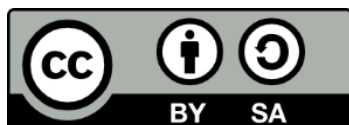


Χρηματοοικονομική II

Ενότητα 4: Οργανισμοί αξιολόγησης πιστοληπτικής ικανότητας (credit rating agencies)

Ιωάννης Ταμπακούδης
Τμήμα Οργάνωσης και Διοίκησης Επιχειρήσεων



Ευρωπαϊκή Ένωση
Ευρωπαϊκό Κοινωνικό Ταμείο



ΥΠΟΥΡΓΕΙΟ ΠΑΙΔΕΙΑΣ ΚΑΙ ΘΡΗΣΚΕΥΜΑΤΩΝ
ΕΙΔΙΚΗ ΥΠΗΡΕΣΙΑ ΔΙΑΧΕΙΡΙΣΗΣ

Με τη συγχρηματοδότηση της Ελλάδας και της Ευρωπαϊκής Ένωσης



ΕΥΡΩΠΑΪΚΟ ΚΟΙΝΩΝΙΚΟ ΤΑΜΕΙΟ

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Ευρωπαϊκή Ένωση
Ευρωπαϊκό Κοινωνικό Ταμείο



ΕΠΙΧΕΙΡΗΣΙΑΚΟ ΠΡΟΓΡΑΜΜΑ
ΕΚΠΑΙΔΕΥΣΗ ΚΑΙ ΔΙΑ ΒΙΟΥ ΜΑΘΗΣΗ
επένδυση στην κοινωνία της γνώσης
ΥΠΟΥΡΓΕΙΟ ΠΑΙΔΕΙΑΣ ΚΑΙ ΘΡΗΣΚΕΥΜΑΤΩΝ
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Με τη συγχρηματοδότηση της Ελλάδας και της Ευρωπαϊκής Ένωσης



ΕΣΠΑ
2007-2013
πρόγραμμα για την ανάπτυξη
ΕΥΡΩΠΑΪΚΟ ΚΟΙΝΩΝΙΚΟ ΤΑΜΕΙΟ

Credit rating agencies



Definitions

- A credit rating agency (CRA) is a company that assigns credit ratings
 - A credit rating is an evaluation of the credit worthiness of a debtor; its ability to pay back the debt by making timely interest payments and of the likelihood of default
- An agency may rate:
 - the creditworthiness of issuers of debt obligations (companies, special purpose entities, state and local governments, non-profit organizations, or sovereign nations)
 - debt instruments (government bonds, corporate bonds, CDs, municipal bonds, preferred stock, and collateralized securities, such as mortgage-backed securities and collateralized debt obligations)
- A credit rating affects the interest rate a security pays out, with higher ratings leading to lower interest rates
- Individual consumers are not rated for credit-worthiness by credit rating agencies, but by credit bureaus (or consumer reporting agencies, credit reference agencies), which issue credit scores

Users of Credit Ratings

- Investors most often use credit ratings to help assess credit risk and to compare different issuers and debt issues when making investment decisions and managing their portfolios
- Intermediaries (investment bankers) which facilitate the flow of capital from investors to issuers
 - They may use credit ratings to benchmark the relative credit risk of different debt issues, as well as to set the initial pricing for individual debt issues they structure, and to help determine the interest rate these issues will pay
- Issuers (corporations, financial institutions, national governments, states, and cities and municipalities) use credit ratings to provide independent views of their creditworthiness and the credit quality of their debt issues
 - As a general rule, the more creditworthy an issuer or an issue is, the lower the interest rate the issuer would typically have to pay
- Businesses and financial institutions may use credit ratings to assess counterparty risk, which is the potential risk that a party to a credit agreement may not fulfill its obligations

Rating Issuers & Issues

- Rating an Issuer

- Analysts weigh a broad range of business and financial attributes relevant to that issuer that may influence the issuer's ability to repay, both qualitative and quantitative
- These include economic, regulatory, and geopolitical influences, management and corporate governance attributes, key performance indicators, competitive trends, product-mix considerations, R&D prospects, patents rights, and labor relations

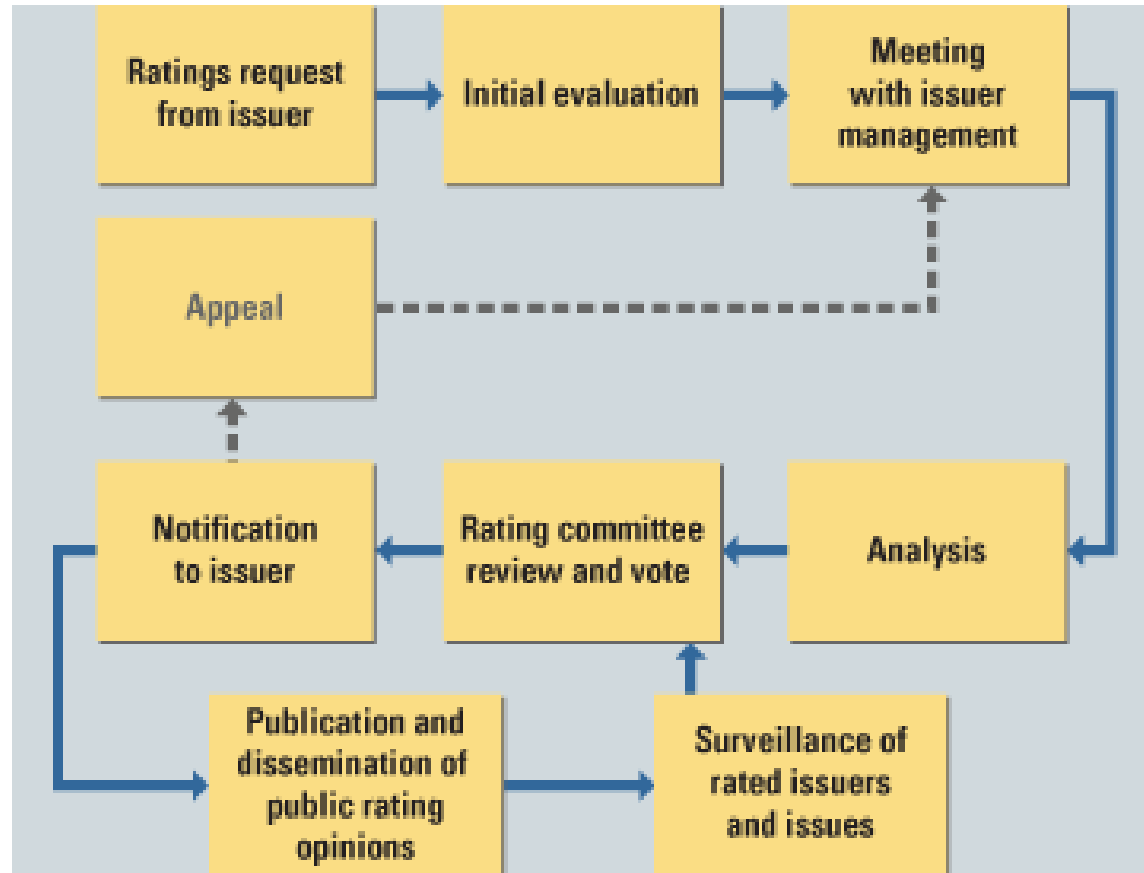
- Rating an Issue

- Analysts evaluate its credit quality and likelihood of default based on current information furnished by the issuer or obtained from other reliable sources. Key considerations include:
 - The issue's terms and conditions and, if relevant, its unique legal structure
 - Relative seniority of the issue with regard to the issuer's other debts and priority of repayment in the event of default
 - The existence of external support or credit enhancements (letters of credit, guarantees, insurance, and collateral)

Typical process for a new rating

- Contract. The issuer requests a rating and signs an engagement letter
- Pre evaluation. S&P assembles a team of analysts to review pertinent information
- Management meeting. Analysts meet with management team to review and discuss information
- Analysis. Analysts evaluate information and propose the rating to a rating committee
- Rating committee. The committee meets to review and discuss the lead analyst's rating recommendation and presentation, including the full analysis and rating rationale, and then votes on the credit rating
- Notification. S&P generally provides the issuer with a pre-publication rationale for its credit rating for fact-checking and accuracy purposes. Standard & Poor's may allow for an appeal only if the issuer can provide new and significant information to support a potentially difficult rating conclusion
- Publication. Standard & Poor's typically publishes a press release announcing the public rating and posts the rating on www.standardandpoors.com

Analyst's driven rating process



Key things about CRA

- 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
- <http://www.standardandpoors.com/aboutcreditratings/>

Growth of bond market

- The end of the Bretton Woods system in 1971 led to the liberalization of financial regulations and the global expansion of capital markets
- Two economic trends that brought further expansion (during 1980s and 90s) for the global capital market were:
 - the move away from "intermediated" financing (bank loans) toward cheaper and more long-term "disintermediated" financing (bonds and other fixed income securities)
 - the global move away from state intervention towards economic liberalism based on global capital markets and arms-length relations between government and industry
- The role of CRA became critical since:
 - investors had many investment alternatives (debt securities)
 - pension funds and money market funds could purchase only securities rated above certain levels, according to US government regulators
- A market for low-rated, high-yield "junk" bonds blossomed in the late 1970s, expanding securities financing to firms other than a few large (blue chips)

Growth of bond market (cont.)

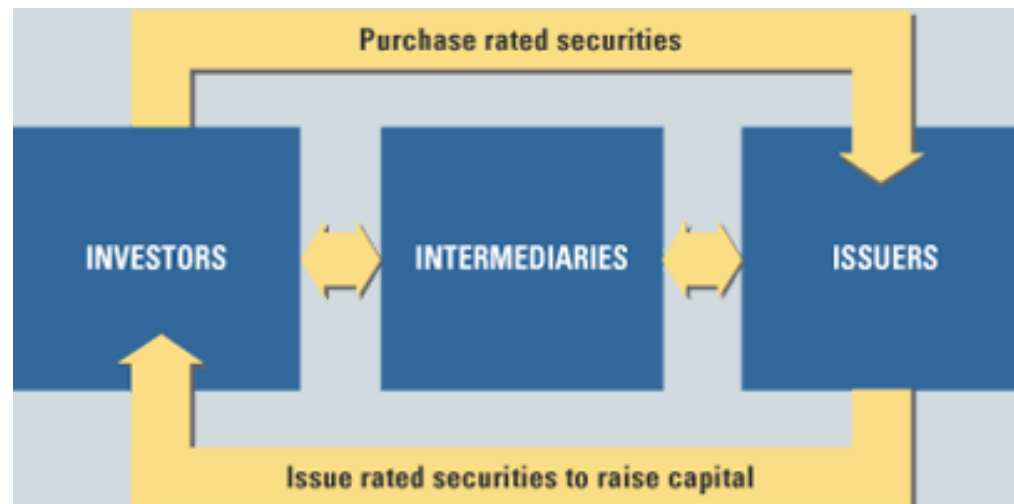
- Ratings were increasingly used in most developed countries' financial markets and increasingly in the "emerging markets" of the developing world
- Structured finance was another growth area. The "financial engineering" of the asset-backed securities made them "harder to understand and to price" and became a profit center for rating agencies
 - asset-backed securities (ABS), residential mortgage-backed securities (RMBS), commercial mortgage-backed securities (CMBS), collateralized debt obligations (CDOs), "synthetic CDOs", and derivatives
- By December 2008, there were over \$11 trillion structured finance debt securities outstanding in the US bond market
- By 2009 the worldwide bond market (total debt outstanding) reached an estimated \$82.2 trillion in 2009 dollars

The "Big Three" credit rating agencies - CRA

- Credit rating is a highly concentrated industry
 - Moody's and S&P have 80% market share globally, while the "Big Three" CRA - Moody's, S&P and Fitch Ratings - control approximately 95% of the business
- Their market dominance and credit market expansion brought profits margins of around 50 percent from 2004-2009
 - By 2006, Moodys' earned \$881 million in revenue from structured finance
- As CRA influence and profitability expanded so did scrutiny and concern about their performance and alleged illegal practices
 - In 1996 the US Department of Justice launched an investigation of possible improper pressuring of issuers by Moody's in order to win business
 - Agencies were subject to dozens of lawsuits by unhappy investors complaining of inaccurate ratings following the collapse of Enron
 - CRA were at under the spotlight after the US subprime mortgage crisis and subsequent late-2000s financial crisis (73% - over \$800 billion worth - of all MBS Moody's had rated triple-A in 2006 were downgraded to junk status in 2008)
 - Downgrades of European (2010) and US (2011) sovereign debt were also criticized

Role in capital markets

- CRA serve as information intermediaries, so they
 - reduce information costs (asymmetric information)
 - increase the pool of potential borrowers
 - promote liquid markets
- These functions may increase the supply of available risk capital in the market and promote economic growth



Ratings use in bond market

- CRA provide assessments about the creditworthiness of sovereign and corporate bonds, and packagers of asset-backed securities
 - CRAs theoretically provide investors with an independent evaluation and assessment of debt securities creditworthiness
 - “The ratings are and must be construed solely as, statements of opinion and not statements of fact or recommendations to purchase, sell, or hold any securities”
- However, the paying customers of CRAs have primarily been issuers of securities, raising the issue of conflict of interest
- To determine a bond's rating, a CRA analyze the accounts of the issuer and the legal agreements attached to the bond. Effectively, CRA produce a forecast of the bond's chance of default, expected loss, or a similar metric
- The metrics vary somewhat between the agencies:
 - S&P ratings reflect default probability
 - Moody's ratings reflect expected investor losses in the case of default
 - For corporate obligations Fitch's ratings incorporate a measure of investor loss in the event of default, but its ratings on structured, project, and public finance obligations narrowly measure default risk

Rating Methodologies/Approaches

- Analyst-Driven Credit Ratings
 - In rating an issuer, analysts conduct a review of the financial performance, policies, and risk management strategies of that issuer as well as of the business and economic environment in which the issuer operates
 - In addition, credit analysts typically weigh qualitative information, such as long-term strategies, as they assess the issuer's ability and willingness to meet its financial obligations in a timely manner
- Model-Driven Credit Ratings
 - CRA use the model-driven approach, focusing more exclusively on quantitative data that they incorporate into a mathematical model to produce their ratings, which are generally point-in-time assessments
 - For example, an agency using this approach to assess the creditworthiness of a bank or financial institution evaluates that entity's asset quality, funding, and profitability based on figures that appear in that entity's financial statements and regulatory filings
 - The mathematical formulas used to measure creditworthiness are often proprietary and highly complex

Rating grades



- The rating grades are usually expressed through some variation of an alphabetical combination of lower and upper case letters, with either plus or minus signs or numbers added to further fine tune the rating
 - Fitch and S&P use AAA, AA, A, and BBB for investment-grade long term credit risk, and BB, CCC, CC, C, and D for "speculative" long term credit risk.
 - Moody's long-term designators are: Aaa, Aa, A, Baa for investment grade, and Ba, B, Caa, Ca, and C for speculative grade
 - Fitch and S&P use pluses and minuses (e.g., AA+ and AA-) and Moody's uses numbers (Aa1 and Aa3) to add further gradations
- CRAs provide an ongoing review of securities after initial rating and may change a security's rating if they feel its creditworthiness has changed
- They typically signal in advance their intention to consider rating changes
 - Fitch, Moody's and S&P all use negative "outlook" notifications to indicate the potential for a downgrade within the next two years (one-in-three likelihood)
 - Negative "watch" notifications are used to indicate that a downgrade is likely within the next 90 days (one-in-two likelihood)

Credit rating tiers

Moody's		S&P		Fitch		rating description
Long-term	Short-term	Long-term	Short-term	Long-term	Short-term	
Aaa	P-1	AAA	A-1+	AAA	F1+	Prime
Aa1		AA+		AA+		High grade
Aa2		AA		AA		
Aa3		AA-		AA-		
A1	P-2	A+	A-1	A+	F1	Upper medium grade
A2		A		A		
A3		A-		A-		
Baa1	P-3	BBB+	A-2	BBB+	F2	Lower medium grade
Baa2		BBB		BBB		
Baa3		BBB-		BBB-		
Ba1	Not prime	BB+	B	BB+	B	Non-investment grade speculative
Ba2		BB		BB		
Ba3		BB-		BB-		
B1		B+		B+		Highly speculative
B2		B		B		
B3		B-		B-		
Caa1	Not prime	CCC+	C	CCC	C	Substantial risks
Caa2		CCC				Extremely speculative
Caa3		CCC-				Default imminent with little prospect for recovery
Ca	CC					
		C				
C		D	/	DDD	/	In default
/				DD		
/				D		

Rating tier definitions

• https://www.globalcreditportal.com/ratingsdirect/renderArticle.do?articleId=1019442&SctArticleId=147045&from=CM&nsi_code=LIME

 Investment Grade	'AAA'	Extremely strong capacity to meet financial commitments. Highest rating
	'AA'	Very strong capacity to meet financial commitments
	'A'	Strong capacity to meet financial commitments, but somewhat susceptible to adverse economic conditions and changes in circumstances
	'BBB'	Adequate capacity to meet financial commitments, but more subject to adverse economic conditions
	'BBB-'	<i>Considered lowest investment grade by market participants</i>
Speculative Grade 	'BB+'	<i>Considered highest speculative grade by market participants</i>
	'BB'	Less vulnerable in the near-term but faces major ongoing uncertainties to adverse business, financial and economic conditions
	'B'	More vulnerable to adverse business, financial and economic conditions but currently has the capacity to meet financial commitments
	'CCC'	Currently vulnerable and dependent on favorable business, financial and economic conditions to meet financial commitments
	'CC'	Currently highly vulnerable
	'C'	A bankruptcy petition has been filed or similar action taken, but payments of financial commitments are continued
	'D'	Payment default on financial commitments
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.		

Rating tier definitions (in more details)

Moody's	Standard & Poor's	Fitch	AM Best	Credit worthiness
Aaa	AAA	AAA	aaa	An obligor has EXTREMELY STRONG capacity to meet its financial commitments.
Aa1 Aa2 Aa3	AA+ AA AA-	AA+ AA AA-	aa+ aa aa-	An obligor has VERY STRONG capacity to meet its financial commitments. It differs from the highest rated obligors only in small degree.
A1 A2 A3	A+ A A-	A+ A A-	a+ a a-	An obligor has STRONG capacity to meet its financial commitments but is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligors in higher-rated categories.
Baa1 Baa2 Baa3	BBB+ BBB BBB-	BBB+ BBB BBB-	bbb+ bbb bbb-	An obligor has ADEQUATE capacity to meet its financial commitments. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitments.
Ba1 Ba2 Ba3	BB+ BB BB-	BB+ BB BB-	bb+ bb bb-	An obligor is LESS VULNERABLE in the near term than other lower-rated obligors. However, it faces major ongoing uncertainties and exposure to adverse business, financial, or economic conditions which could lead to the obligor's inadequate capacity to meet its financial commitments.
B1 B2 B3	B+ B B-	B+ B B-	b+ b b-	An obligor is MORE VULNERABLE than the obligors rated 'BB', but the obligor currently has the capacity to meet its financial commitments. Adverse business, financial, or economic conditions will likely impair the obligor's capacity or willingness to meet its financial commitments.
Caa	CCC	CCC	ccc	An obligor is CURRENTLY VULNERABLE , and is dependent upon favourable business, financial, and economic conditions to meet its financial commitments.
Ca	CC C	CC C	cc c	An obligor is CURRENTLY HIGHLY-VULNERABLE . The obligor is CURRENTLY HIGHLY-VULNERABLE to nonpayment. May be used where a bankruptcy petition has been filed.
C	D	D	d	An obligor has failed to pay one or more of its financial obligations (rated or unrated) when it became due.
e, p	pr	Expected		Preliminary ratings may be assigned to obligations pending receipt of final documentation and legal opinions. The final rating may differ from the preliminary rating.
WR				Rating withdrawn for reasons including: debt maturity, calls, puts, conversions, etc., or business reasons (e.g. change in the size of a debt issue), or the issuer defaults.
unsolicited	unsolicited			This rating was initiated by the ratings agency and not requested by the issuer.
	SD	RD		This rating is assigned when the agency believes that the obligor has selectively defaulted on a specific issue or class of obligations but it will continue to meet its payment obligations on other issues or classes of obligations in a timely manner.
NR	NR	NR		No rating has been requested, or there is insufficient information on which to base a rating.

— investment grade —
— "junk" or sub-investment grade —



























Investment grade bonds

- A bond is considered investment grade (IG) if its credit rating is BBB- or higher by Standard & Poor's or Baa3 or higher by Moody's
 - Generally they are bonds that are judged by the rating agency as likely enough to meet payment obligations that banks are allowed to invest in them
 - Bank regulators and market participants view them as suitable investments for institutions such as banks, insurance companies, and savings and loan associations
 - The risks associated with investment-grade bonds are considered significantly higher than those associated with first-class government bonds
- Ratings play a critical role in determining how much companies and other entities that issue debt, including sovereign governments, have to pay to access credit markets (amount of interest paid on the issued debt)
 - The threshold between investment-grade and speculative-grade ratings has important market implications for issuers' borrowing costs
- Bonds that are not rated as investment-grade bonds are known as high yield bonds or more derisively as junk bonds.
 - The issuer or issuer currently has the ability to repay but faces uncertainties, which could increase the likelihood of default, or failure to meet its financial obligations

Present sovereign and banks ratings

CREDIT RATINGS

LONG-TERM SOVEREIGN DEBT RATINGS

Country/Ratings Agency	Moody's	S&P	Fitch	INVESTMENT GRADE RATINGS
U.S.A. 	Aaa	AA+	AAA	 Aaa/AAA Minimal risk  Aa/AA Very low  A/A Low risk  Baa/BBB Moderate risk  Ba/BB Substantial risk  B/B High risk  Caa/CCC Very high
Japan 	Aa3	AA-	AA	
EURO ZONE				
Austria 	Aaa	AAA	AAA	
Belgium 	Aa1	AA	AA+	
Cyprus 	Baa3	BBB	BBB	
Estonia 	A1	AA-	A+	
Finland 	Aaa	AAA	AAA	
France 	Aaa	AAA	AAA	
Germany 	Aaa	AAA	AAA	
Greece 	Ca	CC	CCC	
Ireland 	Ba1	BBB+	BBB+	
Italy 	A2	A	A+	
Luxembourg 	Aaa	AAA	AAA	
Malta 	A2	A	A+	
Netherlands 	Aaa	AAA	AAA	
Portugal 	Ba2	BBB-	BB+	
Slovakia 	A1	A+	A+	
Slovenia 	Aa3	AA-	AA-	
Spain 	A1	AA-	AA-	

Sources: Moody's, Standard & Poors, Fitch



BANKS CREDIT RATINGS

MOODY'S DOWNGRADES ON BIG BANKS

Bank name	Old Rating	New Rating	Investment Grade Ratings
HSBC Holdings	Aa2	Aa3	Aaa/AAA Minimal risk
Royal Bank of Canada	Aa1	Aa3	
Credit Suisse	Aa1	A1*	Aa/AA Very low
BNP Paribas	Aa3	A2	
Credit Agricole S.A.	Aa3	A2	A/A Low risk
Deutsche Bank	Aa3	A2	
JP Morgan Chase	Aa3	A2	Baa/BBB Moderate risk
Societe Generale	A1	A2	
UBS	Aa3	A2	Ba/BB Substantial risk
Barclays	A1	A3	
Goldman Sachs	A1	A3	B/B High risk
Macquarie	A2	A3**	
Morgan Stanley	A2	Baa1	Caa/CCC Very high
Royal Bank of Scotland	A3	Baa1	
Bank of America	Baa1	Baa2	SD/RD Selective Default Restricted Default
Citigroup	A3	Baa2	
Nomura Holdings	Baa2	Baa3***	

* Moody's downgraded Credit Suisse Group AG (the holding company) provisional senior debt to (P)A2 from (P)Aa2, outlook stable

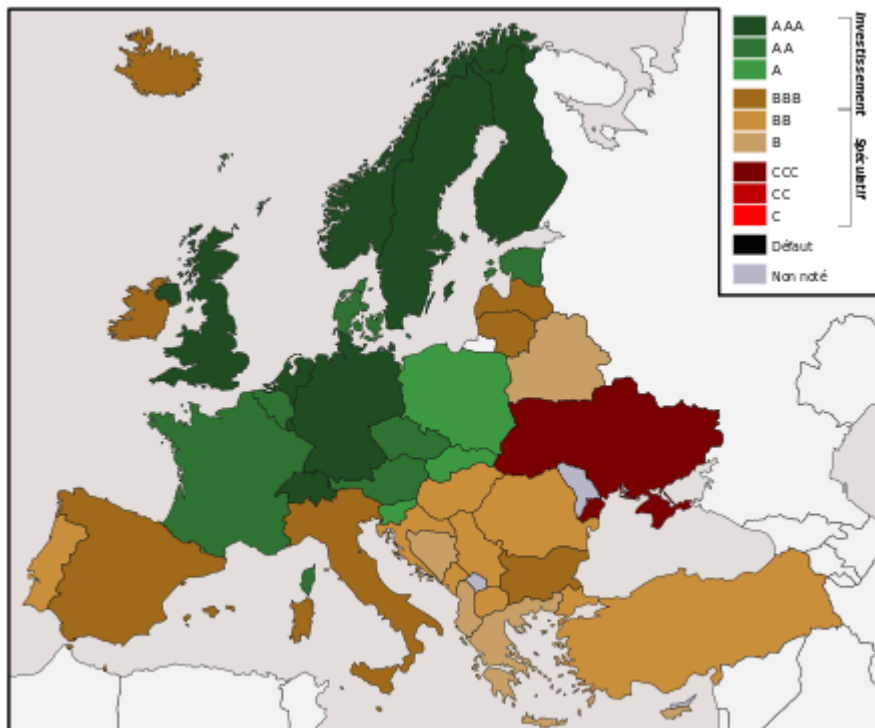
** Moody's downgraded Macquarie Group Ltd. to A3 on Mar. 16 from a previous rating of A2

*** Moody's downgraded Nomura Holdings, Inc. to Baa3 on Mar. 15 from a previous rating of Baa2

Source: Moody's



S&P and Fitch

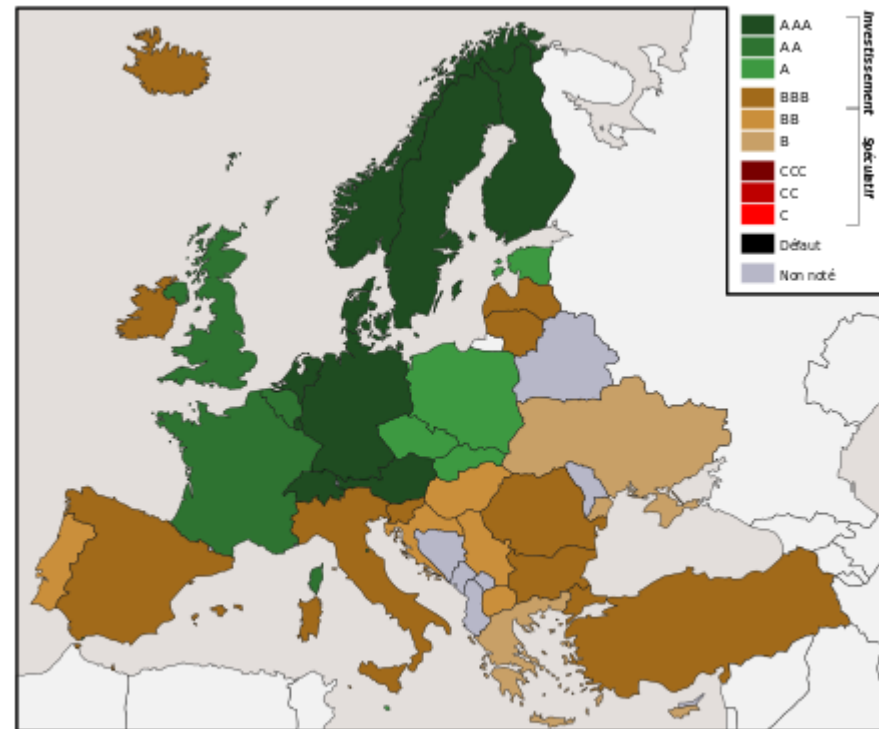


Standard & Poor's

Notation financière à long terme des États européens

28/01/2014

Source : S&P (<http://www.standardandpoors.com/home/en/eur>)



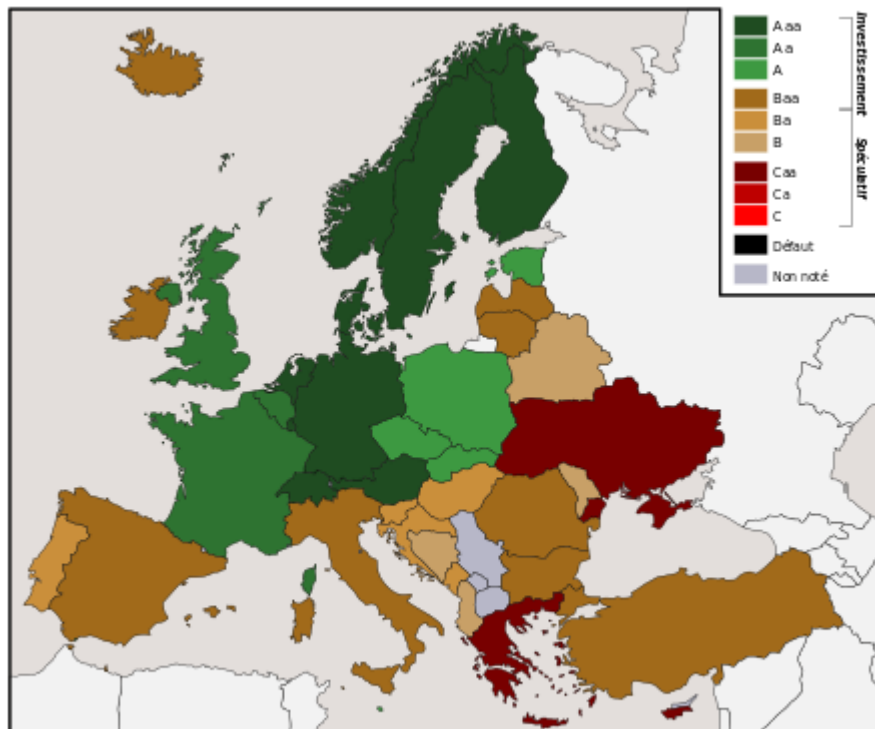
Fitch Ratings

Notation financière à long terme des États européens

21/09/2013

Source : Fitch Ratings (http://www.fitchratings.com/index_fitchratings.cfm)

Moody's and Dagong

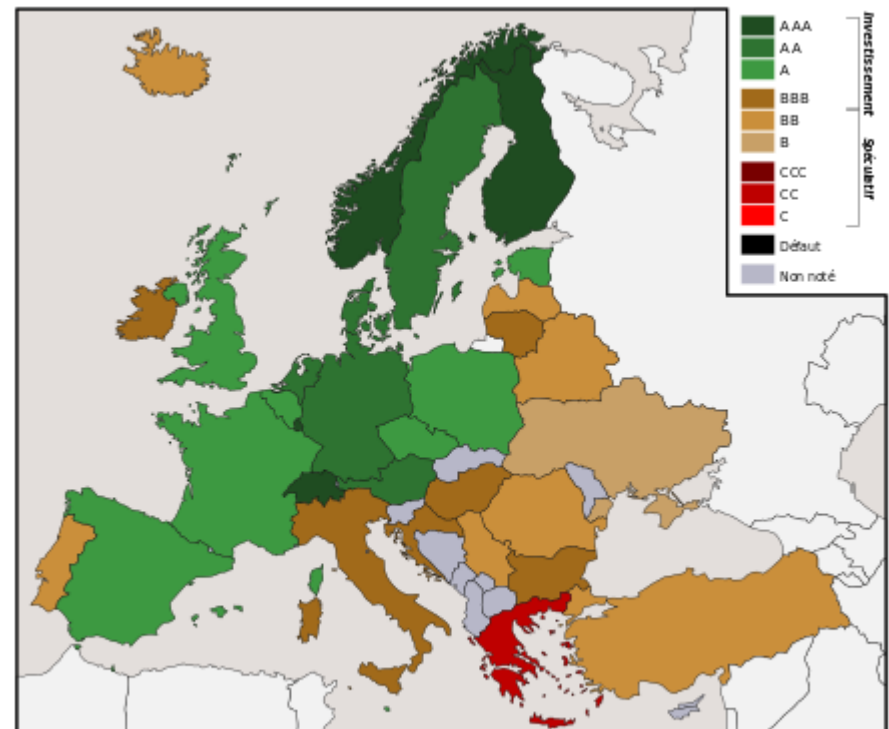


Moody's

Notation financière à long terme des États européens

18/01/2014

Source : Moody's (<http://www.moody.com/>)



Dagong Global Credit Rating

Notation financière à long terme des États européens

06/10/2013

Source : Dagong (<http://www.dagongcredit.com/dagongweb/eng/ish/index.php>)

Recovery Ratings

- Some CRA incorporate into their ratings opinions the potential for recovery, which is an opinion about the amount that investors may recover in the event of default
- Rating agencies that assess recovery consider the percentage of the instrument's outstanding principal that an investor can expect to receive back
 - When used as a rating factor, recovery prospects are an important component in evaluating credit quality, particularly in the evaluation of non-investment-grade debt
 - The recovery rating scale forms the basis for adjusting the credit rating of an issue up or down relative to the credit rating of the issuer

Recovery rating	Recovery description	Recovery expectations (%)*	Issue rating relative to issuer credit rating**
1+	+Highest expectation, full recovery	100	+3
1	Very high recovery	90-100	+2
2	Substantial recovery	70-90	+1
3	Meaningful recovery	50-70	0
4	Average recovery	30-50	0
5	Modest recovery	10-30	-1
6	Negligible recovery	0-10	-2

(For issuers with a non-investment-grade corporate credit rating)

* Recovery of principal plus accrued but unpaid interest at the time of default.

** Number of notches the issue rating may be adjusted relative to the credit rating of the issuer (i.e. +3 could mean the issue rating would be BBB+ if the issuer rating was BB+)

4-Year Idealized Expected Loss (EL = PD x LGD) Rates by Rating Category

Aaa	0.00%	Ba1	2.31%
Aa1	0.01%	Ba2	3.74%
Aa2	0.03%	Ba3	5.38%
Aa3	0.06%	B1	7.62%
A1	0.10%	B2	9.97%
A2	0.19%	B3	13.22%
A3	0.30%	Caa1	17.86%
Baa1	0.46%	Caa2	24.13%
Baa2	0.66%	Caa3	36.43%
Baa3	1.31%	Ca	50.00%
		C	100.00%

Spreads and probability of default

- Agencies do not attach a hard number of probability of default to each grade, preferring descriptive definitions
 - However, some studies have estimated the average risk of default and reward of bonds by rating (additional interest rate or "spread")

Chance of default	Moody's	S&P	Fitch
		Investment grade	
Lowest risk	Aaa	AAA	AAA
	Aa1	AA +	AA +
	Aa2	AA	AA
Very low risk	Aa3	AA -	AA -
	A1	A +	A
	A2	A	A +
Low risk	A3	A -	A -
	Baa1	BBB +	BBB +
	Baa2	BBB	BBB
	Baa3	BBB -	BBB -
		Speculative grade	
Probable	Ba1	BB +	BB +
	Ba2	BB	BB
	Ba3	BB -	BB -
High risk	B1	B +	B +
	B2	B	B
	B3	B -	B -
Default	Caa1	CCC +	CCC +
	Caa2	CCC	CCC
	Caa3	CCC -	CCC -
	Ca	CC	CC
	C	C	C
		D	DDD

Five-Year Default Rates by Rating (Moody's)
 "Over a 5-year period, what portion of a rated entity or investment is expected to default?"

S&P	MOODY'S	PROBABILITY OF DEFAULT (5 YEARS)
AAA	Aaa	0.15%
AA+	Aa1	0.15%
AA	Aa2	0.20%
AA-	Aa3	0.20%
A+	A1	0.40%
A	A2	0.60%
A-	A3	0.60%
BBB+	Baa1	1.50%
BBB	Baa2	2%
BBB-	Baa3	4%
BB+	Ba1	7%
BB	Ba2	9%
BB-	Ba3	19%
B+	B1	25%
B	B2	31%
B-	B3	43%
CCC	Caa-C	60%

Estimated spreads and default rates by rating grade		
Rating	Basis point spread <small>[22][76][77]</small>	Default rate ^{[78][79]}
AAA/Aaa	43	0.18%
AA/Aa2	73	0.28%
A	99	n/a
BBB/Baa2	166	2.11%
BB/Ba2	299	8.82%
B/B2	404	31.24%
CCC	724	n/a

Sources: Basis spread is between US treasuries and rated bonds over a 16 year period;^{[22][76]} Default rate over a 5-year period, from a study by Moody's investment service^{[78][79]}

Default rates

- Bond default rates up to 2007 for municipal versus corporate bonds by rating and rating agency

Cumulative Historic Default Rates (in percent)

Rating categories	Moody's		S&P	
	Municipal	Corporate	Municipal	Corporate
Aaa/AAA	0.00	0.52	0.00	0.60
Aa/AA	0.06	0.52	0.00	1.50
A/A	0.03	1.29	0.23	2.91
Baa/BBB	0.13	4.64	0.32	10.29
Ba/BB	2.65	19.12	1.74	29.93
B/B	11.86	43.34	8.48	53.72
Caa-C/CCC-C	16.58	69.18	44.81	69.19
Investment Grade	0.07	2.09	0.20	4.14
Non-Invest Grade	4.29	31.37	7.37	42.35
All	0.10	9.70	0.29	12.98

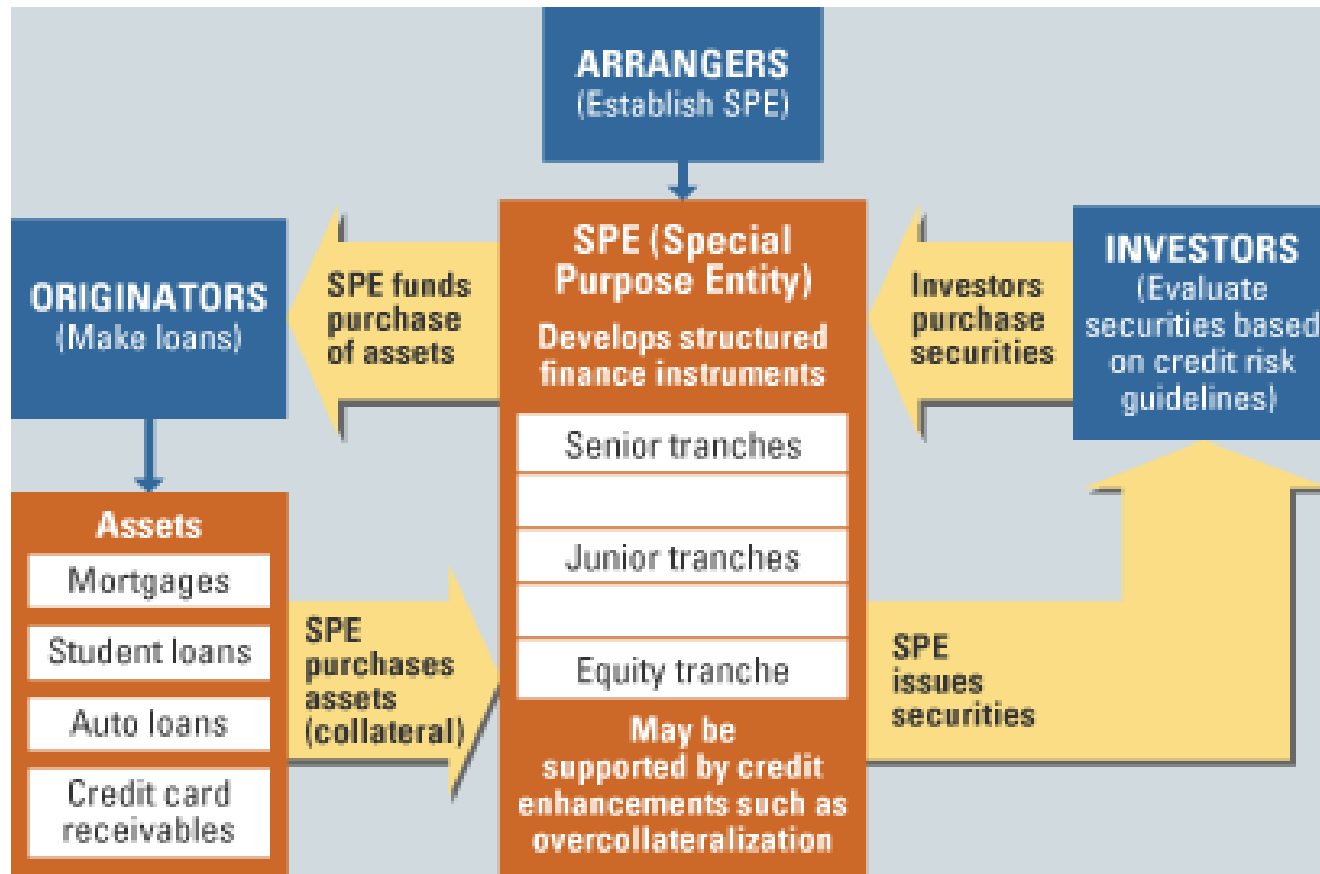
CRAs' inaccurate ratings and forecasts

- Critics maintain that the rating of securities has not worked nearly as smoothly as agencies suggest. Near defaults, defaults and financial disasters not detected by the CRA post-issuance surveillance. Notable examples are:
 - the 1970 Penn Central bankruptcy
 - the 1976 New York City fiscal crisis
 - the 1994 Orange County default
 - Asian and Russian financial crises
 - the 1998 collapse of the Long-Term Capital Management hedge fund
 - the 2001 Enron and WorldCom bankruptcies
 - the 2007-8 subprime mortgage crisis
- Conversely, complaints have been made that agencies have too much power over issuers and that downgrades can even force troubled companies into bankruptcy
 - The lowering of a credit score by a CRA can create a vicious cycle and self-fulfilling prophecy, as not only interest rates for their securities rise, but other contracts with financial institutions may be affected adversely, causing an increase in financing costs and ensuing decrease in credit worthiness

Ratings in structured finance

- Some debt securities are created through a process known as securitization. These securities formed by pooling debt and structured by "slicing" the pool into multiple "tranches", each with a different priority of payment
 - The most common assets are mortgage loans, auto loans and leases, credit card receivables, trade receivables, bank loans and corporate bonds
- Structured finance instruments are more complex and an accurate prognosis of repayment more difficult than with other debt ratings (ABS, MBS, CDOs)
- Repayment flows down to the next tranche only if the one above has been filled with its full share and is overflowing. Consequently,
 - the higher-up the bucket in the income stream, the lower its risk, the higher its credit rating, and lower its interest payment
 - the higher-level tranches have more credit worthiness than would a conventional unstructured, untranche bond with the same repayment income stream
- CRA are not only paid for giving ratings to structured securities, but may be paid for advice on how to structure tranches and sometimes the underlying assets that secure the debt to achieve ratings the issuer desires

Creation of structured financial instruments



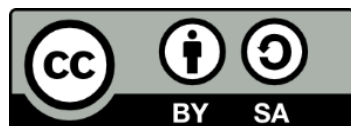
Business models

- CRA generate revenue from a variety of activities related to the production and distribution of credit ratings
- They operate under one or a combination of business models: the subscription model and the issuer-pays model
 - Under the subscription model, the credit rating agency does not make its ratings freely available to the market, so investors pay a subscription fee for access to ratings
 - Under the issuer-pays model, agencies charge issuers a fee for providing credit rating assessments. This revenue stream allows issuer-pays credit rating agencies to make their ratings freely available to the broader market, especially via the Internet
- The subscription approach was the prevailing business model until the early 1970s, when Moody's, Fitch, and finally Standard & Poor's adopted the issuer-pays model

Further research

- <http://www.esma.europa.eu/page/Credit-Rating-Agencies>
- http://www.standardandpoors.com/en_US/web/guest/home
- http://ec.europa.eu/internal_market/rating-agencies/index_en.htm
- <https://www.fitchratings.com/web/en/dynamic/fitch-home.jsp>
- <https://www.moody.com/>
- <https://www.sec.gov/spotlight/dodd-frank/creditratingagencies.shtml>
- http://en.wikipedia.org/wiki/Credit_rating
- http://en.wikipedia.org/wiki/Credit_rating_agencies
- <http://bonds.about.com/od/buyingbonds/a/BondRankings.htm>
- <http://www.economist.com/blogs/charlemagne/2013/12/eu-and-credit-rating-agencies>
- http://www.wikinvest.com/wikinest/api.php?action=viewNews&aid=5556035&page=Concept%3ACredit_Ratings_Agencies&format=html&comments=0

Τέλος Ενότητας



Ευρωπαϊκή Ένωση
Ευρωπαϊκό Κοινωνικό Ταμείο



ΥΠΟΥΡΓΕΙΟ ΠΑΙΔΕΙΑΣ ΚΑΙ ΘΡΗΣΚΕΥΜΑΤΩΝ
ΕΙΔΙΚΗ ΥΠΗΡΕΣΙΑ ΔΙΑΧΕΙΡΙΣΗΣ

Με τη συγχρηματοδότηση της Ελλάδας και της Ευρωπαϊκής Ένωσης

