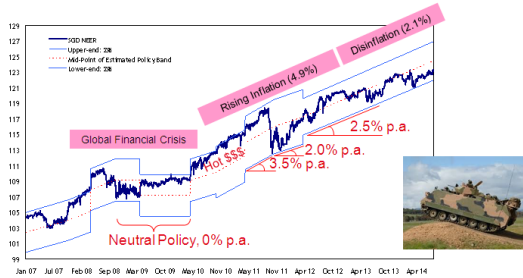
Recap: 1H2015 → Near-term Challenges, Long-term Goals

Key Features Of Managed Float



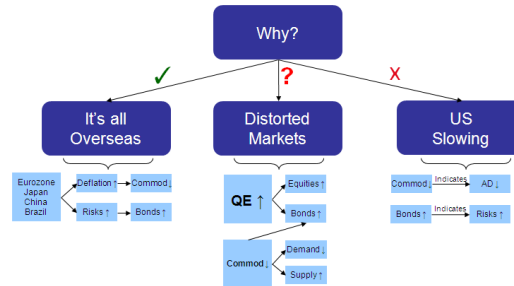
(2) Slope (or crawl)

- Determines rate at which the SGD is allowed to appreciate by adjusting the **inclination of the slope**.
- In line with the robust growth outlook in the Singapore economy and rising inflation (since Apr 11), the MAS allows the SGD NEER to appreciate at about **2.5%** every year.

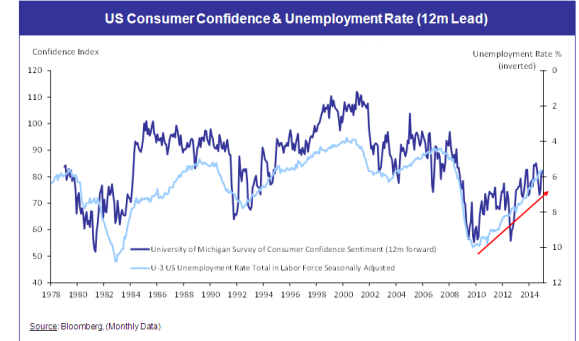


The New York Times

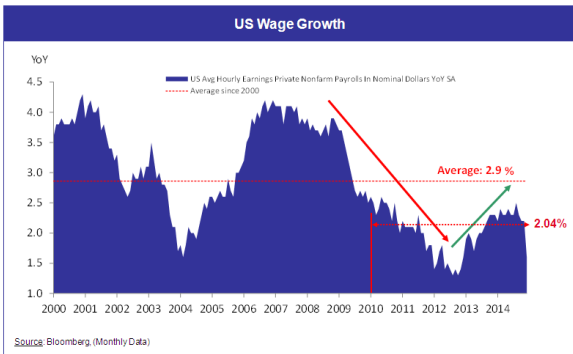
There's a Giant Contradiction at the Heart of the U.S. Economy
By NEIL IRWIN
November 21, 2014



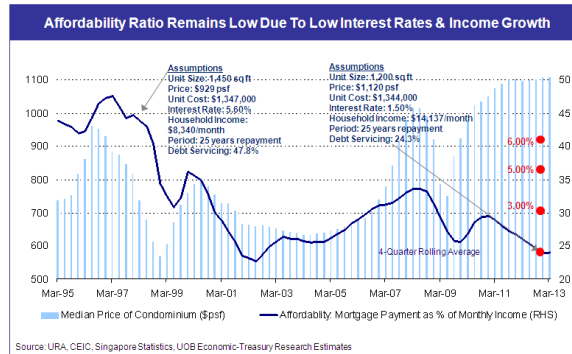
Consumer Confidence As A Predictor Of Unemployment



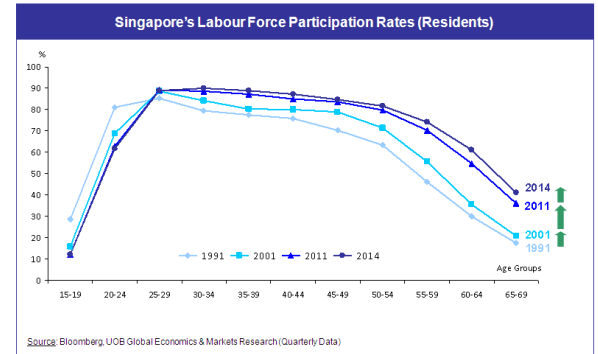
Wage Growth Remains Slow, But Trending Higher...



Demand In Singapore Likely To Remain Firm



We Bought Some "Time" By Increasing LFPR



Recap: 2H2015 → First Greece, Then China: What Else Next?

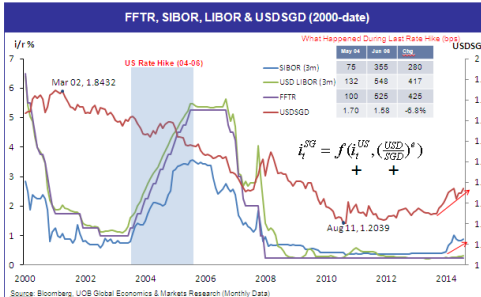
Deflationary Risks & Weak Global Growth Prompted Central Banks To Cut Rates

Central Bank Policy Decisions in 2015					
Country	Key Target Rate	Current Rate	Amount of Change	Next meeting	
7 (unscheduled)	Romania	Key Policy Rate	2.50%	-25bps	4 Feb 2015
16 (unscheduled)	Switzerland	Target Rate	-0.75%	-50bps	19 Feb 2015
16 (unscheduled)	India	Repo Rate	7.75%	-25bps	3 Feb 2015
16	Egypt	Deposit Rate	8.75%	-50bps	26 Feb 2015
20 (unscheduled)	Peru	Reference Rate	3.25%	-25bps	12 Feb 2015
20 (unscheduled)	Danmark	Lending Rate	0.25%	-15bps	NA
20 (unscheduled)	Danmark	Deposit Rate	-0.50%	-25bps	NA
22	Eurozone	Refinancing Rate	0.25%	No Change (but implemented QE)	5 Mar 2015
20	Turkey	Benchmark Rate	7.75%	-50bps	24 Feb 2015
21	Canada	Overnight Rate	0.75%	-25bps	4 Mar 2014
21	Sri Lanka	SLRIC Rate	12.25%	-50bps	4 Mar 2015
24	Pakistan	Discount Rate	4.00%	-100bps	11 Mar 2015
23 (unscheduled)	Singapore	FX-centred Policy		Lowering the SIBOR/USD SGD* appreciation slope	April 2015
30	Russia	1-week Auction Rate	15.00%	-200bps	13 Mar 2015
3	Australia	Cash Target Rate	2.25%	-25bps	12 Mar 2015
5	Denmark	Deposit Rate	-0.75%	-25bps	NA
12	Sweden	Riksbank Interest Rate	-0.10%	-10bps & announced QE	29 Apr 2015
17	Indonesia	BI Rate	7.50%	-25bps	17 Mar 2015
23	Israel	Base Rate	0.10%	-15bps	23 Mar 2015
28 (unscheduled)	China	1Y Lending Rate	5.35%	-25bps	NA
4 (unscheduled)	India	Repo Rate	7.50%	-25bps	7 Apr 2015
11	Thailand	Repo Rate	1.75%	-25bps	29 Apr 2015
12	Hong Kong	Bank Rate	1.75%	-25bps	9 Apr 2015

Source: Bloomberg & various websites. *US dollar-denominated. Includes home currency exchange rate.
 Produced by UOB Global Economics & Markets Research August 2015

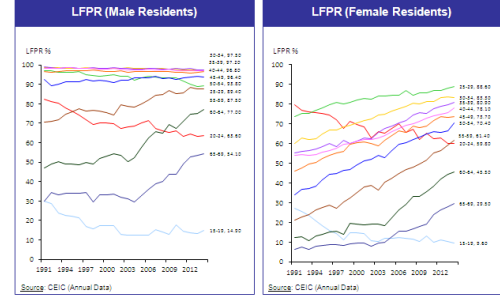
Many More! 8

Spike In SIBOR Due To FX Effects



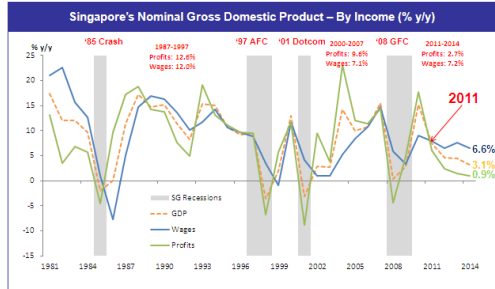
Source: Bloomberg, UOB Global Economics & Markets Research (Monthly Data)
 Produced by UOB Global Economics & Markets Research August 2015

The Rise In Females & Older Residents In Workforce



Source: CEBIC (Annual Data)
 Produced by UOB Global Economics & Markets Research August 2015

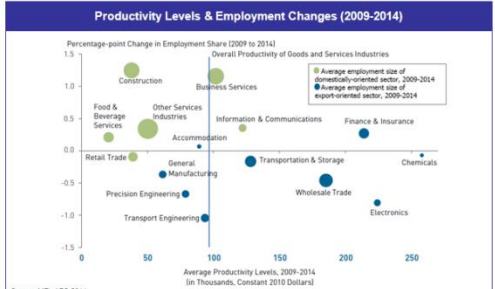
Recent Slow Growth Due To Weaker Corp Profits



Source: Bloomberg, UOB Global Economics & Markets Research (Annual Data)
 Produced by UOB Global Economics & Markets Research August 2015

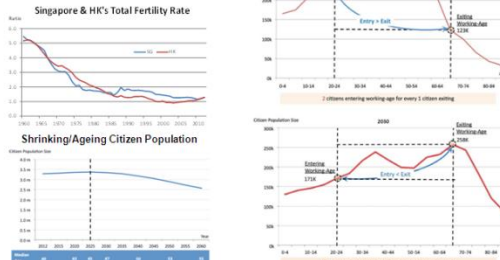
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More Employed In Less Productive Sectors



Source: MTL, ABS 2014
 Produced by UOB Global Economics & Markets Research August 2015

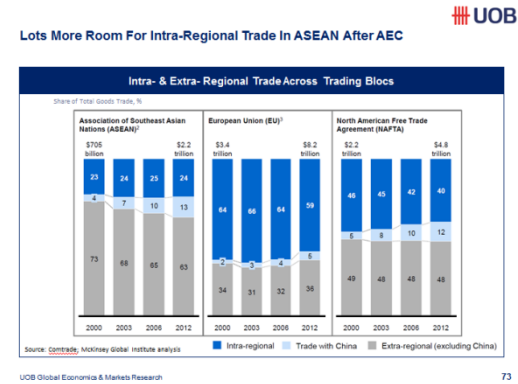
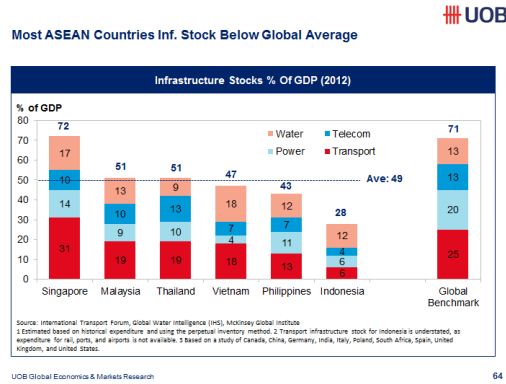
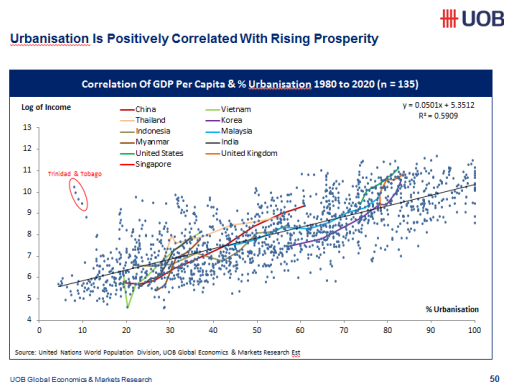
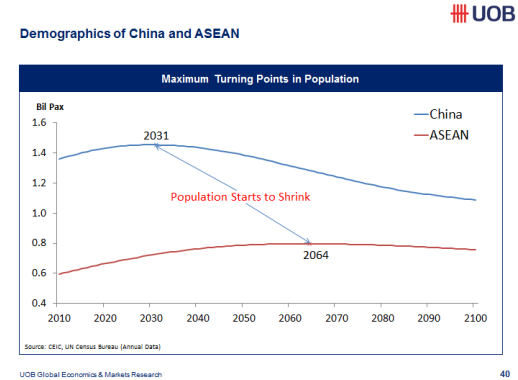
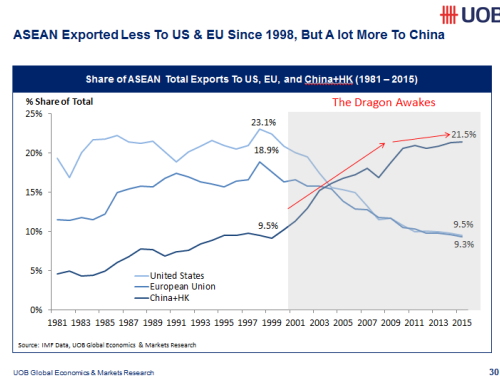
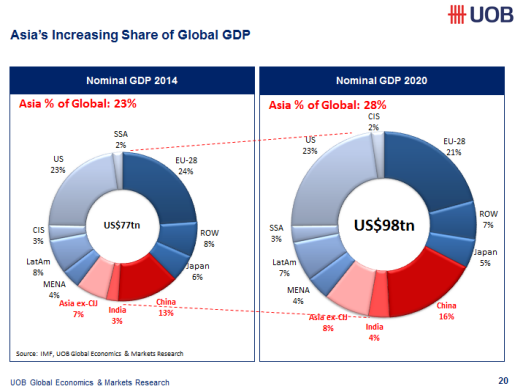
A SUSTAINABLE POPULATION FOR A DYNAMIC SINGAPORE



Source: Singapore National Population and Family Division
 Produced by UOB Global Economics & Markets Research August 2015

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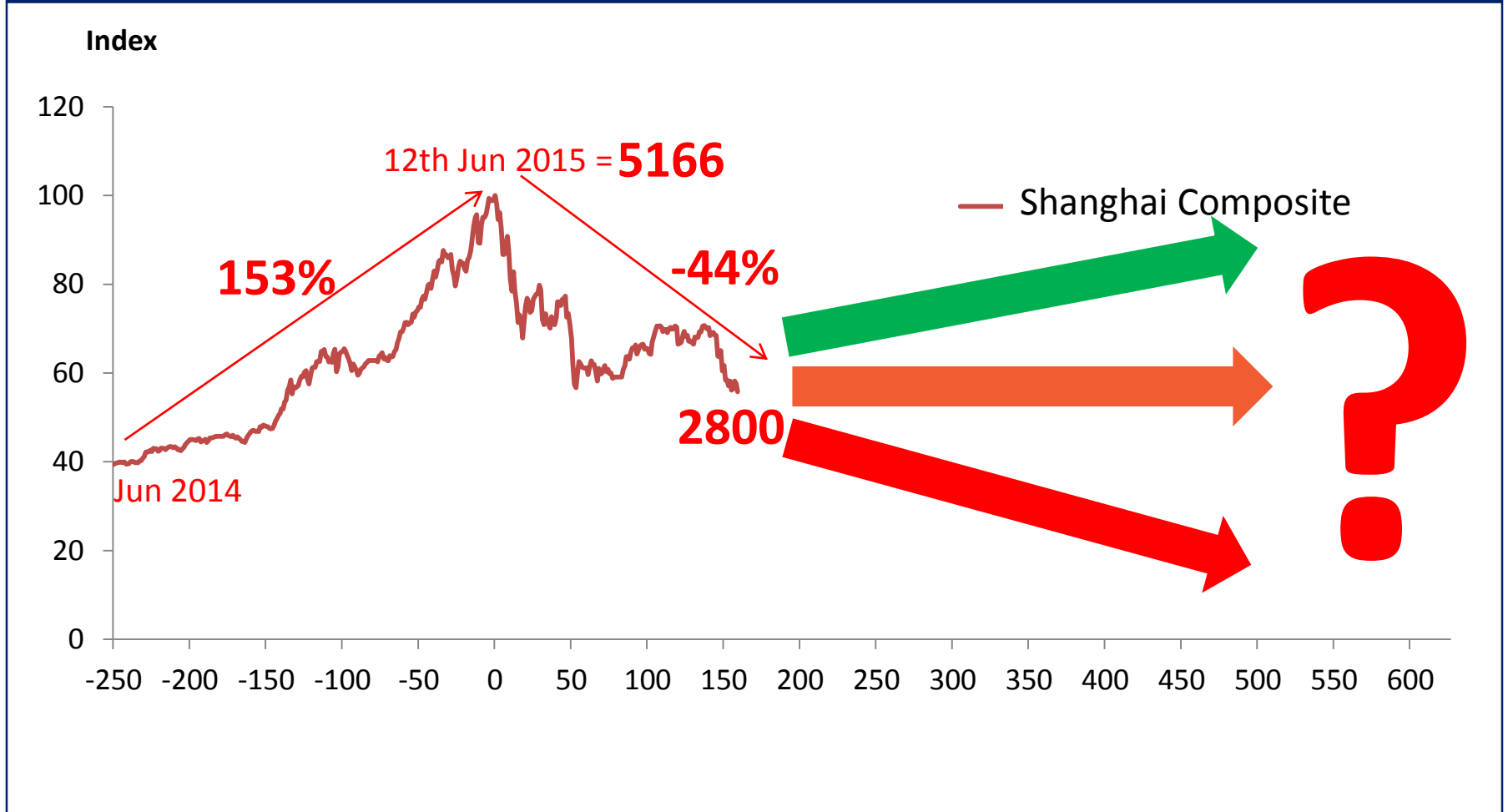
Recap: 1H2016 → The Asian Miracle: Will it Continue?





On 28th Jan 2016

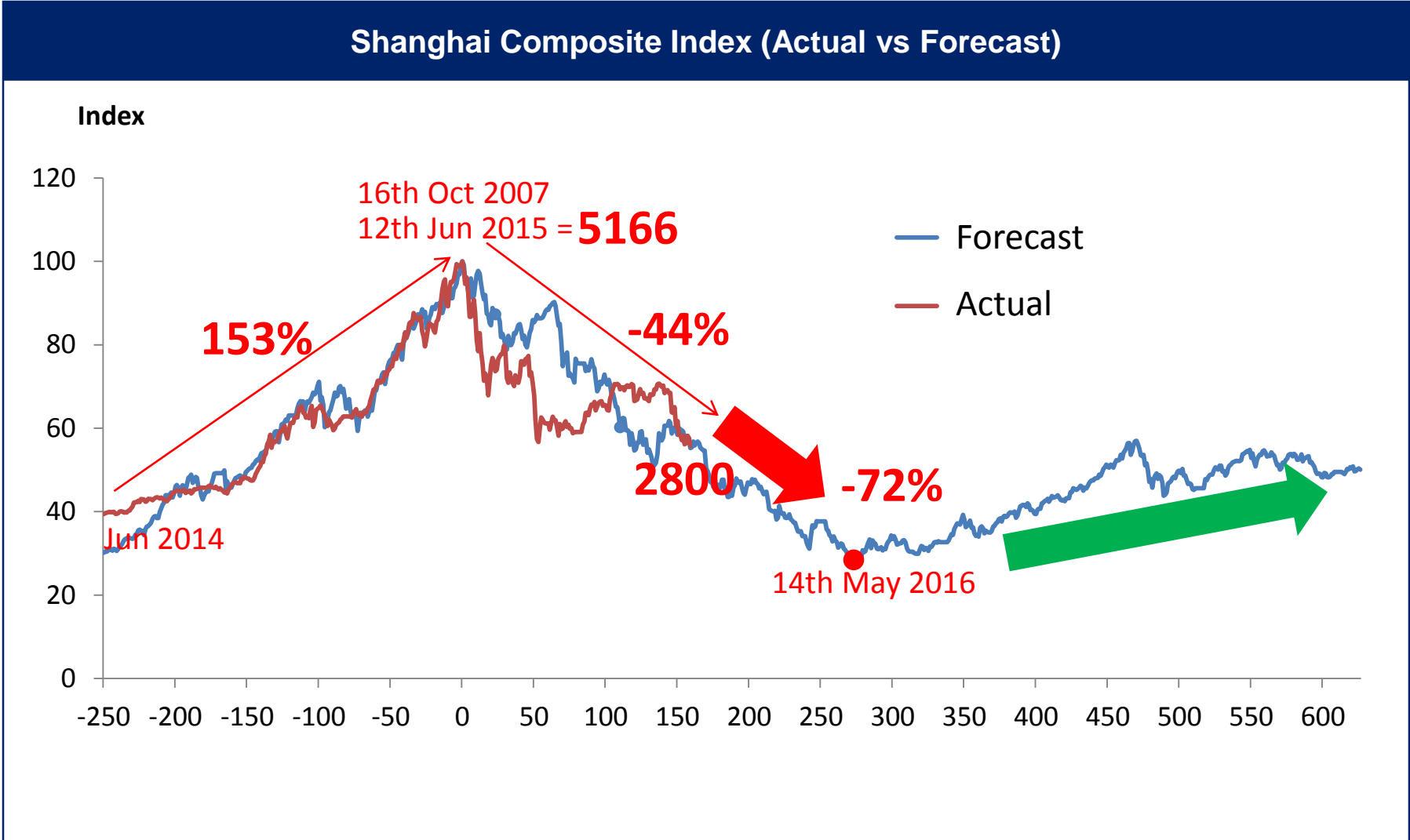
Shanghai Composite Index



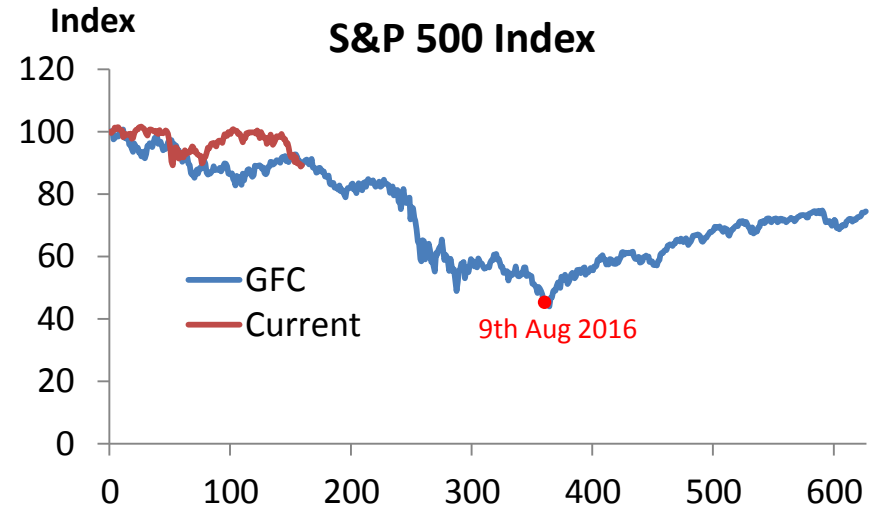
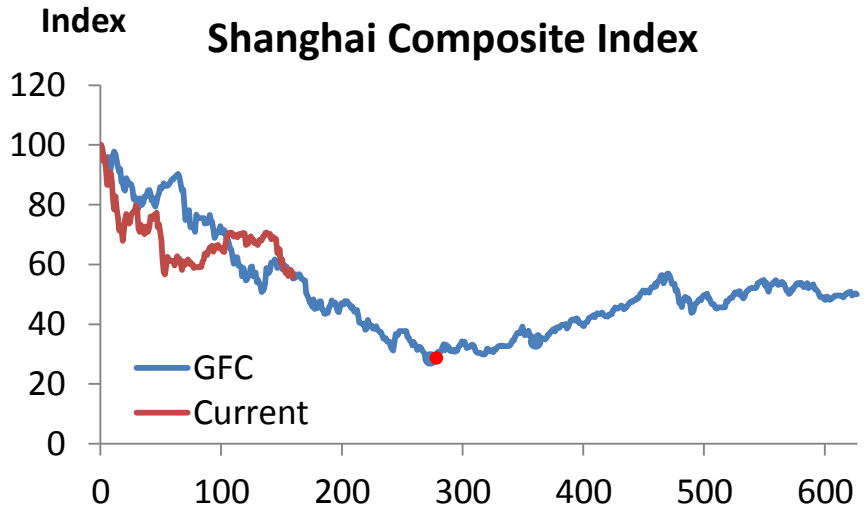
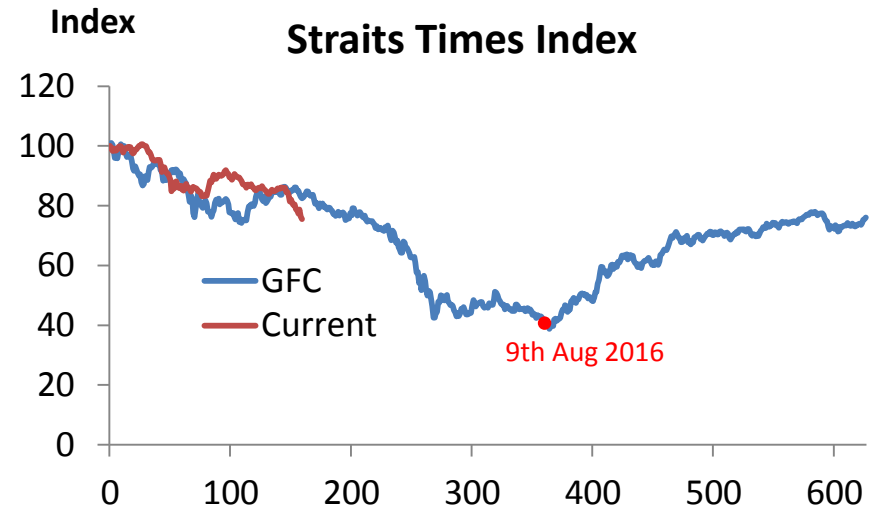
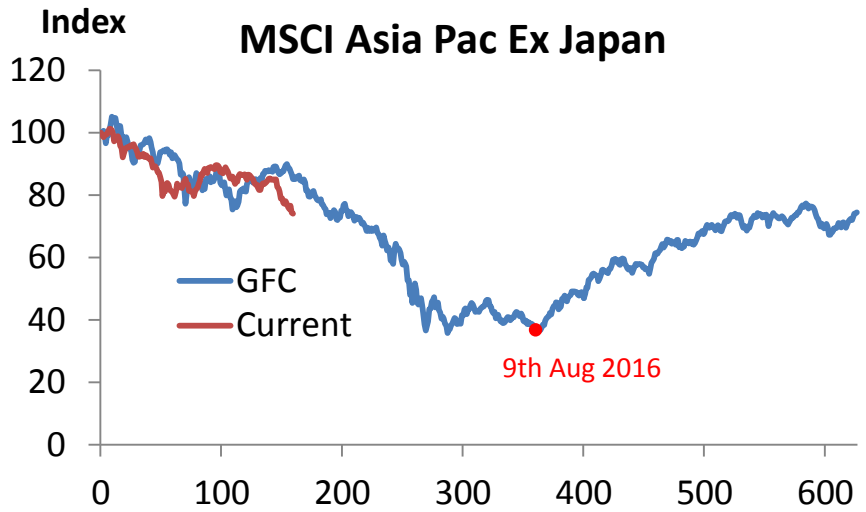
History doesn't repeat itself,
... but it does **RHYME**.

Mark Twain

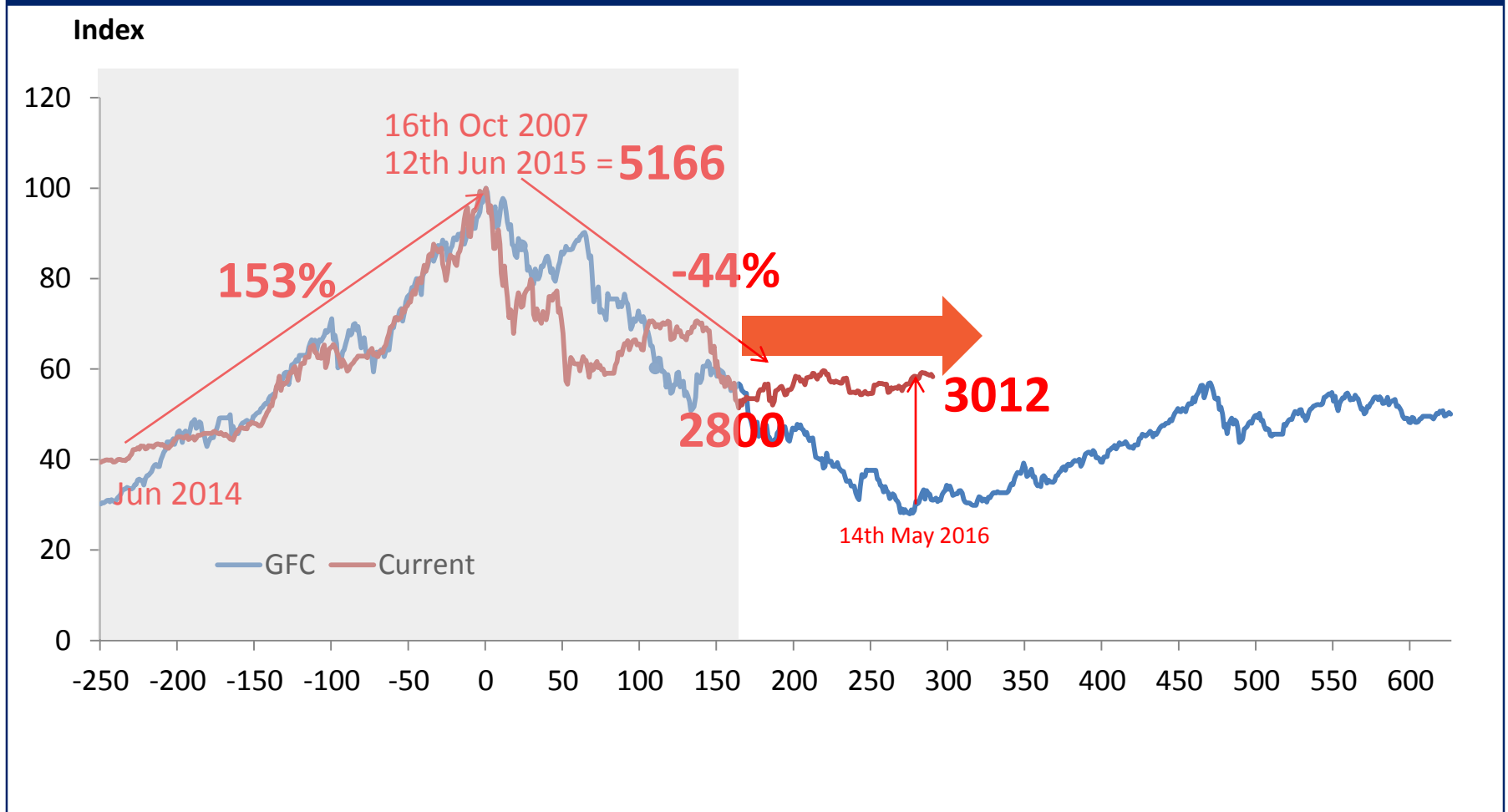
On 28th Jan 2016

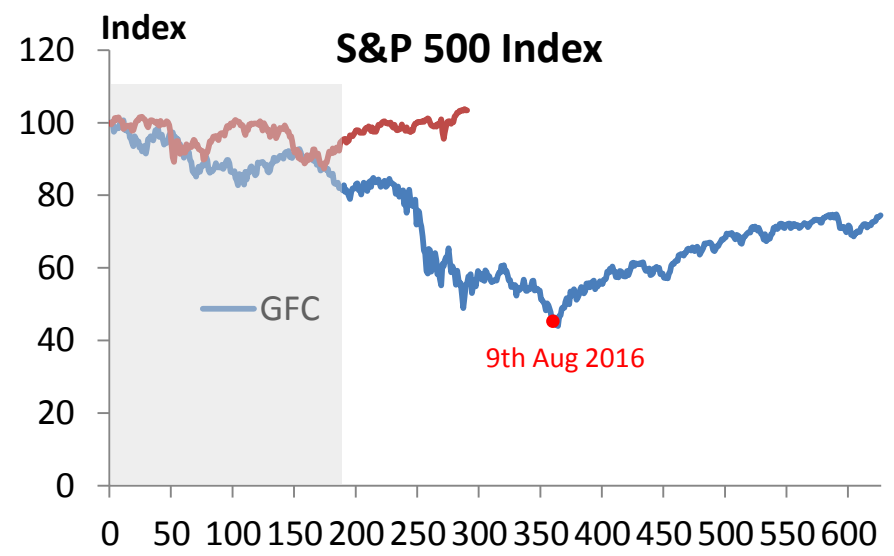
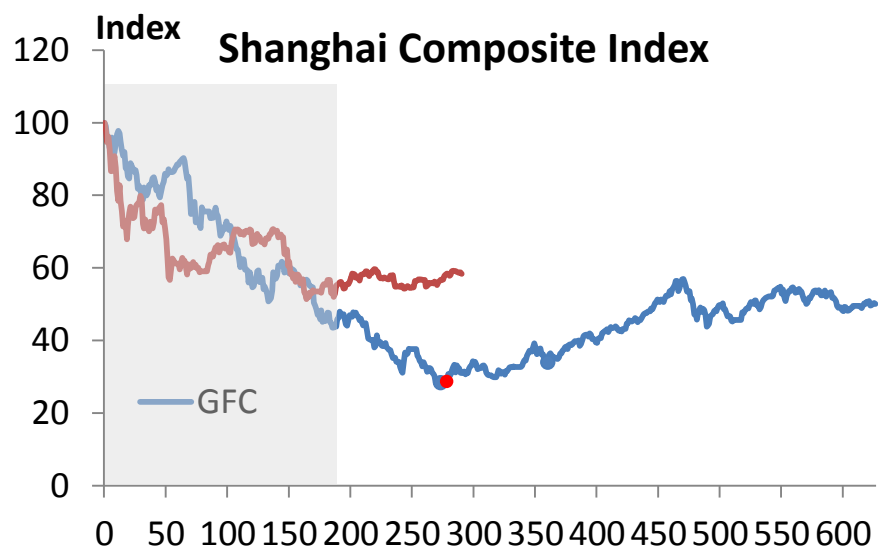
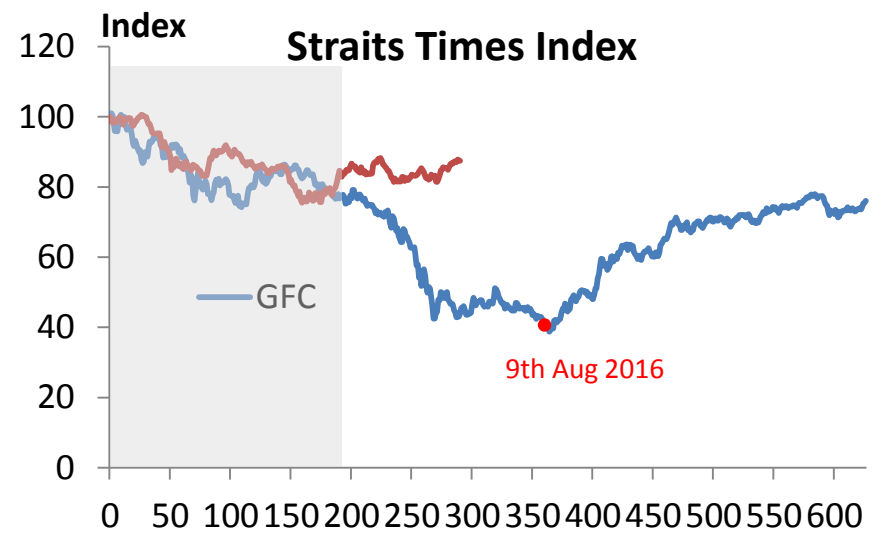
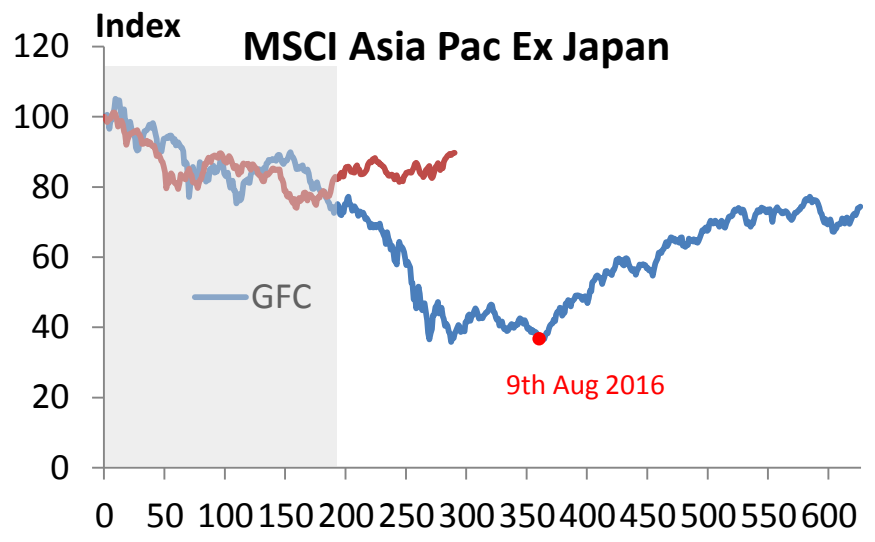


On 28th Jan 2016



Shanghai Composite Index (Actual vs Forecast)





Singapore Dollar Near Record High Puts Heat on MAS to Ease Again

by [Lilian Karunungan](#)
[lilianten](#)

<http://bloom.bg/29qFUOr>

8th Jul 2016

Haven buying of the Singapore dollar amid global market turmoil has pushed a gauge of its strength to **unprecedented levels**, putting pressure on the city's central bank to do more to support the economy.

The Monetary Authority of Singapore's trade-weighted measure of the currency reached a record high after Britain voted to exit the European Union. It has reversed losses incurred after the MAS surprised markets by moving to a **neutral policy** of zero percent appreciation in April. That's prompting ABN Amro Bank NV, Royal Bank of Scotland Plc and Nomura Holdings Inc. to predict more easing. The next review is due in October.

While Singapore's top credit rating and current-account surplus is luring money, along with nations such as Japan and South Korea, the city's economy is **sputtering**. **Gross domestic product barely grew** in the first quarter from the previous three months and the government predicts non-oil exports will shrink this year. Consumer prices have been declining since November 2014 and retail sales, excluding cars, fell in the three months though April.

"The **risk of MAS easing in October has increased**," said XXX, a senior currency strategist at XXX in Singapore. "Global GDP will be lower, and this will have repercussions on **Singapore's growth**. The **Singapore dollar strength** against currencies of Singapore's main trading partners poses a strong downside risk to export and inflation forecasts."

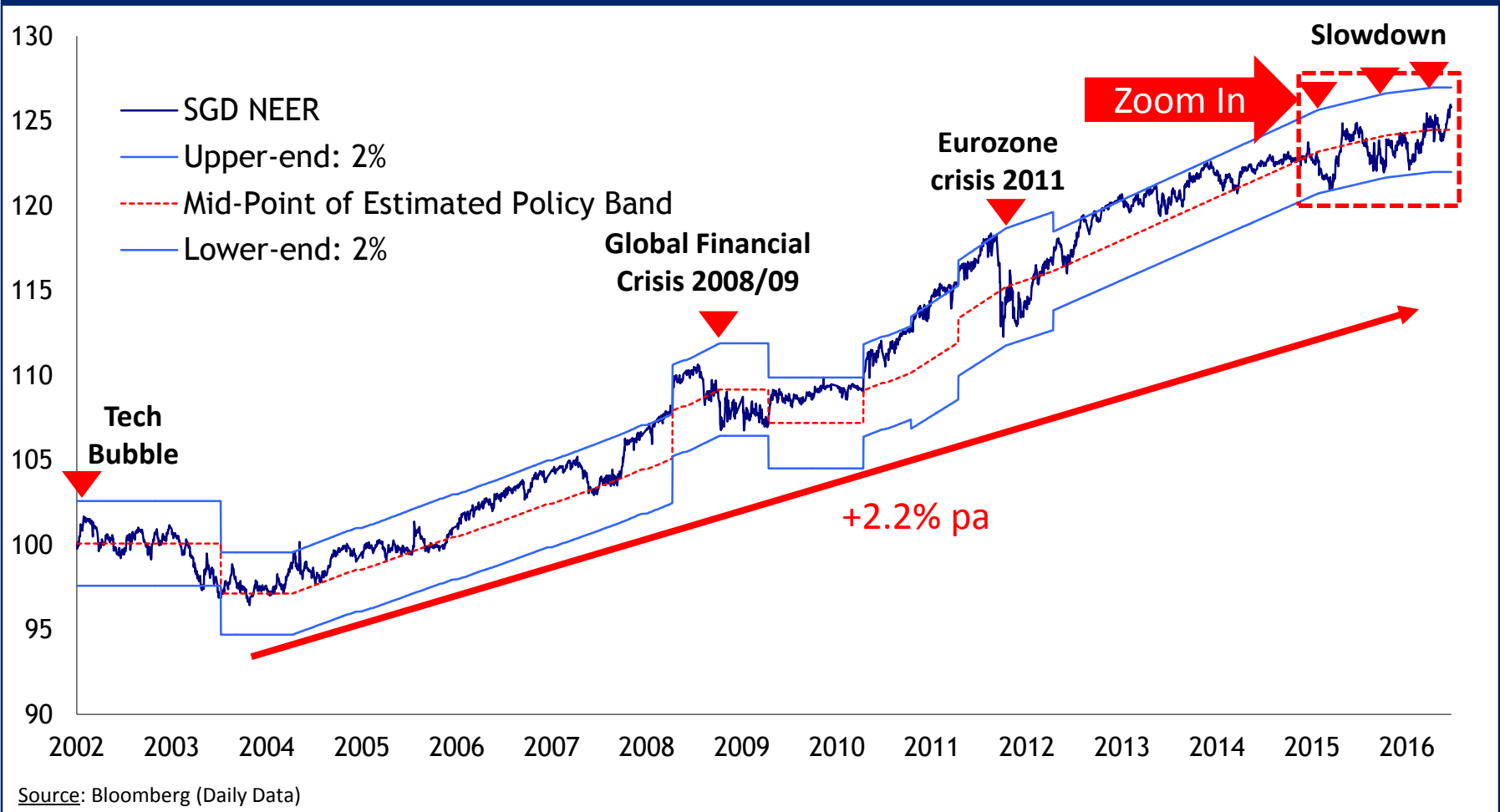
SGD NEER at
Historic High

SGD GDP
Growth Very
Weak

MAS Will
Ease The SGD
NEER

Appreciating SGD NEER In The Past Was Well Supported By Growth In Labour Productivity, Current Account Surpluses

UOB SGD NEER Model



A Little... Logic

TRUTH

VALIDITY

SOUNDNESS

A Little... Logic

Premise 1: SGD NEER at Historic Strength → Bad for GDP Growth **False**

Premise 2: Whenever GDP Growth is Bad → MAS will Ease SGD NEER **False**

Conclusion: SGD NEER at Historic Strength → MAS will Ease SGD NEER

Valid but Unsound

Premise 1: All living things with wings → can fly **False**

Premise 2: Penguins have wings

Conclusion: Penguins can fly

Valid but Unsound

Premise 1: All Men are Mortal

Premise 2: Francis is a Man

Conclusion: Francis is Mortal

Valid & Unsound

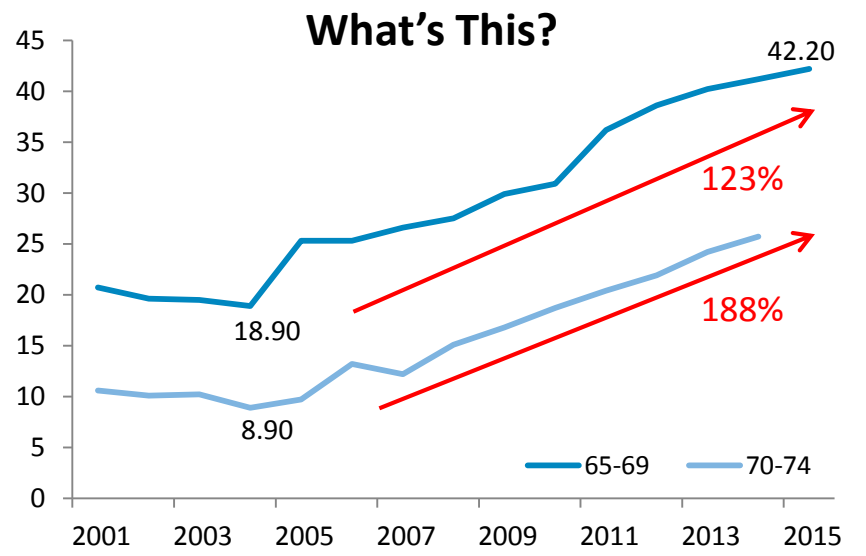
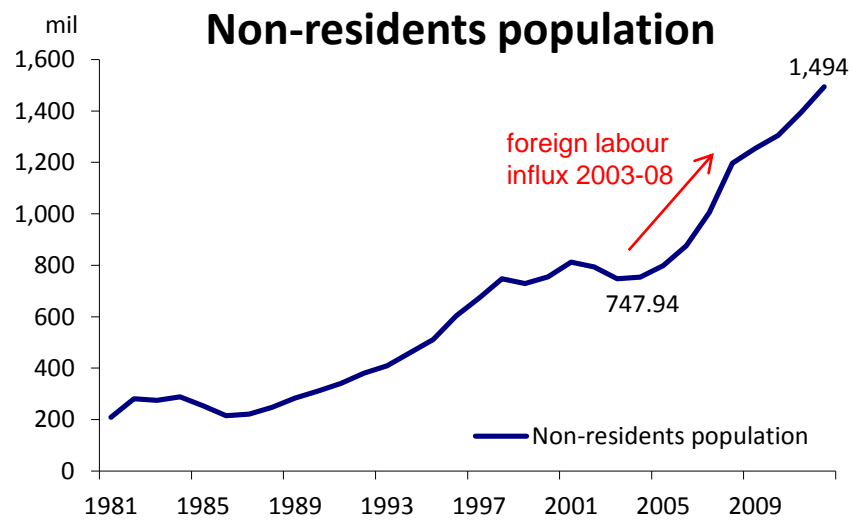
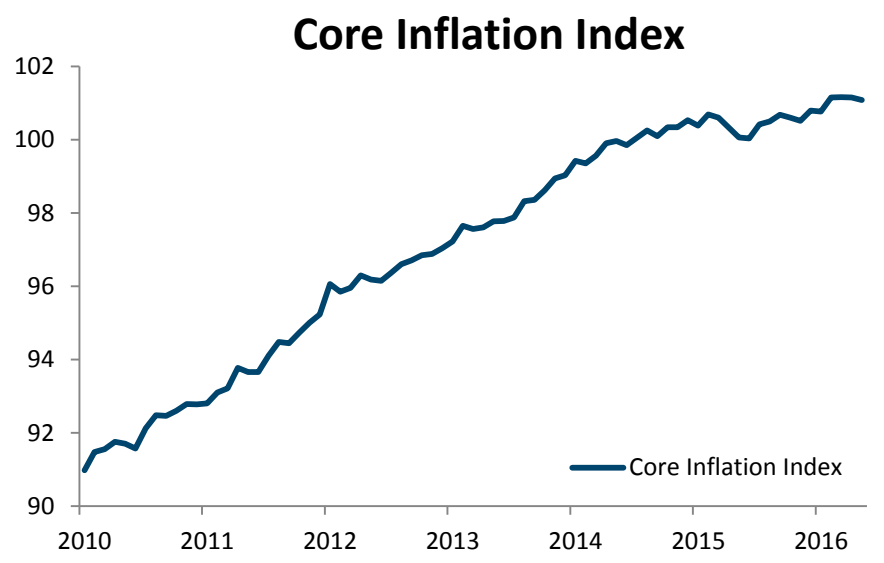
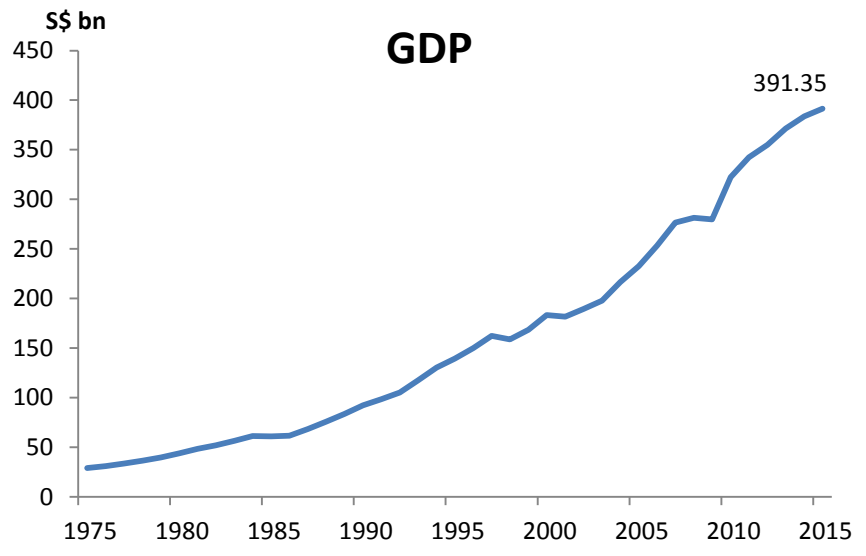
Premise 1: All who wear pants are Men **False**

Premise 2: The women in this room wear pants

Conclusion: The women in this room are men!

Valid but Unsound

But Many Other Economic Indicators Are Also At Its Highest



MAS stuns market by flattening Singapore dollar policy band

15th Apr 2016

Central bank shifts to neutral policy stance – even without recessionary conditions – as it tempers core inflation outlook

By Kelly Tay
kellytay@sph.com.sg
@KellyTayBT

Singapore

ONCE again, the Monetary Authority of Singapore (MAS) caught the market off-guard – delivering an easing stroke by flattening the Singapore dollar policy band on Thursday, after tempering its core inflation forecast for 2016.

This marked the first time the S\$NEER (Singapore dollar nominal effective exchange rate) band's slope was flattened in the absence of a recession – prompting some economists to call MAS's decision "a new paradigm". One analyst even remarked that market-watchers were "stunned like vegetable" – a reference to a local song and online meme.

Amid the surprise, however, the central bank was keen to stress that its shift to a neutral policy stance of zero per cent appreciation was not a strategy to weaken the Singapore dollar.

"This is not a policy to depreciate the domestic currency, and only removes the modest and gradual appreciation path of the S\$NEER policy band that was in place," emphasised MAS in its twice-yearly monetary policy statement.

This certainly didn't stop the market from reacting, though. The Singapore dollar slid by 0.93 per cent to S\$1.3632 against the US dollar at 9.49am Singapore time – its biggest fall since November.

The width of the policy band and the level at which it is centred remain unchanged.

Summing up why the market was so taken aback by the move, UOB economists Francis Tan and Quek Ser Leang said: "A neutral S\$NEER policy slope is typically deployed during critical situations such as the 2008 global financial crisis and the 2001 tech bubble recession, where GDP growth contracted and core inflation fell into the negative zone. The move today is a significant one and shows that the central bank is probably uncomfortable with the recent strength in the SGD, where it gained a 10 big figure in a short span of three months."

Prior to Thursday morning's announcement, most economists had expected MAS to leave its monetary policy stance unchanged. However, a small minority – including those from Citi and HSBC – had warned that it would be a closer call than most were thinking.

What many did not foresee was the subtle but discernable change in MAS's core inflation outlook. After all, the central bank has said that core inflation (which strips out the costs of accommodation and private road transport) is the most relevant indicator for monetary policy.

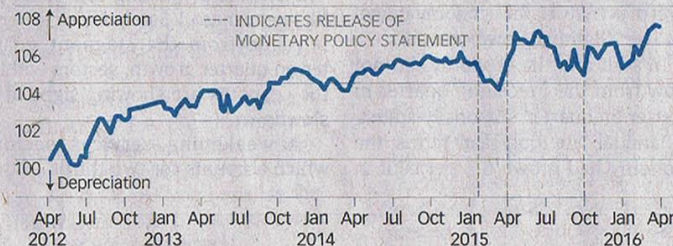
"For the whole of 2016, (core inflation) should come in within the lower half of the 0.5-1.5 per cent forecast range, barring upside surprises to global oil prices," said MAS – essentially narrowing its core inflation forecast.

While the central bank continues to expect core inflation to rise over the course of this year, it foresees this happening at a milder pace than

Surprise easing

S\$ Nominal effective exchange rate (S\$NEER)

INDEX (APRIL 2-5, 2012 AVERAGE = 100)



Source: Monetary Authority of Singapore (MAS)

earlier thought. This is due to a downward revision in the outlook for global oil prices, a reduction in labour market tightness, and weaker consumer sentiment.

Added MAS: "Over the medium term, core inflation is expected to average slightly below 2 per cent."

Inflation aside, the central bank adjusted its growth outlook too – albeit against its expectations from half a year ago (during its previous policy review in October 2015) – to bring it in line with more recent forecasts. A month after that policy meeting, the Ministry of Trade and Industry (MTI) released its 2016 GDP growth forecast of 1-3 per cent – an assessment MAS reiterated on Thursday.

Indeed, against the backdrop of a less favourable external environment, MAS flagged that the level of economic activity would be "slightly below potential".

Flash estimates by MTI – also announced on Thursday – showed that gross domestic product grew by a better-than-expected 1.8 per cent in the first quarter from a year ago, but sequential quarterly growth was flat.

In its policy statement, MAS said that the flattening move follows "measured steps" in January and October 2015, when the slope of the band was decreased.

MAS had adopted a "modest and gradual" appreciation path for the S\$NEER policy band since April 2010.

"The actual outcome of S\$NEER movements over the six months since October 2015 has in fact been a zero per cent appreciation compared to the preceding six-month period. The cumulative effects of past S\$NEER movements and the new policy path will continue to ensure price stability over the medium term," said the central bank.

Several economists characterised MAS's decision as "pre-emptive" – one

calculated to counter potential downside risks to inflation and growth expectations, linked to a less-tight labour market.

Mizuho economist Vishnu Varathan, for example, said that MAS could be responding to a "slow-burn" recession-like environment.

Added OCBC economist Emmanuel Ng: "On our end, anticipated labour market tightness we think is no longer sacrosanct and the authorities may have finally acquiesced in terms of expecting any strong pass-through effects. We think therefore that the policy shift was motivated more by inflation-related considerations as opposed to growth concerns."

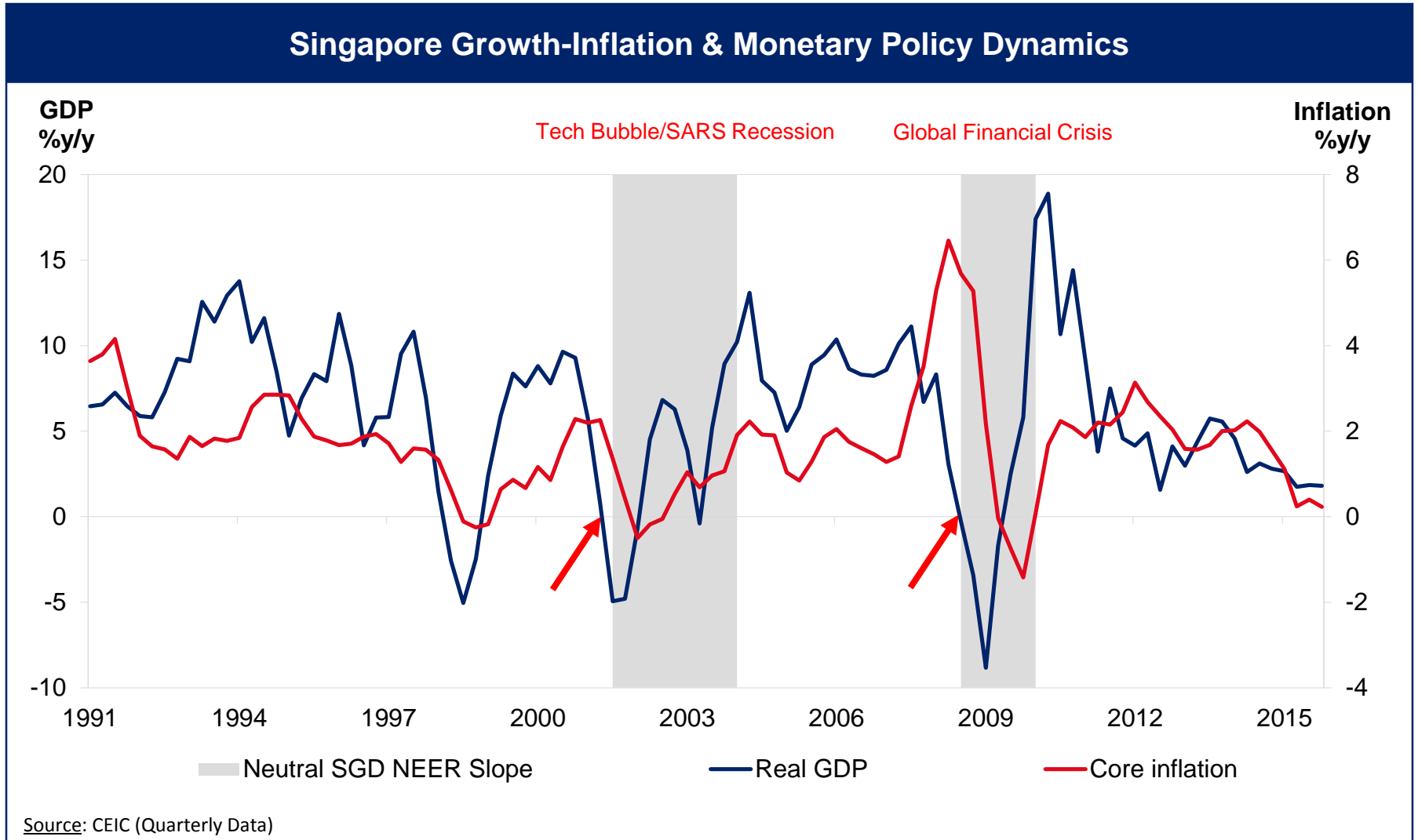
Looking ahead to the next MAS review in October, some analysts believe another round of monetary policy easing is possible. "The growth data over the coming months will be crucial – and we think that recentring is a likely next step should a technical recession materialise," said HSBC researchers in a note.

But Mr Varathan warned of other unexpected side-effects from today's policy decision. "One notable unintended risk is that SOR (swap offer rate) rates could rebound if a strong USD expectations comeback is accentuated by the neutral S\$NEER policy."

"This could inevitably intensify pressures on real estate and undermine loan quality for banks. But all considered, measured and lagged back-stop of downside risks is a lesser policy risk."

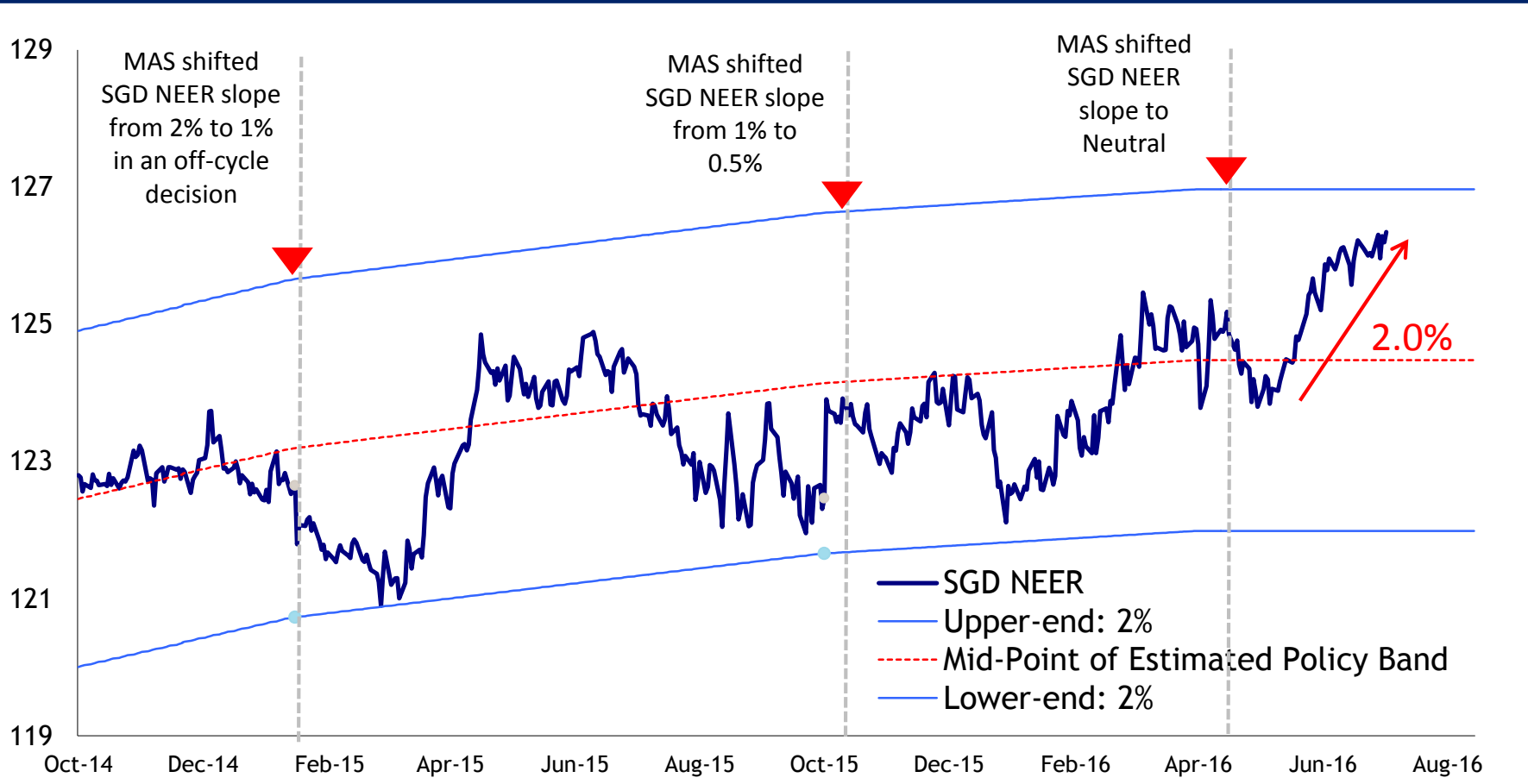
BT Infographics: Flattening expectations, Page 2

Past Episodes of ZERO SGD NEER Slope



SGD Gaining Strength Lately

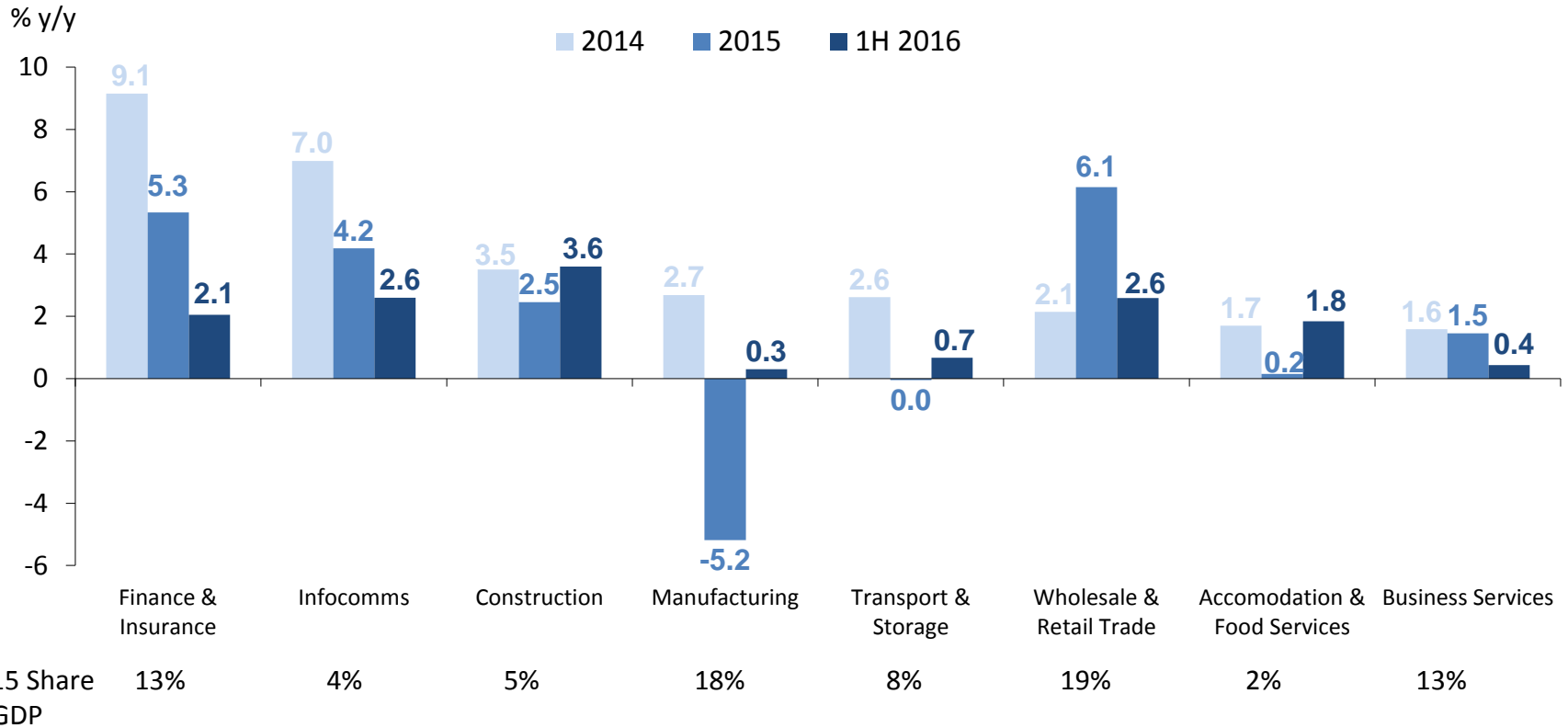
UOB SGD NEER Model – Zoomed in



Source: Bloomberg (Daily Data)

Although Mfg Regained Growth, Services Sectors Slowing Down

Singapore's GDP by Industries (2014 to 1H 2016)



Source: CEIC (Quarterly Data)

Divergence In Actions Of Global Central Banks Since Mid 2014

Summary of Central Bank Actions Since May 2014

Contractionary



>100bps

S. Africa (+150), Russia (+300), Brazil (+325), Egypt (+350), Colombia (+375), Venezuela (+566), Ukraine (+700), Argentina (+1725),

+25 to 100bps

U.S. (+25), Peru (+25), Iceland (+50), Mexico (+75)

Expansionary



>-100bps

S. Korea (-125), Sweden (-125), Hungary (-150), China (-165), Romania (-175), Turkey (-200), Pakistan (-375), Croatia (-400)

-75bps to -100bps

Australia, Morocco, NZ, Swiss, India, Indonesia, Norway, Poland

-50bps to < -75bps

Canada, Chile, Jordan, Philippines, Taiwan, Thailand, Israel

0 to < -50bps

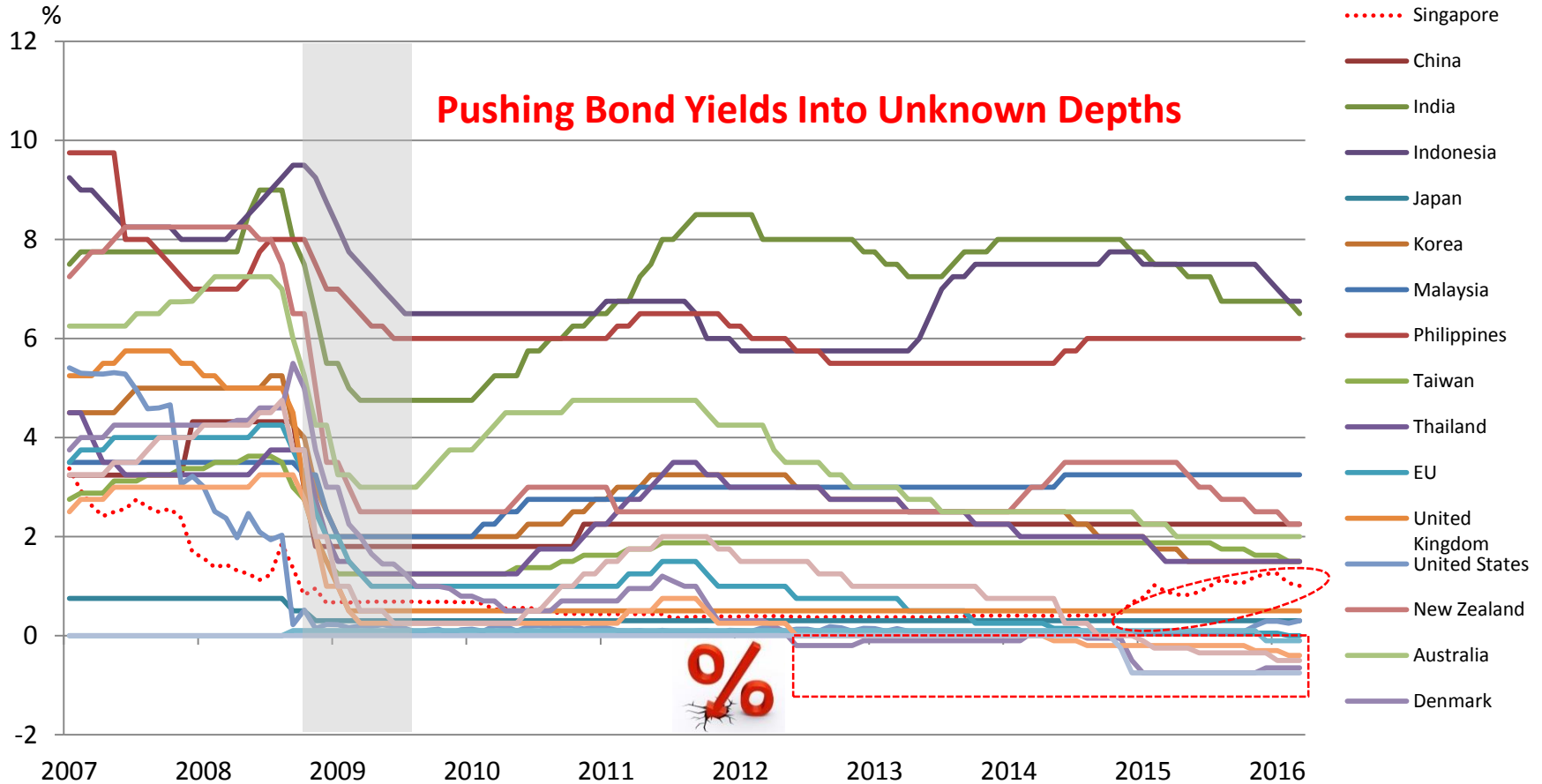
Bulgaria, Denmark, Eurozone

RMB Revaluation & RRR cuts (China), QE (Eurozone), slow rise SGD NEER

Source: Bloomberg, UOB Global Economics & Markets Research (Monthly Data)

Deflationary Concerns Led Global Central Banks To Ease Policies; For Some, To Unconventional Depths...

Central Bank Policy Rates (Jan 2007 = 100)



Source: CEIC & Bloomberg (Monthly Data)



US\$100



US\$1,000,000



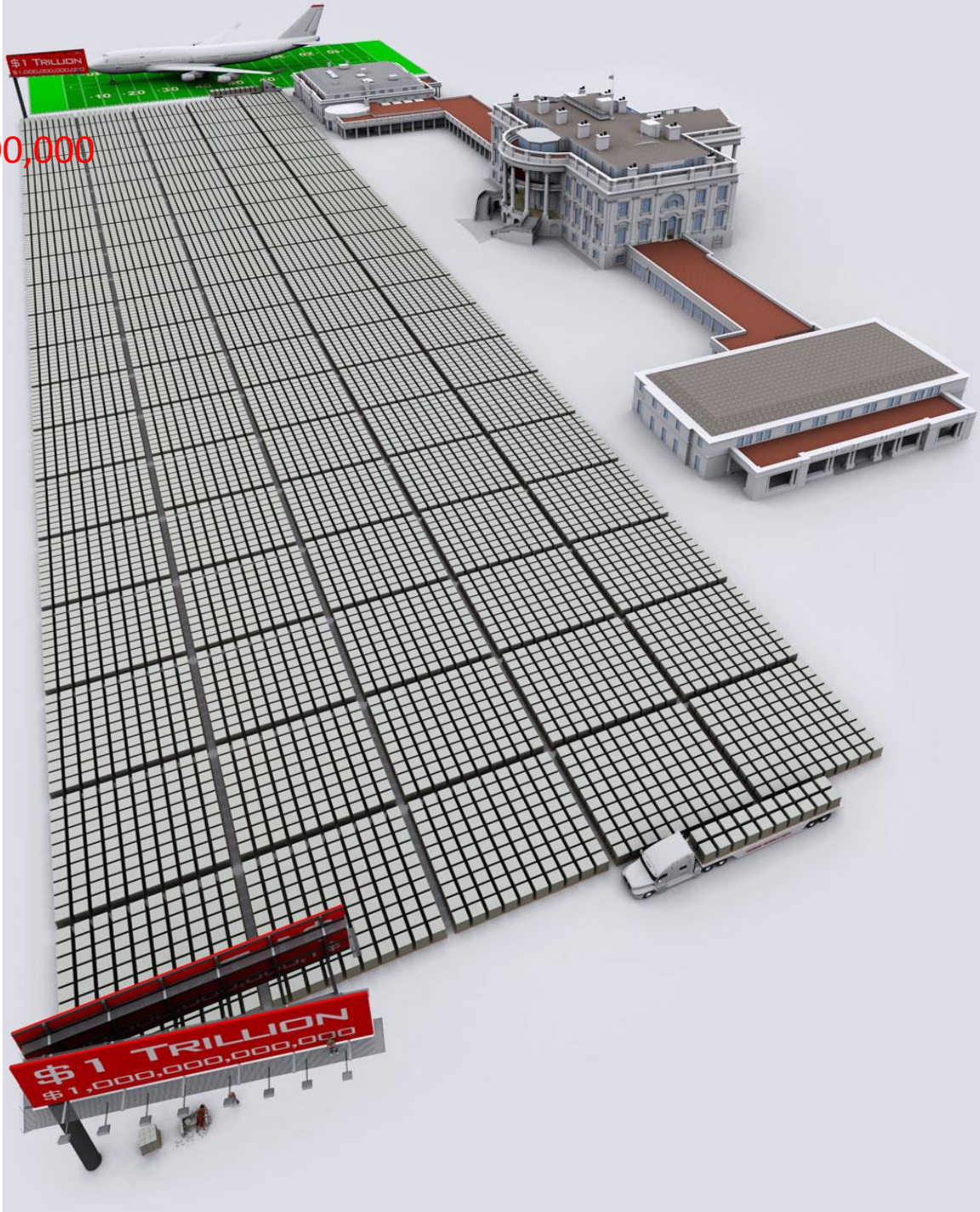
US\$1,000,000,000

US\$1,000,000,000,000

\$ 1 TRILLION
\$ 1,000,000,000,000



US\$1,000,000,000,000





All These Monies Returning

< 0% !!!!!!!!!!!!!!!

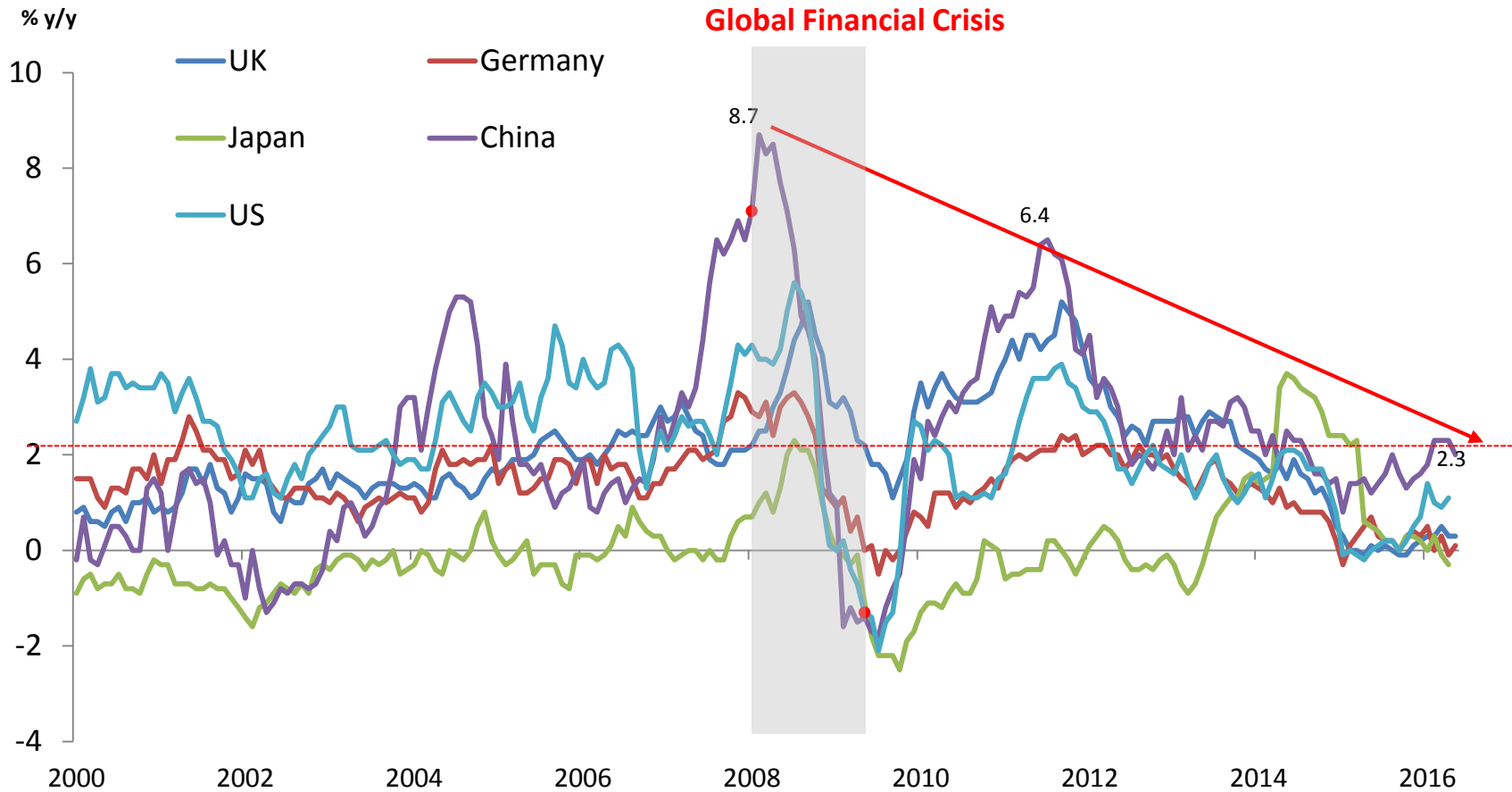
US\$19,381,591,000,000



As of: 31st Jun 2016

The Much-Dreaded Inflation From Massive QEs Did Not Materialise

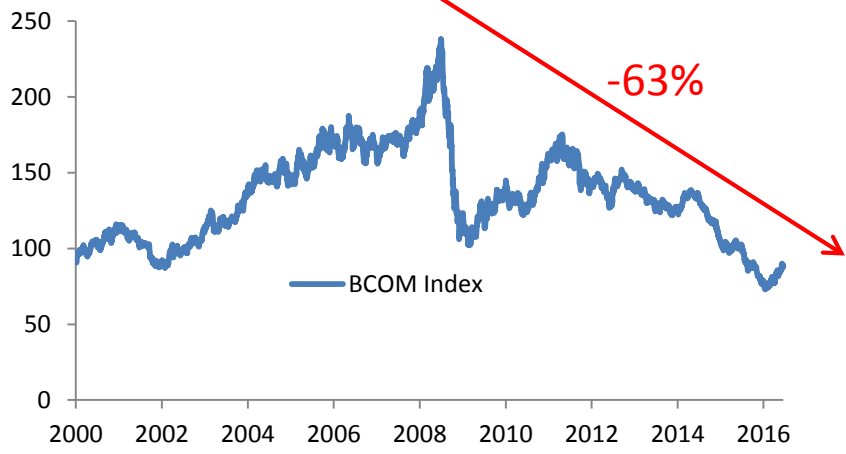
Inflation Rates Across Selected Economies



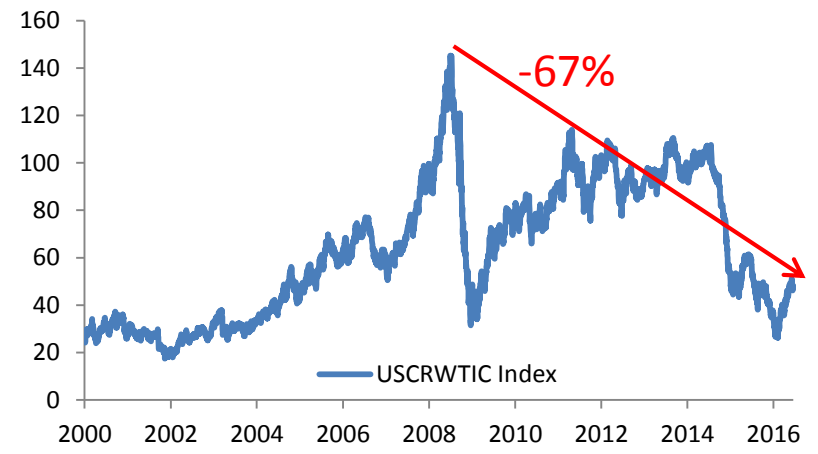
Source: Bloomberg (Monthly Data)

World Commodities Prices Remain Depressed

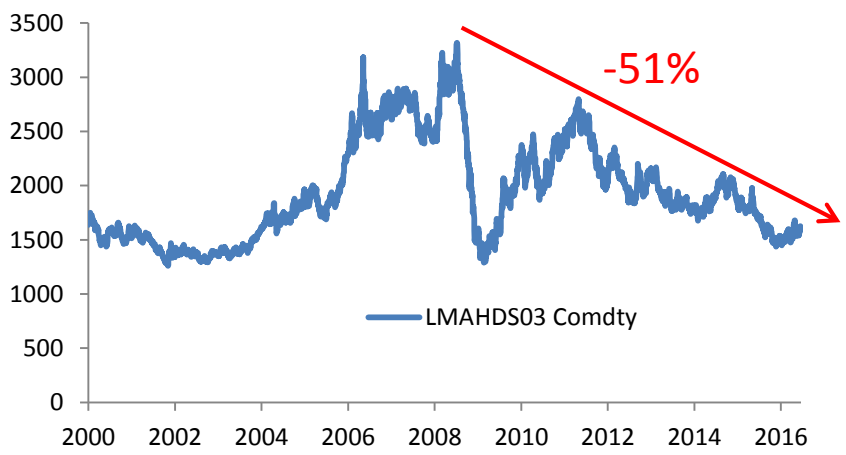
Bloomberg Commodity Index



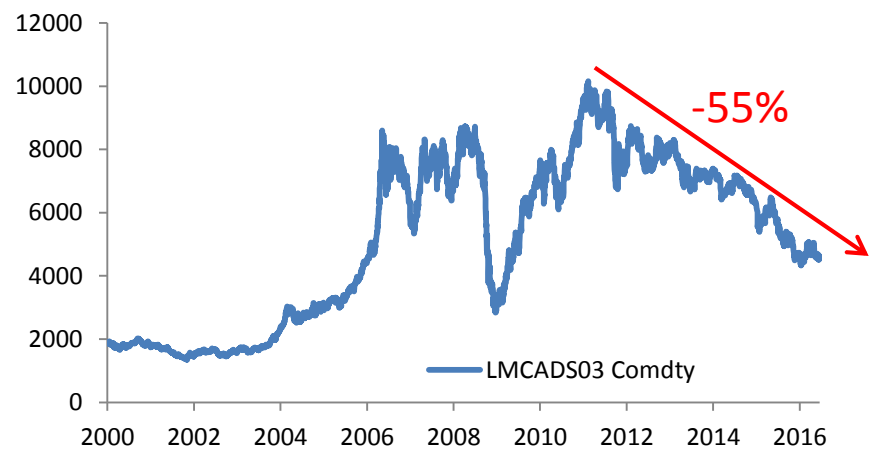
West Texas Intermediate Crude



Aluminium

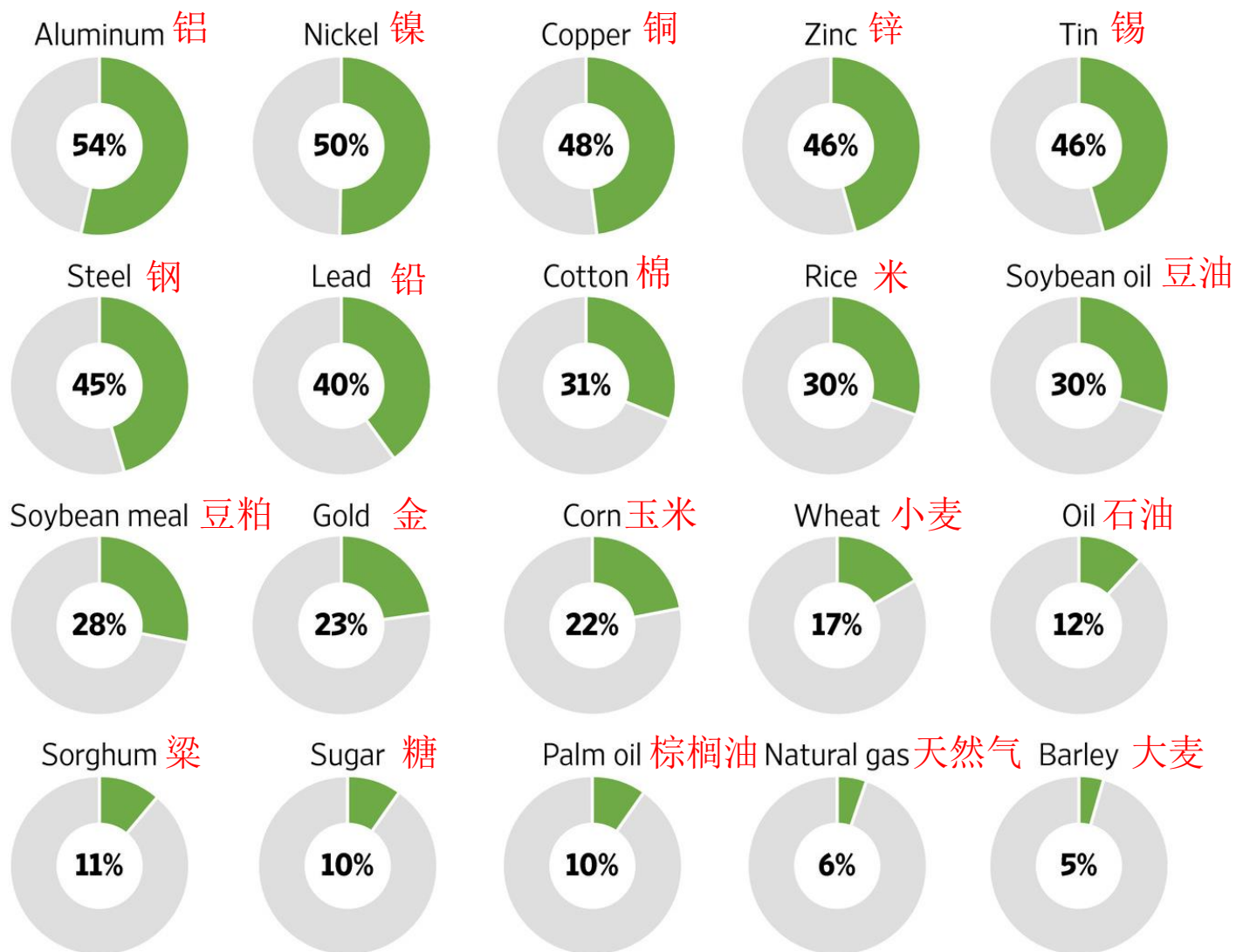


Copper



Source: Bloomberg (Daily Data)

China's Demand of World Commodities

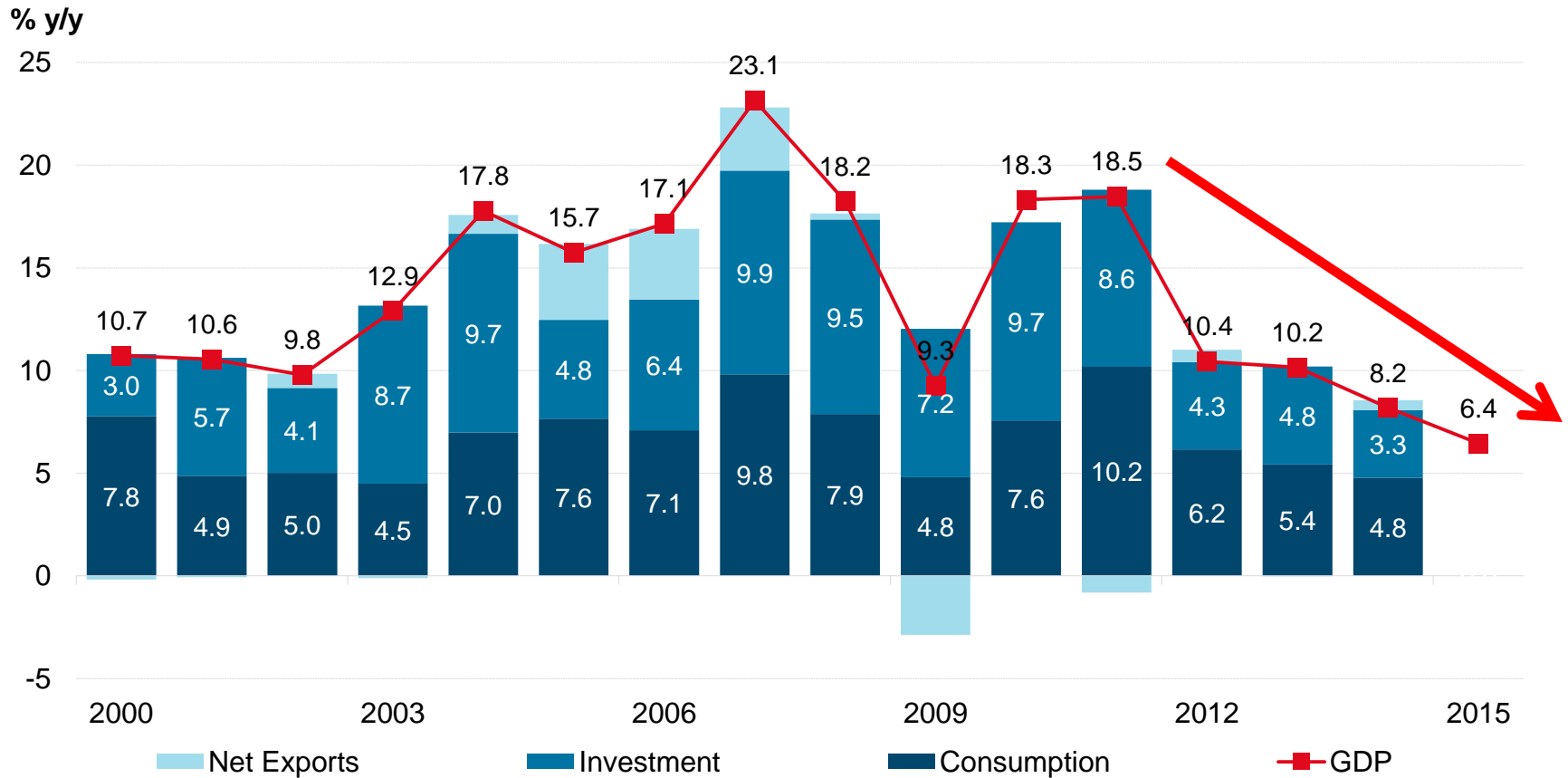


Sources: World Bureau of Metal Statistics (first six months of 2015 for refined metals, slab zinc); World Gold Council (2014 for gold); BP Statistical Review of World Energy 2015 (2014 for oil, natural gas); Metalytics via Morgan Stanley (2015 estimate for finished steel); U.S. Department of Agriculture (2013-14 season for others)

THE WALL STREET JOURNAL.

Slowdown In China's Economic Growth Took Some Blame For Global Slowdown

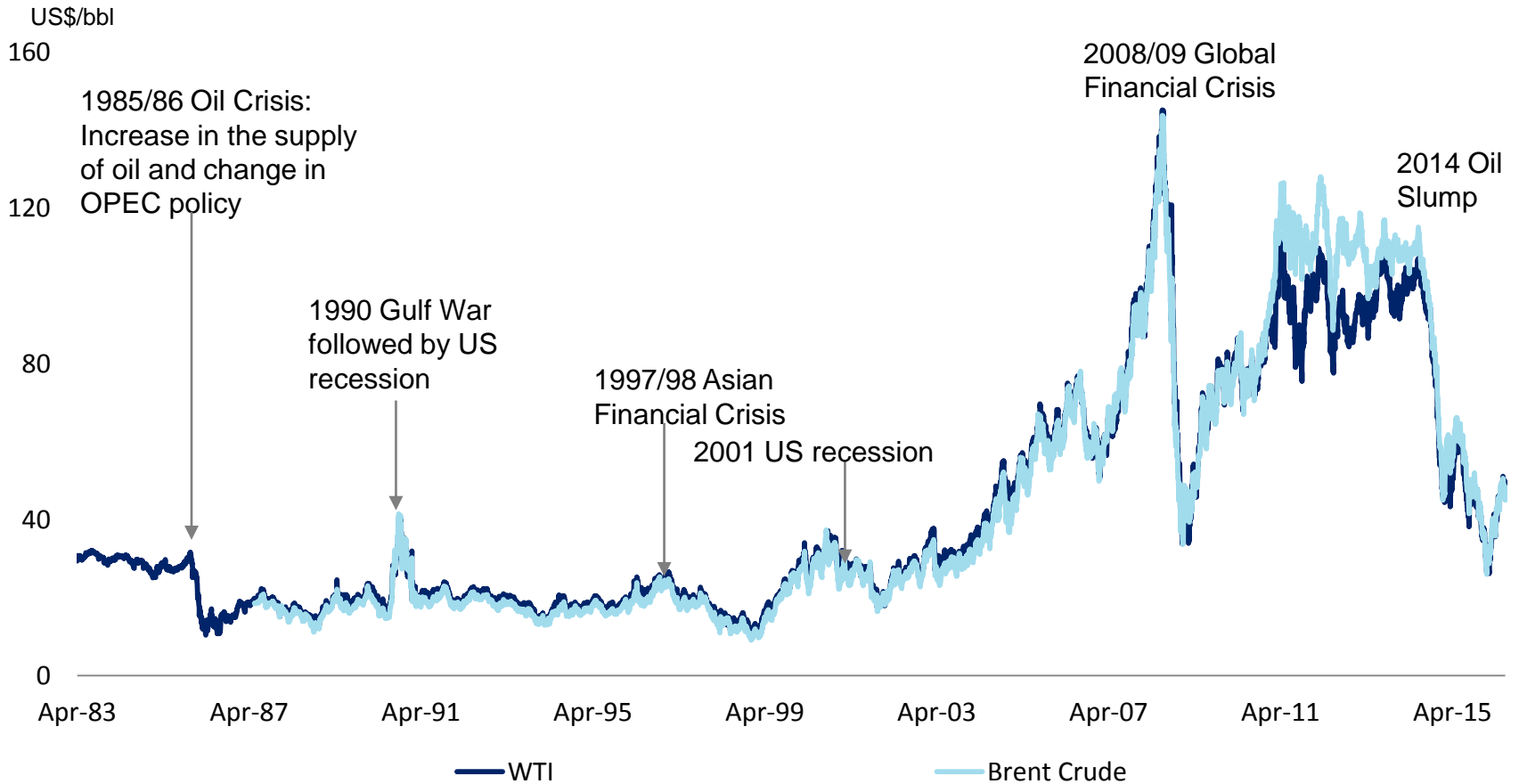
China's Nominal GDP By Expenditure



Source: Bloomberg (Quarterly Data)

Past Episodes of Sharp Oil Price Declines

Episodes Of Oil Price Declines >30% In 6-month Period

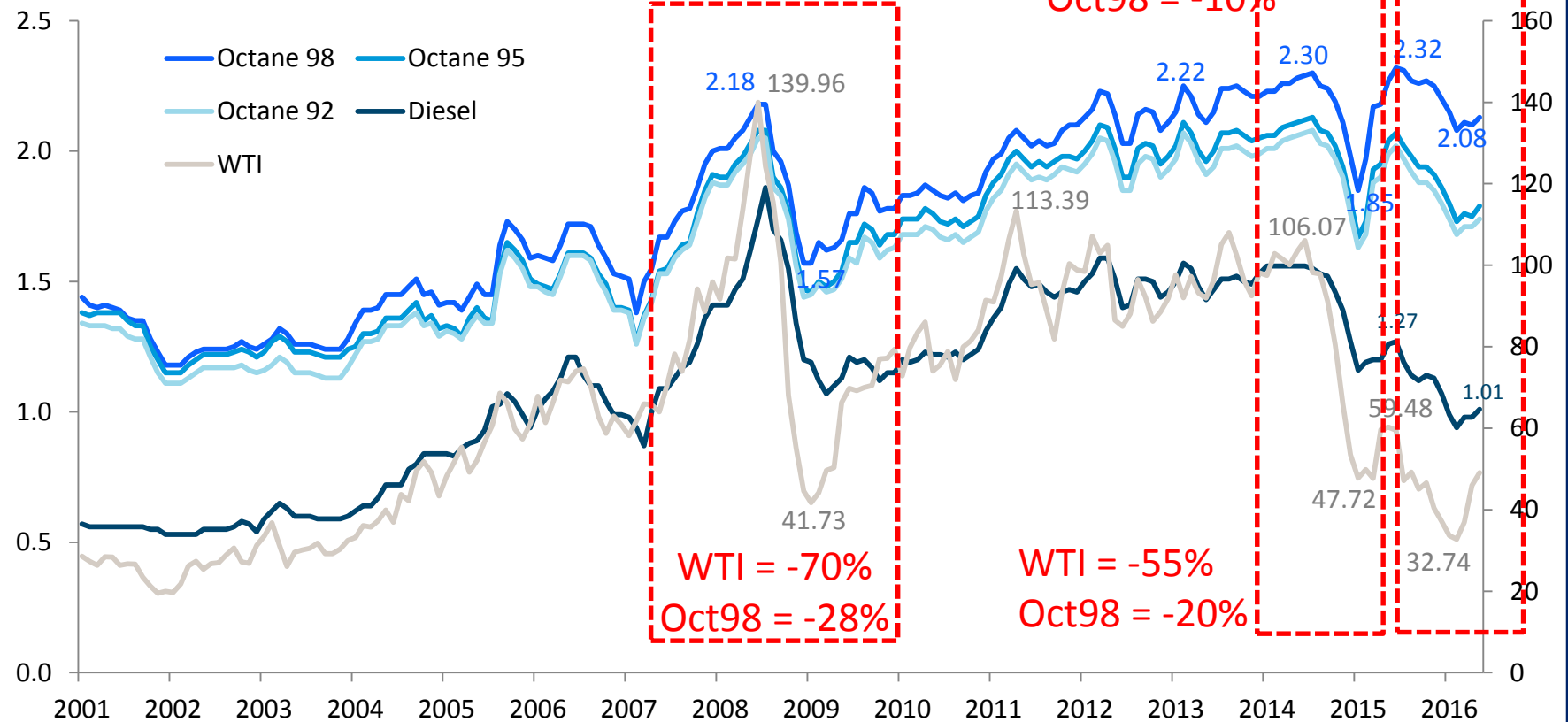


Source: US EIA, CEIC

Pass-Through Similar In Direction, Though Not In Magnitude

Pass-Through Effects Of Global Oil Prices On Singapore Retail Pump Prices

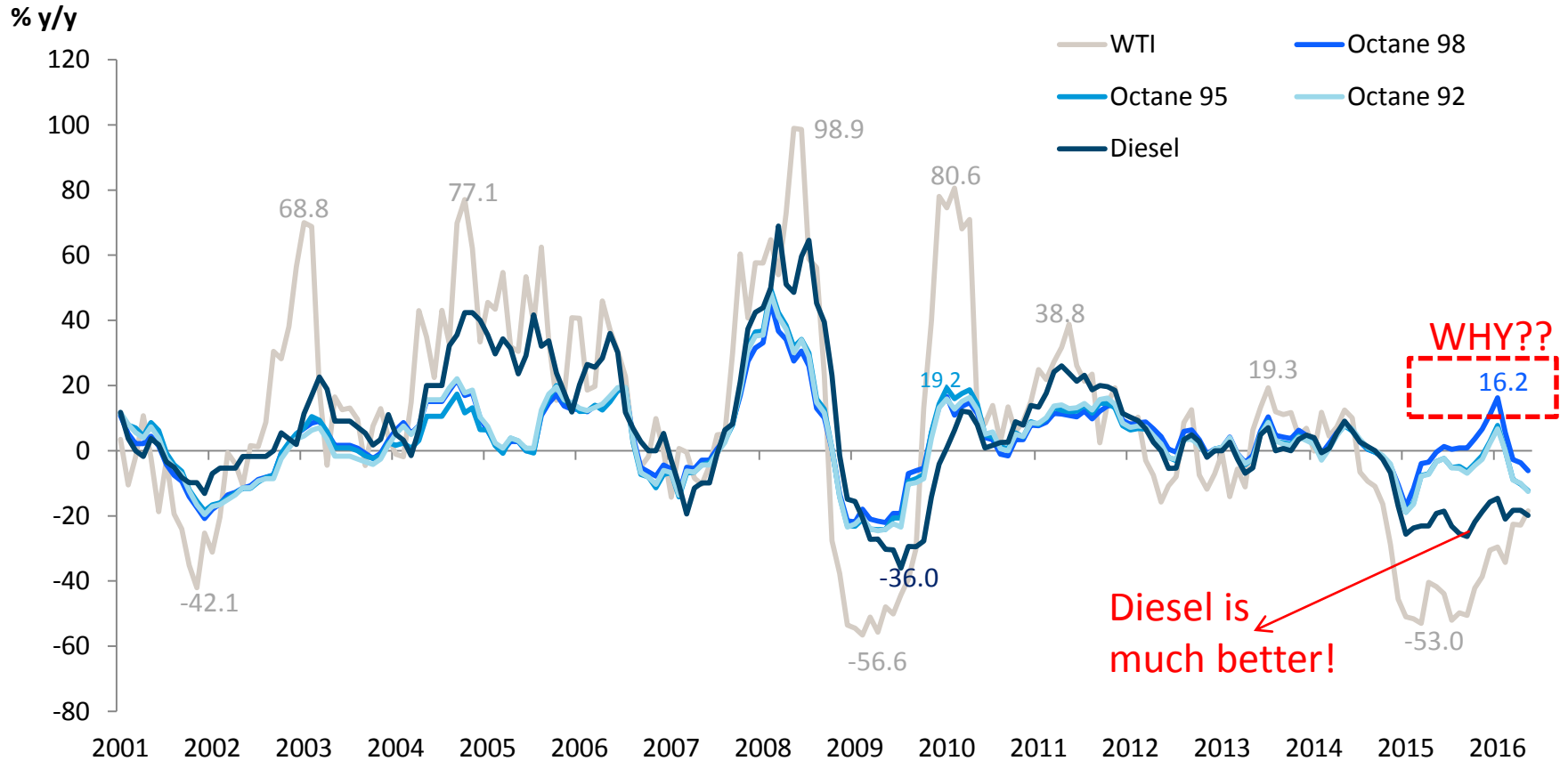
S\$/ltr Octane



Source: CEIC, UOB Global Economics & Markets Research est

Pass-Through Similar In Direction, Though Not In Magnitude

Pass-Through Effects Of Global Oil Prices On Singapore Retail Pump Prices

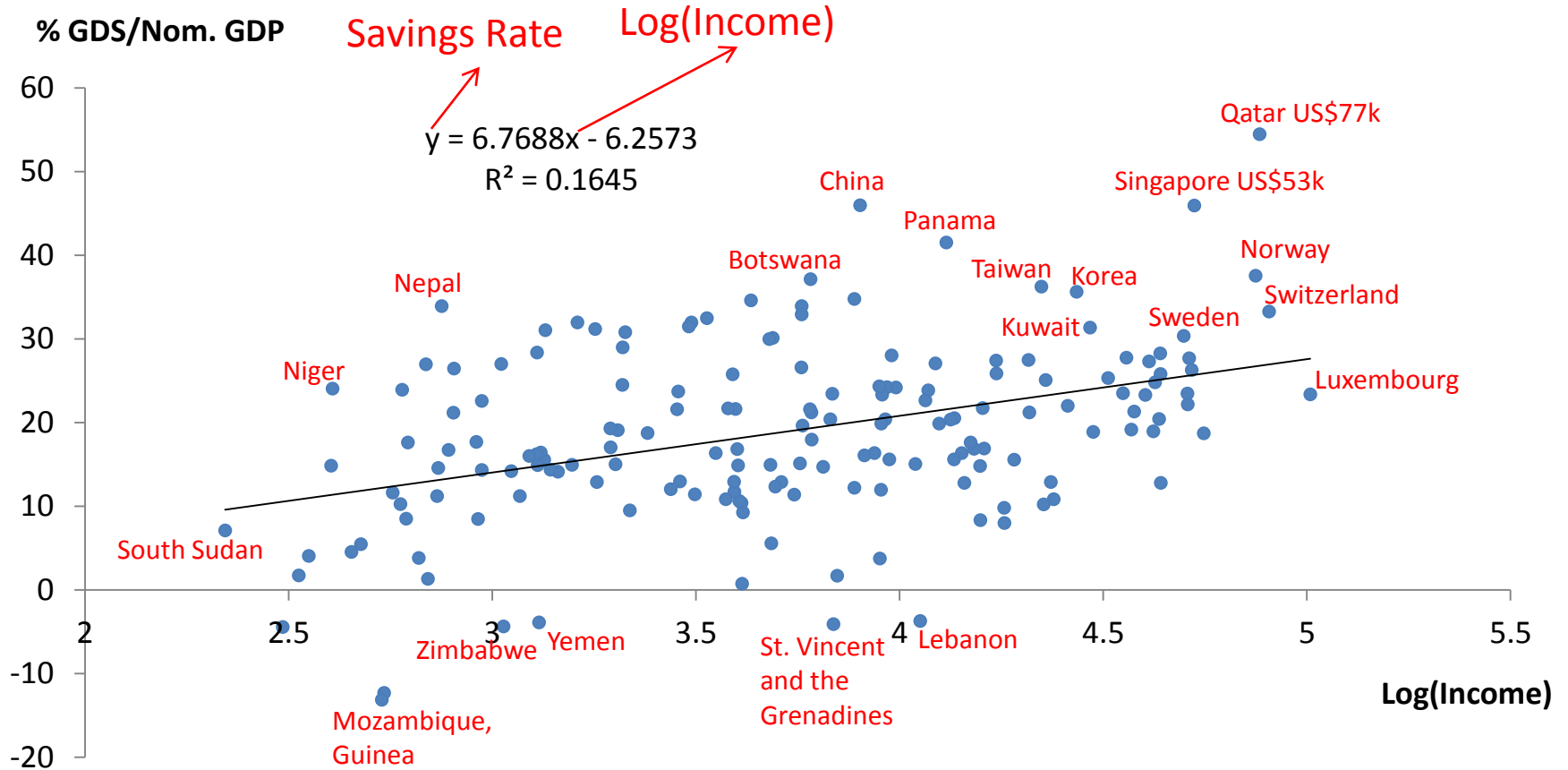


Source: CEIC, UOB Global Economics & Markets Research est



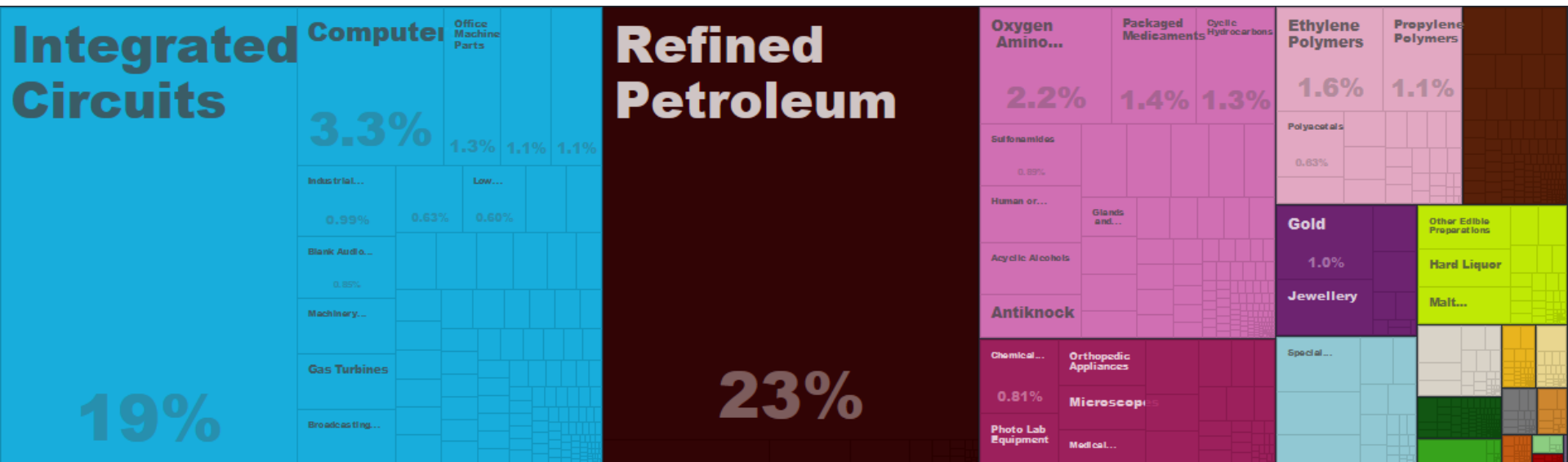
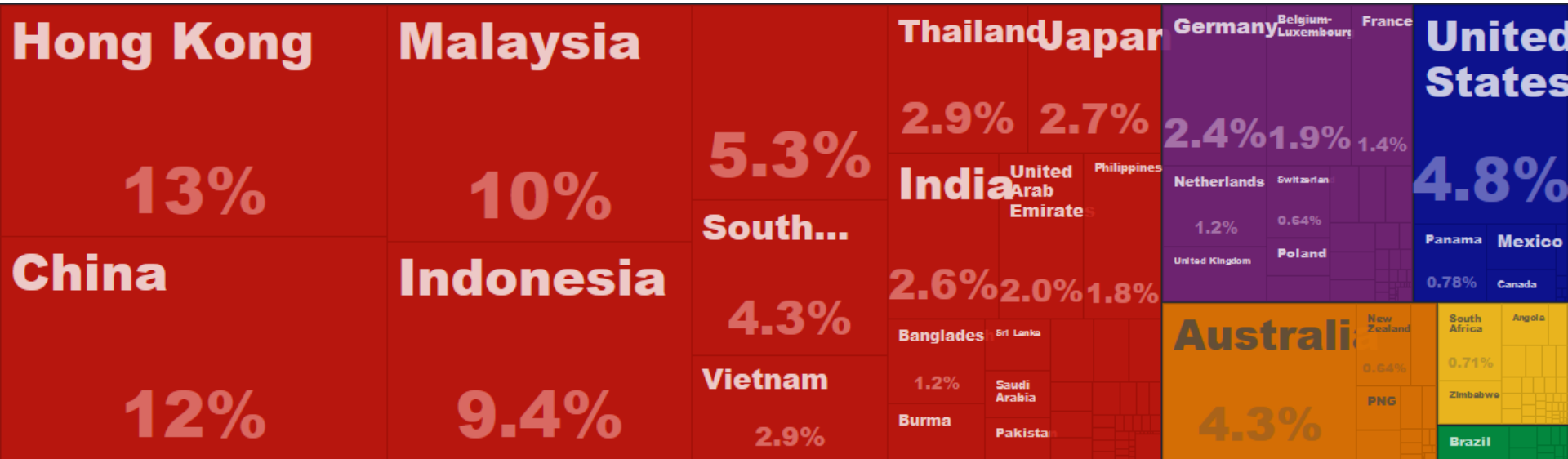
Those Who Earn More, Save More... Not Just In Terms Of Total \$\$\$, But % of Income Too!

Relationship of Income and Savings (n = 171) in 2015



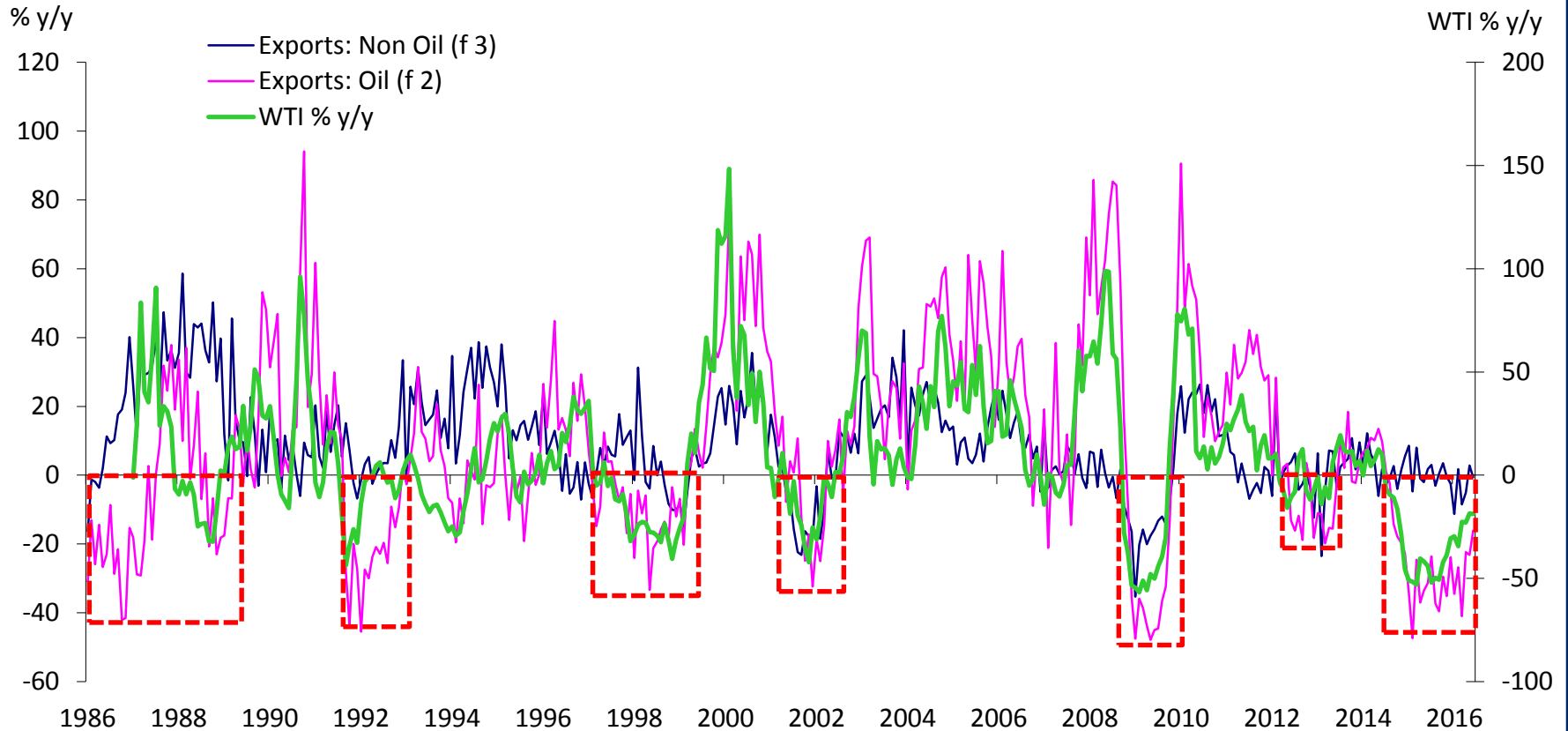
Source: IMF (Annual Data)

Singapore's Exports: \$272B (2014)



Although Oil Exports Contracted, NODX Held Its Grounds

Singapore's Nominal Oil & Non-Oil Exports



Source: Bloomberg (Monthly Data)

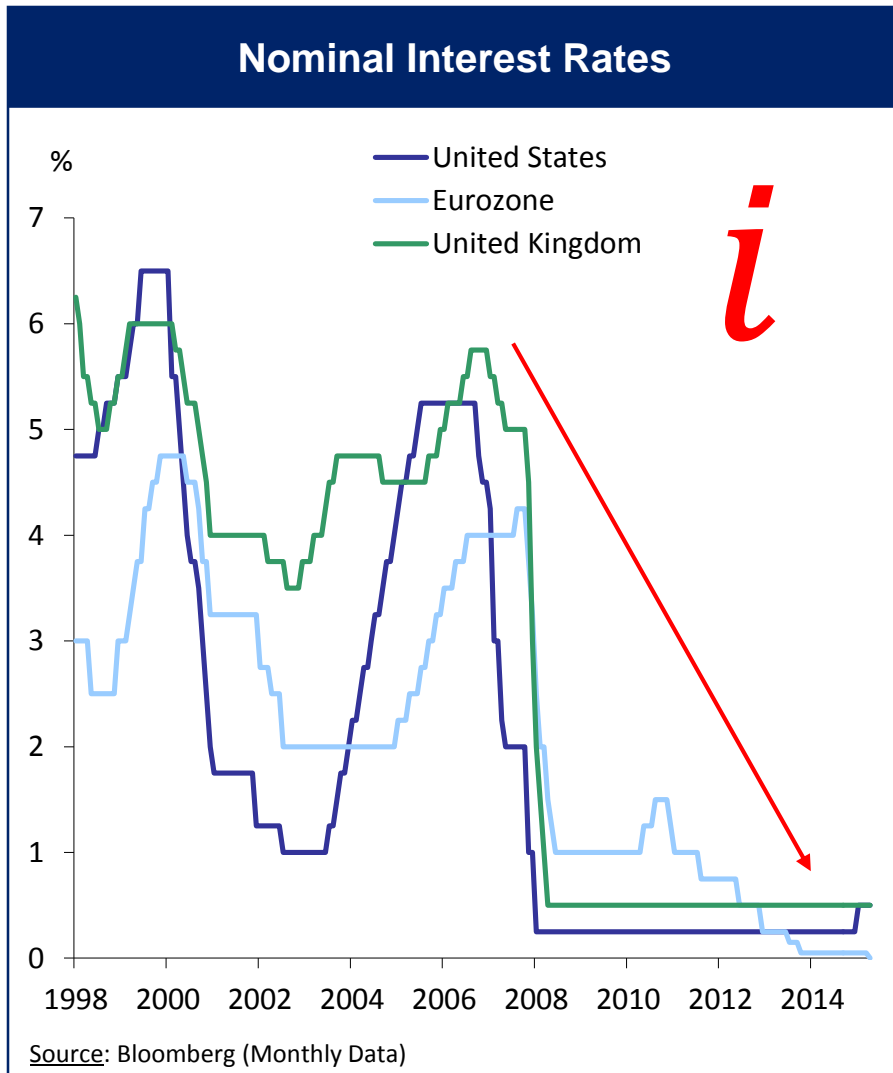
Emerging Markets' Manufacturing Activities Took The Biggest Hits Recently



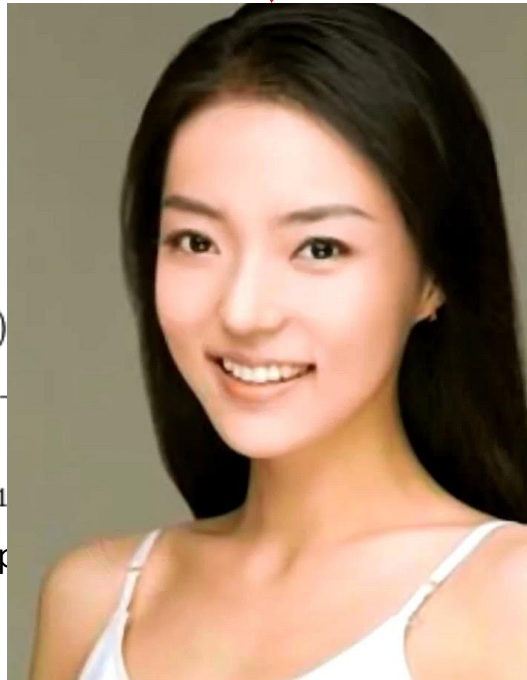
2015-2016

GDP per Cap		52,252	46,405	43,362	41,490	41,000	39,892	38,259	37,595	35,667	32,841	28,451	25,260	24,566	18,256	14,955	11,258	8,865	8,522	6,844	5,852	3,863	1,854	1,234	1,078
Country / Region	World	Ireland	United States	Netherlands	United Kingdom	Austria	Germany	Canada	Japan	France	Eurozone	Italy	Spain	South Korea	Greece	Czech Republic	Poland	Turkey	Mexico	Russia	Brazil	China	Indonesia	India	Vietnam
Jun-2016	50.4	53	51.3	52	52.1	54.5	54.5	51.8	48.1	48.3	52.8	53.5	52.2	50.5	50.4	51.8	51.8	47.4	51.1	51.5	43.2	48.6	51.9	51.7	52.6
May-2016	50	51.5	50.7	52.7	50.4	52	52.1	52.1	47.7	48.4	51.5	52.4	51.8	50.1	48.4	53.3	52.1	49.4	53.6	49.6	41.6	49.2	50.6	50.7	52.7
Apr-2016	50.2	52.6	50.8	52.6	49.6	52	51.8	52.2	48.2	48	51.7	53.9	53.5	50	49.7	53.6	51	48.9	52.4	48	42.6	49.4	50.9	50.5	52.3
Mar-2016	50.6	54.9	51.5	53.6	50.9	52.8	50.7	51.5	49.1	49.6	51.6	53.5	53.4	49.5	49	54.3	53.8	49.2	53.2	48.3	46	49.7	50.6	52.4	50.7
Feb-2016	50	52.9	51.3	51.7	50.8	51.9	50.5	49.4	50.1	50.2	51.2	52.2	54.1	48.7	48.4	55.5	52.8	50.3	53.1	49.3	44.5	48	48.7	51.1	50.3
Jan-2016	50.9	54.3	52.4	52.4	53	51.2	52.3	50.2	49.3	50	52.3	53.2	55.4	49.5	50	56.9	50.9	50.9	52.2	49.8	47.4	48.4	48.9	51.1	51.5
Dec-2015	50.7	54.2	51.2	53.4	51.8	50.6	53.2	47.5	52.6	51.4	53.2	55.6	53	50.7	50.2	55.6	52.1	52.2	52.4	48.7	45.6	48.2	47.8	49.1	51.3
Nov-2015	51	53.3	52.8	53.5	52.4	51.4	52.9	48.6	52.6	50.6	52.8	54.9	53.1	49.1	48.1	54.2	52.1	50.9	53	50.1	43.8	48.6	46.9	50.3	49.4
Oct-2015	51.1	53.6	54.1	53.7	55.2	53	52.1	48	52.4	50.6	52.3	54.1	51.3	49.1	47.3	54	52.2	49.5	53	50.2	44.1	48.3	47.8	50.7	50.1
Sep-2015	50.4	53.8	53.1	53	51.6	52.5	52.3	48.6	51	50.6	52	52.7	51.7	49.2	43.3	55.5	50.9	48.8	52.1	49.1	47	47.2	47.4	51.2	49.5
Aug-2015	50.4	53.6	53	53.9	51.7	50.5	53.3	49.4	51.7	48.3	52.3	53.8	53.2	47.9	39.1	56.6	51.1	49.3	52.4	47.9	45.8	47.3	48.4	52.3	51.3
Jul-2015	50.8	56.7	53.8	56	51.9	52.4	51.8	50.8	51.2	49.6	52.4	55.3	53.6	47.6	30.2	57.5	54.5	50.1	52.9	48.3	47.2	47.8	47.3	52.7	52.6
Jun-2015	50.9	54.6	53.6	56.2	51.2	51.2	51.9	51.3	50.1	50.7	52.5	54.1	54.5	46.1	46.9	56.9	54.3	49	52	48.7	46.5	49.4	47.8	51.3	52.2
May-2015	51.1	57.1	54	55.5	52	50.3	51.1	49.8	50.9	49.4	52.2	54.8	55.8	47.8	48	55.5	52.4	50.2	53.3	47.6	45.9	49.2	47.1	52.6	54.8
Apr-2015	50.8	55.8	54.1	54	52.2	50.1	52.1	49	49.9	48	52	53.8	54.2	48.8	46.5	54.7	54	48.5	53.8	48.9	46	48.9	46.7	51.3	53.5
Mar-2015	51.5	56.8	55.7	52.5	53.6	47.7	52.8	48.9	50.3	48.8	52.2	53.3	54.3	49.2	48.9	56.1	54.8	48	53.8	48.1	46.2	49.6	46.4	52.1	50.7
Feb-2015	51.8	57.5	55.1	52.2	54.1	48.7	51.1	48.7	51.6	47.6	51	51.9	54.2	51.1	48.4	55.6	55.1	49.6	54.4	49.7	49.6	47.5	51.2	51.2	51.2
Jan-2015	51.6	55.1	53.9	54.1	52.9	48.5	50.9	51	52.2	49.2	51	49.9	54.7	51.1	48.3	56.1	55.2	49.8	56.6	47.6	50.7	49.7	48.5	52.9	51.5
Dec-2014	51.4	56.9	53.9	53.5	52.7	49.2	51.2	53.9	52	47.5	50.6	48.4	53.8	49.9	49.4	53.3	52.8	51.4	55.3	48.9	50.2	49.6	47.6	54.5	52.7
Nov-2014	51.7	56.2	54.8	54.6	53.2	47.4	49.5	55.3	52	48.4	50.1	49	54.7	49	49.1	55.6	53.2	52.2	54.3	51.7	48.7	50	48	53.3	52.1
Oct-2014	52	56.6	55.9	53	53	46.9	51.4	55.3	52.4	48.5	50.6	49	52.6	48.7	48.8	54.4	51.2	51.5	53.3	50.3	49.1	50.4	49.2	51.6	51
Sep-2014	52	55.7	57.5	52.2	51.7	47.9	49.9	53.5	51.7	48.8	50.3	50.7	52.6	48.8	48.4	55.6	49.5	50.4	52.6	50.4	49.3	50.2	50.7	51	51.7
Aug-2014	52.3	57.3	57.9	51.7	53.2	50.9	51.4	54.8	52.2	46.9	50.7	49.8	52.8	50.3	50.1	54.3	49	50.3	52.1	51	50.2	50.2	49.5	52.4	50.3
Jul-2014	52.4	55.4	55.8	53.5	54.9	50.9	52.4	54.3	50.5	47.8	51.8	51.9	53.9	49.3	48.7	56.5	49.4	48.5	51.5	51	49.1	51.7	52.7	53	51.7
Jun-2014	52.4	55.3	57.3	52.3	56.7	50.4	52	53.5	51.5	48.2	51.8	52.6	54.6	48.4	49.4	54.7	50.3	48.8	51.8	49.1	48.7	50.7	52.7	51.5	52.3
May-2014	51.9	55	56.4	53.6	56.7	50.9	52.3	52.2	49.9	49.6	52.2	53.2	52.9	49.5	51	57.3	50.8	50.1	51.9	48.9	48.8	49.4	52.4	51.4	52.5
Apr-2014	51.6	56.1	55.4	53.4	57.5	51.4	54.1	52.9	49.4	51.2	53.4	54	52.7	50.2	51.1	56.5	52	51.1	51.8	48.5	49.3	48.1	51.1	51.3	53.1
Mar-2014	52	55.5	55.5	53.7	54.7	51	53.7	53.3	53.9	52.1	53	52.4	52.8	50.4	49.7	55.5	54	51.7	51.7	48.3	50.6	48	50.1	51.3	51.3
Feb-2014	52.8	52.9	57.1	55.2	56.2	53	54.8	52.9	55.5	49.7	53.2	52.3	52.5	49.8	51.3	56.5	55.9	53.4	52	48.5	50.4	48.5	50.5	52.5	51
Jan-2014	52.7	52.8	53.7	54.8	56.5	54.1	56.5	51.7	56.6	49.3	54	51.5	52.2	50.9	51.2	55.9	55.4	52.7	54	48	50.8	49.5	51	51.4	52.1
Dec-2013	52.7	53.5	55	57	57.2	54.1	54.3	53.5	55.2	47	52.7	53.3	50.8	50.8	49.6	54.7	53.2	53.5	52.6	48.8	50.5	50.5	50.9	50.7	51.8
Nov-2013	52.6	52.4	54.7	56.8	57.7	54.3	52.7	54.9	55.1	49	51.6	51.4	48.6	50.4	49.2	55.4	54.4	55	51.9	49.4	49.7	50.8	50.3	51.3	50.3
Oct-2013	51.8	54.9	51.8	54.4	56.2	52.7	51.1	55.6	54.2	49.1	51.3	50.7	50.9	50.2	47.3	54.5	53.4	53.3	50.2	51.8	50.2	50.9	50.9	49.6	51.5
Sep-2013	51.5	52.7	52.8	55.8	57.1	51.1	51.1	54.2	52.5	49.8	51.1	50.8	50.7	49.7	47.5	53.4	53.1	54	50	49.4	49.9	50.2	50.2	49.6	51.5
Aug-2013	51.4	52	53.1	53.5	58.6	52	51.8	52.1	52.2	49.3	51.4	51.3	51.3	49.3	48.7	53.8	52.8	50.9	50.8	49.4	49.4	50.1	48.5	48.5	49.4
Jul-2013	50.4	51	53.7	50.8	54.6	49.1	50.7	52	50.7	49.7	50.3	50.4	49.8	47.2	47	52	51.1	49.8	49.7	49.2	48.5	47.7	50.7	50.1	48.5
Jun-2013	50.2	50.3	51.9	48.8	48.8	48.3	48.6	52.4	52.3	48.4	49.1	50	49.4	45.4	45.7	51	49.3	51.2	51.3	51.7	50.4	48.2	51	50.3	46.4
May-2013	50.3	49.7	52.3	48.7	51.9	48.2	49.4	53.2	51.5	46.4	48.3	47.3	48.1	51.1	45.3	50.1	48	51.1	51.7	50.4	50.4	49.2	51.6	50.1	48.8
Apr-2013	50.2	48	52.1	48.2	50.5	47.8	48.1	50.1	51.1	44.4	46.7	45.5	44.7	52.6	45	49.5	46.9	51.3	51.7	50.6	50.8	50.4	51.7	51	51
Mar-2013	51	48.6	54.6	48	49.6	48.1	49	49.3	50.4	44	46.8	44.5	44.2	52	42.1	49.1	48	52.3	52.2	50.8	51.8	51.6	51.3	52	50.8
Feb-2013	50.7	51.5	54.3	49	47.9	48.3	50.3	51.7	48.5	43.9	47.9	45.8	46.8	50.9	43	49.9	48.9	53.5	53.4	52	52.5	50.4	50.5	54.2	48.3
Jan-2013	51.4	50.3	55.8	50.2	51	48.6	49.8	50.5	47.7	42.9	47.9	47.8	46.1	49.9	41.7	48.3	48.6	54	55	52	53.2	53.3	49.7	53.2	50.1
Dec-2012	50.1	51.4	54	49.6	50.7	48.1	46	50.4	45	44.6	46.1	46.7	44.6	50.1	41.4	46	48.5	53.1	57.1	52	51.1	50.5	50.7	54.7	49.3
Nov-2012	49.6	52.4	52.8	48.2	48	49.3	46.8	50.4	46.5	44.5	46.2	45.1	45.3	48.2	41.8	48.2	48.2	51.6	55.6	52.2	52.2	51.5	51.5	53.7	50.5
Oct-2012	48.8	52.1	51	48.9																					

Interest Rates May Be Low, But Inflation Was Lower

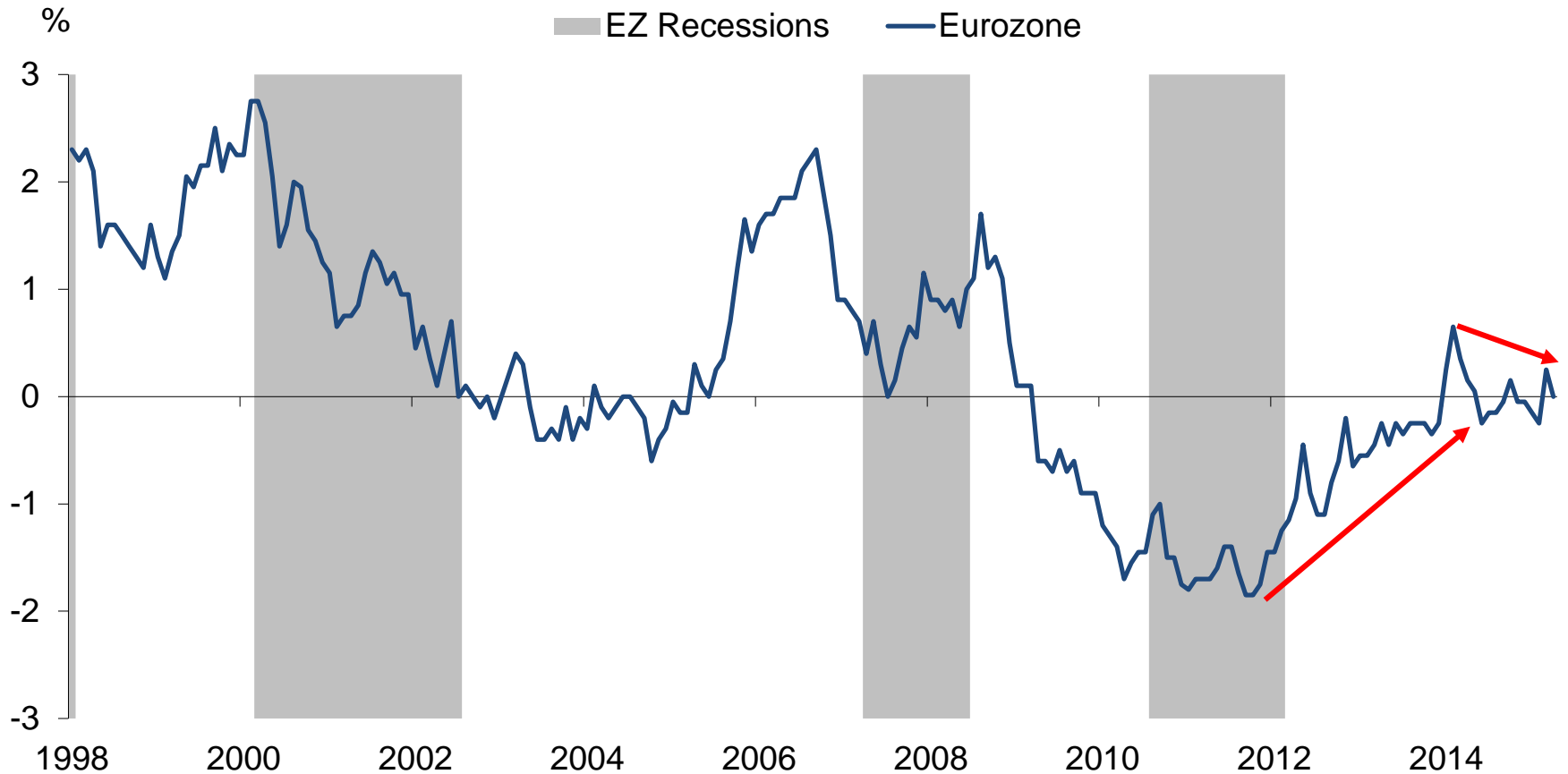


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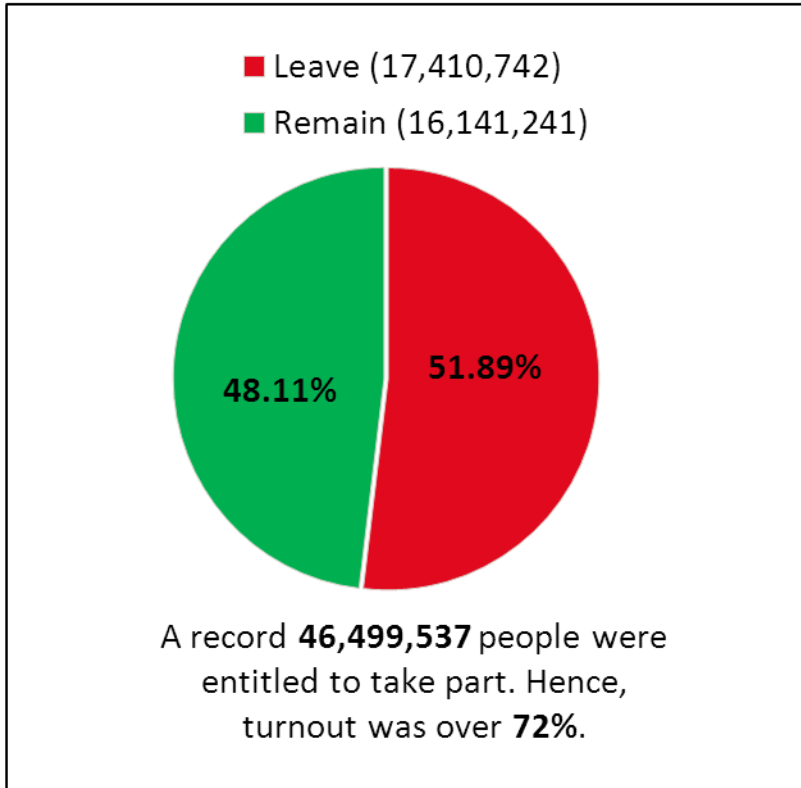
Concerns over Rising Real Interest Rates Pushed ECB To Adopt Very Unconventional Monetary Policies

Eurozone Real Interest Rates

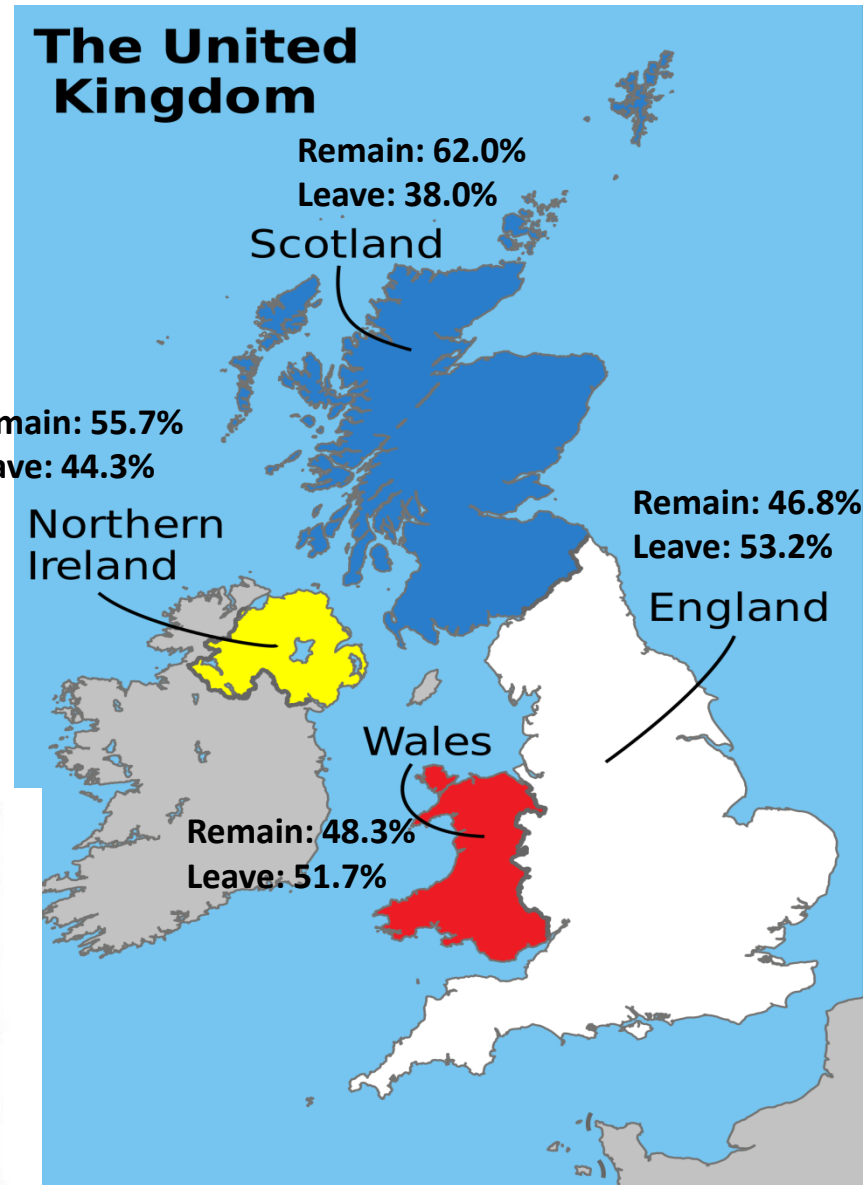


Source: Bloomberg (Monthly Data)

UK Referendum: The Outcome

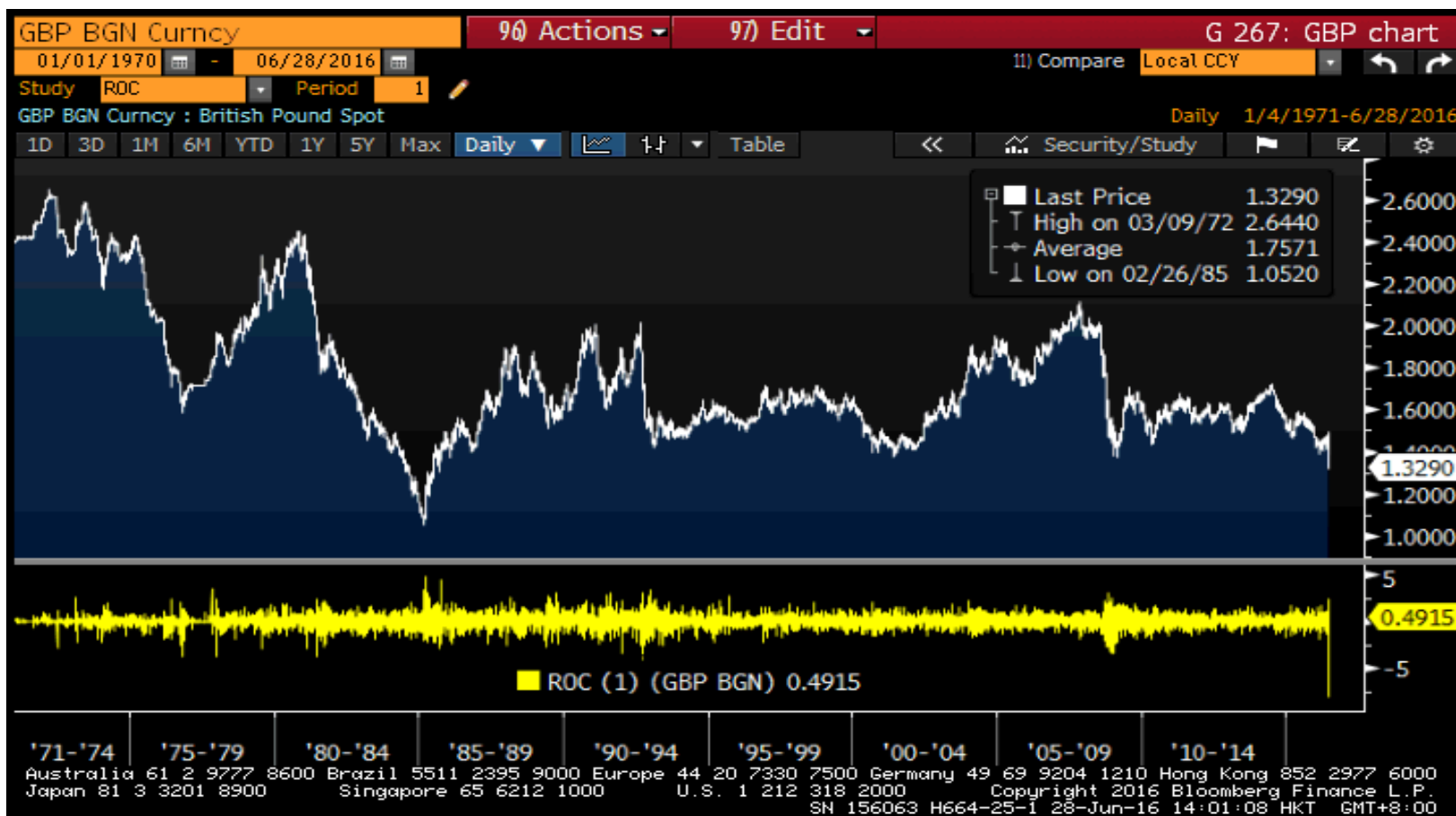


Referendum on the United Kingdom's membership of the European Union	
Vote only once by putting a cross <input checked="" type="checkbox"/> in the box next to your choice	
Should the United Kingdom remain a member of the European Union or leave the European Union?	
Remain a member of the European Union	<input type="checkbox"/>
Leave the European Union	<input type="checkbox"/>



GBP/USD: Taking the brunt of impact

Earthquake Scale on GBP/USD



Source: Bloomberg

Credit spread widens but should be contained by Central Banks' pledge to offer liquidity

LIBOR-OIS 3 Month Spread



Source: Bloomberg

European banks' CDS rose but still far below 2012 levels

S&P/ISDA CDS European Banks Select 15 Index

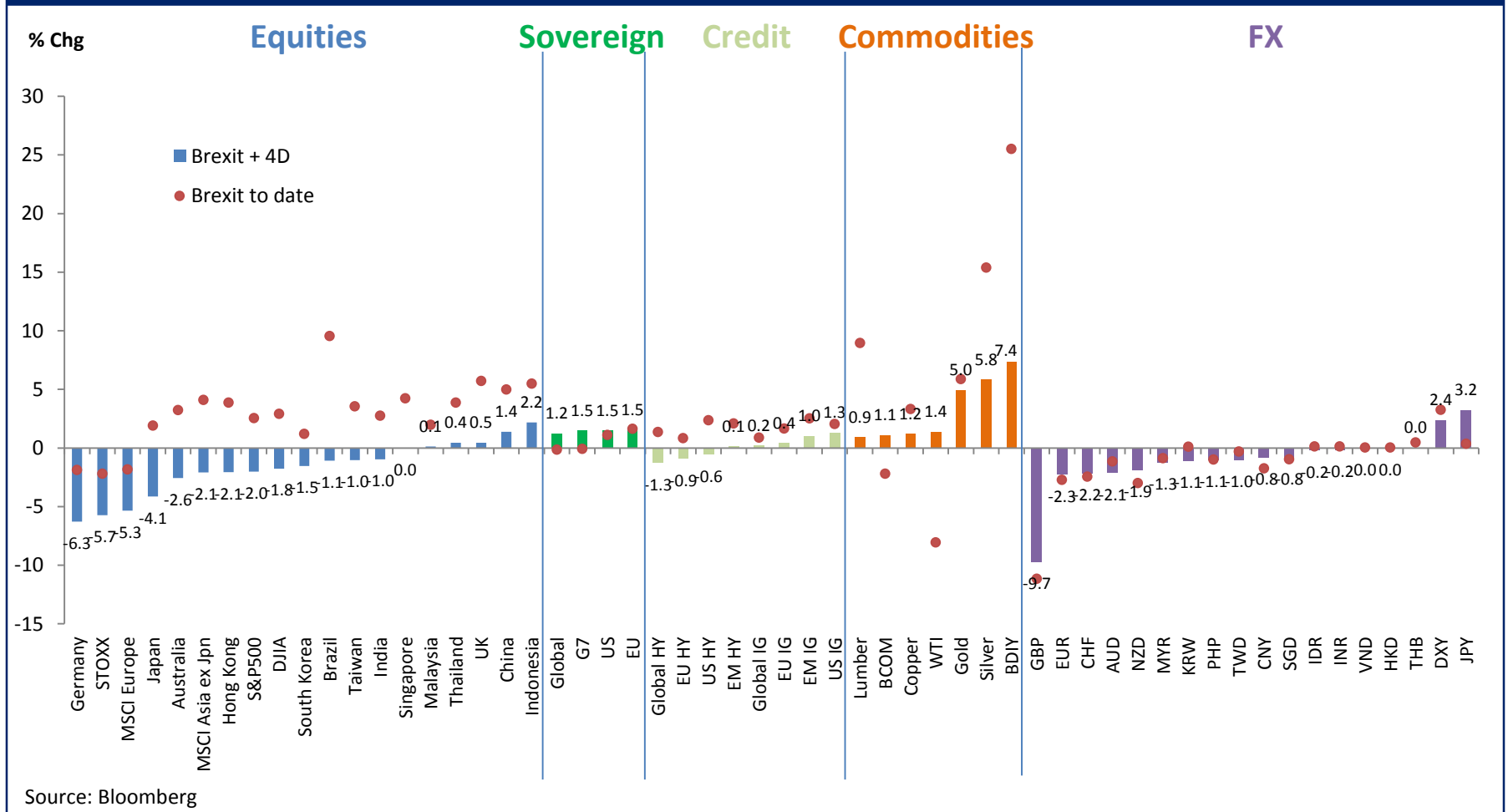


How Have Global Policymakers Responded?

G7	Released a statement in a post-Brexit conference that it “recognize that excessive volatility and disorderly movements in exchange rates can have adverse implications for economic and financial stability” and that they are monitoring markets.
Bank of England	True to its word, the BoE did not stand in the way of the currency adjustment, it did however pledge an extra GBP250bn of additional funds to ensure market stability.
European Central Bank	Issued a press release stating that “the ECB stands ready to provide additional liquidity, if needed, in euro and foreign currencies” and that it is “closely monitoring financial markets and is in close contact with other central banks.”
Federal Reserve	Said it is carefully monitoring developments in the global markets and is prepared to provide USD liquidity through existing swap lines with central banks.
Bank of Japan	Said it is carefully monitoring developments in the global markets and is prepared to provide USD liquidity through existing swap lines with central banks.
Swiss National Bank	Confirmed intervention in CHF, and will remain active in the market.
Monetary of Singapore	Said trade-weighted SGD remains within its policy band; liquidity positions of major banks in Singapore are healthy; stands ready to curb excessive volatility in SGD; have been prepared for market volatility; continues to be vigilant and stay in close touch contact with fellow central banks and regulators; will provide additional liquidity to the banking system if needed.
Credit Rating Agencies	<ul style="list-style-type: none"> - S&P downgraded UK’s sovereign rating from AAA- to AA- - Fitch cut its rating from AA+ to AA - Moody’s downgraded UK outlook to negative from stable while maintaining the Aa1 rating

Selling Off of Risky Assets; Accumulation in Safe Haven Assets

Asset Classes Performance For Brexit+4 & Brexit-to-date





GORDON DENNIS/AP/GETTY IMAGES

David Cameron has already announced his resignation. He is expected to be replaced



© PA

British Prime Minister Theresa May is expected to launch a campaign for the



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we doubt France's citizens will be granted any such plebiscite. And Germany won't allow for such.

“... The big issues are not about financial markets or economics. The markets will react negatively, and overshoot, but this will not be like 2008 when the house came down. There will be a loss of growth in the UK and Europe because of the uncertainty of the next few years, and the weaknesses there will also hurt the rest of the world including us in Asia. But the more profound questions revolve around politics. ... ”

Singapore Deputy PM Tharman Shanmugaratnam

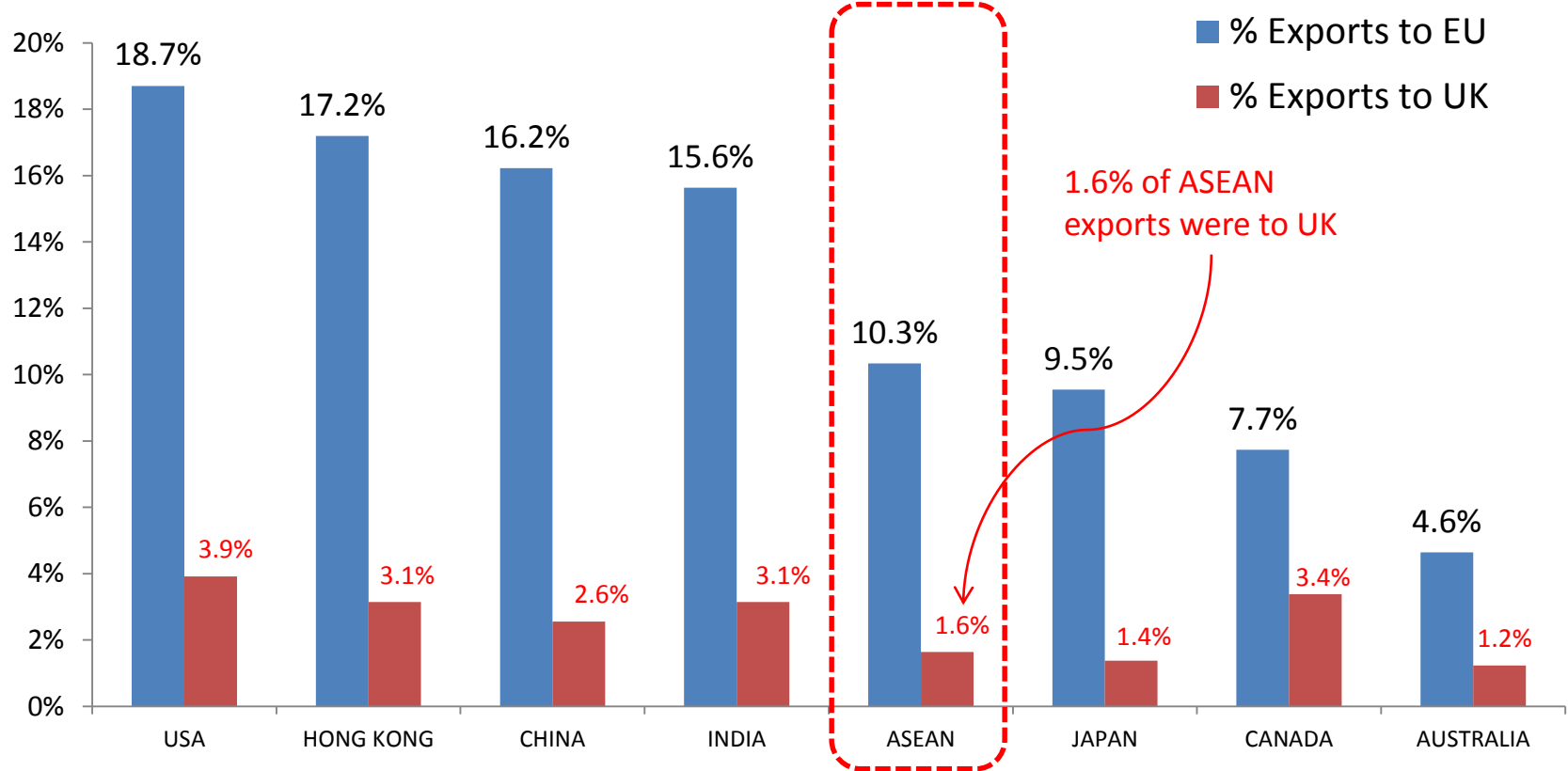
Facebook post 24 Jun 2016

<https://www.facebook.com/TharmanShanmugaratnam/posts/1331060486923439:0>

1.6% of ASEAN's Exports Were To The UK; 10.3% to EU

Export Reliance of Selected Countries/Regions to EU and UK

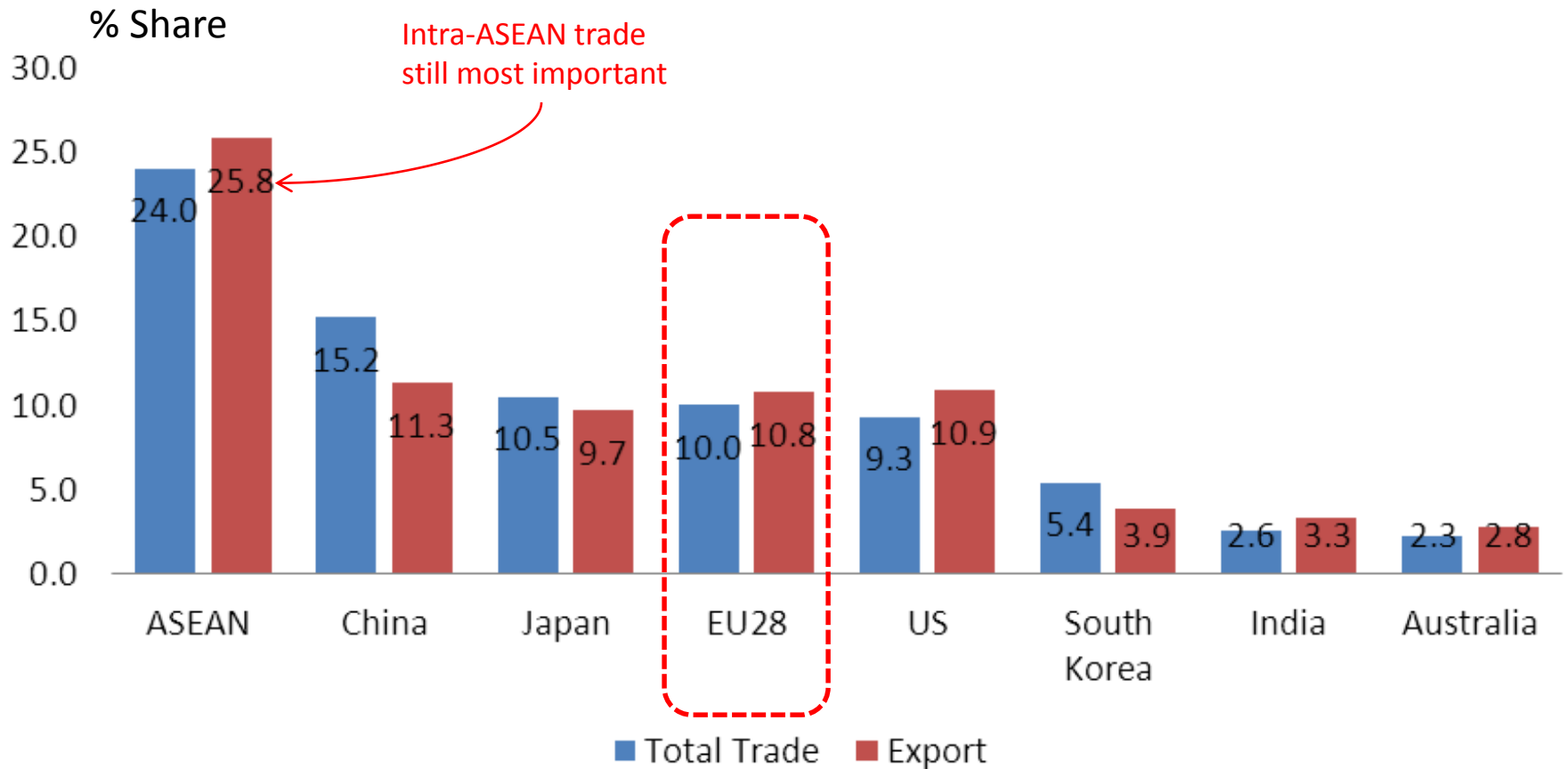
% Share Of Exports To



Source: Bloomberg

Excluding Intra-ASEAN Trade, EU28 Was The Third Largest Trading Partner With ASEAN

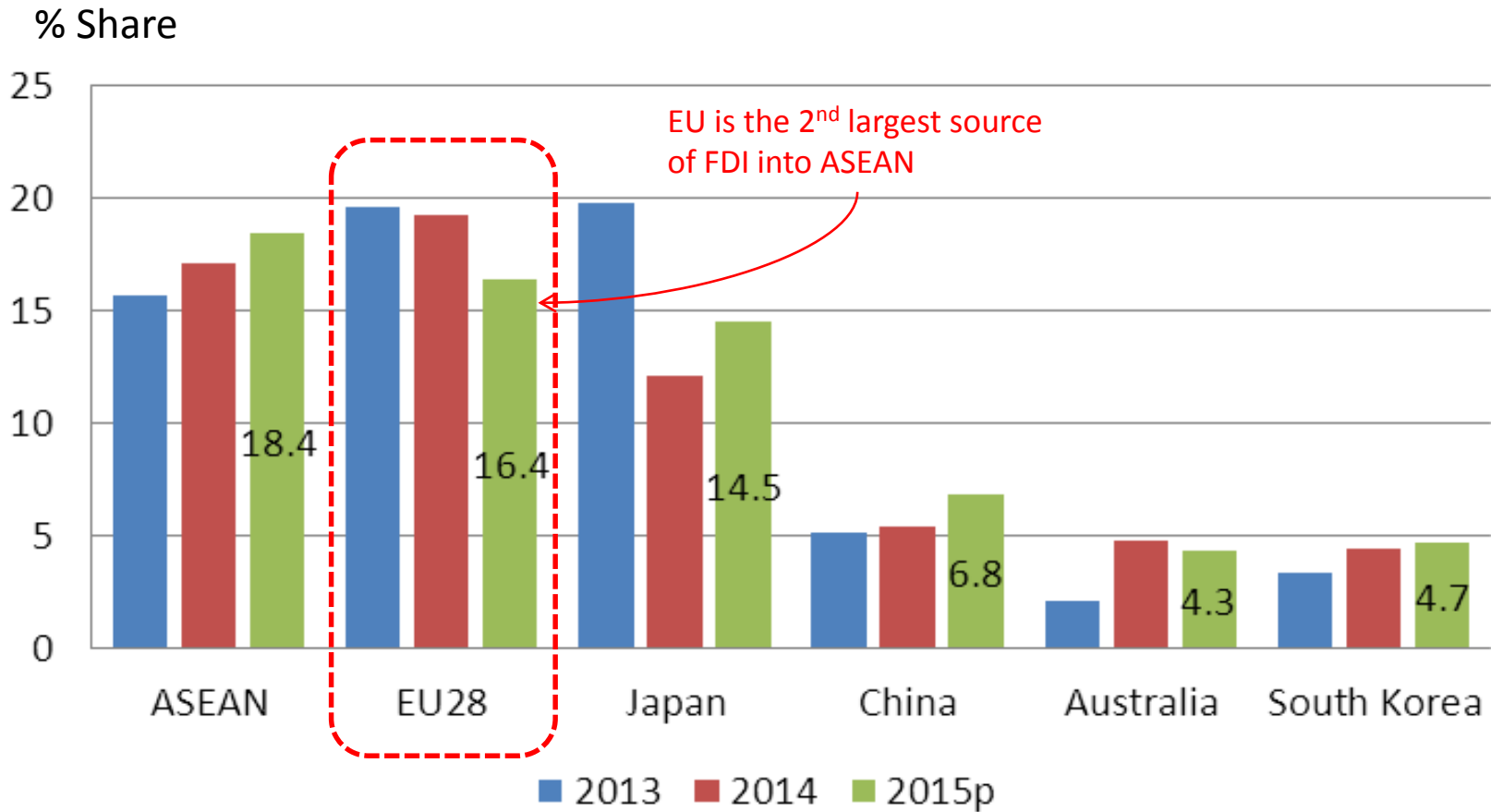
ASEAN's Trade/Exports with its Key Partners (2015)



Source: ASEAN Secretariat

Excluding Intra-ASEAN FDI, EU28 Was The Largest Source of FDI Net Inflows Into ASEAN

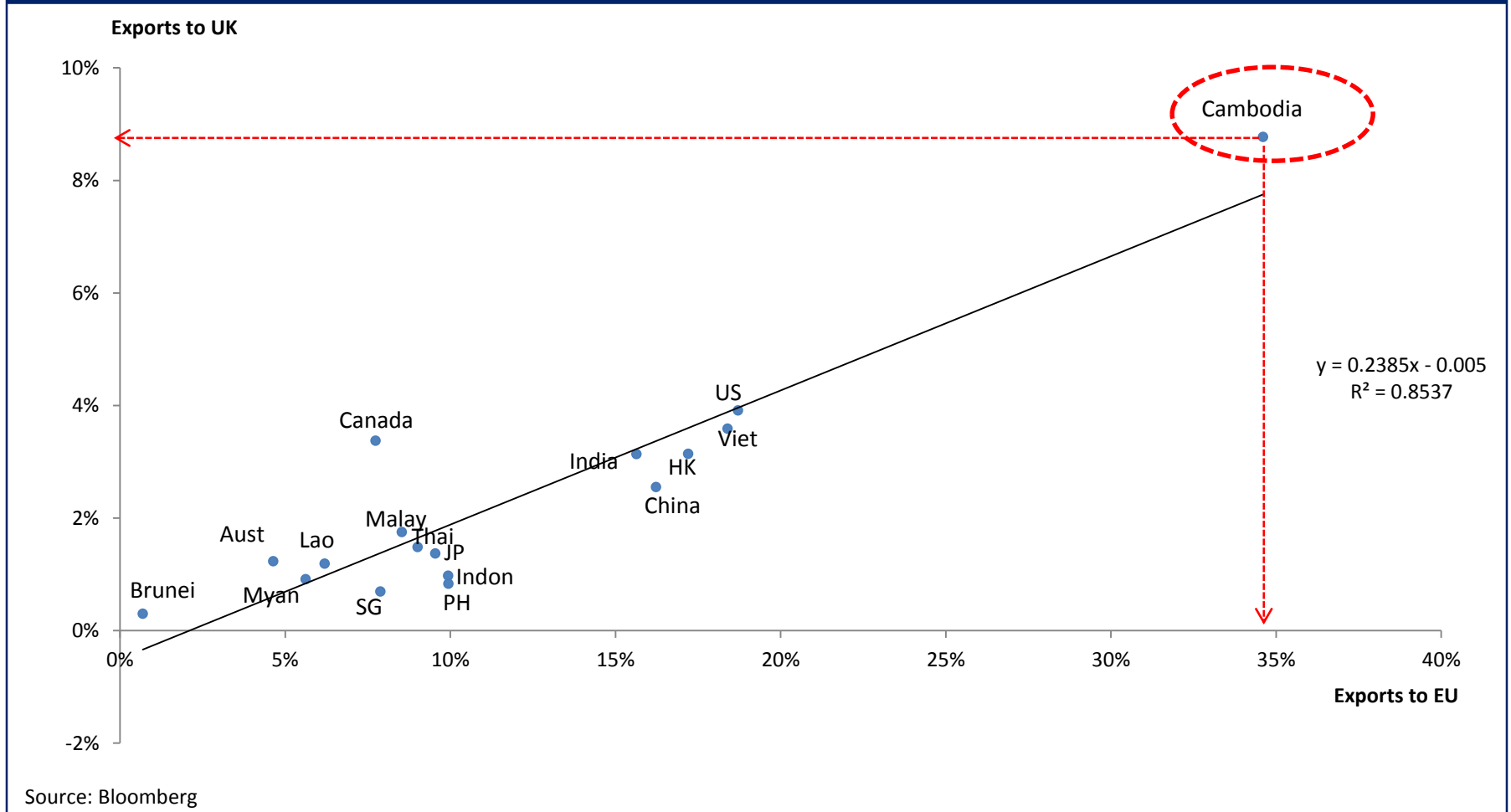
Share of ASEAN's Total Net FDI Inflows



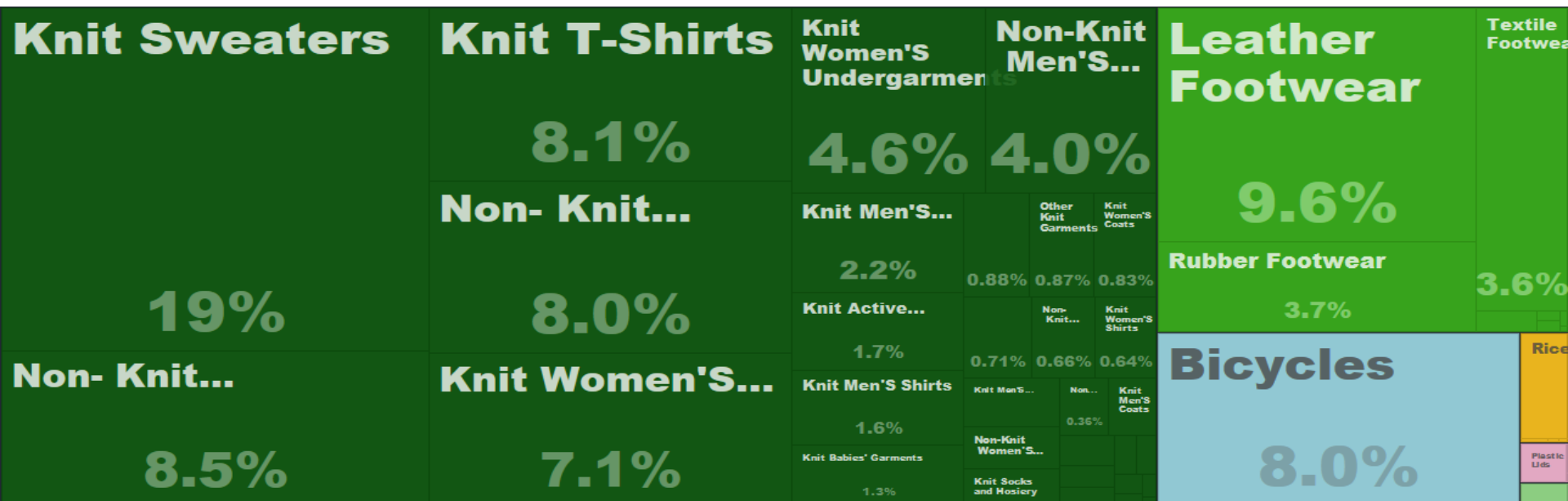
Source: ASEAN Secretariat

However, The Reliance Is Very Different Across ASEAN Countries

Export Reliance of Selected Countries/Regions to EU and UK



Exports from Cambodia to UK: US\$1.27b (2014)



Exports from Cambodia to Germany: US\$1.29b (2014)



SG Listed Companies With The Largest Exposure To UK

Name	Industry	% Rev From UK	Market Cap	% chg since BREXIT	Price
ELEKTROMOTIVE GROUP LTD	Electrical Equipment	76.9	\$ 9,742,101	33.3%	\$ 0.004
BROOK CROMPTON HOLDINGS LTD	Trading Companies & Distributo	57.8	\$ 12,942,502	-15.8%	\$ 0.320
INFORMATICS EDUCATION LTD	Diversified Consumer Services	44.2	\$ 14,804,205	-2.4%	\$ 0.200
AF GLOBAL LTD	Hotels Restaurants & Leisure	35.3	\$ 210,072,256	0.0%	\$ 0.199
HO BEE LAND LTD	Real Estate Management & Devel	30.5	\$ 1,432,404,864	0.0%	\$ 2.170
HWA HONG CORP LTD	Real Estate Management & Devel	25.5	\$ 196,051,200	-4.9%	\$ 0.290
COMFORTDELGRO CORP LTD	Road & Rail	24.9	\$ 5,755,910,144	10.5%	\$ 2.950
KOP LTD	Media	23.4	\$ 75,341,432	-4.7%	\$ 0.081
UG HEALTHCARE CORP LTD	Health Care Equipment & Suppli	22.8	\$ 56,407,060	-1.7%	\$ 0.290
FRASERS HOSPITALITY TRUST	Real Estate Investment Trusts	18.7	\$ 1,055,578,752	2.0%	\$ 0.775
CENTURION CORP LTD	Hotels Restaurants & Leisure	18.5	\$ 273,786,848	0.0%	\$ 0.355
MEGACHEM LTD	Trading Companies & Distributo	14.5	\$ 51,987,000	2.6%	\$ 0.390
ADVANCED INTEGRATED MANUFACT	Electronic Equip., Instruments	13.8	\$ 30,420,874	-17.4%	\$ 0.190
ASCOTT RESIDENCE TRUST	Real Estate Investment Trusts	13.6	\$ 1,797,650,304	3.7%	\$ 1.135
MTQ CORP LTD	Energy Equipment & Services	12.5	\$ 77,186,552	-2.0%	\$ 0.490
CITY DEVELOPMENTS LTD	Real Estate Management & Devel	12.4	\$ 7,428,992,000	2.9%	\$ 8.550
FORISE INTERNATIONAL LTD	Textiles, Apparel & Luxury Goo	10.2	\$ 39,780,000	-5.6%	\$ 0.017
BLUE SKY POWER HOLDINGS LTD	Commercial Services & Supplies	8.7	\$ 846,820,544	0.0%	\$ 0.100
AZEUS SYSTEMS HOLDINGS LTD	IT Services	8.3	\$ 15,000,000	-9.0%	\$ 0.455
CHINA HAIDA LTD	Building Products	7.3	\$ 3,568,329	28.6%	\$ 0.018
JARDINE MATHESON HLDGS LTD	Industrial Conglomerates	5.6	\$ 40,289,243,136	6.5%	\$ 57.840

SG Listed Companies With The Largest Exposure To EU

Name	Industry	% Rev From EU	Market Cap	% chg since BREXIT	Price
IREIT GLOBAL	Real Estate Investment Trusts	100.0	\$ 446,734,944	3.5%	\$ 0.745
ELEKTROMOTIVE GROUP LTD	Electrical Equipment	76.9	\$ 9,742,101	33.3%	\$ 0.004
BROOK CROMPTON HOLDINGS LTD	Trading Companies & Distributo	57.8	\$ 12,942,502	-15.8%	\$ 0.320
FORISE INTERNATIONAL LTD	Textiles, Apparel & Luxury Goo	52.7	\$ 39,780,000	-5.6%	\$ 0.017
FRENCKEN GROUP LTD	Machinery	46.7	\$ 93,196,552	-4.3%	\$ 0.220
UG HEALTHCARE CORP LTD	Health Care Equipment & Suppli	44.8	\$ 56,407,060	-1.7%	\$ 0.290
INFORMATICS EDUCATION LTD	Diversified Consumer Services	44.2	\$ 14,804,205	-2.4%	\$ 0.200
AF GLOBAL LTD	Hotels Restaurants & Leisure	35.3	\$ 210,072,256	0.0%	\$ 0.199
ACMA LTD	Machinery	34.8	\$ 19,287,818	-14.3%	\$ 0.390
RICKMERS MARITIME	Marine	34.7	\$ 71,249,440	1.3%	\$ 0.079
SEMBCORP MARINE LTD	Machinery	31.8	\$ 3,228,648,704	-1.3%	\$ 1.535
HO BEE LAND LTD	Real Estate Management & Devel	30.5	\$ 1,425,742,464	0.0%	\$ 2.170
SINGAPORE SHIPPING CORP LTD	Marine	30.1	\$ 117,814,120	5.6%	\$ 0.285
PNE INDUSTRIES LTD	Electronic Equip., Instruments	29.4	\$ 54,965,480	5.3%	\$ 0.695
ASCOTT RESIDENCE TRUST	Real Estate Investment Trusts	28.9	\$ 1,805,896,448	3.7%	\$ 1.135
HWA HONG CORP LTD	Real Estate Management & Devel	25.5	\$ 196,051,200	-4.9%	\$ 0.290
COMFORTDELGRO CORP LTD	Road & Rail	24.9	\$ 5,820,583,424	10.5%	\$ 2.950
KOP LTD	Media	23.4	\$ 75,341,432	-4.7%	\$ 0.081
CFM HOLDINGS LTD	Machinery	21.5	\$ 3,255,570	-10.0%	\$ 0.027
FRASERS HOSPITALITY TRUST	Real Estate Investment Trusts	18.7	\$ 1,055,578,752	2.0%	\$ 0.775
CENTURION CORP LTD	Hotels Restaurants & Leisure	18.5	\$ 273,786,848	0.0%	\$ 0.355
PCI LTD	Electronic Equip., Instruments	17.0	\$ 85,612,568	-2.3%	\$ 0.420
HOE LEONG CORPORATION LTD	Trading Companies & Distributo	15.8	\$ 16,189,699	0.0%	\$ 0.028
MEGACHEM LTD	Trading Companies & Distributo	14.5	\$ 51,987,000	2.6%	\$ 0.390
KEPPEL DC REIT	Real Estate Investment Trusts	14.1	\$ 975,842,560	11.3%	\$ 1.185
CHUAN HUP HOLDINGS LTD	Electronic Equip., Instruments	13.9	\$ 251,108,768	-1.8%	\$ 0.270
ADVANCED INTEGRATED MANUFACT	Electronic Equip., Instruments	13.8	\$ 30,420,874	-17.4%	\$ 0.190
MTQ CORP LTD	Energy Equipment & Services	12.5	\$ 77,186,552	-2.0%	\$ 0.490
CITY DEVELOPMENTS LTD	Real Estate Management & Devel	12.4	\$ 7,438,085,120	2.9%	\$ 8.550
KODA LTD	Household Durables	9.7	\$ 13,090,769	-10.4%	\$ 0.430
CHINA HAIDA LTD	Building Products	9.6	\$ 3,568,329	28.6%	\$ 0.018
BLUE SKY POWER HOLDINGS LTD	Commercial Services & Supplies	8.9	\$ 846,820,544	0.0%	\$ 0.100
AZEUS SYSTEMS HOLDINGS LTD	IT Services	8.3	\$ 15,000,000	-9.0%	\$ 0.455
COMBINE WILL INTERNATIONAL H	Leisure Products	7.2	\$ 17,780,070	2.7%	\$ 0.565
ANNAIK LTD	Metals & Mining	6.7	\$ 16,183,245	0.0%	\$ 0.080
YANGZIJANG SHIPBUILDING	Machinery	6.6	\$ 3,372,227,840	2.3%	\$ 0.895
SP CORP LTD	Trading Companies & Distributo	6.2	\$ 14,390,652	14.6%	\$ 0.470
LIONGOLD CORP LTD	Metals & Mining	5.7	\$ 5,171,639	-50.0%	\$ 0.001
JARDINE MATHESON HLDGS LTD	Industrial Conglomerates	5.6	\$ 40,175,452,160	6.5%	\$ 57.840

Brexit Aftermath: Highlights of Forecasts Changes

- GBP/USD to stay volatile and vulnerable: 1.28 by end-3Q16 and then to 1.24 by end-2016
- Negative effect on EUR/USD: 1.07 end-2016
- One US Fed rate hike, Dec 2016
- Risk aversion and Fed rate expectations to support USD/Asians, minor tweaks higher to USD/SGD, USD/MYR, and USD/CNY

Budget 2015

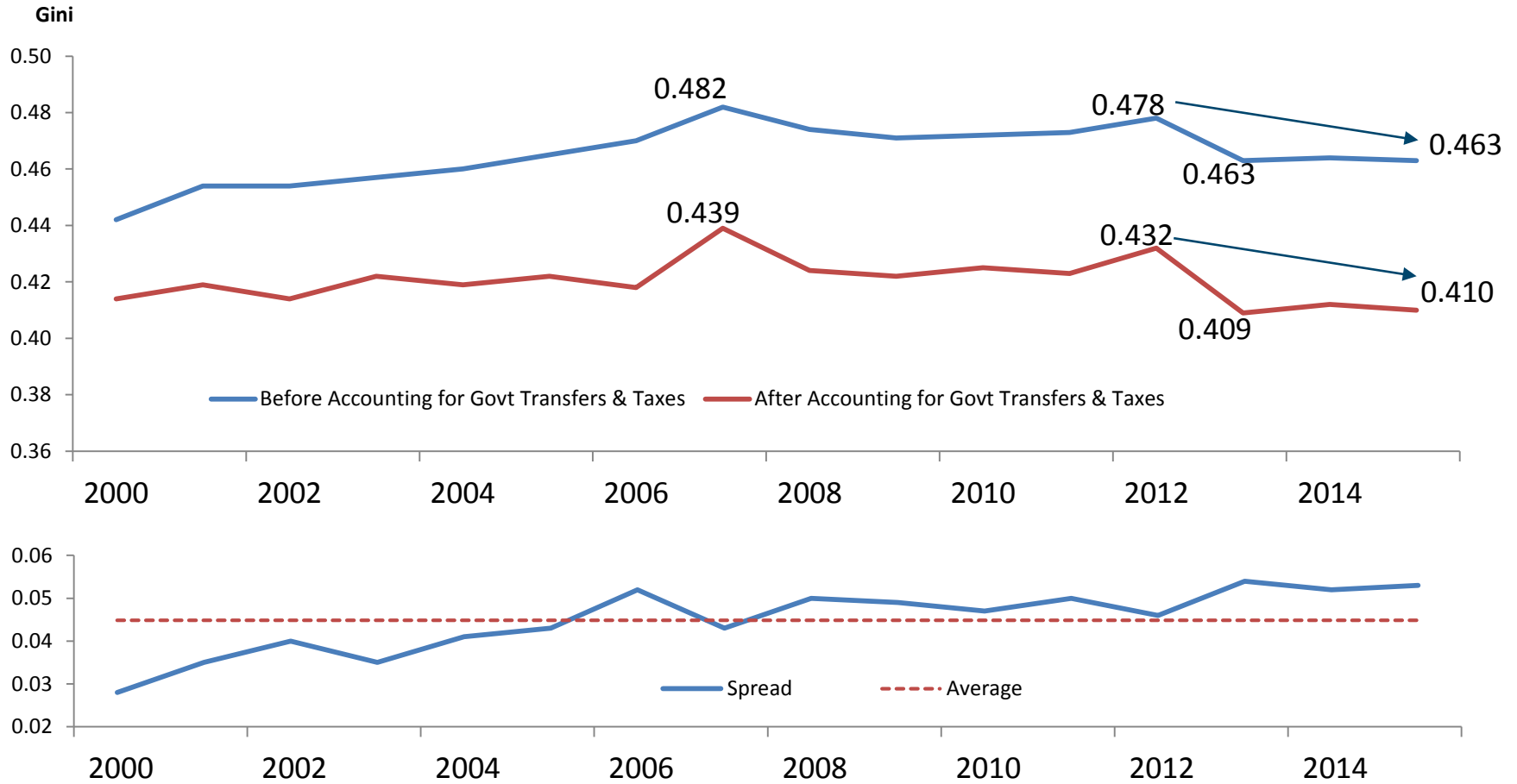


*Building Our Future,
Strengthening Social Security*

Budget 2015		Pages	Number	
Social	Building our Future, Strengthening Social Security	6 to 19	14	37 (63%)
	Assurance in Retirement	46 to 56	11	
	Supporting Families, Strengthening Community	59 to 70	12	
Economy	Investing in Innovation & Internationalisation	32 to 43	12	22 (37%)
	Developing our People	21 to 30	10	

Improvement in Income Inequality

Singapore's GINI Coefficient



Source: CEIC

Budget 2016



Partnering for the Future

Social

Budget 2016	Pages	Number
Building a Caring & Resilient Society	47 to 65	19
		(34%)

Economy

Transforming our Economy through Enterprise & Innovation		
Growing Singapore Together	11 to 16	6
Addressing Near-Term Concerns	17 to 21	5
Industry Transformation Programme	22 to 25	4
- Enterprise	25 to 29	5
- Industries	29 to 32	4
- Innovation	33 to 39	7
Supporting Our People	39 to 44	6

37
(66%)

Budget 2016



Partnering for the Future

		Budget 2016	Pages	Number
Social	}	Building a Caring & Resilient Society	47 to 65	19 (34%)
		Transforming our Economy through Enterprise & Innovation		
Economy	}	Growing Singapore Together	11 to 16	6
		Addressing Near-Term Concerns	17 to 21	5
		Industry Transformation Programme	22 to 25	4
		- Enterprise	25 to 29	5
		- Industries	29 to 32	4
		- Innovation	33 to 39	7
		Supporting Our People	39 to 44	6
Long-Term				21 (84%)



BUDGET 2015



BUDGET 2016

cpf students families second last billion credit
 subsidies lower budget growth school
 wage healthcare higher system rate help
 enhanced develop changes industry
 skills skills future provide many additional
 singaporean incomes government middle
 future singaporeans income
 life retirement education next scheme
 based increase innovation singapore tax
 development productivity employers
 workers companies quality learning social
 receive introduced training silver further
 cost costs million benefit smes rates
 aged

silver billion sector skills cash
 children projects million wage caring
 sectors community continue help develop
 programme scheme economic
 singaporeans measures seniors
 government build transformation
 economy innovation industry
 development tax singapore society
 receive together total workers provide
 budget challenges fund businesses
 transform productivity firms business
 social many growth income efforts smes
 three future

Source: MOF, UOB Data Management Office

Words That Appeared Less Frequently

Words	2016	2015	2016-2015
income/incomes	25	123	-98
singaporean/(s)	28	99	-71
cpf	11	58	-47
tax	32	68	-36
retirement	5	33	-28
education	18	36	-18
subsidies/training	25	60	-35
students	6	23	-17
costs	3	20	-17
skillsfuture	14	30	-16
learning	10	26	-16
contribution	1	17	-16

Words That Appeared More Frequently

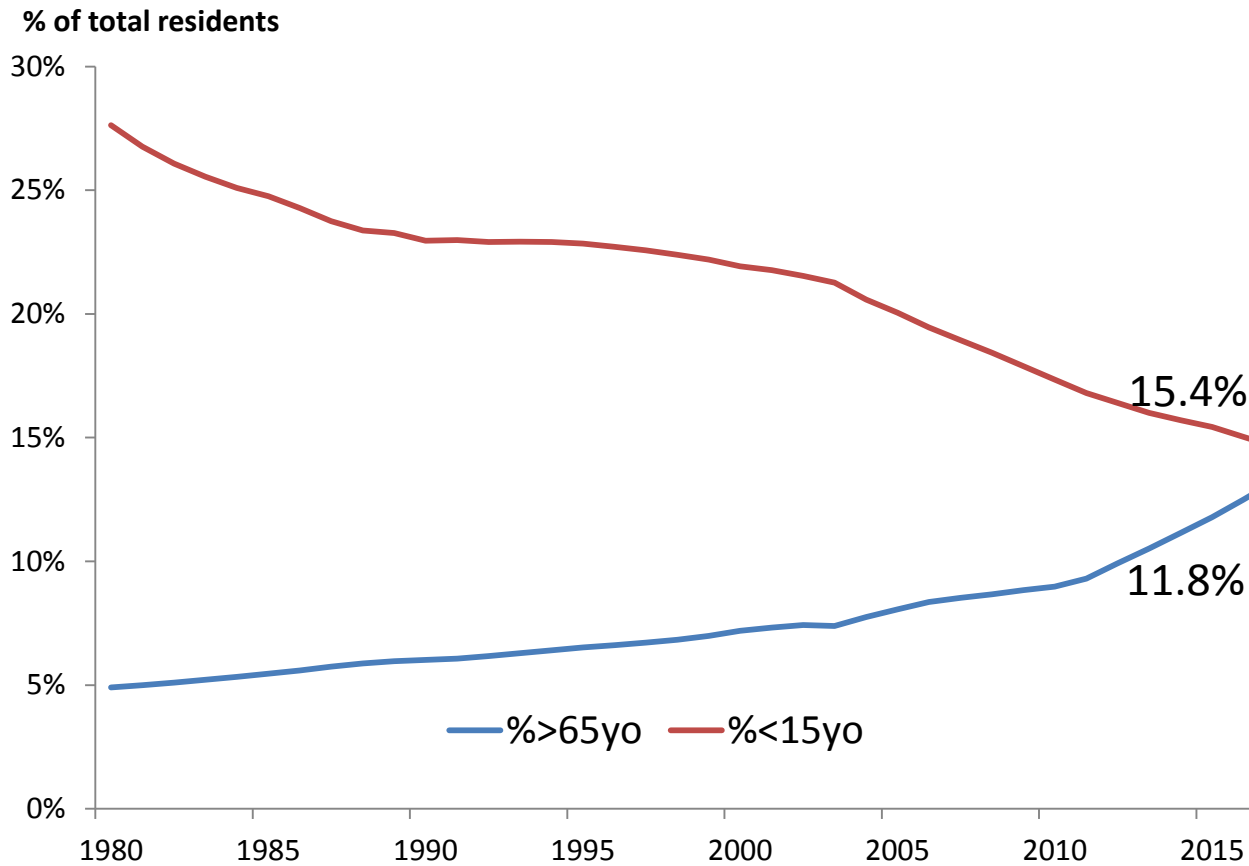
Words	2016	2015	2016-2015
industry(ies)/sectors	99	42	57
transformation/transform	58	7	51
Business/enterprise(s)	59	20	39
firms	44	10	34
seniors	44	12	32
innovation	56	29	27
singapore	53	26	27
caring	22	2	20
challenges	21	1	20
economy	32	14	18
partnership	18	2	16
society	24	10	14
efforts	20	6	14
food	17	3	14
projects	20	7	13
trade	17	4	13
opportunities	15	3	12
technology	15	3	12
national	19	8	11
manufacturing	17	6	11
create	15	4	11

Source: MOF, UOB Data Management Office



Longer Term Challenges

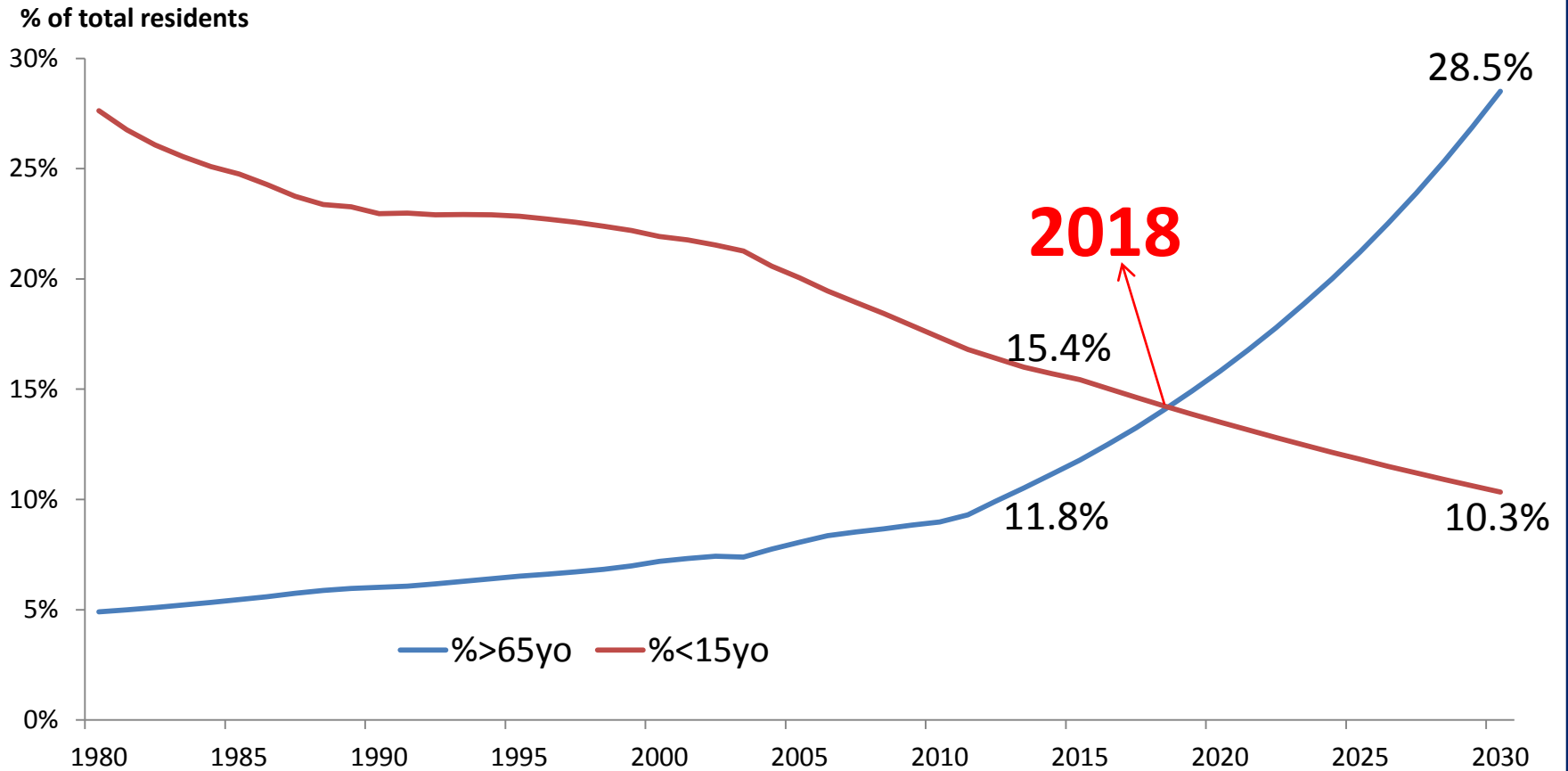
Singapore's <15yo and >65yo as % of Total Resident Population



Source: CEIC

Longer Term Challenges

Singapore's <15yo and >65yo as % of Total Resident Population



Source: CEIC

The big shift from young to ageing workforce

The economic growth that once seemed easy won't occur unless productivity boots up



Joanna Seow

Last year, when SGSO was the talk of the town, Singapore crossed another major milestone – one that few nations in the world have serious implications for the city state's future economic growth.

That second milestone involved the number of working age citizens, which peaked last year and is on the way down, assuming birth rates remain at 2013 levels and there is no immigration from 2014 onwards.

Fast Forward series

With Singapore firmly focused on the Future Economy, The Straits Times' series, Fast Forward: Disruption and the Singapore Economy, helps you make sense of the big shifts that will shake up entire sectors, reshape jobs and change lives. Every Saturday for 12 weeks, the paper's journalists will examine a disruptive force, its likely impact on the economy and how soon that will be felt, from robotics, 3D printing and smart buildings to deep demographic trends, the global skills revolution and the Asian growth story.

Next week, find out more about the big shifts in what, where, when and how people learn.

"We have less time to adapt to the situation than some other countries have had," says SIM University (USIM) economist Walker Theiera.

In just six years' time, Singapore is expected to move out of its demographic "sweet spot" – the period when the shares of the population below age 15 and above 65 are below 30 per cent and 15 per cent respectively – according to UOB economist Francis Tan.

"Generally, countries during this 'sweet period' will experience high GDP growth because a large percentage of their resident population is 'working age'," he says.

In other words, Singapore's stellar record of economic growth can no longer be taken for granted. That's because the nation's labour force growth – one of the two main drivers of economic growth – is slowing to a crawl.

GROWTH SLOWS

So intense is Manpower Minister Lim Swee Say's explaining the challenge, he has come up with a series of simple equations to get it across: The first is 4 + 0 + 4, that is, workforce growth of 4 per cent plus productivity growth of zero equals 4 per cent GDP growth. That held for the years 2010 to 2014, when the workforce grew by 4 per cent a year on average. But by 2010, that will be far smaller in size. That means more Singaporean workers will leave the workforce than join it.

The trend is not unusual. As countries develop, birth rates fall as the share of women working rises, people marry later and desire smaller families.

Popcorn to fine jobs because stagnates and can decline.

But that demographic transition is taking place particularly fast here

productivity must grow at 2 per cent, a stretch target given that it shrank by 0.1 per cent last year.

On GDP growth, the Ministry of Trade and Industry said it expects GDP growth of 2 to 4 per cent per year for the rest of the decade.

"GDP growth will increasingly be driven by productivity growth as workforce growth slows, especially towards the end of the decade. However, there is greater likelihood of growth averaging towards the lower end of the 2 to 4 per cent range, in view of the downside risks posed by the external environment."

"If external demand conditions remain uncertain and sluggish, business expansion plans, investment decisions and demand for workers may each be adversely affected. Under such circumstances, both workforce and productivity growth may be dampened over the short-to-medium term."

Already, employees worry that if birth rates and immigration do not rise, the tight labour market will only get tighter. "Employers may not be able to meet their manpower demands with residents... potentially impacting business growth," says Singaporean Employer's Federation executive director Koh Jian Kat.

While an oversupply of jobs may sound like good news for job hunters, the labour shortfall could put off multinational companies and cause them to turn to other countries in the region with a ready supply of younger and cheaper workers.

If firms move out and there is an outflow of both jobs and investments, job seekers will take longer to find jobs because businesses will make some positions redundant. "With slower growth, the average Singaporean

may have to be prepared for greater competition for jobs, not less," warns USIM economist and Nominated MP Randolph Tan.

The changes in Singapore's demographic composition and education profile are driving a major structural shift in the economy. What further complicates matters is that this shift is taking place even as the economy comes up against rapid technological change and globalisation that it needs to adapt to in order to remain competitive, as Manpower Minister Mr Lim observed in an interview with The Straits Times this week.

"The growth rate of our local workforce will slow down. At the same time, the transition of our Singapore workforce will also speed up, in terms of education, skills, expectations, and aspirations... At the same time, on the economy side, we have to face the pace of transition so that we can remain competitive, and then thirdly, to keep the two in sync to minimise the mismatch."

That means the types of industries that Singapore attracts will have to change, and that in turn means workers will need a new mix of skills to do the new kinds of jobs.

DBS economist Irvin Seah says these changes will "shape the profile of multinational companies coming to Singapore". He expects them to be capital-intensive and low labour intensity, like those in the pharmaceutical cluster.

"At the same time, jobs which have tended to be held by older workers who cannot find other options, such as taxi-driving, could also become obsolete in a few decades when driverless vehicles hit the roads.

So it is crucial that workers are prepared to move through different professions and pick up new skills.

The Manpower Minister hints

workers to get set for a future in which "we will talk about lifelong career conversion because we have to keep changing not just from job to job, but also from profession to profession." So what's the most important skill? It's to make our workers reskillable," he says.

WORK LIVES LENGTHEN

The scale of this demographic disruption and its implications for people's work lives and retirement dreams is best reflected in the often heated and emotional debates on retirement age and incomes.

One important and smart way to

top up Singapore's workforce and keep the economic engine whirring is to encourage seniors to extend their working lives. That also gives them the option to stay engaged and productive for longer, and salt away more savings for their retirement years – which will lengthen as life expectancies rise.

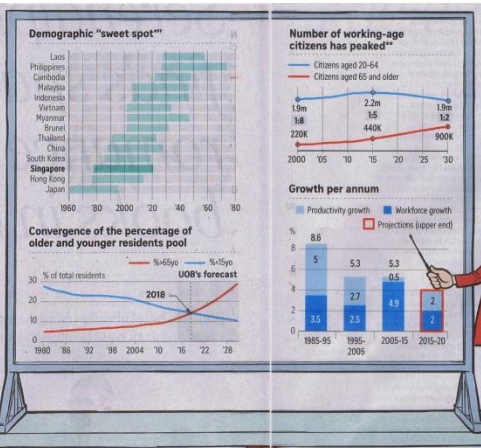
Deputy Prime Minister Tharman Shanmugaratnam is the latest in a string of political leaders to broach the idea of how people's work and businesses' ideas about retirement need to change, radically. During a dialogue at the World Cities Summit last week, he said the retirement age, which stands at 62, will have to go "at some point."

It is critical, he said, that employers view older workers as assets to be continually invested in rather than just as add-ons because younger workers are hard to come by in a tight labour market.

"Older folks are an asset. They have wisdom, experience and they also learn on the job. We have to make this [integrating older workers] part and parcel of the workplaces... We have not done it very well in Singapore so far and we have to do much better in the real world," said Mr Tharman, who is also Coordinating Minister for Economic and Social Policies.

He was responding to a question from Ambassador-at-Large Tommy Koh, who is age 78 still works full-time and asked the DPM if the Government could abolish compulsory retirement. Their exchange sparked fierce debate online, with some agreeing with Mr Tharman's statement while others worried that it would mean they would not be able to access their Central Provident Fund (CPF) savings.

The relevant numbers for retirees are:



NOTE: The "sweet spot" is the period when the shares of the population under age 15 and above 65 are below 30 per cent and 15 per cent respectively. *Data from 2010 onwards are projected figures based on 2013 birth rates and no immigration from 2014 onwards.

Sources: UOB GLOBAL ECONOMICS AND MARKETS RESEARCH, SINGAPORE DEPARTMENT OF STATISTICS, NATIONAL POPULATION AND TALENT DIVISION, MINISTRY OF MANPOWER, MINISTRY OF TRADE AND INDUSTRY



Mr Kee Hong (second from right) started his job as gardener at wholesale florist Ji Kai Flower two years ago. He is one of five employees over the age of 62 in the firm, including from left: manager Lee Lay Chue, 67, administration clerk Saw Lay Kim, 63, and gardener Tang Wong Tak, 65. ST PHOTO. MARK CHEONG

Retirement age of 62, which legally protects workers from being dismissed earlier than that because of their age. It also gives employers some flexibility to re-negotiate terms of contract beyond that point.

Re-employment age which will rise from 65 to 67 next year.

Supervisors at Met also have the flexibility to arrange different reporting times, lunch hours and rest times for staff.

Such changes are becoming necessary as demographic trends that have been years in the making – and the resulting labour crunch – become a reality. As Mr Mok put it, "We do not opt out of our way to hire senior workers... Our policy is to take the best fit out of the lot on condition that the shortlisted candidate meets the job requirements."

On the policy level, the Government has rolled out one programme after another.

Companies that want to redesign their jobs for older workers can have their projects funded by WorkPro grants, rolled out three years ago and enhanced this month.

Training and job placement initiatives such as the Career Support Programme and Professional Conversion Programme help workers acquire skills they need to stay relevant and move into new industries.

At the national level, longer-term change is being driven by the "Singapore movement and the Industry Transformation Programme. The first equips workers with the right skills for the industries and jobs here. The second is to help firms and industries compete and innovate.

The other big factor to consider is how many foreigners to allow in, work in better jobs than in the past. "We should not assume that they can only take on low-value, low-impact jobs," says USIM's Dr Theiera.

As to whether ageing itself has a negative impact on productivity, "the jury is still out," says National University of Singapore's Professor Paul Cheung. "Ageing itself does not necessarily diminish the capability of the workforce," adds Singapore's former chief statistician who is also director of the United Nations Institute of Demography.

There have been several academic studies on the link between age, productivity and wages using data from European countries. Academics Jan C. van Ours and Lenny Steiner, for example, found that the age effect on the gap between productivity gains and wage costs at high ages is small, while noting that other studies found no evidence of an age-related pay-productivity gap.

PEOPLE ADJUST

On the ground, workers and employers are already adjusting to the realities of an ageing workforce.

Mr Ng Kee Hong, 76, started a flower job two years ago as a gardener at wholesale florist Ji Kai Flower on Road. He is one of five employees over the age of 62, out of 80 staff in total.

He wants to continue working because he is able to bring steady income at home all the time. "It's easier to pass the time," he says. He used to run a small business but stopped after his eyesight deteriorated and he could no longer drive.

He starts work at 8am, waters plants and arranges them so they look attractive and are easy for customers to find. After his shift

ends at 1pm, he goes home to rest in nearby Ang Mo Kio, where he lives with his wife and daughter. Asked about whether he finds the job strenuous at his age, he says: "When we like the job, it's not tiring."

Job redesign lies behind his happy arrangement. Business manager Mok King Hing explains that one job was split in two so that Mr Ng can work half day.

Supervisors at Met also have the flexibility to arrange different reporting times, lunch hours and rest times for staff.

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Supervisors at Met also have the flexibility to arrange different reporting times, lunch hours and rest times for staff.

Such changes are becoming necessary as demographic trends that have been years in the making – and the resulting labour crunch – become a reality. As Mr Mok put it, "We do not opt out of our way to hire senior workers... Our policy is to take the best fit out of the lot on condition that the shortlisted candidate meets the job requirements."

On the policy level, the Government has rolled out one programme after another.

Companies that want to redesign their jobs for older workers can have their projects funded by WorkPro grants, rolled out three years ago and enhanced this month.

Training and job placement initiatives such as the Career Support Programme and Professional Conversion Programme help workers acquire skills they need to stay relevant and move into new industries.

At the national level, longer-term change is being driven by the "Singapore movement and the Industry Transformation Programme. The first equips workers with the right skills for the industries and jobs here. The second is to help firms and industries compete and innovate.

The other big factor to consider is how many foreigners to allow in, work in better jobs than in the past. "We should not assume that they can only take on low-value, low-impact jobs," says USIM's Dr Theiera.

As to whether ageing itself has a negative impact on productivity, "the jury is still out," says National University of Singapore's Professor Paul Cheung. "Ageing itself does not necessarily diminish the capability of the workforce," adds Singapore's former chief statistician who is also director of the United Nations Institute of Demography.

There have been several academic studies on the link between age, productivity and wages using data from European countries. Academics Jan C. van Ours and Lenny Steiner, for example, found that the age effect on the gap between productivity gains and wage costs at high ages is small, while noting that other studies found no evidence of an age-related pay-productivity gap.

PEOPLE ADJUST

On the ground, workers and employers are already adjusting to the realities of an ageing workforce.

Mr Ng Kee Hong, 76, started a flower job two years ago as a gardener at wholesale florist Ji Kai Flower on Road. He is one of five employees over the age of 62, out of 80 staff in total.

He wants to continue working because he is able to bring steady income at home all the time. "It's easier to pass the time," he says. He used to run a small business but stopped after his eyesight deteriorated and he could no longer drive.

He starts work at 8am, waters plants and arranges them so they look attractive and are easy for customers to find. After his shift

KEY RETIREMENT NUMBERS

62

Retirement age, which legally protects workers from being dismissed earlier than that because of their age.

65

Re-employment age from next year, rising from 65.

67

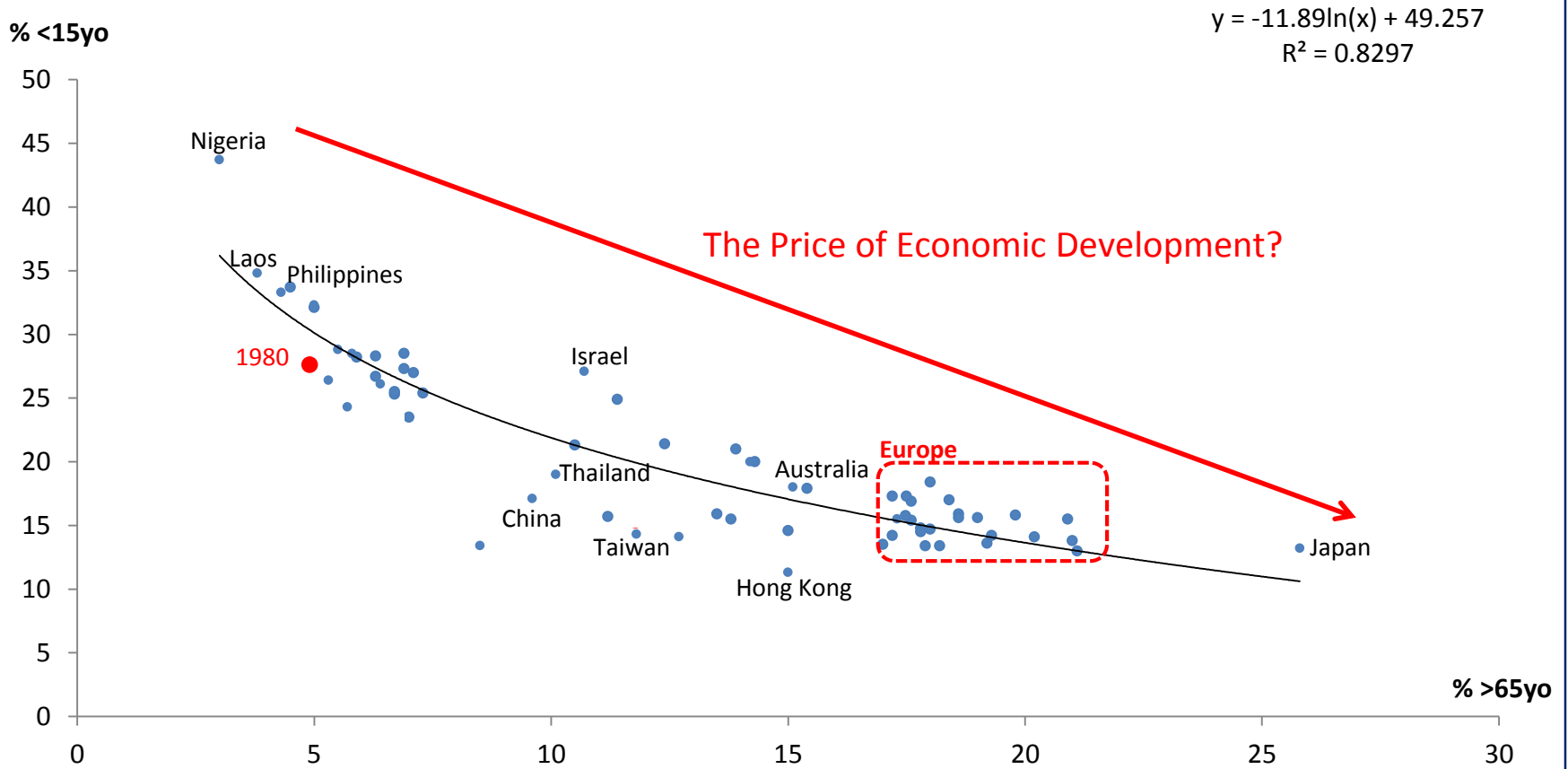
Re-employment age for those born in 1954 and after.

65

CPF payout eligibility age for those born in 1954 and after.

Longer Term Challenges

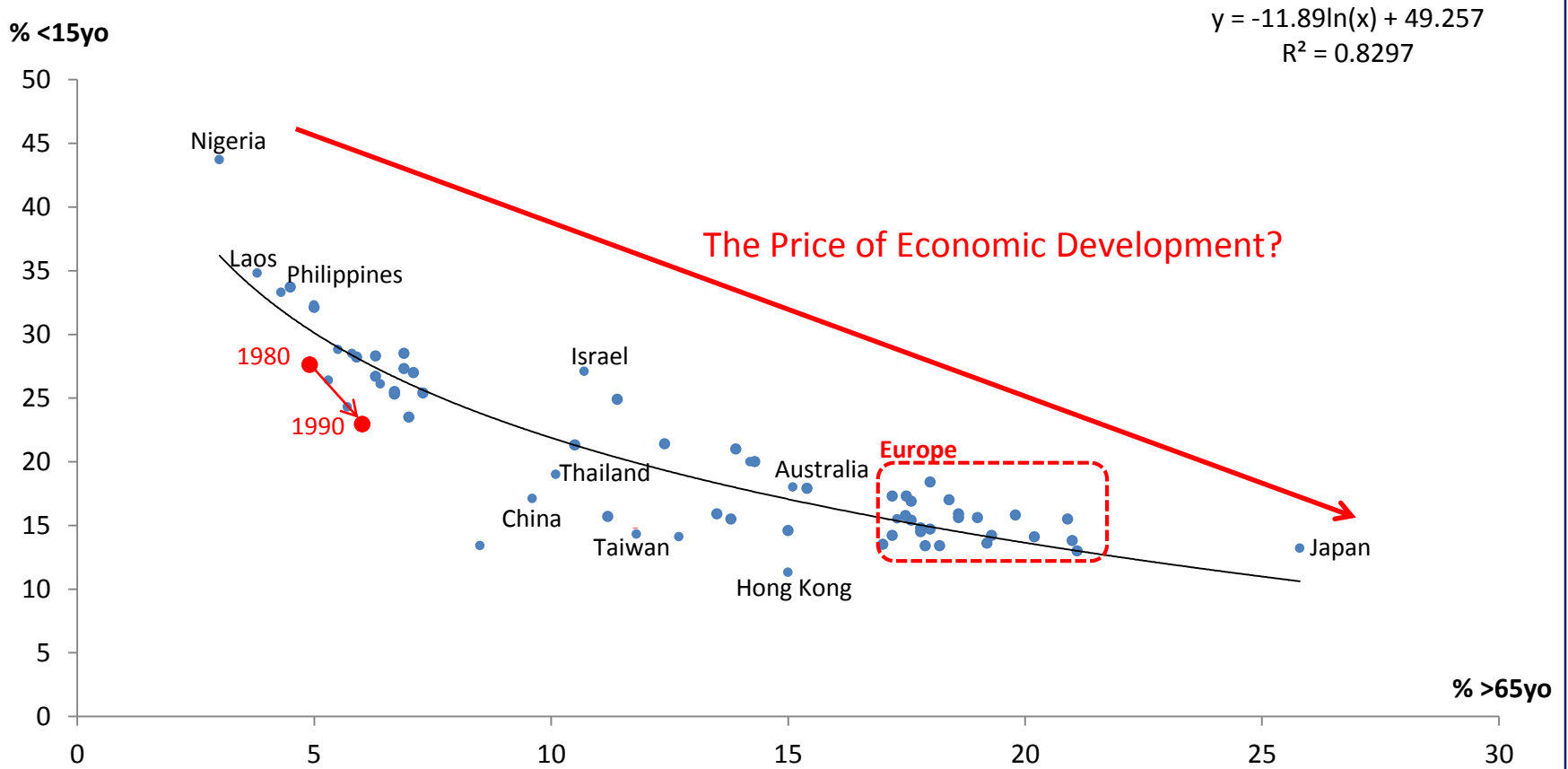
Singapore's Demographics Path



Source: United Nations World Population Prospects, UOB Estimates

Longer Term Challenges

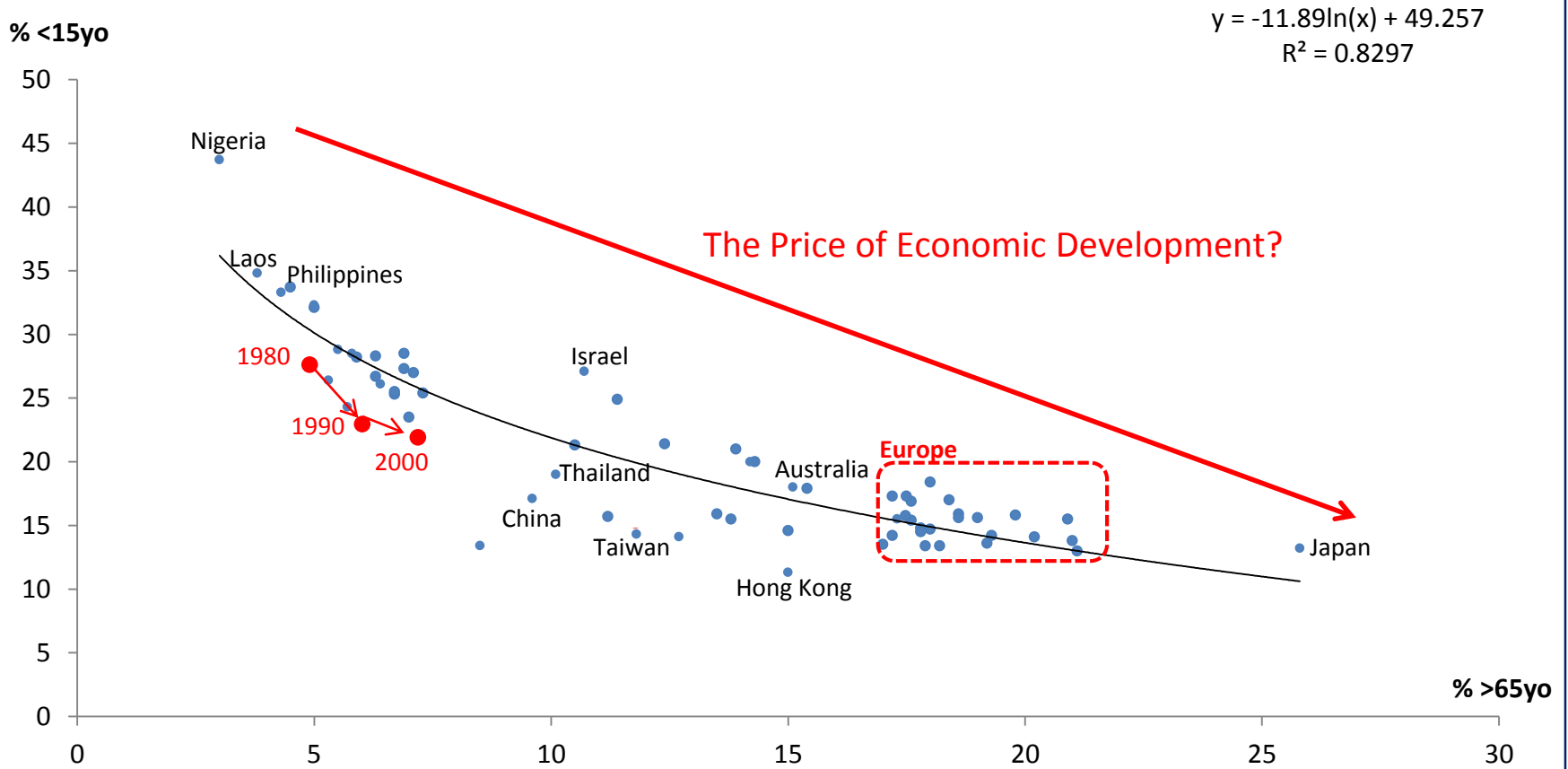
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Longer Term Challenges

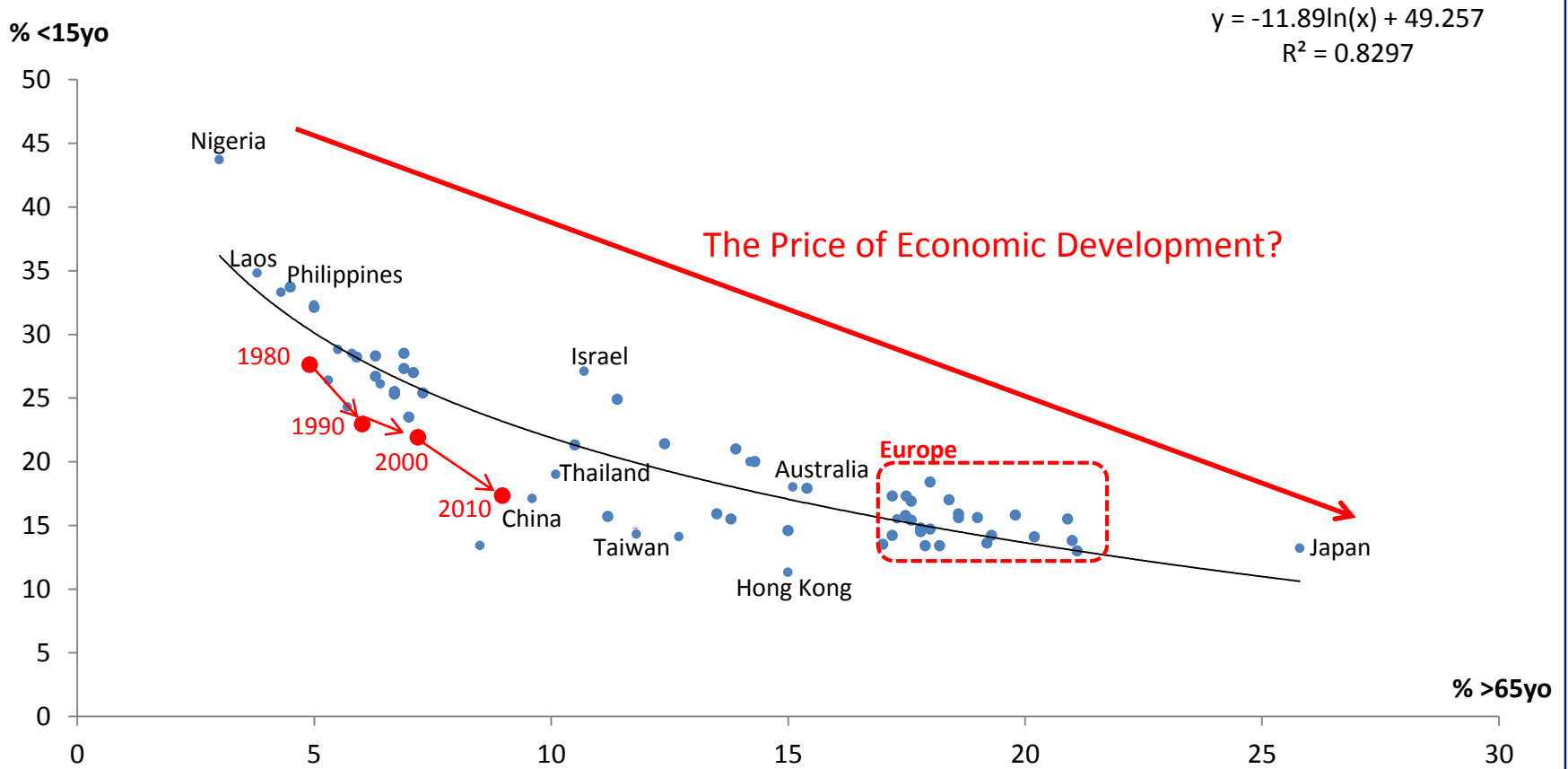
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Longer Term Challenges

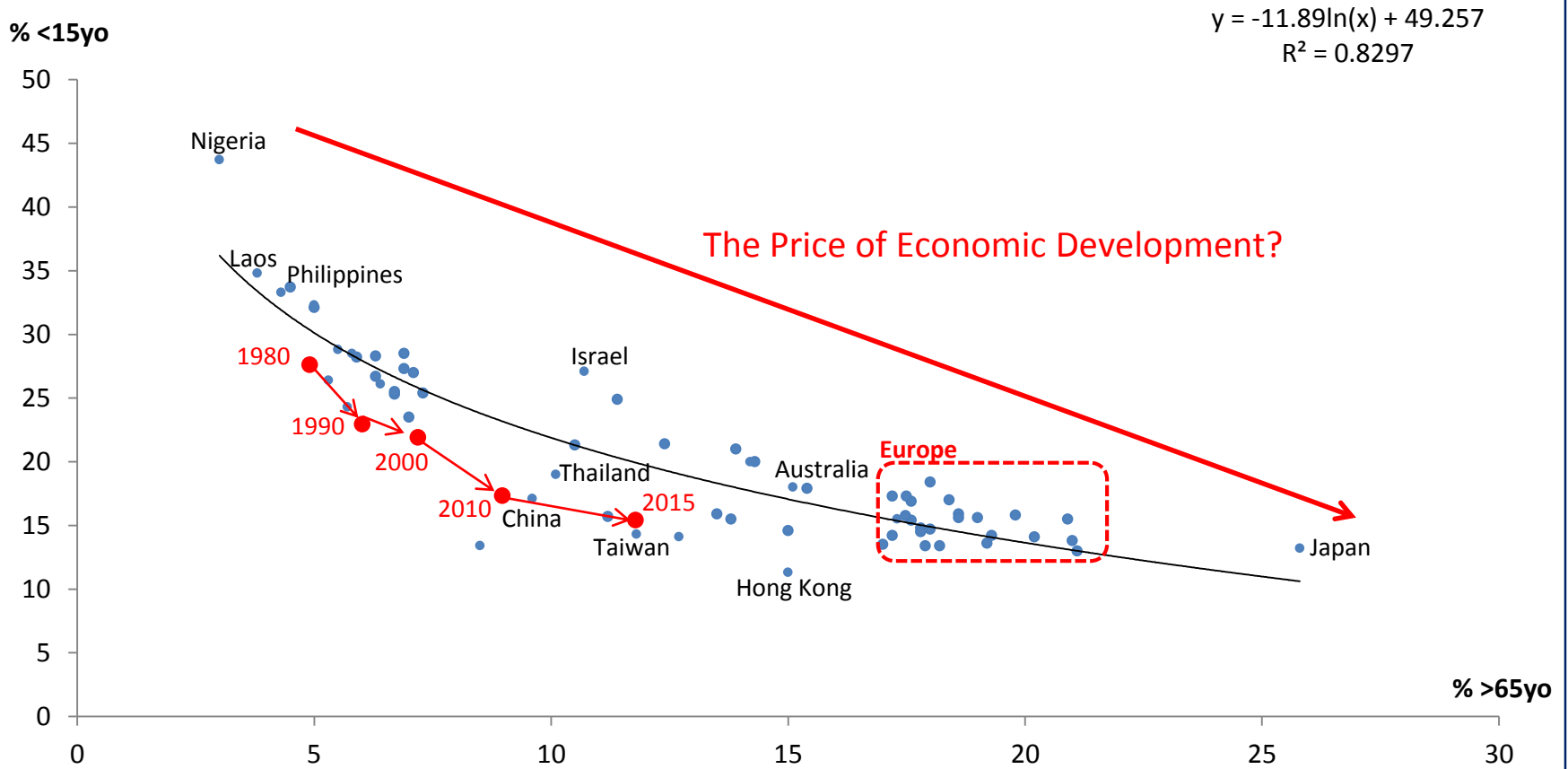
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Longer Term Challenges

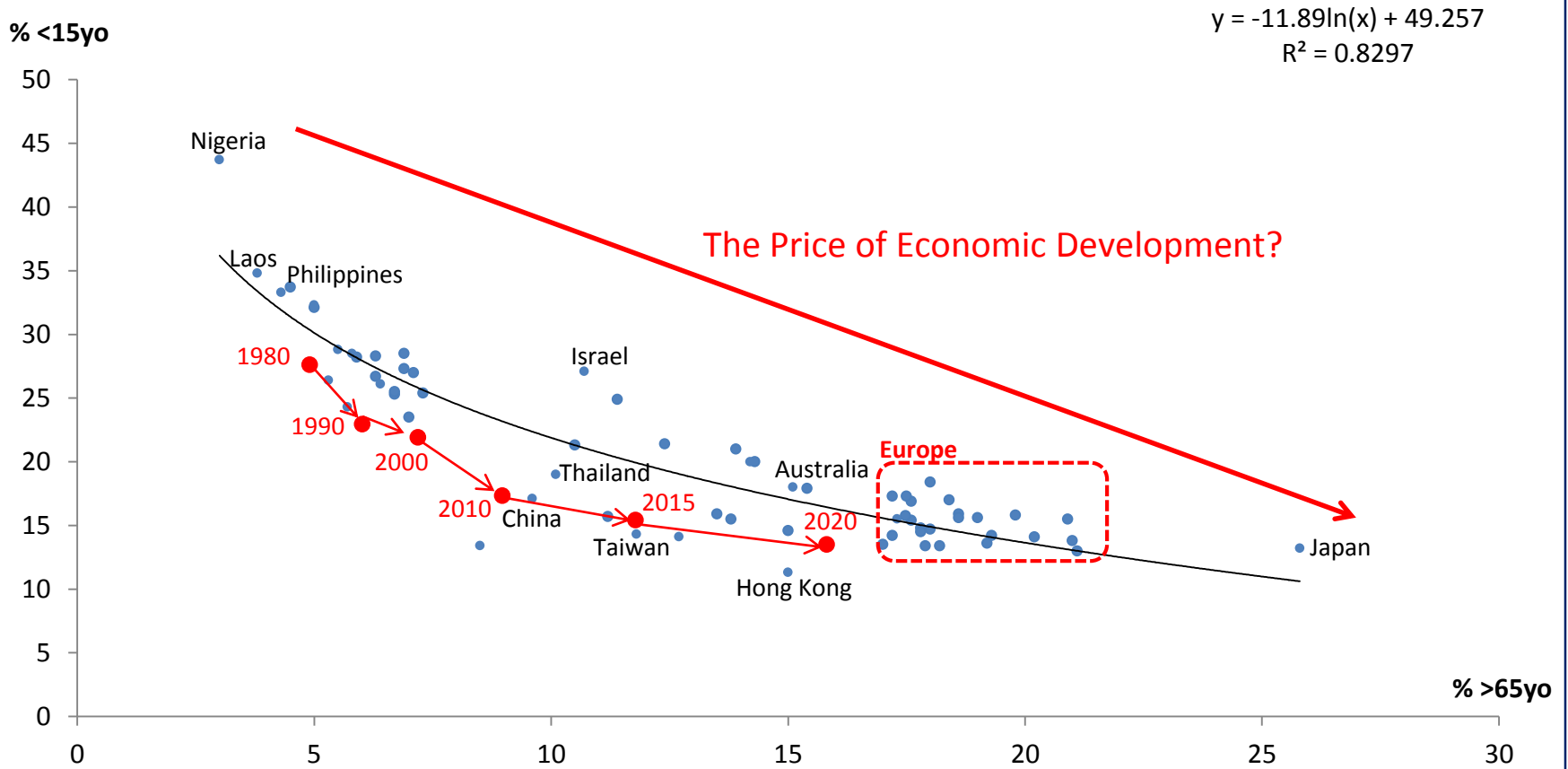
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Longer Term Challenges

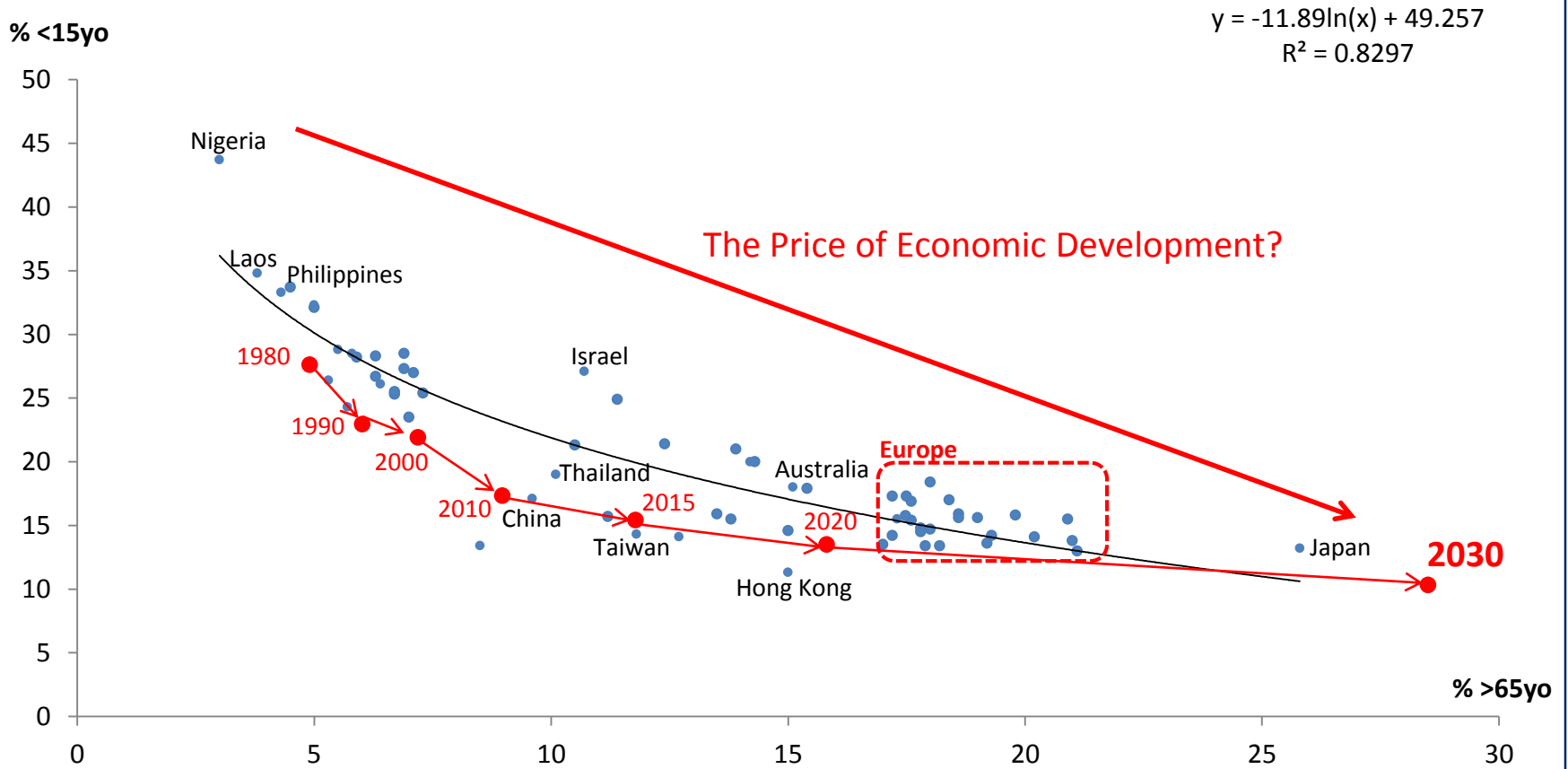
Singapore's Demographics Path



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Longer Term Challenges

Singapore's Demographics Path



Source: United Nations World Population Prospects, UOB Estimates

“S'pore unlikely to go Scandinavian way to up fertility rate”

"The Scandinavians have a lot of kids, and they are content to have three-quarters of a career. They work hard but they don't work 12 or 18 hours a day. They finish work at 3pm or 4pm, they fetch their kids from childcare, go home and spend time with them."



“that it was possible only if the country was willing to accept a higher goods and services tax of **20 per cent** to fund the policies.”

When it comes to rolling out generous goodies to try and boost the fertility rate here, Singapore is unlikely to go the way of the Scandinavian countries that have spent heavily over the years and succeeded in having more babies.

Question & Answer Session

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About The Speaker

Francis is an economist with United Overseas Bank's Global Economics & Markets Research team and covers macroeconomic research on Asia. He provides regular economics commentary on TV and is frequently quoted in the media. Before joining UOB in 2012, Francis was an investment strategist at Phillip Capital where he used macroeconomics, business cycle theories, market timing and technical analyses to develop a systematic top-down investment approach for discretionary portfolios. Prior to that, Francis served as an Investment Manager in the wealth management arm of the Royal Bank of Scotland. His career also included stints as an economist at the Ministry of Trade and Industry and the Singapore Tourism Board, where he specialised in Tourism Economics.

Francis obtained the Bachelor of Social Science (Honours) in Economics in 2002 and the Master of Social Science in Applied Economics in 2003 from the National University of Singapore. Continuing his academic interests in the field of applied economics, Francis most recently contributed a chapter titled "Tourism Demand in Singapore: Estimating Neighbourhood Effects" in the Handbook of Tourism Economics published in 2013, and had just published a paper titled "Growth and Environmental Quality in Singapore: Is There Any Trade-off?" in the "Ecological Indicators" journal in 2014.