The Asian Boom and Australia's proximity

South Australia's AAA rating: A Comparative Study of Financial and Economic Performance

Dr. Bianca Cravenna
Bocconi University Intern

Dr. Daniela Grosselli
University of Trento Intern

Economic and International Coordination Division

Supervisor: Adj. Prof. Nicola Sasanelli AM

Government of South Australia
Department of the Premier and Cabinet

Acknowledgments

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Maintaining the State's AAA credit rating is a central target of South Australia's Strategic Plan.

The AAA rating provides a simple measure, relied upon by a diverse range of users as a basis for decision making and a point of difference informing stakeholder opinions on government financial management.

In this paper Dr Daniela Grosselli and Dr Bianca Cravenna – under the guidance of Adjunct Professor Nicola Sasanelli AM – explore the historical underpinnings of the rating services and the companies that provide them, providing a background to the important role these companies play in modern financial society.

The paper goes on to consider the emerging role of ratings in modern political society as more than a financial market tool.

Adding context, the authors have used the Australian setting to document the relationship between a Sovereign Government and sub national or regional Governments and how this impacts rating analysis.

For the reader who has limited knowledge of South Australian and Australian fiscal context the paper summarises the strong fiscal position as the basis for the sovereign rating of AAA.

I commend this paper to readers interested in pursuing improved understanding of the historical role of rating agencies and the important role played by the independent reviews on the state of government fiscal and financial management.

Andrew Blaskett FCPA

General Manager, Government Accounting Reporting and Procurement
SA Department of Treasury and Finance

Abstract

In this paper we will define and explain what a credit rating agency is and how it operates. We will briefly analyse the importance of credit rating agencies in the market, including a brief summary of the criticism towards them and the response of the agencies to this criticism.

We will then switch our focus towards Sovereign credit rating, examining in deep detail the rating process of the two biggest and most important credit rating agencies in the market. We will also try to explain the importance of credit rating in policy making by focusing on South Australia. The analysis will include a description of the process of sovereign credit ratings as long as an analysis of the economic drivers and indicators are used in such processes. We will then proceed to appraise some of the economic drivers and indicators just mentioned in the case of Australia. We will also go through the process of sub sovereign rating for the same two agencies in order to better understand the factors that come to matter from a South Australian perspective.

To further understand sovereign credit rating in a dynamic framework we will investigate two cases of changes in the credit rating of a sovereign, namely Ireland and Japan. The former has been downgraded and a further downgrading took place while we were working on this paper. The latter is one of the world largest debtors with a very high ratio of Government debt to gross domestic product while still holding a very high credit rating.

In the final part we will study the current rating of Australia and South Australia, two bright examples of a Sovereign and Regional Government belonging to the top notch.
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Introduction

Political economy is based on the tension between the centralised authority of the government and the decentralised authority of the market. The period after World War II saw the rise of credit rating agencies (CRAs) as an influential market-based authority.[1] That is why CRAs are a player of crucial and rising importance in the international capital market.

The reason Governments seek credit ratings is to gain access to foreign capital that investors are more likely to allocate to a rated rather than an unrated security.[2] This obviously gives great power to CRAs whose opinions are valued with great importance by National and Regional Governments and play a role in the decision making process with respect to expenditures and services.

It is therefore of great interest to analyse the field of credit rating. For this purpose it is important to understand what a credit rating agency is and how it operates.

It is also crucial to understand what the meanings of ratings are and what the peculiarities of Sovereign credit ratings are. This gives the opportunity to get a better understanding of why and how ratings are part of economic policy decisions in many countries.

In this framework, Australia and South Australia are brilliant examples of very high ratings; hence they represent the perfect case for our analysis. The investigation of the drivers and indicators lying behind such resilient economic performance are a great way to apply in practice the theory of credit rating.

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[1] R. Abdelal C.M. Bruner 2005 *To Judge Leviathan: Sovereign Credit Ratings, National Law, and the World Economy* Cambridge University Press

[2] R Cantor F Packer 1995 *Sovereign Credit Rating* Federal Reserve Bank of New York

“There are two superpowers in the world today in my opinion. There's the United States and there's Moody's Bond Rating Service. The United States can destroy you by dropping bombs, and Moody's can destroy you by downgrading your bonds. And believe me, it's not clear sometimes who's more powerful. ”

Thomas L. Friedman, interview,
NewsHour with Jim Lehrer,
PBS, 13 February 1996.

1. Credit Rating: The rating agencies

1.1 What are credit ratings?

According to Standard & Poor's there are four points that should be kept in mind to understand credit rating:

- Credit ratings are opinions about relative credit risk.
- Credit ratings are not investment advice, or buy, hold, or sell recommendations. They are just one factor investors may consider in making investment decisions.
- Credit ratings are not indications of the market liquidity of a debt security or
its price in the secondary market.
- Credit ratings are not guarantees of credit quality or of future credit risk.

Source: *Standard & Poor's*

The criteria above tells us the most important things that everyone should know before approaching a study of ratings. That is, ratings given by credit rating agencies are not meant to be in any way a judgment on the quality of the firm or country itself, they are not telling us if a bond or a share is good or bad in absolute terms, they are not suggesting that investors buying obligations from a higher rated entity will get higher revenues out of their investment.

So what are ratings? A credit rating is an opinion regarding the future creditworthiness of an entity, a debt or financial obligation, debt security, preferred share or other financial instrument, or of an issuer of such debt or financial obligation, debt security, preferred share or other financial instrument, issued using an established and defined ranking system of rating categories[3].
In other words they are an assessment of how likely a firm or a government is to be able and willing to pay off its obligations in a timely way. This means that what we can infer from the rating of a sovereign or a corporate entity is how likely investors are to get back their money on time.

According to Standard & Poor's "*ratings denote a relative level of credit risk that reflects a rating agency's carefully considered and analytically informed opinion as to the creditworthiness of an issuer or the credit quality of a particular debt issue".*

[3] *Code of Conduct*, October 2010, Moody's Investors Service

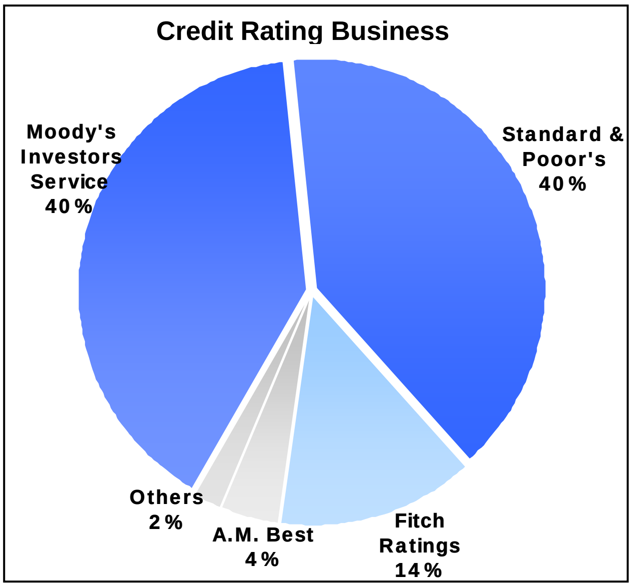
With the above mentioned points in mind we can proceed to an analysis of credit rating, the process that leads to the ratings and the credit rating agencies.

1.2 The Big Three: Fitch, Moody's and Standard & Poor's

A credit rating agency (CRA) is an independent entity that provides solicited and unsolicited credit opinions about a corporate, regional, national or sovereign debt or entity.

These credit opinions are meant to be a source of information for investors in the stock market and are the outcome of an accurate process of qualitative and quantitative analysis. The rating process is based on principles aimed at granting its quality, transparency, independency and reliability are kept under constant screening in order to guarantee timely updates in case of a change in the economic scenario.

Graph 1.2



Source: *The Washington Post*

Today we can count over 150 credit rating agencies around the world; nevertheless (Graph 1.2) there are two that hold 40% of the market each. Therefore, with a combined market share of 80%, Moody's and Standard & Poor's - both U.S. based – are the two biggest and most important credit rating agencies, followed by Fitch Ratings – dual headquartered in France and the U.S. – holding 14% of the market, a significantly lower share.[4]

The U.S. Securities and Exchange Commission (SEC) grants Credit rating Agencies that are allowed to officially operate in the U.S. market with a Nationally Recognized Statistical Rating Organization (NRSRO) status, which started to be used in 1975. Until 2003 though, only Fitch Ratings, Moody's Investors Service and Standard & Poor's were recognized as NRSROs, that year a fourth company was added to the government's list, a smaller Canadian-based firm called Dominion Bond rating Service Ltd, that had been operating in the business for more than a decade.

The only other addition to the NRSROs list before the *Credit Rating Agency Reform Act* of 2006 was A.M. Best, in 2005.

In the *Credit Rating Agency Reform Act* of 2006 the SEC defines a credit rating agency to be, generally, a person (a) engaged in the business of issuing credit ratings on the Internet or through another readily accessible

[4] Klein, Alec *Smoothing the Way for Debt Markets,* The Washington Post, 23 November 2004

means, for free or for a reasonable fee, but does not include a commercial credit reporting company; (b) employing either a quantitative or qualitative model, or both, to determine credit ratings; and (c) receiving fees from either issuers, investors, or other market participants, or a combination thereof.[5]

As a consequence of the *Credit Rating Agency Reform Act* of 2006, the commission recognized a total of seven firms registered as NRSROs:

- A.M. Best Company, Inc.
- DBRS Ltd.
- Fitch, Inc.
- Japan Credit Rating Agency, Ltd.
- Moody's Investors Service, Inc.
- Rating and Investment Information, Inc.
- Standard & Poor's Ratings Services

According to the SEC definition a NRSRO issues credit ratings certified by qualified institutional buyers, with respect to— (i) financial institutions, brokers, or dealers; (ii) insurance companies; (iii) corporate issuers; (iv) issuers of asset-backed; (v) issuers of government securities, municipal securities or securities issued by a foreign government; or (vi) a combination of one or more categories of obligors described in any of clauses (i) through (v). In order to apply for the NRSO certification a credit rating agency must have been in business for at least 3 years prior the date of application.[6]

The recognition of the above listed agencies broke the decade-long domination in the credit rating market of the "Big Three". Nevertheless Fitch Rating, Moody's and Standard & Poor's together still control 94% of the market. This might also be explained by the fact that Fitch, Moody's and Standard & Poor's are the only three agencies that are recognised by all the members of the Basel Committee on Banking Supervision (BCBS) and by all the interesting non-members of BCBS (with the notable exception of Argentina that does not recognize Moody's). The big three are therefore officially recognized in sixteen of the most influential countries worldwide.[7]

[5] *Oversight of Nationally Recognized Statistical Rating Organizations*, 4 October 2009, Securities and Exchange Commission

[6] *Credit Rating Agency Reform Act*, 2006

[7] M Elkhoury *Credit Rating Agencies And Their Potential Impact on Developing Countries*, United Nations Conference on Trade and Development, January 2008

Hence, from a worldwide perspective, the number of recognized CRAs increases significantly. In the countries member of the BCBS alone there are a total of almost seventy recognized credit rating agencies.

Moody's and Standard & Poor's each control more than one third of the market, it is therefore interesting portraying in brief their history in order to better understand where CRAs come from and what their background is.

Moody's

John Moody (1868 – 1958) entered Wall Street by working for a bank, back in 1890. In 1900 he founded the John Moody and Company and on the same year the company published *Moody's Manual of Industrial and Miscellaneous Securities*, containing information and statistics on stocks and bonds of financial institutions, government agencies, manufacturing, mining, utilities and food companies, which was sold out within two months.

Unfortunately John Moody & Company did not survive the Wall Street Panic of 1907 but a couple of years after John Moody was back on track, publishing *Moody's Manual of Railroads and Corporation Securities*. The latter differed from Moody's first manual in the sense that it provided an analysis of security values, rather than mere information on property, capitalisation and management of companies. In his second publication John Moody expressed his conclusion on the relative investment quality of railroads, through letter rating symbols adopted form the mercantile and credit rating system that had been used by the credit-reporting firms since the 1800s.

By the mid 1910s Moody's analysis had stretched to industrial companies and utilities. Shortly after Moody's Investors Service started rating also bonds issued by US cities and other municipalities, covering almost the entire US bond market by 1924.[8]
Even though in the 1970s Moody's rating of sovereign Governments included only US, Canada and Australia, by the year 2000 the company was rating about 100 nations following the take-off of sovereign ratings in 1980s and 1990s.[9]

The 1970's also saw the commercial paper market and bank deposits included for the first time in Moody's ratings. [10] In the same period credit rating agencies went from charging investors, to getting paid from companies for their rating services. The reason for this was partly to be

[8] *Moody's History: A Century of Market Leadership*, www.moodys.com
[9] Klein, Alec *Smoothing the Way for Debt Markets,* The Washington Post, 23 November 2004
[10] *Moody's History: A Century of Market Leadership*, www.moodys.com

found in the development of photocopy that made it easier for reports to be available to non-paying investors.[11]

In 2007 Moody's Investors Service, dealing exclusively with credit ratings, was separated from Moody's Analytics, which covers all the other activities.

As of today, Moody's Investors Services covers: more than 100 countries, 12,000 corporate issuers, 25,000 public finance issuers and 106,000 structured finance obligations.[12]

Standard & Poor's

The history of Standard & Poor's starts with Henry Varnum Poor, a law graduate who opened a law firm with his brother John Alfred in Bangor, Maine. The two brothers built a fortune by investing in Maine's timber industry and in 1849 John bought the American Railroad Journal, of which Henry was manager and editor in New York. This led to the publication, in 1860, of *The History of Railroads and Canals in the United States*, an attempt to provide information on the past and present financial state and operations of the railroad industry in the US

In 1865 the H.V. and H.W. Poor Co. was established by Henry Varnum and his son Henry William, three years later the company published the *Manual of railroads of the United States*, which later became an updated and regularly published manual on the railroads industry. The firm later became Poor's Railroad Manual Co. and then Poor's Publishing Co.

Meanwhile, in the early 1900s, the Standard Statistic Bureau was founded by Luther Lee Blake. Standard Statistic's main focus was on industries other than the railroad business, it published regularly five per seven-inch cards containing updated corporate news and information, in addition a comprehensive book was published yearly. The firm saw a fast growth and it was incorporated in 1914.

In the early 1920s corporate bonds started to be rated by both companies, and in the same period a stock market index covering 233 US based companies was developed by Standard Statistics and published weekly.

The two companies merged in 1941, becoming Standard & Poor's Corp. In the same year the company published its first bond guide, rating about 7,000 municipal bonds. The S&P 500 index was introduced more than ten years later, it is still today one of the most followed indices by investors in the world for large-cap American stocks. In 1962 the company went public and was quoted on the New York Stock Exchange. In the late 1960s S&P

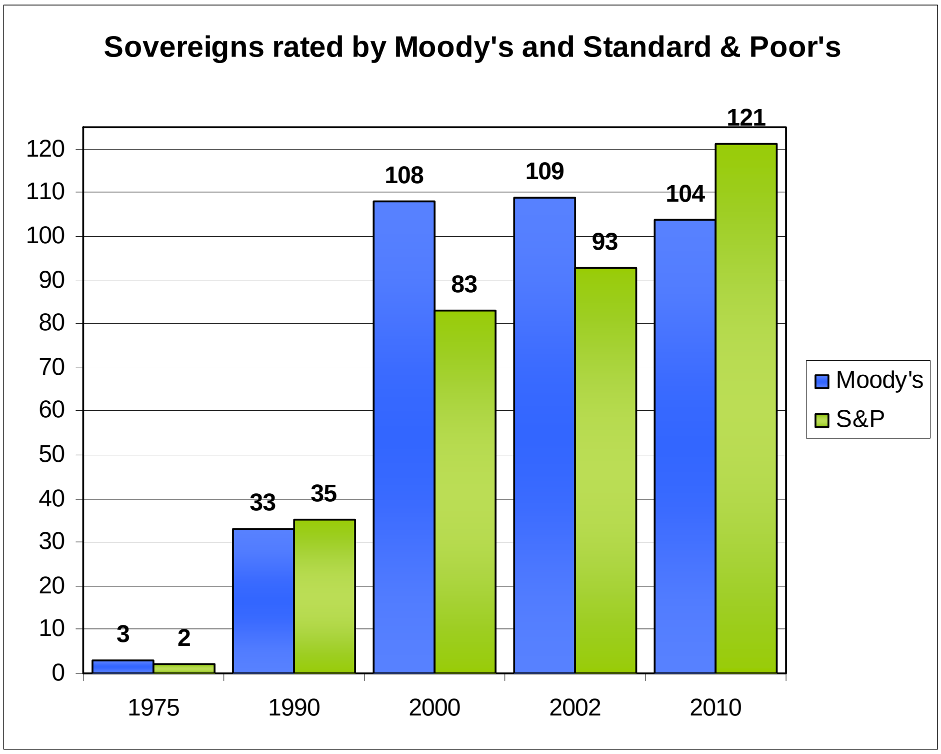
[11] Borrus A, McNamee M and Timmons H, *The Credit–Raters: How they work and how they might work better*, Business Week, 8 April 2002
[12] *Moody's Investors Service: Moody's Role in the Capital Markets*, www.moodys.com

introduced Corporate and Municipal bond pricing services and in the following decade the company started to charge issuers rather than investors for its municipal rating services, this would become standard practice also for corporate ratings in 1974.

Standard & Poor's has been designated as a NRSRO since the late 1970s and it was the first rating agency to open a branch in London to cover the European markets.

As of today, Standard & Poor's is part of the McGraw-Hill companies, has offices in 23 countries worldwide, rating more than US$32 trillion in outstanding debt a year and publishing nearly 900,000 credit ratings.[13]

Chart 1.2



Source: Guardian, *the Washington Post*

[13] A History of Standard & Poor's, www.standardandpoors.com

1.3 Criticism towards Credit Rating Agencies

Since their very beginning CRAs acquired an important role in the financial market as they were acting as watchdogs against speculative bubbles and unexpected credit defaults. With the growing importance of financial and stock exchange markets though, there have been increasing doubts on the independence and the actual capacity of the agencies to acquire and disclose to investors in a timely manner, important information on the state of the finances of debt issuers.

In the history of credit rating there have been a few of what could be considered misjudgements from the credit rating agencies' side that fuelled the criticisms towards them. The most notable were:

- Penn Central Railroad – 1970
  The US$82 million default of the company was not anticipated by credit rating agencies; from this unforeseen railroad default derived the first attempt by the FED to provide some regulation for the CRAs.

- New York City – 1975
  The city plunged into financial turmoil without being previously downgraded by CRAs.

- State of Washington – 1983
  The Washington Public Power Supply System nuclear utility was rated at a top level when it defaulted on more than US$2 billion in bonds.

- Orange County, State of California – 1994
  The County defaulted by more than US$1.5 billion in investment and filed for bankruptcy without any previous warning from CRAs.

- Asian crisis – 1997
  A deep financial crisis spread throughout many Asian countries and the credit rating agencies were not able to downgrade Asian nations' ratings until the financial crisis was at its full stage.

- Enron Corp. – 2001
  The American energy company was downgraded to junk level just a few weeks before it filed for bankruptcy (the fourth largest in U.S. history), the CRAs later claimed that the management of the company hid important information on the status of the company from the analysts.

- WorldCom – 2000
  The credit rating of the company was downgraded to junk status only weeks before it filed for bankruptcy and the third largest corporate fraud in the US was unveiled.

– Subprime Mortgage Crisis – 2007
  According to the Financial Crisis Commission the CRAs and their rating played a pivotal role in the Subprime Mortgage Crisis. The reason being that the mortgage-related securities, that eventually caused the market failure, could not have been sold without a positive credit rating. As it was clearly seen when the crisis burst out, such positive rating was not mirroring the real quality of the debts issued.

Critics considered the above mentioned crisis some of the worst misses of the CRAs. As previously mentioned, these scenarios paved the way to some further criticism with respect to the role of CRAs as gatekeepers in the stock exchange market.

A partial solution was brought about by the already mentioned *Credit Rating Agency Reform Act* of 2006, which introduced tighter transparency requirements and partly opened the credit rating business by allowing for the entry in the market of newly recognized NRSROs.

There are still some doubts among critics with respect to the substantial oligopoly that is in place in the rating business, the potential conflict of interest that could harm the independency of the agencies and the excessive power CRAs are believed to have in the stock exchange given they seem to be in absolute control, while uncontrolled, of the faith of any listed company and the ability to borrow money of countries around the world.

What seems to make CRAs substantially different from other gatekeepers is that they do not respond directly to any higher entity. It is true that the SEC provides some regulation for CRAs but the latter are not directly controlled by any governmental agency. Moreover, unlike other gatekeepers CRAs seem to have experienced increasing profitability over the past decade, almost 90% of these profits are coming from rating fees, therefore from debt issuers who pay CRAs for their services.

This leads us to a third peculiarity of the CRAs that is the potential conflicts of interest arising from the ancillary services, such as risk management consulting services that they provide to debt issuers, which may feel under pressure to buy those services from the same rating agency they already hired fearing that failure to do so might reflect negatively on their ratings. Credit rating agencies have argued that these conflicts of interest are dealt with appropriately and that due to the structure of the agencies it is possible for them to control and avoid any possible inference among different departments.

A fourth source of concern is to be found in the so called unsolicited ratings (ratings that agencies provide to issuers free of charge) that, some critics argue, might be used as a blackmailing tool to force debt issuers into paying for rating services in order to avoid a lower rating. The unsolicited ratings problem has been the subject of several litigations in the US, CRAs claimed they are fundamentally a financial publishing company therefore their opinions fall under the First Amendment of the United States Constitution that grants freedom of speech and protects the freedom of the press. The latter argument is usually embraced by judges that in almost all cases agreed that CRAs ratings are fundamentally opinions.

Some solutions to the points above could be found in a reduction of the benefits of regulatory licenses by removing, limiting or substituting them with market- based measure of credit risk of NRSROs. Since the long gone domination of the big three CRAs was due to consolidations among a higher number of CRAs that were originally present in the market the opening to the recognition of new NRSROs alone might not be enough over time if regulators fail to implement some further policy reforms in the credit rating business.[14]

Furthermore, the 2007 subprime mortgage crisis (that eventually lead to the late-2000's financial crisis and recession, believed to be the worst crisis since the great Depression of the 1930s)[15] brought about heavier criticisms on the role of the credit rating agencies, the overdependence on which is seen by many as a primary cause of the credit market turmoil.[16]

[14] Partnoy, Frank How and Why credit rating Agencies Are Not Like Other Gatekeepers, Legal Studies Research Paper series, Paper No.07-46, University of South Australian Diego School of Law, may 2006
[15] *Three Top Economists Agree 2009 Worst Financial Crisis Since Great Depression; Risks Increase if Right Steps are Not Taken*, Reuters, 27 February 2009
[16] Partnoy, Frank *Overdependence on Credit Ratings was a Primary Cause of the Crisis*, Eleventh Annual International Banking Conference

2. The Triple-A Rating

2.1 Rating Scales and Meanings

As discussed in depth before, a credit rating is an assessment of the creditworthiness, that is, the ability and willingness to pay back in a timely way, of an issuer of debt.
The Big Three credit rating agencies each use slightly different letters to express each grade but the scale itself is universal, as shown in table 2.1

Table 2.1

Interpretation	Moody's		Standard and Poor's		Fitch	
	Long-term	Short-term	Long-term	Short-term	Long-term	Short-term
Investment-grade ratings						
Highest credit quality	Aaa		AAA		AAA	
High credit quality	Aa1 Aa2 Aa3	Prime-1	AA+ AA AA-	A1+	AA+ AA AA-	F1
Strong payment capacity	A1 A2 A3	Prime-2	A+ A A-	A1	A+ A A-	
Adequate payment capacity Last rating in investment-grade	Baa1 Baa2 Baa3	Prime-3	BBB+ BBB BBB-	A2 A3	BBB+ BBB BBB-	F2 F3
Speculative-grade ratings						
Speculative Credit risk developing, due to economic changes	Ba1 Ba2 Ba3		BB+ BB BB-	B	BB+ BB BB-	B
Highly speculative, credit risk present, with limited margin safety	B1 B2 B3	Not prime	B+ B B-		B+ B B-	
High default risk, capacity depending on sustained, favourable conditions	Caa1 Caa2 Caa3		CCC+ CCC CCC- CC	C	CC+ CCC CCC- CC	C
Default, Although prospect of partial recovery	Ca, C		C, D	D	C, D	D

Source: M Elkhoury *Credit Rating Agencies And Their Potential Impact On Developing Countries,* United Nations Conference on Trade and Development, January 2008

Fitch Rating Scale[17]

AAA - Denote the lowest expectation of default risk. They are assigned only in cases of exceptionally strong capacity for payment of financial commitments. This capacity is highly unlikely to be adversely affected by foreseeable events.
AA - Denote expectations of very low default risk. They indicate very strong capacity for payment of financial commitments. This capacity is not significantly vulnerable to foreseeable events.
A - Denote expectations of low default risk. The capacity for payment of financial commitments is considered strong. This capacity may, nevertheless, be more vulnerable to adverse business or economic conditions than is the case for higher ratings.
BBB - Indicate that expectations of default risk are currently low. The capacity for payment of financial commitments is considered adequate but adverse business or economic conditions are more likely to impair this capacity.
BB - Indicate an elevated vulnerability to default risk, particularly in the event of adverse changes in business or economic conditions over time; however, business or financial flexibility exists which supports the servicing of financial commitments.
B - Indicate that material default risk is present, but a limited margin of safety remains. Financial commitments are currently being met; however, capacity for continued payment is vulnerable to deterioration in the business and economic environment.
CCC - Substantial credit risk. Default is a real possibility.
CC - Very high levels of credit risk. Default of some kind appears probable.
C - Exceptionally high levels of credit risk. Default is imminent or inevitable, or the issuer is in standstill.
Conditions that are indicative of a 'C' category rating for an issuer include:
i) the issuer has entered into a grace or cure period following non-payment of a material financial obligation;
ii) the issuer has entered into a temporary negotiated waiver or standstill agreement following a payment default on a material financial obligation; or
iii) Fitch Ratings otherwise believes a condition of 'RD' or 'D' to be imminent or inevitable, including through the formal announcement of a coercive debt exchange.
RD - Indicate an issuer that in Fitch Ratings' opinion has experienced an uncured payment default on a bond, loan or other material financial obligation but which has not entered into bankruptcy filings, administration, receivership, liquidation or other formal winding-up procedure, and which has not otherwise ceased business. This would include:
i) the selective payment default on a specific class or currency of debt;
ii) the uncured expiry of any applicable grace period, cure period or default forbearance period following a payment default on a bank loan, capital markets security or other material financial obligation;
iii) the extension of multiple waivers or forbearance periods upon a payment default on one or more material financial obligations, either in series or in parallel; or
iv). execution of a coercive debt exchange on one or more material financial obligations.
D - Indicate an issuer that in Fitch Ratings' opinion has entered into bankruptcy filings, administration, receivership, liquidation or other formal winding-up procedure, or which has otherwise ceased business.
Default ratings are not assigned prospectively to entities or their obligations; within this context, non-payment on an instrument that contains a deferral feature or grace period will generally not be considered a default until after the expiration of the deferral or grace period, unless a default is otherwise driven by bankruptcy or other similar circumstance, or by a coercive debt exchange.
"Imminent" default typically refers to the occasion where a payment default has been intimated by the issuer, and is all but inevitable. This may, for example, be where an issuer has missed a scheduled payment, but (as is typical) has a grace period during which it may cure the payment default. Another alternative would be where an issuer has formally announced a coercive debt exchange, but the date of the exchange still lies several days or weeks in the immediate future.

[17] *Definition of ratings and Other Forms of Opinion,* January 2011, Fitch Ratings

In all cases, the assignment of a default rating reflects the agency's opinion as to the most appropriate rating category consistent with the rest of its universe of ratings, and may differ from the definition of default under the terms of an issuer's financial obligations or local commercial practice.

Modifiers "+" or "-" - Modifiers may be appended to a rating to denote relative status within major rating categories. Such suffixes are not added to the 'AAA' Long-Term IDR category, or to Long-Term IDR categories below 'B'.

Moody's Rating Scale[18]

Aaa - Obligations rated Aaa are judged to be of the highest quality, with minimal credit risk.
Aa - Obligations rated Aa are judged to be of high quality and are subject to very low credit risk.
A - Obligations rated A are considered upper-medium grade and are subject to low credit risk.
Baa - Obligations rated Baa are subject to moderate credit risk. They are considered medium grade and as such may possess certain speculative characteristics.

Ba - Obligations rated Ba are judged to have speculative elements and are subject to substantial credit risk.
B - Obligations rated B are considered speculative and are subject to high credit risk.
Caa - Obligations rated Caa are judged to be of poor standing and are subject to very high credit risk.
Ca - Obligations rated Ca are highly speculative and are likely in, or very near, default, with some prospect of recovery of principal and interest.
C - Obligations rated C are the lowest rated class and are typically in default, with little prospect for recovery of principal or interest.
Modifiers 1, 2, and 3 - Moody's appends numerical modifiers to each generic rating classification from Aa through Caa: The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic rating category.

Standard & Poor's Rating Scale[19]

AAA - An obligation rated 'AAA' has the highest rating assigned by Standard & Poor's. The obligor's capacity to meet its financial commitment on the obligation is extremely strong.
AA - An obligation rated 'AA' differs from the highest-rated obligations only to a small degree. The obligor's capacity to meet its financial commitment on the obligation is very strong.
A - An obligation rated 'A' is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligations in higher-rated categories. However, the obligor's capacity to meet its financial commitment on the obligation is still strong.
BBB - An obligation rated 'BBB' exhibits adequate protection parameters. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitment on the obligation.

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[18] *Rating Symbols and Definitions*, May 2011, Moody's Investors Service
[19] *Standard & Poor's Ratings Definitions*, 27 April 2011, www.standardandpoors.com

Obligations rated 'BB', 'B', 'CCC', 'CC', and 'C' are regarded as having significant speculative characteristics (“junk” bonds). 'BB' indicates the least degree of speculation and 'C' the highest.

While such obligations will likely have some quality and protective characteristics, these may be outweighed by large uncertainties or major exposures to adverse conditions.

BB - An obligation rated 'BB' is less vulnerable to non-payment than other speculative issues. However, it faces major ongoing uncertainties or exposure to adverse business, financial, or economic conditions which could lead to the obligor's inadequate capacity to meet its financial commitment on the obligation.

B - An obligation rated 'B' is more vulnerable to non-payment than obligations rated 'BB', but the obligor currently has the capacity to meet its financial commitment on the obligation. Adverse business, financial, or economic conditions will likely impair the obligor's capacity or willingness to meet its financial commitment on the obligation.

CCC - An obligation rated 'CCC' is currently vulnerable to non-payment, and is dependent upon favourable business, financial, and economic conditions for the obligor to meet its financial commitment on the obligation. In the event of adverse business, financial, or economic conditions, the obligor is not likely to have the capacity to meet its financial commitment on the obligation.

CC - An obligation rated 'CC' is currently highly vulnerable to non-payment.

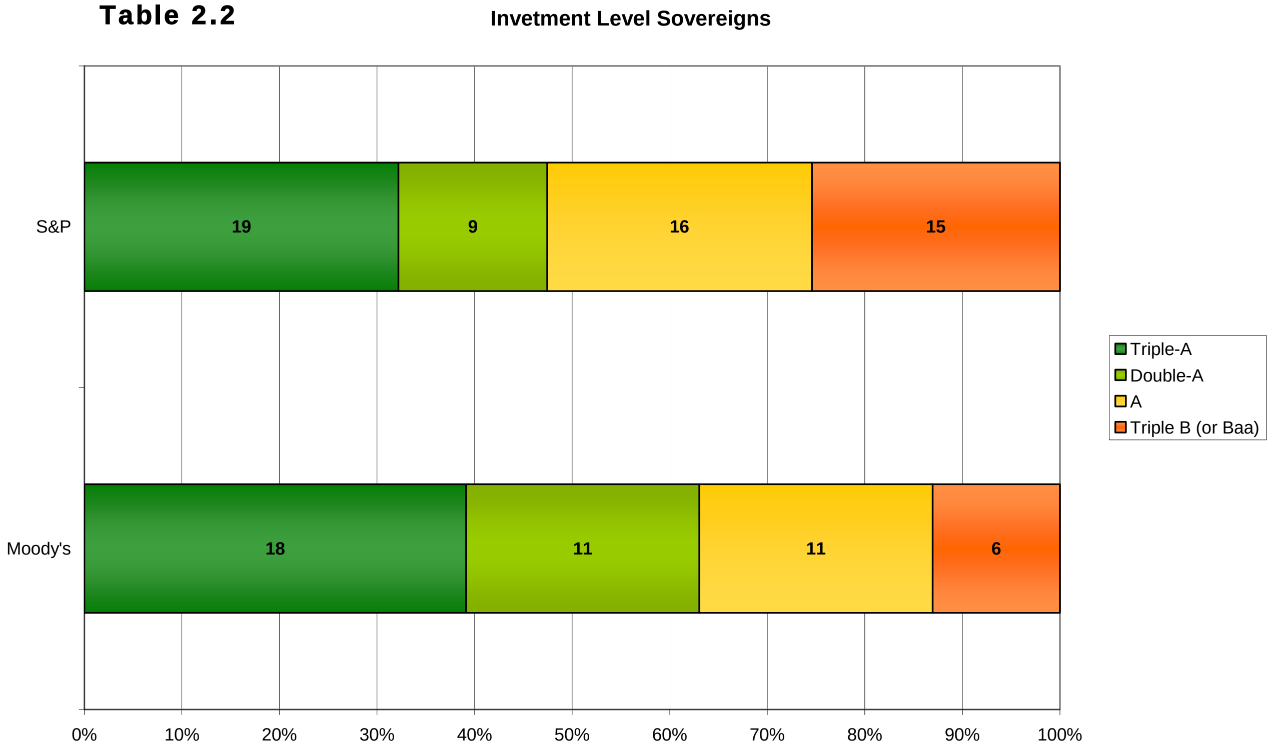
C - A 'C' rating is assigned to obligations that are currently highly vulnerable to non-payment, obligations that have payment arrearages allowed by the terms of the documents, or obligations of an issuer that is the subject of a bankruptcy petition or similar action which have not experienced a payment default. Among others, the 'C' rating may be assigned to subordinated debt, preferred stock or other obligations on which cash payments have been suspended in accordance with the instrument's terms or when preferred stock is the subject of a distressed exchange offer, whereby some or all of the issue is either repurchased for an amount of cash or replaced by other instruments having a total value that is less than par.

D - An obligation rated 'D' is in payment default. The 'D' rating category is used when payments on an obligation, including a regulatory capital instrument, are not made on the date due even if the applicable grace period has not expired, unless Standard & Poor's believes that such payments will be made during such grace period. The 'D' rating also will be used upon the filing of a bankruptcy petition or the taking of similar action if payments on an obligation are jeopardized. An obligation's rating is lowered to 'D' upon completion of a distressed exchange offer, whereby some or all of the issue is either repurchased for an amount of cash or replaced by other instruments having a total value that is less than par.

Plus (+) or minus (-) - The ratings from 'AA' to 'CCC' may be modified by the addition of a plus (+) or minus (-) sign to show relative standing within the major rating categories.

2.2 The Characteristics of a Triple-A rated Sovereign

Table 2.2



Source: *Guardian*

Triple-A rated countries have extremely strong positions concerning all the aspects analysed during a credit rating assessment that are discussed in detail later in this paper.

The triple-A category is somehow different from all the other rating levels, not only because of the extreme resilience and flexibility of the countries belonging to that cluster but also because, being in the top range, there is no chance for upgrading; while some triple-A countries grow incredibly fast, others might have a slower pace and even though the difference among countries could be noticeable they would still belong to the same cluster of top-rated sovereigns, which is therefore extremely stretched.[20]

The characteristics of a top-rated sovereign usually include, but are not limited to: an outstanding stability, transparency and accountability of political institutions, an extremely high flexibility at a balance-sheet level when it comes to deal with changes in the economic and political scenario, an open economy very highly integrated into the global financial system, a high per capita income deriving form a diverse and prosperous economy -a very low volatility of the economy is also important-, a credible and independent Central Bank, low levels of inflation, sustainable economic policies (monetary and fiscal), a very strong, wide and regulated financial market as well as a capital market with the same features, excellent external liquidity levels and the lowest possible level of external debt.[21]

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[20] *What Does It Mean To Be A Triple-A Sovereign*, May 2008, Moody's Investors Service
[21] *Sovereign Credit Characteristics by Rating Category*, 19 November 2003, Ratingsdirect

All these elements combine differently for each sovereign and none of the above mentioned characteristics by itself is sufficient to lead to a top-rating, that is, some Triple-A countries might have outstanding features in each category while others could be stronger in some of them and slightly weaker in others. This reflects the idea that credit rating is not an automatic process but rating committees evaluate and weigh each and every factor with great accuracy to understand not only the size of the debt but, much more importantly, the ability of the sovereign to cope with this debt by rising the necessary resources with little or no consequences from an economic and political stability perspective.

2.3 The Rating Assignment Process

As a consequence of the *Credit Rating Agency Reform Act* of 2006, further transparency was introduced in the credit rating field. Currently all the CRAs are required to publish the method they use to assess creditworthiness and to clarify wether a rating is solicited or unsolicited. The rationale for these requirements is to be found in the above discussed problems rising from the doubts brought about by some critics according to which unsolicited ratings could be a potential blackmailing tool in the hands of CRAs.

The current legislation allows CRAs to access confidential information that would not be normally available to anyone other than the debt issuer; the reason for this special permission is to allow the CRAs that are hired by the company or government to assess the credit risk in the most possibly accurate way. The fact that during the credit rating assignment process analysts have access to this information leads investors to rely on their judgment because they assume it is based on more accurate information than that available to the general public. However, when a CRA decides to rate a debt issuer without being paid to do so, the obligor won't necessarily grant the agency access to confidential information, therefore potentially lowering the accuracy of the rating.

Before the *Credit Rating Agency Reform Act* of 2006 CRAs were not required to explicitly state whether a rating was or wasn't solicited, meaning that investors would always assume there was an information asymmetry at their disadvantage and that if a CRA was lowering the outlook on an obligation it was on the ground of sensible information.
Nowadays, by explicitly showing the nature of the rating, CRAs allow investors to better weigh the assigned rate.

In spite of the rising transparency, ultimately, the rating process is still widely considered as an opinion expressed by a panel of analysts and therefore the actual assessment of the rating is a private process that takes place within the CRAs. Notwithstanding this, CRAs publish updated reports explaining the main factors and criteria considered when assessing the creditworthiness of an obligor and how each factor usually impacts on the final decision.

There are some fundamental principles that apply to credit ratings on all types of issuers and issues. Recently, a credit stability criterion has been introduced in order to cope with the volatility displayed by certain securities: the CRA analyses the likelihood of the issuer or security to be rated of experiencing unusually large adverse changes in credit quality under moderate stress conditions. In order for the ratings to be comparable, a hypothetical stress scenario is usually used as a benchmark.[22]

As creditworthiness is a multi-faceted phenomenon there are several factors that are considered by a CRA when assigning a rating.

Credit Stability:
Obviously the likelihood of default is the pivotal point of the rating process. This criterion breaks into both the ability and the willingness of the issuer to pay back the obligation according to its contractual terms, the willingness factor being extremely relevant especially in sovereign rating. It is important to understand that ratings are meant to be a forward looking assessment of creditworthiness, which means the rating assigned aims not only at describing the current 'health' of the obligation or obligor but also at evaluating its future likelihood of default in case of a possible stress scenario (the higher the rating the higher the stress the rated entity could undergo without defaulting).

Resilience to Shock and Payment Priority:
Notwithstanding its central role, the likelihood of default is not the only factor considered during the rating process. Secondary factors might not have the same pivotal role but are still very important in the credit rating framework.
As just said, credit stability is a very important secondary factor when it comes to assigning a rating, based on the assumption that some credits might default suddenly as a consequence of minor economical or financial stress while others might display a period of gradual decay and default only in a severe stress scenario. This factor gains importance in the credit rating process as the likelihood of default decreases (higher ratings).
The payment priority of an obligation following default also is a crucial secondary factor that is considered by CRAs when rating, this criterion results in higher ratings for senior debt with respect to subordinate ones.

Capacity of Recovery:
A third secondary factor is the projected recovery that an investor would expect to receive if an obligation defaults. Unlike the first one the last two secondary criteria play an increasingly influential role as the likelihood of default increases (lower ratings).

[22] *General Criteria: Methodology: Credit Stability Criteria*, 2007, www.standardandpoors.com

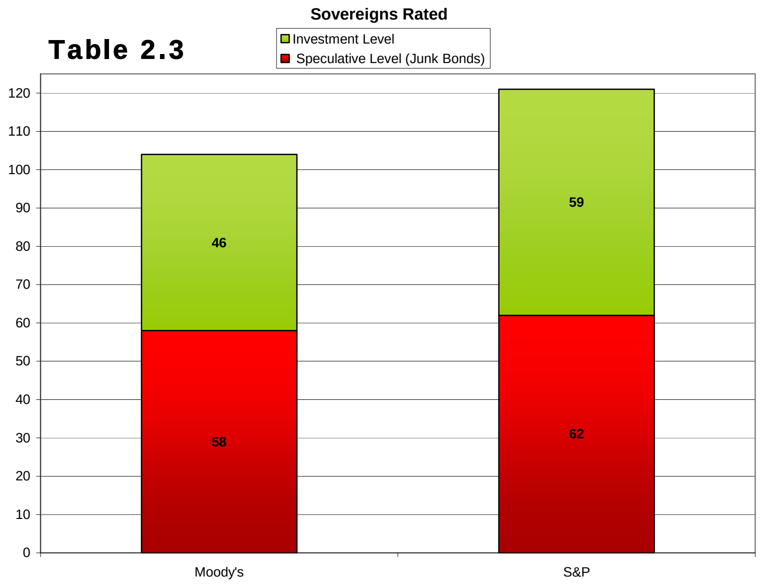
In the corporate and government rating area (as opposed to structured finance securitization ratings) there are some specific fundamental principles that define the analytical framework.

Creditworthiness before External Support:
When it comes to rating a corporate entity or a government, it is crucial to understand how its resources could fulfil the commitments undertaken, bearing in mind the size and timing of those commitments. The factors that play a key role in assessing the obligor's resources include: consideration of economic conditions, the regulatory environment and economic projections and forecasts.
This assessment of resources includes their future expected level, as long as their potential variability on the qualitative side. While on the quantitative side it focuses on the obligor's accounting principles and practices.

External Support:
The likelihood and potential amount of external support are also very important criteria for credit rating. The CRA analysis considers various types of potential support ranging from affiliated business entities to multilateral institutions. The external support is not necessarily a positive factor though, it might also weaken the creditworthiness of the obligor. It is important to underline how the analysis of external support does not include the benefits that an obligor might receive as a consequence of its mere participation in a system of frameworks, as those benefits are assessed during the industry analysis, or as part of the stand-alone creditworthiness evaluation.

Notching and analysis of Specific Instruments:
This analysis includes an evaluation of the priorities within an obligor's capital structure and the potential effects of collateral and recovery estimates in a default scenario.[23]

Table 2.3



Source: *Guardian*

[23] *General Criteria: Principles of Credit Ratings*, 16 February 2011 www.standardandpoors.com

2.4 Sovereign Rating and its Peculiarities

It is easy to understand that the approach taken when rating a Sovereign obligation or obligor must differ from the one used for business or financial assets and how in this analysis the “willingness to pay” factor has a heavier weight compared to corporate ratings.

According to Fitch Ratings’ definition a Sovereign issuer is the government that de facto exercises primary authority over a recognised jurisdiction. And since the sovereign is the highest power and holds the authority to enforce its will on the jurisdiction it governs, if it is unable or unwilling to pay creditors have little or no recourse.[24]

The quantitative factors analysed in the sovereign rating process cover both economic factors and budgetary and financial performance. The former usually include demographics, wealth and growth prospects (Annex 1). Concerning budgetary and financial performance the factors taken into account typically include: budget reserves, external liquidity and structural budget performance.

There are also some specific quantitative factors that must be considered when rating a sovereign obligor, such as: fiscal and monetary policy flexibility, international investments and contingent liabilities associated with support for the financial sector.

Also on the qualitative side, there are some specific factors that are used for sovereign ratings. Typically, they would always include political risk: the effectiveness and predictability of policymaking and institutions, the transparency of processes and data, the accountability of institutions, and the potential for war, revolutions or other security-related turmoils that could affect creditworthiness.
Other include: revenue forecasting, expenditure control, capital planning, debt management contingency planning, all part of the analysis.[25]

Moody’s and Standard & Poor’s adopt slightly different approaches to sovereign credit rating. The rationale behind a sovereign rating process though, stays the same.

Both agencies are aiming at establishing not only the current strength of a country, but also the ability it will have to resist to shocks of a certain entity in the future.
Due to the nature of a sovereign itself, this analysis cannot be based exclusively on economic factors, that are the main aspect taken into account with corporate issuers, but issues of political and social nature play a major role also.

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[24] *Sovereign Rating Methodology*, 16 August 2010 www.fitchratings.com
[25] *General Criteria: Principles of Credit Ratings*, 16 February 2011 www.standardandpoors.com

In fact, the criteria used can be summarised into two macro-areas:

- On the one side we have all those aspects, often of qualitative nature, related to government effectiveness, strength of institutions, policy making process, consensus and population wealth. These are the characteristics typically linked to the nature of the sovereign and its unique powers such as the unpaired flexibility it gets from controlling taxes and printing money, the impossibility for almost any modern sovereign to 'disappear' from the market and the unparalleled powers (especially the judiciary ones) that it exerts within its borders.

- On the other side we find all those drivers that are to some extent of pure economic concern. These factors can be more easily framed in quantitative indicators, such as GDP per capita, Balance of Payments and Current Account. These factors are in some way closer to those weighted to rate corporate issuers. In the sovereign case though, the importance and nature of each factor are quite different.

Standard & Poor's Sovereign Credit Rating[26]

Standard & Poor's establish a Sovereign's creditworthiness basing its analysis on nine macro-factors: a mixture of measures of economic performance and political and policy development evaluations.
The sovereign is weighted according to each category and for every factor a score is assigned ranging form one (the best possible grade) to six (the worst).

- Political Risk:

The first driver in the appraisal of creditworthiness is political risk. Taken into consideration the quality of institutions as well as the policy making process.

In this framework, the stability is evaluated as well as the legitimacy of institution within the country, the participation of the population in politics, the processes of leadership succession, any issue of public security concern as well as the geopolitical risk and the economic policy decision making process and goals.

A highly rated country must have predictable transparent and stable institutions, being characterised by a well rooted separation of powers, a high development of political institutions, an independent press and good relations with neighbouring countries. All the aspects mentioned contribute to a more stable political situation, therefore the risk of turmoil that might

[26] *Sovereign Credit Rating: A Primer* 19 October 2006, www.standardandpoors.com

affect the sovereign’s capacity and willingness to repay its debt are minimised.

Concerning policy making, the rating committee will take into account not only the efficiency of the policies but also, and more importantly, how quickly errors are identified and corrected.

- Income and Economic Structure:

The analysis of the economic structure is aimed at determining whether and to which degree the economy of the sovereign is market oriented and characterised by key features such as a decentralized structure for decision making processes, respect for property rights and a substantial equilibrium between the importance of public and private sector interests. These indicators characterise an environment that is prone to respecting the interest of creditors.

In this area there is also the consideration of Gross Domestic Product (GDP[27]) per capita. The aim is to identify to which extent the sovereign corresponds to the highest rating profile of a wide economy where there are minor income disparities and the financial system is strong and well developed, so it could act effectively in intermediating funds and making credit available.

Other indicators within this macro-factor include: the degree of diversification of the economy, the profitability and competitiveness of the private sector (other than financial activities), the efficiency of public management, the flexibility of the labour market and the presence of non market factors that might influence the economy (such as protectionism).

- Economic Growth prospect:

The third factor aims at identifying the standard of life as well as the fairness of income distribution through the analysis of the size and composition of government’s savings and investments on the one side, while on the other the growth rate and its patterns are evaluated. The presence of good and improving standards of life as well as no significant income disparities will allow the sovereign to put in place the necessary measures to support public sector debt in case of an economic or political shock.

It is important to consider that for triple-A rating countries there is usually a very high level of development in the economy, which translates in a lower growth rate. This means that a top-rated country does not necessarily have a sky-high growth rate and vice versa.

[27] Gross Domestic Product measures the final value of all goods and services that are produced within a country in a given period of time.

- Fiscal Flexibility:

The tools to establish fiscal flexibility are to be found in the appraisal of government revenues, expenditures and trends in deficit. Specifically the analysts will try to evaluate the flexibility of the government in managing taxes and spending in an efficient and effective way.

By considering the government balance sheet the analysts will weight factors such as inflation, export programs, balance performance and fiscal trends to establish to which extent these are building an economic environment that features a low level of distortion and a fertile framework for sustainable growth.

Concerning revenues management the highest rated sovereign should have a broad tax base and a low tax rate, which means they could easily and quickly adjust revenues if further funds were needed. Expenses on the other side must be effective and translate into an affordable financing management: the sovereign should be able to provide its citizens with the public services they demand, while providing them with the infrastructure and education level that are necessary to sustain the country’s economic growth.

The pressure of pension obligations might constitute a heavy burden for countries with a population that is rapidly ageing, therefore this is another aspect that is taken into account when evaluating fiscal flexibility.

There are some cases when a high rated sovereign is found to have a high deficit, this is because the analysis of Standard & Poor’s is not limited to the shallow level of the size of deficit, but looks beyond it to understand the trends in debts. This means that there might be a high debt due to investments in public infrastructures and expenditures in favour of an educated workforce. These of course are trends in debt that not necessarily affect the credit rating of the sovereign.

- Government Debt Burden:

This factor includes all those concerns that arise from a government trend of financing consumption and investment through borrowings, this clearly leads to an increase in general debt level which will have to be coped with through taxation and monetary policies.

The government debt burden is assessed through a number of indicators, such as the ratio of government gross and net debt to GDP, the share of government revenues that are necessary to pay interest on debt, the width and development of domestic capital market – allowing for relatively low cost market based financing - and the composition and maturity of the currency.

As we already discussed it would be quite naïve to conclude that a high level of debt itself is sufficient to give a sovereign a lower credit rating. It might be in fact the case that a high debt is not imposing an excessive burden on the sovereign if the country is characterised by a high level of development and wealth while the government maintains an excellent revenue raising capacity.

- Off-budget and Contingent Liabilities:

This factor focuses on off-balance sheet activities and transactions of non-financial public sector enterprises (NFPSEs) and on the financial sector. NFPSEs are already considered in the analysis of debt burden but in this section the focus is on those activities and transaction that go beyond traditional debt.

Concerning NFPSEs, it is important to consider them because they engage in a number of quasi-fiscal activities that mobilise funds not considered in the budgetary process. If the activities in which NFPSEs are involved imply a very high mobilisation of resources, the explanatory power of the financial indexes usually used to assess creditworthiness is reduced and this reflects in a less central role of government. The issue with NFPSEs is that in some cases they are not profitable and have a very low equity base, making them extremely vulnerable to potential economic shock.
This factor gains a special weight when banks are involved in massive quasi-fiscal activities that are not taken into account in the government budget.

The appraisal of the financial sector's robustness is included in this factor because in a sever crisis scenario the government might decide to put in place bank saving measures that could eventually put the position of the sovereign as a debtor at risk. It is therefore necessary to assess the robustness of banks as a key component for the sovereign survival.

- Monetary Flexibility:

Monetary flexibility is important in the process of assessing a sovereign credit rating. This is because a high degree of flexibility leads to lower inflation levels and when such flexibility is grounded on a well developed capital market, the incentives for the sovereign to default are significantly lowered, since debt is held by a number of different investors across the country rather than concentrated in the hands of a few local banks.

The analysis of a country's monetary flexibility is made up of a number of different elements. While as a general rule the independence of institutions, especially the Central Bank, is crucial to monetary flexibility, it is also important to account for factors that are tightly linked to the core of the economic policy of the sovereign.

Price behaviour is observed both in economic cycles and for what concerns relationships with trading partners. The range and efficiency of monetary policy tools are also very important as they indicate to which degree the economic policy is market oriented and their effectiveness – especially if backed by a financial sector that is characterised by transparency, regulation and development on one side and a wide and mature debt market on the other - translates to a higher level of flexibility.

The exchange rate regime also deserves some attention. The government must handle exchange rate in a way that makes its trend not only sustainable but also coherent with the sovereign's monetary policy goals.

- External Liquidity:

The external liquidity analysis takes into account the balance of payment[28] of the sovereign. In particular, the core of the analysis is understanding the impact that government policies (both monetary and fiscal) have on the sovereign's current account[29].
Specifically, external liquidity is reflected by an indicator that analysts use in this part of the credit rating assessment:

$$\frac{GrossExternalFinancingNeeds}{CurrentAccount\,\mathrm{Re}\,ceipts + UsableForex\,\mathrm{Re}\,serves}\%$$

The higher the ratio above, the higher the rating as it means a higher importance of short-term debt and a lower dependence on concessional debt.

Even in this case the process of linking high or low values of the indicator to the top or bottom credit rating is not automatic. Concerning this specific factor the credit risk brought about by high external financing is lowered by substantial levels of Foreign Direct Investment (FDI)[30] and high levels of expected export growth.

For lower rated countries, debt is usually either denominated in or linked to foreign currency. Therefore for sovereigns with a lower creditworthiness international liquidity is of particular importance.

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28 The balance of payments provides a systematic record of economic tranSouth Australiactions between residents of a given country and residents of the rest of the world. It is composed by three accounts: current, capital and financial, accounting respectively for the trade in goods and services, capital assets and non-produced assets, direct or portfolio investments.

29 The current account (or external account) is that part of the balance of payments that measures the value of traded services and goods (exports – imports) and income and current assets credits/debits.

30 FDI reflects the objective of obtaining a lasting interest by a resident entity in one economy in an entity resident in an economy other than that of the investor. The lasting interest implies the existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence on the management of the enterprise. Direct investment involves both the initial tranSouth Australiaction between the two entities and all subsequent capital tranSouth Australiactions between them and among affiliated enterprises, both incorporated and unincorporated. (OECD, 1999)

- External Debt Burden:

To assess the external debt[31] burden the gross and net external debt of public and private sectors - excluding liquidity assets - is considered. A pivotal role is given to analysing the flows in the balance of payments and in the external balance sheet[32] (Annex 2), with the aim of assessing trends in public debt as well as the size and composition of government contingent liabilities. This analysis also allows an assessment of the adequacy of the foreign exchange reserves size private and public external debt.
An indicator of the magnitude that external debt imposes on the sovereign is the ratio below, which assumes higher values for top-rated countries:

$$\frac{ExternalDebt}{CurrentAccount\,\mathrm{Re}\,ceipts}$$

The size of external debt is not the only issue when it comes to understanding its sustainability. As a general rule for the highest ratings the public external debt is denominated in local currency, making it less burdensome.
Even though at first the glance it could seem that private debt has a secondary importance with respect to sovereign credit rating, we must bear in mind that private debt could put massive stress on the sovereign reserves and eventually be shifted to the government.

Within the estimation of external debt burden it is essential to understand if a sovereign is highly susceptible to investor behaviour or if its position as a debtor will hardly be endangered by swings in the stock exchange market (which is a far better position from a credit rating perspective). If a country has low levels of short-term debt, and that debt is not mainly denominated in foreign currency, the sovereign position will be stronger and less likely to be exposed to changes in investor sentiment.

Some of these factors also contribute to a high rating in other macro-categories of Standard & Poor's sovereign credit appraisal. This happens because such factors have great importance and play a crucial role both at a final rating level and within a single category.

Other factors that would allow a sovereign to get a good rating for their external debt burden include: the access it has to concessional funding such as borrowings from the IMF or other international institutions; the level of reserves; the strength of current account receipts; the presence of a reliable source of domestic funding (domestic capital market), a solid financial sector, productive FDI and a good exchange rate regime.

[31] External debt is an indicator of the extent to which the sovereign relies on foreign capital to fund consumption and investment.
[32] The external balance sheet (or international investment position) gives the most complete picture of the stock position of a country in its financial tranSouth Australiactions with the rest of the world. (Bank of England)

Once again it is important to stress how the sovereign rating process is not an automatic action and is not limited to a simple computation of factors. The rating committees assess creditworthiness basing their decision on – but not limiting it to - such factors. The final rating also takes into account the strength of policy response in a potential crisis scenario and the ability of the government to address and identify causes of instability. Analysts study the interaction of external debt and public finances as well as a number of other factors while incorporating economic, political and commodity cycles risks to its appraisal. A system of early-warning based on several economic and financial indicators is also maintained.

Moody's Credit Risk Assessment[33]

Moody's approach to Sovereign credit rating is based on a three step process. As we will discuss shortly, the first two steps ultimately result in identifying a value on a scale, the two values (very high to very low) are then merged and lead to the identification of a rating range. The third step involves determining a precise rating out of the rating range from the outcome of the first two steps.

Moody's identifies the first two steps as two analyses, each focusing on a particular aspect of sovereign creditworthiness. The first step focuses on economic resiliency, while the second one focuses on financial robustness.

- Shock Absorption Capacity:

The reasoning behind this first moment of analysis is if and how effectively a sovereign would be able to pay back its debt in a timely way without putting excessive stress on national income and wealth in a scenario of financial or political disorder.

The shock absorption capacity macro-factor measures the resiliency of a sovereign to economic shocks of a certain entity. It is measured through two different elements that together produce an estimate the overall strength of the country.

Economic strength

The main indicator used here is the value of GDP per capita on a Purchasing Power Parity (PPP) [34] basis.

This is not simply the final value of all goods and services that are produced within a country in a year, but rather the average of GDP per capita over several years, calculated on a purchasing power parity basis, in order to allow peer comparison (a crucial aspect when it comes to credit rating). The

[33] *Sovereign Bond rating* September 2008, www.moodys.com

[34] Purchasing Power Parity allows a comparison of income in different countries taking into account the value of the currency that is, considering the impact of exchange rates. Through PPP it is possible to compare income levels across countries in a more accurate way.

fact that the value of GDP per capita on a PPP basis is measured as an average of its value during several years allows a higher rating to be assigned to sovereigns that are enjoying long periods of economic prosperity.

At a worldwide level GDP has been constantly growing, this means that the scale a CRA uses to link a certain GDP value to a corresponding rating level needs to be expanded over time. In order for a rating to maintain their ordinal nature the highest bucket will rise. It is important to understand that a high level of GDP does not automatically translate into a very high rating, even though GDP per capita on a PPP basis is a highly significant factor, the economic strength of a sovereign is assessed through a deep analysis of its balance sheet. Another indicator might also be the GDP of a sovereign weighted by the country scale.

The level of diversification of an economy is also an important aspect of a sovereign's economic strength. A diversified economy means the wealth of a country depends on a number of different sectors and not just on a few areas of the economy, thus reducing the risks in an economic crisis scenario.

There are also a number of other elements that are directly affecting the long term resiliency of a sovereign from a structural point of view taken into account while assessing economic resiliency. Such factors are amongst others, the participation in an integrated economic area (i.e. EU, NAFTA, etc) that enhances the stability and reliability of an economy, the investment in human capital and the level of innovation.

Institutional Strength

The bases for institutional strength analysis are usually the World Bank indicators (Annex 3) – in particular the rule of law and government efficiency indexes – that constitute a jumping off point for a deeper assessment.

The institutional strength is of great importance with respect to the creditworthiness of a Sovereign. Due to the nature of this particular type of debtor the quality and independence of institutions - their stability and maturity - are of pivotal importance. A good economic institutional framework allows for a higher predictability of government behaviour leading to a trend of respecting contractual obligations.

In a sovereign there are a number of different political and economic institutions to be taken into account. What is important to bear in mind concerning the creditworthiness of the country is that the type of government in place is not of primary importance. A democracy is not necessarily more creditworthy than a authoritarian regime or a monarchy. What is analysed within the institutional strength framework is the effectiveness of the government rather than its nature. Typically at the highest rating levels government action must be characterised by efficacy, transparency and predictability.

The respect for property rights is an important component of institutional analysis, because an overall trend that tends to empower the importance of such rights will be more likely to impose a stronger constraint on the willingness to pay in a crisis scenario.

For what concerns elements of a more political nature it is important, within the institutional strength appraisal, that government have a large consensus among the population. Consensus is a multi-faceted feature. To reach high consensus levels in a country the political participation must be high, the accountability of the government must be perceived by citizens as something they can rely on and income must be evenly distributed across the population. A high level of consensus will allow the government to raise its revenues (i.e. taxes) or lower expenditures (typically by cutting services) as much as necessary without incurring in political instability.

All the elements considered above are certainly necessary for a strong institutional framework but they are not sufficient. For a sovereign to be assigned a high rating to it's also of crucial importance that strong and independent economic and financial institutions operate to enhance economic growth and wealth within the country, regardless of the Government's political agenda. This means the country must have a Central Bank that can operate with a high degree of independence and a strongly regulated and supervised financial system.

- Financial Robustness:

The financial robustness assessment step is made up by the analysis of two different factors. On the one side we find the evaluation of the financial strength, while on the other side there is susceptibility to risk, this has a dual meaning being considered both as the risk of not being able to repay debt in a timely way and the risk of incurring in a multi-notch credit rating downgrade.

The core of the financial robustness analysis is to establish the structure and nature of government debt and to understand how vulnerable public finances are and how robust the government is from a financial perspective. This analysis is approached in a dynamic way, meaning that analysts need to understand the government financial robustness behaviour in a non-static framework.

Status of Government Finances (Financial Strength)
There are two sides to financial strength, on the one hand the size of the debt, on the other the ability for government to mobilise the necessary resources (taxes, spending, assets, foreign exchange) to provide for the funds requested to repay debt in a timely way.

The analysis is run as a constant comparison between *what* the government has to repay and *how* it is going to repay it.

This point in the credit rating process has two elements. It is assessed the extent to which the policy choices of the sovereign are limited by the debt obligations and then the balance of payments is carefully screened. It is therefore finalised to the understanding of the magnitude of the effort that the government would have to undertake in order to put in place the necessary measures to get the funds required to honour its obligation. Such measures are identified in financial adjustments (rise taxes, diminish spending), refinancing (does not affect the amount of debt but increases the liquidity of government assets) and asset mobilisation.

Susceptibility of Country and Government to Risk
This aspect of sovereign credit risk analysis is the most forward looking and dynamic. The rating committee assess the probability that public and private sector finances would be in danger if a potentially plausible external risk took place. This takes into account both the probability of such risk and the potential severeness of its impact. In other words it is evaluated how negative financial, political and economic events could affect a sovereign debt and more precisely how likely to happen such negative events are.

- Final Step:

The first two steps of Moody's credit rating process are merely evaluative. The focus is both on qualitative and quantitative measures. The analysis that leads to the identification of a rating range includes both approaches and neither is prominent. In the framework of sovereign analysis the drivers that might lead a government to decide to default on debt can be summarized as a cost/benefit analysis. The country will decide to deliberately default on selected debt when the costs the government has to undertake to honour its obligations outweigh those it would have to undergo if debt is not repaid. Therefore a purely quantitative analysis would leave aside the political costs of debt that are evaluated trough qualitative indicators.

As said at the beginning of this chapter, the above mentioned steps result in the identification of a credit range, that is, the process does not indicate a precise rating value. It is then the job of the rating committee to assign an exact rating on the basis of peer comparison and evaluation of risk factors of an exceptional nature.

Foreign versus Local Currency Ratings

There is an important distinction to be made with respect to sovereign credit rating. That between debt denominated in local currency and debt denominated in foreign currency. Usually the two ratings do not have the same value. The local currency denominated debt is often rated zero to three notches above the foreign currency denominated one.[35] The rationale behind this gap is that the question to be answered by analysts when rating local currency bonds, concerns the extent to which the alteration of government balance of income and spending can be put in place by a sovereign in order to pay debt in a timely way. Therefore the assessment of creditworthiness focuses on the appraisal of solvency and liquidity risk. In other words it assesses the availability of resources and the government's capacity to mobilise them. The rating committee has to understand if and at what cost the debt can be repaid. In terms of raising taxes and cutting spending on services, liquidating assets and obtaining financing from central banks. All these operations could bring about negative consequences (slower growth and social discontent, high inflation etc).

When it comes to foreign currency bonds the government has to undertake a further step besides the already potentially highly burdensome ones just described, that is, to exchange money. Obviously the revenues of a sovereign are generally almost all in local currency; therefore paying debt in foreign currency requires a further effort and more importantly, the reliance on an economic agent that would buy local currency for foreign one. It is quite easy to see how this operation leaves the country quite vulnerable to market swings (notably the demand for the country's currency).

It is also important to bear in mind that a sovereign has unique capacities when it comes to local currency liabilities. The monetary and fiscal flexibility it enjoys are unparalleled given the control it has on money printing and economic policies.[36]

2.5 Moody's sub-sovereign ratings determinants

As a consequence of decentralization in developed countries since the 1990s, there have been substantial changes in fiscal and tax relationships between central and regional Governments.

Six major factors have boosted the sub national rating business since then[37]

- Fiscal decentralization: the devolution of decision making on certain responsibilities to regional, provincial and municipal Governments has enabled an increase in their borrowing capacity.

- Development of market-based borrowing policies: as in the sovereign, the local and regional Governments rating business boomed following the growth of sub-sovereign bond markets. This relationship originated from the increasing role played by credit ratings in regulatory rules -

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[35] *Sovereign Credit Ratings: A Prime*, 19 October 2006, Standard & Poor's
[36] Packer F, *Mind the gap: domestic versus foreign currency sovereign ratings* Bank for International Settlements Quarterly review, September 2003
[37] N. Gaillard, *The determinants of Moody's sub Sovereign ratings*. 2009 http://www.eurojournals.com/finance.htm

credit institutions have strict portfolio management policies that limit their investments to rated bonds. Consequently, sub-national issuers have little chance to access the international capital markets without rating.

- Willingness to improve credibility: regional and local Governments want to be rated in order to build their credibility, enhance their name recognition and promote investors' confidence. Their willingness to obtain ratings is related to the objective of establishing a public track record of their debt payment history, therefore demonstrating their trustworthiness.

- The search for better borrowing conditions: having a high rating improves the sub-national's borrowing conditions on capital markets. The high incentive for a sub-national to be rated is based on the fact that a lack of rating is equivalent to a low rating. Ratings, for example, are useful when an issuer intends to apply for bank loans, being rated is an accurate indictor of creditworthiness, thus negotiation of liquidity lines is easier and the guarantee required is less strict.

- The strengthening of regulatory frameworks: a good example is Mexico. The level of capitalization of loans for regional Governments is based on their credit rating, thus rating level has a direct impact on the terms and conditions of financing.

2.6 The dependence relationship within sub-sovereign and sovereign ratings

- Constitutional and economic dependence, regardless of ratings:

Sub-national depends economically on their central Governments. The sovereign establishes the investment climate. If the investment trend is negative for the central government, then the market for both sovereign and regional will be negative. The central government can intrude in the local autonomy by setting the terms of intergovernmental transfers of revenue and expenditure responsibilities, allocating tax authority and controlling debt authorization. In case of crisis, sovereign financial flexibility would be stronger and in case of default, regional and local Governments cannot start to restructure the debt.

- Sub-national ratings constrained by the country ceiling:

Both ratings are closely dependent. No local or regional government would be assigned a rating unless its sovereign already had a rating. Until 2010, the sovereign rating was considered the ceiling that no corporate or sub-national borrower was likely to pierce. The reason was that all domestic issuers were potentially subject to foreign currency transfer risk. Since 2001 Moody's and S&P shifted their policies and allowed sub-nationals to be rated higher than their sovereign. However, the conditions are very tight. For S&P, the local and regional political institutions must be stable and transparent. It's financial autonomy should be as strong as possible so that it cannot be affected by sovereign decisions and be financially flexibly enough to face potential pressures from the central government. To Moody's, the ability of a borrower to overtake the sovereign depends on; the creditworthiness of the issuer, reflected in its local currency rating; the probability that there will be a generalized moratorium in the event of default by the government; and the probability that if there is a foreign currency payments moratorium, certain classes of securities may be exempted from such a moratorium.

Very few sub-national Governments have been rated above their sovereign since 2001. As of May 2009, only 1.4% and 3.8% of LRGs monitored respectively by S&P and Moody's had a FC rating higher than their sovereign.

Moody's exceptions were the city of Buenos Aires, the Province of Mendoza, the city of Zagreb, the Region of Lombardy and the Autonomous Province of Trento. While entities rated above their sovereign by S&P were the Autonomous Communities of the Basque Country and Navarre.

Such findings show that, beside the very few exceptions mentioned before, sovereign ratings still act as an upper limit for sub-sovereign ratings.

2.7 Moody's and the Australian States[38]

There are six categories of quantitative and qualitative factors that determine credit quality for local and regional Governments. These categories can be organized into general and specific risks. The first two factors (general risk) are related to the economic strength and stability and the institutional framework that assigns powers and responsibilities between the national government and the local and regional government sector: they are the operating environment and the institutional framework. The remaining factors regard specific risks that are reflected by the status and performance of individual Australian states: they are the finances and budgetary performance, the debt profile, the governance and management, and the economic fundamentals.

We will now explain how some of these factors apply to Australian States.

- Operating environment and institutional framework: Refers to the national economic and political context in which local and regional

[38] *Submission to Australian Senate's select Committee on State Government Financial Management, Moody's rating for Australian States*. May 2008 http://www.aph.gov.au/SENATE/committee/sgfm_ctte/submissions/sub35.pdf

Governments function. Moody's considers the nation's susceptibility to systemic shock by reviewing current economic circumstances and recent economic financial history.
Australian states' high GDP per capita, low GDP volatility and high ranking on the World Bank's government effectiveness index, suggests a low level of systematic risk.
The institutional framework encompasses the arrangements that determine intergovernmental relations and shape local and regional government powers and responsibilities. This factor addresses a local and regional government's public policy responsibilities and the adequacy of its fiscal powers to meet them. It also addresses the way in which these responsibilities and powers may be altered, whether by a higher entity or by the local regional government itself.
Moody's believes that Australia's well-established and stable institutional framework is a key support of the Aaa rating.
The fiscal framework benefits from states' autonomy, including the ability to raise tax rates without restriction. They also have full authority to adjust a significant portion of their expenditures, although they are subject to political constraints with regard to reducing staffing levels or cutting back on essential services such as health, education, community services and public security costs.

The following are the state's specific factors:

- Finances and budgetary performance: Moody sees the government's ability to cover all of its costs and debt service as an important factor. The ability of local and regional Governments to implement policy decisions that generate balanced or positive fiscal outcomes and as a result develop long-term financial strength is a key for maintaining the credit rating.

- Debt profile: the debt level measures the ability to pay such as the size of the government's revenue flow and jurisdiction's economic output, as measured by GDP.

- The states of Australia support low debt burdens when compared with their international peers. The nominal amount of the states' gross debt outstanding remains fairly stable despite positive financial performance because the states' maintain certain debt levels for debt management purposes. The debt burden of the states have eased or remained stable in most cases over the past years.

- The debt burden of most states could rise over the medium term as the government's embark on significant capital improvement programs for infrastructure. One of the key issues in containing the debt from increasing is the ability of the states' to control escalations in construction and wage costs related to report labour shortages. Moody's believes that the impact of the rising debt levels on debt burden is expected to be compensated by growing revenues and economic expansion in the years to come.

- Governance and management: when compared to their international peers on governance and management factors, Australian states are positively positioned. They are characterized by multi-year planning and have a significant degree of transparency in their management that has resulted in them exceeding targets.

2.8 Standard & Poor's methodology for Local and Regional Governments[39]

S&P assign credit rating to LRGs based on the quantitative and qualitative analysis of a range of financial, economical, managerial and institutional factors. The analysis is articulated in eight factors that are ordered in a five point scale from 1 (strongest) to 5 (weakest). The factors are:

- Institutional framework
- Economy
- Financial management
- Budgetary flexibility
- Budgetary performance
- Liquidity
- Debt burden
- Contingent liabilities

Analytical framework for rating Local and Regional Governments

For S&P, the best way to analyse the individual credit profile of an LRG is to study the context of the institutional and legislative environment in which it operates. By following this process it is easy to distinguish the score of an LRG's institutional framework, relative to the country where the LRG is located, from the other rating factors. The remaining scores, which are based on specific characteristics, are simultaneously combined to determine the LRG's individual credit profile. Following this, the institutional framework is combined with the individual credit profile to determine a rating level.

Assessing the institutional framework relative to the country where the LRG operates:

As the institutional framework is the only LRG rating factor that it is assessed on a country basis for each level of government, the score given,

[39] *International public finance: Methodology for rating international local and regional Governments.* May 2010
www.standardandpoors.com/ratingsdirect

for example for states and municipalities from the same country, can be rated differently. This institutional framework defines the environment in which LRG operates. S&P's assessment of the institutional framework aims to measure how the predictability, the reliability and the supportiveness of public finance systems and legislative frameworks are likely to affect an LRG's ability to service debt in the long term.

Determining an LRG's individual credit profile based on its specific characteristics:

The remaining factors are based on the individual characteristics of an LRG. Budgetary performance, budgetary flexibility, debt burden and contingent liabilities together produce five equally weighted factors. From an average of these five, an individual credit profile is derived.

Combining the institutional framework and the individual credit profile to determine an LRG rating level:

Combining the institutional framework score and the individual credit profile, S&P determine an indicative LRG rating level.
To reach a decision about the final rating level, stress scenarios associated to each rating category level are used.

Firstly, we will describe the institutional framework scores and their characteristics.

- Score 1 - Very stable and supportive: mature intergovernmental framework with limited and/or well planned gradual reforms agreed on by all level of Governments; own revenue generation capability and/or subsides providing good coverage of spending responsibilities; demonstrated ongoing supportiveness; high national standards in terms of transparency, public sector accounting, governance, reporting controls and planning.

- Score 2 - Predictable and well balanced: well established intergovernmental framework with regular reforms; overall good balance between revenues and expenditures; relatively strong standards on transparency, public sector accounting, governance, reporting and controls; prudent regulation of fiscal policy.

- Score 3 - Evolving and moderately supportive: evolving system of intergovernmental relations with repeated but not radical reforms; satisfactory balance of revenue sources and responsibilities; some mandates that may be unfunded; national standards in terms of disclosure control and public sector accounting that ensure good transparency; relatively prudent national regulation on fiscal policy.

- Score 4 - Developing and uneven: developing intergovernmental system with recent significant transition period of frequent ill reforms; potential volatility in central government transfers and/or in the LRG's mandates; generally adequate match between revenues and expenditures, but some underfinanced responsibilities; improving but still limited national standards in term of public accounting, reporting and controls, leading to a potential lack of standardization and potential insufficiencies for the weakest LRGs; some restrictions on the fiscal policy but without proper monitoring.

- Score 5: volatile and unpredictable: highly unpredictable institutional framework with ongoing and ill-prepared large scale transformations, or with potential instability of political institutions at the national level; LRG's depend on volatile transfers from other layers of Governments, creating potential significant funding gaps; generally limited flexibility at the LRG level; weak and inconsistent national standards in terms of public accounting, controls and disclosure; poor monitoring and/or loose national fiscal policy framework, with lack of central government enforcement.

The first scenario is a "very stable and supportive" one. In this case, a default would require the combination of very weak liquidity and very poor management. This government would generally be rated Aa, because it should be able to meet its financial obligations. When LRG's are particularly strong they could even by rated at a Aaa level.

The second scenario is based on a "volatile and unpredictable" institutional framework. Even an LRG with a very low debt burden could default for external reasons. An LRG with an average individual credit profile in this environment would likely be rated no higher than the B category because it faces major ongoing uncertainties and its ability and/or willingness to meet its financial obligations could be impaired by a soft degree of stress.

In the third scenario, a "predictable and well balanced" institutional framework is combined with an LRG's capability to bare a substantial level of stress, corresponding to an A category. Alternatively, an "evolving and moderately supportive" institutional framework is combined with an LRG's capability to bare a moderate level of stress, corresponding to a rating in the BBB category. Finally a "developing and uneven" institutional framework combined with an LRG's capacity to bare a modest level of stress, corresponds to an average rating in the BB category.

Table 2.1

INSTITUTIONAL FRAMEWORK SCORE	DESCRIPTION	INDIVIDUAL CREDIT PROFILE								
		1	1.5	2	2.5	3	3.5	4	4.5	5
		Extremely strong	Very strong	Strong	Relatively Strong	Average	Relatively weak	Weak	Very weak	Extremely weak
1	Very stable and supportive	AAA	AAA	AA+	AA	AA-	A	BBB+	BB+	SG
2	Predictable and well balanced	AAA	AA+	AA	AA-	A+	A-	BBB-	BB-	CCC/CC
3	Evolving and moderately supportive	AAA	AA	A+	A	BBB+	BBB-	BB-	B-	CCC/CC
4	Developing and uneven	N/A	A-	BBB	BBB-	BB+	BB-	B	CCC+	CCC/CC
5	Volatile and unpredictable	N/A	BBB-	BB	BB-	B+	B	B-	CCC	CCC/CC

3. South Australia's credit rating

South Australia is a state situated in the southern central part of Australia. With a total land area of 983.482 km^2 it is the fourth largest of Australia's states and territories. The majority of its people reside in the state capital, Adelaide, with most of the remainder settled in fertile areas along the south-eastern coast and River Murray

During the period 2009-2010 the estimated South Australian population was 1.644.582 and the State's GSP $A 80.356 million, which represents 6% of the Australian GDP[40].

South Australia shares many features of the Australian economy in general, in particular the agricultural and mining base is oriented strongly toward export markets and a manufacturing superstructure concerned with the home market and dependent to a degree on the assistance of tariffs on imported goods.

Regarding the industry structure we can say that given the small size of the market, South Australia relies on domestic demand from the rest of Australia as a driver for its economic growth.

An important sector is the manufacturing industry, which plays a big role in the generation of GSP and a large part in exports. The manufacturing industry consists of automotive and component manufacturing, pharmaceuticals, defense technology and electronic systems. South Australia's industrial sector includes meat and meat preparations, wheat and metal manufacturers, fish and crustaceans, road vehicles and petroleum products.

The State's largest employment sector is health care and social assistance, while the second largest employer is the retail trade.

3.1 Current credit rating

Differing from the previous chapters, analysis will be divided in two subchapters: Standard and Poor's Rating analysis and Moody's analysis.

Standard & Poor's rating

The first time that the State of South Australia was rated by Standard & Poor's was in July 1988 with an A-1+ (local short term) which remained stable until September 2009, when it was assigned an AAA level.
In March 2011 the rating agency issued a report on the ratings methodology and drivers regarding South Australia.

[40] Source: http://www.dfat.gov.au/geo/fs/South Australia.pdf

As we have already seen, Standard & Poor's adopts an analytical framework in which scores from 1 to 5 are given to a set of relevant characteristics in order to decide the rating for Local and Regional Governments.

Chart 3 reports our assessment of the results of the process, based on Standard & Poor's December 2010 rating report for South Australia.

Since S&P have assigned an AAA rating to South Australia it is reasonable to assume that the output of the model depicted in chart 3.1 is a score of less than 2 out of 5.

The Institutional Framework is described by S&P as one of the strongest in the world and expected to remain so, considering also the Australian institutional context[41] we could estimate a rating score of 1.

The Individual Credit Profile each of the following factors is scored on a scale from 1 – 5 and each carries equal (20%) weighting towards the overall credit score.

- South Australia's economy is considered strong, moreover the long term trend economic outlook of Australian states is ameliorated by Australia's institutional arrangements that increase the powers of State Governments to offset the differences in availability of revenues or the responsibility for providing services. Standard & Poor's also considers South Australian economy to be stronger now than in the past and forecasts a positive economic growth in both fiscal 2011 and fiscal 2012. These considerations suggest a rating score of 1.

- Concerning budgetary flexibility and performance Standard & Poor's states that South Australian, as all the Australian States, has moderate budget flexibility and the control it enjoys over its revenue base is reduced as a consequence of its dependence on the Commonwealth.
  Standard & Poor's also outlines how South Australia is a recipient under the horizontal fiscal equalization system. According to the last review of GST revenue-sharing relativities South Australia share of GST increased. Standard & Poor's also states that South Australia budget performance is strong, which is a positive rating factor. Moreover the State's operating performance strengthened over fiscal 2010 and it should strengthen substantially again in fiscal 2013. Therefore the score should be in the range 1-3.

- Debt burden and contingent liabilities are also consistent with AAA, and only a very small part of contingent liabilities might crystallize in the

[41] Australia is in the 99th percentile of the World Bank Governance Indicators, see Annex 3, and is the first country in the world according to the Human Development Index developed by the United Nations Development Program (UNDP), see Annex 1,

future. Even thought the compulsory workers' compensation scheme constitutes a significant liability, overall contingent liabilities are considered manageable and also Net Financial Liabilities are in the AAA range. We would therefore estimate a score in the range 1-3.

- South Australia's liquidity is considered a negative rating factor by Standard & Poor's. The overall position of the State though is considered neutral because of the strong access it has to external markets and its deep and liquid domestic capital markets. Therefore we assume a score of 3.

- Financial Management is considered by Standard & Poor's a very positive ratings factor. This happens because of the culture of planning and transparency and the prudent fiscal strategy of the Government that supports a top-level rating. Moreover the risk-management strategies of South Australia seem adequate and the Government holds the necessary power to introduce policy initiatives. We would therefore estimate a score of 1.

Applied to our assessment of rating scores the model in chart 3.1 would derive a credit score in the range 1.4 – 2.2 for South Australia.

When this analysis is considered in conjunction with the institutional framework score of 1 the result of our appraisal further supports an empirical assessment consistent with an AAA/AA+ rating (see table 2.1).

The use of empirical scoring systems by rating organizations informs the final rating decision by the rating panel or rating committee. The rating panels will commonly exercise discretion to assign a rating within one peg either side of the rating indicated by the empirical rating score based on subjective considerations.

The Standard & Poor's conclusion about South Australia is positive: the outlook for the next two years is positive, based on the State's prudently managed finances.

Standard & Poor's noted in a recent press release on the 2012 South Australian Budget "*Downward rating pressure could occur if the ratio of tax-supported debt to operating revenues appears to be deteriorating quicker than forecast….The most likely scenario for this to occur would be a lack of political will or inability to deliver on the state's ambitious savings measures or new expenditure proposals that are not matched by either stronger revenue growth or additional savings measures*."[42]

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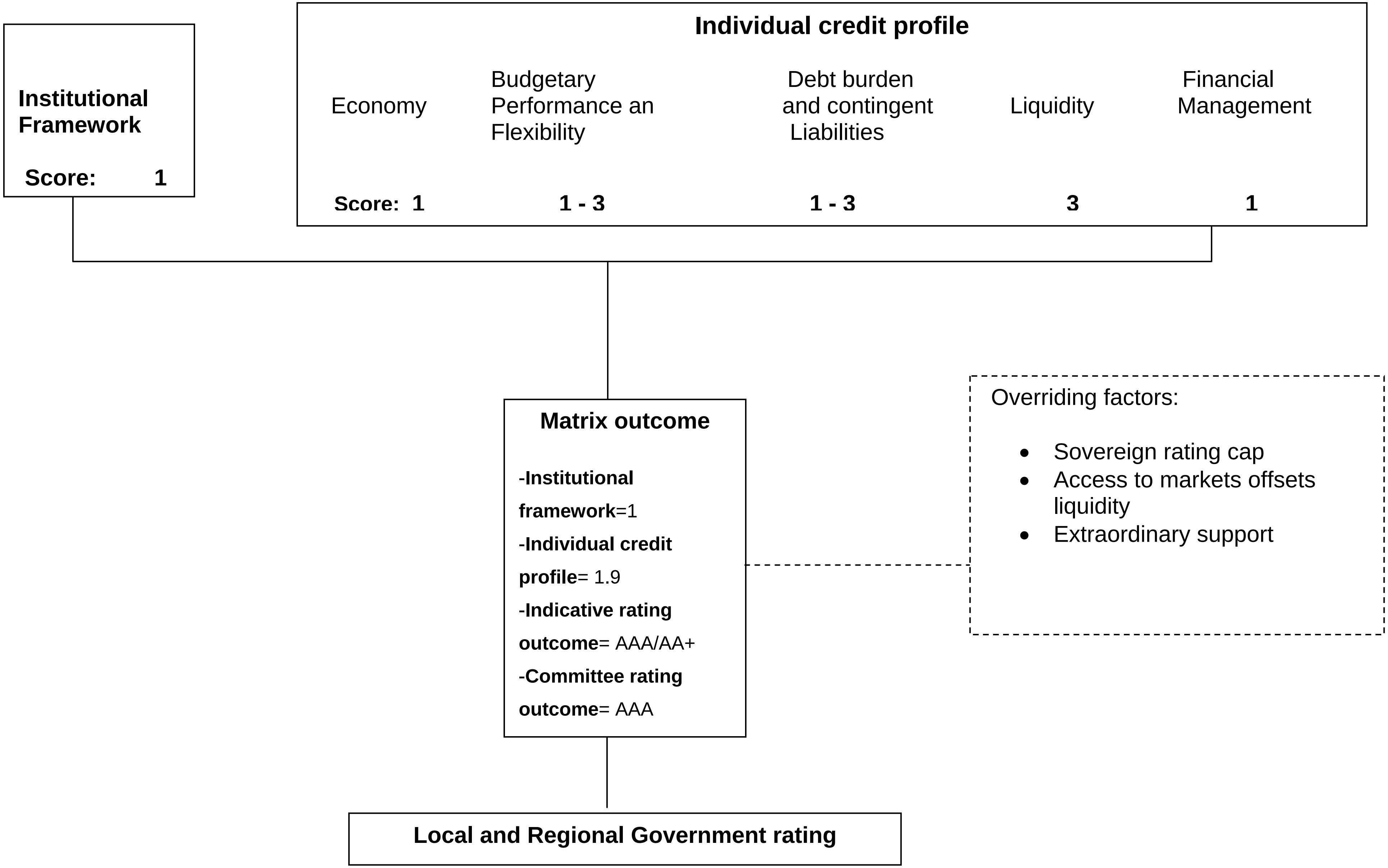
[42] A. Hughes, C. Curtin; *Ratings on the State of South Australia are unaffected by Government's 2012 Budget"* . 9 June 2011
www.standardandpoors.com

Chart 3.1


Institutional Framework
Score: 1
Individual credit profile
Economy
Budgetary Performance an Flexibility
Debt burden and contingent Liabilities
Liquidity
Financial Management
Score: 1
1 - 3
1 - 3
3
1
Matrix outcome
-Institutional framework=1
-Individual credit profile= 1.9
-Indicative rating outcome= AAA/AA+
-Committee rating outcome= AAA
Overriding factors:
Sovereign rating cap
Access to markets offsets liquidity
Extraordinary support
Local and Regional Government rating

Moody's rating

Moody's assigned South Australia's first rating in February 1988, a few months before S&P that rated the State in July. However, the rating given, as we have seen before, was different: S&P gave SA an A-1+ while Moody's gave it an Aaa rating.

In October 2001 the Moody's' outlook on the Aa2 domestic currency debt rating turned positive from stable. The agency explained that the outlook reflected an improvement in the State's debt profile. In August 2003 the debt rating of the State was raised from Aa2 to Aa1 in recognition of the decreasing debt levels and improving financial performance. This rating action was supported by the Government's commitment to maintain a balanced budget. The next upgrade was in November 2004 and it was from Aa1 to AAA, which is currently stable and, in Moody's opinion, unlikely to change in the middle-long period.

In an August 2009 report Moody's announced that the Australian states and territory budgets were under pressure as a result of the declining revenues while spending levels were considerably high.

According to the report, many State Government's financial and debt ratios had deteriorated as a result of the sharply slowdown in revenues after many years of robust growth[43].

Nevertheless, two months later, in October 2009, a stable outlook was confirmed for South Australia's Aaa rating.

Analyzing Moody's reports and announcements regarding South Australia over the years it is clear that the debt profile is a variable of key importance. In contrast to the 90s', when the debt was significantly increased by budgetary challenges, the State has reduced its stock of debt by applying revenues from the divestment of electricity assets, which was completed in 2000-2001. The improvement regarding the debt burden had also increased the State's financial flexibility by reducing interest costs[44].
In the early 2000 SA was given a positive outlook due to its moderate debt levels. The State's economy tended to follow the Australian trend, even though at a slower rate due to the slower population growth and the industry oriented to the agricultural and manufacturing activities.

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[43] *Announcement: Moody's South Australia's Australian state ratings pressured by revenue drop*. August 2009
http://www.moodys.com/research/Moodys-South Australiays-Australian-state-ratings-pressured-by-revenue-drop?lang=en&cy=global&docid=PR_185397

[44] *Rating action: Domestic rating outlook for South Australia finance authority changed to positive*. October 2001.
http://www.moodys.com/research/DOMESTIC-RATING-OUTLOOK-FOR-SOUTH-AUSTRALIA-FINANCE-AUTHORITY-CHANGED-TO?lang=en&cy=global&docid=PRM_20011031112706

As previously mentioned, in 2003 SA's rating was upgraded from Aa2 to Aa1.the rational of this actions was the Government's commitment to maintain a balanced budget and the growth in tax revenues and expenditure restraint. Moody's also transfers from the Commonwealth found very important for the State's credit quality.

The key for the upgrade to an Aaa rating was SA's very low debt burden. The minimal interest payments that resulted from modest debt levels enhance the State's financial flexibility.

The conclusions that we can draw from Moody's' opinion during the last ten years are that South Australia's credit strength is based on an efficient fiscal performance, which is evidenced by the surpluses achieved by the government that is supported by growth in tax revenues, prudent budgetary practices and on its modest debt burden.

3.2 Rating and Regional Budget

As previously explained the State's budget is very important when it comes to the rating assignment process. But what is the impact of the credit rating over the budget decisions?

It is essential to specify the main factors that affect budget decisions, understand the importance of having an Aaa rating and the benefits that it could bring to the State and to its population.

Regarding the main factors affecting the State's budget decisions the main focus is to create a balance between:

- fiscal policy
- South Australia Strategic Plan targets
- services to communities
- the needs of Government Departments

The importance of being rated with an Aaa rating could be looked at from two perspectives: from the political side it is a benchmark, a score card that measures the quality of the State's financial management. From a governance perspective, it provides a fiscal framework within which decisions and actions are taken.

The benefits of an Aaa rating are significant. In the first place, it works as a measure of the quality of the State's management and it is also supports the State's presence in debt markets. Secondly, it implies a certain debt servicing cost. If the rating is downgraded debt costs will rise, with a consequent impact of the budget and a need all other things being equal to raise more revenue or reduce expenditure is fiscal targets are to be achieved.

South Australia 2011-12 Budget

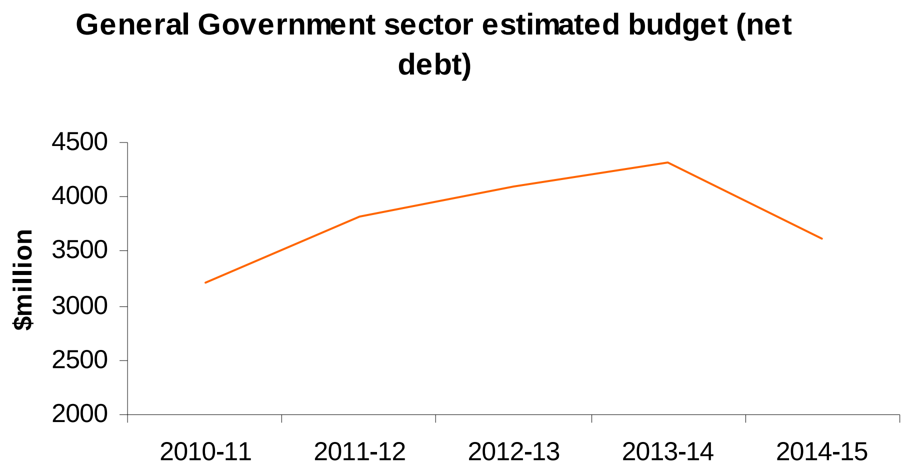
The South Australian Budget for the period 2011-12 was delivered on 9th June 2011. The Budget's slogan is "strong, secure, and supportive": a strong budget to ensure the stability of the economy, a secure financial position and finally supporting of people in need, families and communities.

The 2011 Budget builds upon reinforces and builds upon fiscal adjustments made in the 2010 Budget designed to ensure fiscal sustainability for the future. The previous Budget delivered a package of significant expenditure savings, coupled with asset sales and revenue measures in response to the Sustainable Budget Commission.

Measures in the 2010 and 2011 Budgets result a reduction in net debt in 2014-15.

Even though the 2011-12 Budget delivers an operating deficit or AU$ 260 million, the South Australian Government anticipates that the next Budget will be in surplus, with the expectation that the net operating balance will grow to a surplus of AU$ 655 million in 2014-15
This outlook is supported by the expectation that the South Australian economy will maintain the same economic growth trend over the next four years.

Chart 3.2



***Source**: Regional Budget 2011-12*

Chart 3.3

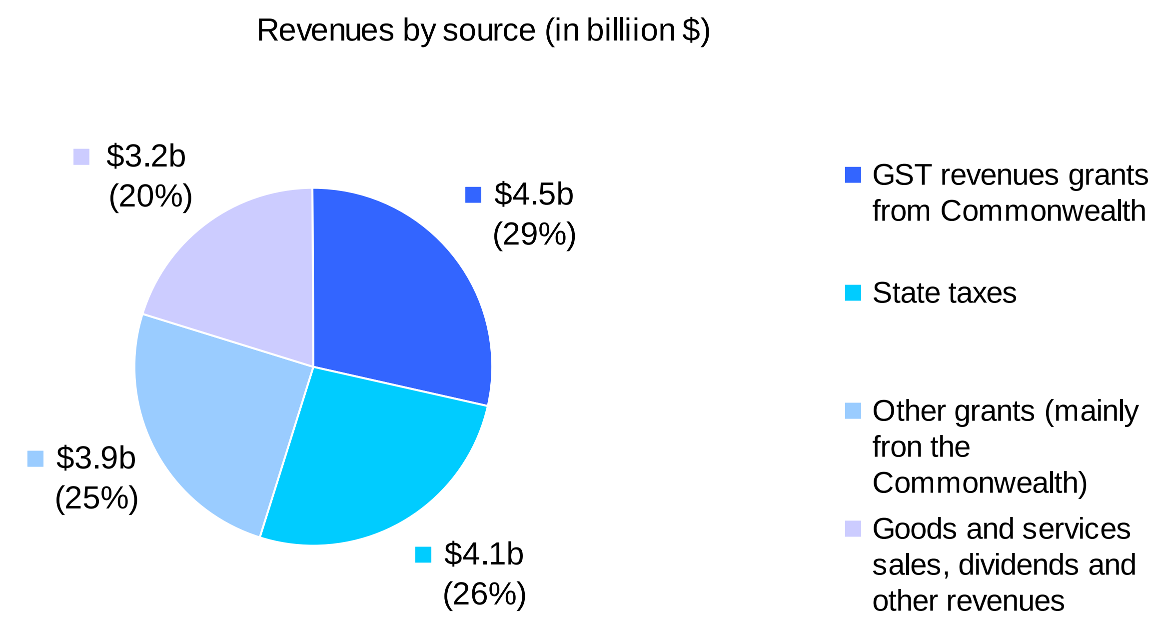
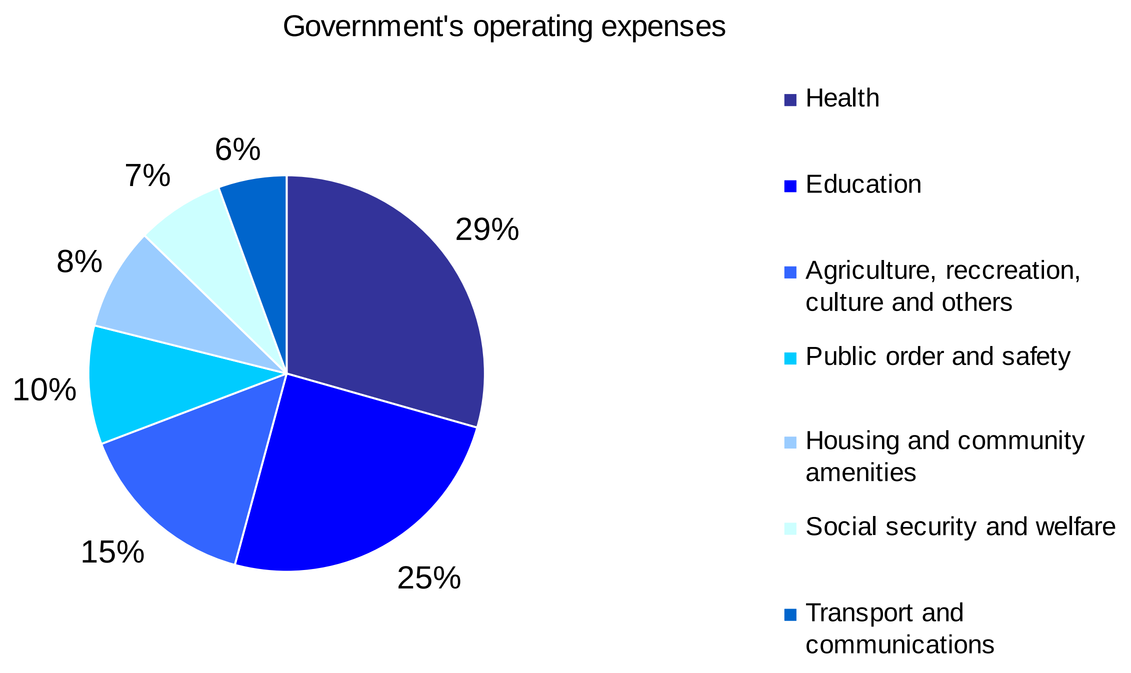


Chart 3.4



***Source**: Regional Budget 2011-12*

3.3 Credit rating agencies and 2011-12 Budget

Both agencies agreed with the fact that the rating is stable and unlikely to change with the release of the 2011-12 Budget.

***Moody's opinion*:**[45]

The rating agency noticed deterioration in the State's financial performance due to increased spending. Besides, the budget forecasts a deficit of -0.8% of revenues in 2011-12. In addition, deficits are forecast to continue over the medium term. The key action, for Moody's, is to carry out recommendations of the State's "Sustainable Budget Commission" which will help to bring the general Government back into balance in the medium term. It is predicted that the rate of expenditure growth is likely to be challenged by wage outcomes and ongoing pressures on health care and other services.

Standard and Poor's opinion: [46]

The assessment of the agency about Australia's strong institutional framework and fiscal discipline continue to support the rating on the State. While budgetary performance is weaker than forecast at the time of the mid-year budget in December 2010, due to lower GST transfer from the Commonwealth of Australia, it is expected that the State's savings measures will mitigate the impact of these lower revenues. As a consequence, general government and nonfinancial public sectors will record a small increase of operating deficits over the next two years. Tax-supported debt to operating revenue is forecast to rise modestly through the budget year and over 2013-14. The lower level of gross debt forecast by the government compared with the mid-year budget update partly reflects the deferral of various capital-expenditure projects and the partial utilization of the State's cash reserves.

Using a comparable discount rate for the unfunded pension liability, net financial liabilities will reach about 84%, which is consistent with an AAA rating.

A possible downgrade could occur if the ratio of tax-supported debt to operating revenues appears to be deteriorating quicker than forecast. The scenario for this to occur would be a lack of political will or inability to deliver on the State's ambitious saving measures for new expenditure

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[45] *Announcement: Moody's comments on State of South Australia's 2011/12 Budget.* June 2011 http://www.moodys.com/research/Moodys-comments-on-State-of-South-Australias-201112-Budget?lang=en&cy=global&docid=PR_220586

[46] *Bulletin: ratings on the State of South Australia are unaffected by Government's 2011 Budget*. June 2011 http://www.standardandpoors.com/prot/ratings/articles/en/us/?assetID=1245306112997

proposals that are not matched by stronger revenue growth or additional savings measures.

As we can see, both agencies have the same opinion about the key importance of saving measures as a means of controlling expenditure growth and thus providing for a sustainable fiscal position.

3.4 The Implications of a Triple-A Rating: a South Australian Perspective

The measures that might lead to losing or maintaining a Triple-A rating are eventually part of the political decision making at the central government level. These decisions of an economic and social nature take place in the framework of the balancing that the South Australian Government puts in place in order to deliver the services required by the community, without exceeding its spending capacity and simultaneously making sure that its policy is aligned with the South Australian Strategic Plan – SASP.

For Australia and South Australia, the goal of maintaining a triple-A rating represents both a framework and a benchmark.
In this context, a policy aimed at keeping a top-level credit rating is important because it provides a judgment on the quality of the government‘s financial management, a sort of tool through which entities other than the public administration can appraise the outcomes of good financial management.

As it is neither part of a monetary union nor of an integrated economic area, Australia - and therefore South Australia- lacks a framework, an entity that acts as a cap on financial management, imposing standards to be respected. The Triple-A rating provides this sort of ceiling. An economic policy aimed at maintaining such rating pushes the government to manage finances wisely in order not to exceed certain limits.

There are also a number of benefits deriving from a top-level rating. Even though the direct financial benefits out of a triple-A rating are relatively small (about AU$4 million based on current debt levels), getting a triple-A implies that financial measures have been put in place so that debt is low, this means being able to repay debt in the long and short run. This is especially important for a country with an ageing population, such as Australia, because government expenditure will rise in the future as a consequence of increasing costs for health care and a higher amount of aged pensions to pay (at a national level). A triple-A rating ensures that debt level is low enough to pay for these expenses.

If the South Australian government pursued a lower rating goal, say a double-A, this could translate into a higher level of debt (coupled with a consequential increase in debt servicing costs). Obviously a higher debt requires higher resources to pay it off, therefore an increase in the debt level could require tax increases and/or expenditure (i.e. services) cuts. It is quite easy to conclude that this scenario would hardly be sustainable in the long-term and would carry the potential for a possible future downgrade.

While it is common that at a sub-sovereign level some local Governments are rated lower than the sovereign it is seldom the opposite, that is, a state or region is unlikely to be granted a higher rating than the one assigned to the nation it belongs to.
While Australia as a sovereign is rated as a triple-A country, not all its States hold a triple-A rating.

Queensland lost their triple-A rating because of the expenditure required for badly needed infrastructures that resulted in an increases debt level. The expenses for such infrastructures were undertaken by state-owned corporations, therefore directly affecting the government liabilities, in a necessary effort to provide for such infrastructures.

Tasmania has never attained a triple-A rating largely because of the size of its economy which is simply too small to meet the high resilience and diversification criteria we discussed earlier.

South Australia does hold a triple-A rating, but, as we just explained, that is not the case of other Australian States, the reason is not to be found in severe economic downturns but rather, a series of circumstances that put some stress on the local finances.

The recently published (9 June 2011) South Australian budget gained the approval of CRAs that confirmed South Australia's top rating.

South Australia is committed to realising two ambitious projects: the new Royal Adelaide Hospital (about AU$2.1 billion) and the Adelaide Oval (about AU$500 million) inside the next 5 years. Debt increases associated with the Adelaide Oval project are already included in the fiscal estimates considered by the rating agencies, however the debt associated with the $2.1 billion hospital PPP project will not hit the State's balance sheet until 2015-16. The State's Budget papers show a focus on a substantial operating surplus in 2014-15 and plans for a similar position in 2015-16 to offset the increase in debt burden associated with this project.

3.5 Overview of Statistical Data used in sovereign credit analysis: Australia[47]

Economic Structure and Performance

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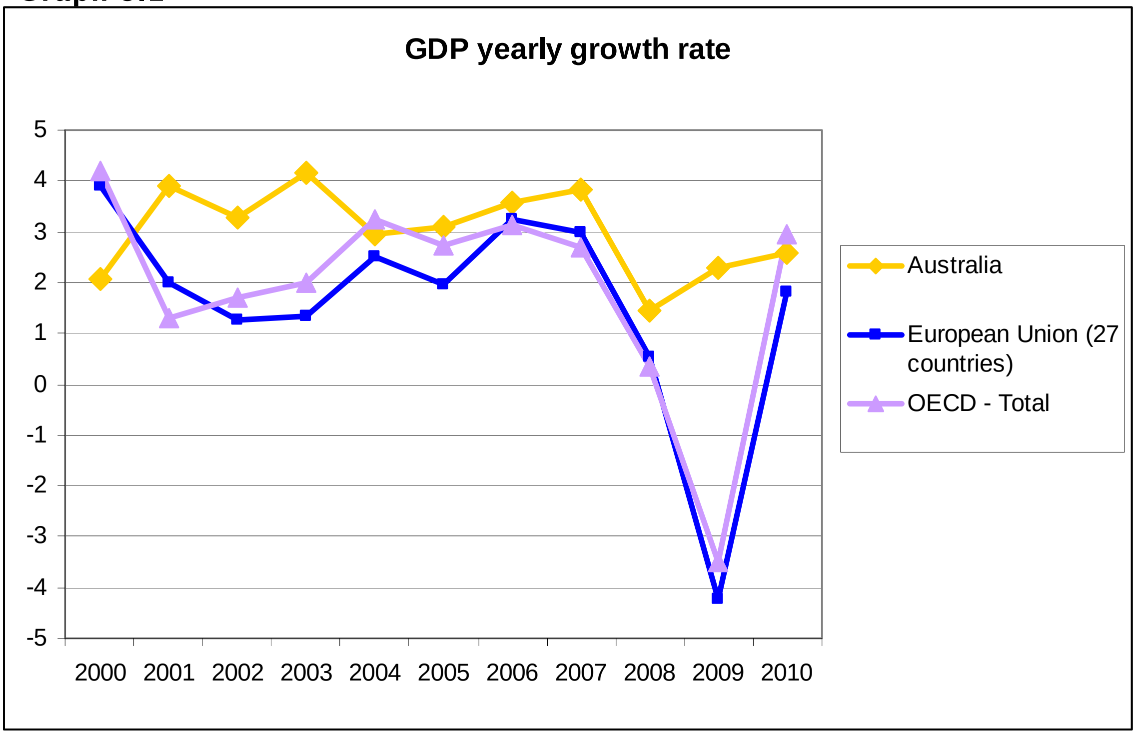
[47] *Sources and Uses of Statistical Data in Moody's Sovereign Credit Analysis*, December 2006, www.moody's.com

As explained previously, the single most relevant measure of a country wealth is per capita GDP on a purchasing power basis. As shown in Annex 4 the Australian GDP per capita (calculated in US$ on current prices), adjusted for the PPP displays a growing trend and it value is placed above both the European Union Average and the OECD average. More importantly the GDP value for 2009 increased with respect to the previous year while both in the OECD and in the EU there was a clear deflation. Analysing the value of GDP is important because it allows to calibrate the importance of a country in international finance, allowing (through PPP) to assess the true relative standard of living of the population.

To better understand the trend in Australian economic growth we should have a look at graph 3.1, showing the trend of Australian GDP growth rate alongside the European Union (EU-27)[48] and the Organisation for Economic Co-operation and Development (OECD)[49] average.

Graph 3.1



Source: *OECD*

Graph 3.1 shows how growth rate of Australian GDP has maintained a very high trend, almost always growing at a higher pace than OECD and EU. Even with the world crisis that hit the international economy from 2007-2009, the Australian GDP never decreased (unlike the EU and the OECD).

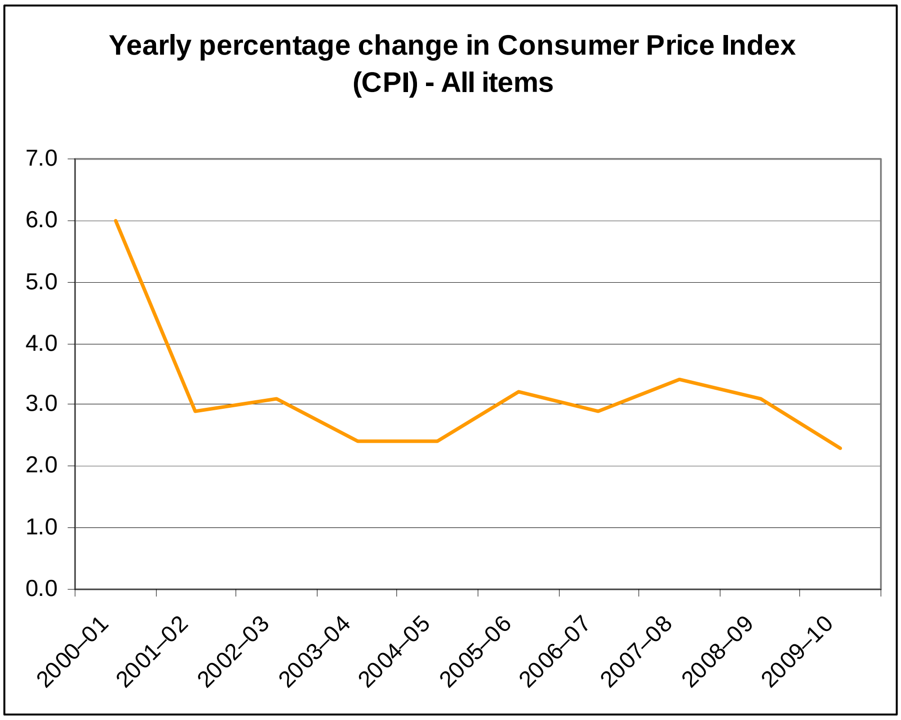
[48] Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.

[49] Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom and the United States.

In 2007 the Australian GDP grew by 3.8% while both the EU-27 and the OECD saw a deflation in the growth rate with respect to the previous year. In 2008 the Australian GDP growth rate decreased too, as a consequence of the crisis, but it never reached the extremely low values hit by the EU-27 and the OECD as a whole (respectively down at 0.5% and 0.3% against a growth of 1.4 for Australia).

The striking difference in the recovery process is seen in 2009 when both at an EU-27 and at the OECD level the growth level of GDP was negative (-4.2% and -3.5%) meaning that on average the GDP for the 27 European countries and the 34 members of the OECD decreased that year. During this period, the Australian GDP growth rate significantly increased, meaning that that year the GDP of Australia not only grew but it also did so at a higher rate than the previous year, recovering from the economic downturn outstandingly. The annual percentage change in GDP allows to see if the country is growing fast enough to cope with the growth in labour force, reduce unemployment and keep up the citizen's standard of living. Thus avoiding potential social conflicts that might result in political instability.

Graph 3.2



***Source**: The Australian Bureau of Statistics (ABS)*

Another important indicator used in sovereign credit rating is the inflation rate.

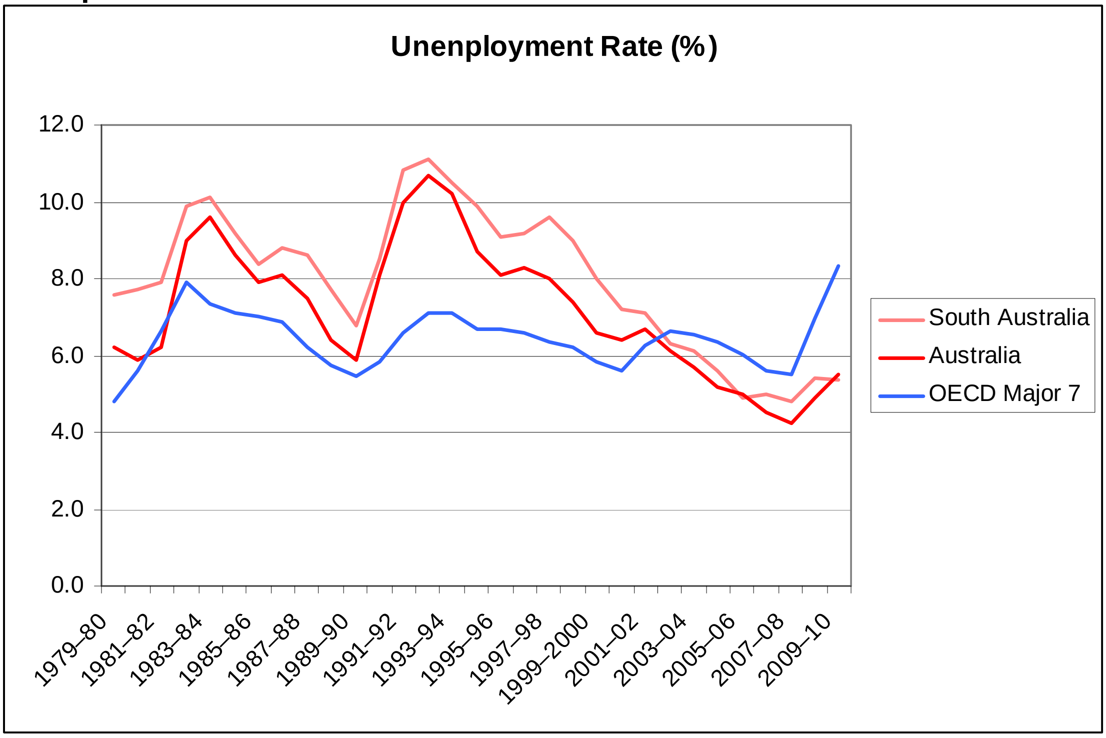
Inflation is measured as the change in the price of a basket of goods commonly consumed (Consumer Price Index) on a yearly basis (December to December).

The reason why inflation rate is important is that it can help identify distortions in the labour and product markets. Moreover a stable level of inflation is a sign of monetary stability and allows for normal productive activity. This measure is not particularly useful to measure international competitiveness though, as it reflects prices at a retail level rather than production cost.

Observing the Australian variation in CPI in graph 3.2, it is possible to appreciate a general downgrading trend in the past 10 years. This means that the inflation rate tends to decrease over time. The graph also suggests that the inflation level in Australia hasn't undergone steep variations since 2001, therefore framing a situation of sound stability.

A further statistical indicator often used into sovereign rating is the unemployment rate. The reason for its importance is that a high level of unemployment translates into high pressure on the government for a stimulation of the economy to decrease social discontent. It is also a useful indicator of the output gap and the under-utilisation of a country's human capital. Graph 3.3 shows the trend of unemployment rate in Australia, South Australia and the OECD Major 7 counties[50].

Graph 3.3



***Source**: ABS*

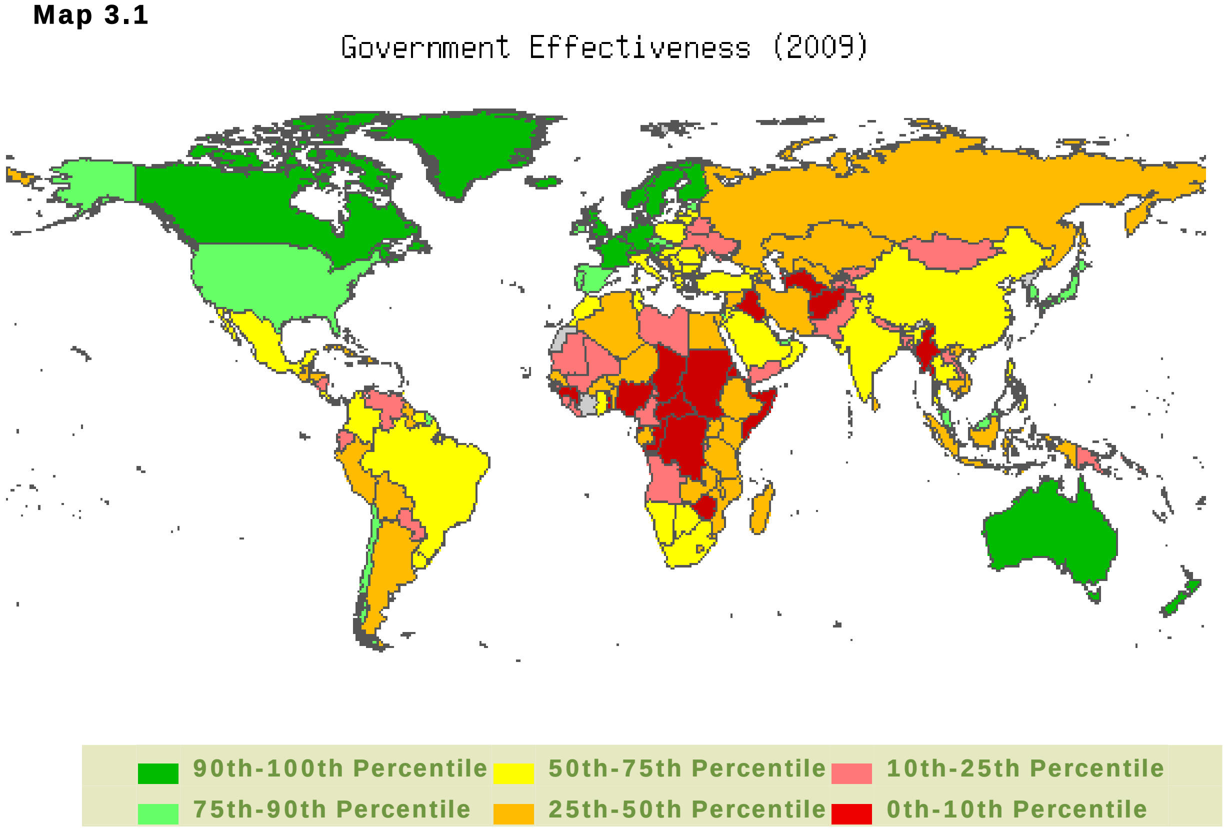
Unemployment rates in Australia were historically higher than the OECD Major 7 counties. Starting from 1994 we can observe a downward trend that eventually brought the Australian unemployment rate to a lower level than that the Major 7 countries in OECD: starting from the 2002-03 (when the rate that for Australia was 6.1 and 6.62 for the OECD Major 7) and widening the gap to 5.49 versus 8.34 in 2009-10. In the past year the OECD countries have seen a steep increase in the unemployment rate while the figures for Australia, though slightly rising, haven't changed as dramatically. South Australia's unemployment rate is generally in line with the national trend, even though it is slightly higher than the national average. It is interesting to note that in the past year the unemployment of

[50] Canada, France, Germany, Italy, Japan, the United Kingdom and the United States of America.

South Australia decreased. This not only means that its value was below the national average, but even more importantly that the South Australian trend was in contrast with the national upward tendency.

A set of crucial indexes used in a sovereign Rating that represents the core and starting point to appraise the performance of a country are the Worldwide Governance Indicators provided by the World Bank (Annex 3). In particular it is interesting to note that the Government effectiveness index is helpful in assessing the promptness of the governmental policy responses and the credibility of its agenda. The worldwide situation is shown in map 3.1, representing the levels of government effectiveness around the globe.[51]

Map 3.1



Source*: Kaufmann D., A. Kraay, and M. Mastruzzi (2010), The Woldwide Governance Indicators: Methodology and Analytical Issues*

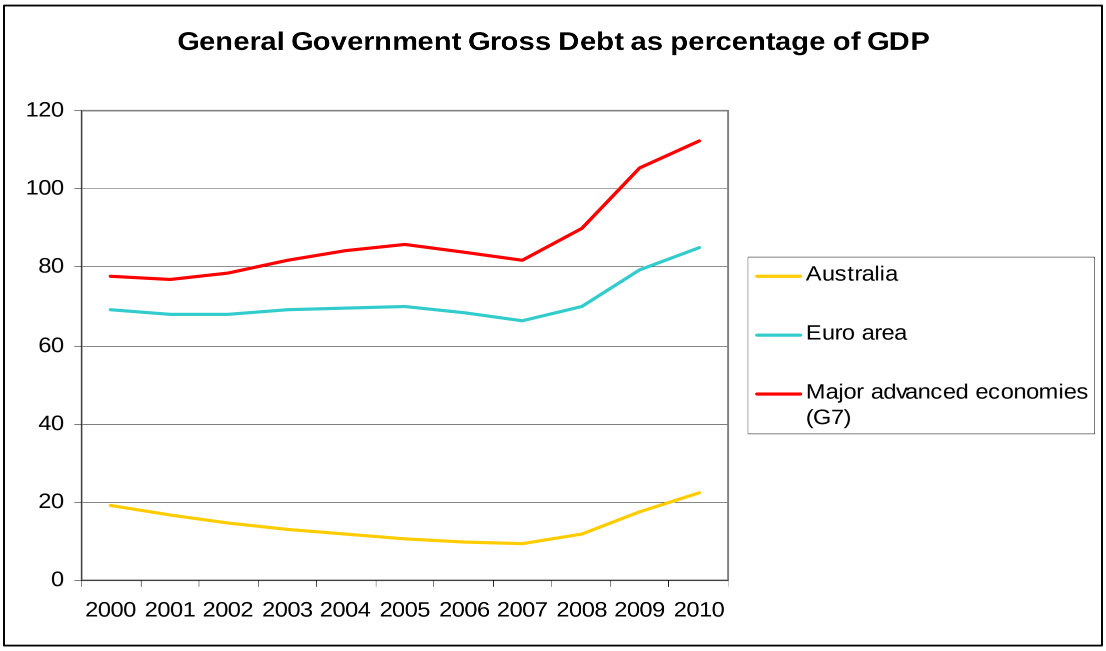
[51] Note: The governance indicators presented here aggregate the views on the quality of governance provided by a large number of enterprise, citizen and expert survey respondents in industrial and developing countries. These data are gathered from a number of survey institutes, think tanks, non-governmental organizations, and international organizations. The aggregate indicators do not reflect the official views of the World Bank, its Executive Directors, or the countries they represent. The WGI are not used by the World Bank Group to allocate resources.

Even in this case Australia's position is in the top-few outstandingly well performing countries (together with Canada and a few European countries), falling into the 95th percentile government effectiveness.

Government Finance

One of the many indexes that can be used to assess government finance in the sovereign rating process is General Government Debt as a ratio of GDP, as shown in the graph below. This measure is probably the most commonly used when it comes to weighting the debt to the economy scale. It is important to bear in mind that when cross-country comparisons are put into place, this index might have some limitations due to possible differences in national accounting practices, although to some extent this problem should be limited by the adoption of consistent statistical measures such as the United Nations System of National Accounts by more advanced economic countries.

Graph 3.4



***Source**: International monetary Fund*

From graph 3.4 it is easy to conclude that the ratio of Australian government debt with respect to GDP is a lot lower than the average for countries in the Euro area[52] as well as the G-7[53] economies. It is very interesting to observe how what appears from the graph above confirms the success of the low debt policy put in place by Australian Governments and

[52] Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia and Spain.
[53] France, Germany, Italy, Japan, United Kingdom, United States, and Canada.

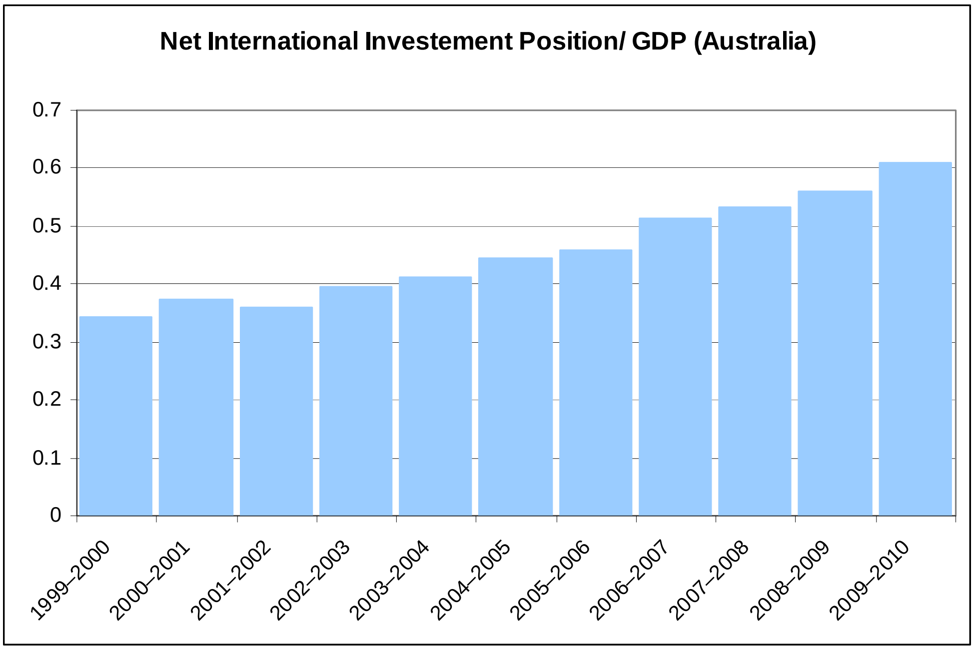
clearly confirms at a data level as was inferred through rating parameters earlier in this paper. The debt position of Australia is outstandingly sound.

External Payments and Debt

The Current Account of the Balance of Payments is a crucial factor in estimating the country's debt position.
The current account balance is the result of all cross-border transactions between residents and non residents. This includes exports and imports of goods and services, unilateral transfers and flow of dividends and interest payments on foreign assets and liabilities. The current account balance records all the cross borders flow and has a negative balance if payments exceed receipts from abroad (as is the Australian case) and a positive balance in the reverse case. The balance of payments is a monetary phenomenon as it measures indirectly demand and supply in the currency market. It is therefore subject to change on a yearly basis due to variations in the exchange rate of the domestic currency with respect to the currency of the trading partner countries.

As shown in the charts Annex 5, there is a parallelism in the trend of the current account balance and the exchange rate of the AUD in comparison to the USD. We can also observe that from the Australian data that it appears that the country is in an importing position.
To allow for cross country comparison the variable should be divided by GDP in order to account for country size and openness of the economy to trade.

Graph 3.5



Source: *ABS*

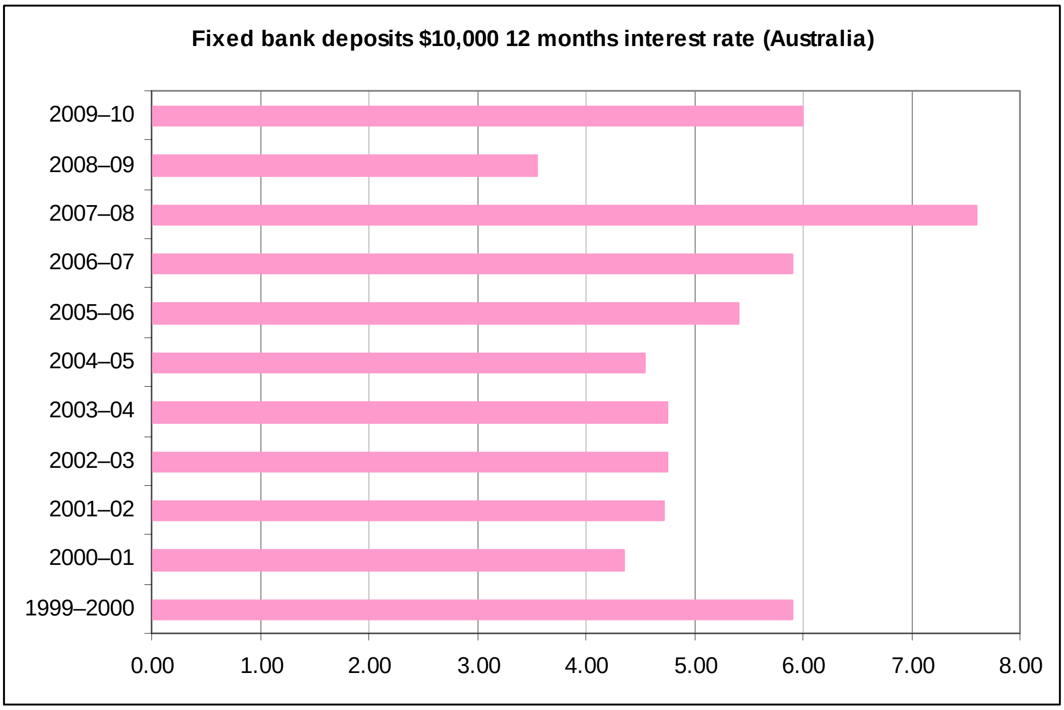
Another statistical measure used to evaluate external payments and debt is the external debt position of a country. This measure though has a very limited significance for developed countries whose currencies have a virtually unquestioned convertibility.

As Australia is one of these advanced industrial countries analysing its external debt position would not provide a useful insight in its economy. The index used to appraise the role of the sovereign in international movement of capital is instead its net International Investment Position expressed as a percentage of GDP, shown in Graph 3.5. In the Australian case we can observe a net asset position maintained over time, meaning that the country is a net creditor in the global capital market.

Monetary, External Vulnerability and Liquidity Indicators

Even though the indicators for monetary, external vulnerability and liquidity are generally used for the evaluation of developing countries resiliency to a possible bank or currency crisis, it is interesting to have a look at the value of one of the most important among such indicators for Australia.
The short term interest rate is shown in the graph 3.6.

Graph 3.6



***Source**: ABS*

From the image above we can observe how the interest rate on bank deposit in Australia has been historically quite low, this shields the economy from possible currency depreciation that would eventually put a high level of stress on debtors and raise the risk for default.

We can therefore conclude that this data are consistent with the framework of outstanding performance pictured by Triple-A standards earlier in this paper, confirming the position of Australia as an extremely reliable debtor.

4. Australia's credit rating: a resilient Aaa Government

Australia is located between the Indian Ocean and the South Pacific Ocean. It comprises six states, two major mainland territories, and other minor territories: New South Wales, Queensland, South Australia, Tasmania, Victoria and Western Australia. The two major mainland territories are the Northern Territory and the Australia Capital Territory.

Australia's population is around 21,766,711 people[54] and its GDP, in the period 2009-2010 was 1,283,957[55].

The economy of Australia is a modern market economy. In 2009, it was the 13th largest national economy by nominal GDP[56]. The Country is a member of the Asia-Pacific Economic Cooperation (APEC), G20, OECD and WTO. It has also entered into free trade agreements with ASEAN, Chile, New Zealand, Singapore, Thailand and the United States.

The economy is dominated by the service sector. Mining and agricultural sectors account for the 57% of the nation's exports[57]. The Australian economy is dependent on imported crude oil and petroleum products. The economy's petroleum import dependency is around 80%.

Australia is a major exporter of agricultural products, particularly wheat and wool, minerals, liquefied natural gas and coal.

The strength of Australia's economy has been highlighted in recent years by its ability to withstand internal and external events, including housing boom and the Asian financial and economic crises.

As a result of the ongoing structural and policy reforms implemented since the 70's, Australia today has a modern institutional and regulatory structure that provides certainty to business and investment.

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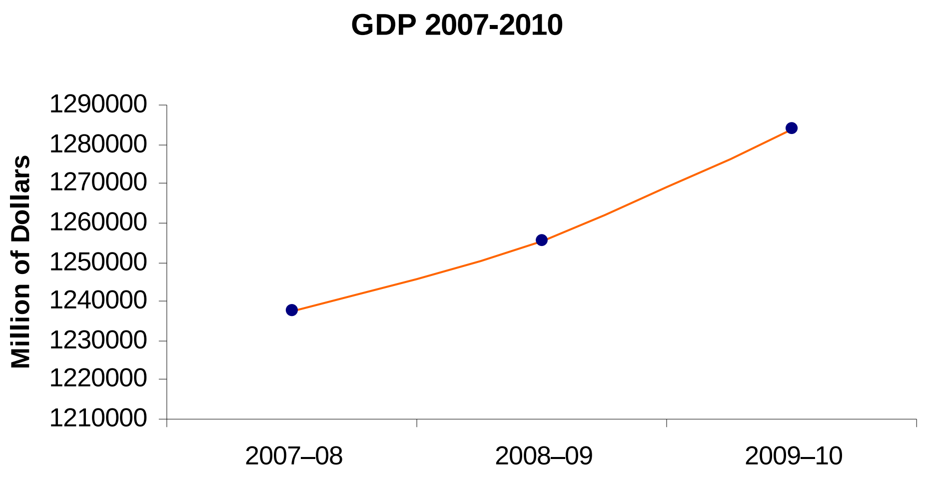
[54] Source: www.indexmundi.com

[55] Source: Australian Bureau of Statistics http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/LookupAttach/1350.0Data+Cubes-30.06.111/$File/13500DO001_201107.xls#TopOfTable_Table_1

[56] Source: CIA world fact book https://www.cia.gov/library/publications/the-world-factbook/fields/2195.html

[57] Source: Reserve Bank of Australia http://www.rba.gov.au/Statistics/Bulletin/H03hist.xls

Graph 4.1



Source: Australia Bureau of statistics

4.1 The rating history[58]

Australia was rated for the first time in January 1962 by Moody's, over ten years later, in July 1975 by Standard & Poor's and as recent as January 1996 was rated by Fitch. The rating in 1962 was A and the first upgrade to Aaa took place in October 1974; six months before being top rated also by S&P.
The downgrades in the Australian rating history occurred in the late '80's. The first one in September 1986 and the second and last one in August 1989.

In 2002 Moody's change the methodology of analysis. As a result of these changes the currency issued by the Australian Government was upgraded to Aaa. In particularly, Moody's Investors Service had raised to Aaa the country ceilings for bond and bank deposits.

A country ceiling functions as a cap on the ratings assigned to foreign currency debt of domestic residents. The cap reflects the risk that in the event of an external payment crisis, the government would impose a general debt moratorium to ration scarce foreign currency assets.

This change reflected Moody's assessment that most Governments have come to recognise the disruption to the economy that could result if a debt moratorium were applied to providers of critical services such as these[59].

[58] *Australia's rating dynamics analysed in this chapter refer to Moody's announcements and actions.*

In January 2003-2004 Moody's reported Australia's outlook as stable. The rationale for the action was the Country's low public debt, resilient economy, strong financial system, stable politics, a market regulatory regime, and a pragmatic policy stance. The rating incorporated the medium-term orientation of fiscal and monetary policies, and Moody's expectation that Australia's emphasis on price stability and a sound budgetary position[60].

One of the latest rating actions was in May 2011[61]. It announced Moody's stable outlook for the Country. This was based on its very high economic resiliency, very high Government financial strength, and a very low susceptibility to event risk.

Moody's pointed to Australia's strong governance indicators. The framework for fiscal policy is transparent and had kept Government debt at low levels.

The report further notes that Australia's economy had outperformed other mature economies during the global financial crisis due to:

(1) The Government's very low debt levels, which put it in a good position to be able to implement an economic stimulus program, including tax cuts and infrastructure spending;

(2) The country's strong banking system, which enabled the country to avoid a financial crisis such as occurred in a number of advanced economies;

(3) The increasing economic links to Asia, with China being Australia's largest trading partner and other Asian countries also having strong demand for Australian exports.

4.2 Rating and Budget

It is worth explaining why a Country's budget has a certain impact on the rating decision. The budget reflects risks that are linked to the status and performance of an individual country. It shows the ability of local and

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[59] *Rating action: Moody's upgrades foreign currency ratings of Australia, New Zealand, and Iceland to Aaa*. October 2002
http://www.moodys.com/research/MOODYS-UPGRADES-FOREIGN-CURRENCY-RATINGS-OF-AUSTRALIA-NEW-ZEALAND-AND?lang=en&cy=global&docid=PR_60715

[60] *Rating action: Moody's reports: Australia's Aaa ratings and stable outlook are thanks to low debt, vibrant economy, and strong financial system.* January 2003
http://www.moodys.com/research/MOODYS-REPORTS-AUSTRALIAS-Aaa-RATINGS-AND-STABLE-OUTLOOK-ARE-THANKS?lang=en&cy=global&docid=PRM_20030109214740

[61] *Rating action: Moody's maintains stable outlook for Australia's Aaa ratings*
http://www.moodys.com/research/Moodys-maintains-stable-outlook-for-Australias-Aaa-ratings?lang=en&cy=global&docid=PR_218185

regional Governments to implement policy decisions that generate balanced or positive fiscal outcomes which enhance long-term financial strength is a credit positive[62].

Moody's considers the budget as an indicator of government financial robustness. Government financial strength is influenced by an analysis centered on the budget. The reality is that not all the debt is created equal. The solution found by Moody's is to assess the degree to which public debt is constraining on the basis of two key questions:[63]

The first question is how "affordable" is the debt?

The same level of debt can create different levels of discomfort for two indebted countries (even if they have identical GDPs). For example, in one case, interest payments may absorb 50% of total revenues – half of the taxes go to pay interest on the debt before paying for schools, bridges, etc. In the case of the other country, interest costs may only pre-empt 10%. Thus, as a starting point, we will look at interest payment/revenues and also the size of the gross borrowing requirement.

The second questions is how adverse (or potentially adverse) are the debt dynamics?

This depends on two main issues:

- **How likely is the debt to rise rapidly due to a shock or crisis?**

The structure of the debt matters. We attempt to differentiate between dangerous and safe debt structures. Dangerous debt structures are characterised by a lack of granularity (front-loaded debt, or a very uneven repayment schedule) and different types of indexation (to interest rates or exchange rates).

Similarly, debt can rise hastily when, for instance, a government has to take the cost of a banking crisis onto its budget. .Therefore it is important to assess the degree of conditionality of liabilities. Actual financial debt obligations should be weighted much more heavily than contingent ones (such as the risk of a banking sector bail-out) or even more implicit, longer-term liabilities (such as unfunded pension liabilities). In fact, contingent liabilities must be discounted by their likelihood of materialisation. This is easier said than done. Future liabilities should be taken into account only in so far as we can appreciate their cash impact.

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[62] *Submission to Australian Senate's Select Committee on State Government Financial Management, Moody's rating of Australian's States*. May 2008.
http://www.aph.gov.au/SENATE/committee/sgfm_ctte/submissions/sub35.pdf
[63] *The "government balance-sheet" tool kit, in Sovereign Bond Ratings*. September 2008.
http://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBC_109490

The point here is that Moody's take into account implicit liabilities such as public pension system deficits only to the extent that they will materialize into an actual debt or payment obligation; Governments have many ways to alter the net present value of pension liabilities, such as postponing retirement age, increasing contributions and lowering pensions.

- **Is the debt on a long-term increasing path?**

Another discriminating parameter is whether debt is on a stable, a declining, or an explosive growth path. This is an important factor, but more helpful in terms of the direction of the rating than for its level.

The second part of the analysis consists in evaluating the ability of a government to adjust and mobilise resources both through further financing, realization of existing assets and through higher revenues and/or lower spending.

Question 1: *is there a large and/or pliant pool of financing?*
The first thing a government can do to repay its debt is raise more debt. This clearly does not improve its solvency but it may allay liquidity concerns. Therefore, in equal conditions, countries that have access to a deep and diversified pool of finance are in a better situation than those whose private savings are low and whose financial system is repressed.
For this reason, financial depth can be a useful indicator of government financial flexibility.

A related question is the extent to which the debt is owned by a captive set of local investors or by foot-loose foreign investors. The public debt that is owned by the central bank may ultimately have to be repaid – when it is not inflated away – but the risk that the central bank is going to bankrupt the government is negligible. Therefore, even though it is often hard to know in detail who owns the debt, the nature of this ownership is a parameter that has to be taken into account. Any debtor benefiting from such a dedicated investor base has a lower degree of vulnerability.

Question 2: *can the government sell assets?*
Another means Governments can use to meet their debt obligations is to sell assets. Indeed, Governments have assets as well as liabilities, such as public companies, deposits in the banking system, and a privileged claim on central banks' foreign currency reserves for the external debt
.
The extent to which these assets can cancel out or mitigate liabilities ultimately depends on whether the country is subject to liquidity risk. If yes, then only liquid assets should be taken into account.

For countries that are not subject to liquidity risk such as Aaa countries, the use of privatization proceeds to repay debt does not improve creditworthiness – barring massive expected productivity gains.

Question 3: *what is the government's adjustment capacity?*
In assessing the "adjustment" capacity of a government, Moody's commonly uses the debt/revenue metric. A low ratio will be reflective of a high "coverage" of the debt by annual tax receipts.

Balance sheets stretch and Aaa

A severe deterioration in government balance sheets has been a common thread underlying all past Aaa downgrades. In Moody's opinion to reverse the trajectory of public debt by returning the primary fiscal position to balance or surpluses, the Aaa downgraded government would need to set recovery plans within a 5 to 7 year time horizon.

The question will be explained by using Norway and Canada as examples[64].
In Norway the initial driver for the downgrade was the Government's over reliance on oil-revenues. This affected the Country's economic growth model when oil prices fell in 1986.

In 1997, Norway regained Aaa status by a concerted sacrifice by all segments of the society in response to the initial crises, and a significant structural adjustment.

Canada was downgraded to Aa1 in 1994 when its general Government debt to GDP ratio was around 100% and when the Federal Government's interest payments were almost 30% of its total revenues. Canada regained its Aaa rating in 2002. As for Norway one of the characteristics is the growth regeneration power and the determination of these societies to recover from crisis through common sacrifice.

4.3 Rating versus the Australian Federal budget

In May 2007, Moody's made an announcement regarding the Australian 2007-08 Budget. In Moody's opinion, the federal budget was in line with the rating assigned for the Government, Aaa, thanks to fiscal management that had brought government debt levels to among the lowest in the world.
Moody's Vice President, Steven Hess, opinion was:

"Australia compares very favorably to other Aaa-rated Governments when it comes to debt, with the Commonwealth now a net creditor if one includes the assets of the Future Fund. The prospect of another year of government surplus included in yesterday's budget only reinforces this evaluation."[65]

[64] *How far can Aaa Governments stretch their balance sheets? Annex A: Moody's past downgrades of Aaa sovereigns.* February 2009
www.moodys.com
[65] *Announcement: Moody's: Australian Budget Consistent with Aaa rating.* May 2007

A similar opinion was made regarding the 2008-09 Budget, except for the comments referred to tax cuts. Which Moody's considered these affordable and summed to the fiscal surplus in the year to come. Both factors were supportive of the rating.
When Budget 2009-10 came out the fiscal position of the Country was weaker as a result of the recession, despite this fact the Aaa rating had not been threatened. The explanation given by Steven Hess was[66]:

"While the trend in Government debt is not favourable, Australia's debt levels will remain well below the average for other Aaa-rated countries. The rapid rise in the debt ratios is manageable because of the low starting point. If we view this as a one-time shock coming from the global recession, then the longer term fiscal trajectory should return to sustainable levels."

With regard to the aspect of the increased debt would be higher interest costs to come, Hess said:

"The affordability of the debt will deteriorate because of the higher level of debt but also because interest rates are unlikely to remain as low as they are now after the recession ends."

In regards to the 2010-11 budget Moody's considered that, despite the budget deficits continuing, the rating level remained secure. The $40 billion deficit projection in the budget released on May 11 for the current fiscal year is less than 3% of GDP and below the levels being recorded in a number of other Aaa-rated countries

The opinion of Steven Hess: "With net debt peaking at only 6.1% of GDP and then declining, Australia is one of the few advanced economies in a position to cut some taxes and initiate some new spending programs while showing an improved fiscal position," Underpinning the improving fiscal outlook is a strengthening of GDP growth, based partly on demand for the country's commodity exports. In addition, unemployment is coming down, helping to boost domestic demand[67].

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http://www.moodys.com/research/Moodys-Australian-Budget-Consistent-with-Aaa-Rating?lang=en&cy=global&docid=PR_133535

[66] *Announcement: Moody's: despite weaker fiscal position, Australia's Aaa rating unaffected.* May 2009 http://www.moodys.com/research/Moodys-Despite-Weaker-Fiscal-Position-Australias-Aaa-Rating-Unaffected?lang=en&cy=global&docid=PR_178800

[67] *Announcement: Moody's South Australiays Australian budget does not affect rating.* May 2010 http://www.moodys.com/research/Moodys-South Australiays-Australias-Budget-Does-Not-Affect-Rating?lang=en&cy=global&docid=PR_199114

Rating and 2011-12 Budget

On May 10th the Federal Government's Budget for 2011-2012 was delivered. The key initiatives were[68]:

- Getting the Budget "back in the black" by making the hard decisions aimed at achieving $22 billion in long-term savings which would produce a Budget surplus of $3.5 billion in 2012-13;

- Building Australia's future work force by investing in the National Workforce Development Fund, reform of the vocational education and training system and implementing a range of measures to boost participation;

- Investing in roads, rail and ports and removing tax impediments to infrastructure investment;

- Better hospitals and healthcare by spending on the national mental health reform, making medicines more affordable and improving access to public dental services;

- Making every school a great school by rewarding top performing teachers, support school students with disability and extending the National School Chaplaincy program;

- Helping families and low income earners by bringing forward part of the low income tax off set into pay packets, increasing the family tax benefit part A and increasing the income threshold a pensioner can earn before the pension entitlements are decreased;

- Investing in our regions by improving regional hospitals, healthcare, universities and roads;

- Supporting small businesses through tax relief and simplification.

The announcements about the budget by Moody's were positive as well. It declared that the budget was in line with the Country's Aaa rating. In Moody's opinion it demonstrates the determination to return to fiscal surplus and it is supportive of the Aaa rating. The aim of returning to surplus is more difficult by the effect of natural disasters. Floods have resulted in a deficit about 0,6% of GDP larger than expected. The larger deficit in the current year also resulted in somewhat higher debt ratios, but Moody's notes that Australia's Government debt remains among the lowest of all Aaa-rated Governments[69].

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[68] 2011/2012 Federal Budget Summary. May 2011. Nexia International
www.nexiaasr.com.au

[69] *Announcement: Moody's South Australiays budget in line with Australia's Aaa rating*. May 2011

At the same time a Credit opinion of the Government of Australia was released. The topics were: credit strengths, credit challenges, the rating rationale, the outlook, what could change down the rating and the latest developments[70].

Moody's considered as credit strengths:

- Resilience to cyclical slowdowns in the global economy.

- Open trade policies and market-oriented regulatory regime that provide a favorable environment for growth and investment.

- Strong political institutions that provide policy predictability.

The credit challenges are:

- Reliance on foreign savings that has left the country with a large external liability position, exposing it to shifts in international confidence.

- Rising social welfare spending.

Rating rationale:

Australia's Aaa rating is based on the Country's very high economic resiliency, very high Government financial strength, and very low susceptibility to event risk. Economic resiliency is demonstrated by the Country's very high per capita income, large size and economic diversity. As one of the worlds' most advanced economies, the Country has not only a significant natural resource sector-including minerals, hydrocarbons, and agriculture-but also well developed manufacturing and service sectors. It also demonstrates strong governance indicators. In particular, the framework for fiscal policy is transparent and has, until now, consistently kept Government debt at low levels.

The Government's debt rating of Aaa takes into account the aim of maintaining a balanced budget, on average, over the business cycle. It is supported by the very low level of public debt ant the Country's strong financial system. In comparison to most other Aaa-rated countries, Australia's Government financial strength is very high with very low gross debt that is easily affordable and provides a high degree of fiscal flexibility.

Although Australia's demographics and policy framework leave it well positioned to deal with an aging population relative to other industrial countries, the government's own analysis indicates that health and aged

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http://www.moodys.com/research/Moodys-South Australiays-Budget-in-Line-with-Australias-Aaa-Rating?lang=en&cy=global&docid=PR_218689

[70] *Credit opinion: Government of Australia.* May 2011 www.moodys.com

care spending will lead to the emergence of a funding gap over the next 40 years. While the fiscal burden is well into the future, policy measures to address it will have to be initiated in the near term.

The diversity of the economy and the strength of the financial system lead to a very low level of event risk. However, the banks are more dependent on the foreign funding than in some other advanced economies. The large size of the negative net international investment position is vulnerability in times of global financial market stress.

Rating outlook:

The stable rating outlook is premised on the expectations that the government will maintain its low debt levels and macroeconomic conditions will continue to support fiscal consolidation. The Commonwealth Government was a net creditor to the global crisis, but will show small net debt in the coming years.

What could change the rating down:

Any trend or event that caused a long-term shift in budget balances to significant deficits and an increasing public debt burden might put downward pressure on the rating. Such trends could include, for example, fiscal costs associated with an aging population. However, since the government has been proactive in addressing this issue through its superannuation policies and proposed reforms to healthcare schemes. Moody's doe not anticipate sustained fiscal deterioration over the rating horizon.

Recent developments:

The budget for the 2010-11fiscal year indicated that the fiscal deficit for the current year is estimated at $A 46 billion, or 3,3% of GDP. This is an upward revision from earlier estimates, primarily reflecting the effects on both revenue and expenditure of the Queensland floods. Despite the worsening of this year's deficit, the government maintained its commitment to return to surplus by the 2012-13 fiscal year. This result will be achieved primarily by expenditure restraint and by the effect of a strong recovery in GDP growth during the coming fiscal year. The larger deficit in the recently ended fiscal year will mean that the Commonwealth's net debt level will rise to a peak of 7,2% of GDP at the end of the coming fiscal year, with gross debt rising to 15,9%. While this estimate is about one percentage point above the Government's previous forecast, it is still among the lowest of any Aaa-rated sovereign. Over the following three years, the net debt ratio will decline to under 6%.

It is worth noting that on a consolidated general government basis, including State and Local Governments, there continues to be a small deficit over the period through to 2013-14 and the ratio of net debt to GDP continues to rise, although slowly, to 9,4% of GDP. This level is still very low by global standards.

The Government's economic forecast for the 2011-12 fiscal year is for real GDP to grow by a strong 4% with continued high investment spending and reconstruction following the earlier floods contributing to this increase. In the following years, growth is forecast to taper off to about 3%. The most important risk to this growth scenario is a possible slowing of demand for Australia's commodities should growth is Asia drop by more than expected.

Table 4.1

Foreign Currency rating history

Date	**Rating**	**Rating Action**
15- Jan- 62	A	New
2- Aug -74	Aaa	Upgrade
10-Sep-86	Aa1	Downgrade
28-Aug-89	Aa2	Downgrade
20-Oct-02	Aaa	Upgrade

Source: Moody's Investor Service

5. Variations in sovereign ratings[71]

5.1 Distinction between "resistant", "resilient" and "vulnerable' Aaa Governments[72]

Moody's decision to downgrade a country rating is based on the analysis of the deterioration in credit metrics. This deterioration should be:

- Observable and material in absolute/relative terms
- Unlikely to be reversed in the near future
- Actual and potential deterioration of a government's balance sheet.

All Aaa Governments are affected by global synchronized crisis. Moody's divides the Countries into three groups:

- Resistant Aaa countries: whose rating is largely tested
- Resilient Aaa countries: whose ratings are being tested but they possess the capacity to grow out of their debt and repair the damage
- Vulnerable Aaa countries: whose rating will depend on their ability to regenerate their economies as they are facing hard economic challenges.

5.2 When to downgrade?

Downgrading is not a simple and automatic process. Moody's gave three main reasons why the issue *when* to downgrade could be a difficult process[73].

The first reason is that Governments are rated on a global scale. However, they have specific powers and attributes and between them the power to address liquidity by "printing money". This means that as the finances of all Aaa Governments are impaired by a synchronised and secular shock, it is difficult to decide if a large sovereign debt issuer should end outside the Aaa category.

The second reason is that the Aaa space has no ceiling. This means that there are no rating changes if credit metrics temporarily move outside these rating level boundaries. Therefore there is a large space for fluctuations in the short/mid term.

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[71] All of Ireland's and Japan's rating dynamics analysed in this chapter refer to Moody's announcements and actions.

[72] *Distinction between resistant, resilient and vulnerable Aaa Governments,* 12 February 2009 https://www.moodys.com/research/Moodys-Examines-How-Much-Debt-Aaa-Governments-Can-Afford-Before?lang=en&cy=global&docid=PR_172777

[73] *Why Aaa sovereigns get downgraded. 1. Different but comparable: why are Aaa-rated Sovereign special?* September 2009 www.moodys.com

The last factor is the default example in the rating history. None of these cases (France, Spain and Portugal in the 17th and 18th century) are instructive in terms of determining the credit metrics from the standpoint of an investor today. The result is that the separation line between Aaa and Aa sovereign credits is normative instead of empirical.

5.3 Debt metrics and rating level[74]

Moody's bond rating methodology is based on four parameters. The first two refer to the shock absorption capacity of the country - economic and institutional strength. The last two instead refer to the strength of the government, its balance sheet, and its susceptibility to risk.

The classic question is how an increase in public debt could result in a rating downgrade. As four different factors are used, the correlation between the default risk measured by ratings and the size of the government does not exist.

On the other hand, within one specific rating class, debt levels matter. Increased levels of debt create downward rating pressure, especially in Aaa Governments that are less vulnerable to changes in the three other rating factors.

5.4 Rating dynamics: two different cases: The Republic of Ireland and Japan

To better understand the dynamics of the rating process we will present the case of the Republic of Ireland. This is an example of an economic trend and performance which became one of the weakest economies in Europe after being one of the strongest for almost twenty years, and the case of Japan, one of the strongest economies in the world, able to recover rapidly from natural catastrophes but with the biggest external debt among developed countries.

5.4.1 Downgrading in a crisis scenario: The Republic of Ireland, a vulnerable Government

Ireland is the third largest island in Europe. Situated in the northwest of Continental Europe it is surrounded by hundreds of islands and islets. To the east of Ireland is Great Britain, the two are separated by the Irish Sea. The island is divided between the Republic of Ireland and Northern Ireland, and part of the United Kingdom.

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[74] *Why Aaa sovereigns get downgraded. 2. Given the range of risk indicators, why focus on debt metrics for Aaa Governments?* September 2009
www.moodys.com

Ireland is subdivided into four provinces: Connacht (west), Leinster (east), Munster (south), and Ulster (north). Ireland has thirty two traditional counties. Twenty-six of the counties are in the Republic of Ireland and six counties are in Northern Ireland. The six counties that constitute Northern Ireland are all in the province of Ulster.

With a population around 4.34[75] million people and a GDP of $172.3 billion and $37,300 GDP per capita[76], the Irish economy has moved from an agricultural focus to a trade dependent economy, focusing on the third sector and on high-tech industries. Several studies[77] have found Ireland to be one of the best places to live in terms of life quality. In the 1995 to 2000 period, the high economic growth procured Ireland the "Celtic Tiger" entitlement. The main core of the economic strategy that led to this huge growth was the low corporation tax that was at 12.5% standard rate.[78] One of the main achievements of this period was the development of new jobs - from 1990 to 2005; employment soared from 1.1 million to 1.9 million.[79]

As mentioned above, the key to Ireland's success was the combination of policies focused on the openness to international markets, low tax rates and correct investment.

This optimistic scenario led to an expansion of credit and a property bubble that exploded in 2007 causing a collapse in the market and a consequent bank collapse one year later. The Government announced it was in recession in September 2008. According to the Central Statistic Office, Ireland was the first state in the Euro zone to enter in recession[80]. The financial crisis of 2008 is still affecting the Irish economy severely.

In November 2010 the Government issued the "National Recovery Plan" that is aimed to restore the public finances and bring the deficit in line with the EU parameters within four years. It introduces a set of measure that will involve a budget adjustment of 15 billion Euros (almost $A 22 billion) - 10 billion in public expenditure cuts and 5 billion in taxes. These measures should increase Ireland's GST by 23% and increase government revenues by 5 billion Euro (almost $A8 billion) or around 3% of GDP in 2010 terms ($A 172.3 billion).[81]

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[75] Economist Intelligence Unit, 2006
http://www.eiu.com/
[76] **Both** GDP purchasing power parity in 2010 US dollars.
Cia, The World Fact book,
https://www.cia.gov/library/publications/the-world-factbook/geos/ei.html#
[77] The Economist Intelligence Unit's quality-of-life index, page. 4 , 2005,
http://www.economist.com/media/pdf/QUALITY_OF_LIFE.pdf
[78] Finfacts. Ireland's Business and Finance Portal
http://www.finfacts.ie/fincentre/taxfacts.htm#corptax
[79] *How Ireland Became the Celtic Tiger,* The heritage foundation, June 2006, http://www.heritage.org/Research/Reports/2006/06/How-Ireland-Became-the-Celtic-Tiger
[80] http://www.cso.ie/
[81] Source: The National Recovery Plan 2011-2014

The rating history: from the Celtic Tiger to the latest downgrades and outlook

Moody's rated the Republic of Ireland for the first time in 1987 with an Aa3 rate82. Standard & Poor's first rating was in 1988 with an A+ rate83. Finally, Fitch evaluated Ireland in 1994 with an Aa level84.

As seen above, Moody's credit analysis focuses on the factors and key business drivers that are relevant from the risk perspective. In other words, the analysis evaluates the ranked subject's aptitude to generate cash to cope with debts in the future.

Even though the Irish economy during the late '80s required all the basic requirements to be rated, they were not enough for an instantaneous upgrade. Moody and S&P's first upgrades were in 1993. This was also when Fitch considered Ireland's ranking worth. This moment in time corresponds to the beginning of Ireland's economy recovery, the Celtic Tiger period.

Since the 1994 upgrade from Aa3 to Aa2, there have been two other upgrades: from Aa2 to Aa1 (February 1997)[85] and from Aa1 to Aaa (May 1998)[86].

The first of Moody's downgrades took place on the 2nd of July 2009 (from Aaa to Aa1) after a negative outlook given in April of the same year. This was a time when Ireland was part of the "vulnerable Aaa countries" i.e. countries "whose rating depend on their ability to rapidly regenerate their economies".[87]

The following downgrades occurred from July to December in 2010, and the last in April 2011. Currently, Ireland is considered as a vulnerable Aaa country.

Downgrades key drivers[88]

- 2nd of July 2009, from Aaa to Aa1

After a review for a possible downgrade in April 2009, within three months Ireland was downgraded for the first time in July 2009. The rational behind this first downgrade was based on three key drivers regarding debt - affordability, financeability and reversibility. The consequently negative

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[82] http://www.moodys.com/credit-ratings/Ireland-Government-of-credit-rating-423933
[83] http://www.standardandpoors.com/rating/articles/en/us/?assetID+1245304089015
[84] http://www.fitchratings.com/web_content/ratings/sovereign_ratings_history.xls
[85] http://www.moodys.com/ Government of Ireland
[86] http://www.moodys.com/ Government of Ireland
[87] *Distinction between resistant, resilient and vulnerable Aaa Governments*, 12 February 2009
[88] Source: http://www.moodys.com/ Government of Ireland

outlook was explained by the risk of further deterioration of the debt affordability and financeability, intended as the cost at which the country could raise future debt.

- 19th of July 2010, downgrade from Aa1 to Aa2:

The main factors leading this decision were:

- Deterioration of the government's financial strength:

Within the period 2008-2009 the overall tax revenue dropped was higher than the nominal GDP contraction as the tax income was strongly correlated to the property market. As a result, the 2007 budget surplus turned into a GDP deficit of 7.3% in 2008, which doubled in 2009. In an attempt to stabilize the deficit, the government cut expenditures during 2009 and increased revenues which lead to an adjustment of the budget of more than 15 billion Euros (approximately 21 billion AUD). Not withstanding these measures, the Irish debt increased in two years from 25% to 64% of the GDP. In this context, Moody's reached the conclusion that debt to GDP could possibly level off to 95% - 100% in years to come.

- Weakening of economic growth prospect in the aftermath of the crisis:

With the weakened growth prospects, creditworthiness and economic growth is likely to be below the historical trend over the following years. Moody's had considered two main factors regarding Ireland's growth prospects for future. The first consideration was regarding the engines of growth in the years preceding the crisis: banking and real estate. These two sectors would not contribute to the economic growth as they were one of the crisis' triggers. Therefore, there would be a need to re-balance the economy leaving behind these sectors. The second consideration was the impact of the fall in private sector credit over the growth outlook. In 2009 private sector credit decreased by almost 8% as consequence of the dramatic rise of household debt between 2001 and 2008.

- ***Crystallisation of bank contingent liabilities:***

It was not expected the government would incur permanent losses as a result of bank obligations, but all the uncertainty regarding the banking sector could exert further pressure on the government's financial strength. Moody's perspective for the country's banking system was based on the difficult economic environment and the impact that it had on unemployment.

- 17th December 2010 downgrade from Aa2 to Baa1:

The key drivers for the decision to downgrade Ireland's Government bond rating were:

- ***Crystallization of bank contingent liabilities****:* as we have mentioned in the previous downgrade, the Irish Government's financial strength had suffered from the crystallization of banning contingent liabilities on the government's balance sheet. The government had committed to give around 50 billion Euros (around $A 68 billion) to the bank sector. Nevertheless, capital markets were reluctant to provide funding to Irish banks. This fact made banks largely dependent on access to bank liquidity.

- ***Increased uncertainty regarding Ireland's economic outlook****:* in Moody's view, Ireland's growth prospects over the next five years are affected by three main factors. The first one is the impact of the austerity measures on domestic demand - the Recovery Plan aimed to reduce the budget deficit represents an obstacle on the recovery of domestic demand. The second factor is the decline in private sector credit. The last factor is the severe adjustment in banking and real estate. These two past triggers of growth will not contribute in the economy's reconstruction as there is a need to reset the overall system away from these sectors.

- Loss in government financial strength*:* apart from the passive growth prospects and bank recapitalisations, the country's elevated borrowing costs are adversely affecting the debt's dynamics. Moody's debt projections are based on the above factors. Taking them into account, the forecast for Ireland's general government gross debt relative to GDP is expected to increase to 120% in 2013 from 66% in 2009. As Ireland's borrowing costs are expected to exceed those of the other's sovereign credits, interest payments on public debt as a share of government revenues are projected to rise beyond 15%.

- 15th April 2011 Downgrade from Baa1 to Baa3:

The latest downgrade refers to foreign and local currency government bond ratings, the outlook remains negative. The key drivers for this rating are:

- The expected decline in the Government's financial strength combined with the country's weaker economic growth prospects*:* the country's weak economic growth prospects are driven by the fiscal consolidation process, the ongoing contraction in private sector credit and an adverse interest rate environment. Besides the weakening of the domestic demand caused by the Recovery Programme and the limited availability of the private sector credit, the Government's financial strength may suffer as a result of the policy rates increases by the European Central Bank to slow the rise in Euro area inflation.

- ***The uncertainty created by the solvency test required by the European Stabilisation Mechanism for the provision of future liquidity support****:* in addition to the uncertainty related to the ESMs solvency trust required for the provision of future liquidity support, Moody's view about the limitation of liquidity support and the stop of fiscal transfer by the European Union was confirmed.

- 9th May negative outlook:

The latest outlook on the Government's bond ratings is based on the view that financial strength could decline further if the economic growth was to be weaker than currently programmed, or if fiscal adjustment were to fall short of the Government's consolidation path. Furthermore, Moody's considers that Ireland's funding environment could be negatively affected by adverse sovereign developments from other European Union's members; such scenario would likely complicate Ireland's aim of reassessing the market.

According to Moody's, growing pressure on Ireland's rating could arise if the fiscal consolidation efforts succeed in reversing the current debt dynamics, improving, in that way, the Irish government's financial strength.

- 12th July 2011 Downgrade from Baa3 to Ba1, negative outlook:

The key driver for this action is the growing possibility that following the end of European Union support at the end of 2013 the Country is likely to need further rounds of official financing before it will be able to the private market. This increases the possibility that private sector creditor participation will be required as a precondition for such additional support.

A further rating downgrade could be considered if the Irish government is unable to meet the target fiscal consolidation goals. However, the upward pressure on the rating could develop if the Government's continued success in achieving its fiscal consolidation targets, supported by a consistent economic growth, is able to reverse the existing debt dynamics.

Table 5.1

Foreign Currency rating history

Date	Rating	Rating Action
15-Jul-87	Aa3	New
24-Jun-94	ON WATCH	Possible Upgrade
31-Aug-94	Aa2	Upgrade
24-Jan-97	ON WATCH	Possible Upgrade
13-Feb-97	Aa1	Upgrade
18-Mar-98	ON WATCH	Possible Upgrade
4-May-98	Aaa	Upgrade
17-Apr-09	ON WATCH	Possible Downgrade
2-Jul-09	Aa1	Downgrade
19-Jul-10	Aa2	Downgrade
5-Oct-10	ON WATCH	Possible Downgrade
17-Dec-10	Baa1	Downgrade
15-Apr-11	Baa3	Downgrade
12- Jul-11	Ba1	Downgrade

***Source**: Moody's Investor Service*

5.4.2 Downgrading and economic development: Japan, a resilient Government.

Japan is an archipelago of almost 7000 island in East Asia. The Country has the world's tenth largest population with more than 127 million people. Its capital, the city of Tokyo is the largest metropolitan area in the world with over 30 million residents.

Japan's population in 2009 was 127.6 million people, of which 36.507 million people living in Tokyo[89]. The Country's GDP is $4.31 trillion (2010 est. almost $A 4 trillion) and $34,000 GDP per capita (almost $A 32, 000)

The Japanese economy is the third largest in the world (after USA and PR of China). From 1960 to 1990 Japan experienced a rapid economic growth. It was the world's second largest economy until 2010, when it was replaced by China. However, in the second half of the '80's real estate prices caused an economic bubble which exploded when the Tokyo Stock Exchange crashed in 1992. Economic crisis during the '90's were aggravated by domestic policies aimed to reduce the speculative excess from the stock and property markets.

The Country's economy is based on exportation given the lack of natural resources to support its growing economy and large population. However, the industrial sector's main activities are the manufacturing and processing of raw materials imported from abroad. A smaller agricultural sector is highly subsidised with crop yields amongst the highest in the world. Japan imports about 60% of its food. This strategy of economic development requires the establishment of a strong economic infrastructure which provides energy, transport, communications and know-how. These economic processes are one of the reasons for the high Japanese debt.

In 2010 GDP total growth was 3.9% and it had been the highest in the previous twenty years, until March 2011 when natural catastrophes affected Japan's economy. The GDP growth has contracted by almost 4% in the first quarter of 2011. In response, Japanese companies started to dismiss foreign assets and acquire more Yens, in order to generate capital to afford the Country's reconstruction.

As previously mentioned, Japan is a mountainous, island nation that does not have the adequate natural resources to support its own economy and the huge population. All these reasons explain Japan's advanced and well-maintained infrastructure, one of the basis of its economic development. Both the private and the public sectors undertake various infrastructural projects and services[90].
One of the main supporters of infrastructure development is the construction industry which, during the '90's employed 9,4% of the working

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[89] Source: CIA, the World fact group, The World Bank Data
[90] [90] Source: Encyclopedia of the Nations
http://www.nationsencyclopedia.com/

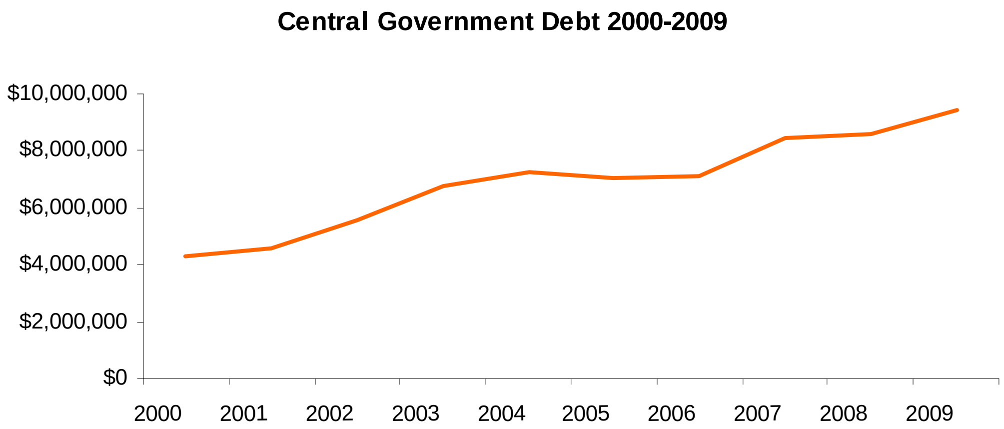
population and contributed to almost 8,5% of national GDP. Japanese construction technology, which includes advanced earthquake-resistant designs, is among the most developed in the World.

The second main supporter is the extensive and modern road and railway network. Major development projects to expand the Japanese highway network include a $32 billion (almost $A30 billion) for the construction of another Tomei-Meishin Expressway, connecting Tokyo and Kobe via Nagoya[91]. The major sources of funding for road development are the earmarked tax revenue system along with the toll road system. These are based on the theory that owners and drivers receive more benefits and damage roads more than pedestrians. Therefore, they should pay more for road development and maintenance[92]. The Country's vehicles taxes and road tolls are the most expensive among those from all the other developed countries.

Regarding the cost of the infrastructure over the GDP, Japan is believed to spend an average of 5% of it[93].

Another characteristic of Japan's economy, highly related to the modern infrastructure, is the public debt, which is the highest in the world. Studies conducted by OECD and CIA showed that in 2009 it was US$ 9464934.6 million and 225.8% of GDP (est.2010 CIA). As we have seen in the chart, it has been growing consistently in the last ten years.

Graph 5.1



Source: *http://stats.oecd.org/*

The key challenge for Japan is to bring down its high public debt to GDP ratio. As an attempt to reform the economy the Cabinet published a "New

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[92] Takaaki Nambu, *History of road development, finance and investment in Japan.* http://www.roadsfundtz.org/web/pdf/session%204/Japan%20History%20of%20Road%20Development%20Finance%20and%20%20%20%20%20%20Investment.pdf\

[93] Peter Dyloco, *Japan's infrastructure excess*. April 2011 http://injapan.gaijinpot.com/2011/04/11/japans-infrastructure-excesses/

Growth Strategy" in June 2010. The aim of the plan was to raise growth above 2% on average for the next decade and targets an unemployment rate below 4%. The keys areas for development were the promotion of green markets, encouraging tourism, improving health care and raising women's participation in the labour force [94].

Japanese national debt figures mean the Government will be limited by debt repayments for many years. Even before the 2011 catastrophes, credit rating agencies warned the Country about a possible downgrade[95].

The Rating history

Japan foreign currency was rated in February 1975 by S&P (AAA), in October 1981 by Moody's (Aaa) and by Fitch in August 1994 (AAA).

Moody's rating history:

After the first rating, the following action undertaken by Moody's was the confirmation of the rating in December 1997, when other East Asian Countries were downgraded. The reason for confirming the rating and a stable outlook were the amount of official international reserve possessed, substantial net foreign assets of the banking system and persistent current-account surpluses[96] .

In July 1998, Moody's reviewed Japan's situation for a possible downgrade. The rational was that all the economic problems regarding the stagnation, immunity to the classic policy remedies, a lack of consensus among policy makers on a medium-term strategy for a structural reform, a fiscal problem that was likely to worsen over the medium term and, finally, signs of weakening in Japan's external position. The review was focused on the implications of policy responses for the long term strength of fiscal and external payment positions and how such developments could have affected the banking sector[97].

The first downgrade (from Aaa to Aa1) was assigned after this negative outlook, in November of the same year. The rational for the negative outlook and possible downgrade in July were confirmed in a certain way:

[94] Source: IMF calls for Japan to Rein in Debt http://www.imf.org/external/pubs/ft/survey/so/2010/car071410b.htm

[95] http://www.economicshelp.org/blog/economics/japanese-national-debt/

[96] *Following review of East Asian countries, Moody's downgrades foreign currency ceilings of Indonesia, Malaysia, Korea and Thailand; confirms ceilings of China, Hong Kong, Japan, Macau, Philippines, Singapore, Taiwan and Vietnam*. December 1997 http://www.moodys.com/research/FOLLOWING-REVIEW-OF-EAST-ASIAN-COUNTRIES-MOODYS-DOWNGRADES-FOREIGN-CURRENCY?lang=en&cy=global&docid=PR_16106

[97] *Rating action: Moody's will review for possible downgrade Japan's Country ceilings or foreign currency and the domestic currency rating of the Government of Japan*. July 1998. http://www.moodys.com/research/MOODYS-WILL-REVIEW-FOR-POSSIBLE-DOWNGRADE-JAPANS-COUNTRY-CEILINGS-FOR?lang=en&cy=global&docid=PR_21090

uncertainties and heightened risks over the long term that arose from policy and economy weakness had led to the deterioration of the Government's fiscal position and the financial system. The outlook of that period suggested that growth would remain below potential, regardless of the attempt of creating fiscal stimulus packages aimed to boost domestic demand. Moody's have observed that to date such fiscal packages were increasing domestic debt[98].

Two years later, in February 2000, the Aa1 foreign currency rating was confirmed.

In April 2004 Japan was upgraded to Aaa. The change was prompted by the rise in Japan's official reserve assets. In Moody's opinion the continued build-up of reserves further reduces the risk associated with Government's obligations. In addition, it was expected that the level of foreign exchange reserves would continue to grow in the future[99].

In May 2009 Moody's Investors Service unified the Government of Japan's local and foreign currency bond ratings at Aa2. The downgrade reflects the risks of Japan's high level of debt, which left the Country's fiscal position vulnerable to shocks or imbalances that would have cause to rise interest rates[100].

In February 2001, just before the March's catastrophes, Moody's changed the Country's outlook to negative from stable. The factors driving that decision were[101]:

-The severity and persistence of the shock that the global financial crisis imparted on Japan's Government finances and on aggravating pre-existing deflationary pressures;
- As a result, the current policy framework will not be capable of overcoming difficulties blocking a return to fiscal deficit reduction,
- Increasing uncertainty over the capability of ruling and opposition parties to fashion an effective policy reform response to the debt and growth challenges;
- Vulnerability regarding the long term horizon of Japan's gradual fiscal consolidation strategy to worsening domestic demographic pressures.

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[98] Moody's lowers the ratings of the Government of Japan as well as the foreign currency country ceilings for Japan.
http://www.moodys.com/research/MOODYS-LOWERS-THE-RATINGS-OF-THE-GOVERNMENT-OF-JAPAN-AS?lang=en&cy=global&docid=PR_23788

[99] *Moody's raises Japan's foreign currency Government bond rating to Aaa*. April 2004
http://www.moodys.com/research/MOODYS-RAISES-JAPANS-FOREIGN-CURRENCY-GOVERNMENT-BOND-RATING-TO-Aaa?lang=en&cy=global&docid=PR_80604

[100] *Rating action: Moody's unifies Japan's government ratings at Aa2*. May 2009
http://www.moodys.com/research/Moodys-unifies-Japans-government-ratings-at-Aa2?lang=en&cy=global&docid=PR_179216

[101] *Moody's changes Japan's Aa2 rating outlook to negative from stable*. February 2011
http://www.zerohedge.com

The latest Moody's announcement was about the review for a possible downgrade in May 2011. Factors driving this decision are[102]:

-The much larger than expected economic and fiscal costs of the March earthquake are magnifying the adverse affects imparted by the global financial crisis over the Country's economy;

-Concern that the policy framework will continue to fall short of achieving deficit reduction on a timely basis.

-Vulnerability of a long term fiscal consolidation strategy to worsening domestic demographic pressures, as well as renewed shocks in a fragile post-crisis global economic environment.

Besides the effects deriving from the global financial crisis, the fiscal consequences of the earthquake were greater than initially expected. The costs to the budget may amount to around 2%of GDP.

Moody's, in its last announcement also include the triggers for a future rating actions[103].

Japan's very large economy and very deep financial markets provide the cushion to absorb economic shocks. Nevertheless, the inexorable rise in government debt suggests that actions are urgently needed to regain fiscal consolidation. Moreover, the Government's large refinancing needs introduce a susceptibility to a credit market tipping point, which could lead to an abrupt fall in JGB prices and a rise in yields, which would result in downward rating pressure.

The focus of the rating review is twofold:

(a) an assessment of the scope, effectiveness, and timeliness of the administration's proposed comprehensive tax reform program,
(b) the near- and long-term fiscal costs and economic consequences of the March 11th earthquake.

Even if immediate pressures from other risk factors are not relevant, potential adverse developments in a number of areas would add downward pressure on the rating trajectory including:

1. A reduction in the domestic funding base to a level that is insufficient to meet Government refinancing requirements. This could arise from a drop in the household savings rate into negative territory.

[30, 31] *Announcement: Moody's places Japan's Aa2 Government rating on review for possible downgrade*. May 2011
http://www.moodys.com/research/Moodys-places-Japans-Aa2-govt-ratings-on-review-for-possible?lang=en&cy=global&docid=PR_219909

2. A shift in the current account on the external balance of payments into deficit. This would reflect a downward shift in national savings and would raise Government funding costs to a level on par with those in foreign Government debt markets. It could also sharply raise the risk premium for JGBs.
A fiscal and economic reform program which holds promise for stabilizing Government finances and eventually deflecting downward the rise in the Government debt trajectory would be consistent with a rating in the Aa range.

On the other hand, a weak or delayed reform program coupled with continued weak economic growth prospects would put greater downward pressure on the rating and reduce the probability that it could remain in the Aa range.

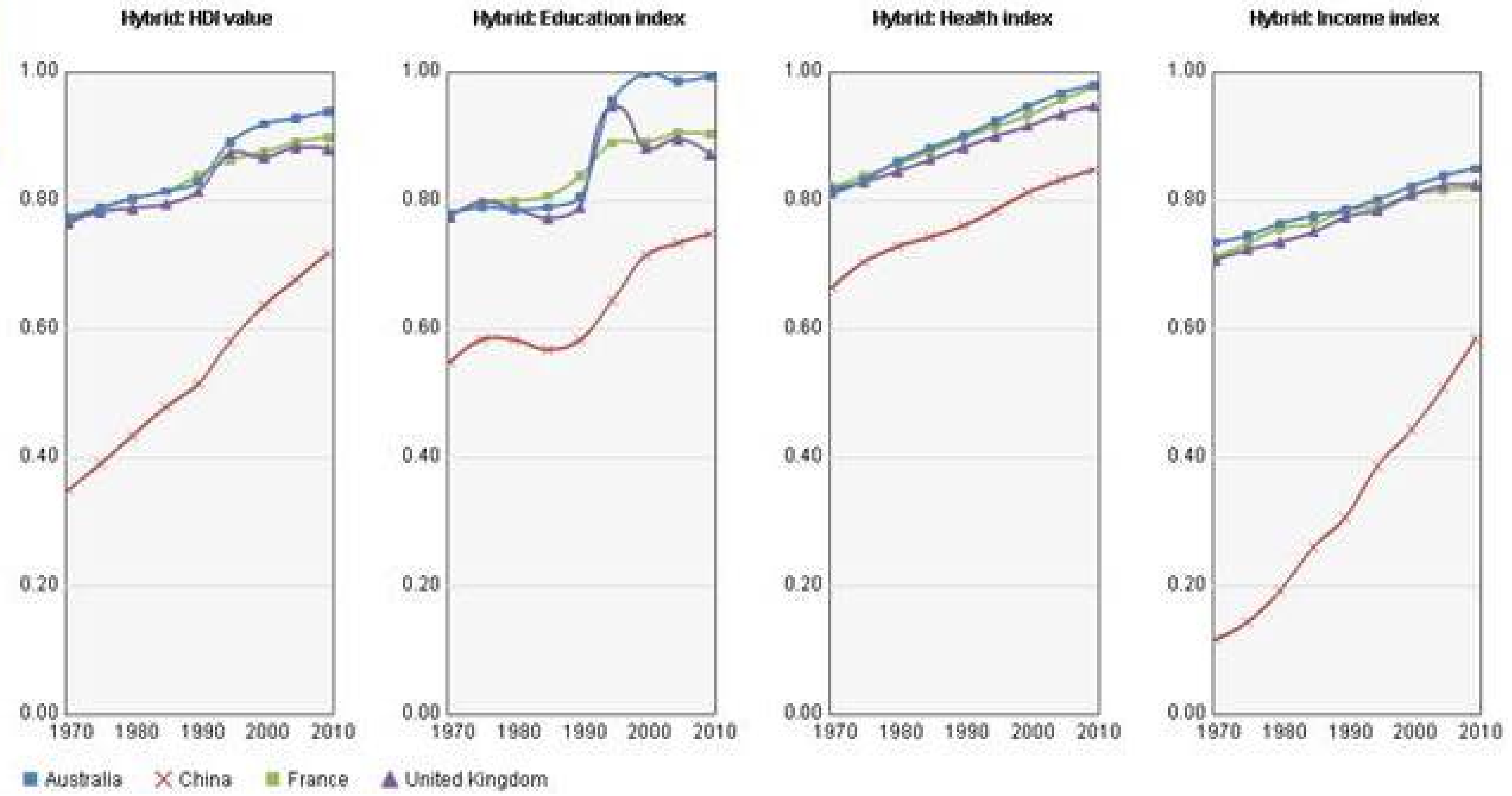
Table 5.2

Foreign Currency rating history

Date	Rating	Rating Action
1-Oct-81	Aaa	New
21-Dec-97	Aaa	Confirm
23-Jul-98	ON WATCH	Possible Downgrade
16-Nov-98	Aa1	Downgrade
17-Feb-00	Aa1	Confirm
7-Apr-04	Aaa	Upgrade
18-May-09	Aa2	Downgrade
31-May-11	ON WATCH	Possible Downgrade

Source: Moody’s Investor Service

Annex 1



Source: United Nations Development Program

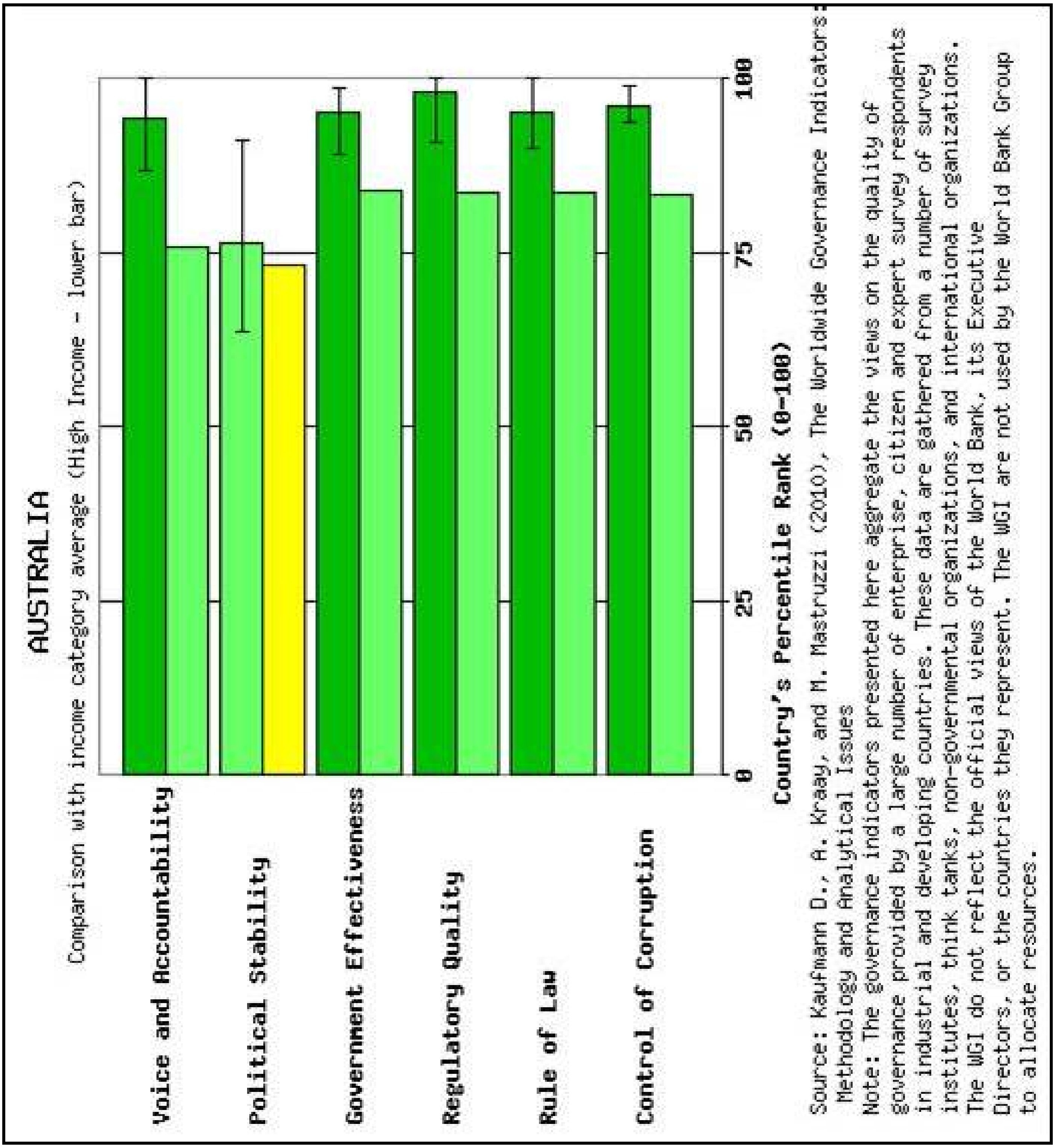
Annex 2

International investment position

Period	Net International Investment Position			Foreign Assets			Foreign Liabilities		
	Total	**Equity**	**Debt**	**Total**	**Equity**	**Debt**	**Total**	**Equity**	**Debt**
				ANNUAL ($ MILLION)					
2007–08	658,560	58,119	600,441	1,082,555	579,549	503,006	1,741,115	637,668	1,103,447
2008–09	703,667	79,393	624,274	1,088,727	510,594	578,133	1,792,394	589,987	1,202,408
2009–10	783,273	96,923	686,350	1,190,198	571,623	618,575	1,973,470	668,546	1,304,925
				QUARTERLY ($ MILLION)					
2008–2009									
March	714,434	51,945	662,489	1,066,172	490,846	575,326	1,780,606	542,790	1,237,815
June	703,667	79,393	624,274	1,088,727	510,594	578,133	1,792,394	589,987	1,202,408
2009–2010									
September	742,863	119,922	622,941	1,141,431	557,255	584,176	1,884,294	677,177	1,207,117
December	776,174	117,638	658,535	1,164,268	582,999	581,270	1,940,442	700,637	1,239,805
March	774,246	104,440	669,807	1,185,415	607,073	578,342	1,959,661	711,513	1,248,148
June	783,273	96,923	686,350	1,190,198	571,623	618,575	1,973,470	668,546	1,304,925
2010–2011									
September	785,308	109,119	676,189	1,198,630	592,984	605,646	1,983,938	702,103	1,281,835
December	774,265	126,755	647,510	1,219,206	616,059	603,147	1,993,471	742,813	1,250,657
March	780,570	103,251	677,320	1,243,220	638,203	605,017	2,023,790	741,453	1,282,337

Source: **Balance of Payments and International Investment Position, Australia** (cat. no. 5302.0)

Annex 3



90th-100th Percentile	50th-75th Percentile	10th-25th Percentile
75th-90th Percentile	25th-50th Percentile	0th-10th Percentile

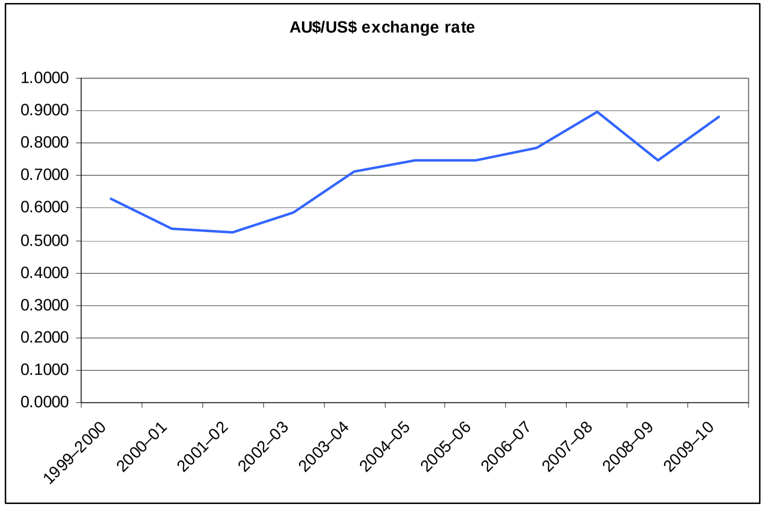
Annex 4

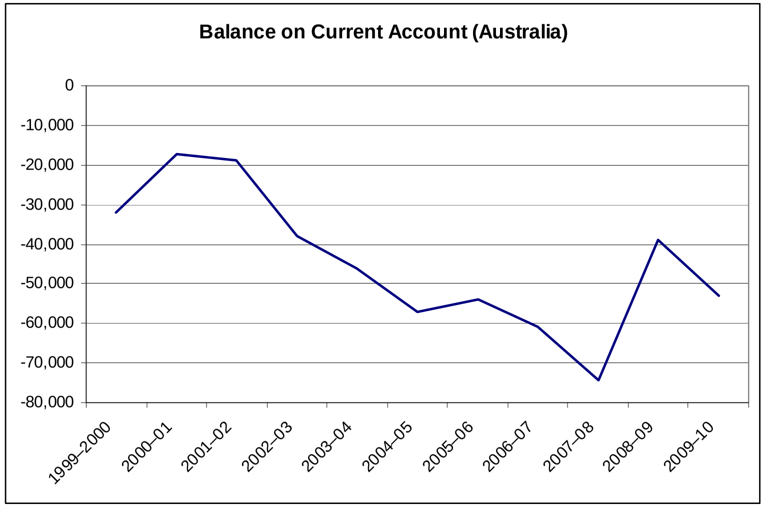
Gross Domestic Product per capita on PPP, current prices, in US$

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Australia	28046.8435	29234.5107	30440.999	32091.2809	33515.7565	35114.6383	37108.799	39087.0429	39058.4334	39918.132
European Union (27 countries)	21919.3304	23048.5645	23977.0803	24542.6912	25730.995	26894.9164	29067.8473	30772.8689	32114.1024	31269.4118
OECD - Total	24358.6935	25132.1434	25901.3313	26657.4919	28111.3941	29561.5645	31516.3293	33132.6186	34002.2072	33022.8442

Source: ABS

Annex 5





Source: ABS

Conclusions

We can infer from the information analysed in this paper that the role of Credit Rating Agencies has a growing importance worldwide. The segment of Sovereign rating is a powerful tool since it is of high relevancy for Governments, allowing them to gain access to international borrowings. The opinion of CRAs can be so crucial to the point of exerting some influence on the budgetary decisions both at a National and Regional level of many countries.

From our analysis emerged the features of a triple-A country, defining the characteristics of excellence belonging to countries in the top notch, of which Australia and South Australia are part. Australia is therefore part of a cluster of distinction embracing the most advanced, socially mature, economically developed, and stable countries worldwide.

In this framework South Australia emerges as one of the best performing regions in the Australian nation from a credit rating perspective, therefore identifying itself as an outstanding player in the international economic scene.

After analyzing the Irish rating history the final conclusion is that in this case the downgrade is a consequence of inconsistent financial and credit policies. These two factors, combined with a crystallization of bank contingencies, created a critical crash of the private market which triggered the economic system default. The key to reversing the existing dynamics is the achievement of the goals proposed in the National Recovery Plan.

On the other hand, the case of Japan shows a strong economy, with highly developed modern infrastructure and technology. These characteristics made Japan the Country with the highest domestic debt in the world. In this case, the rational for downgrading the Country’s rating is the effect of the lack of consensus between the political parties regarding the financial policies which inhibit any kind of debt reduction strategy.

Australia and South Australia instead are both examples of stable Governments and economic situations. The strong characteristics of the Country and the State are the low debt burden and the strong banking system, which are the exact opposite of both Japan and Ireland’s characteristics.

South Australia’s top rating and positive outlooks during the years are the reflection of a strong fiscal performance, government stability and a high level of political consensus, which is demonstrated by the flexibility of the budget.

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