



Curtailing PPP Infrastructure Costs: Learning from International Experiences

Presenter
Abdullahi Umar , MRICS, PMP,



Presentation outline

- 1. Current state of our infrastructures*
- 2. Impact of poor infrastructures on Economic growth*
- 3. PPPs- what are they?*
- 4. PPPs- historical chronology of their use*
- 5. PPP performance so far*
- 6. The problem: interest rates*
- 7. International Experiences*
- 8. conclusion*

Q & A



Current state of our infrastructure

Current state of OUR Infrastructure

Poor infrastructure in sub-Saharan Africa has been found to **depress firm productivity by around 40 percent** (World Bank, 2013).

92 million Nigerians lack access to electricity, worst globally – Report

5th June 2022



| By Tunde Ajaja

Kindly share this story:



Impact of poor infrastructure on Economic Growth and development

Impact of poor infrastructure - Energy

- ✓ For every 1MW increase in electricity, **extra productivity of \$1,120–\$1,740** is achieved (Morimoto & Hope, 2004).
- ✓ **48 countries in sub-Saharan Africa** use the same energy as Spain (World Bank, 2013) and only **31.7%** have access while **the number without access is rising** (IEA, 2014)



Impact of poor infrastructure -Transport sector

- Over 4,971 accident deaths in 6 months! (4th quarter 2017 to 1st quarter 2018)
- **37,562 road accident deaths in 2017 alone!** (WLE, 2017)



~~THOUGHTS~~
~~& PRAYERS~~
POLICY
CHANGE

fabianb

Impact of poor infrastructure - Transport

Poor roads **reduce the useful lifespan of vehicles and increases maintenance costs** (Teravaninthorn & Raballand, 2008, pp. 80-81)

Sub-Saharan Africa lags behind all other regions of the world in all infrastructure class **except unpaved roads** (Loxley, 2013)



Impact of poor infrastructure - Education

Students in well designed and maintained schools have higher scores in Mathematics and Reading standardized tests (Kweon et al, 2017)



Impact of poor infrastructure-Water Sector

- ❑ **Africa losses \$28.4 billion annually** due to time spent by households in search for water (UN-Water,2009)
- ❑ **A return of \$3-\$34 can be achieved for every \$1 invested in water depending on the region & type of technology** (Hutton & Hutton, 2004; Hutton 2012)
- ❑ **45,000 children** under the age of five **die from diarrheal diseases** in Nigeria (Water Aid, 2016)



Impact of poor infrastructure-Water Sector

- ❑ **Arsenic-related diseases:** lung, bladder and skin **cancers**, **diabetes mellitus** and **Hypertension** (Rahman *et al.*, 1998; Rahman *et al.*, 1999; National Research Council, 1999; Smith, *et al.*, 2000; National Research Council, 2001; WHO, 2011, p. 5).
- ❑ **Safe water reduces child mortality by 8% and 26%** in urban and poorer neighbourhoods respectively (Galiani, *et al.*, 2005)



Sustainable Development Goals(SDGs)

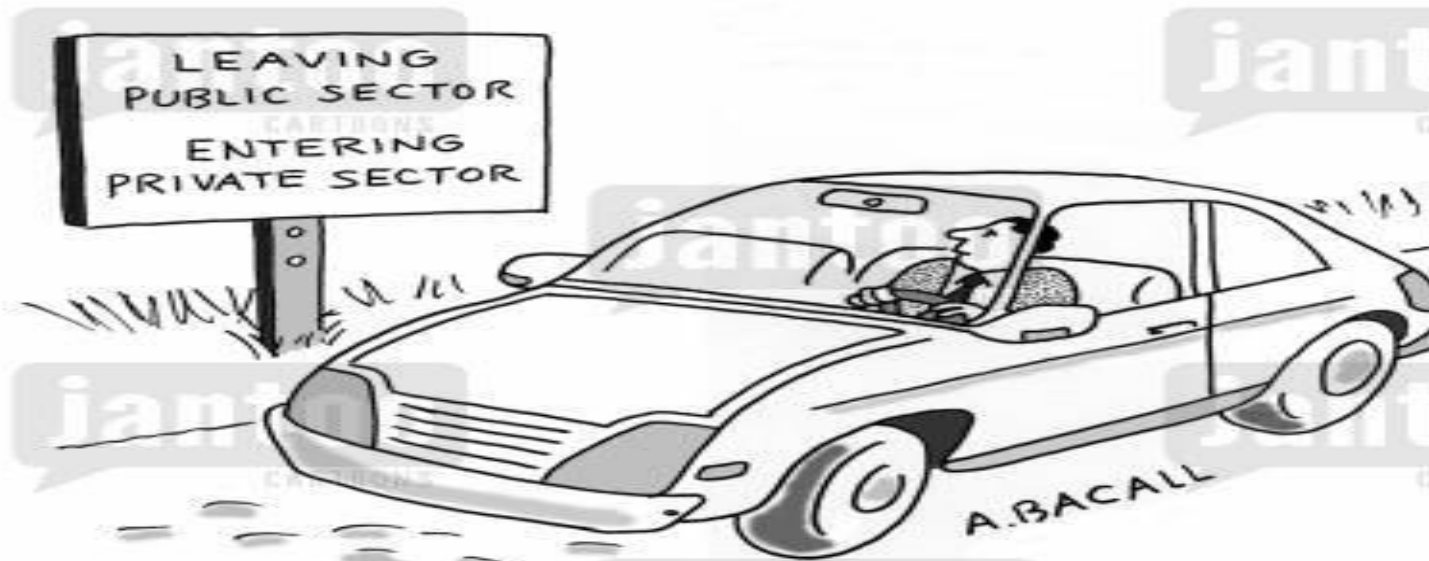
SDGs: On September 25th 2015, countries adopted a set of goals to **end poverty, protect the planet and ensure prosperity for all**



PPPs: What are they?

Defining PPPs...

- **Public-Private Partnerships (PPPs)** is simply a **partnership** between a **government** and a **private company** usually a consortium for the provision of **public services** under contract for a **specific duration** and a specified **'minimum' quality** in return for **availability or performance payment** to the private company. **The project is returned to the government** at the end of the concession period. (*Fewings, 2005; Yong, 2010; Yescombe and Farquharson, 2018*)



Forms of PPPs...

Other names for PPPs include:

- 1. PFI and PF2 (UK)**
- 2. PSP, PPP (Europe)**
- 3. PFP (Australia)**
- 4. PPI (World Bank)**
- 5. BOT**
- 6. BLT**
- 7. DBFO**
- 8. P3 (Canada & U.S)**



A Historical Chronology of PPPs

1. Perrier brothers concession in Paris 1782
2. Philadelphia & Lancaster Turnpike 1792 (USA)
3. The Suez Canal concession in 1869
4. Hong Kong cross harbour tunnel 1950s
5. Orzal Targut's tolled roads in Turkey 1982
6. Sydney monorail by TNT harbour link 1988
7. Second Severn Crossing & Skye Toll Bridge UK 1992

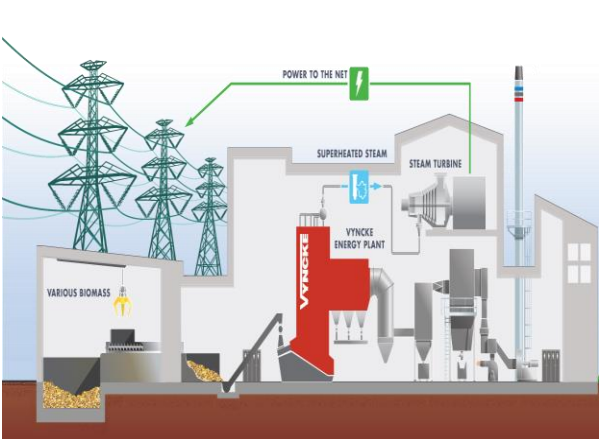
*UK is still the largest and most diverse PPP market with over 700 projects
(Thomson & Goodwin, 2005)*

Where can we use PPPs?



Types of payment structures

1. **Offtake:** Electricity-IPPs (Take or Pay)
2. **User-pay:** Railways, Airports, Museums, Water supply and sanitation, Tolled Roads and Bridges, Public housing
3. **Availability payment:** Schools, Hospitals, Government Buildings, Military
4. **Shadow tolls:** Roads and Bridges

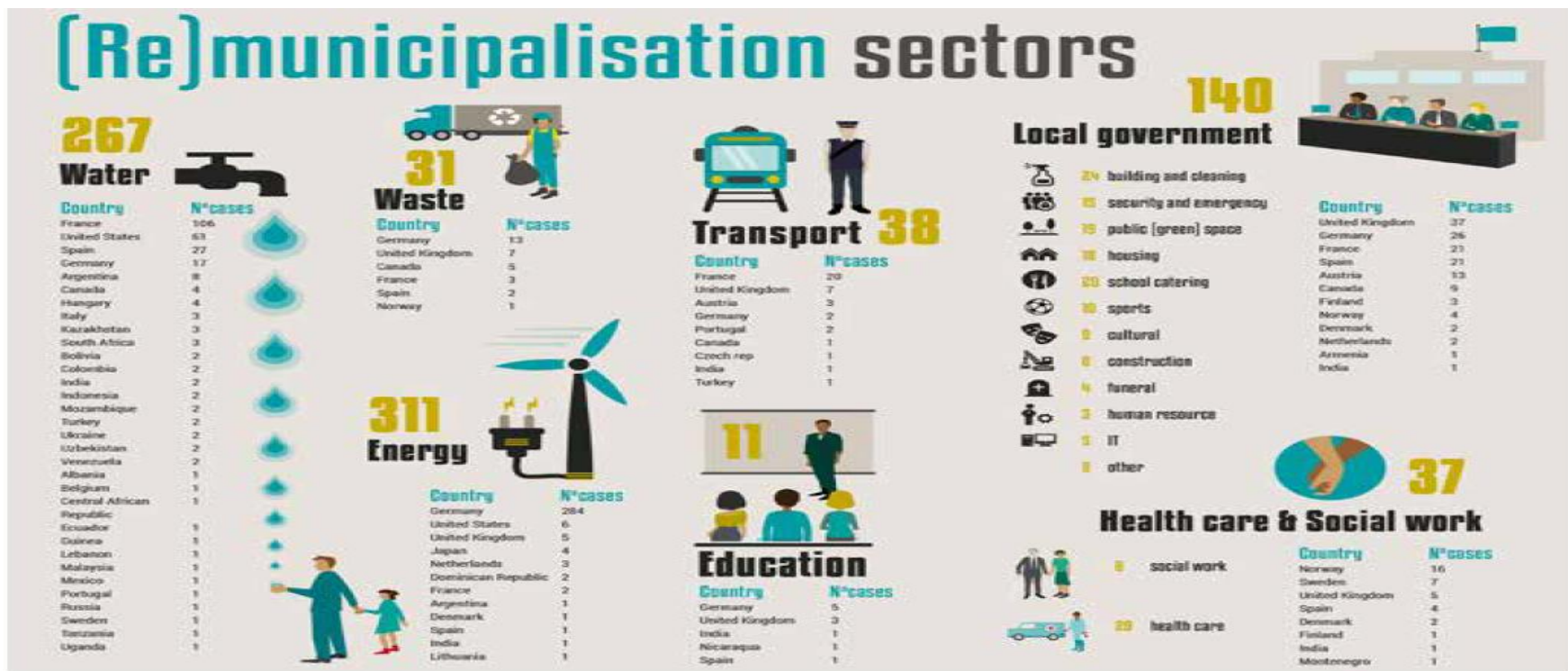


“If you’re a *Good Public Sector*, you shouldn’t need PPPs. *If you’re bad, you shouldn’t go near them!!!*”

(Robert Bain, Review of Lessons from Completed PPP Projects Financed by the European Investment Bank, 2009)

835 cancelled PPP contracts...since 2010!

✓ Mehra, (2005) documented **over 100 PPPs** in Canada, Australia & UK in her report: *Flawed, Failed, or Abandoned*.



PPP Performance – “Water Sector”

- 1) In 2014 alone, **59 PPPs** were cancelled in the U.S with **49 cancelled in France** all in the water sector (Lobina, et al., 2014).
- 2) **Privatised water is 16% more expensive** than public water provisions (Lobina, 2014)



PPP Performance – “Energy”

- 1) In Germany, **72 privatised energy generation and supply contracts have been cancelled** (Wagner & Berlo, 2015).
- 2) Electricity market reforms in **UK, Alberta (Canada) and California** have **failed to deliver reliable services at low and stable prices** (Woo et al., 2003)

ENERGY PPPs STATUS

	ENERGY PPPs STATUS		
1	Chad	STEE	Cancelled
2	Gambia	MSG	Cancelled
3	Senegal	SENELEC	Cancelled
4	Rwanda	Kibuye Power	Cancelled
5	Mozambique	Energia de Mocambique	Cancelled
6	Gabon	Gabon (SEEG)	Distressed

PPP Performance - “Transport”

- ✓ **All rail PPPs in the UK have been cancelled** [*London Underground, Railtrack & Metronet*] (Hall, 2015)
- ✓ **Over 80% of PPP deals closed in Europe between 2015-2016 are Government-pay PPPs** (*EIB, 2016*)



PPP Performance -Prisons



Sections

The Washington Post
Democracy Dies in Darkness

\$0.99 every four weeks

National

Kids-for-cash judge loses bid for lighter prison sentence

THE 7 FROM The Washington Post

Seven key points to start your weekday.

Sign up here →

PPP Performance – “Health/Hospitals”

- ❑ The United States stands out for **cost-related access barriers** and **less-efficient care**. (Scheon et al., 2007)
- ❑ La Trobe Hospital sued the Government of Victoria in Australia because it was **not making enough profits!** (Mehra, 2005)



PPP Performance - “Education”

- **9 out of the 10 lowest rated schools** were procured using PPPs ([CABE, 2006](#))
- **Only 3 of the top 10 excellent schools** were procured using PPPs.



PPPs incompatible with Sustainability

INDUSTRY

'Buy more electricity or be disconnected'

Published August 2, 2019

KINDLY SHARE THIS STORY



**PUBLIC-PRIVATE
PARTNERSHIPS**



Growing PPP Debts

Barcelos in Portugal will require **528 years** to fulfil its PPP liabilities! ([Up to the Last Drop Documentary](#))

RE PREMIUM INDY/LIFE INDYBEST INDY100 MY INDEPENDENT VOUCHERS COMPARE

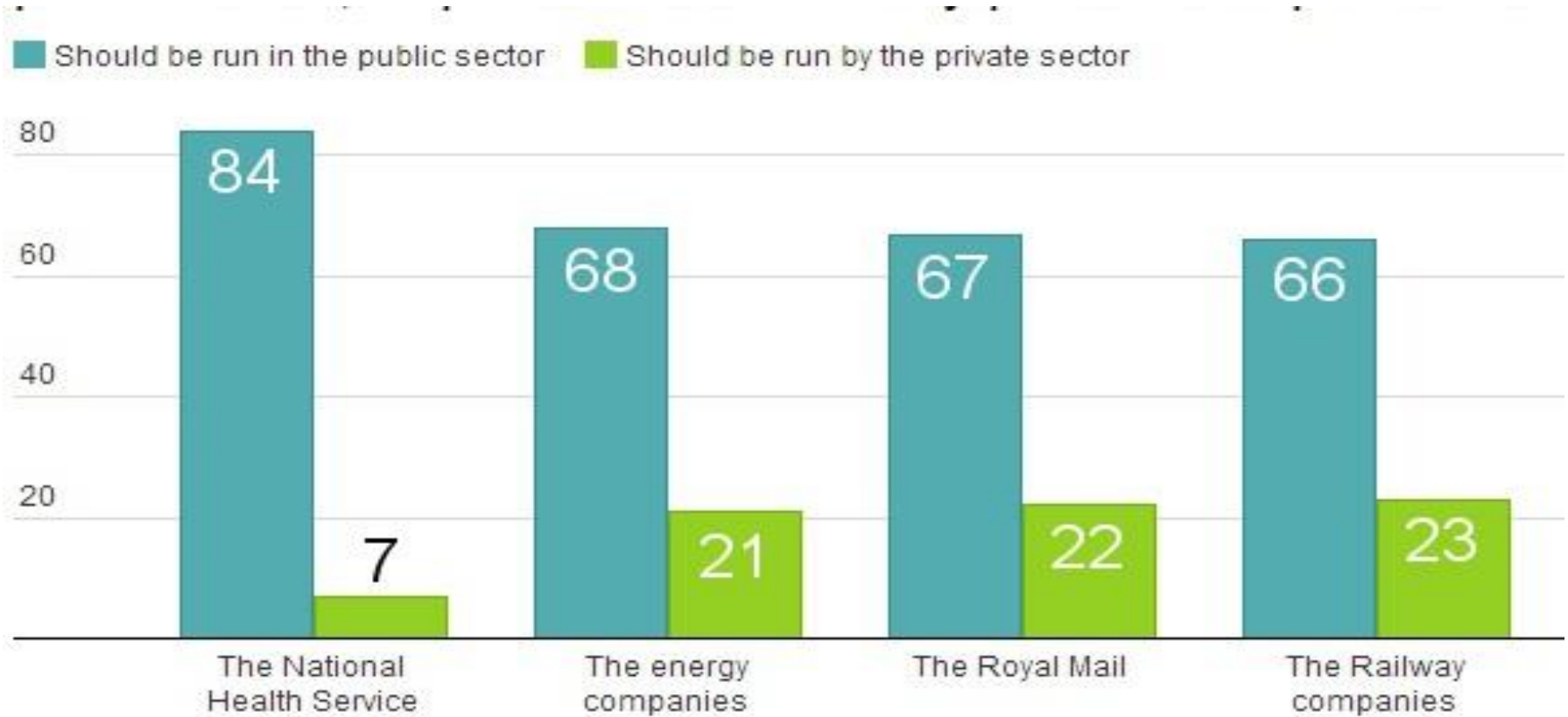
Crippling PFI deals leave Britain £222bn in debt

Exclusive: Treasury data analysis unearths the 'enormous financial disaster' of Private Finance Initiatives

Jonathan Owen • Saturday 11 April 2015 21:26 • [Comments](#)



A survey of UK residents: **Public or Private ?**



Source: **YouGov**

**The Surgery was
successful but
the patient died**

Unbundling power utilities is good but does not ensure adequate availability and performance (PPIAF, 2016)



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News & Analysis

UK abolishes PFI as 'days of the public sector being a pushover' end

Chancellor Philip Hammond insisted present contracts will be honoured but vowed to never again sign a PFI or PF2 project.

By Zak Bentley - 30 October 2018

Share A+ 100%

UK Chancellor Philip Hammond yesterday brought the curtain down on the Private Finance Initiative, 26 years after it was first introduced.

HIGH LEVEL INAUGURAL PPP CONFERENCE 2019

Public Private Partnerships AFRICA'S NEXT BIG THING

"In Focus People First Principles In Support of UN Sustainable Development Goals"

16 - 18 Sept, 2019 | Kampala Serena Hotel

HON. Matia Kasajja
Minister of Finance, Planning and Economic Development Uganda

H.E Yoweri K. Museveni | Guest of Honor

HON. Sam Kutesa
Minister of Foreign Affairs Uganda

SPEAKERS AND PANELISTS

Patrick Bwalya Kitali Minister of Energy, Water and Power Development, Uganda	Et. Hon. Bwalya, Odiya Minister of Energy, Water and Power Development, Uganda	Ms. Rosy Mwangi Minister of Energy, Water and Power Development, Uganda	Ms. Bobi Eshunah Vice President, UWEA, Uganda	Geoffrey Hamilton CEO, Uganda Investment Authority, Uganda	Dmitry Potchev President, UWEA, Uganda	Mungu Bardi Director General, UWEA, Uganda	Ziad Alexander Hayek President, UWEA, Uganda
Harold Mubungi Minister of Energy, Water and Power Development, Uganda	Eng. Chidi K.C. Mwanuzi Minister of Energy, Water and Power Development, Uganda	Ms. Justine Mwanuzi Minister of Energy, Water and Power Development, Uganda	Hon. Bwalya Mwangi Minister of Energy, Water and Power Development, Uganda	Eng. Peter Mwanuzi Minister of Energy, Water and Power Development, Uganda	Dr. Rony Hemedi Minister of Energy, Water and Power Development, Uganda	Ms. Yvonne Mwanuzi Minister of Energy, Water and Power Development, Uganda	David Bwalya Minister of Energy, Water and Power Development, Uganda
Harold Mubungi Minister of Energy, Water and Power Development, Uganda	David A. Dodd Minister of Energy, Water and Power Development, Uganda	Patrick Nwagwu Minister of Energy, Water and Power Development, Uganda	Christophe DCCAB Minister of Energy, Water and Power Development, Uganda	Paul Nwagwu Minister of Energy, Water and Power Development, Uganda	Eng. Zina Mwanuzi Minister of Energy, Water and Power Development, Uganda	Ms. Yvonne Mwanuzi Minister of Energy, Water and Power Development, Uganda	Ms. Yvonne Mwanuzi Minister of Energy, Water and Power Development, Uganda

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PPPs: The problem

Areas of concern for PPP Researchers

PPPs have 3 characteristics that deserve research;

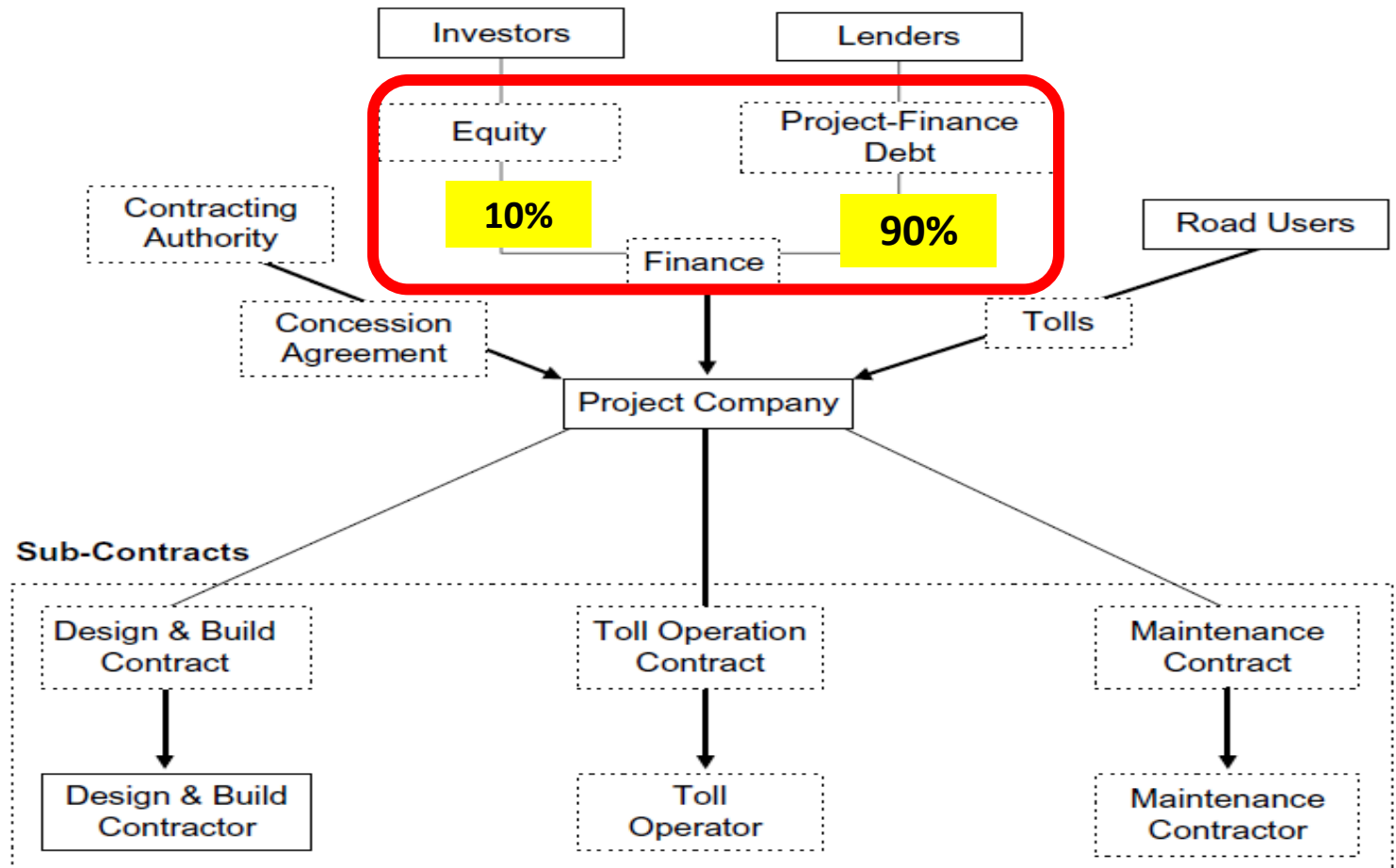
1. The **use of private finance**,
2. The **complexity** associated with the long-term contracts,
3. The **governance** of such long-term contracts.

The **outcome of the first two** has **major implications** for the third (Hodge, 2006)



"WHILE DOING THE RESEARCH, KEEP IN MIND THERE ARE ONLY TWO KINDS OF FACTS... THOSE THAT SUPPORT MY POSITION... AND INCONCLUSIVE."

Typical Financial Structure of a Tolled Road PPP



High Leverage = Higher ROE

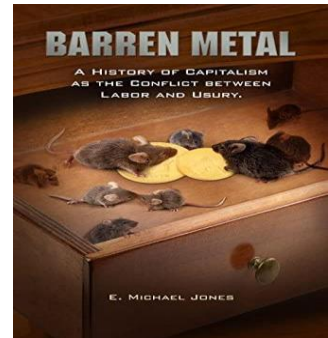
Table 2.2 Benefit of Leverage on Investors' Return

		Low Leverage	High Leverage
Project cost		1,000	1,000
a) Debt		300	800
b) Equity		700	200
c) Revenue from project		100	100
d) Interest rate on debt (<i>p.a.</i>)		5%	7%
e) Interest payable	[(a) × (d)]	15	56
f) Profit	[(c)–(e)]	85	44
Return on equity	[(f) ÷ (b)]	12%	22%

Source: Yescombe, 2014

Impact of Debts on PPPs

- ❑ The **pricing of products was more related to interest rates** rather than Quality or the people's needs (Gesell, 1904)
- ❑ **Over 90% of privatised energy projects** face **financial stress** involving **cash flow shortage** (PPIAF, 2005).
- ❑ The **interest-bearing debt** used in financing these PPP projects **is a major cause of the problems** (Gaffney & Pollock, 1999).
- ❑ The **high financing costs** associated with these **highly leveraged structures are passed on to customers** (Bayliss, 2017).



“Interest rates impact”

- ✓ The Compound interest formula is an **exponential function** (Greco, 1990)

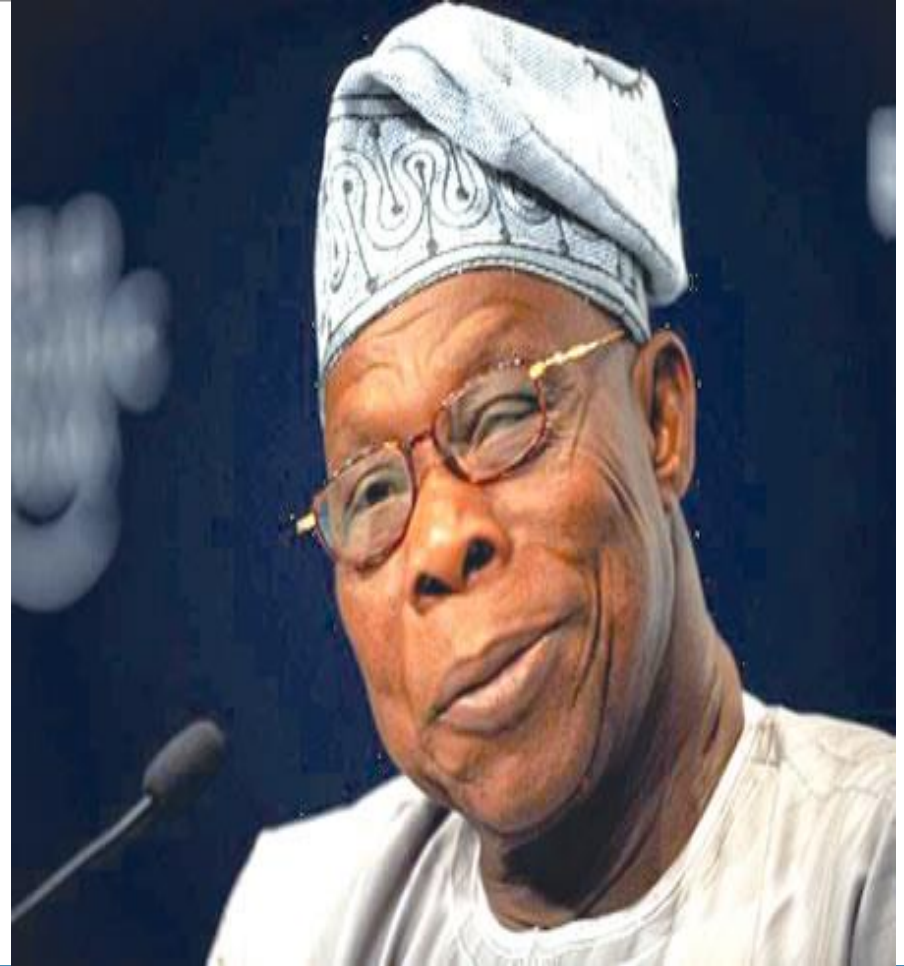
$$A=P(1+i)^n$$

- ✓ Nothing can satisfy an appetite **as voracious as** one generated by **compound interest** (Jones, 2014)
- ✓ A **1% reduction in interest rates** would result in **annual savings of £400 million** from UK’s £40 billion PPP projects (House of Commons Treasury Committee, 2011).
- ✓ Risky Behaviours & financial practices (**Mark-to-market, CDOs, CFDs, CDSs, OTC Derivatives**)
- ✓ The poor are punished for being Poor



Compound interest!

Obasanjo: “All that we had borrowed up to 1985 or 1986 was around **\$5 billion** and we have paid about **\$16 billion** yet we are still being told that we owe about **\$28 billion**. That \$28 billion came about because of the injustice in the foreign creditors’ interest rates. **If you ask me what is the worst thing in the world, I will say it is compound interest.**”
(Jubilee 2000 news update, 18 August 2000)



...and God warned us!

World Religions & INTERESTS!

- ❑ **Usury** originally and simply meant the practice of **charging interest on loans** (Sandberg 2013).
- ❑ Prohibitions against interest can be found in the traditions of **all the major religions: Buddhism, Hinduism, Judaism, Christianity & Islam.**
- ❑ The biblical (Matthew 21:12) story of how Jesus cast the **moneylenders** out of the temple as cited by Sandberg (2013) is a prime example.
- ❑ Dante's Inferno

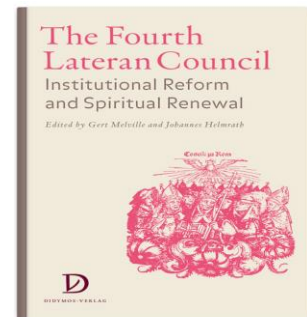


Judaism & Christianity on INTERESTS!

- **Judaism on Interests:** *“Under Talmudic law, it is not only the creditor who takes interest who is violating the biblical prohibition, but also the debtor who agrees to pay interest, the guarantor who guarantees the debt which bears interest, the witnesses who attest the creation of an interest-bearing debt, and even the scribe who writes out the deed”* (Cohn, 1971 pp.17-33).
- **The Bible on Interest:** *Deutronomy 23:19; Leviticus 25:36; Nehemiah 5:7; Psalm 15:5; Ezekiel 18:8; Ezekiel 22:12*
- Under the **Council of Vienne (1311)**, Pope Clement V **“allowed excommunication of princes, legislators and public authorities who either utilized or protected usurers, or who sought to distinguish between allowable interest and usury** (Jones, 1989).

The Church ban on INTERESTS: 1139AD-1517AD!

1. Second Lateran Council 1139 AD under Pope Innocent II
2. Third Lateran Council 1179 AD under Pope Alexander III
3. The Fourth Lateran council 1215 AD under Pope Innocent III
4. First Council of Lyons 1245 AD under Pope Innocent IV
5. Second Council of Lyons 1274 AD under Pope Gregory X
6. Council of Vienne (1311-1312 AD) under Pope Clement V
7. Council of Basel-Ferrara-Florence 1431-49 AD under Pope Eugenius IV
8. Fifth Lateran Council 1512-17 AD under Pope Leo X



Islam & interests!

1. Quran, Al-Baqarah, Chapter 2, Verse 275
2. Quran, Al-Baqarah, Chapter 2, Verse 276
3. Quran, Al-Baqarah, Chapter 2, Verse 278
4. Quran, Ali-Imran, Chapter 3, Verse 130
5. Quran, An-Nisa, Chapter 4, Verse 161

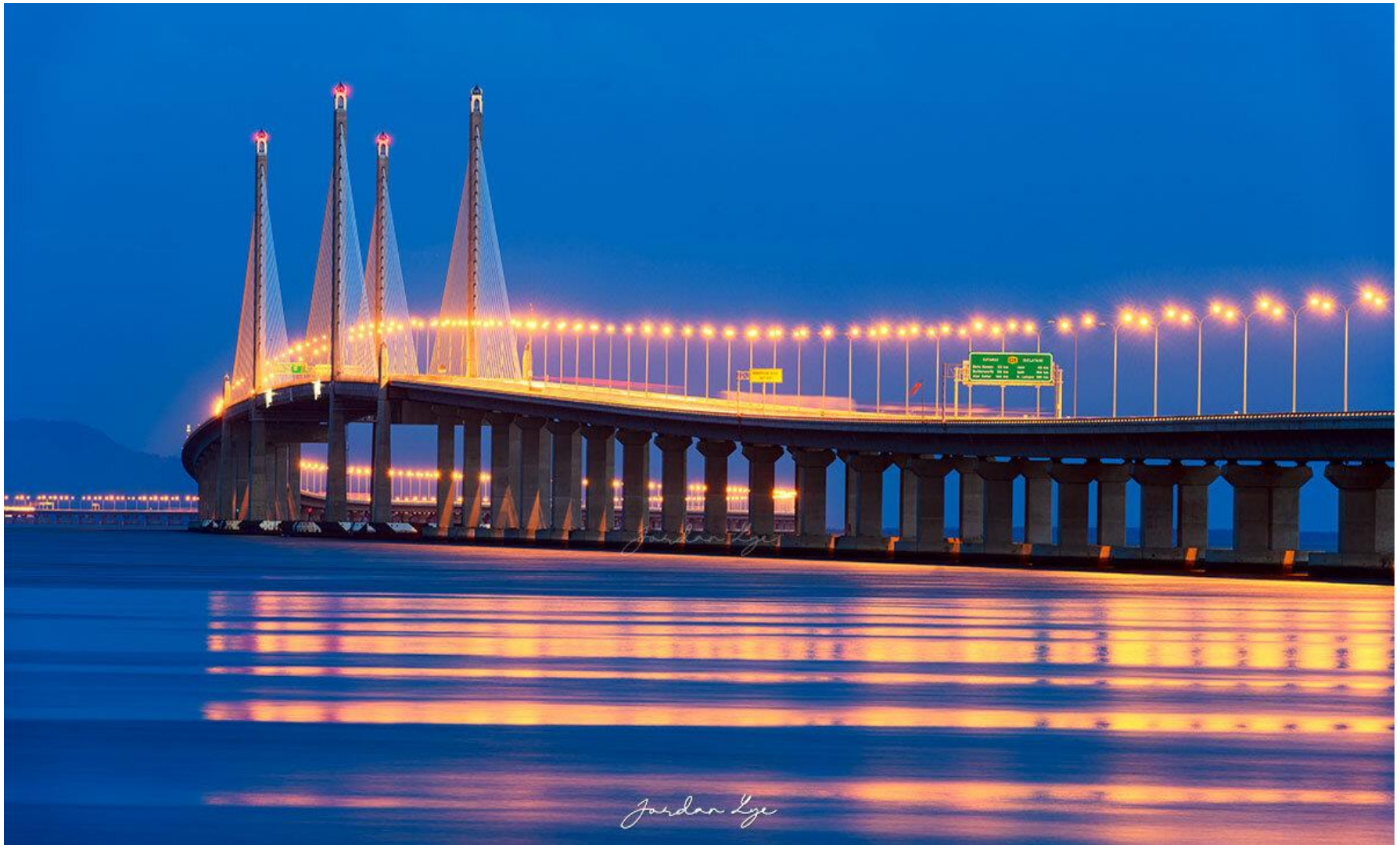


❑ O you who believe! Be afraid of Allah and **give up what remains (due to you) from Riba** (usury) (from now onward), **if you are (really) believers.** (Quran Chapter 2, Verse 278)

❑ “If ye do it not, **Take notice of war from Allah** and His Messenger: But if ye turn back, ye shall have your capital sums: Deal not unjustly, and ye shall not be dealt with unjustly (**Verse 279**).

Learning from International experiences

Second Penang Bridge-Malaysia



Jordan Lye

Govts as Equity investors

(Kuwait 50-50: Law No. 116/2014)



Salik Electronic Toll - Dubai



Sukuk-financing



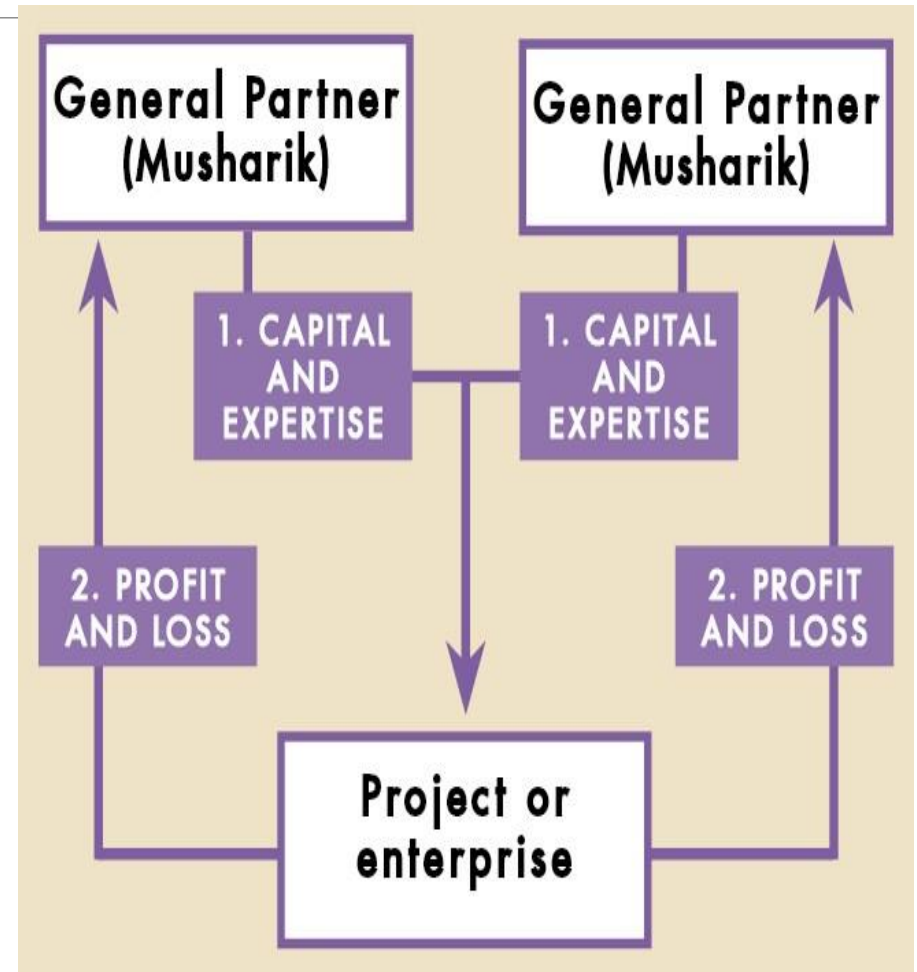
Defining Sukuks & Bonds

- ❑ **Sukuks** are certificates of equal value **representing undivided shares in ownership of tangible assets**, usufruct and services or (in the ownership of) the assets of particular projects (AAOIFI)
- ❑ A **Bond** is defined as a **pure debt security** issued to finance any activity and whose price solely **depends on the creditworthiness of its issuer** (Godlewski et al., 2011).



Sukuk-financing: The instruments

1. Mudarabah
2. Murabaha
3. Istisna
4. Ijarah
5. Musharakah



Sukuk vs Bonds

There are five important differences between sukuk and traditional bonds:

1. Sukuk indicate **ownership of an asset**. Bonds indicate a **debt obligation**.
2. Sukuk are priced **according to the value of the assets backing them**. Bond pricing is **based on credit rating**.
3. Sukuk can **increase in value when the assets increase in value**. Profits from **bonds correspond to fixed interest**.
4. When you sell sukuk, you are **selling ownership in the assets backing them**. The **sale of bonds is the sale of debt**.
5. The assets that back sukuk are **compliant with Shariah**. Assets backing bonds may include **products or services that are Non-halal or Harmful**.

Sukuks...are they for only Muslims...?

S/No	Country	Dominant religion	Percentage of Muslims	Value of sukuk (\$'Million)	Number of Issues
1	Germany	Christianity	3.7%	55	1
2	Singapore	Buddhism	14.3%	711	4
3	Luxembourg	Christianity	2.2%	280	3
4	South Africa	Christianity	1.5%	500	1
5	United Kingdom	Christianity	4.4%	1,028	8
6	Hong Kong	Buddhism	4%	2,196	4
7	Japan	Shintoism	0.06	190	3
8	France	Christianity	9%	1	1
9	United States	Christianity	0.9%	1,367	5
10	China	Buddhism	1.8%	97	1
Source: IIFM Sukuk Report, 5th Edition, 2016					

Sukuks...the World Bank is onboard!



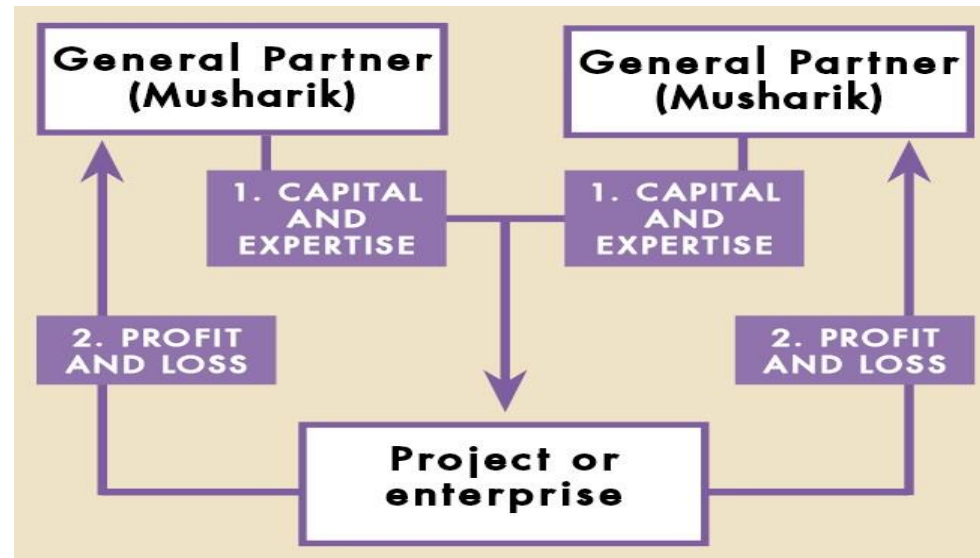
MOBILIZING ISLAMIC FINANCE FOR INFRASTRUCTURE PUBLIC- PRIVATE PARTNERSHIPS

REPORT 2017



Projects involving Sukuks

1. **Maconda park apartments-United States**
2. **The International Finance Facility for Immunisation-UK**
3. New Doha International Airport –Qatar
4. East Klang Valley Expressway-Malaysia
5. Doraleh Container Terminal-Djibouti
6. **F1 International Circuit -Bahrain**
7. Dukhan Highway -Qatar
8. KLIA 2-Malaysia
9. Queen Alia airport-Jordan
10. Bibiyana power plant-Bangladesh
11. Konya hospital-Turkey
12. Jimah East Power project-Malaysia



Emerging Challenges: Sukuk Defaults

- ❑ Recent **sukuk defaults** have raised several questions about the viability of sukuku (Dana Gas Dubai, Kuwait FH Dar Sukuk)
- ❑ Only **asset-based sukuku defaulted** because they replicated structures of debt instruments.
- ❑ **Asset-backed sukuku do not default.**
- ❑ **Asset-backed sukuk** investors are only exposed to **risk of capital loss, fluctuations in the market value of underlying assets, and the returns from the assets.** (Zaheer & Wijnbergen, 2013)
- ❑ **Asset-backed sukuku are more compliant to the Shariah** (Herzi, 2016).



Other Emerging challenges I

- ❑ Mutual suspicions between muslims & Christians
- ❑ Lack of skilled professionals in Islamic finance structures



Other Emerging challenges II

- ❑ Creating certainty by agreeing **fixed-income returns** where none should exist.
- ❑ Criticisms that **the only difference between sukus and bonds is just the word 'Islamic'** (Haniffa & Hudaib, 2010; Khan, 2010).
- ❑ Another emerging challenge is **fatwa shopping** (Oseni, 2017).
- ❑ Dana Gas Dubai(**fatwa shopping**)incidence: cited '*evolution in interpretation of Islamic law*' (Billington & Taha, 2018).



Alternative financing models

- ✓ **Take-out financing** – a third party promise to take over debt in future
- ✓ **Stapled financing** – pre-arranged and provided by govt.
- ✓ **Underwritten bids** – submission with financing commitment



There is **EXCESS** liquidity in the country



The Trellis Highway Proposal



THANK YOU Q&A



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