A Transforming “Macro” Environment: Implications for Effective Risk Management

Dr. Kevin Lynch
Vice-Chair BMO Financial Group
and
Former Clerk of the Privy Council and Cabinet Secretary,
Government of Canada

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BMO Financial Group

1. **The global context is shifting** --- over the last 2 years, the world has experienced a sharp spike in global volatility and global risk, with no reason to think either will abate soon --- This brings to the fore the need for a new **“macro” approach** to **risk management**.

Prices

↓  Oil -65%

↓  Loonie -25+%

↓  Real -50%

↑  US $

Economy (2016 Forecasts)

↓ Global

↓ Canada

↓ Brazil

↓ China

↓ U.K.

↓ Russia

↓ Emerging Markets

Environmental Context

↑↑  Terrorism, Insecurity

↑↑  Geopolitical Risk

↓  Trust

↑  Regulatory Uncertainty

Political Context

Canada	Liberal majority
U.S.	Polarizing primaries
UK	Brexit
Brazil	Dilma being impeached

Sources: Bank of Canada, IMF, Edelman Trust Index, IEA (all May 30 2014 to May 30 2015)

2. **The new global risks** --- the new global normal includes a changing **macro risk environment**. These risks are: more systemic; more global; more geopolitical; more interconnected; and more insecurity-related --- in short, more "macro". The WEF's Risk Map highlights this **global risk transformation**.

A Transformation: WEF's "Top 10" Global Macro Risks (2016)

1. Large scale involuntary migrations

2. Extreme weather events

3. Failure of climate change mitigation and adaptation

4. Interstate conflicts

5. Natural disasters

6. Failure of national governance

7. Unemployment, underemployment and social stability

8. Data fraud, information thefts

9. Water crises

10. Illicit trade

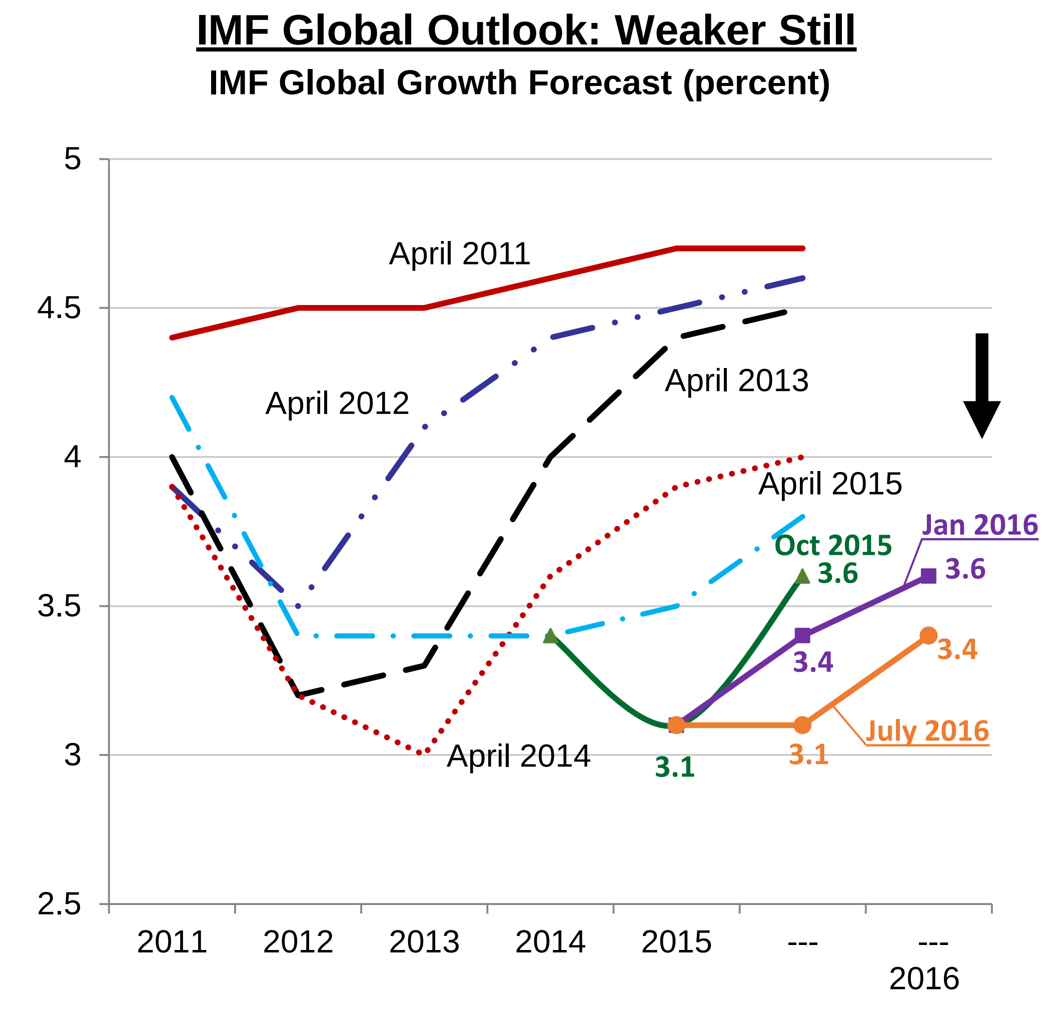
3. This **structural change** in the **“macro” environment** is disruptive --- it is impacting traditional companies, sectors and entire economies --- from the financial sector to food retailing. One consequence: a **“macro” risk management** mindset/approach will be a competitive differentiator.

Risk management is increasingly complex and increasingly valuable

8 elements driving the new “macro” risk environment

- Forecast risk
- Market risk
- Geopolitical risk
- Technology risk
- Regulatory (and policy) risk
- Security risk
- Governance risk
- Trust (social license) risk

(i) Forecast risk: The global economy is experiencing weak, volatile and uneven global growth: the IMF has revised its global outlook downward for 5 consecutive years, and the weakness has spread to Emerging Markets. The global growth problem is increasingly structural, not just cyclical --- **and Canada has a 1% growth "deficit"**, with our trend (potential) growth stuck under 2%.



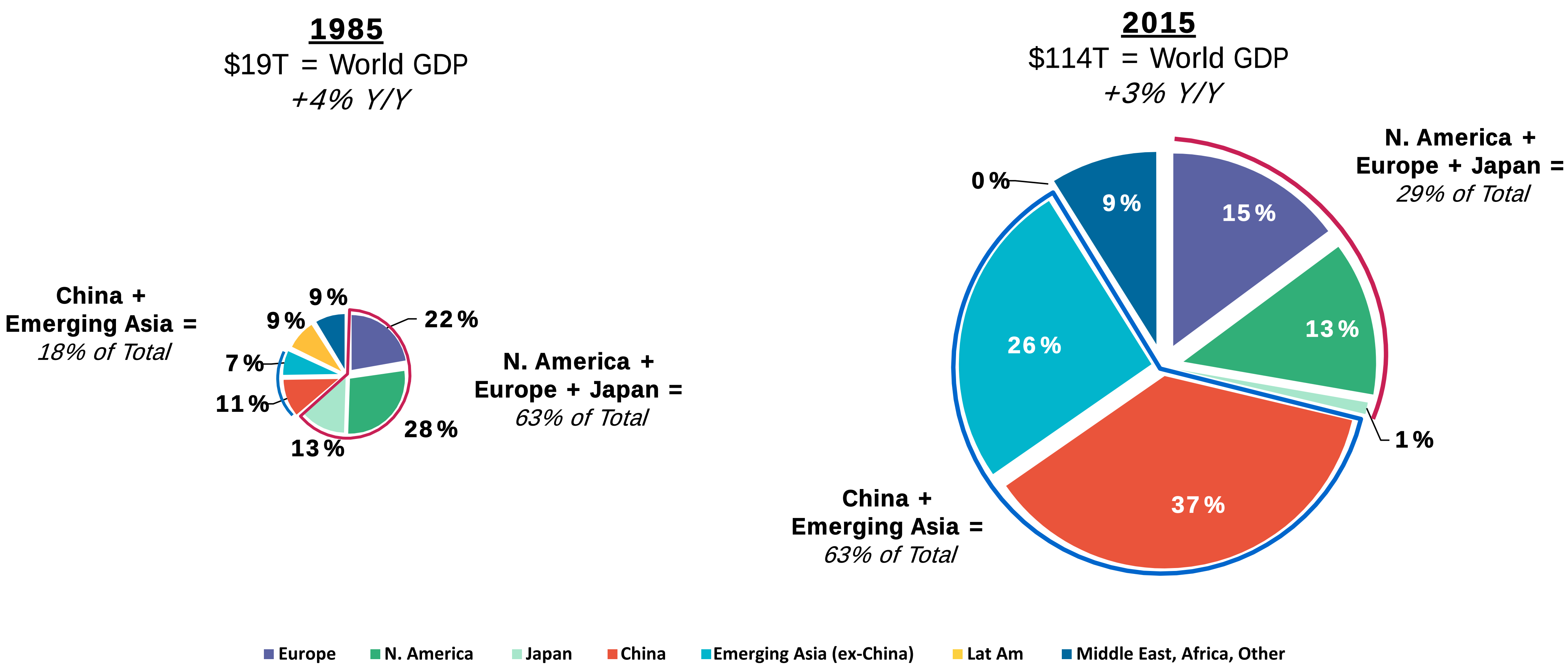
Updated IMF World Outlook (July, 2016)

	2015	2016	2017	Change
Global	3.1	3.1	3.4	↓
China	6.9	6.6	6.2	↓
Canada	1.2	1.7	2.1	↓
U.S.	2.4	2.2	2.5	↓
Euro area	1.7	1.6	1.4	↓
Japan	0.5	0.3	0.1	↓
U.K.	2.2	1.7	1.3	↓
India	7.6	7.4	7.4	→
Mexico	2.5	2.5	2.6	↓
Brazil	-3.8	-3.3	0.5	↓
Russia	-3.7	-1.2	1.0	↓

(ii) Market risk: The global growth engines are structurally shifting to Asia: almost 2/3 of world growth now comes from China and Emerging Asia versus 2/3 from North America, Europe and Japan 30 years ago. In today's hyper-connected world, **your market risk is now global not local or regional**.

Real GDP Growth Contribution by Region, 1985 / 2015

(Based on Purchasing Power Parity)



Source: KPCB INTERNET TRENDS 2016

(iii) Geopolitical risk: We inhabit a less stable, less predictable and multi-polar world, characterized by increasing nationalism, rising regional tensions, increasing conflicts, and escalating humanitarian crises. This poses increasing "macro" risks for governments and firms where **local tensions become global risks**.

Terrorist attacks	→	From foreign to home-grown, from "lone wolf" to organized: now a reality in the West
Conflict refugees	→	Flood of refugees from Libya, Syria, Iraq, Sudan, Afghanistan
Brexit	→	What will U.K. leaving the E.U. mean for the U.K., the E.U., and the ROW
OPEC and oil	→	Saudi policy shift to stabilize its market share destabilizes markets; Iran out of oil sanctions; U.S. shale oil
Russia, Ukraine and Europe	→	Russia reacts to its worsening economy by broadening conflict in Eastern Europe
South China seas	→	China's policy shift to exert territorial claims
Brazil	→	Dilma impeachment proceeding due to Petrobras scandal

(iv) Technology risk (a): Technological change is at an **inflexion point**, with disruptive innovations imminent in many sectors. What is most amazing is the **scale** and **scope** of these disruptive technologies and the **pace** of adaptation.

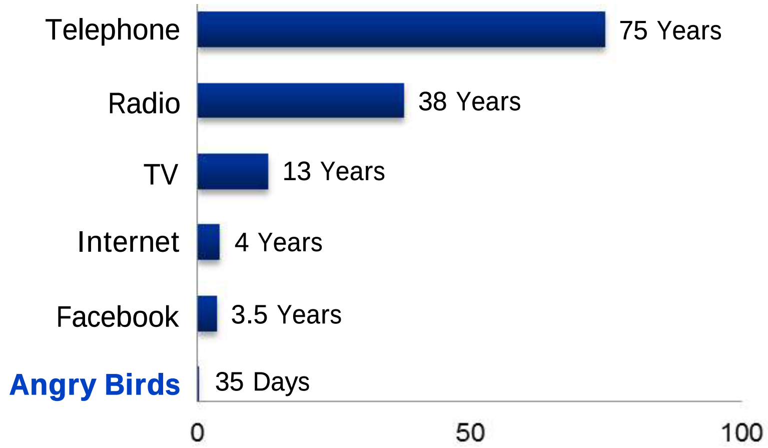
THE "SCOPE" OF DISRUPTIVE TECHNOLOGIES

- ✓ The Internet of things
- ✓ Advanced oil and gas exploration and recovery
- ✓ Energy storage
- ✓ Autonomous and near-autonomous vehicles
- ✓ Mobile Internet
- ✓ 3D printing
- ✓ Advanced robotics
- ✓ Next-generation genomics
- ✓ Artificial intelligence (AI)
- ✓ Cloud technology

Source: McKinsey

THE "PACE" OF DISRUPTION

(time to reach 50 million users)



Source: Citi GPS: Global Perspectives & Solutions

THE "DISRUPTION QUESTION"

Do we have the technology capacity, management skills and culture to handle this scale and pace of disruption? --- Will we be disruptors and early adaptors, or simply among the disrupted?

(iv) Technology risk (b): A disruptive innovation example is “Fintech”. It is challenging traditional business models across financial services; it will disintermediate functions not firms; it will increase competition; and it will test regulators.

CHARACTERISTICS OF FINTECH DISRUPTORS

- Big data, big computing power (cloud), predictive analysis
- Platform technologies, with enormous scale-ability
- Disrupt existing processes, and business models, using technology
- Focus on functions not businesses

EXAMPLES OF THE ‘FIN-TECH DISRUPTORS CLUB’

- **Lending** – Lending Club, Prosper, SoFi
- **Transactions, payments** – Google, Amazon, Alibaba; PayPal, Apple Pay, Square
- **Wealth, Advice** – FutureAdvisor, Nutmeg, Wealthsimple
- **Funding, Capital raising** – Crowdsourcing

THE “DISRUPTION QUESTION”

Why not “Govtech”? --- Many government operations and services are equally amenable to big data, big computing power, platform technologies, scale, and predictive analytics.

(v) Regulatory (and policy) risk: **We are in a re-regulation cycle / trend** and regulation affects most sectors --- an example (but not unique) is the financial sector which is at the intersection of 4 intersecting (and at times contradicting) regulatory dimensions: regulatory certainty versus uncertainty; regulatory sovereignty versus extra-territoriality; regulatory coordination versus fragmentation; and regulatory simplicity versus complexity.

1. Regulatory (Compliance) Certainty vs Uncertainty:

THE WALL STREET JOURNAL. Dec 30, 2014

For Banks, 2014 Was a Year of Big Penalties

Lenders Struggled to Adjust to a Changed Regulatory Climate

2. Regulatory Sovereignty vs Extra-territoriality:

U.S. examples include the following "policy vehicles": **Patriot Act** (Sections 317 and 319), **U.S. Foreign and Corrupt Practices Act**, and **Dodd-Frank**

Record Fine for French Bank

U.S. uses dollar power to penalize BNP Paribas for violating sanctions.

3. Regulatory Coordination vs Fragmentation:

- Different accounting systems (IFRS, US GAAP, others)
- Uncertainty over 'who rules past the border' for cross border resolution
- Different structural prohibitions (Volcker Rule, Vickers, Liikanen)
- Common principles, varying national prescriptive applications of FSB policies
- Emerging markets lack supervision and compliance capacity

4. Regulatory Simplicity vs Complexity:

- In choosing the design of regulations, where the objectives are clarity and effectiveness in influencing/reshaping behaviour, simplicity has the advantages of being clear and difficult to get around

(vi) Security risk: Security risk has increased, yet again: **terrorism** (ISIS, A-Q), **cyber attacks** (state, hacker gangs), **money laundering** (including terrorist financing), **cross border crimes** (int'l criminal organizations, internet scams) and **information theft** (personal + corporate).

Scale/scope of cyber/info hacks

a) Entertainment → **How the Sony Breach Changes Cybersecurity**
THE WALL STREET JOURNAL.

b) U.S. Banks → JPMorgan Chase Hacking Affects 76 Million Households
The New York Times

c) Retail → Home Depot's 56 Million Card Breach Bigger Than Target's
'Unique, Custom-Built Malware' Eliminated From Retailer's Systems After Five-Month Attack on Terminals
THE WALL STREET JOURNAL.

d) Global Banks → Hacker ring stole $1B from banks in 30 countries, says report
Banks in Russia, the U.S., Germany, China and Ukraine
CBCnews

e) Government → **Canada National Research Council 'hacked by Chinese spies'**
BBC

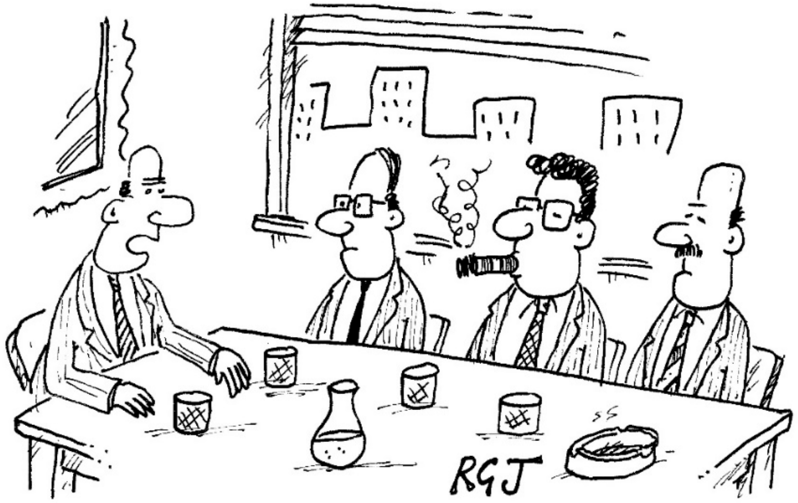
f) Medical → **The Next Cyber security Target: Medical Data**
The Atlantic

(vii) Governance risk: With the vitriolic debates about governing and government in the US, UK and elsewhere today, and with concerns about the impacts of short-termism on governing in both the corporate and political world, **we take "good governance" for granted at our peril**.

Trends Affecting Governance

- **Short-termism** --- long term policy and long term business investments are a causality
- **Permanent campaigning** --- governing is a causality, and it negatively affects political and public services roles, as well as public expectations of gov't
- **Globalization versus governance** --- commerce and firms knows few borders today, but borders define countries, and governments loathe to "share" their sovereignty
- **Communications revolution** --- social media (segmentation and targeting) and immediacy (Twitter versus considered analysis) are transforming the way we govern
- **Trust in government and business** --- declining (as well as trust in traditional media)

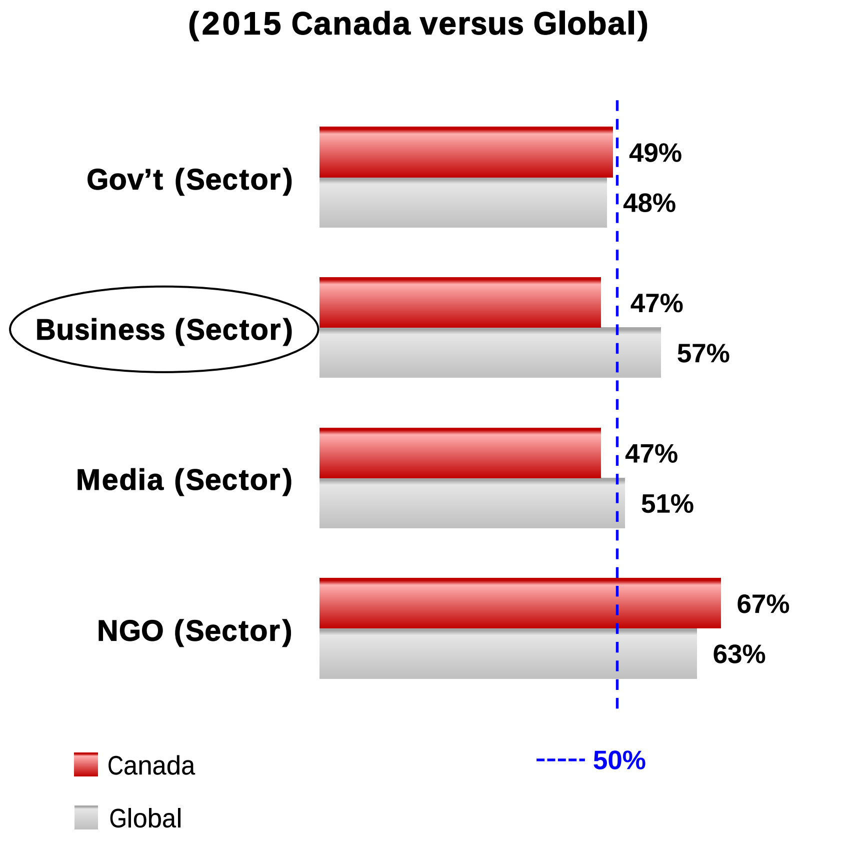
Tyranny of Short-termism



"We need an end to short - termism ... at least until next week."

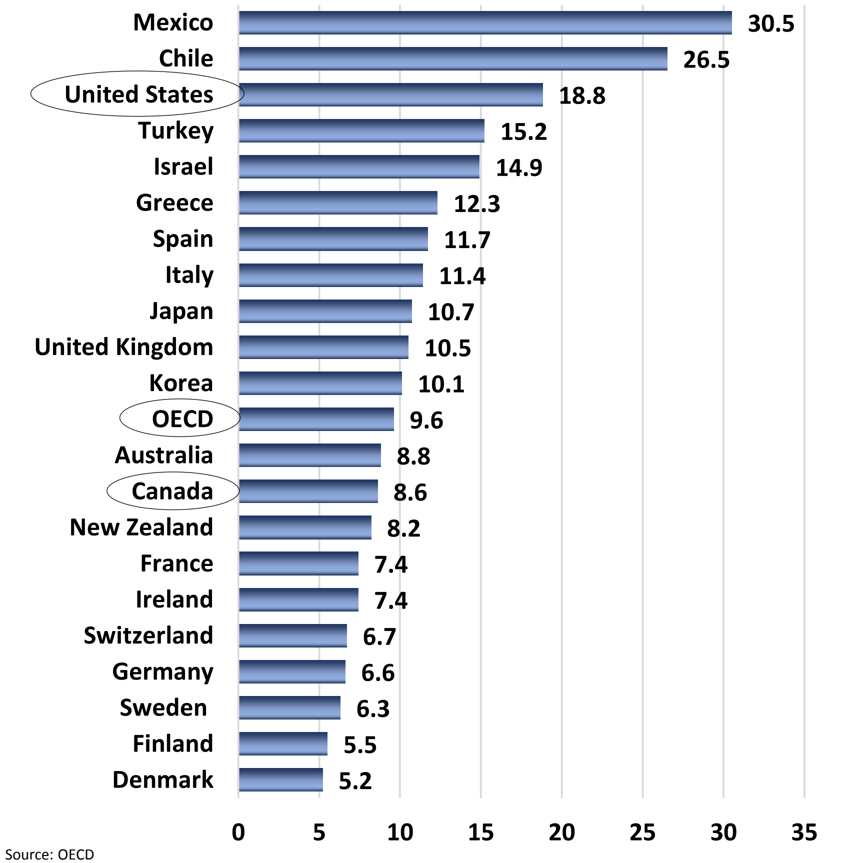
(viii) Trust (and social license) risk: Trust is part of the "soft infrastructure" required for effectively managing both countries and companies. But, trust deficits are on the rise (e.g. financial crisis, BP, VW, etc.), exacerbated by rising income inequality gaps. **This puts "social license" and "shared consensus" at risk** --- witness Trump, Brexit and Le Pen.

Global Trust in Sectors (2015): Canada no longer a leader



Source: Edelman Trust Barometer 2015

Income Inequality: Ratio of Top 10% to bottom 10% of disposable income (latest year)



Source: OECD

4. In this “new global normal,” **attitudes and leadership matter** for effective macro risk management: We inhabit a world of constant change, relentless competition, expanding opportunities and interconnected risks. Avoiding complacency is the sine qua non of effective macro risk management.

COMPLACENCY IS A RISK BEST AVOIDED

Source: 2010 Dan Regan

5. **Concluding observation** --- Effective macro risk management must not be confused with risk aversion: without innovation and smart risk taking, there are no increased returns, no stronger growth and no economic/business transformation --- it's all about **smart macro risk management in the new global normal**.

- We need to avoid **"status quo-ism"**
  - in a fundamentally changing world, keeping things as they were cannot be a model for future success

- We need to avoid **"risk aversion"** in business and government
  - without risk, no innovation and little progress

- We need to avoid **"short-termism"**
  - it is hard to build for our long term future with a quarterly mindset
  - and it is hard to reach for the podium without vision (Peace Tower: "Without vision, the people perish")