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Risk in project finance and capital markets: The challenges of present market conditions

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RISK IN PROJECT FINANCE AND CAPITAL MARKETS

- The challenges of present market conditions

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1 INTRODUCTION

Tamir Agmon in his 1985 book states "International financial markets are shaped by politics and economics: The basic laws of economics push relentlessly toward market integration and worldwide global economy, while the political process practised by governments and other interest groups is expressed by constant jockeying for special economic privileges".

The World Bank is an international financial institution that provides loans to developing countries for capital programs. The Bank was created in 1944, with its official goal being the reduction of poverty – to address the imbalance of wealth and support the laws of economics which Argon refers to. Although the first recipients of the loans were European countries (the very first loan recipient was France), the focus shifted in the 70s and 80s to concentrate the lending on meeting the basic needs of developing countries (infrastructure and social) rather than on the ability of the borrower country to repay the loans.

In the early decades of the World Bank, the Northern Hemisphere Banks were the primary sources of funds. From the latter part of the 20th Century and into this century, funding has been primarily sourced from the global bond market (giving rise to massive third world debt) and pledges from the richer nations.

Another important contextual note about the World Bank is that it strives to implement an environmental strategy in its funding approvals to promote "clean technologies" for the good of the globe.

Twice a year, the Data and Research arm of the World Bank publishes "Global Economic Prospects" which examines the growth trends (three-year and ten-year forecasts) for the global economy and how they affect developing countries. The January 2012 report, and its relevance to Project Finance, will be discussed later in this paper.

The International Monetary Fund (IMF) has a parallel history. It was also established post - second world war to foster global monetary cooperation, secure financial stability, facilitate international trade, promote high employment and sustainable economic growth, and reduce poverty around the world.

1.1 WORLD BANK AND IMF PUBLICATIONS

Both the World Bank and the IMF produce regular publications on the state of global economics and the impact on its goals (foster global cooperation, financial stability, international trade, sustainable growth and poverty reduction). The World Bank Global Economic Prospects have been consistently produced twice yearly using standard metrics and methodologies since 1998, The World Bank Global Economic Prospects 2012 is discussed in this paper and the IMF's World Economic Outlook Update, January 2012 is also analysed.

2 ANALYSIS

2.1 CONTEXT

The World Bank classifies countries for operational and analytical purposes.

It uses the Gross National Income per capita to determine the categories. Currently the groups are low income (USD1005 or less), middle income (USD 1006 – 3975), upper middle income (USD3976 – 12275) and high income (USD 12276 and above).

In addition to the World Bank classifications, each country is also credit rated by the major financial consultants (such as Standard and Poor's, Fitch's, Moody's and Institutional Investors). Selected Standards and Poor's ratings are shown in brackets above.

These values, and a number of other indicators such as unemployment figures, gross debt, consumer price index (CPI), exports, interests rates etc., are used when analysing the risks of economies in the global market place,

Social values and impacts are harder to measure. The Equator Principles are a voluntary set of principles

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TABLE 1

Examples of country / economy classification.

Low Income USD 1005 or less	Lower Middle Income USD 1006-3975	Upper Middle Income USD 3976-12275	High Income USD 12276 and above
Haiti	Solomon Islands	Albania	Andorra
Kenya	Timor-Leste	Brazil	Australia (AAA)
Liberia	Ukraine (B+)	China (AA-)	Germany
Malawi	Uzbekistan	Chile	Gibraltar
Mali	Sudan	Cuba	Norway (AAA)
Togo	Bolivia	Russian Federation	Saudi Arabia
Afghanistan	Egypt	South Africa (A)	UK (AAA)
Benin	El Salvador	Mexico (A)	USA
Tajikistan	Fiji	Malaysia	French Polynesia

that are used for determining, setting and managing project risk; they were developed by the private sector banks in 2003 and cover in excess of 85 per cent of the global project finance market. These principles are modelled on the World Bank's environmental standards and the International Finance Corporation's (ICF) social standards. The principles attempt to measure and manage the social and environmental risk associated with large infrastructure projects such as dams, mining and pipelines. All signatories to the Equator Principles use the international BankTrak system to track international payments to economies that do not conform to these principles.

2.2 TREND ANALYSIS

As part of the context for the risk analysis, the following charts show trending data for some of the factors that the World Bank and the IMF use in their regular research reports.

FIGURE 2

Reserve Bank of Australia Index of Commodities Prices (Oct 2011).

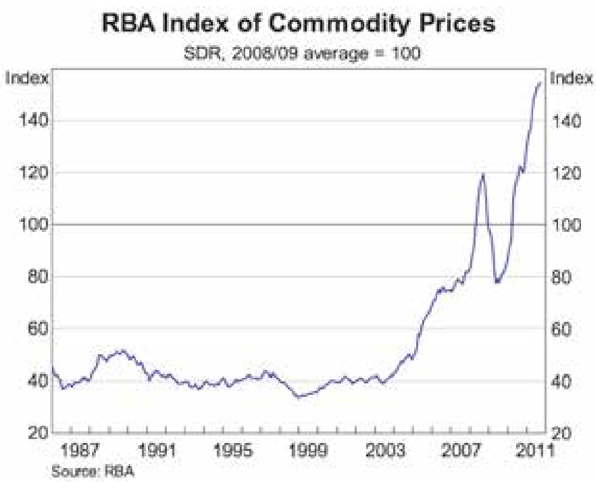

FIGURE 1

Cost of Capital

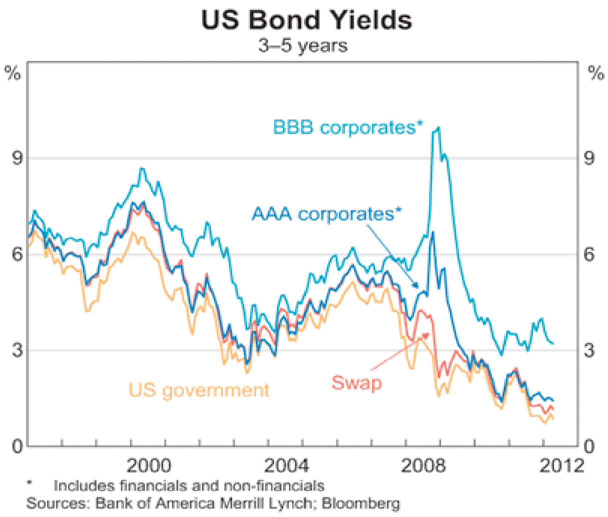

FIGURE 3

5-year Oil Price Chart (Dec 2011).

Source: Australian Stock Exchange Website

2.3 RISK ANALYSIS

In reference to the international project finance market, this section analyses the risks facing the providers of project finance.

The main objectives of analysing risks are:

- To reduce the likelihood of a default event
- To give the opportunity for fair returns to equity and debt providers
- To provide project (and therefore investment) sustainability
- To meet lender and sponsor criteria

Key issues in Project Finance are:

- Optimism Bias and Forecasting (Endogenous risks)
- Lifecycle Economics
- Externalities (Systemstic and 3rd party)

2.3.1 RISK IDENTIFICATION

TABLE 2

Risk Propositions from World Bank Global Economic Prospects Report - January 2012 (Risk Identification)

ID.	DESCRIPTION	ROOT CAUSE	COMMENTS
1.	Financial turmoil in Europe spread to developing and other high income countries	Euro area crisis	
2.	Capital flows to developing countries falling sharply	Contraction in capital/lending/equity	
3.	Europe in recession	Euro area crisis	
4.	Growth in developing countries (Brazil, India, Russia, South Africa) slower	Economic Indicator	
5.	Global growth, world trade slowed sharply	Economic Indicator	
6.	Prospects uncertain	Uncertainty	
7.	Global economy expected to expand 2.5 (2012) and 3.1 (2013)	Economic Indicator	
8.	High-income growth expected at 1.4 (2012) and 2 (2013)	Economic Indicator	High debt low growth
9.	Developing country growth to 6 (2012) and 6.3 (2013)	Economic Indicator	
10.	World trade to 4.7 (2012) to 6.8 (2013)	Economic Indicator	
11.	Low market confidence	Uncertainty	
12.	Risk of sudden market shocks	Uncertainty	Affects maturing debt and re-financing
13.	Political tensions in the Middle East	Oil Price uncertainty	
14.	Political tensions in North Africa	Oil Price uncertainty	
15.	Disruption of oil supply	Oil Price uncertainty	
16.	Global GDP 4% lower than baseline	Economic Indicator	
17.	Markets may deny financing to several additional European economies	Euro area crisis	
18.	High income countries do not have the fiscal or monetary reserves to bail out the banking system or stimulate	Fragile financial systems	This is what happened in 2008/2009
19.	Financing for fiscal deficits may dry up in developing countries	Fragile financial systems	
20.	Credit default swaps (DCS) spreads have increased 117bps in past 6 months	Economic Indicator	Market volatility
21.	Developing countries lost 8.5% of their stock market volatility in past 6 months	Contraction in capital/lending/equity	Equity markets
22.	High income countries lost 4.2% of their stock market volatility in past 6 months	Contraction in capital/lending/equity	
23.	Combined stock market losses equate to loss of 9.5% of global GDP	Contraction in capital/lending/equity	Wealth loss
24.	Capital flows to developing countries have weakened	Contraction in capital/lending/equity	
25.	Equity issuance down 80% with exceptionally weak flows to China and Brazil	Contraction in capital/lending/equity	
26.	Bond issuance to almost halved in East Asia and emerging Europe	Contraction in capital/lending/equity	
27.	Decline in syndicated bank loans	Contraction in capital/lending/equity	

TABLE 2 (CONTINUED)

Risk Propositions from World Bank Global Economic Prospects Report - January 2012 (Risk Identification)

ID.	DESCRIPTION	ROOT CAUSE	COMMENTS
28.	Slowing of industrial growth in large middle-income countries	Economic Indicator	Offset
29.	Increased industrial growth in Europe, Central Asia, USA, Japan	Economic Indicator	Offset
	Exports declined	Economic Indicator	
30.	Growth weak in high income countries	Economic Indicator	Still repairing damaged financial sectors
31.	Developing countries need to source growth from developing countries	Economic Indicator	
32.	Developing countries have exited the GEC faster than anticipated	Economic Indicator	
33.	Developing countries do not have fiscal space to respond to any new crisis	Fragile financial systems	
34.	Highly uncertain market	Uncertainty	

TABLE 3

Risk Propositions Sourced from the IMF's World Economic Outlook Update – January 2012 (Risk Identification)

ID.	DESCRIPTION	ROOT CAUSE	COMMENTS
1.	Intensifying strains in euro area	Euro area crisis	
2.	Global output to expand by 3.255	Economic Indicator	
3.	Euro area into mild recession	Euro area crisis	
4.	Rise in sovereign yields	Economic Indicator	
5.	Bank deleveraging on the real economy	Economic Indicator	
6.	Fiscal consolidation	Contraction in capital/lending/equity	
7.	Slow growth in emerging and developing economies	Economic Indicator	
8.	Policy challenges in restoring confidence	Uncertainty	Treatment – supporting growth, provide liquidity, monetary accommodation
9.	Financial systems need repairing and reforming	Fragile financial systems	Treatment
10.	USA unexpectedly lowered their savings rate	Fragile financial systems	
11.	USA business investment stayed strong	Economic Indicator	
12.	Bounce back from supply chain disruptions from Japan earthquake quicker than expected	Economic Indicator	
13.	Oil prices stabilising	Oil Price uncertainty	
14.	Near term outlook deteriorated	Economic Indicator	
15.	Wide sovereign spreads for euro area	Euro area crisis	
16.	Bank funding in euro area has dried up	Euro area crisis	
17.	European Central Bank now offering a 3 year long-term refinancing option	Euro area crisis	Treatment
18.	Bank lending conditions deteriorated in advanced economies	Contraction in capital/lending/equity	
19.	Capital flows to emerging economies fell sharply	Contraction in capital/lending/equity	
20.	Currency markets volatile	Euro area crisis	
21.	Global activity decelerating	Economic Indicator	
22.	Policymakers intensify efforts to address euro crisis	Euro area crisis	Treatment
23.	Very high unemployment in advanced economies	Economic Indicator	
24.	Rise in euro sovereign yields	Euro area crisis	
25.	Spillovers from euro crisis in trade and financial channels	Euro area crisis	
26.	Stronger underlying domestic demand in USA	Economic Indicator	
27.	Higher risk aversion in advanced economies	Uncertainty	
28.	Slowdown in domestic demand in emerging economies	Economic Indicator	
29.	Asia expected to grow rapidly	Economic Indicator	

TABLE 3 (CONTINUED)

Risk Propositions Sourced from the IMF's World Economic Outlook Update – January 2012 (Risk Identification)

ID.	DESCRIPTION	ROOT CAUSE	COMMENTS
30.	Middle East and Africa expected to grow driven by the recovery in Libya and the continued strong performance of oil exports	Economic Indicator	
31.	Most oil importers face muted growth due to longer than expected political transition	Economic Indicator	
32.	Global slowdown of sub-saharan Africa limited to South Africa and the region is expected to expand by 5%	Economic Indicator	
33.	Adverse spillovers expected in central and eastern Europe	Economic Indicator	
34.	Commodity prices generally declined in 2011	Economic Indicator	
35.	Geopolitical oil price risks have risen	Oil Price uncertainty	
36.	IMF's baseline petroleum price project for 2012 is unchanged	Oil Price uncertainty	
37.	Non-oil commodity prices expected to fall	Economic Indicator	
38.	Inflation pressures subdues	Economic Indicator	
39.	Overall consumer prices to decelerate	Economic Indicator	
40.	The most immediate risk is the intensification of the adverse feedback loops between sovereign and bank funding pressures in the Euro area	Euro area crisis	
41.	Increased concerns on fiscal stability	Uncertainty	
42.	Deterioration in bank asset quality	Fragile financial systems	
43.	Losses on sovereign debt holdings	Euro area crisis	
44.	Private investment contraction	Contraction in capital/lending/equity	
45.	Lower global output	Economic Indicator	
46.	Insufficient progress in developing medium term fiscal consolidation plans in USA and Japan	Fragile financial systems	
47.	Turmoil in the global bond and policy markets	Uncertainty	
48.	Overestimation of trend growth rate in major emerging economies	Economic Indicator	
49.	Geopolitical oil supply risks	Oil Price uncertainty	
50.	Limited oil inventory and supply buffers	Oil Price uncertainty	
51.	Fragile financial systems	Fragile financial systems	
52.	High public deficits and debts	Economic Indicator	
53.	Interest rates close to zero	Economic Indicator	
54.	Worsening crisis in Euro area	Euro area crisis	

TABLE 4

Key Resulting Risks

This table identifies the key messages that have come out of the Risk Identification process.

ID.	KEY MESSAGE/ROOT CAUSE	NUMBER OF RISK PROPOSITIONS	COMMENTS
1.	Fragile financial systems	9	Attempting to recover from the Global Financial Crisis
2.	Contraction in capital/lending/equity (Liquidity)	12	
3.	Crisis in Euro area	14	
4.	Oil Price Uncertainty	7	
5.	Uncertainty	8	
	Economic Indicator	-	Economic indicators show growth slow down and weakening, and are a symptom of the other factors

TABLE 5

Risk Matrix (Probability and Impact)

This table scores each risk.

ID.	RISK	SCORE (IMPACT X LIKELIHOOD) *
1	Oil price	0.10
2	Fragile financial systems	0.28
3	Liquidity	0.72
4	Crisis in the Euro Area	0.72
5	Uncertainty	0.14

* Source APM 2004

TABLE 6

Graphical Risk Profile (Heat Map)

The Risk Identification number is shown in the appropriate matrix block

IMPACT/LIKELIHOOD	VERY HIGH 0.8	HIGH 0.4	MEDIUM 0.2	LOW 0.1	VERY LOW 0.05
Very High 0.9	3. Liquidity 4. Euro Crisis				
High 0.7		2. Fragile Finance System	5. Uncertainty		
Medium 0.5			1. Oil Price		
Low 0.3					
Very low 0.1					

TABLE 7

Risk Allocation and Treatment

ID.	RISK	ALLOCATION	TREATMENT (Source: Imf's World Economic Outlook Update - January 2012)
1.	Oil price	Political	• Diplomacy, geo-political treatments
2.	Fragile financial systems	Regulators	• Easy funding in the short term to be made available while systems repaired and credit conditions normalised
3.	Liquidity	Providers of capital Policy makers	• Sustained, but gradual adjustment; ample liquidity; ample monetary policy; confidence in policymakers ability to act • Fiscal space needed, Created by things like low interest rates • Monetary policy should continue to support growth, as long as inflation remains anchored and unemployment high • Foster global demand rebalancing. • Project Bond Market and the introduction of project bond
4.	Crisis in the Euro Area	IMF, Euro Zone	• More capital needs to be injected into the euro area banks to break the adverse loops between weak growth and deteriorating balance sheets • Policymakers intensify efforts to address euro crisis
5.	Uncertainty	All	• Variation in requirement of countries to adjust, but policymakers actions must be mutually consistent • Implement structural reforms • Foster global demand rebalancing. • Support growth, provide liquidity, monetary accommodation

3 CONSEQUENTIAL EFFECTS ON THE CONTRACTION IN SUPPLY CAPITAL

For project finance, the main focus remains the availability of capital and the cost of capital. The source of funds for projects is

- Development Agencies,
- Banks, and
- Capital Market.

Traditionally, the capital markets and banks have been western, with some contribution from Japan. The Global Financial Crisis has caused funding to re-direct, in order to bail out the very western banks who were players in the supply of capital, and consequently a Sovereign Debt crisis in Europe is looming. This can be seen in our analysis above. In addition, Japan has suffered catastrophic natural disasters and is in need of capital to repair its infrastructure and economy.

If the capital dries up, the global economy will experience impacts on all areas that are supposed to benefit, i.e.

- Reduced global monetary cooperation
- Unstable financial markets
- Reduced international trade
- High unemployment and slow economic growth
- Increased poverty around the world.

Economists are keenly aware of the impact of contraction on capital. One of the initiatives being considered by the IMF, European Commission and other market players is the introduction of "project bonds" or "bonds for growth" to boost investment in energy, transport and the digital economy.

4 CONCLUSION

In an ABC Radio National interview on 23rd March 2012, former two terms World Bank President Sir James Wolfensohn was interviewed. In the interview he stated that until 2002 Western countries dominated the world. In the 1940's China and India contributed 2 per cent to the World GDP; in 2012 that contribution is 11 per cent and in 2020 it is expected to be 50 per cent, with Asia contributing 60 per cent.

To quote Sir James, "What is likely is that we will have by 2050 a world in which a lot of business has moved to Asia, probably in the order of 50 – 60 per cent. And, even beyond the economic science, the Asians are preparing for it."

On that same day, 23rd March 2012, the new President of the World Bank was announced. An academic of Korean descent, Jim Yong Kim is perhaps added evidence of the Asian century and the shift of wealth from West to East.

This is further evidenced by the growth in Japanese acquiring investment banks (The Wall Street Journal article "New Banking Strategy? Head to Japan" 18/01/2012).

For project financiers, the shift is relevant only if the Global Economy can continue to meet the IMF's objectives to:

- Foster global monetary cooperation,
- Secure financial stability,
- Facilitate international trade,
- Promote high employment and sustainable economic growth, and
- Reduce poverty around the world.

In fact, a shift in the wealth from West to East may be advantageous to Australian project finance because of our unique position in the region.

The project finance focus remains the availability of capital and the cost of capital.

REFERENCES

A Tamir, *Political Economy and Risk in World financial Markets*, 1985.

A Shelagh, Heffernan. *Sovereign Risk Analysis*, 1986.

A Fight, *Understanding International Bank Risk*, 2004.

P Nagy, *Country Risk*, 1984.

V Yadav, 'Risk in International Finance', *Routledge Frontiers of Political Economy*, 2008.

ABC Online, ‹www.abc.net.au›.

The International Monetary Fund Website, ‹www.imf.org›.

The World Bank Website, ‹www.worldbank.org›.

The Standard and Poors Website, ‹www.standarandpoors.com›.

I Steger, 'New Banking Strategy? Head to Japan', *The Wall Street Journal,* 2012.

The Australian Stock Exchange Website, ‹www.asx.com.au›.

The Reserve Bank of Australia Website, ‹www.rba.gov.au›.

Project Procurement and Finance Lecture Notes. Bond University.

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Marianne Garden has over 20 years experience in the private sector Information Technology (IT) industry in both national and international roles and 2 ✣ years experience with the Queensland Government. Marianne has worked in Banking & Finance, Primary Industries and Telecommunications. She is currently the Executive Manager Business Systems for QFRS at the Department of Community Safety. A traditional IT career path (from analyst/programmer through to management) underpins experience in all aspects of the System Development Life Cycle and IT best practise. She is an accomplished IT Manager with proven ability, drive and experience to deliver IT projects. Marianne is PMBOK , Prince2 & MSP certified, a member of the Australian Institute of Project Managers and is currently doing a Masters in Project Management degree at Bond University.