



Business Council *of*
British Columbia

Macroeconomic Musings in a Slow-Growth World

presented to
MacKay CEO Breakfast

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What Do Business Leaders Think of Economists?

“Any company
that has an economist
on staff certainly has
one employee too many”

Warren Buffett

Topics Addressed

- ▶ Economic setting and near-term outlook
 - » Global picture
 - » US
 - » Canada

- ▶ What is the future for economic growth? Competing scenarios:
 - » Secular stagnation
 - » Structural pessimism (demographics and more)
 - » Emerging markets ride to the rescue
 - » Techno-managerial optimism

Today's World Economy

- ▶ *Weak overall global economic growth*
- ▶ *Extraordinarily low interest rates* in the advanced economies
- ▶ *Depressed levels of investment*
- ▶ *China* is decelerating...plus weaker growth in other emerging economies
- ▶ *Key commodity prices have fallen* since 2011 (oil, coal, natural gas, etc.)

Some "macro" risks for 2015-16...

- ▶ Eurozone economic, banking, political and sovereign debt woes
- ▶ China's glide path to slower growth path
- ▶ Geopolitical hot spots – Iraq/Syria, Ukraine, etc.



Global Economic Forecast

(% change in real GDP)

	2014	2015	2016	2017
World*	3.3	3.3	3.6	3.6
US	2.4	2.7	3.0	2.8
Japan	-0.1	0.4	1.5	1.6
Euro area	0.9	1.2	1.3	1.8
China	7.4	6.9	6.8	6.5
Canada	2.4	1.9	2.5	2.0

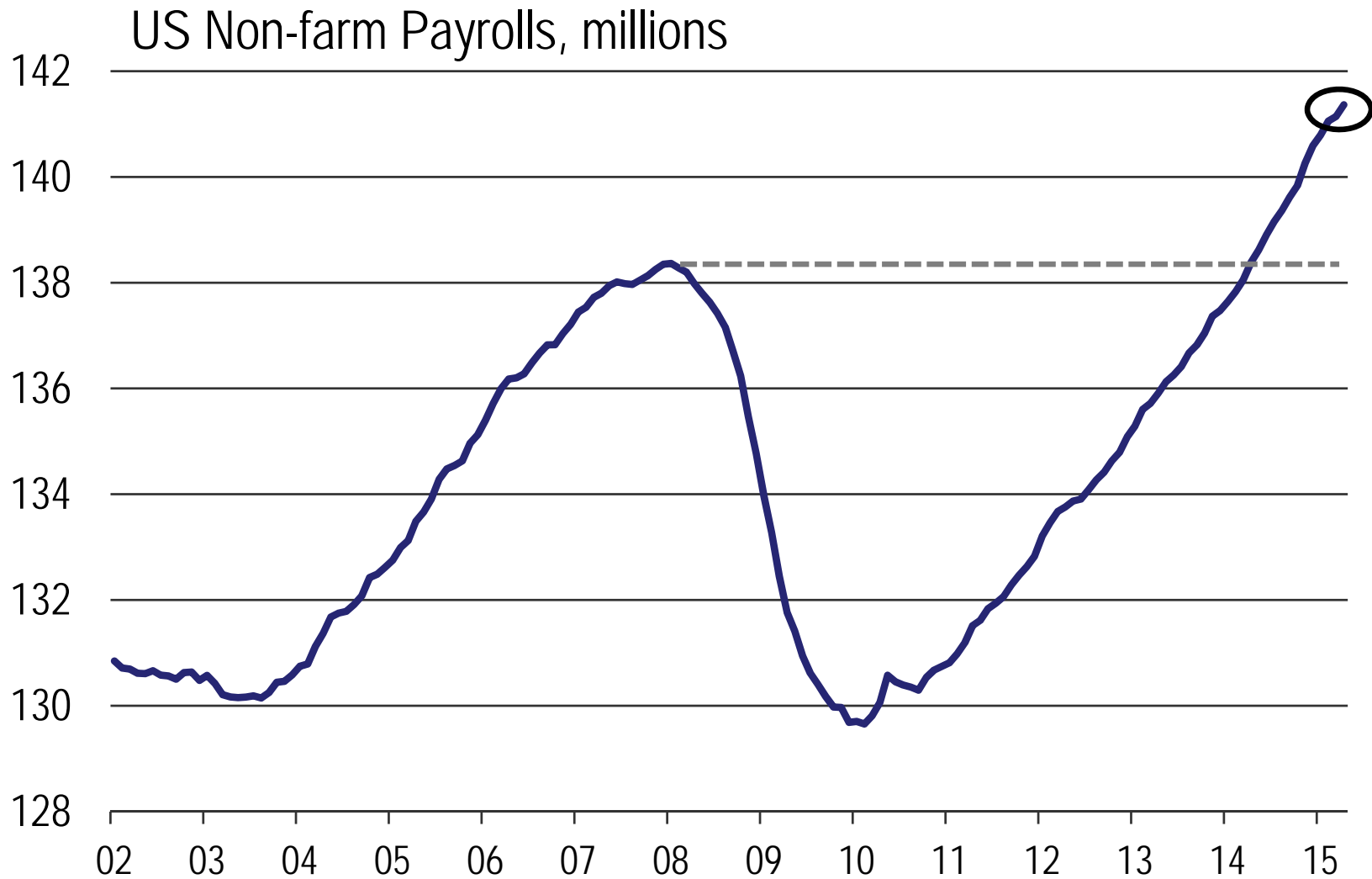
Tracking America's Economic Expansion

- ▶ Economy grew > 4% (annualized real GDP) over last 9 months of 2014, slowed to 2.6% in Q4...and contracted in Q1 2015
 - » 61 months of job gains, ~3 million jobs created last year
 - » consumption trending higher, but bumps along the way
 - » some household balance sheet repair since 2009
 - » housing starts gradually climbing, exceeded 1 million in 2014
 - » public sector 'fiscal drag' is diminishing
 - » lower oil prices are a plus for the US economy

- ▶ US Federal Reserve's policy interest rate is expected to edge up (from zero) by H2 2015 and over the course of 2016



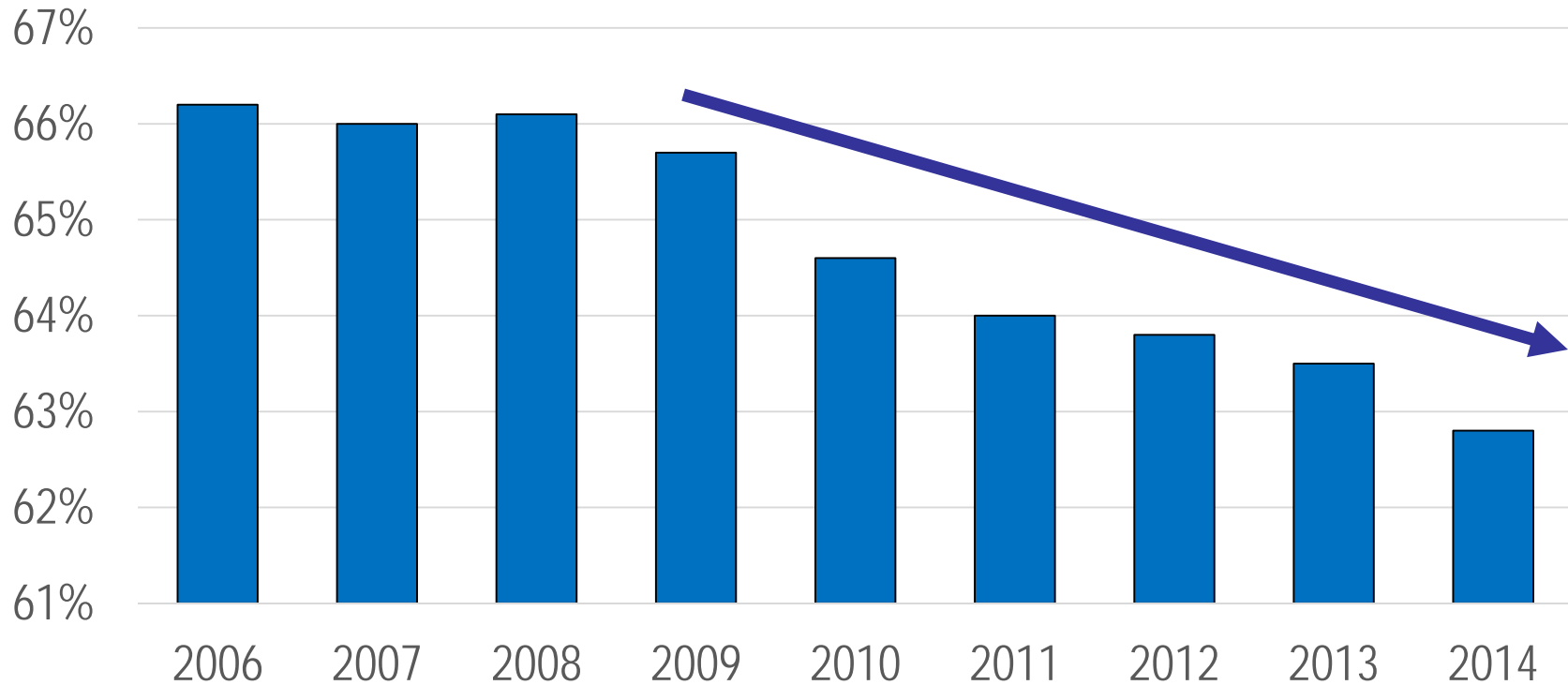
US Employment Rebounding





...But Labor Force Participation Has Fallen

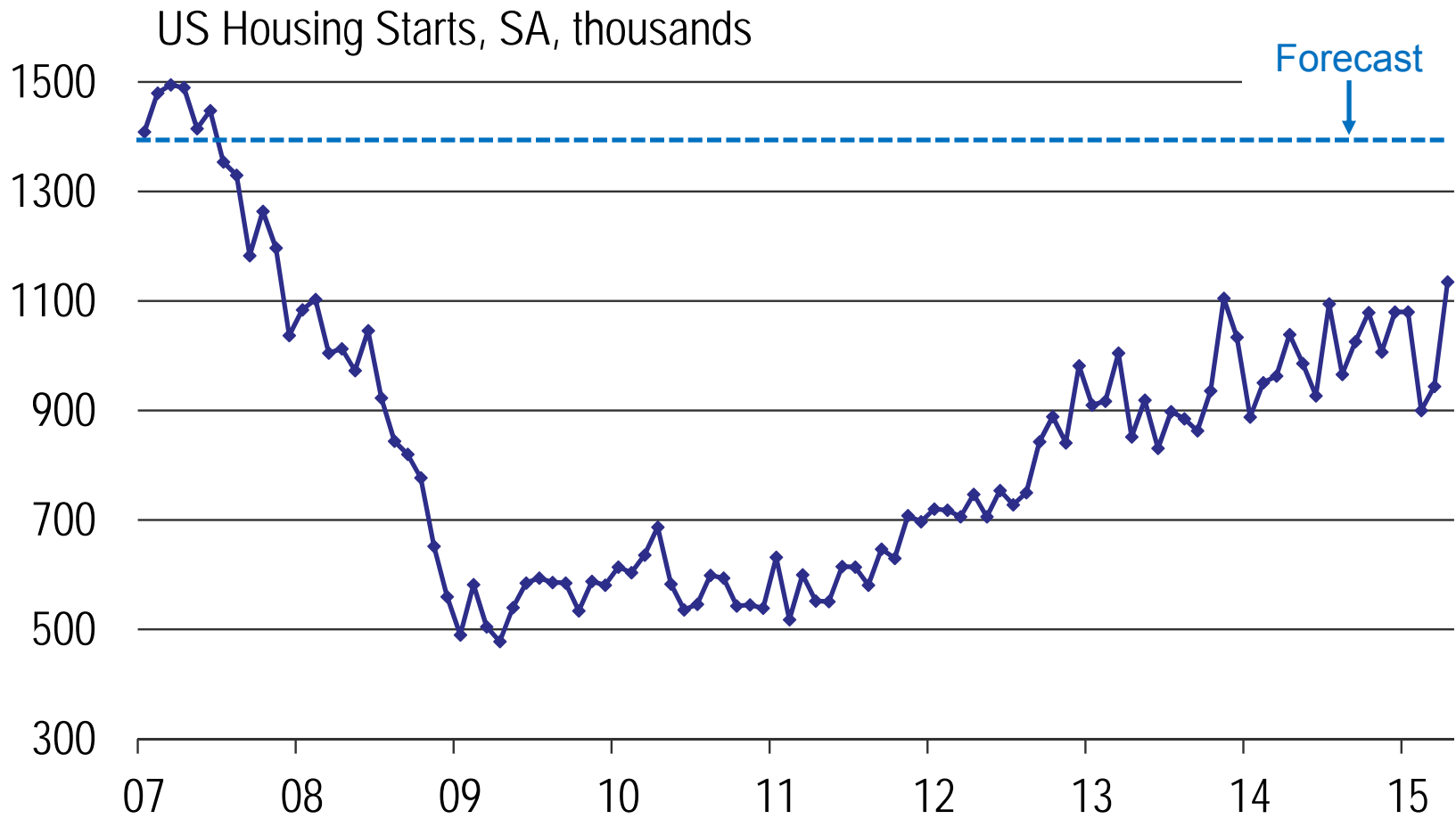
(percentage of working-age Americans in the labor force)



- ▶ The Federal Reserve estimates that $\frac{3}{4}$ of the decline in labor force participation is permanent/structural and won't be reversed with continued economic expansion.



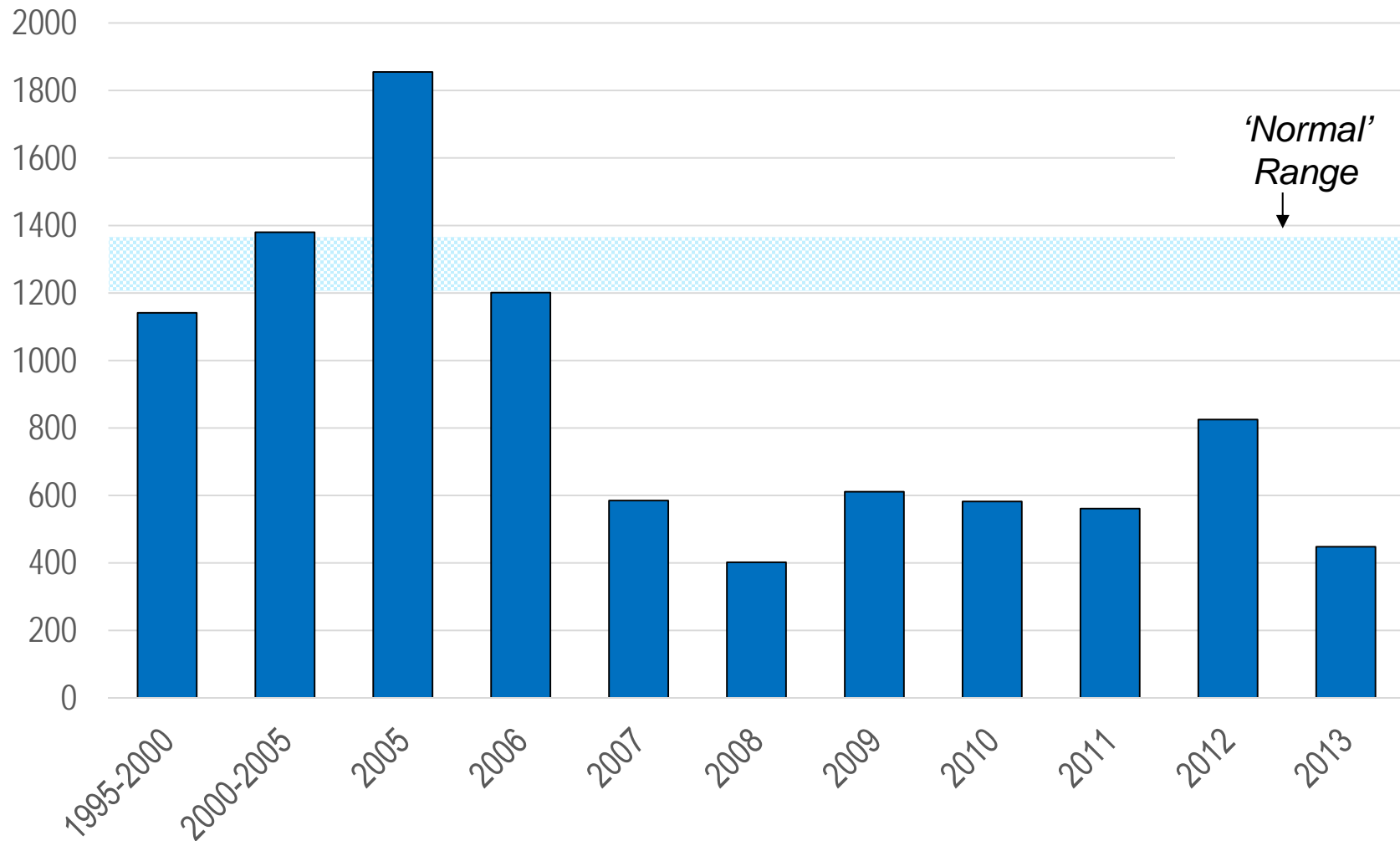
US Housing Starts Edging Higher



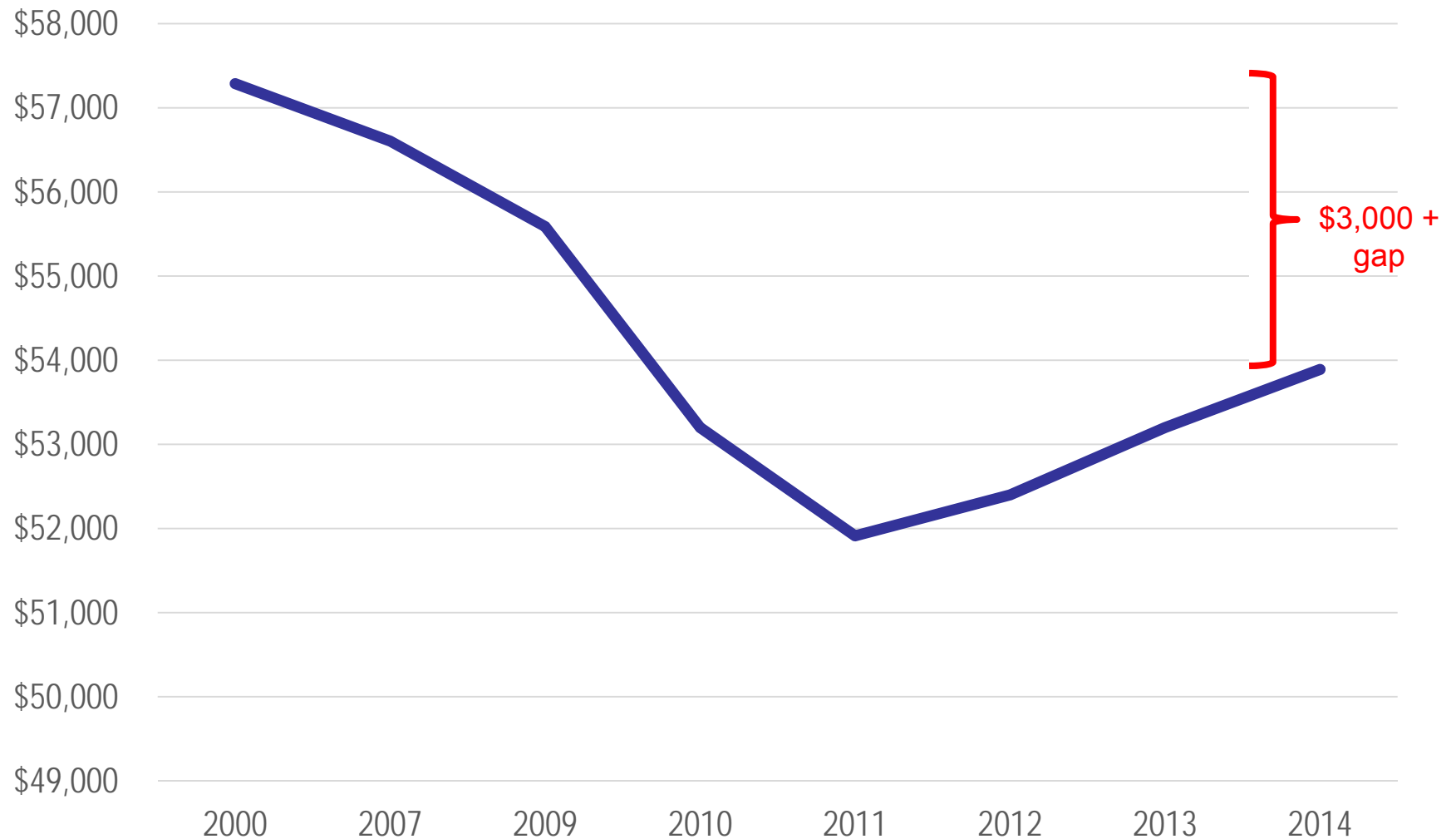


Unusual Weakness in US Household Formation

(*annual growth, # of households, 000s*)

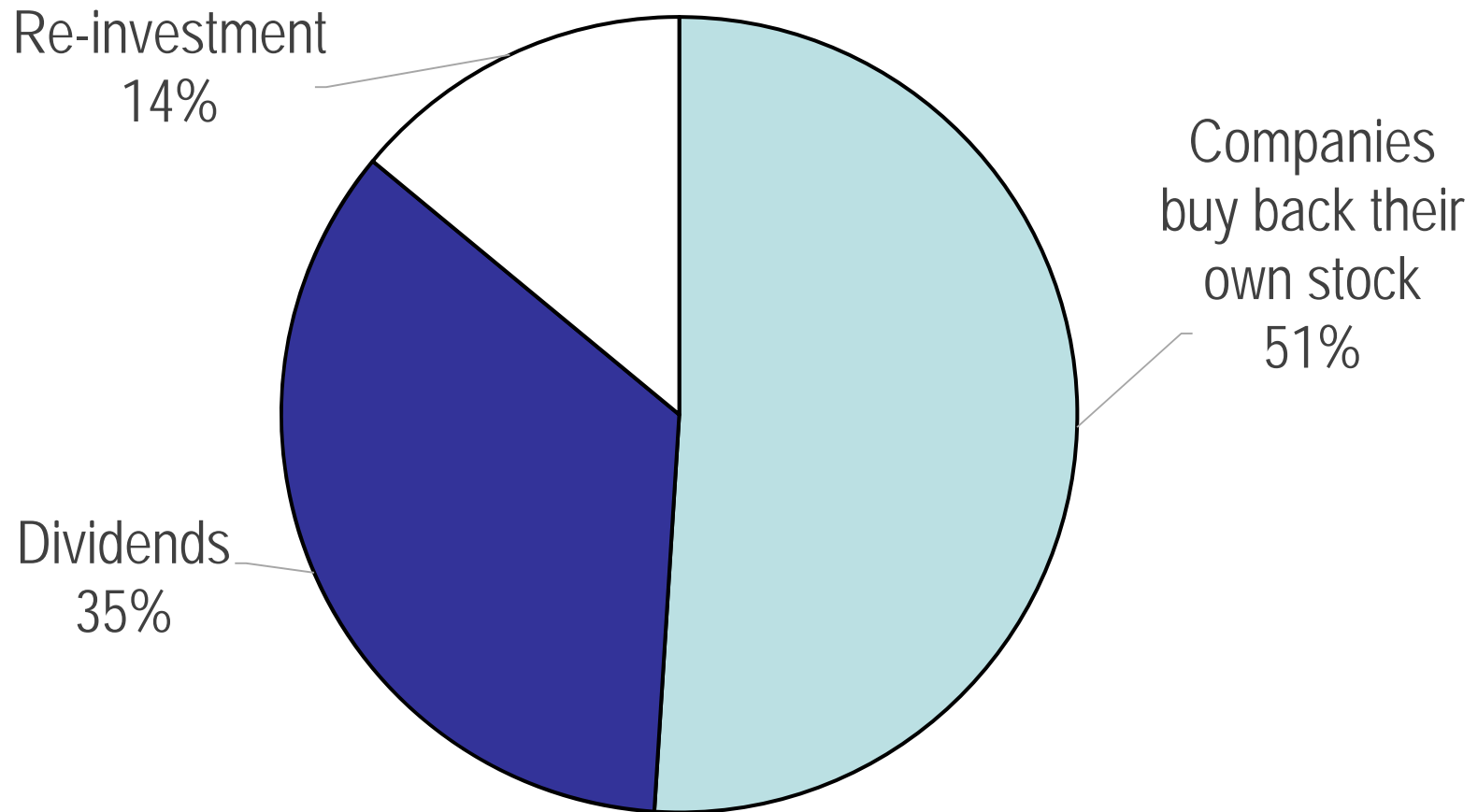


Median US Household Income (adjusted for inflation)





Disposition of the Cumulative Profits of US S&P Companies*, 2004-2013



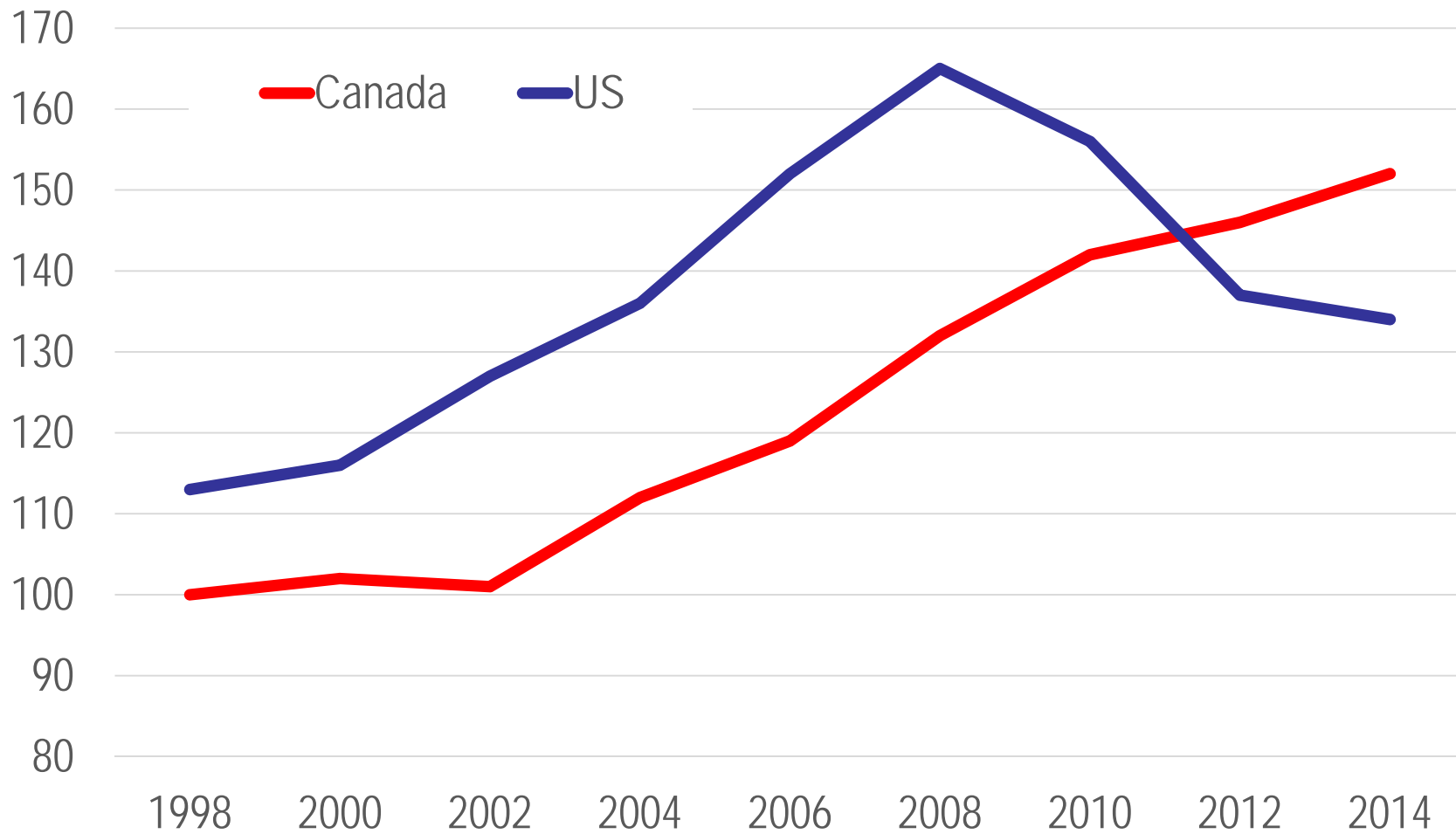
Canada's "Lopsided" Economy

- ▶ Consumer spending has been running *above its long-term average* as % of GDP – while non-residential investment and export growth have been sluggish
- ▶ Household debt/disposable income ratio = *record high 163%*
- ▶ Residential investment as % of GDP is tracking *above the long-term average* (7% now, versus 5.8% avg)
- ▶ Ratios of housing prices to i) incomes and ii) rents at or near *all time highs* in most urban areas
- ▶ The above observations all apply to British Columbia...

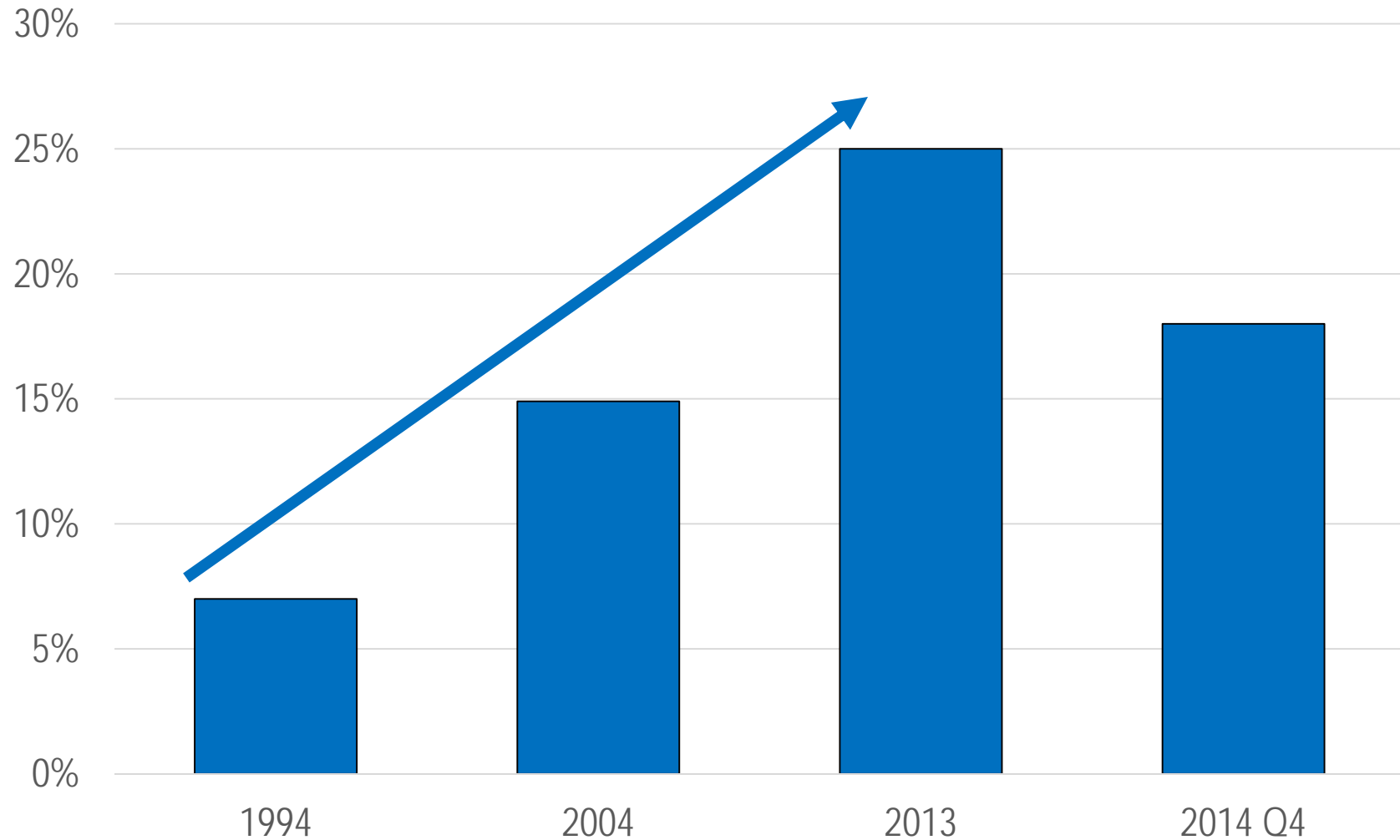


Aggregate Debt/Income Ratio, US and Canada

(household credit market debt as % of income)



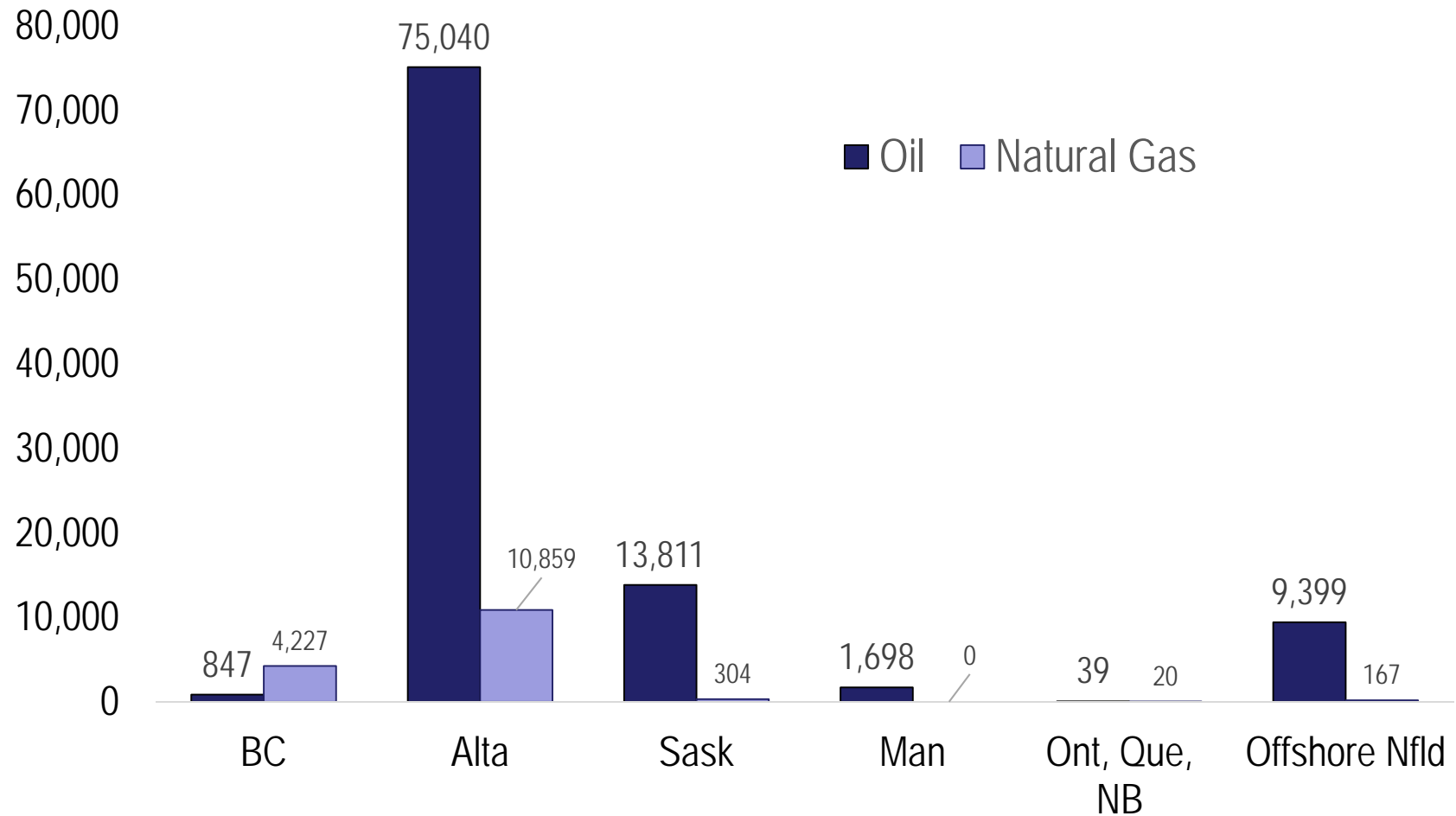
Energy's Place in Canada's Export Mix*



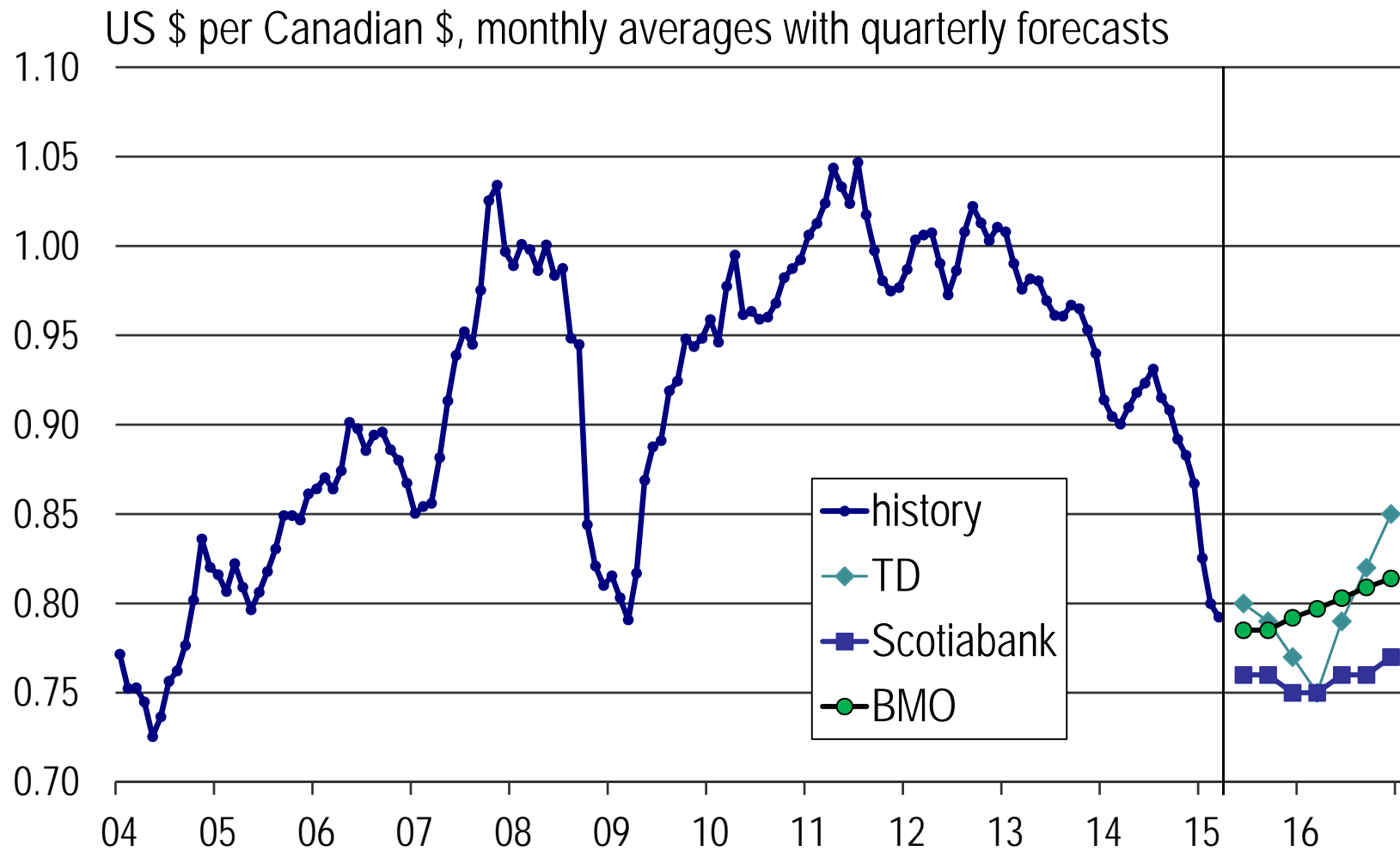
Source: CIBC World Markets. *Merchandise exports only; excludes services. Q4 2014 figure is an estimate

Oil and Gas Production Across the Provinces

Value of Producers' Sales 2013, millions \$

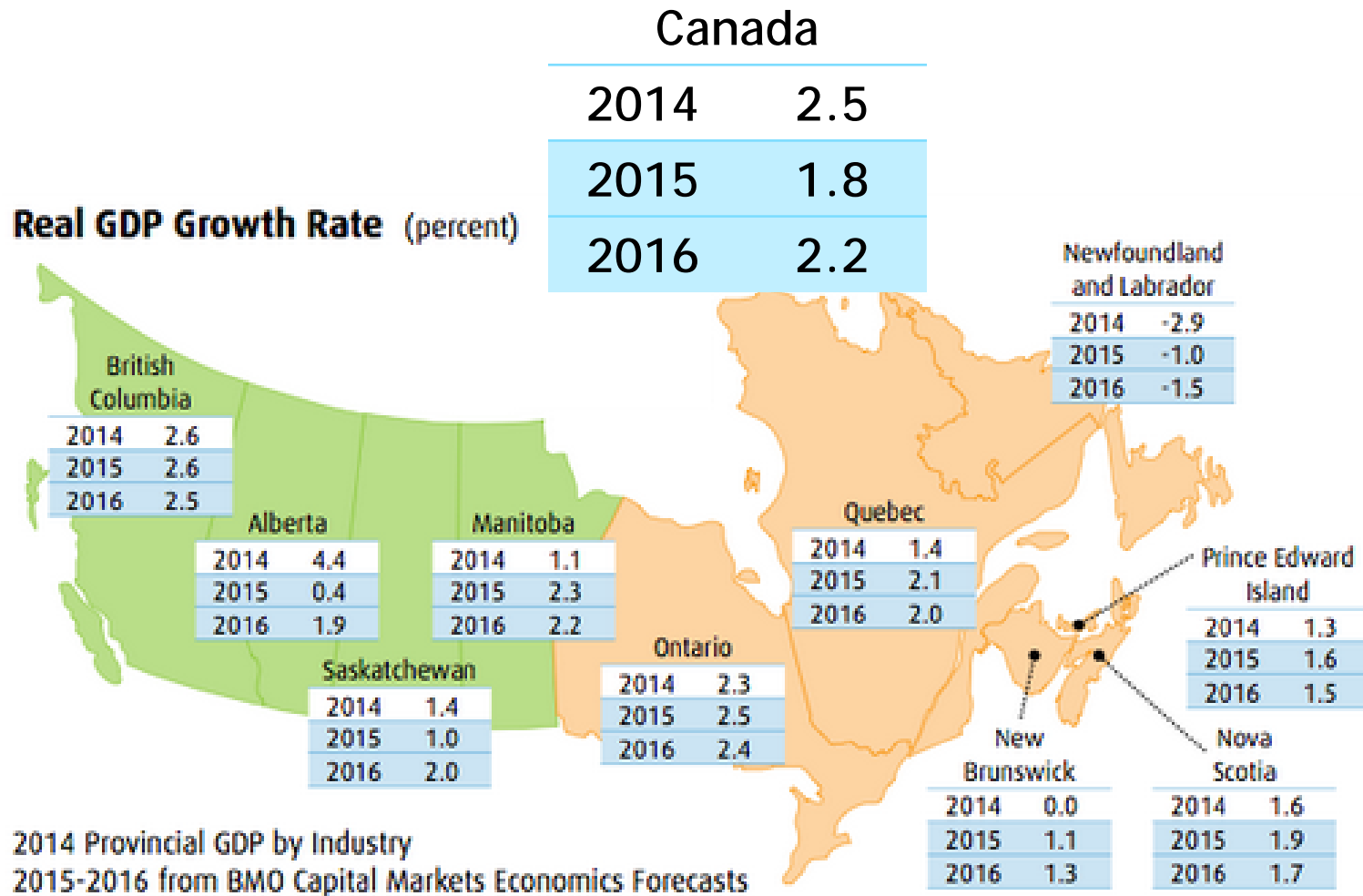


Exchange Rate Down Sharply





Canadian Economic Outlook: The Tables Turn for the Provinces

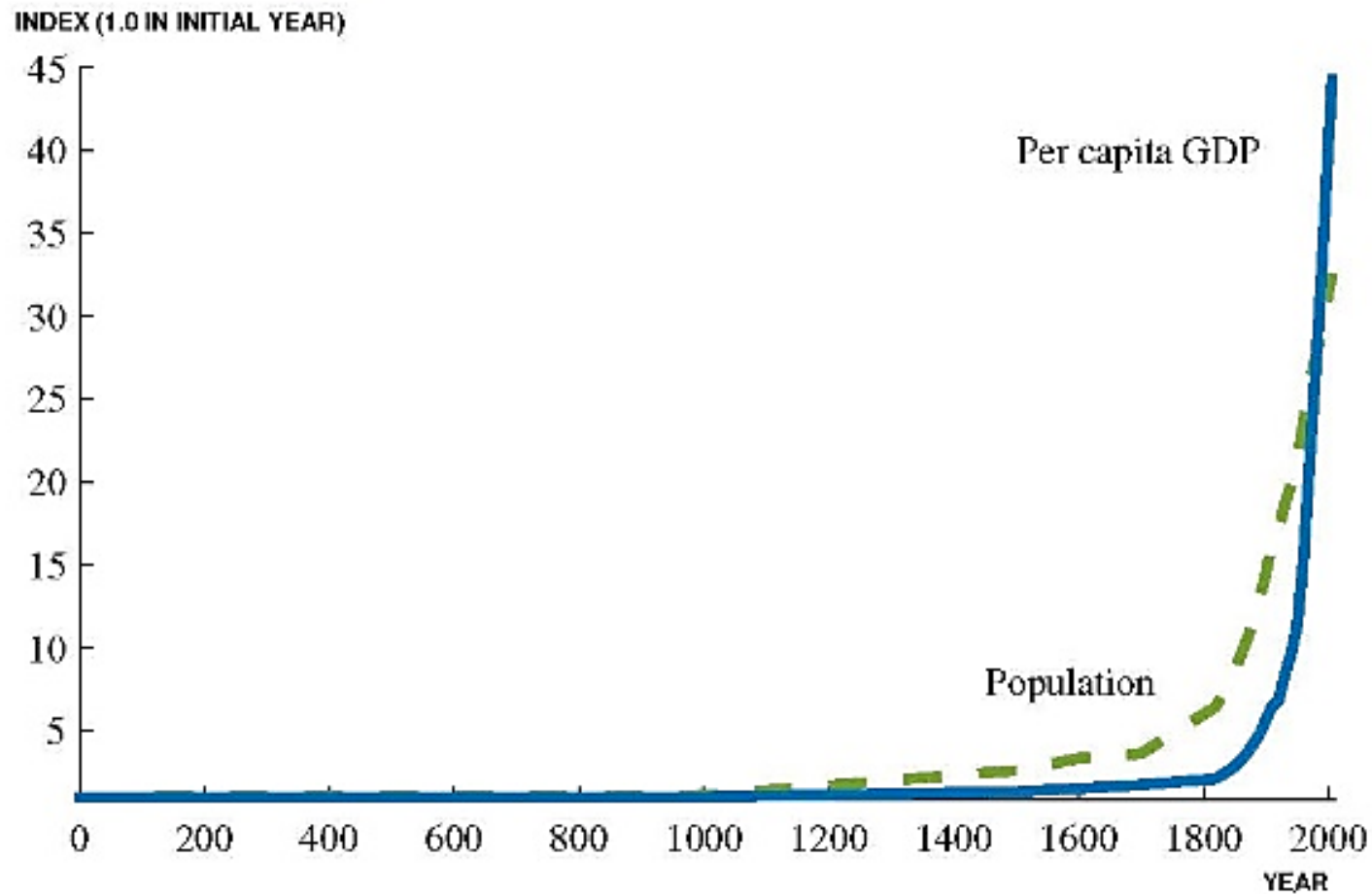




Prospects for Economic Growth Over the Balance of the Decade and Beyond

- » Sub-par economic recovery from 2008-09 financial crisis and 6 years of near-zero short-term interest rates have fed a gloomier outlook
- » Four scenarios:
 - » *Secular stagnation thesis* (protracted deficiency of demand in major advanced countries, savings > investment)
 - » *Structural pessimism* (unfavourable demographics, high debt levels, growing inequality, slowing innovation act to depress potential GDP growth)
 - » *Emerging markets to the rescue* (rapid growth in emerging markets propels the global economy forward)
 - » *Techno-managerial optimism* (technological innovation, combined with better management and smart public policy, promise a future of robust growth in GDP and living standards; epitomized by Eric Brynjolfsson and Andrew McAfee, *The Second Machine Age*)

Economic Growth Over the Very Long Run



Note: Data are from Maddison (2008) for the "West," i.e. Western Europe plus the United States. A similar pattern holds using the "world" numbers from Maddison.

The Arithmetic of Economic Growth

GDP per capita =

potential labour force/population x
employed persons/potential labour force x
hours worked/employed person x
productivity

Productivity = Real GDP/hours worked

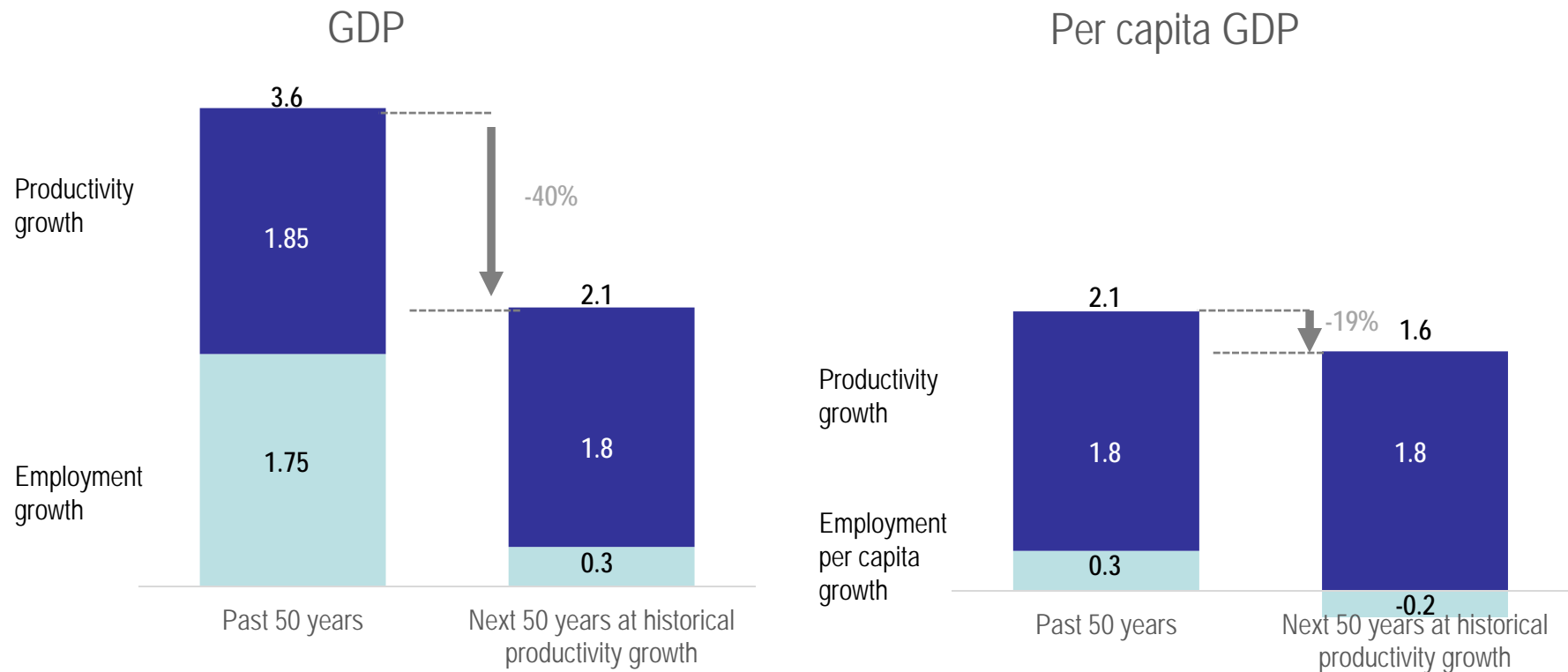
Productivity is affected by...

- physical capital (machinery, equipment, structures, infrastructure)
- workforce skills (education and other measures of human capital)
- technology and pace of technical innovation
- quality of institutions (education system, justice system, property rights, etc.)



History and Outlook for Global Economic Growth

(G20* economies, compound annual growth, %)



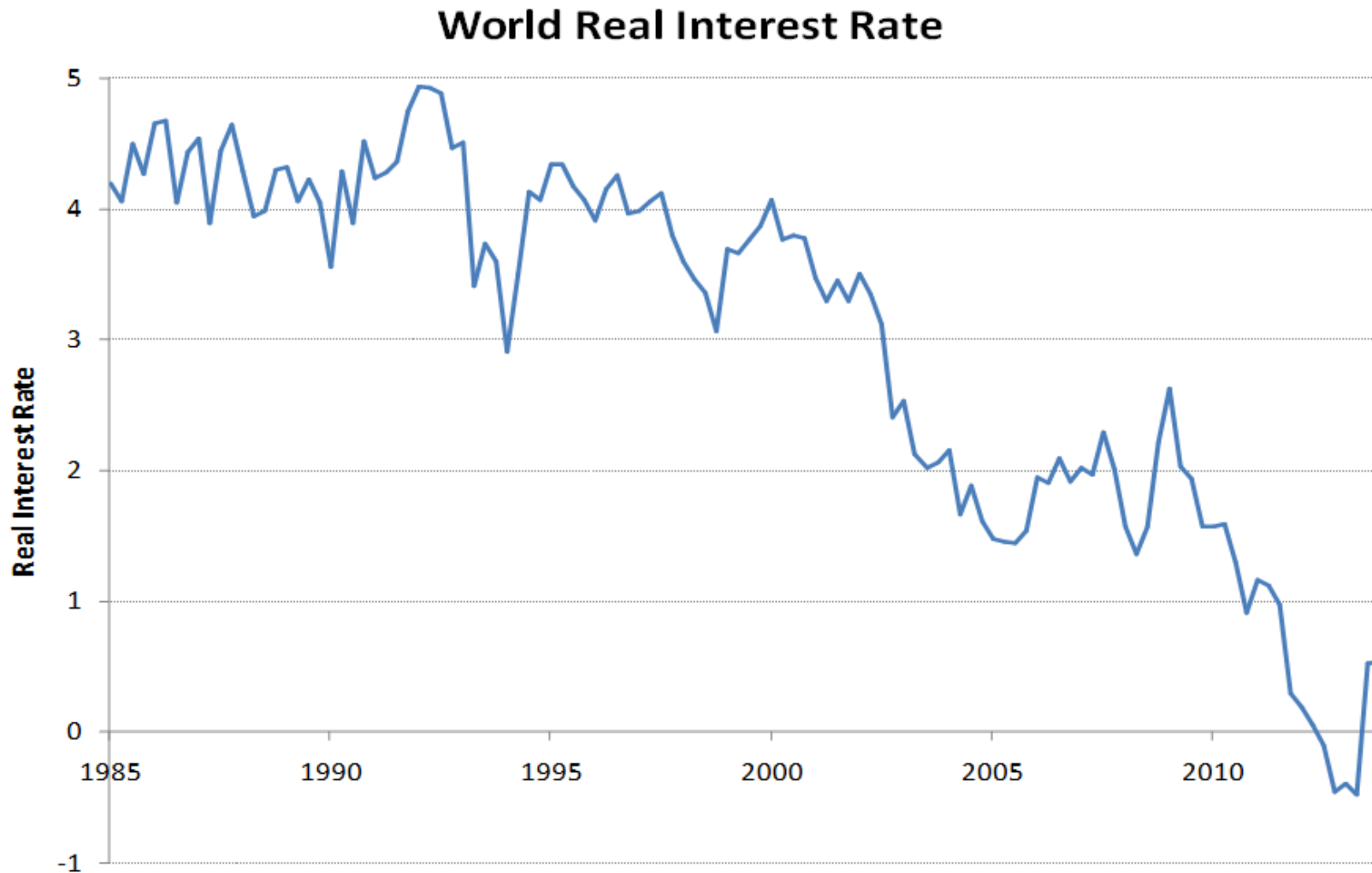
- Assuming past rates of productivity growth continue, world GDP growth will slow by ~40% and per capita GDP by ~20%, compared to the preceding 50 years.

*G20 minus the EU but with Nigeria added.

1. Secular Stagnation Thesis

- ▶ Idea developed in the 1930s and recently revived to explain a period of sluggish GDP growth with low inflation and high levels of debt. Risk of a slow-growth “trap”
- ▶ Analytical focus is on persistent weak demand. Absent offsetting equilibrating forces, this reduces not just *current* GDP, but also *potential output growth* via negative effects on labour supply/skills and by dampening productive (non-residential) investment
- ▶ Monetary policy cannot stimulate demand sufficiently to exit from stagnation...with central banks’ policy interest rates pinned at/near zero, it’s impossible to lower real interest rates so that “desired investment” will match “desired saving”
- ▶ One suggested remedy is fiscal stimulus, particularly via stepped-up public investment in infrastructure. But not all countries have fiscal space to act
- ▶ Secular stagnation is a demand-side story, framed around short/medium-term. It differs from economic growth narratives that concentrate on supply side factors affecting growth potential

World Real Interest Rate



Source: Mervyn King "Measuring the World Real Interest Rate", via <http://www.voxeu.org/article/larry-summers-secular-stagnation>.



More Economies Awash in Debt

(total debt *ex-financial sector*, 2013, % of GDP)

<i>World</i>	212%
<i>All Developed Economies</i>	272%
Japan	411%
Sweden	293%
Canada	284%
UK	276%
US	264%
Eurozone	257%

<i>All Emerging Markets</i>	151%
Hungary	223%
China	217%
Poland	137%
South Africa	127%
Brazil	121%
India	120%
Turkey	105%
Mexico	77%
Indonesia	65%

- ▶ Total global debt, ex-financial sector, rose from 162% of GDP in 2001 to 173% in 2007 – and then to 212% by 2013



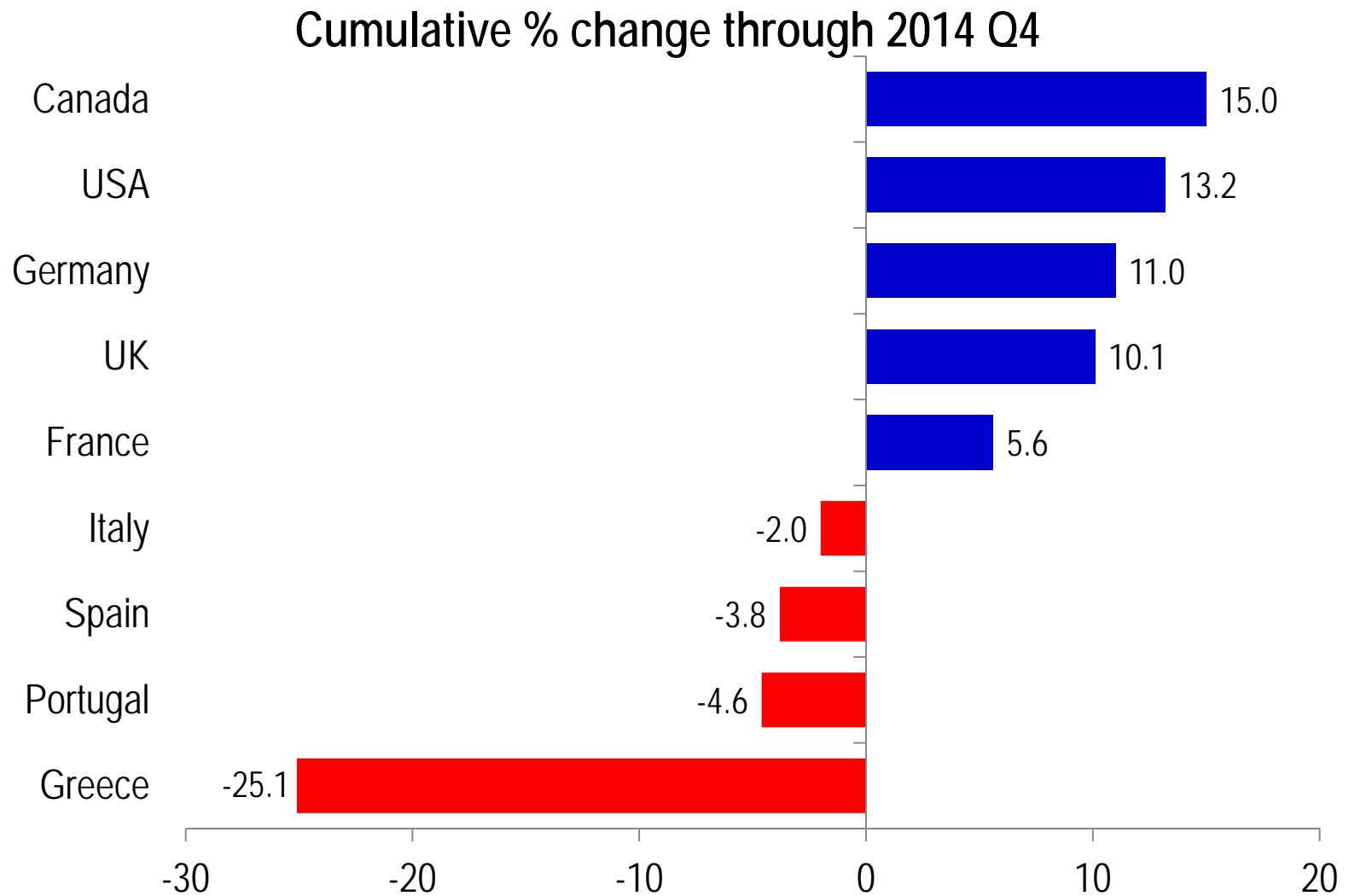
Secular Stagnation in the OECD: Conclusions from a Recent Analytical Assessment

- ▶ “Signs of economic stagnation differ across the main OECD areas...”
- ▶ “Secular stagnation characteristics and risks...are especially evident in the euro area and, to a lesser extent, Japan.”
- ▶ In the US and UK, “risks of secular stagnation seem far less important.”
 - » Canada was not examined, but falls into the US/UK camp
- ▶ “In principle, more monetary and fiscal stimulus should be accompanied by structural reforms that boost potential growth and neutral [interest] rates.”

Source: L. Rawdanowicz et al, “Secular Stagnation: Evidence and Implications for Economic Policy,”
OECD Economics Department Working Papers, No. 1169, 2014.



Total Change in Real GDP Since the 2008-09 Recession/Financial Crisis*



Source: Finance Canada; Eurostat.

* the trough or low point of recession varies across the countries shown.

2. Structural Pessimism: The Robert Gordon Vision

- ▶ A well-known scholar whose work focuses on US economic growth. He has been a noted skeptic on US productivity since the late 1970s – today he is cautious about the prospects for *future* productivity and real income gains

- ▶ His key baseline starting point is: real GDP per capita in the US rose at an average annual rate of 2.0% from 1891 to 2007

- ▶ In recent work, Gordon predicts that, over the next 30+ years, economic growth in America will be *significantly lower*, averaging on an annual basis:
 - » +0.9% for real GDP per capita – i.e., ~ half the growth rate over 1891-2007;
 - » +1.2% for labour productivity;
 - » +0.4% for real income per capita “for the bottom 99% of the population”; and,
 - » +0.2% for real disposable income for the “bottom 99%”

Source: Gordon, “The Demise of US Economic Growth: Restatement, Rebuttal, Reflections,” National Bureau of Economic Research, Working Paper #19895, February 2014; and “Revisiting US Productivity Growth over the Past Century with a View of the Future,” in D. Prasada Roa and Bart van Ark, eds., World Economic Performance: Past, Present and Future, Edward Elgar, 2013.

Structural Pessimism: Explanations

- ▶ Gordon points to four “headwinds” that, together, are expected to exert persistent downward pressure on future growth in productivity and real incomes in the US:
 1. *Aging* and related demographic shifts
 2. *Educational attainment plateaus*, with the US losing (more) ground in the world league tables on high school/college completion rates and indicators of literacy/numeracy
 3. *Inequality continues to increase*, dampening real income gains for most households, and re-directing overall spending toward the most affluent 10% and 1% of the population
 4. *A rising public sector debt burden* relative to GDP necessitates significantly higher taxes, which lowers potential GDP growth. Reduced public sector outlays on education, research, infrastructure, etc. compound the problem

- ▶ This analysis is also relevant to other OECD economies

- ▶ The US may be in a worse situation on headwinds 2 and 3 above compared to some other economies...but it is much better positioned on headwind 1



Growth in the Size of the Workforce (% change over the period indicated)

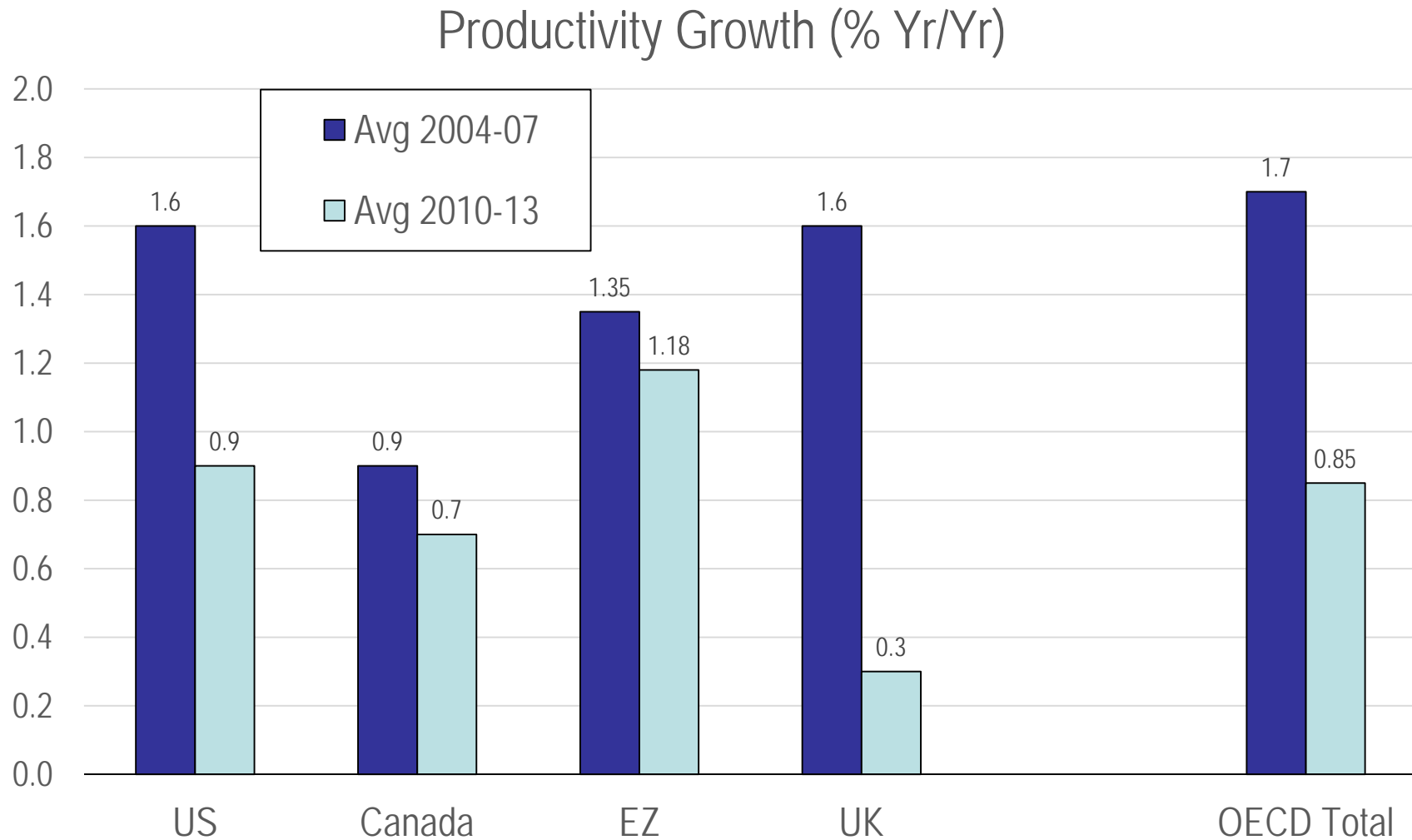
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	1990-2013	2013-2050
Japan	1.0	-33.7
US	21.2	18.0
UK	11.3	1.8
Germany	8.1	-34.3
China	18.9	-10.5

Could Innovation Save the Day?

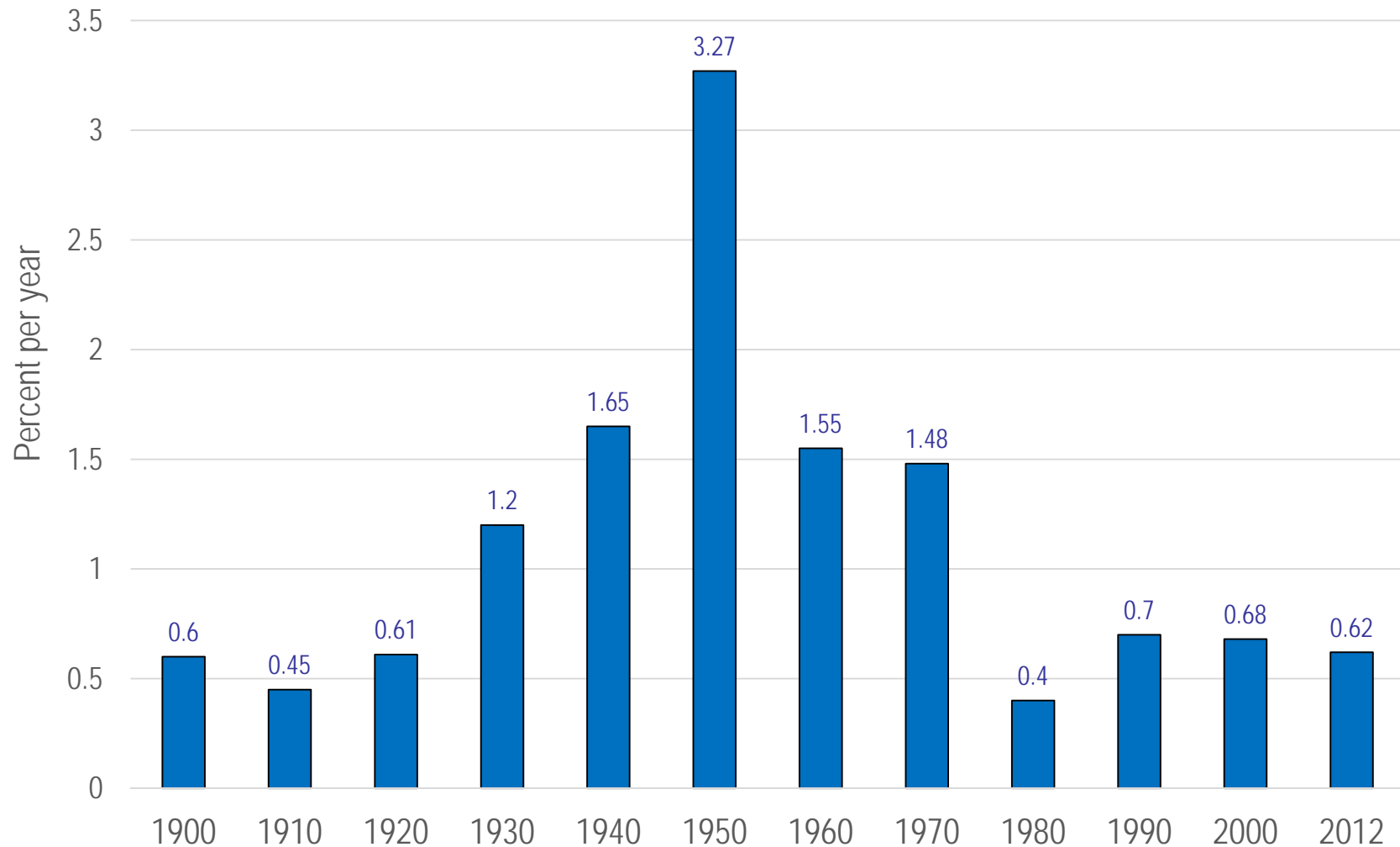
- ▶ Gordon is skeptical that accelerating innovation can offset the effects of the four headwinds
- ▶ He finds that the impact of innovation on US economic growth, via productivity increases, has exhibited *a long-term downward trend* since the early 1970s
 - in the 40 years ending in 1972, US labour productivity *grew almost 1% per year faster* than during the subsequent 40 years
- ▶ Gordon believes previous cycles of technological innovation delivered greater advances in productivity, real incomes and living standards than the innovations associated with the “third industrial revolution” in the 1990s and 2000s
- ▶ *Compare:* railways, automobiles, national highway system, electricity, in-door plumbing, telephones, air conditioning, air travel, urban skyscrapers, electric typewriters, household appliances, and advances in infectious diseases, public health and other fields of medicine *with...* personal computing, the internet, e-mail, mobile phones, movie and music streaming, multiplying social media platforms, ATMs, the bio-tech industry, robots, etc.

Slower Productivity Growth Across the OECD





Annual Growth of US Total Factor Productivity, During Ten-Year Periods Preceding the Years Shown

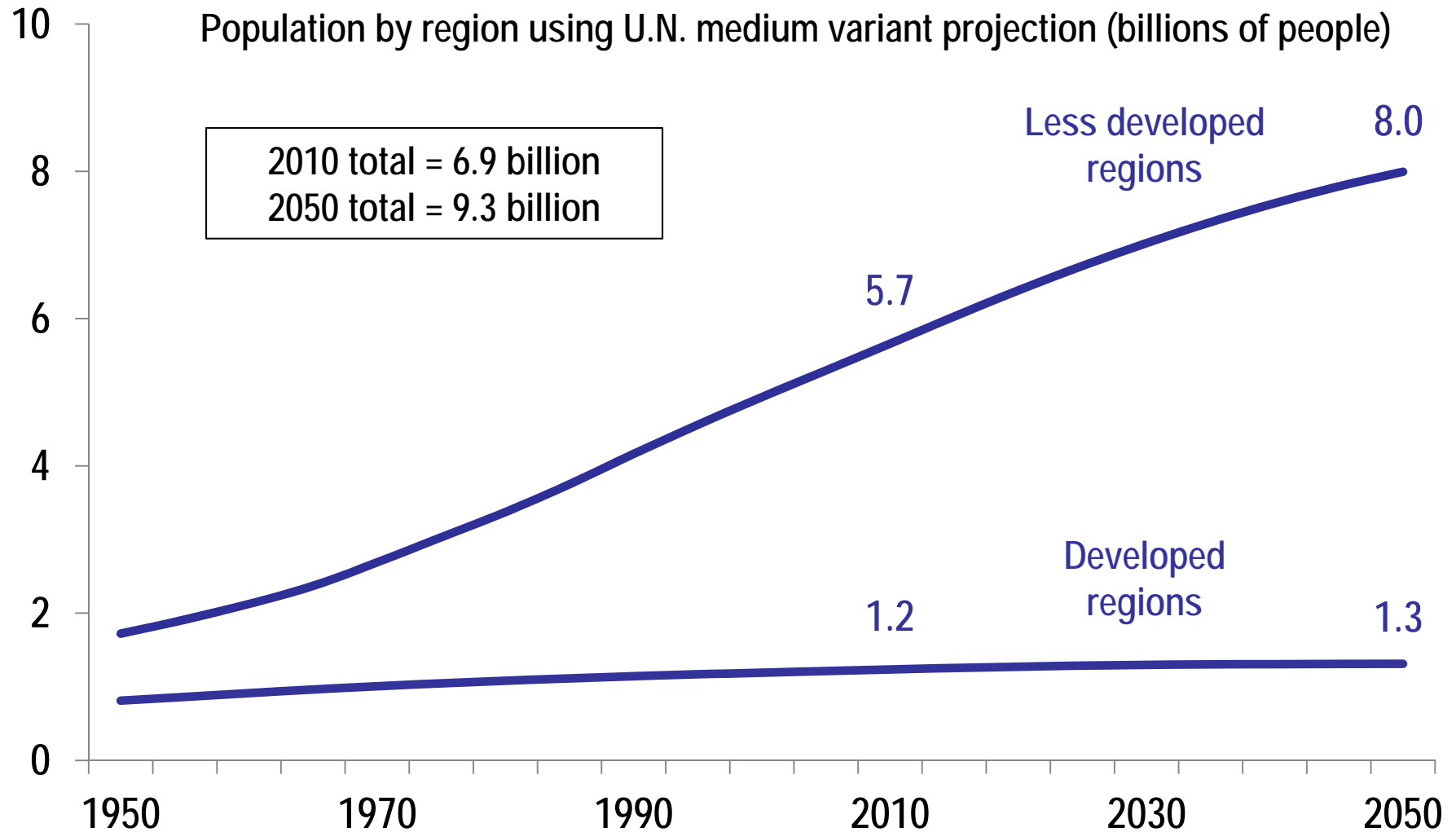


3. Emerging Markets to the Rescue

"A new world order is taking shape before our eyes, and it is one that includes accelerated convergence between the old Western economic powers and the emerging world's new players"

Mohammed El-Erian,
former Co-Chief Executive and Chief Investment Officer,
PIMCO, January 2012.

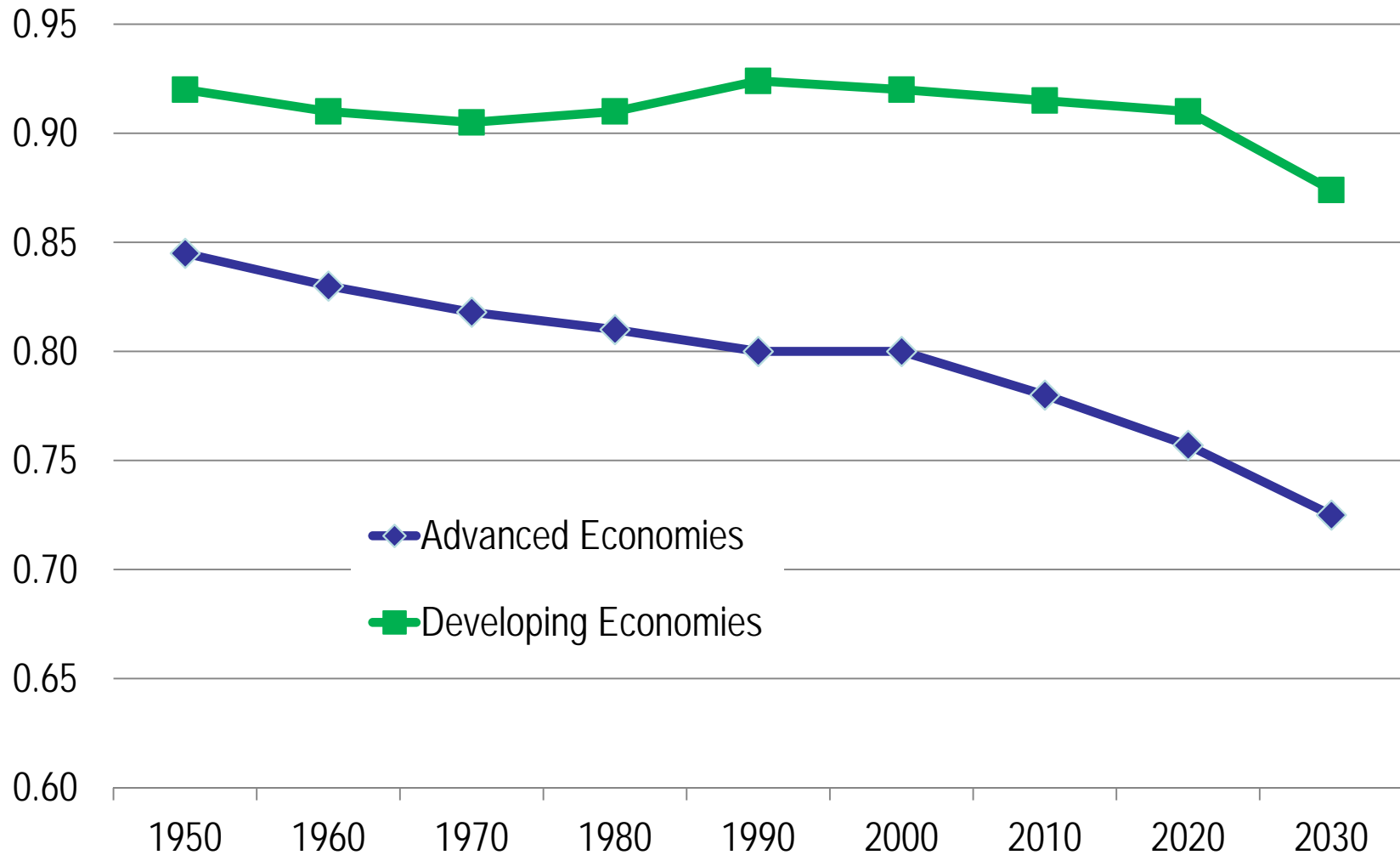
World Population Projections





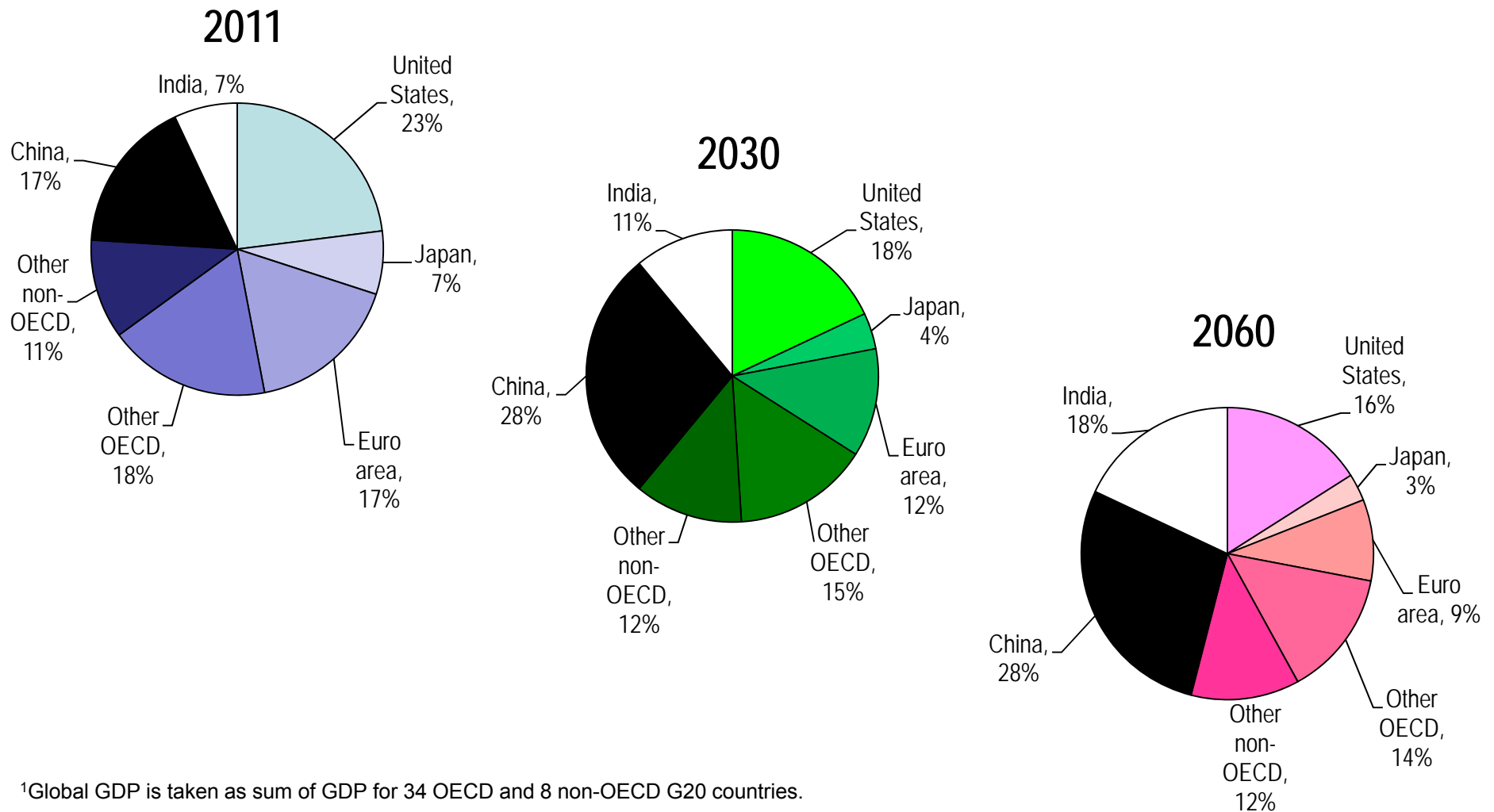
Working Age to Total Population Ratio

(ratio of population aged 16-64 to the total adult population)





Big Changes in the Composition of Global Output by Region¹



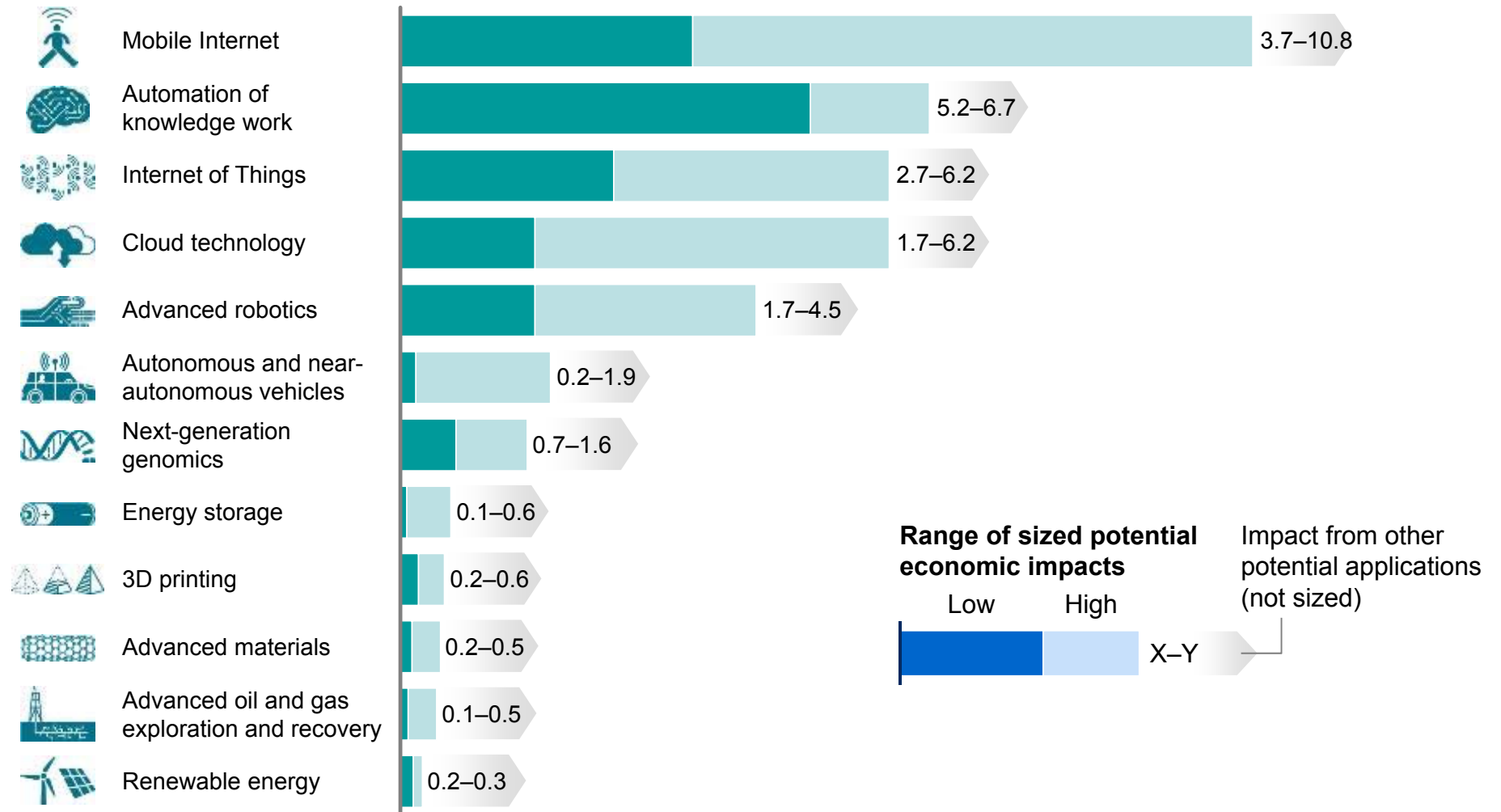
¹Global GDP is taken as sum of GDP for 34 OECD and 8 non-OECD G20 countries.

4. Techno-Managerial Optimism

- ▶ Promoted by technology gurus, Silicon Valley boosters, many consulting firms (notably McKinsey), and some business school academics
- ▶ Emphasizes the power of technological innovation to drive new wealth creation, employment, and economic activity
- ▶ The historical evidence broadly supports the argument that technological innovation has positive effects on living standards, productivity, and real incomes
- ▶ When asked about lagging productivity techno-optimists respond by saying that:
 - » the data on GDP and productivity are flawed/inadequate;
 - » we are at an early stage in the current wave of technological innovation...as time passes, the innovations associated with the “second machine age” will generate large advances in economy-wide productivity
- ▶ Yet...the slowdown in productivity growth across the OECD increasingly looks like a secular trend, not a short-term dip

New Technologies Will Have Enormous Positive Impacts by 2025 (says McKinsey)

\$ trillion, annual





McKinsey's Prescriptions to Boost Productivity and Economic Growth Amid Demographic Headwinds

- ▶ Expand the technological/managerial/knowledge “frontier” via fundamental operational improvements, business innovations, and sophisticated technologies that go beyond current practice/knowledge
- ▶ “Catch up” via the widespread adoption/rapid diffusion of best practices in management, business organization, public policy, use of technology, skills development, etc. to increase productivity
 - » Globally, catch-up accounts for $\frac{3}{4}$ of McKinsey's estimate of future productivity growth potential
- ▶ **A question:** For the world as a whole, productivity can offset the effects of adverse demographics only if it grows *80% faster* than in the preceding 50 years. In the OECD, productivity gains would need to be even greater to fully counter the impact of negative demographics. Is this plausible?

Conclusions

- ▶ The global economy seems to be mired in an extended cycle of sluggish growth – with few policy tools available to improve the situation
- ▶ The advanced economies as a group face a probable future of slower growth in per capita incomes compared to pre-2008 era, in part due to unfavourable demographics
 - » US is better positioned than others – and Canada should benefit
- ▶ Emerging markets will be the main engines of global economic expansion over the medium term, even as China downshifts to a more moderate growth trajectory
- ▶ It is unclear to what extent ongoing technological innovation will influence potential GDP growth for the mature industrial economies, given the long period of generally weak productivity performance