A Century of Bond Ratings as a Business*

Ludovic Moreau†

Abstract

Historical accounting datasets about a leader of the bond rating industry have been gathered in order to provide an unprecedented long term view on this business. To better judge of the dynamics at play, similar data for representatives of older and broader business fields is also introduced. Overall, this empirical discussion plays down the importance of regulatory "licenses" given to bond rating firms and puts forward the coming of a "modern" business model where issuers pay for ratings.

Key words: industry study, bond ratings, financial regulation
JEL codes: L84, G18, G24

This version: July 2009

* I thank M. Aglietta, V. Bignon, M. Boutillier, R. Sylla and L. J. White. I am also indebted to P. Talon who provided valuable help in dealing with the data. The usual disclaimer applies.

† EconomiX, Université Paris Ouest Nanterre, Office K 124, 200 Avenue de la République, 92001 Nanterre Cedex, Tel./fax : (33) 1 40 97 78 86, e-mail : lumoreau@u-paris10.fr

In the early decades of the past century, a couple of American firms started to provide bond ratings and managed to run a lasting business out of it. In the 1930's, American Financial authorities introduced rules relying on these privately issued opinions. This particular way of dealing with regulation was then left unchallenged and even extended, particularly over the last quarter of the twentieth century. Once authorities had started using bond ratings straightforwardly, Partnoy (1999, pp. 681-703) argued that private third party certifiers relevant to the marketplace were bound to end up mostly providing regulatory benefits or "licenses".

To provide a ground for such a "regulatory license" theory, one may want to draw a parallel between the profits of bond raters and the extent of statutory rules relying on bond ratings. This is required to provide more than yet another statement on how the rating business might have been regulatory inflated. Yet relevant data is scarce… This paucity of hard information has not fostered the coherence of the views on the bond rating business. For example, Partnoy (2006) also argued that what made the rating firms attractive to investors was their involvement in the structured finance issuance boom and the fact that they had repeatedly escaped liability in courts.

What did really matter? More broadly, does the rating business truly appear so special that one needs to turn to such "exogenous" factors? In an attempt to deal with these questions, the present paper introduces a number of genuine datasets. *Moody's* is the rating firm that has managed to stay independent for the longest time and to go public on the stock market on its own. Historical accounting datasets about this corporation then provide an unprecedented long term view on the dynamics of the rating business. In particular, since *Moody's* changed its business model in the late 1960's, this allows an historical discussion on the role of the rating firm fee structure.

Part 1 of this paper gives background information about the development of the rating business. Part 2 introduces an empirical discussion using accounting data unavailable to date. First, the pattern of earnings of the *Moody's* corporation does not fit the regulatory license theory well: it becomes less sustainable precisely on the wake of the first financial rulings using ratings as straightforward inputs. Secondly, when rating firms exhibited impressive profitability measures over the early 2000's, these remain in line with a trend that can be traced back to the mid 1970's and to the transition to an "issuer pay" business rating model. Lastly, the confidence of investors in a dedicated rating entity like *Moody's* proved impressive in the early 2000's but eroded well before troubles with structured finance ratings. Part 3 provides a discussion of these results by looking at the structure of the American bond market since 1945. After 1970, modern publicly available issuer paid ratings were of particular interest for foreign corporate bond issuers increasingly entering the American bond market and for the new major buyers of non Treasuries bonds (households and foreign holders). Concluding remarks comes back on the regulatory implications of dealing with two rating business models.

1 – Some Remarks on the History of the Bond Rating Business

Credit reporting or *mercantile* credit agencies have sometimes been introduced as the main precursors to bond rating firms (see Cantor &Packer (1994, p.1 col b, §1) and Partnoy (1999, §2 p.636-§1 p.637)). Sylla (2002, pp. 19-25) introduced a broader perspective by raising a simple question: why did rating firms develop that late in bond market history? Indeed, investors had been buying bonds since the sixteenth century centuries and a meaningful experience of rating securities came as late as the early twentieth century[1]. The main reason is that bond markets remained mostly sovereign debt markets: businesses in Europe met most of their capital needs thanks to bank loans and stock issues. Dating back to the 1850's and focusing on railroads in its early decades, the corporate bond market can be considered as an American financial

[1] This does not mean that there were no previous experiences with rating securities; but their scope remained limited. According to the founder of the first rating firm: "I cannot claim much credit for creating the idea, and certainly I think the general use of commercial and credit ratings had something to do with bringing the idea of possible bond ratings to my mind. While no one in this country had attempted such a thing as investment ratings by means of symbols, yet even in those days bonds were classified into groups according to quality and salability, especially by large investment institutions, such as insurance companies. Moreover, there had existed for a considerable time, I think, a bond rating system in Vienna and also I believe in Berlin. These foreign systems had been developed by symbols, and the *Austrian Manual of Statistics*, which carried these symbols, was quite well known in Europe, although not at all in this country." (see Harold (1938, p. 11)).

innovation that later spread to the rest of the world. The rating business was born out the needs coming from this innovation. Before the creation of any rating firm, the American corporate bond market experienced half a century of spectacular growth. This growth went along with 3 historical developments that provide a picture of the boundaries of the rating business:

(i) *the credit-reporting or mercantile credit agencies*: The critical role played by this intermediary in the development of credit lines among American business networks is studied in full length by Olegario (2006). Precedents to these institutions developed well before the rise of the American corporate bond market, the business however especially took hold over the second half of the nineteenth century. Founded in 1841 by L. Tappan, the *Mercantile Agency* gathered information on the business standing and creditworthiness of businesses all over the United States through a network of agents and sold reports to subscribers. It became *R.G. Dun & Co* in 1859. The company's subscribers grew from 7,000 in the 1870's to 40,000 in the 1880's, and by 1900 its reports covered more than a million businesses. In 1849, J. Bradstreet founded a similar firm, which by 1857 was publishing what apparently was the world's first commercial credit rating book. In 1933, the Dun and the Bradstreet companies merged to form *Dun & Bradstreet* (*D&B*). In 1962, *Dun & Bradstreet* (*D&B*) acquired *Moody's Investors Service*, the bond rating firm that J. Moody had created in 1909.

(ii) *the specialized financial press*: Over the second half of the nineteenth century, journalists created the business of supplying comparative information on the assets and earning power of the companies. As the editor of *The American Railroad Journal*, H. V. Poor gathered and published systematic information on the property of railroads, their assets, liabilities and earnings. In 1868, he started a firm to publish yearly his *Manual of the Railroads of the United States*, which reported financial and operating statistics for most of the major American railroads and was widely recognized as the authoritative source of such information for several decades (see Chandler (1956, chapters 9 and 11)). In 1906, J. Moody entered this business and underwent solvency on the wake of the 1907 panic. Reincorporating his company in 1908, he innovated with the publication of a rating manual in 1909 (see Harold (1938, pp. 9-12)). In 1916, the *Poor Company* entered this bond rating business as a natural outgrowth. In 1922, the second new entrant, *Standard Statistics*, was also a financial information company. In 1924, the third and last firm to enter the early rating business was the *Fitch Publishing Company*, a security quotation publisher since 1913. In 1941, two of these rating firms merged to form *Standard &Poor's* (*S&P*). In 1966, *S&P* was taken over by the publishing giant *McGraw &Hill* (*MG&H*).

(iii) *the investment banker*s: Flandreau &Flores (2007) studies sovereign bond markets over the 1820's and concludes that the hierarchy of underwriters was a proxy for the one of issuers. As

financial intermediaries for the railroad securities, American great investment bankers had a strong reputation incentive to monitor every deal. Their access to the suppliers of capital through a vast network, often international, was at stake. They did act as investors' insiders, insisting that issuers provide all relevant information related to company operations on an ongoing basis and sometimes requiring seats on the board of directors of corporations. At the turn of the twentieth century, the size of the investing class started to grow and this pivotal role of investment bankers started to be questioned. Embedding trust in a number of key individuals was certainly better suited to closed networks of wealthy individuals (Sylla (2002, 1 p. 34)). Especially with the 1912-1913 Money Trust investigation in mind, the rise of the rating business over the 1920's looks quite contemporaneous to the weakening of great investment bankers. Harold (1938, 2-3 p.16) states that "in no circles has the attitude toward bond ratings been more hostile than among investment bankers" and mentions a number of attempts to influence ratings by some investment banking houses. The broad public's request for more publicly available information on the quality of investments first reflected in paternalistic State "Blue Sky" laws and would later bring both mandatory disclosure laws for issuers of securities and the Securities and Exchange Commission (SEC).

The rating business took hold over the 1920's (see Flandreau et al. (2009, pp. 10-13) giving details on the rating industry during the interwar era). Reviewing the three historical precedents, this business can be considered at the border of two different activities. Historical ties with (i) and (ii) portrays the rating business as a mere development of *financial journalism*, the purpose of which is to provide relevant information to investors. With (iii), however, *private certification* is stepping in. Great American investment bankers did not give reviews on the deals they were selling; they did act as quality certifiers who ended up placing people on the board of companies... Sylla (2002, pp. 25; 33) mentions a transfer of reputational capital from these quality certifiers to the rating firms and focuses on the historical forces that may have led to it. But the extent of this transfer remains unclear…

Since the development of rating firms came to a standstill with the 1940's, Partnoy (1999, p. 646) argued that any reputation that might have been gained over the 1920's had quickly gone away on the wake of the 1929 crisis. Remember that the market structure remained quite concentrated (4 established firms after 1924, back to 3 following the 1941 merger that created *S&P*). Furthermore, weakened market leaders of the rating industry became external growth opportunities for related business over the 1960's. This may be interpreted as a poor ability to deal with the post World War II (WWII) American capital markets. In any case, at the turn of the 1970's, rating firms changed their business model: when they had formerly been selling their

ratings to investors in every manner manageable, they started charging issuers[2]. Existing comments on this move can be sorted in two broad views of rating industry development:

❖ *Financial market development*: With the post-WWII decades, growth brought more stable and higher corporate earnings and this allowed the use of internal funds for investment purposes. Market finance was also replaced by other institutional means: Atkinson (1967, Chapter II) documents that about half of debt securities were privately placed over 1948-1965 and Sylla (2002, 5 p. 30) also points out that commercial banks introduced term loans as an alternative to bond financing (see (Kemmerer (1952, pp. 459-481)). The change in the fee structure can then be presented as a natural outcome of both the poor profitability of a business model dating back to the 1910's and a kind of risk free environment. Yet, explaining the pressure on a business model is hardly explaining the birth of a new one[3]. Note first that the issuer pay ratings were introduced in 1968 by *S&P* for sub-sovereign issues. The increased role of ratings in this field would soon bring public attention (see NYT (1972) and Twentieth Century Fund (1974)). Then, commercial paper issuance had grown over post-war decades under the assumption that investors could trust any commercial paper issued by a known firm. Following the Penn central default in 1970, commercial paper issuers began to solicit ratings to lower their capital costs and revitalize confidence. This succeeded in changing market perception, a result that certainly expanded the market niche for charging issuers (Cantor &Packer (1994, p.4)). Last but not least, with the "functional" view introduced above in mind, rating firms may be reviving their links with private certification at the onset of a new era of market finance.

❖ *Regulation*: in the 1930's, American authorities began to use bond ratings for the purpose of regulating bank and insurance investments. On the wake of the financial difficulties of the early 1970's, the practice of incorporating ratings in regulatory procedures was revived by the Securities Exchange Commission (SEC) in its regulation of broker dealer in 1973/1975. This rule referred to "Nationally Recognized Statistical Ratings Organizations" (NRSRO), a new category that paved the way for the use of ratings by other official bodies. As regulatory references to ratings multiply, ratings starts deriving value from ensuring that a security complies with these regulations. Shifting away from the sale of information to investors, bond rating firms may end up merely providing "regulatory licenses" (see (Partnoy (1999, pp. 681-703)). In any case,

[2] S&P began charging municipal bond issuers in 1968 and most other issuers in 1971, Fitch and Moody's began charging corporate issuers in 1970 (see Cantor &Packer (1994, p. 4)).

[3] There have been organizations following the "old" business model since the coming of the modern rating business (see BIS (2000, p.25)). Overall, the global rating industry is however heavily weighted toward the modern rating business model with an oligopoly allowing the 3 "modern" rating firms (Moody's, S&P and Fitch) to own more than 80% of the global market.

regulation first increased demand with regulatory procedures starting in the 1930's and then contracted supply with the NRSRO category as a barrier to entry from 1975 (White (2002)). The 2006 Credit Rating Agency Reform Act targeted the supply side: entry was made easier by working on the NRSRO designation process. A focus on regulatory interferences tends to downplay the coming of the modern business model. If anything, this evolution may be interpreted as a move to better extract a regulatory rent.

These two broad views of rating development remain open to debate and pervade most discussions on the rating business. As can be seen in appendix A, a recognised source of investor research considers the modern *Moody's* as a part of the publishing industry broken down as follows: magazines (*Martha Stewart Living*), financial information publishers (*McGraw-Hill*, *FactSet*, *IHS Inc.*, *Moody's*, *Thomson*) and internet directories (*R.H.-Donnelley*, *Monster Worldwide*). On the contrary, Partnoy (2006, p. 67) argued that this corporation had financial ratios in no comparison to major financial publishers and a stock price evolution in no comparison to major broker dealers. After mentioning the critical role that rating firms played in structured products issuance, Partnoy (2006) puts forward two "exogenous" factors: 1/ regulatory benefits or "licenses" and 2/ immunity from civil and criminal liability for malfeasance. Yet, for example, Hill (2004, pp. 67-68) noted evidence of a "sticky institutional norm" favouring two ratings from *S&P* and *Moody's* that could not clearly be related to existing regulations. The following empirical analysis aims at contributing to this debate.

2 – Empirical Analysis

Since most rating firms are subsidiaries, previous analyses of the rating business have not focused on financials. Partnoy (1999, pp. 649-650) looks at the workforce and the number of outstanding ratings as proxies for business activity. In its first report on NRSRO required by the 2006 Credit Rating Agency Reform Act, the Security and Exchange Commission (SEC) produced a view on competition by looking at outstanding ratings (see SEC (2008, pp. 34-36)). Becker &Milbourn (2008) also looks at outstanding American corporate ratings to judge on how market shares evolved over 1998-2006.

This paper aims at adding to these analyses by looking at financials. A major issue with this option is access to relevant data (see attempts to run "traditional" industry analyses following the "Structure Behavior Performance" breakdown: White (2002, pp. 44-51) and, to a lesser extent, Smith &Walter (2002, pp. 293-305)). Consider that *Moody's* is the only rating firm that went public as an independent corporation and that it managed this for quite limited periods of

time (1929-1962; 2000-today). To better judge of the dynamics at play and to deal with periods when *Moody's* is not public, *Moody's* data may be plotted against the one of *Dun &Bradstreet* (*D&B*) and *McGraw &Hill* (*MG&H*) (that is, respectively, the credit reporting firm that controlled *Moody's* from 1962 to 2000 and the publishing giant that counts *S&P* as one of its business segment since 1966).

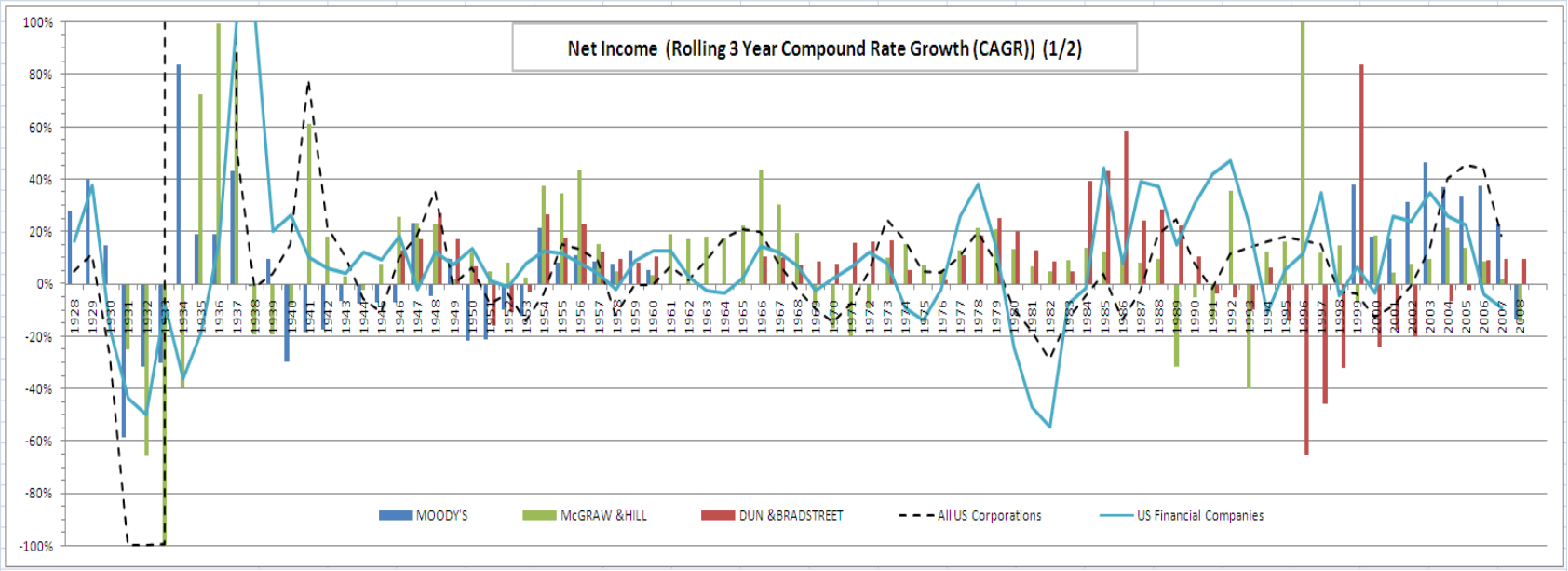
Note that the "old" *Moody's* follows an investor paid business model while the "modern" one follows an issuer paid business model. The interesting point is that *Moody's* has always been one of the very few leaders of the rating industry: this makes this historical discussion valuable because a modern analysis of the two business models is bound to compare small competitors to market leaders.

2.1 The bottom line: power in earnings

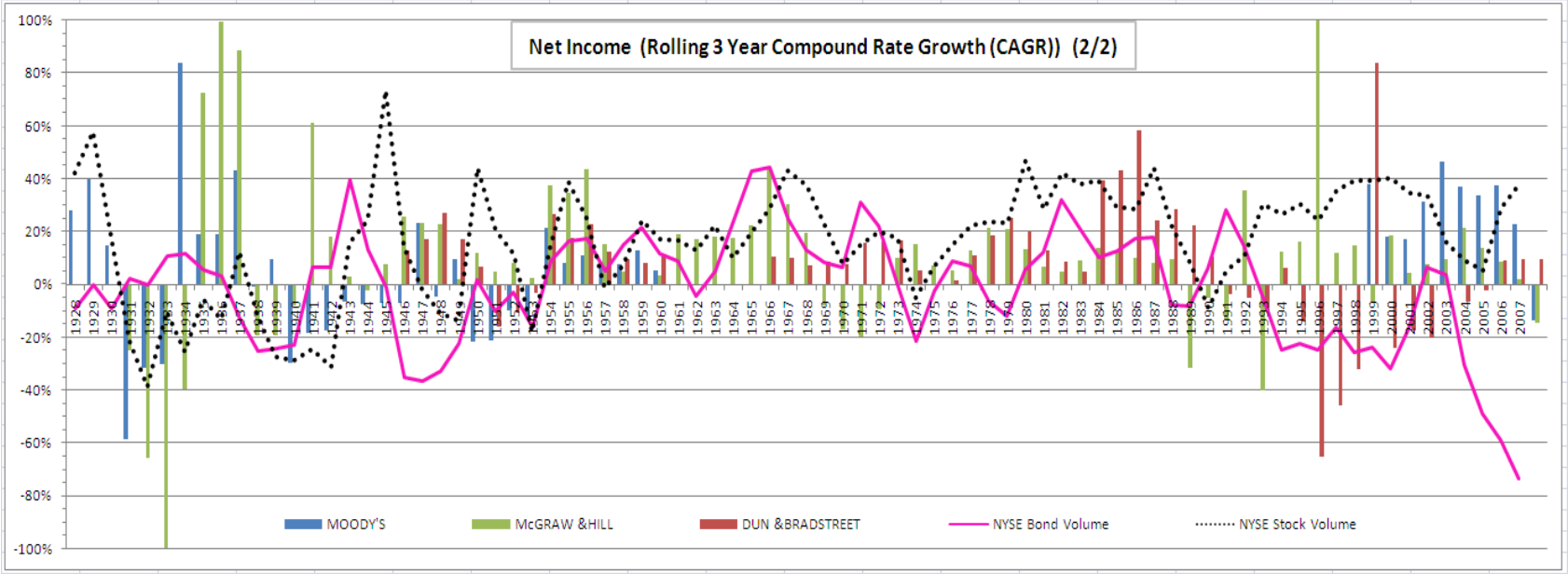
For any firm, looking at the net income brought the greatest historical range. To get a middle term view on the evolution of this net income, the graphs on the next page do not display natural amounts but rolling 3 year Compound Average Growth Rates (CAGR).

Looking at the graph on the top of the next page, these rates may be compared to the averages for all American firms and for all American Finance &Real Estate corporations. Graphically, bear in mind that any positive figure means a positive growth: whatever the volatility, a lasting stage of positive figures means good times.

From 1925 to 1930, the early *Moody's* corporation has an impressive pattern of earnings as compared to the average American firm and to a lesser extent to the average American financial firm. After suffering the blow of the Great recession, the investor paid rating firm recovers with the real economy and then earlier than the average financial company and than *MG&H*. This recovery does not last long and bad times starts at the end of the 1930's. As compared to *MG&H*, *Moody's* first resists better but then is unable to profit from growth in real activity. This holds for the early 1940's and to a lesser extent for the late 1940's. A more sustainable pattern of earnings has been managed over 1951- 1960. During this period, most of the time the early *Moody's* once again appears to do better than the average financial company; *MG&H* and *D&B* seem well more attractive over the early 1950's though.



Source: Moody's Industrial Manuals, Compustat, SEC 10-K filings, NBER Macro History datasets, BEA Survey of Current Business datasets
Underlying accounting data converted to real USD (CPI adjusted)



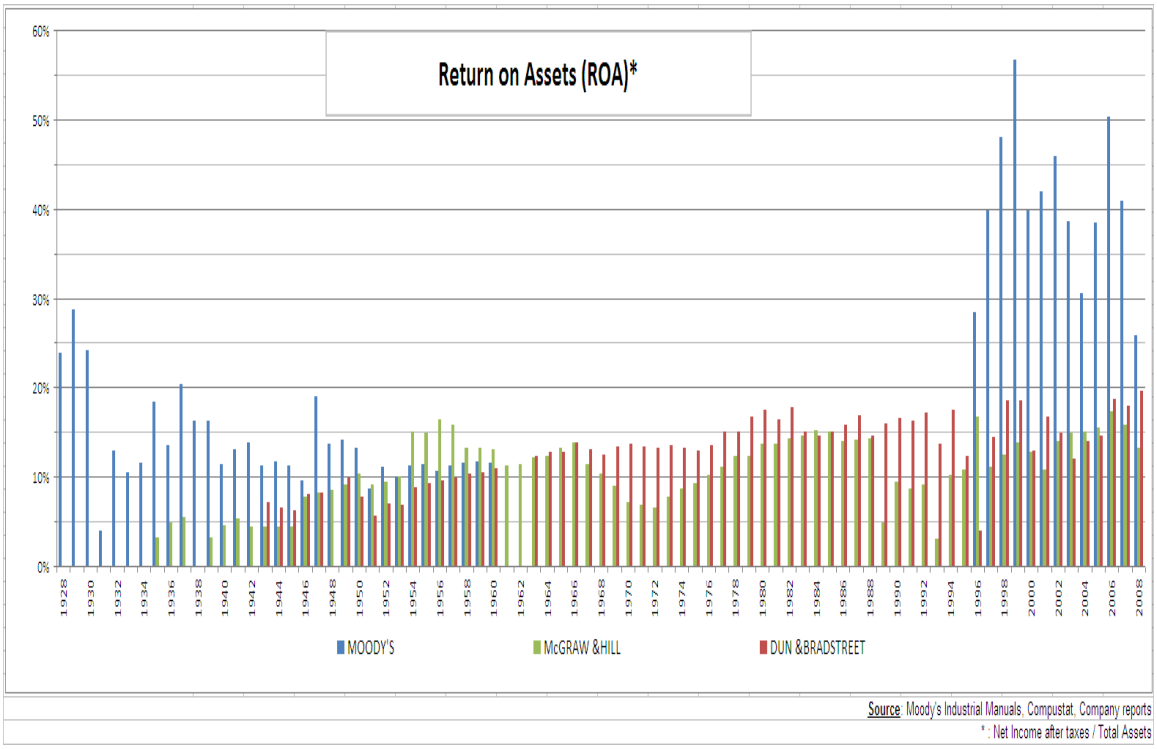
Source: Moody's Industrial Manuals, Compustat, SEC 10-K filings, NBER Macro History datasets, NYSE factbook

From 1961 to 1998, the first graph displays data only for the business peers. *MG&H* suffered at the turn of the 1970's and of the 1990's but each time quite quickly recovered. In contrast, D&B did not meet troubles before the early 1990's but then encountered more structural difficulties. From 1999, the modern *Moody's* power in earnings has proved impressive with most of the 3 year CAGR well above 20%. This is in sharp contrast with *D&B*'s experience, but *MG&H*'s earnings have also shown a nice pattern since the second half of the 1990's. To some extent, the expansion of the modern *Moody's* is coherent with the pattern of financial profits. The rating company has the up side though, especially in weathering out a downward trend starting in 2003. The last observation shows that *D&B* is the only one to escape the blow coming from the end of the structured finance episode.

On the previous page, the basic idea motivating the second graph is: the more the volume on the market, the more the need for information on a security issue. This is a matter for the specialized financial press and the investor paid early *Moody's* corporation. However, little comes out of plotting patterns of earnings against the evolution of the volumes on the New York Stock Exchange (NYSE) stock and bond markets. Interestingly, up to 1933, the fortune of the early *Moody's* appears more correlated to the one of the stock market than to the one of the bond market.

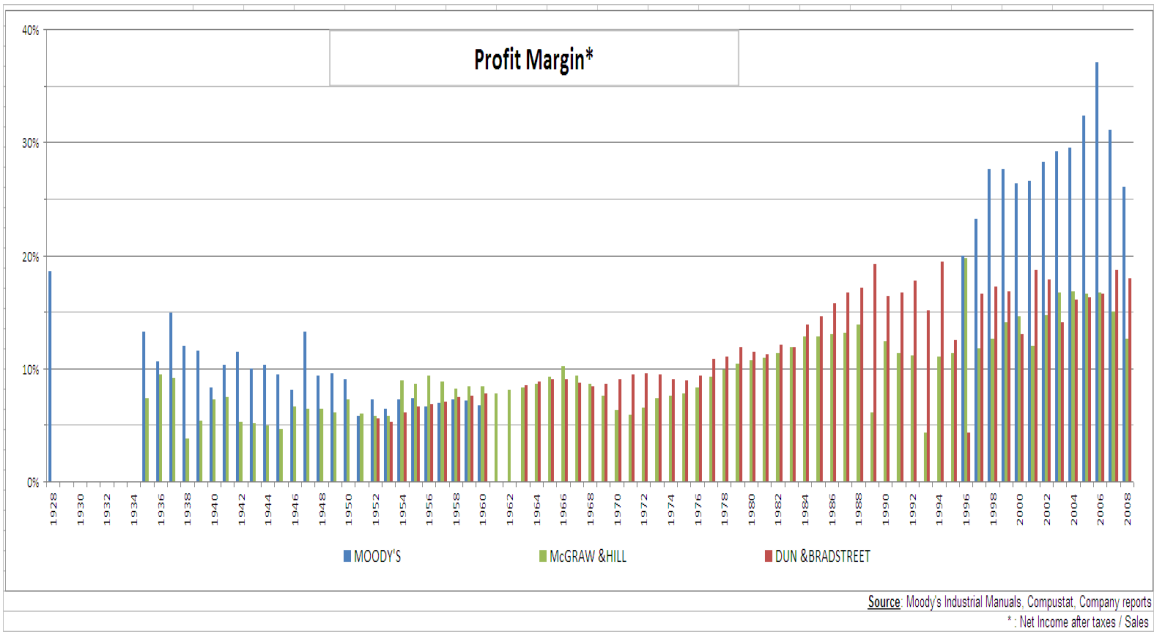
2.2 Financial Ratios

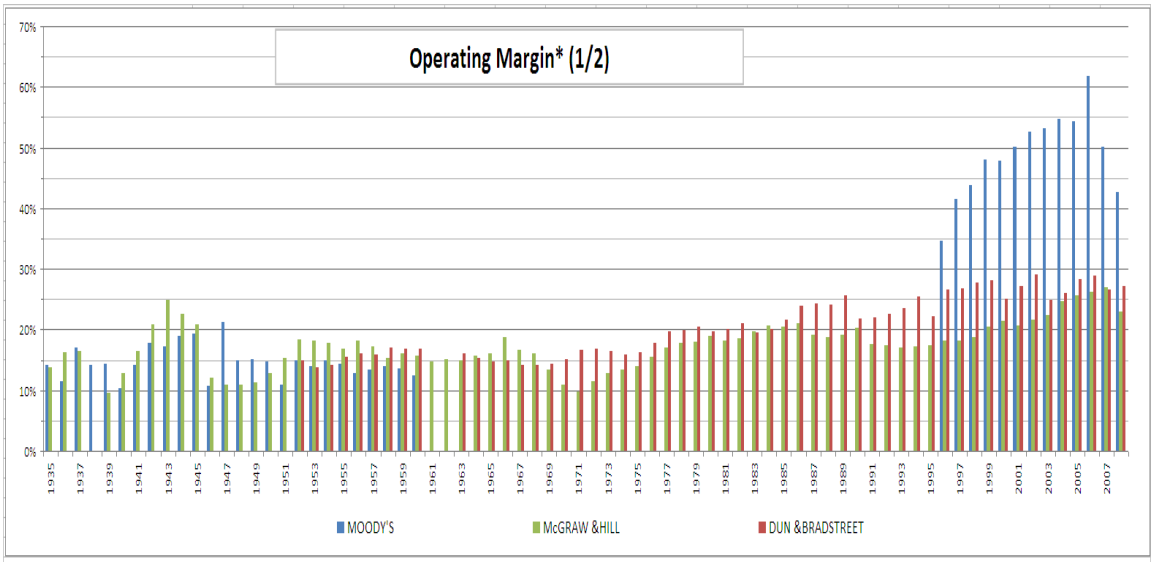
From the accounting data underlying the previous graphs, a number of financial ratios can be drawn over the past 80 years. A natural starting point is to look at basic profitability measures.

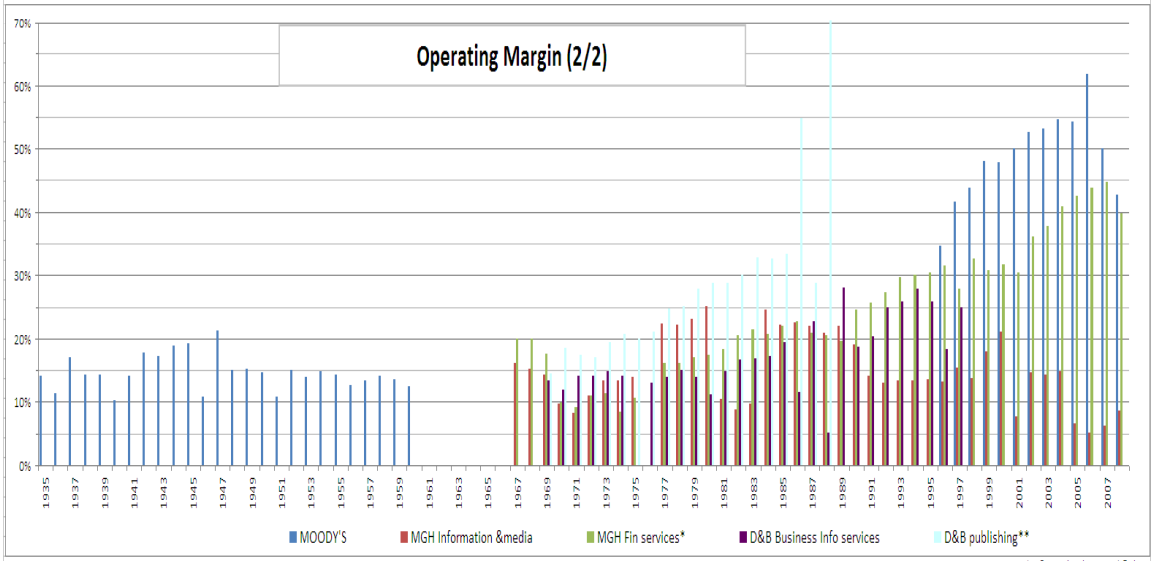


First, the preceding graph displays the Return on Asset (ROA). The early *Moody's* had a rate of return always above 20% before 1931. Up to 1950, this ratio still proved advantageous to the investor paid rating firm as compared to *MG&H* and *D&B*. The three businesses then settled for similar figures around 10-15%. Plotted against *MG&H*, *D&B* has the downside from the early 1940's to the early 1960's. The situation is then strikingly reversed and this occurred at the time when Moody's was incorporated as a business line... The modern issuer paid *Moody's* displays very high and volatile ROA. A sharp upward trend over 1996-1999 is brought to a halt in 2000. The recoveries are always ended further declines yet the ROA remains very impressive (>25%) and then this pattern may be more linked to asset management than to external shocks.

Secondly, to avoid the bias of asset management policies and the graphs below provide profit margins. The top one gives straight profit margins. In 1928, *Moody's* was able to extract 18, 56 cents of net profit out of every dollar of sales. Despite a downward trend, this investor paid corporation had a better profit margin than *MG&H* until 1950. In contrast, the modern *Moody's* corporation figures display an impressive upward trend until 2006. Although it is a close call in 2008, *Moody's* has always extracted more than quarter of net income out of every dollar of sales and managed this when *D&B*'s and *MG&H*'s have been gravitating around a 15% margin.







*: Operating Income / Sales

: business line including S&P corporation since 1967 *: separated business line including Moody's from 1969 to 1988, which is then mixed into the other traditional business line from 1989 to 1995

Source: Moody's Industrial Manuals, Compustat, Company reports, SEC 10-K filings.

The two graphs above differ from the previous one by looking at "raw" profits. Unfortunately, the data starts when good times are over for the old *Moody's* corporation. This said, looking at the operating margin brings a new light on the comparison between the investor paid firm and *MG&H*. Again, the modern *Moody's* corporation appears to be something else by extracting between 30 to 60 cents in operating income out of every dollar of sales. The modern *Moody's* started with an operating margin well above the ones *D&B*'s and *MG&H*'s and this margin grew at a fast pace when the two others stayed between 15% and 30%.

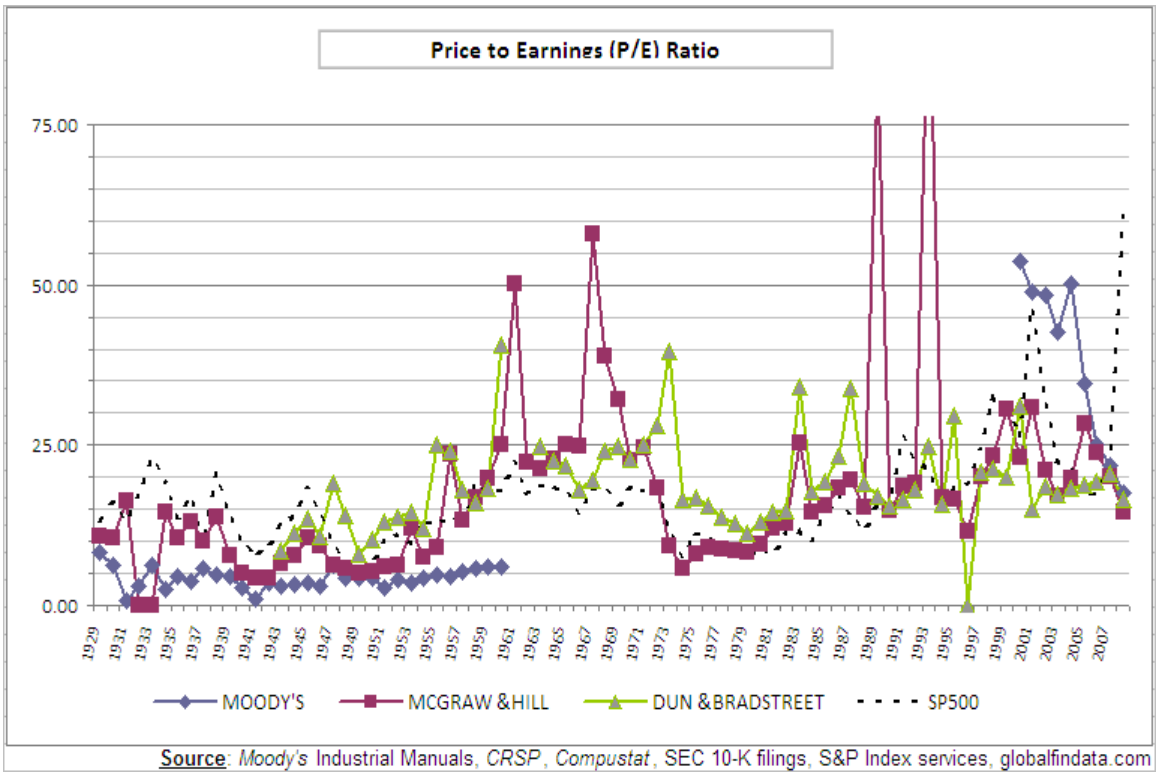
Looking at raw profits, segment reporting from *D&B* and *MG&H* can be used in an attempt to overcome accounting data limitations. The second graph of the next page then shows operating margins for the modern *Moody's* next to the business lines incorporating rating firms. By starting from the right, note how the profitability of the financial services division of *MG&H* shows an evolution keen to the one of the modern *Moody's*. This financial service division of *MG&H* displays an

impressive trend line from 1975 to 2007. Such a trend could hardly be achieved without a steady and long term profitability of the modern rating business. This interpretation is further confirmed by operating margins for a *D&B* business line incorporating *Moody's* from 1969 to 1988.

Such an interpretation also tends to downplay numerous statements made on the wake of the structured finance crisis. Most commentators had ended up associating the impressive profitability measures from rating firms to their involvement in structured finance securities issuance during the speculative episode of the early 2000's. Going into more details, the SEC showed that staffing among the three leaders of the rating business followed the rise in activity and in revenues in the RMBS field but not in the CDO field (see Appendix B). This certainly raises issues about business management. This said, overall, the recent profitability of the leaders of the rating industry remains in line with a trend that can be traced back to the mid 1970's. This trend occurred on the wake of the transition to the modern "issuer pay" business rating model in the early 1970's.

2.3 The opinion of the stock market

When each of the ratios used above has some advantages, it is generally held that stock markets generate better estimates than any model using financials as inputs. For this reason, the graph below provides historical Price to Earnings (P/E) ratios. This measure has some disadvantages since very low or negative earnings per share may bring hardly informative extreme values. Again, this is then more about looking at horizontal patterns.



The old *Moody's* corporation went public in October 1928. Over 1929, *Moody's* stock was on average bought at more than 8 times its earnings, as compared to more than 10 for *MG&H*'s stock and for the SP500 average. Over the following decade, equity investors' confidence in *Moody's* dropped down and the P/E moved around 5. Extreme values aside, the reference point for *MG&H* remained somewhere around 10 until the 1950's. A sharp upward trend started at this time and was then violently brought to a halt over the 1960's and the early 1970's. A couple of years aside, *MGH*'s P/E ratio remained aligned to the SP500 average over the last quarter of the century. Things seemed to have changed in 2003 but came back to normal in 2007. Considering the last decade, the reference point for this stock would be somewhere between 20 and 25. *D&B*'s P/E ratio started below the SP500 average but this situation changed over 1947. Taking the up side, *D&B*'s P/E follows an upward trend similar to the SP500 but with less volatility than *MG&H*. *D&B* then better managed the 1960's and 1970's slowdown than *MG&H*. These good times ended with the late 1980's, *D&B* de-correlated from the SP500 average and exhibited volatility. Over the last decade, a reference point for this stock would be around 20.

In September 2000, the modern *Moody's* corporation concluded its spin-off from *D&B*. Confidence in the future of this independent rating entity was high among investors: over 2000, they proved on average ready to pay more than 50 times *Moody's* earnings to become shareholders. The P/E ratio then evolved but the reference point for this company could still be thought around 50 until 2004. Confidence has then faded… *Moody's* line joined the one of *MG&H* in 2006 and the three lines became one over 2007-2008.

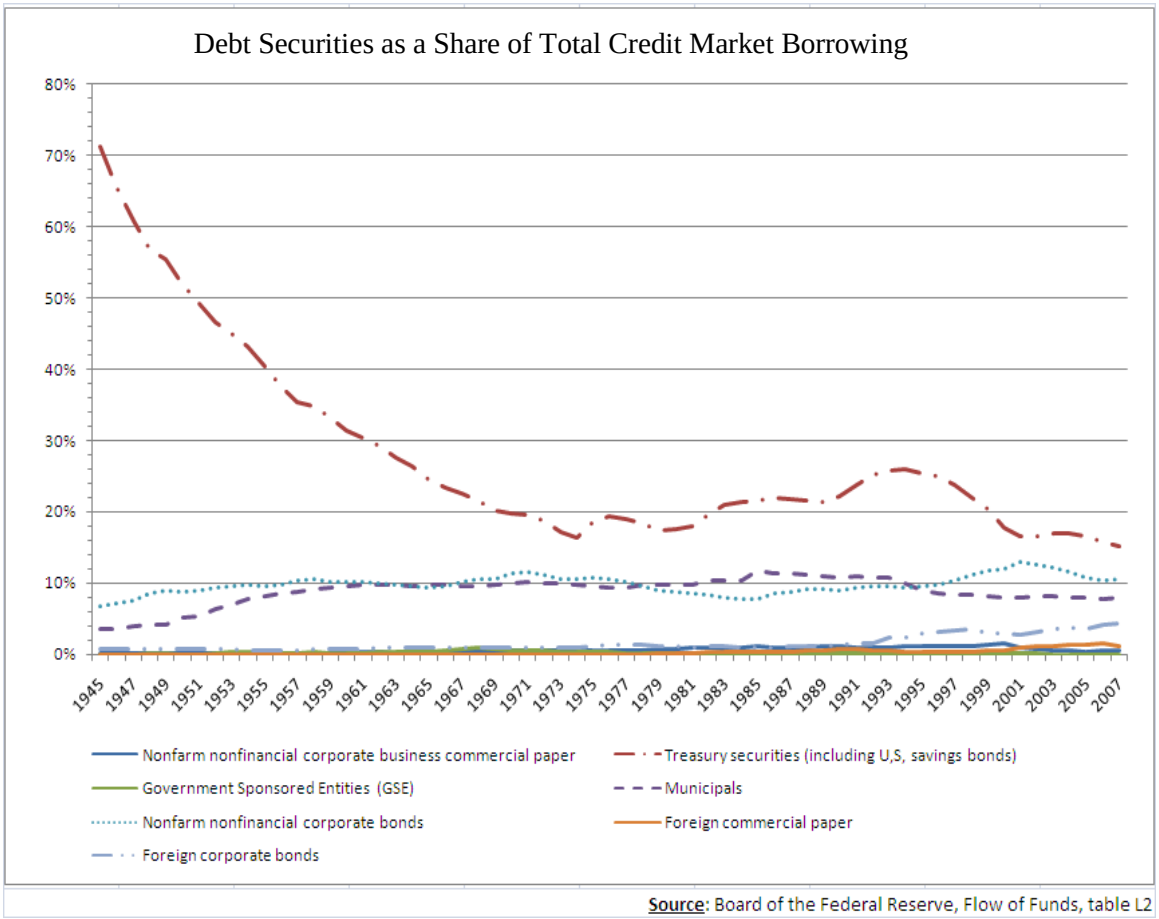
3 – Result discussion: the structure of American bond market since 1945

Is there something so special about the rating business that one needs to turn to exogenous factors? To deal with this question, a narrow business analysis is not enough. For example, musing on the historical development of rating firms Sylla (2002, 3 p. 33) pointed to macroeconomic factors and mentioned "historical rhymes" between the 1920's and the last quarter of the twentieth century.

In an attempt to further link the history of rating firms to the one of the American corporate bond market, this section provides descriptive statistics allowing a discussion of the microeconomic figures presented above. These statistics rely on a normalized body of datasets going to date (the Federal Reserve flow of funds). This is not the case for information on earlier periods. For the sake of comparison, some data from the most common sources on 1900-1945 are given in appendix C but the discussion here will focus on the post-World War II decades.

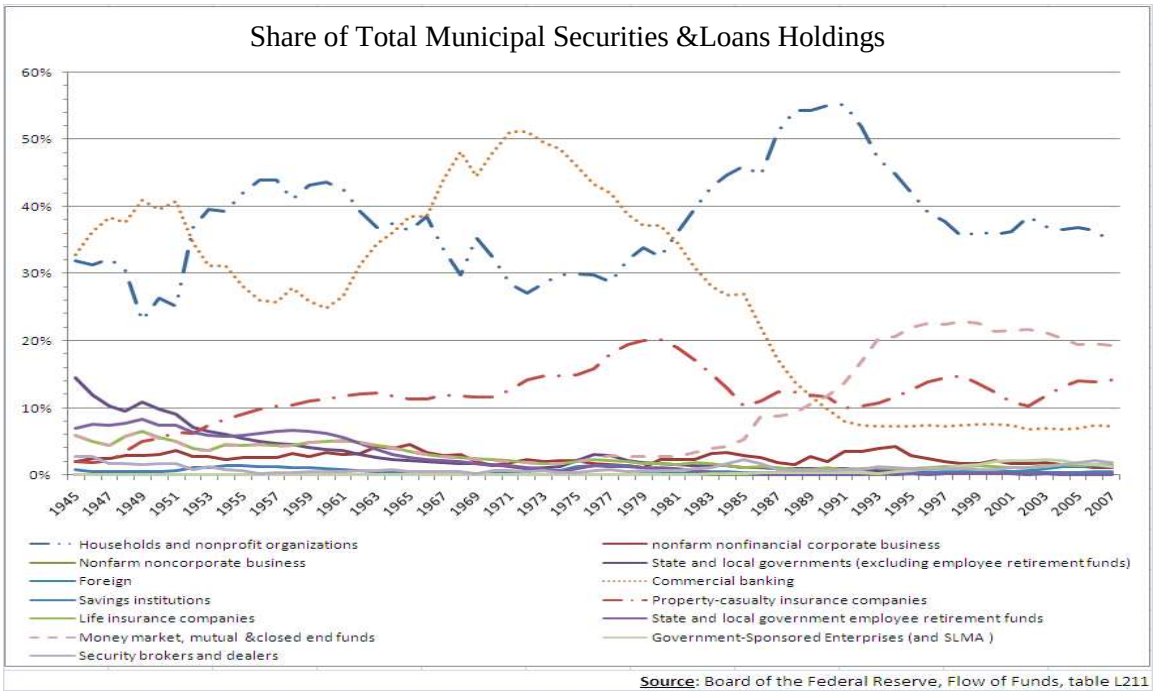
The first matter of interest is whether the coming of financial globalization and financial deregulation brought unprecedented levels of bonded debt after 1970. On the following graph, a striking feature is the decrease of Federal bonded debt which has steadily freed capital over the post

world-war II era. Another important point is that other areas of the American bond market have not that benefited of this structural change. American sub-sovereign government and corporate bond market issues have remained around a 10% level achieved by the late 1950's. Municipals then settled to a 8% level after 1995. The American corporate bond market share proves a little more volatile: there is a 12% peak over 1969-1971, a 8 % low over the mid-1980's and a more than12% peak over the early 2000's. The rise of American corporate bond levels over the second half of the 1990's seems to benefit from the decreasing share of Treasuries over 1995-2001. Overall, the main consistent long term trend is the rising market share of foreign corporation bonds since the 1990's: when this share had been below 2% since 1945, a steady growth brought it around 4% since 2003. This means good business for modern issuer paid rating firms: what better ways to manage a bond issue on the American field than buying the services of this intermediary?

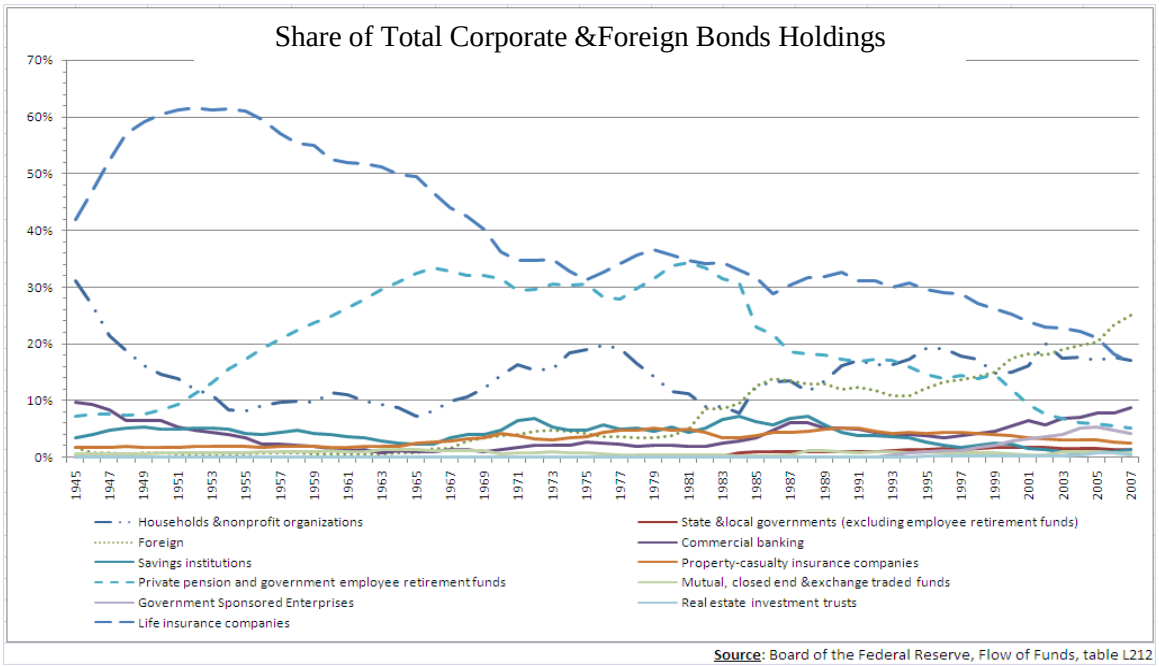


Source: Board of the Federal Reserve, Flow of Funds, table L2

The preceding graph provided a look on the relative importance in the supply of credit market debt of three fields at the core of rating activities. The following graphs turn to the demand side: who are the key holders of American &Foreign corporate bond issues and of American sub-sovereign issues? These are the ones truly benefiting of the existence of a pervading bond rating system.



Source: Board of the Federal Reserve, Flow of Funds, table L211



Source: Board of the Federal Reserve, Flow of Funds, table L212

As for the holdings of sub-sovereign American credit market debt, a structural change occurs around the end of the 1970's: at the beginning of the decade, a dramatic decrease of commercial bank holdings starts and it is then joined by a decrease in the share of insurance companies. This reaffirms households and non-profit organizations as the major holder of municipal debt. Meanwhile, the share mutual funds raises from negligible to more than 20% over the 1980's. Overall, this means a shift from traditional institutional investors to the investing public. While Municipal ratings may have some coordinating values for traditional institutional investors, households and individuals may be more eager to check on these ratings.

As for the holdings of corporate and foreign bonds, the major feature is the long term decrease in the share of life insurance companies. This decrease is first compensated by a rising share of pension and government retirement funds but this share starts a slow decrease in the mid-1960's (despite a slight recovery at the end of the 1970's). The structural decrease in life insurance holdings is then eventually compensated by: (a) a recovery in households holdings starting in the mid 1960's, brought to a halt in the late 1970's and coming back over the following decades as the share of pension and government retirement funds sharply drops and (b) an impressive growth in foreign holdings starting in the late 1960's, remaining under 8% up until 1981 and then increasing at a fast pace to dominate since 2006. Again, these remarks point to a shift from traditional institutional investors to holders that greatly benefit from publicly available third party rating on bond quality

Concluding Remarks: Two business in one...

Ratings were for long an American bond market feature and have recently become a global bond market feature thanks to the financial globalization since the 1970's. With the strong involvement of major rating firms in the structured finance episode, news editorials and politicians have discussed on this business over recent years. On the wake of heavy market disruptions, this heated debate reached an unprecedented scale when basic knowledge is still missing.

This is a matter of worry when regulators are bound to act against such a background. For example, to my knowledge, there was not a single public document providing a detailed discussion on competition in the rating business when the 2006 Credit Rating Agency Reform Act was passed as a "duopoly relief" regulation. Opening public registration to new entrants was certainly a good thing; yet it was bound to do little about market shares when the three market leaders enjoy strong reputational advantages (see Hill (2004, 4-6 p. 85)). The core of the policy move was then to bring major rating firms under the Securities and Exchange Commission (SEC) authority and to require a number of key disclosures (information on interest conflicts management, performance statistics, methodologies, ...). In December 2008, the agency adopted new rules of this kind as a policy response to the role of ratings in the structured finance episode. The agency first wanted to force full disclosure of rating histories to allow better assessments of rating performance. Such a proposal would have killed investor paid rating firms and the final rule settled for a limited and random disclosure (see SEC (2009) on rule 17g-2). As shown by this episode, the issue of managing competition can become quite challenging and still has to be tackled. For instance, Fons (2008, p. 7) clearly links troubles with structured finance issues to competitive pressures allowing arrangers to take advantage of "rating shopping". The "Cuomo agreement", which came after a year-long inquiry and campaign by the New York State Attorney, precisely targeted related bad practices (see Cuomo (2008)). Even Moody's (2009) publicly acknowledged that the credit rating industry needed third party help in order to

properly deal with competition and information disclosure. The SEC is now considering a more ambitious move, which has been set aside in December 2008 and re-proposed in February 2009. This proposal would force information sharing between an issuer paid rating firm and its NRSRO competitors (both issuer paid and investor paid, see SIFMA (2009) commenting rule 17g-5). This would certainly fundamentally change the shape of competition in the rating business.

Current regulatory discussions then end up facing the problem of competition within the rating business. An open question is whether competition policy should discriminate between the two existing rating business models. Drawing on *Moody's* history, this paper provided an unprecedented discussion on this issue. While this company has always been one of the few leaders of the rating industry, it was paid by investors until the early 1970's and has then been paid by issuers. Looking at a number of financial ratios, the modern issuer paid rating firm indeed appears to be something else. A number of arguments have been put forward to explain this profitability:

(i) the pervasive use of ratings in financial regulations,

(ii) the little success of legal cases brought against rating firms

(iii) the involvement in the structured finance issuance boom.

This paper also provided a new perspective on these arguments. First, the business record of the early Moody's corporation shows no particular windfall in the coming of the first American regulation using ratings as a straightforward input and that is a problem with (i). Note, by the way, that Moody's has for long publicly supported the withdrawal of ratings from financial regulations (see for example, MIS (1995)). Secondly, this paper suggests paying more attention to the coming of the modern business model than arguing on the structured finance episode (iii). Using financial information from business divisions incorporating *Moody's* and *S&P*, it has been shown that Moody's recent profitability is in line with profitability trends that started in the 1970's. Last but not least, reviewing the structure of the American credit market borrowing provides a better understanding on why "modern" ratings became to matter more over the last quarter of the twentieth century. American issuer paid ratings were particularly interesting for a rising star of credit market borrowing over this period: foreign corporate bond issuers. Furthermore, both the holdings of sub-sovereign government bonds and of American and foreign corporate bonds show a decrease in the share of major institutional investors compensated by an increase in the one of households and foreign holdings. These holders are great beneficiaries of the public good feature of issuer paid ratings (see Schwarcz (2002, 3 p.8)).

References

Atkinson, T. R., 1967, *Trends in Corporate Bond Quality*, Columbia University Press for the National Bureau of Economic Research

Bank for International Settlements (BIS), 2000, Credit Ratings and Complementary Sources of Credit Quality Information, Basel Committee on Banking Supervision, Working Paper No. 3, August

Becker, B. and T. Milbourn, 2008, Reputation and Competition: Evidence from the Credit Rating Industry, Harvard Business School Working Paper No. 09-051.

Cantor, R. & F. Packer, 1994, The Credit Rating Industry, *Federal Reserve Bank of New York Quarterly Review* (Summer/Fall)

Chandler, A. D., 1956, *Henry Varnum Poor, Business Editor, Analyst, and Reformer*, Cambridge, Harvard University Press,

Cuomo, A., 2008, Attorney General Cuomo Announces Landmark Reform Agreements with the Nation's Three Principal Credit Rating Agencies, press statement, Jun. 5th 2008.

Flandreau M. & J. H. Flores, 2007, Bonds and Brands: Intermediaries and Reputation in Sovereign Debt Markets 1820-1830," Universidad Carlos III Working Papers in Economic History No 07-12; *forthcoming in the Journal of Economic History* (*Fall*)

Flandreau M., N. Gaillard, and F. Packer, 2009, Ratings Performance, Regulation and the Great Depression: Lessons from Foreign Government Securities, CEPR Discussion Paper No. 7328 (June).

Fons, J. S., 2008, White Paper on Rating Competition and Structured Finance, January

Goldsmith, R.W., 1954, *The Share of Financial Intermediaries in National Wealth and National Assets, 1900-1949*, NBER

Guthmann, H. G., 1950, The Movement of Debt to Institutions and Its Implications for the Interest Rate, *The Journal of Finance*, Vol. 5, No. 1, pp. 70-87

Harold, G., 1938, *Bond Ratings as an Investment Guide: an Appraisal of their Effectiveness*, New York, Ronald Press Co

Hill, C., 2004, Regulating the Rating Agencies, *Washington University Law Quarterly*, Vol. 82, p. 43.

Kemmerer, D.L., 1952. American Financial Institutions: The Marketing of Securities, 1930-1952, *The Journal of Economic History*, Vo. 12, No. 4, pp. 454-468.

Morgan Stanley, 2007, Moody's Sub-prime Issues Manageable; Buying Opportunity, Investment Case, *Morgan Stanley Research North America*, June 28th 2007

Moody's Investor Service (MIS), 1995, "Ratings in Regulation: A Petition to the Gorillas", letter delivered to the SEC 5th Annual International Institute for Securities Market Development (04/28/1995, p.17) by T. J. McGuire (Vice President).

New York Times (NYT), 1972, U.S. Bond-Rating Rules Urged, March 28th, p. 59

Olegario, R, 2006, *A culture of credit: embedding trust and transparency in American business*, Harvard University Press, Cambridge, Massachusetts, and London, England

Partnoy, F., 1999, The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies, *Washington University Law Quarterly*, vol. 77, No. 3.

, 2006, « How and Why Credit Rating Agencies Are Not Like Other Gatekeepers », in ed. Y. Fuchita & R. E. Litan, *Financial Gatekeepers: Can They Protect Investors?*, Brookings Institution Press and the Nomura Institute of Capital Markets Research, 2006

Schwarcz, S.L., 2002, Private Ordering of Public Markets: The Rating Agency Paradox, AEI-Brookings Joint Center For Regulatory Studies Related Publication 02-9 (May).

Securities & Exchange Commission (SEC), 2008, Report on Nationally Recognized Statistical Rating Organizations, as required by section 6 of the Credit Rating Agency Reform Act of 2006, June

, 2009, Amendments to Rules for Nationally Recognized Statistical Rating Organizations, 17 CFR Parts 240 and 249b [Release No. 34-59342; File No. S7-13-08] RIN 3235-AK14

Securities Industry and Financial Market Association (SIFMA), 2009, Comment letter on Re-proposed Rules for Nationally Recognized Statistical Rating Organizations; Release No. 34-59343: File No. S7-04-09, Mar. 26th 2009

Sylla, R., 2002, « An Historical Primer on the Business of Credit Rating, » in *Ratings, Rating Agencies and the Global Financial System*, ed. by R. M. Levich, G. Majnoni, and C. Reinhart. Kluwer Academic Publishers.

Smith, R. C. and I. Walter, 2002, « Rating Agencies: Is There an Agency Issue? », in *Ratings, Rating Agencies and the Global Financial System*, ed. by R. M. Levich, G. Majnoni, and C. Reinhart. Kluwer Academic Publishers.

Twentieth Century Fund, 1974, *The Rating Game: Report of the Twentieth Century Fund Task Force on Municipal Bond Credit Rating*, Twentieth Century Fund, New York, NY.

White, L. J., 2002, « The Credit Rating Industry: An Industrial Organization Analysis », in *Ratings, Rating Agencies and the Global Financial System*, ed. Levich R. M., Majnoni G. & C. Reinhart. Boston, Mass.: Kluwer Academic Publishing

Appendix A – A view of Moody's Business Peers

Comparative Valuation – Publishing Companies

	Magazines	Publishers / Financial Info.					Directories/ Internet		
	Martha Stewart Living	FactSet	IHS Inc.	McGraw-Hill	Moody's	Thomson	R.H. Donnelley	Monster Worldwide	Average (excl. MSO)
Rating	Equal-weight	Equal-weight	Equal-weight	**Overweight**	**Overweight**	++	Equal-weight	**Overweight**	--
Recent Stock Price	**17.15**	**68.16**	**46.25**	**68.20**	**62.57**	**40.73**	**73.79**	**41.66**	--
52-week High	23.21	70.86	48.03	72.50	76.09	44.93	84.49	54.79	--
52-week Low	14.76	42.30	25.90	47.80	49.76	37.66	48.03	34.81	--
Year-to-Date Stock Price Return	**-21.7%**	**54.6%**	**24.8%**	**0.3%**	**-9.4%**	**-1.7%**	**17.6%**	**-10.7%**	**10.8%**
% Off 52-Week High	**-26.1%**	**-3.8%**	**-3.7%**	**-5.9%**	**-17.8%**	**-9.3%**	**-12.7%**	**-24.0%**	**-11.0%**
12-month Price Target	--	--	--	86.00	85.00	++	--	55.00	--
Upside to Target	--	--	--	26.1%	35.8%	--	--	32.0%	--
Dividend per Share	--	0.48	--	0.82	0.32	0.98	--	--	--
Yield (%)	--	0.7%	--	1.2%	0.5%	2.4%	--	--	1.2%
Earnings per Share									
2006(A)	-0.03	1.56	1.15	2.50	2.25	1.33	2.26	1.28	--
2007(E)	0.43	2.04	1.41	3.02	2.64	++	1.41	1.44	--
2008(E)	0.45	2.48	1.75	3.52	3.17	++	2.09	1.88	--
% Change 2007(E) vs. 2006(A)	--	30.7	22.2	20.8	17.0	--	-37.8	12.6	10.9
% Change 2008(E) vs. 2007(E)	4.4	21.5	24.4	16.5	20.4	--	48.2	30.6	26.9
Valuation Ratios									
P/E - 2006(A)	--	**28.3**	**32.2**	**27.2**	**30.7**	**31.1**	**27.7**	**36.6**	**30.5**
P/E - 2007(E)	**39.9**	**33.4**	**32.9**	**22.6**	**23.7**	--	**52.4**	**29.0**	**32.3**
P/E - 2008(E)	**38.2**	**27.5**	**26.4**	**19.4**	**19.7**	--	**35.3**	**22.2**	**25.1**
P/E Relative - 2006(A)	--	1.62	1.84	1.56	1.76	1.78	1.59	2.09	1.75
P/E Relative - 2007(E)	--	2.11	2.07	1.42	1.50	--	3.30	1.83	2.04
P/E Relative - 2008(E)	--	1.83	1.76	1.29	1.32	--	2.36	1.48	1.67
Enterprise Value/EBITDA									
2006(A)	--	**14.54**	--	**14.91**	**17.23**	**13.70**	**10.19**	**18.84**	**14.90**
2007(E)	**30.26**	**17.96**	**19.45**	**12.33**	**13.18**	--	**10.61**	**14.34**	**14.64**
2008(E)	**19.10**	**14.72**	**15.66**	**10.63**	**11.08**	--	**9.93**	**10.84**	**12.14**
Free Cash Flow per Share									
2006(A)	-0.54	1.72	1.67	2.67	2.85	1.88	7.74	1.11	--
2007(E)	0.38	1.99	1.95	2.33	2.69	++	7.83	1.86	--
2008(E)	0.27	2.26	2.15	3.56	3.19	++	8.66	2.13	--
Adjusted Price/Free Cash Flow									
2006(A)	--	**39.6**	**27.7**	**25.5**	**21.9**	**21.7**	**9.5**	**37.5**	**26.2**
2007(E)	**45.1**	**34.2**	**23.7**	**29.3**	**23.2**	--	**9.4**	**22.4**	**23.7**
2008(E)	**63.7**	**30.1**	**21.5**	**19.1**	**19.6**	--	**8.5**	**19.5**	**19.7**
Financial Data ($ mil)									
Revenue - 2007(E)	335	476	628	6,818	2,412	++	2,676	1,351	--
EBITDA - 2007(E)	**27**	**184**	**123**	**1,904**	**1,300**	++	**1,418**	**323**	--
EBITDA Margin (%)	8.1%	38.6%	19.6%	27.9%	53.9%	++	53.0%	23.9%	36.1%
Revenue - 2008(E)	372	567	684	7,336	2,779	++	2,711	1,569	--
EBITDA - 2008(E)	**41**	**219**	**146**	**2,109**	**1,498**	++	**1,448**	**406**	--
EBITDA Margin (%)	11.1%	38.6%	21.4%	28.7%	53.9%	++	53.4%	25.9%	37.0%
Shares Outstanding (2007E)	54	51	57	349	273	++	73	134	--
Equity Market Cap (2007E)	**928**	**3,491**	**2,646**	**23,815**	**17,056**	++	**5,375**	**5,583**	--
Total Debt (2007E)	NA	0	1	0	300	++	9,734	0	--
Preferred (2007E)	0	NA	NA	0	0	++	0	0	--
Cash and Equivalents (2007E)	103	193	217	247	221	++	66	875	--
Other (2007E)	0	0	-40	-99	0	++	0	0	--
Net Debt	**-103**	**-193**	**-256**	**-346**	**79**	++	**9,668**	**-875**	--
Unconsolidated Assets (2007E)	0	0	NA	0	0	++	NA	70	--
Minority Interests (2007E)	0	0	0	0	0	++	NA	0	--
2007E Enterprise Value	**824**	**3,298**	**2,391**	**23,470**	**17,135**	++	**15,043**	**4,638**	--
Debt-to-Capital (2007E)	NM	NM	NM	NM	NM	--	82.6%	NM	82.6%
Total Debt/EBITDA (2007E)	0.0	0.0	0.0	0.0	0.2	--	6.9	0.0	1.2
Net Debt/EBITDA (2007E)	-3.8	-1.1	-2.1	-0.2	0.1	--	6.8	-2.7	0.1
EPS CAGR (2006-08E)	--	26.0%	23.3%	18.6%	18.7%	--	-4.0%	21.3%	17.3%
EBITDA CAGR (2006-08E)	--	22.5%	21.2%	13.5%	14.8%	--	0.0%	18.8%	15.2%
PEG (2007E)	--	1.1	1.5	1.1	1.4	--	-1.4	2.3	1.0

Source: Morgan Stanley Research *E = Morgan Stanley Research Estimates* *A = Actual* *V = More Volatile* *P = Pro Forma*

Free cash flow = Free Cash Flow from Operations - Debt Service - Tax Adjustment for Cash Flow - Net Cash Used (From) One-time Items.

Adjusted Price / FCF = Price - Unconsolidated Assets per Share / FCF per share

Enterprise value = Adjusted Mkt. Cap. + Debt - Cash - Unconsolidated Assets + Minority Interest + Other Non-operating Assets or Liabilities.

Pro forma 2006 revenue, EBITDA, and free cash flow numbers are not available for those companies which have made acquisitions or divestitures during 2006 due to the constraints of ModelWare. Dashes are shown for these companies.

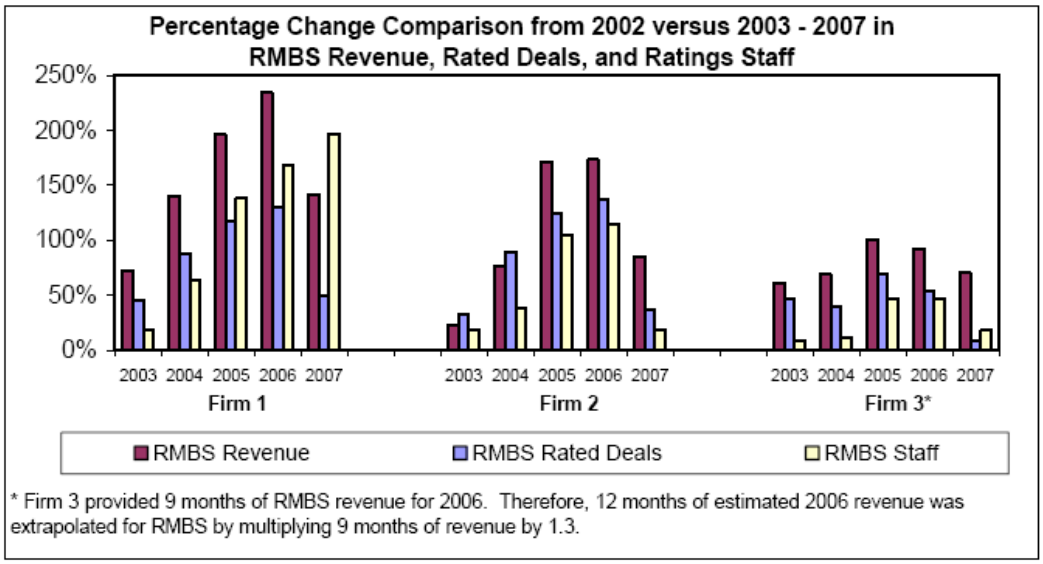
Publishing industry view - In-Line - In the absence of a meaningful pick-up in traditional media ad trends or additional restructurings, the Publishing group is likely to mark time with the S&P.

Source: Morgan Stanley (2007, exhibit 15 p. 11)

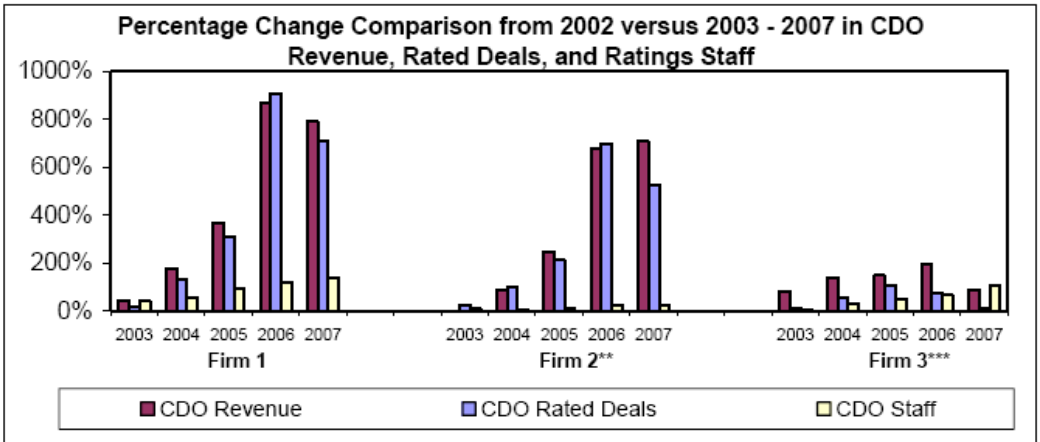
Appendix B – The SEC's View on Structured Finance Business Management

Source: SEC (2008c, p. 10-11)

(Note: refers to the leaders of the rating industry)



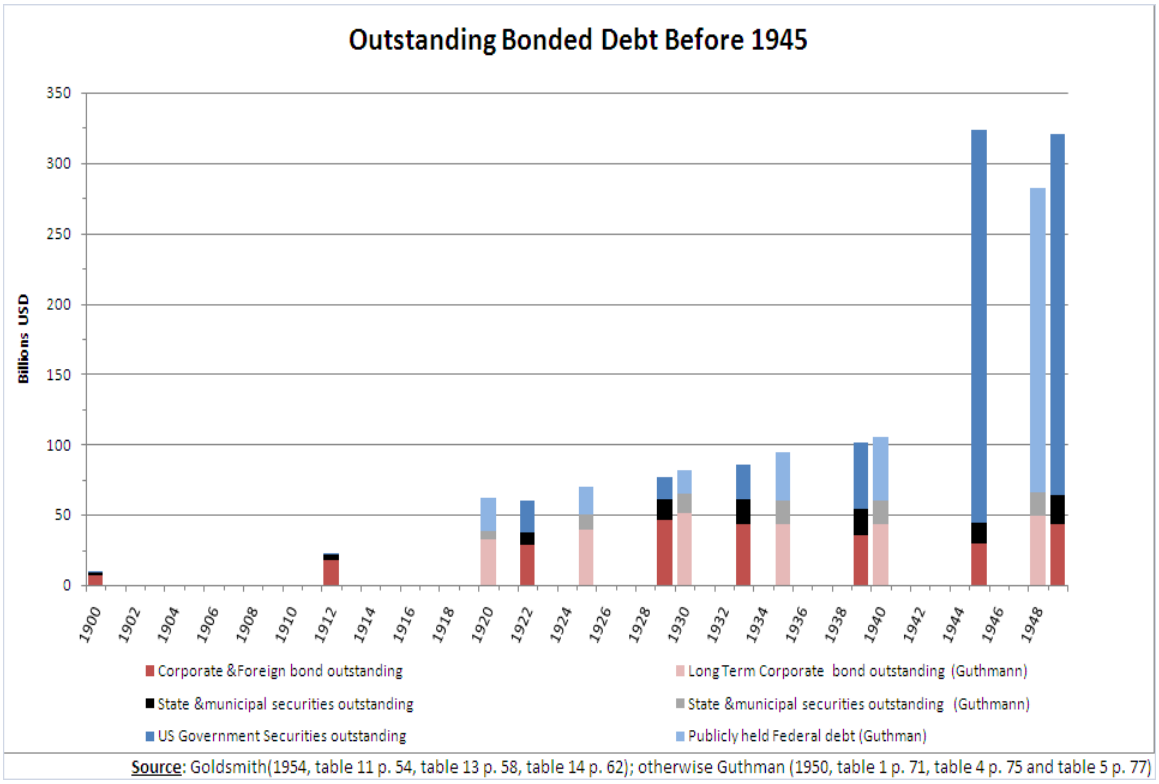
* Firm 3 provided 9 months of RMBS revenue for 2006. Therefore, 12 months of estimated 2006 revenue was extrapolated for RMBS by multiplying 9 months of revenue by 1.3.



** Firm 2 did not provide 2002 CDO revenue data. Therefore, the CDO revenue percentage change is based upon the 2003 balance as opposed to 2002.

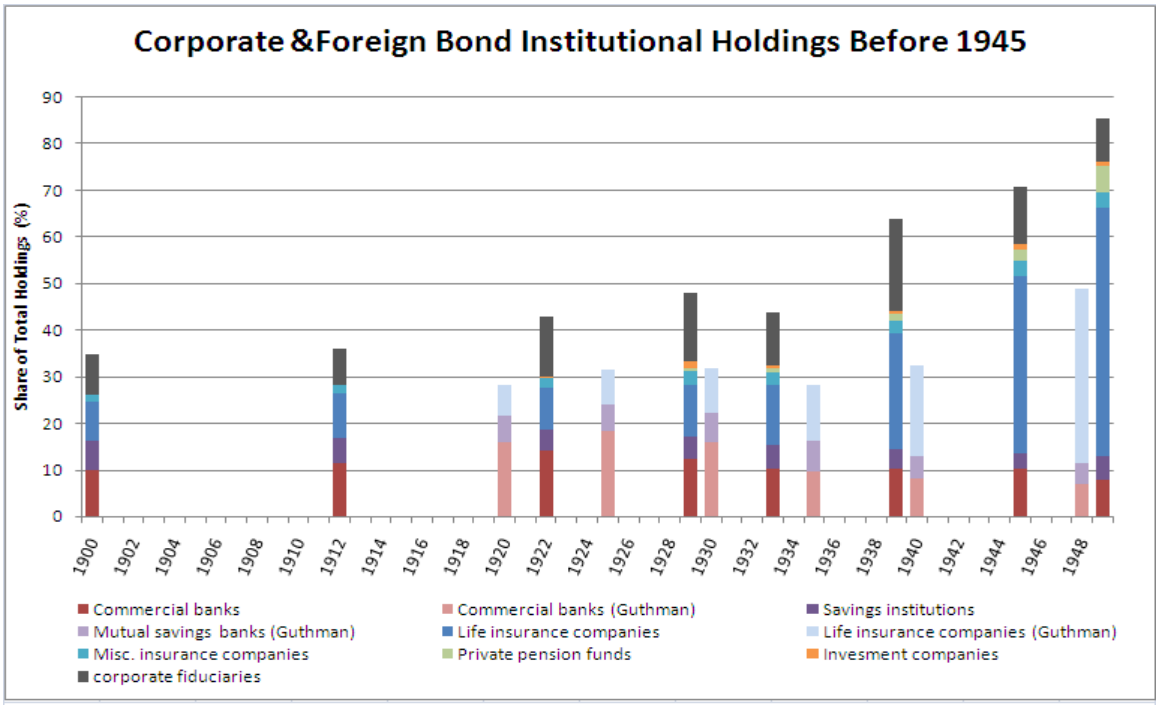
*** Firm 3 provided 9 months of CDO revenue for 2006. Therefore, 12 months of estimated 2006 revenue was extrapolated for CDO by multiplying 9 months of revenue by 1.3.

Appendix C - The American Bond Market before 1945



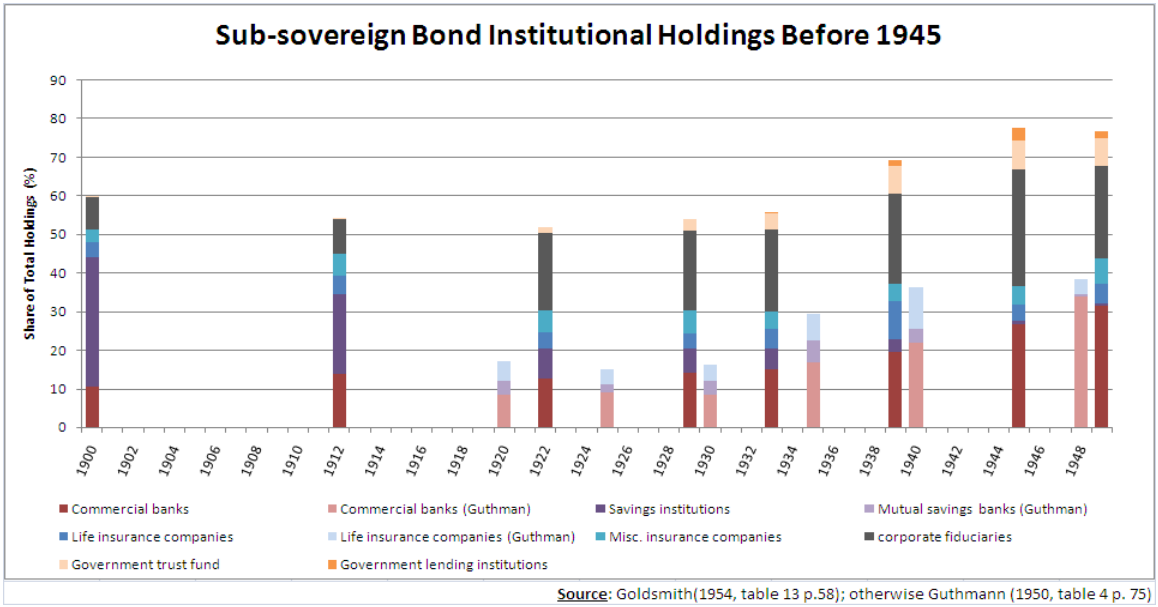
Source: Goldsmith(1954, table 11 p. 54, table 13 p. 58, table 14 p. 62); otherwise Guthman (1950, table 1 p. 71, table 4 p. 75 and table 5 p. 77)

The graph above gives a view of the supply side. Note that publicly held Federal debt comes on the wake of World War I and from then on it seems to negatively correlate with the amount of corporate bond outstanding. When the share of municipals remains quite stable, rise in the one of treasuries seems to answer decrease in the one of corporate (and inversely).



Source: Goldsmith(1954, table 14 p.62); otherwise Guthmann (1950, table 1 p. 71)

Turning to the demand side, the striking feature on the first graph above is the rising share of all financial intermediaries. As for the 1920's, the main channel is the traditional banking system something that can more easily seen in the figures reported by Guthmann (1950). On the wake of the 1929 market crash, the decrease in these holdings leaves the field open for a complete predominance of life insurers' holdings.



Source: Goldsmith(1954, table 13 p.58); otherwise Guthmann (1950, table 4 p. 75)

This second graph shows that savings institutions were the major intermediary of sub-sovereign holdings at the beginning of the century. Their share has then decreased dramatically. Note also the increasing share of commercial banks starting at the end of the 1920's, which correspond to the decrease in their corporate and foreign holdings documented above.