Sustainable Development of Thai Economy and the Roles of Financial Market

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Introduction

- There are many theoretical and empirical study which proved that "Financial Development is positively related to the Economic Growth."
- However, there is a critical question whether the current financial development leads our economy to the unsustainable direction?
- If so, should we rewrite the new theory of finance or should we modify or apply the existing theory to be more relevance to the "Sustainable Development."
- How can we apply the idea of Sustainable Development to all level including the personal sustainable, corporate sustainability and the country sustainable development (and the world sustainability).

Introduction

- This working paper is the 1st conceptual paper of the 2 years research series on "Sustainable Development" in order to celebrate the 50th Anniversary of NIDA (on 1-April-2016) which we will incorporate all academic disciplines to create the sustainable development model for Thai Socio-Economy and politics

- There are plenty of rooms for NIDA Scholars and NIDA Network of Academicians to pursue this mega topic

- At the end of this presentation, the researcher will highlight why most of the world leading countries are now venerable to the unsustainable development and the existing direction is very risky and unsustainable

- Financial Market (especially SEC) and the leading private firm with good governance can play crucial roles as the supplement for public services and government strategic investment (such as PPP). This direction will reduce the government duties and enhance the competitiveness of country and also magnify the sustainable development for better living of the country citizens.

CRITICAL RESEARCH QUESTIONS

1. How is Financial Development related to the Economic Growth?
2. Do current financial development lead our economy to the unsustainable direction?
3. What is wrong about the modern theory of finance for investment decision?
4. What is wrong about the goal of economic development measurement? And how to make the more relevant measurement for long-term sustainable development.
5. What should be the modification of finance theory and/or applications to make financial market (especially SEC) to support the "Sustainable Development"

MAXIMUM SUSTAINABLE YIELD

- From the research by Colin Clark (Mathematical Bioeconomics : The Optimal Management of Renewable Resources, 1976). Colin Clark is interested in the Concept of Maximum Sustainable Yield – MSY.

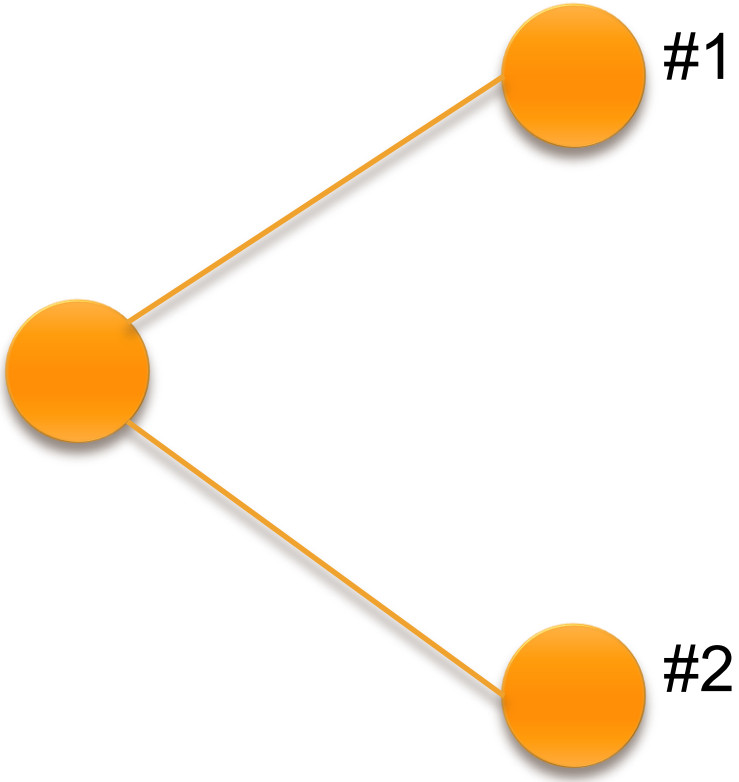
MAXIMUM SUSTAINABLE YIELD

Collin has made a hypothetical case of Blue Whale hunting which is a limited resource and assumed that there are only 75,000 Blue Whales in this world. Each Blue Whale can be sold at 10,000 USD fixed price. Furthermore, assume that there is only 1 licensed company to hunt for Blue Whale. This company will have 2 alternatives as followed:

Alternative #1: Hunt Blue Whale at the sustainable yield of 2,000 Blue Whales a year

Alternative #2: Hunt all 75,000 Blue Whales within 1 year

SUSTAINABLE DEVELOPMENT PROJECT



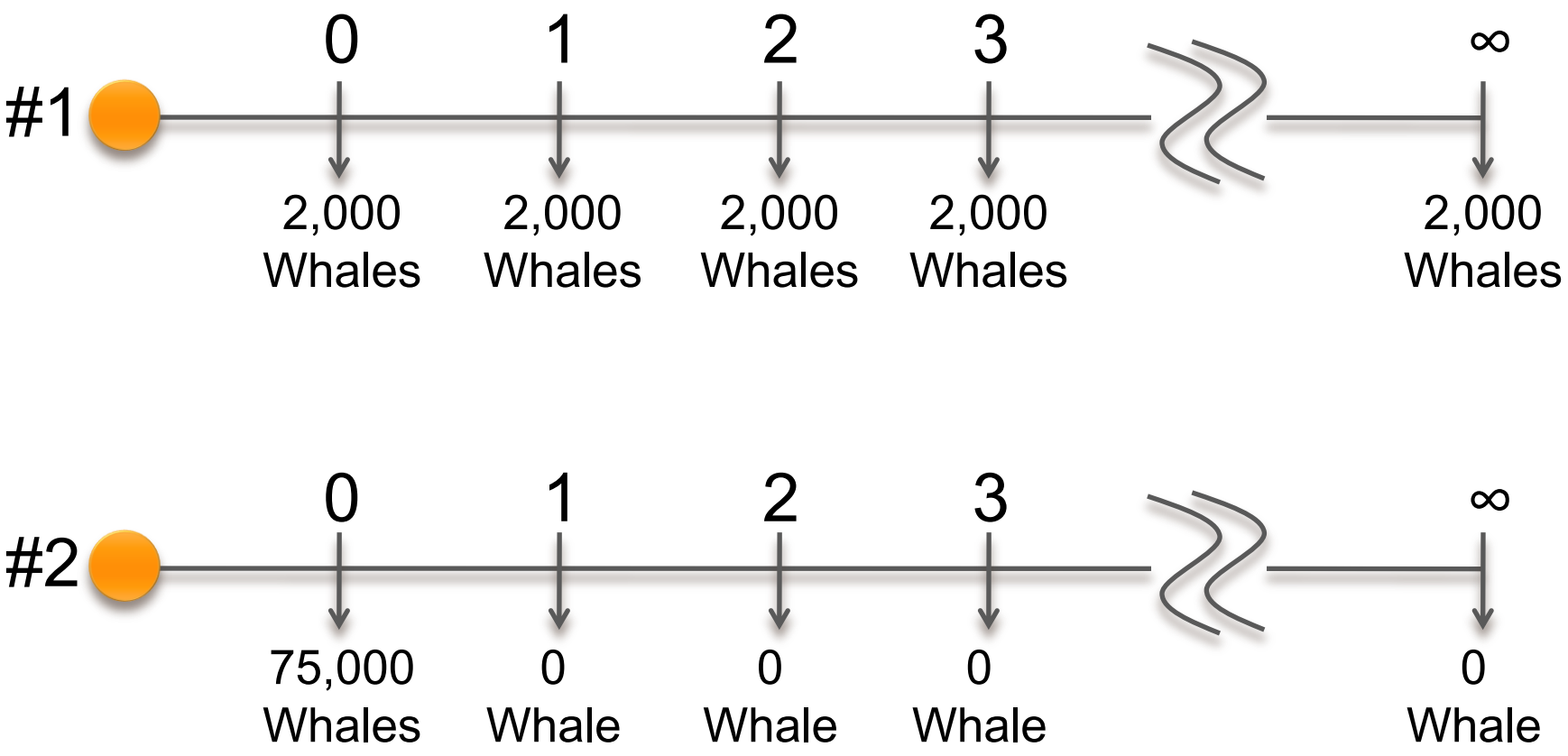
2,000 Blue Whales / Year

Eternity

75,000 Blue Whales

In 1 Year

SUSTAINABLE DEVELOPMENT PROJECT



MAXIMUM SUSTAINABLE YIELD

- For the alternative #1, this company will earn

  Earning = 2,000 whales x 10,000 USD/whale

  = 20 million USD annually until infinity.

- For alternative #2, this company will earn at once

  Earning =75,000 whales x 10,000 USD/whale

  = 750 million USD

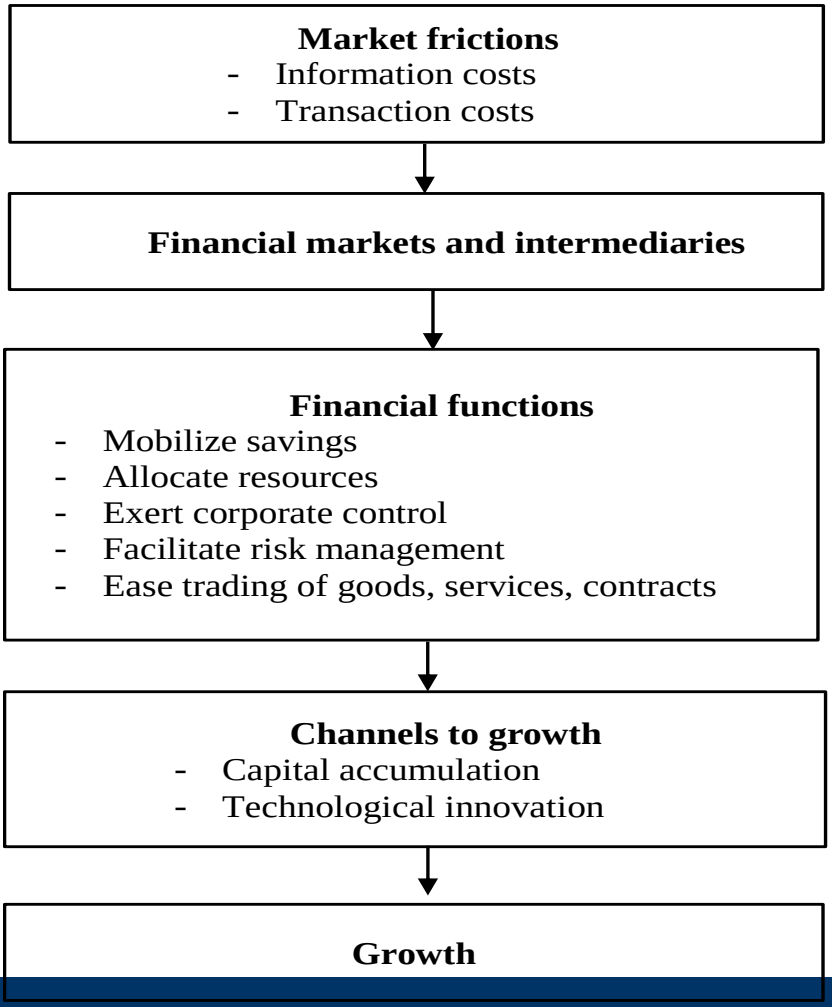
  (assuming Zero Price elasticity).

And then this company may deposit this revenue into the bank and earn 5% annual interest rate. Thus, this company will earn 37.5 million USD perpetually which will be almost twice the annual earnings from sustainable cultivating of Blue Whale.

MAXIMUM SUSTAINABLE YIELD

- There are almost half the world — over three billion people — live on less than $2.50 a day (http://www.globalissues.org/).
- This is surely another phenomenon of ‘unsustainable development.’
- However, the total wealth and capital accumulation of the whole world is more than enough if we can make the innovative and positive measures for wealth and wellness distribution through the financial market mechanism.

Introduction – FD and Economic Growth



Mechanism link between financial development to economic growth

Levine (1997) suggested that financial institutions and markets could foster economic growth through several channels :

(1) by facilitating the trading, hedging, diversifying, and pooling of risk,
(2) by acquiring investment information and allocating resources,
(3) by monitoring managers and exert corporate control,
(4) by mobilizing savings, and
(5) by facilitating the exchange of goods and services. Each of these functions can influence saving and investment decisions and hence economic growth.

Introduction – FD and Economic Growth

- In the present, the role of financial markets contribution in the growth process still being received considerable attentions. Nevertheless, the debate regarding financial development and economic growth relationship has been an inconclusive story among the economists.

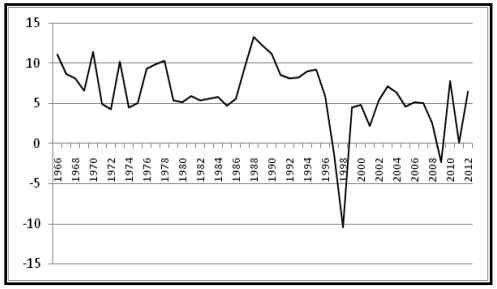
- Blum et al (2002) summarized the causal link between financial and real sector into six possible hypotheses:
  (1) **supply-leading**, the way that casual relation runs from financial sector to real sector
  (2) **demand-following** regards financial development as endogenously determined by the real economy or its needs
  (3) **bi-variation** which implied that financial depth drove real growth, while the growing economy's demand for finance was served by the advancing financial sector
  (4) **negative causal link** which referred to the danger of financial crises or speculative bubbles
  (5) **interdependence** where expressed that cash flow was another source for corporate investment
  (6) **no casual relation** that referred the case of Robinson (1952) which argued that financial system does not foster economic growth

Introduction – FD and Economic Growth

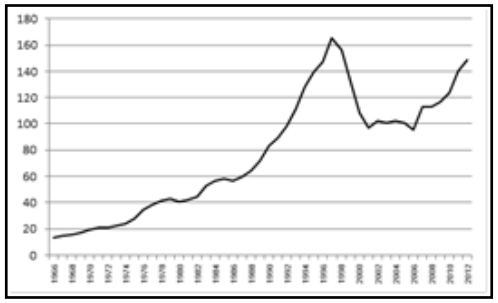
- Recent studies to explore the relationship between financial development and growth mainly focus on endogenous growth models, which showed that there would be self-sustaining growth without exogenous factors and the growth rate could be related to preferences, technology progress, income distribution and institutional arrangement. This provides the theoretical underpinning that early contributors lacked: financial intermediation can be shown to have not only level effects, but also growth effects. (Pagano, 1993, p 613)

Introduction – FD and Economic Growth

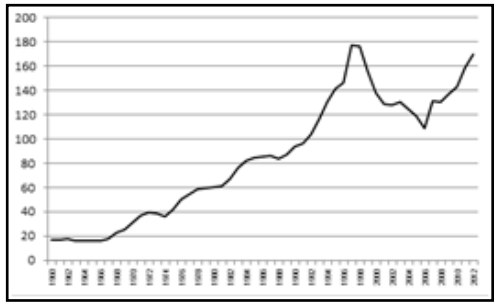
Financial development to economic growth in Thailand



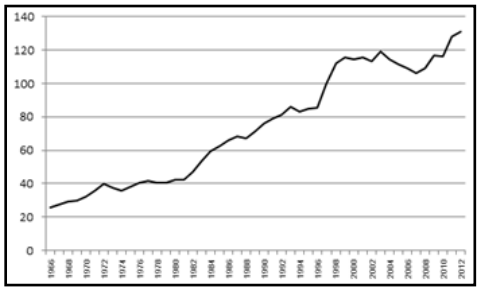
Thailand GDP growth rate



Domestic Credit
to Private Sector to GDP

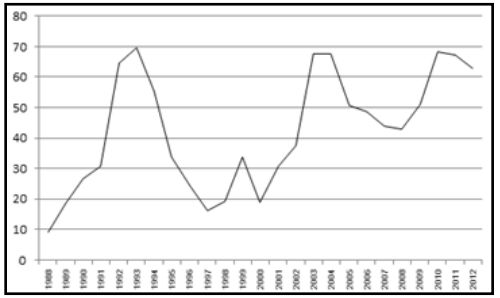


Domestic Credit
Provide by Financial Sector to GDP



M2 to GDP

Market Capitalization to GDP



Stock Trade Value to GDP

Introduction – FD and Economic Growth

Financial development to economic growth in Thailand

- The studies regarding financial development and economic growth in Thailand have been carried out by various methods and selected representative variables.
- Almost of such papers were conducted based on time-series and panel data techniques such as multiple regression, co-integration and error correction models, panel unit root test, dynamic panel data co-integration analysis, panel-based vector error correction model and so on.
- Nevertheless, findings regarding financial development and economic growth relationship demonstrated different causality direction. In another word, relationship between financial and growth has been an inconclusive finding so far.

Introduction – FD and Economic Instability

- Ceremeno, Garcia and Gonzalez-Vega (2012) summarized the literature on the impact of financial development to volatility, based on the functions performed by financial intermediaries, into three strands :
  (1) diversifying portfolio
  (2) facilitating the management of production risk and coping with liquidity shocks, mobilizing the precautionary savings of households
  (3) generating information about the risks and returns of alternative investments in order to allocate capital more efficiently, thus the financial sector may diminish the volatility of economic growth.

- The studies regarding the relationship between financial development and economic volatility were conducted by a number of economists. Nevertheless, those studies revealed different results.

- Some studies focused on the determination about financial development and economic growth volatility relationship. Those studies found both negative and positive relationship between them.

Introduction – FD and Economic Instability

Financial development to economic instability in Thailand

- Pholphirul (2008) invited the simultaneous equation models (SEMs) to investigate the bi-direction relationship of financial instability, banking crisis, and growth volatility in Thailand.

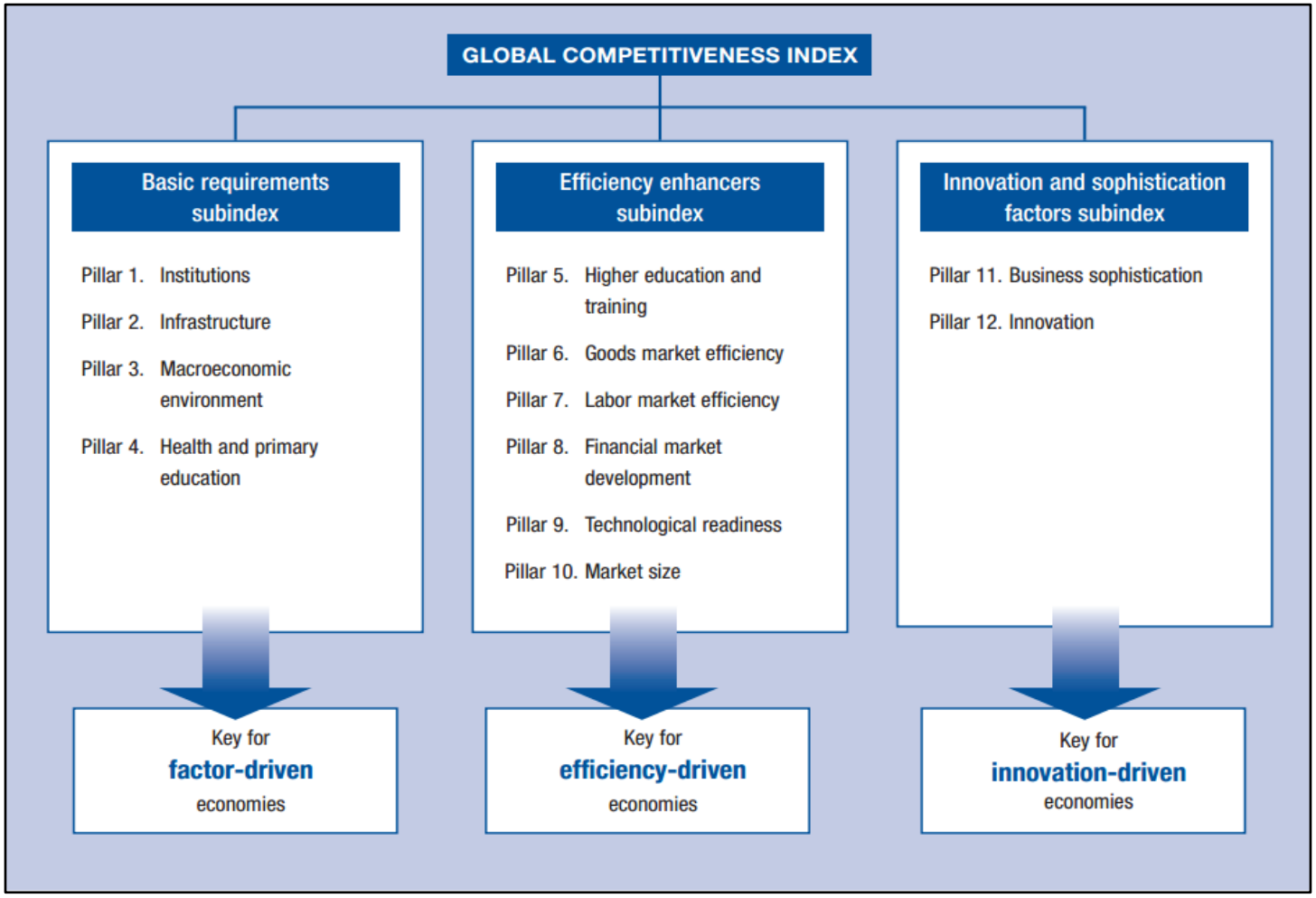
- The result of econometrics model examined that volatility in financial institution was a major cause Thailand's economy volatility. Moreover, the estimated coefficients also indicated that better financial system development should help stabilize growth volatility and decrease the probability of economic downtown

How to better measure Economic Performance

- Refer to the research by Colin Clark (Mathematical Bioeconomics : The Optimal Management of Renewable Resources, 1976)
  - Concentrate on the efficient resources allocation through the concept of Maximum Sustainable Yield – MSY which is discussed in earlier section.
  - The goal and also the measures for 'Development' are the challenges for building better and more sustainable development world.
  - GDP is the most widely used and recognized; However, GDP has weakness and need to find a better measure for economic performance which will bring us closer to the sustainable development.

- Here are some of the new ideas on sustainable development and measurements which we will explore in this working paper.

How to better measure Economic Performance

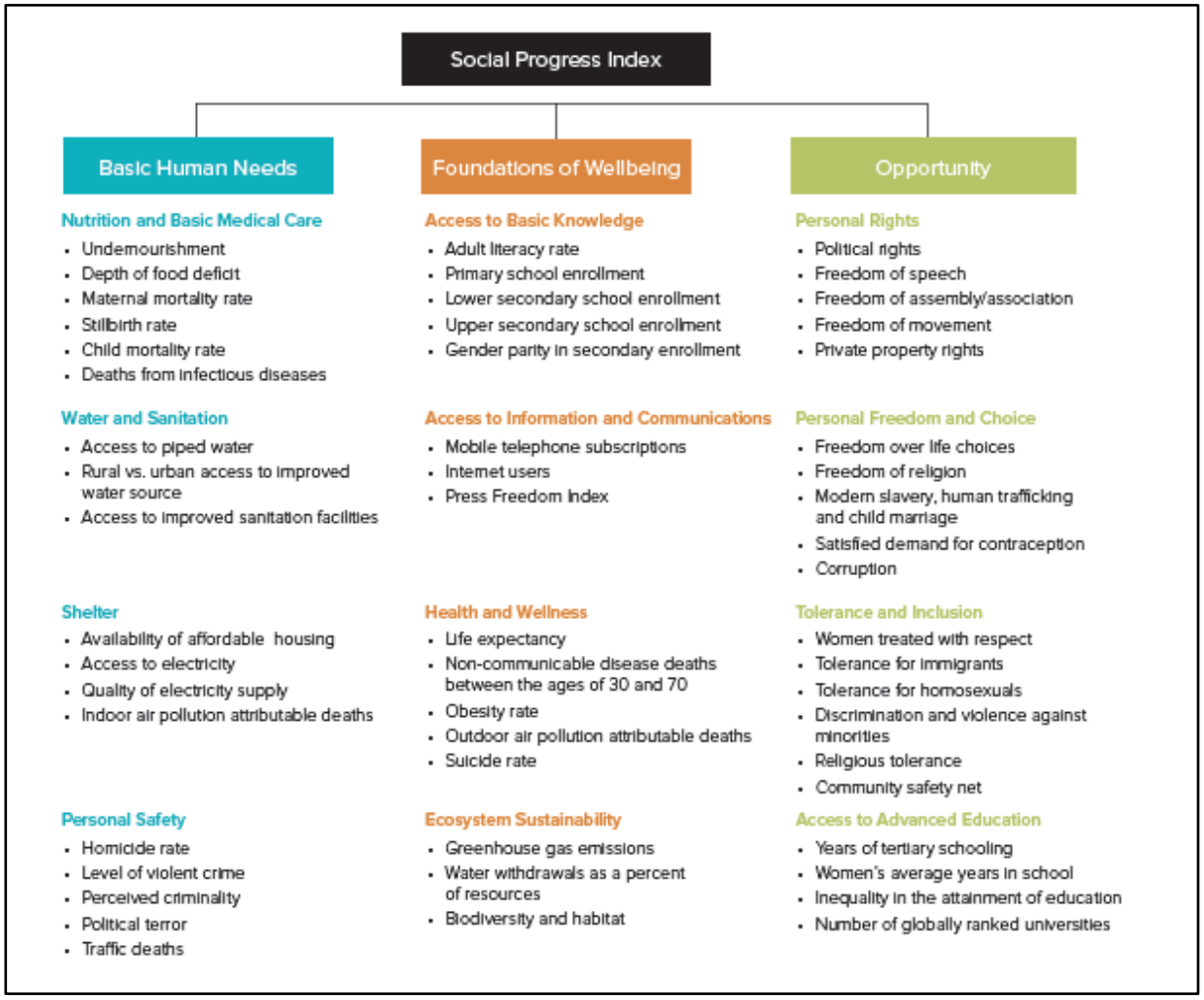


Source : The Global Competitiveness Report2013–2014 Full Data Edition

How to better measure Economic Performance

- This index is a comprehensive tool that measures the microeconomic and macroeconomic foundations of national Competitiveness.
- The factors that play significant role in creating favorable business-climate environment in the country and are important for competitiveness and manufacture point of view are used in analysis of GCI.
- It considers strength and weaknesses of a country, identifies priorities for the facilitation of political reforms implementation.
- The competitiveness is widely accepted as the key driver for sustain development and raising the well-being of its citizens.

How to better measure Economic Performance



Source :Social Progress Imperative (http://www.socialprogressimperative.org)

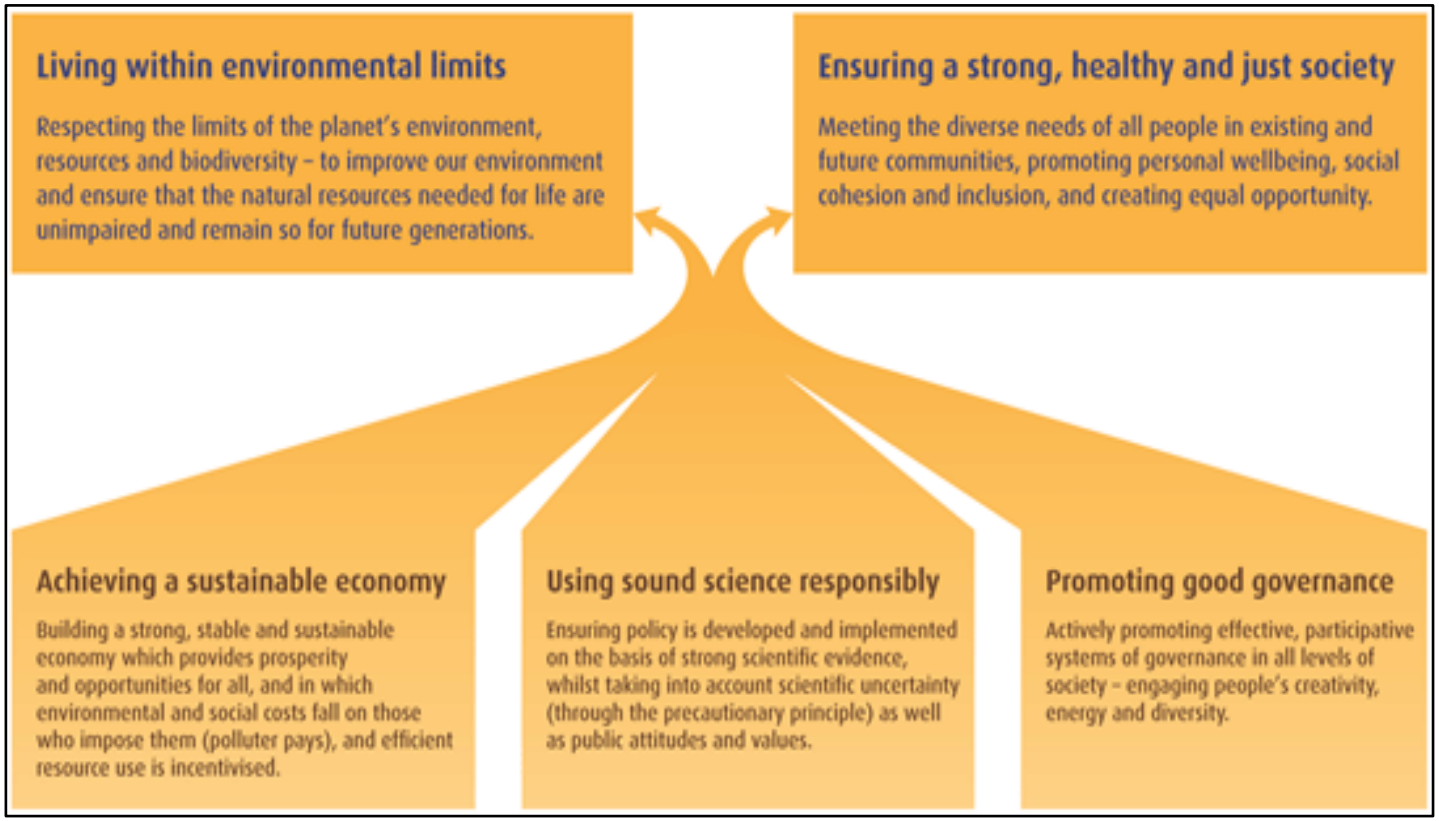
How to better measure Economic Performance

- **The Social Progress Index** measures the extent to which countries provide for the social and environmental needs of their citizens. Fifty-two indicators in the areas of basic human needs, foundations of wellbeing, and opportunity to progress show the relative performance of nations.

- **Michael E. Porter** has announced the launch of the Social Progress Imperative, a new rigorous index rating the social performance of more than 50 countries.

How to better measure Economic Performance

Principles of sustainable development



Source: http://www.sd-commission.org.uk/pages/what-is-sustainable-development.html, Sep 2014, 16.

How to better measure Economic Performance

The 5 principles of sustainable development were comprised of:

1. Living within environmental limits

   Respecting the limits of the planets environment, resources and biodiversity- to improve our environment and ensure that the natural resources needed for life are unimpaired and remain so for future generations.

2. Ensuring a strong, healthy and just society

   Meeting the diverse needs of all people in existing and future communities, promoting personal wellbeing, social cohesion and inclusion, and creating equal opportunity.

3. Achieving a sustainable economy

   Building a strong, stable and sustainable economy which provides prosperity and opportunities for all, and in which environmental and social costs fall on those who impose them (polluter pays), and efficient resource use is incentivized.

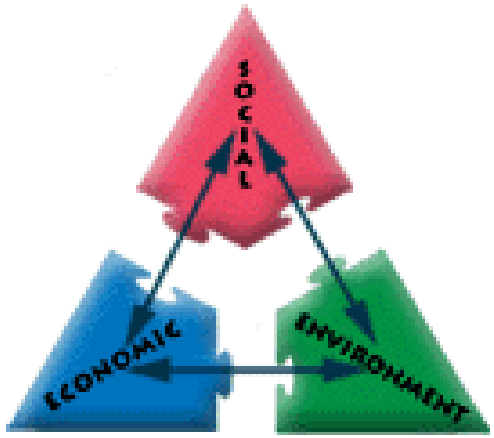
4. Using sound science responsibly

   Ensuring policy is developed and implemented on the basis of strong scientific evidence, whilst taking into account scientific uncertainty (through the precautionary principle) as well as public attitudes and values.

5. **Promoting good governance**

   Actively promoting effective, participative systems of governance in all levels of society – engaging people's creativity, energy and diversity.

Sustainable development puzzle diagram

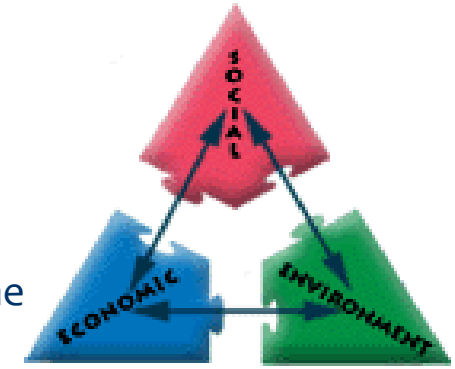


Services	Equity	Biodiversity
Household Needs	Participation	Natural Resources
Industrial Growth	Empowerment	Carrying Capacity
Agricultural Growth	Social Mobility	Ecosystem Integrity
Efficient Use of Labor	Cultural Preservation	Clean Air and Water

How to better measure Economic Performance

Social aspects

- The need for social services is universal
- Local issues/global issues
- Linking social sector issues with the economic and the environmental sectors
- Social indicators



Economic aspects

- Everyone plays a role in the economy
- Local issues/global issues
- Linking the economy with environmental and social sectors

Environmental aspects

- Environmental issues affect everyone
- Local issues/global issues
- Linking the environment with the economic and social sectors
- Environmental indicators

CSD indicators for sustainable development

Theme	Sub-theme	Core indicator	Other indicator
Poverty	Income poverty	Proportion of population living below national poverty line	Proportion of population below $1 a day
	Income inequality	Ratio of share in national income of highest to lowest quintile	
	Sanitation	Proportion of population using an improved sanitation facility	
	Drinking water	Proportion of population using an improved water source	
	Access to energy	Share of households without electricity or other modern energy services	Percentage of population using solid fuels for cooking
	Living conditions	Proportion of urban population living in slums	

CSD indicators for sustainable development

Theme	Sub-theme	Core indicator	Other indicator
Governance	Corruption	Percentage of population having paid bribes	
	Crime	Number of intentional homicides per 100,000 population	

CSD indicators for sustainable development

Theme	Sub-theme	Core indicator	Other indicator
Health	Mortality	Under-vive mortality rate	
		Life expectancy at birth	Healthy life expectancy at birth
	Health care delivery	Percent of population with access of primary health care facilities	Contraceptive prevalence rate
		Immunization against infectious childhood diseases	
	Nutritional status	Nutritional status of children	
	Health status and risks	Morbidity of major diseases such as HIV/AIDS, malaria, tuberculosis	Prevalence of tobacco use
			Suicide rate

CSD indicators for sustainable development

Theme	Sub-theme	Core indicator	Other indicator
Education	Education level	Gross intake ratio to last grade of primary education	Life long learning
		Net enrolment rate in primary education	
		Adult secondary (tertiary) schooling attainment level	
	Literacy	Adult literacy rate	

CSD indicators for sustainable development

Theme	Sub-theme	Core indicator	Other indicator
Demographics	Population	Population growth rate	Total fertility rate
		Dependency ration	
	Tourism		Ratio of local residents to tourists in major tourist regions and destinations

CSD indicators for sustainable development

Theme	Sub-theme	Core indicator	Other indicator
Natural hazards	Vulnerability to natural hazards	Percentage of population living in hazard prone areas	
	Disaster preparedness and response		Human and economic loss due to natural disasters

CSD indicators for sustainable development

Theme	Sub-theme	Core indicator	Other indicator
Atmosphere	Climate change	Carbondioxide emission	Emission of greenhouse grass
	Ozone layer depletion	Consumption of ozone depleting substances	
	Air quality	Ambient concentration of air pollutants in urban areas	

CSD indicators for sustainable development

Theme	Sub-theme	Core indicator	Other indicator
Land	Land use and status		Land use change
			Land degradation
	Desertification		Land affected by desertification
	Agriculture	Arable and permanent cropland area	Fertilizer use efficiency
			Use of agricultural pesticides
			Area under organic farming
	Forests	Proportion of land area covered by forests	Percent of forest trees damaged by defoliation
			Area of forest under sustainable forest management

CSD indicators for sustainable development

Theme	Sub-theme	Core indicator	Other indicator
Oceans, seas and coasts	Coastal zone	Percentage of total population living in coastal areas	Bathing water quality
	Fisheries	Proportion of fish stocks within safe biological limits	
	Marine environment	Proportion of marine area protected	Marine trophic index
			Area of coral reef ecosystems and percentage live cover

CSD indicators for sustainable development

Theme	Sub-theme	Core indicator	Other indicator
Freshwater	Water quantity	Proportion of total water resources used	
		Water use intensity by economic activity	
	Water quality	Presence of faecal coliforms in freshwater	Biochemical oxygen demand in water bodies
			Wastewater treatment

How to better measure Economic Performance

CSD indicators for sustainable development

Theme	Sub-theme	Core indicator	Other indicator
Biodiversity	Ecosystem	Proportion of terrestrial area protected, total and by ecological region	Management effectiveness of protected areas
			Area of selected key ecosystems
			Fragmentation of habitats
	Species	Change in threat status of species	Abundance of selected key species
			Abundance of invasive alien species

How to better measure Economic Performance

CSD indicators for sustainable development

Theme	Sub-theme	Core indicator	Other indicator
Economic development	Macroeconomic performance	GDP per capita	Gross saving
		Investment share in GDP	Adjusted net savings as percentage of gross national income (GNI)
			Inflation rate
	Sustainable public finance	Debt to GNI ration	
	Employment	Employment-population ratio	Vulnerable employment
		Labor productivity and unit labor costs	
		Share of women in wage employment in the non-agricultural sector	
	Information and communication technologies	Internet users per 100 population	Fixed telephone lines per 100 population
			Mobile cellular telephone subscribers per 100 population
	Research and development		Gross domestic expenditure on R&D as a percent of GDP
	Tourism	Tourism contribution to GDP	

CSD indicators for sustainable development

Theme	Sub-theme	Core indicator	Other indicator
Global economic partnership	Trade	Current account deficit as percentage of GDP	Share of imports from developing countries and from LDCs
			Average tariff barriers imposed on exports from developing countries and LCDs
	External financing	Net official Development Assistance (ODA) given or received as a percentage of GNI	Foreign direct investment (FDI) net inflows and net outflows as percentage of GDP
			Remittances as percentage of GNI

How to better measure Economic Performance

CSD indicators for sustainable development

Theme	Sub-theme	Core indicator	Other indicator
Consumption and production patterns	Material consumption	Material intensity of the economy	Domestic material consumption
	Energy use	Annual energy consumption, total and by main user category	Share of renewable energy sources in total energy use
		Intensity of energy use, total and by economic activity	
	Waste generation and management	Generation of hazardous waste	Generation of waste
		Waste treatment and disposal	Management of radioactive waste
	Transportation	Modal split of passenger transportation	Modal split of freight transport
			Energy intensity of transport

FD and Sustainable Development

European Sustainable Development Network (2012)

Sustainable development consisted of six principles that need to be taken into account when discussing the link to the financial market:

(1) Balancing different policy dimensions;
(2) Long timeframes and intergenerational equity;
(3) Ecosystems limits and planetary boundaries;
(4) Equal opportunities and access;
(5) Inclusion and participation;
(6) Governance for sustainable development

FD and Sustainable Development

European Sustainable Development Network (2012)

A few suggestions could be made to include the sustainable development perspective into finance:

(1) internalization of externalities in the calculation of an investment (i.e. in a company's present value);
(2) assigning a long-term horizon to investments, also as a necessity for maintaining the prospect of safeguarding financial capital for the future;
(3) progressive substitution of financial ratios with sustainability ratios;
(4) a changing perspective on the connotation of financial profits.

FD and Sustainable Development

AVIVA proposed a roadmap for sustainable capital markets in order to achieve the United Nation sustainable development goals

The capital markets were of relevance to sustainable development policy makers for three distinct but related reasons:

(1) As a way of raising capital to enhance government spending on sustainable development projects;

(2) As a target for systemic change to integrate sustainability at each stage as the financial influence of the capital market via corporate access to capital can enhance or undermine long-term sustainable development goals; and,

(3) As an ownership mechanism for influencing corporate practices that policy makers can seek to harness to improve the sustainability practices of existing listed companies.

FD and Sustainable Development

AVIVA proposed a roadmap for sustainable capital markets in order to achieve the United Nation sustainable development goals

The ways that could achieve the sustainable development goals promoted capital markets that integrate sustainable development

(1) Goal: A resilient, sustainable economy that optimizes quality of life for all" Targets: Economic Growth

(2) Promote Integrated Financial Regulation: Governments to promote capital markets regulation that integrates sustainable development factors in the mandates of the supervision agencies of stewardship codes, listing rules and financial stability

FD and Sustainable Development

Price Waterhouse Coopers, proposed an idea according to the role of Australia's financial sector in sustainability

In terms of barriers and challenges, it indicated that there were number of barriers and challenges unique to Australia which explained why the finance sector may not be as advanced as its North American and European counterparts in responding to sustainable development. These include:

- **legislation** – the enforcement of environmental legislation and the disclosure requirements for companies and superannuation trustees in relation to environmental and social issues is less onerous than North American and European systems
- **market size** – the supply of financial products that incorporate sustainable development principles, such as SRI, is restricted by small market size
- **awareness** – despite a high level of concern about environmental and social issues in the community, this has not been translated into a significant investment in "green" products or active campaigning to promote sustainable corporate practices
- **public disclosure** – the voluntary disclosure of environmental and social information is less developed than in North America and Europe. The only mandatory disclosure requirement, namely s299(1)(f) of the Corporations Law is under review and may be repealed.

FD and Sustainable Development

The World Business Council for Sustainable Development (WBCSD)

- The financial capital enables natural and social capitals to be owned and traded. But unlike the other types of capital, it has no real value itself but is representative of natural, human, social or manufactured capital; e.g. shares, bonds or banknotes. Although it has no real value, it has a disproportionate significance in how a corporation's performance is measured and plays a material role in driving the behavior of business leaders.

FD and Sustainable Development

The World Business Council for Sustainable Development (WBCSD)

- The sustainability crisis facing the world is because the human population is consuming the planets stocks of natural and social (including human) capital faster than it is being produced if indeed it can be. Unless these capitals are effectively managed, the current rate of consumption will result in depletion and possible extinction of vital life sustaining resource stocks in the long term.

FD and Sustainable Development

The World Business Council for Sustainable Development (WBCSD)

- The WBCSD's work in the Natural and Social Capital needs to be complemented by a work program in Financial Capital which focuses on educating the managers of financial capital on the sustainability issues implicit in their decisions and to change the "rules of the game" by bringing natural and social capital into balance with financial capital allocations.

FD and Sustainable Development

Daniel de Faro Adamson and Joe Andrew, The Blue Way: How to profit by investing in a better world. New York: Simon & Schuster, 2007.

Challenging of "Blue Way" Real Success in US Capital Market to Thai Financial Market

- Adamson and Andrew (2008) argued and proved that "Blue Way" listed companies in S&P 500 have significantly outperformed the ordinary S&P 500 index.
- Adamson and Andrew defines "Blue Way" companies as the ethical Social Enterprise companies with values-based vision and concern about cleaner environment and equal opportunities.
- Adamson and Andrew have created "Blue Way companies Index" and proved that the eco-friendly and ethical companies can create better return compared with "S&P 500."

FD and Sustainable Development

Daniel de Faro Adamson and Joe Andrew, The Blue Way: How to profit by investing in a better world. New York: Simon & Schuster, 2007.

Criteria for "Blue Way" Sustainable Organization are as followed:

1) **A cultural of innovation:**
2) **Organizational flexibility:**
3) **Eco-efficiency:**
4) **Investment in employees' well-being:**
5) **Constructive relationships with critics:**
6) **Long-term perspective**:

Sustainable Development and Value Creation
(The Conference Board of Canada , 2001)

1. SD practices can have a direct influence on costs and revenues and, in so doing, affect value creation within a company. For example, corporate SD practices can:
   - facilitate access to markets/ease operational start-ups
   - address the value chain
   - address media/activist pressures
   - lead to lower bank loan rates
   - lead to lower insurance premiums
   - increase eco-efficiency of operations
   - satisfy due diligence requirements regarding partnerships and acquisitions
   - facilitate divestitures
   - promote industry self-regulation

Sustainable Development and Value Creation
(The Conference Board of Canada , 2001)

2. Sustainable Development as a Proxy for Superior Quality of Management
   - In addition to contributing to share price directly, as outlined above, SD practices can function as a proxy for identifying companies with superior quality of management. By definition, SD companies are interdisciplinary facilitate access to markets/ease operational start-ups in their approach to business, reflecting a senior management team that thinks "ahead of the curve" (Griss 2000).
   - Accordingly, SD companies can be expected to make superior decisions on key business issues—such as product and production line innovation, new financing options or exploitation of new market opportunities or executive hiring—and thus to present preferred investment options (Ehrbar 1998).

National Round Table on the Environment and the Economy, 2007

The Task Force has made recommendations that it believes will encourage the integration of environmental, social and governance (ESG) factors into capital allocation decisions and contribute to a new and strengthened vision for investing in Canada's sustainable future. The recommendations of the Task Force are set out below :

Recommendation 1.1

That the federal, provincial, and territorial governments adopt, in their respective jurisdictions, regulations that require pension plans:

- to disclose on a recurring basis, at a minimum annually, the extent to which environmental, social, and governance considerations are taken into account in the selection, retention, and realization of investments; and
- to disclose the extent to which environmental, social, and governance considerations are taken into account in proxy voting and corporate governance engagement activities, and to require pension plans to disclose their proxy voting activity

FD and Sustainable Development

National Round Table on the Environment and the Economy, 2007

Recommendation 1.2

That all fiduciaries, including institutional investors, money managers, and fund trustees, adopt voluntary practices to disclose

- ESG considerations and
- investment policy, and that they be encouraged to sign on to the UN sponsored *Principles for Responsible Investment*

National Round Table on the Environment and the Economy, 2007

Recommendation 2

That federal, provincial, and territorial governments or regulators enact guidelines or, where appropriate, regulations to clarify that the fiduciary obligation of the trustee includes the consideration of ESG issues that are financially material to investment decisions.

National Round Table on the Environment and the Economy, 2007

Recommendation 3

That the federal government lead by example and actively integrate ESG factors in

- federal funding of grants and projects related to capital markets; and
- federal pension plans.

National Round Table on the Environment and the Economy, 2007

Recommendation 4

That ESG issues be integrated into the education requirements of academic and professional institutions and programs

- granting MBA degrees and CFA accreditation;
- offering director education courses and certification; and
- offering trustee education courses and certification.

National Round Table on the Environment and the Economy, 2007

Recommendation 5.1

That the Canadian Institute of Chartered Accountants (CICA) and the Canadian Securities Administrators, in consultation with the federal and provincial governments, establish an outreach and education program for capital issuers so as to increase understanding of the material ESG issues that should form part of the Management Discussion and Analysis (MD&A) section of annual reports.

National Round Table on the Environment and the Economy, 2007

Recommendation 5.2

That institutional investors, money managers, and trustees engage capital issuers (companies) on the potential materiality of ESG issues, adopt a policy regarding ways of addressing ESG factors in the decision-making process, and encourage the refinement and use of standardized ESG reporting.

FD and Sustainable Development

National Round Table on the Environment and the Economy, 2007

Recommendation 5.3

That the Canadian Securities Administrators encourage the disclosure of financially material ESG issues through publication of a guidance or interpretation statement and encourage Canadian firms to be guided by established reporting frameworks such as the Global Reporting Initiative (GRI).

National Round Table on the Environment and the Economy, 2007

Recommendation 5.4

That securities regulators support the existing MD&A disclosure requirements as they relate to ESG considerations and, when required, enforce the ESG disclosure requirement.

National Round Table on the Environment and the Economy, 2007

Recommendation 6

That federal and provincial laws and regulations as well as the standards set out by professional bodies such as the Canadian Institute of Chartered Accountants (CICA) and the Canadian Institute of Actuaries (CIA) regarding accounting, actuarial valuation, and pension fund governance be assessed for their impact on sustainability and amended where necessary to address the needs of sustainable capital allocation.

FD and Sustainable Development

National Round Table on the Environment and the Economy, 2007

Recommendation 7

That institutional investors assess the impact on sustainability of their investment policies and practices, paying particular attention to the quality of the investment research and the alignment of fund manager compensation practices with long-term performance.

Stakeholder integration (from Conscious Capitalism by John Mackey and Raj Sisodia, 2014)

Whole Foods, Seafood Problem

- Seafood sustainability is a serious environmental issue
- Atlantic cod, once the most abundant species of fish in the Western Hemisphere in the pre-Columbian era. But cod stocks have fallen 95 percent in the last four hundred years (now considered a red-rated species by both the MBA- Monterey Bay Aquarium and the BOI – Blue Ocean Institute).

Sustainability Implement

- Whole Foods label all of seafood with MBA, BOI, and MSC (Marine Stewardship Council) ratings, using a color-coded system based on the degree of sustainability
- In 2012, they eliminated all red-rated species (indication dangerously low sustainability) from their stores
- Whole Foods's purchasing and seafood teams have made a concerted effort to find sustainable fisheries for cod. Happily, at least one fishery is now being certified by the MSC.

Stakeholder integration (from Conscious Capitalism by John Mackey and Raj Sisodia, 2014)

3M, Environmental Problem

- 3M has long been a pioneer in lowering the environmental impact of business which had many products harmful for the environment.

Sustainability Implement

- In 1975, 3M introduced its Pollution Prevention Pays initiative, known as 3P, The program was designed to prevent pollution in products and manufacturing
- The company estimated that its 3P program has prevented three billion pounds of pollution and saved the company nearly 1.4 billion dollar, Team members voluntarily participate in 3P programs have completed over 8,100 projects in thirty –five years.
- Environmentally friendly products are also easier and less costly to dispose of.

Financing Change

(The Financial Community, Eco-efficiency, and Sustainable Development : Stephan S. and Federio J.L. Z with the World Business Council for Sustainable Development, 1996)

Company leaders

- Urge the company leaders to build a sustainable development reflex into corporate activities, so that when the markets come to reward eco-efficiency more systematically, company leaders will have their strategies in place, their team trained and fit, and their stakeholders loyal.

Financing Change

(The Financial Community, Eco-efficiency, and Sustainable Development : Stephan S. and Federio J.L. Z with the World Business Council for Sustainable Development, 1996)

Investors

- Ways must be found to help markets better understand the environment, probably by putting a price on it. This can be achieved by policies that emphasize market mechanisms, such as tradable emissions certificates. More broadly, and in the interests of efficient markets, "owners" of capital who are now remote from the workings of their capital – such as pensioners and shareholders – should be supplied with the necessary information so that they can influence those who make decisions on their behalf.

Financing Change

(The Financial Community, Eco-efficiency, and Sustainable Development : Stephan S. and Federio J.L. Z with the World Business Council for Sustainable Development, 1996)

Bankers

- Leading banks have largely mitigated their own environmental risk exposure, but we suggest that bankers now who more closely for opportunities to provide financial products and services that help others reduce their risks too.

Financing Change

(The Financial Community, Eco-efficiency, and Sustainable Development : Stephan S. and Federio J.L. Z with the World Business Council for Sustainable Development, 1996)

Insurers

- It recommended that the insurance industry use its experience with hazardous waste as a model for how to deal with the threat of climate change. At the very least, this industry should recognize that is interests are different from those of the more vocal and politically astute in heavy industry.

Financing Change

(The Financial Community, Eco-efficiency, and Sustainable Development : Stephan S. and Federio J.L. Z with the World Business Council for Sustainable Development, 1996)

Accountants

- It suggested that accountants strive to help eco-efficient companies communicate their progress (and the business benefits) to the markets, and then help the markets understand the benefits so that they can bestow the necessary rewards.

Corporate Sustainability

Corporate Sustainability is a business approach that creates long-term shareholder value by embracing opportunities and managing risks deriving from economic, environmental and social developments.

Our focus on corporate sustainability is based on two guiding principles:

- Sustainable business practices are critical to the creation of long-term shareholder value in an increasingly resource-constrained world
- Sustainability factors represent opportunities and risks that competitive companies must address

Sustainability-related megatrends are changing our world and are having a measurable impact on companies' top and bottom lines. Long-term challenges such as resource scarcity, demographic shifts and climate change are redefining societal expectations, public policies, regulatory frameworks, and hence business environments and investment outcomes.

Interesting links

› Timeline 2014
› Annual Review 2014
› Review History
› Sample questionnaire
› The Sustainability Yearbook
› Measuring Intangibles
› Brochures
› Monthly Presentation

ESG Index
Corporate Governance Report (CGR)
Global Reporting Initiatives (GRI)

Capital Market and Sustainable Development

- More accepted Sustainable Development
  - Currently, Capital Market has focused on Sustainable Development not only in the area of Economic Growth but also Environment, Social and Corporate Government.
  - Most of Foreign Mutual Fund has adopted the idea of Social Responsible Investment in Investment Management
  - Capital Markets in many countries promote listed company to adopt Sustainable Development Framework in their Operation

Capital Market and Sustainable Development

- SEC in action:
  - Educate and standardize ESG to listed companies
  - In Malaysia, SEC is in progress of developing ESG Index in order to differentiate each company by compliance with ESG Standard.
  - In Thailand, SEC has implemented Corporate Governance Report of Thai Listed Company (CGR) since 2001 and also promoted listed company to adopt Global Reporting Initiatives (GRI)
  - Currently, Thailand's SEC is in progress of developing the requirement for new security to disclose CSR information.

Capital Market and Sustainable Development

- SEC in action:
  - Develop ESG index to use as Benchmark in Investment Assessment
  - New Product Development to link with Climate Change, Energy Sustainability and etc. such as Carbon Trading and Exchange Traded Fund focus on Clean tech Investment.
  - Sustainable Development Roadmap initiatives 2013

Bursa Malaysia's sustainability index

- The proposed sustainability index is the fruit of the Bursa Malaysia's Business Sustainability Programme, which was launched in 2010 to encourage Malaysian public-listed companies to integrate sustainability in their business strategies.
- Currently, Bursa Malaysia requires listed companies to report on Corporate Social Responsibility performance based on an existing framework outlined, but does not stipulate the form in which disclosure should be presented.

Bursa Malaysia's sustainability index

- In the region aside from Malaysia, a number of stock exchanges in China, Taiwan and Singapore have introduced requirements or "encouragement" to listed companies to report on their sustainability activities.
- In terms of sustainability reporting framework, Malaysian companies use Global Reporting Initiative (GRI) G4 - the latest version of GRI sustainability reporting guidelines, as its term of reference.

DJSI World VS. MSCI World ESG Index

ตารางที่ 1: เปรียบเทียบ DJSI World และ MSCI World ESG Index

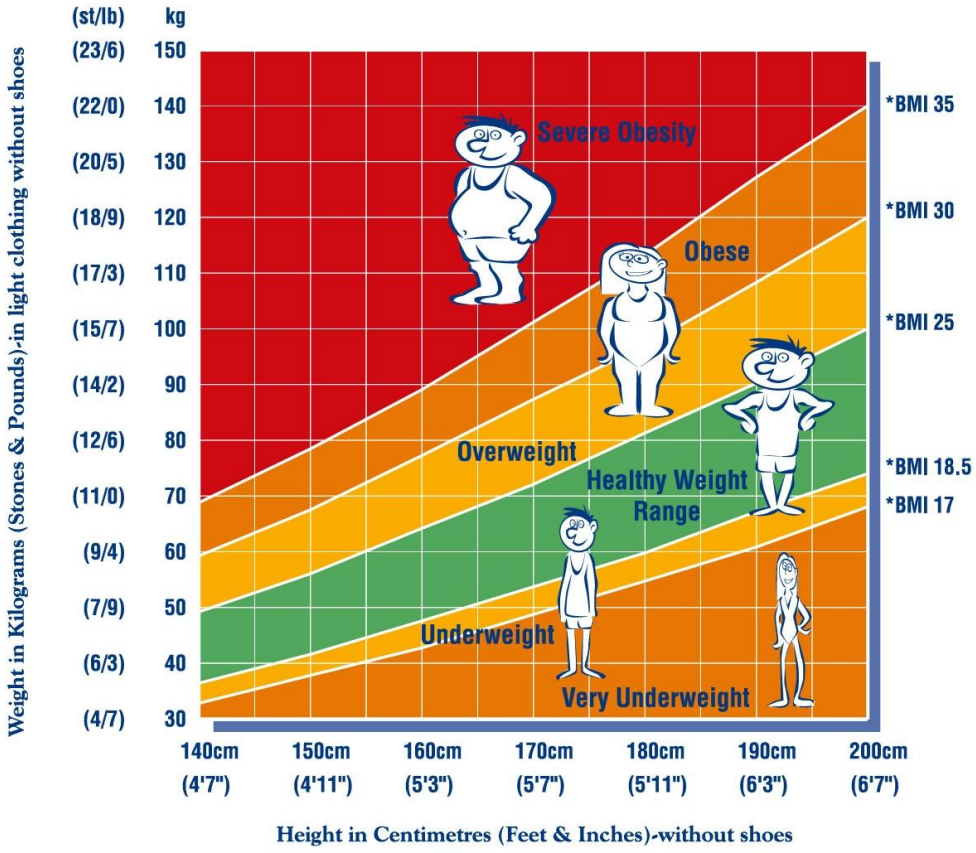
	DJSI World	MSCI World ESG
กลุ่มตัวอย่าง	ร้อยละ 10 ของบริษัทที่ใหญ่ที่สุด 2,500 บริษัทใน 77 ประเทศ ที่ได้รับคะแนนด้านความยั่งยืนสูงสุด	บริษัทในกลุ่ม Best-in-Class ใน 24 ประเทศที่ได้รับ ESG Rating สูง
ข้อยกเว้น	ธุรกิจแอลกอฮอล์ ยาสูบ การพนัน ระเบิด นิวเคลียร์ อาวุธ Adult Entertainment	-
วิธีให้คะแนน	แบบสอบถาม และรายงานบริษัท	รายงานบริษัท
เกณฑ์การพิจารณาให้คะแนน	พิจารณาจาก 3 ด้าน คือ - ด้านเศรษฐกิจ (เช่น บรรษัทภิบาลของบริษัท จรรยาบรรณทางธุรกิจ)	พิจารณาจาก 3 ด้าน คือ - ความยั่งยืนด้านสิ่งแวดล้อม: E (เช่น การจัดการทรัพยากร การปล่อยของเสีย)
	- ด้านสังคม (เช่น การพัฒนาทุนมนุษย์ การปฏิบัติต่อแรงงาน)	- ความยั่งยืนด้านสังคม: S (เช่น สิทธิมนุษยชน ความปลอดภัยของแรงงาน)
	- ด้านสิ่งแวดล้อม (เช่น รายงานด้านสิ่งแวดล้อมของบริษัท การประเมินผลด้านสิ่งแวดล้อม)	- ความยั่งยืนด้านบรรษัทภิบาล: G (เช่น รายงานการจัดการด้านความยั่งยืน ความโปร่งใสของคณะกรรมการ)

ที่มา: http://www.sustainability-index.com/ และ http://www.msci.com/

Let's do some exercises

Testing Person Sustainable (Healthy?)
vs
Testing Countries Sustainable (Healthy?)

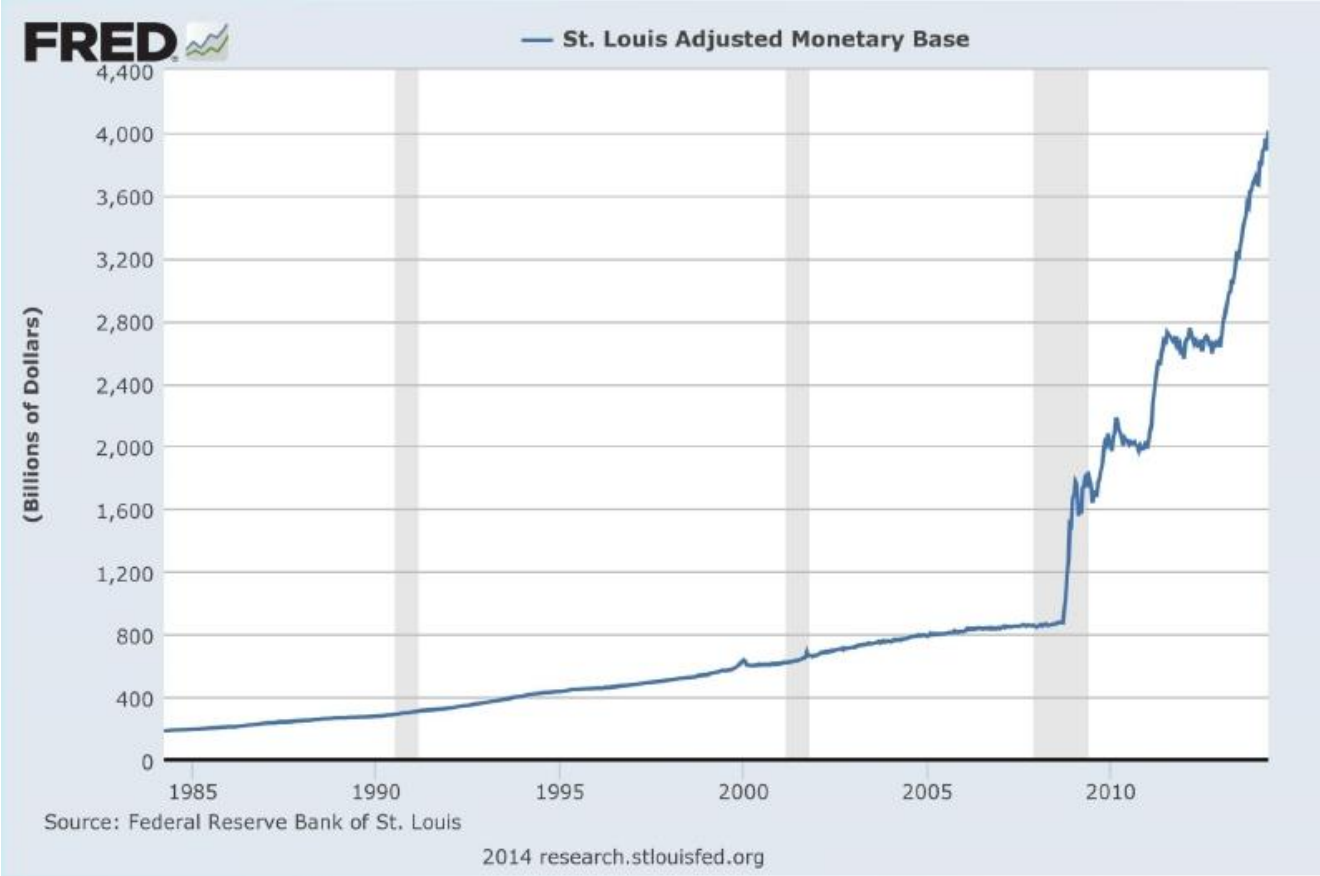
Aim for a Healthy Weight



* Body Mass Index (BMI) = $\frac{\text{Weight (kg)}}{\text{Height}^2 \text{ (metres)}}$

Nutrition Australia
www.nutritionaustralia.org

Short Run: Low Inflation



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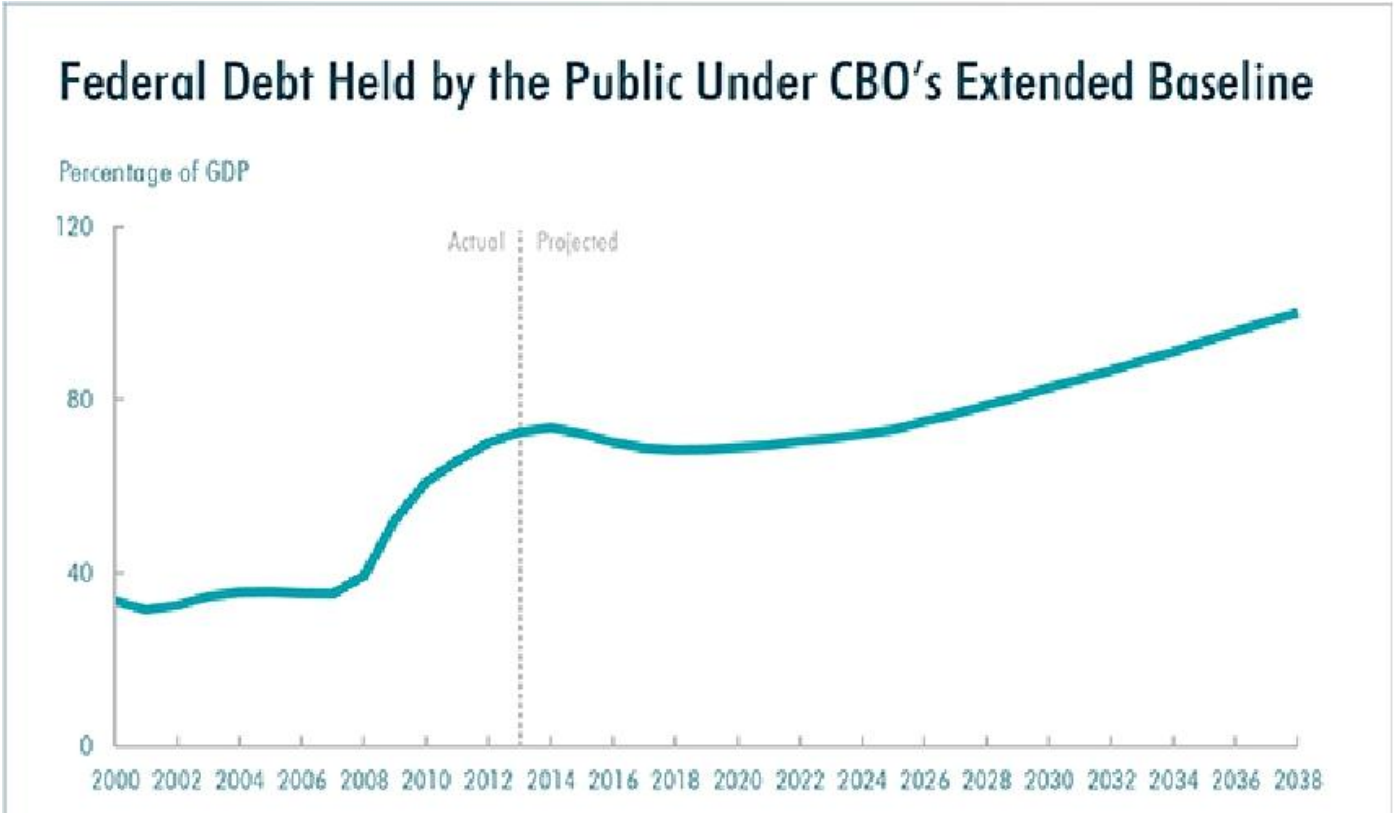
Federal Debt held by Public



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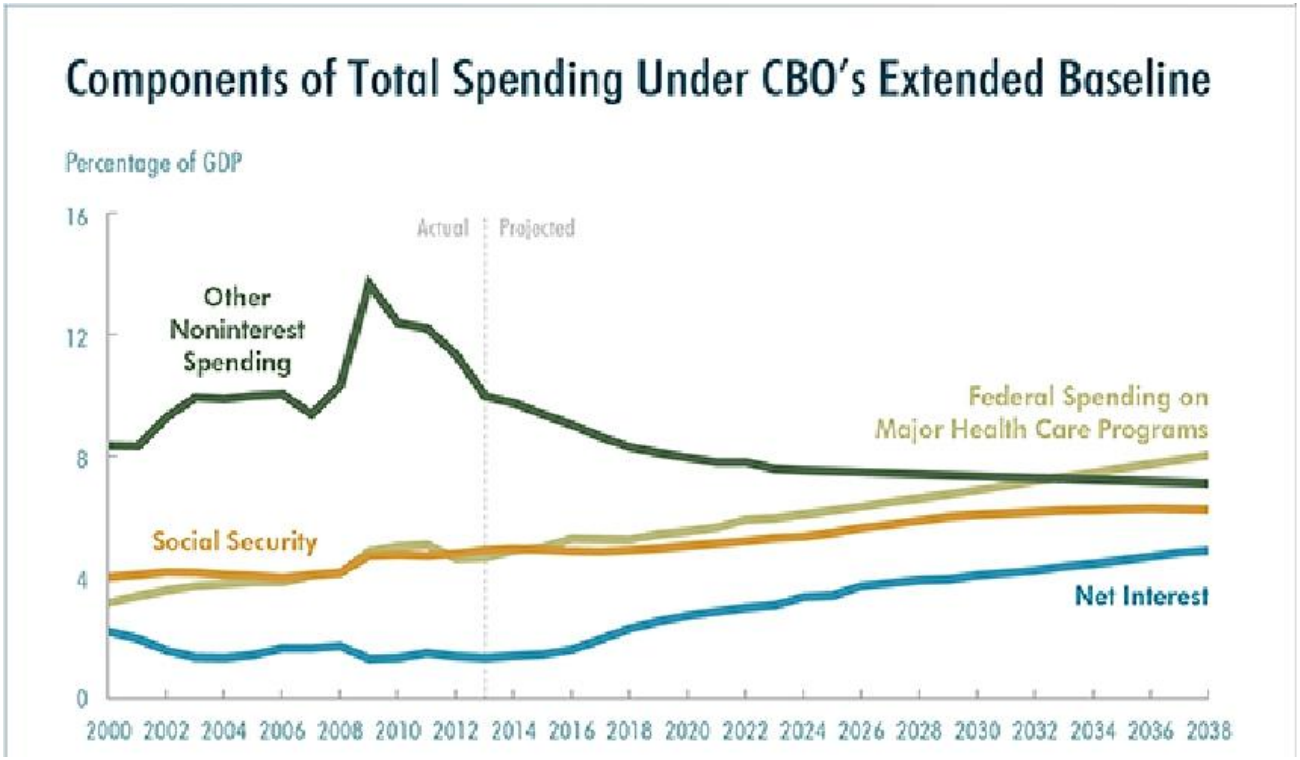
Source: CBO, Long-Term Budget Outlook

Components of Total Spending



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Source: CBO, Long-Term Budget Outlook

Fiscal Balances

	1970	2007	2021 January Baseline
	Percentage of GDP		
Revenues	**19.0**	**18.5**	**20.8**
Outlays	**19.3**	**19.6**	**24.0**
Social Security, Medicare, Medicaid, health insurance subsidies, and other health programs	*3.8*	*8.2*	*12.0*
Defense	*8.1*	*3.9*	*3.6*
Other mandatory spending and nondefense discretionary spending	*6.0*	*5.8*	*5.0*
Net interest	*1.4*	*1.7*	*3.3*
Deficit	**0.3**	**1.2**	**3.2**

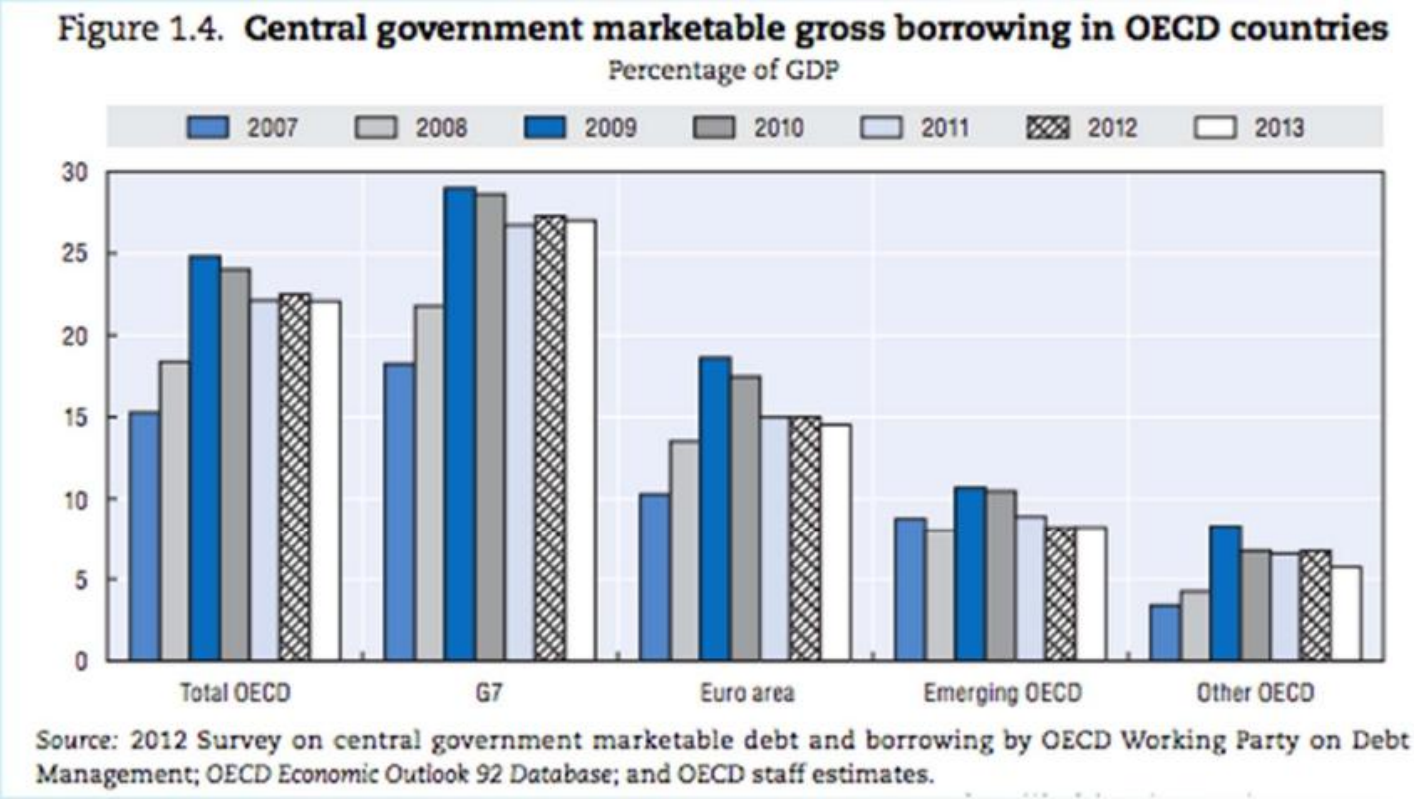
Source: CBO

Fiscal Balances

- Reforming corporate tax code won't raise much revenue

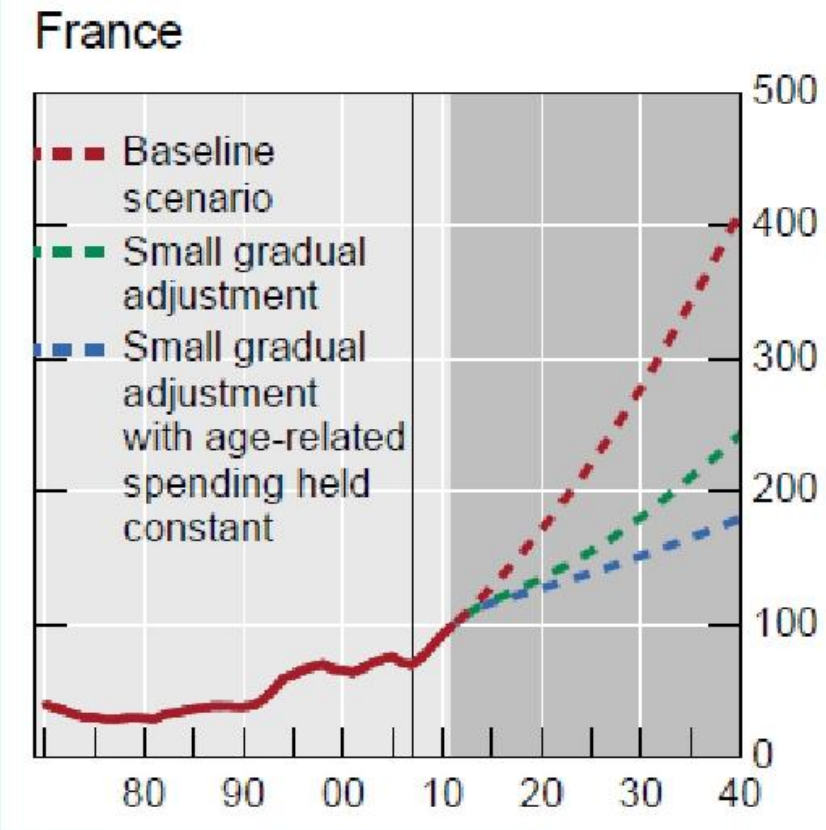
Key Change	What it means?	Cost between 2011-2019
Tax Deferral Rules	Delay Deductions for overseas expenses	$60.1 B
Foreign Tax Credit	Limit the U.S. Credit Firms can take on Foreign taxes paid	$43.0 B
Income Shifting	Harder to shift income from one subsidiary to another	$86.5 B
"Tax Haven" Countries	Require foreign banks to report individual American Accounts	$8.7 B
Total		$198.3 B*

Europe's Major Challenges



Source: OECD

Public Debt/GDP Projections



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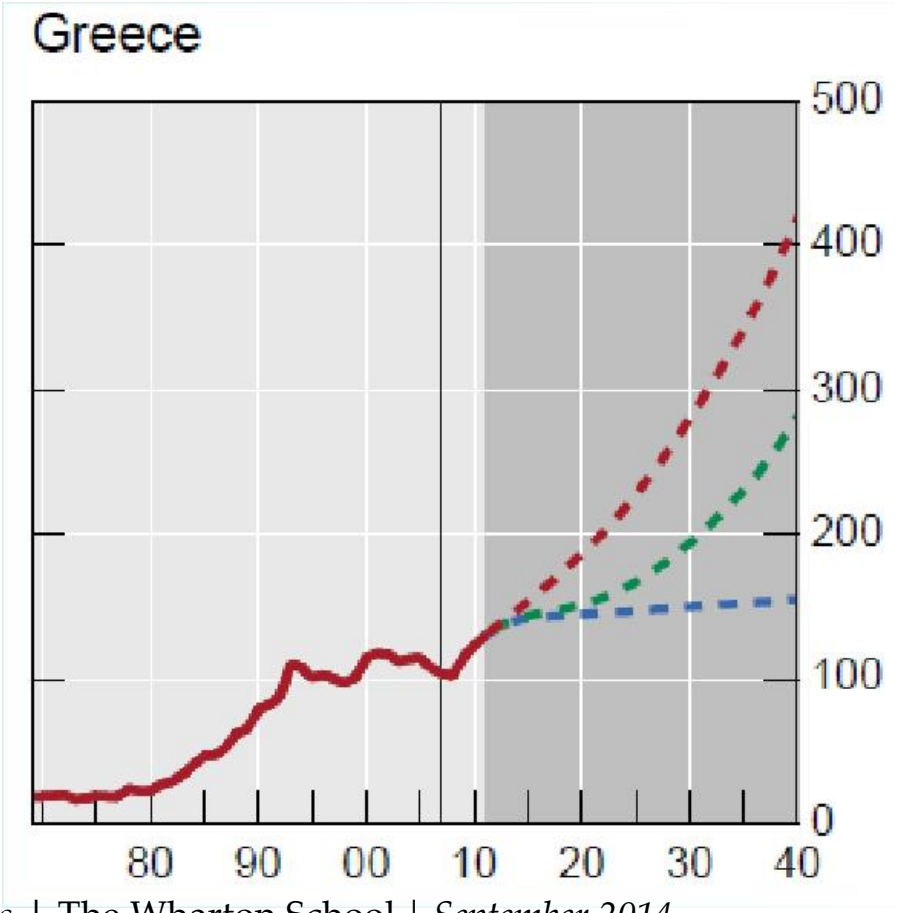
Source: Bank for International Settlements, BIS Working Paper No. 300

Public Debt/GDP Projections



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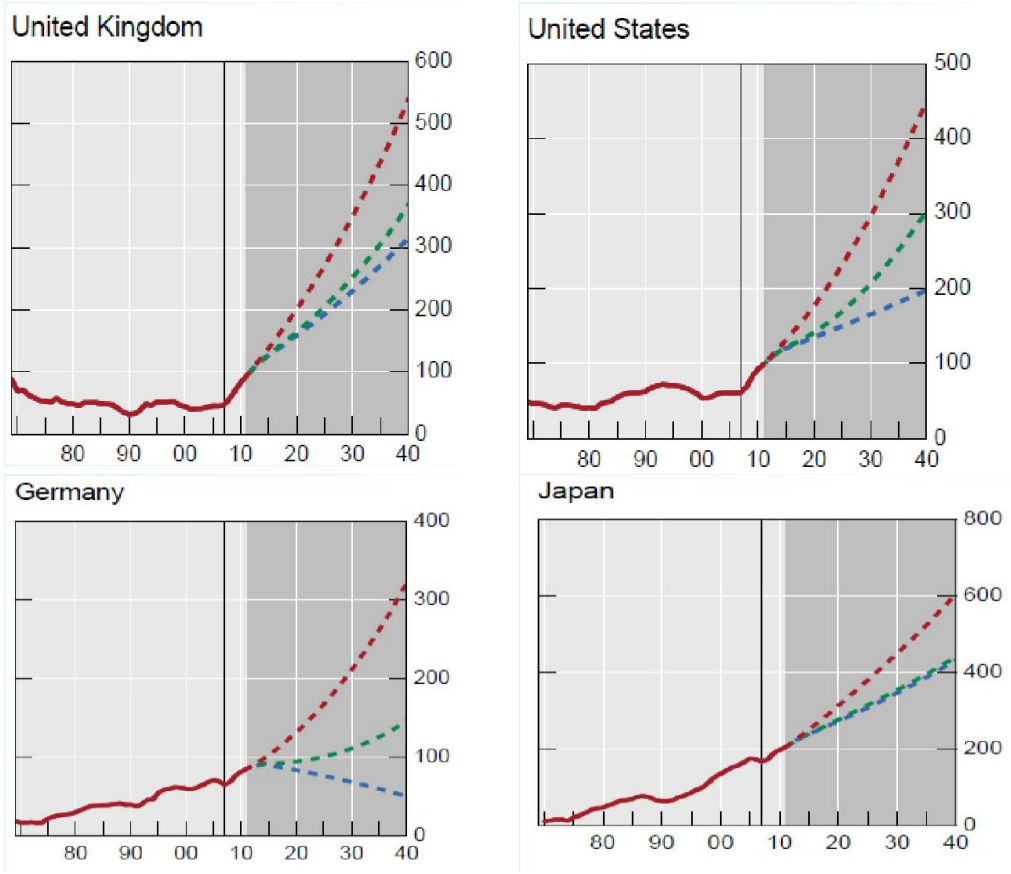
Source: Bank for International Settlements, BIS Working Paper No. 300

Public Debt/GDP Projections



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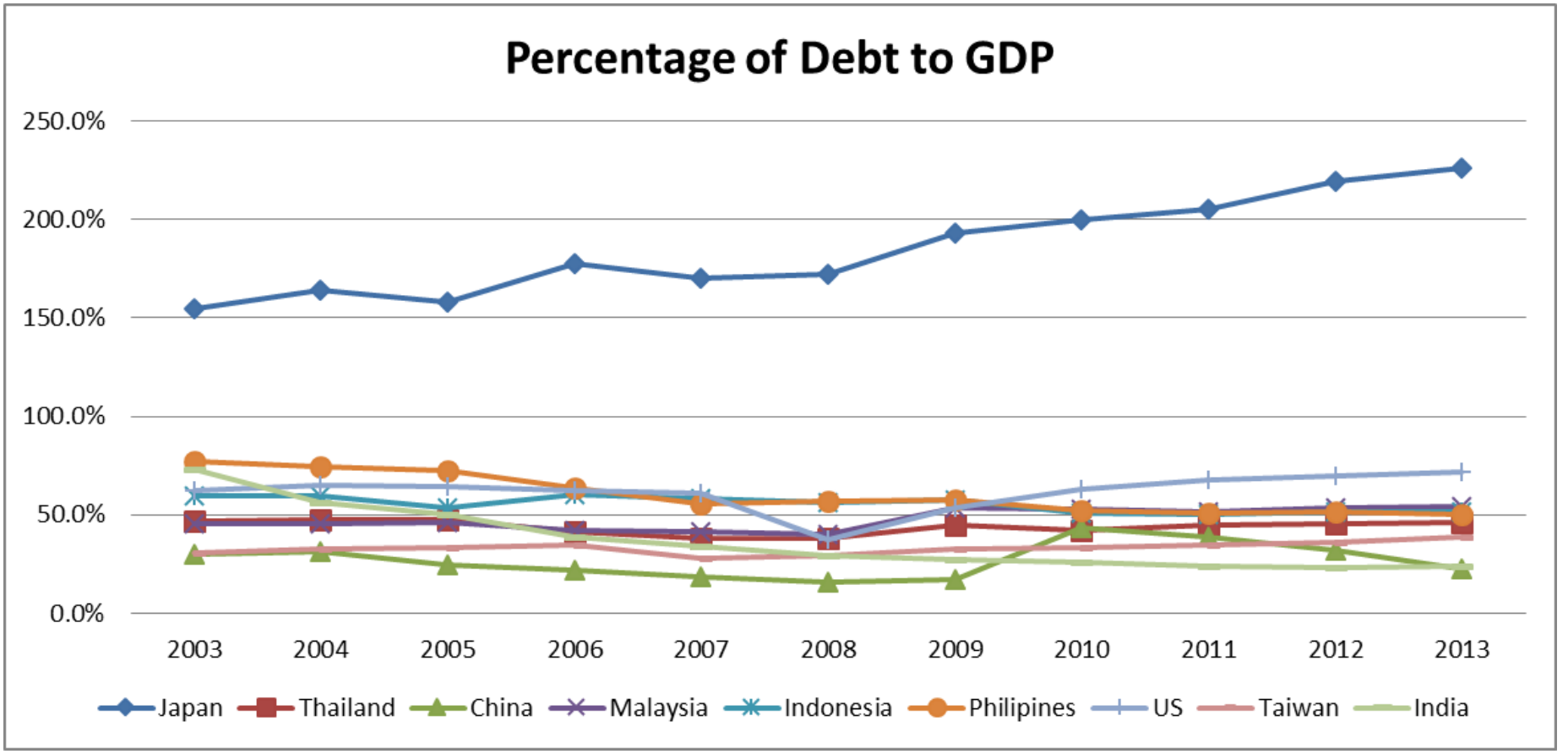
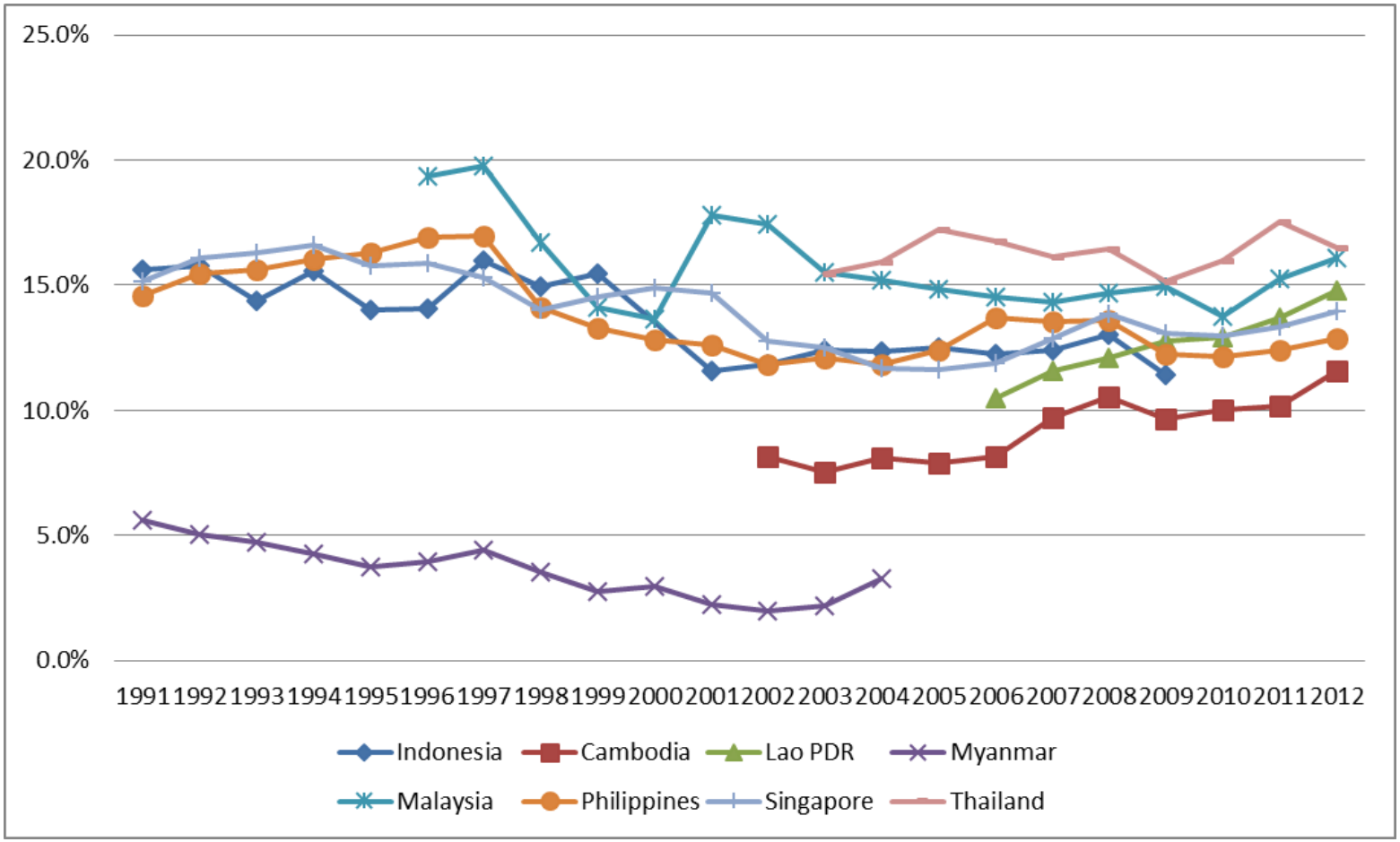
Source: Bank for International Settlements, BIS Working Paper No. 300

Japan and AEC Debt to GDP



Pradit Withisuphakorn, NIDA Business School, 22-Oct-2014

AEC Tax Revenue

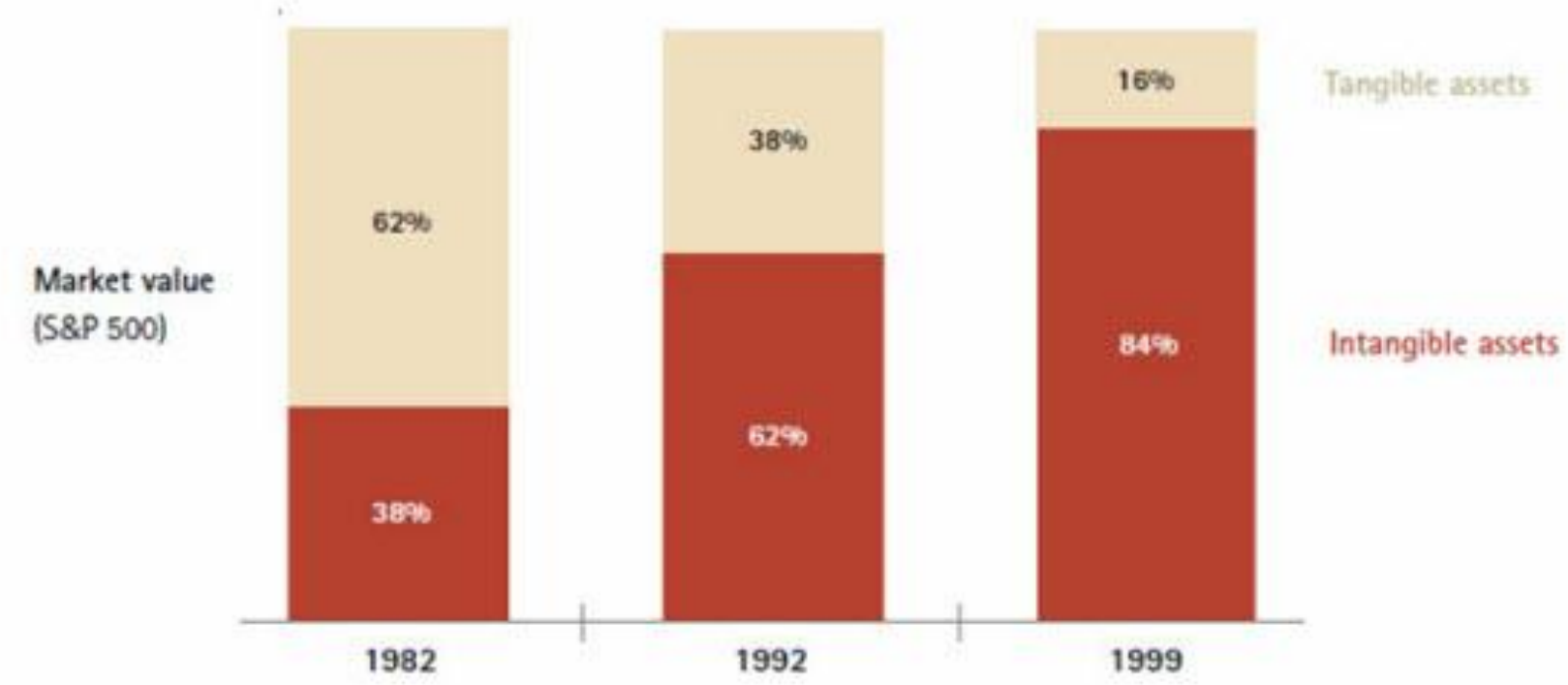


Pradit Withisuphakorn, NIDA Business School, 22-Oct-2014

Changes in Asset Base

Changing asset base

Over two decades, intangible assets became key drive of economy



SOURCE: JUERGEN H. DAUM, *INTANGIBLE ASSETS AND VALUE CREATION*, JOHN WILEY & SONS, 2002

Implications on Financial Market and SEC for Sustainable Economic Development

1. This working paper highlights that the concept for existing economic development and existing theory of financial decision may not bring us to the '**Sustainable Development'** and needs '**CHANGE.'**

2. Furthermore, the financial market and **SEC** can play crucial roles for all aspects in **'Sustainable Development'** including the environmental sustainability, business competitiveness and long term economic sustainability.

3. In order to achieve this end results for Sustainable Economic Development, we need to **modify the way to set "Goal",** the **new perspective on "Process" to reach this goal** (with creative environment for constructive competition plus efficient alternative).

   This is a continuing process which need involvement from all stakeholders in the Financial Market and the Whole Economy. **SEC** will be no longer the regulatory body but **act as agent of 'CHANGE'** for new sustainable financial system and institutionalization.

Concluding Remarks

- From the previous slide, we can conclude that more than 80% of the corporate market values are coming from "Intangible Asset"
- Furthermore, almost 100% of "Intangible Assets" are creating from "Human Capital" (Innovation, Creativities, Intellectual Properties, etc.)
- Therefore, there are a lot more hidden value (in Human Capital) which are much more valuable than the whole global wealth and assets value nowadays.
- For all these reasons, it is unreasonable to see the poor people who has no access to the basic need; Furthermore, there should be plenty of room for these poor people to become the future engine of growth and sustainable development.

Concluding Remarks

- Goal of development must be beyond GDP and has more than 1 dimension
- Government must be smaller and the private sector will become bigger and much more importance in business, social and economic development
- Financial Market and private firms with good governance can play more crucial roles than the government in the "Sustainable Development."
- The number of **Obese** (1 billion persons are dying from illness which are directly related to the overweight eating behavior) is now bigger than the **Hunger** (800 million persons are dying because of insufficient food) . this is the key evidence to prove that our world has more than enough resources for existing population if we can manage and balance and sustainable development in all level starting from personal sustainable, corporate sustainable and country sustainable.

[**Obese** is becoming the big problem in rich countries who over consumed;

Hunger is the long term problem of people in the poor countries]