The Legitimacy of Credit Rating Agencies in the Bond Market

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Glossary

CalPERS The California Public Employees' Retirement System

CDO Collateralized Debt Obligation

CDS Credit Default Swap

CMBS Commercial Mortgage-Backed Securities

CRA Credit Rating Agency

DoJ The U.S. Department of Justice

Fitch Fitch Ratings Inc.

MBS Mortgage-Backed Securities

Moody's Moody's Investors Service Inc.

NACM National Association of Credit Men

NRSRO Nationally Recognized Statistical Rating Organizations

OCC Office of the Comptroller of the Currency

RMBS Residential Mortgage-Backed Securities

SEC The U.S. Securities and Exchange Commission

S&P Standard & Poor's Global Ratings

The Fed The U.S. Federal Reserve System

Abstract

The world has suffered from a recession since the 2008 financial crisis which made countless investors worldwide lose a huge amount of money. After this trauma, some legal settlements were made between governmental organizations and banks or credit rating agencies. Credit rating agencies remain influential and even grow more powerful although collapses or reshuffles happened to several gigantic investment banks. The puzzles of the dominance of credit rating agencies, particularly in the bond market, triggered this research.

While most researches focus on the impacts of credit rating agencies from a business or a marketing viewpoint, this thesis targets at the legitimacy of credit rating agencies from a historical and sociological perspective. Besides, while researchers who discussed the historical background of credit rating agencies tend to treat the establishment of The Mercantile Agency in 1841 as the inception, this thesis, by contrast, claimed that the origin of credit rating agencies needs to be traced back to a much earlier era—at least three centuries before that—since some banking families had started to deal with credit in essence.

The main research methods consist of case study, critical discourse analysis and interviews. In this thesis, four cases of banking families—the Medici, the Fugger, the Baring, and the Rothschild—were studied in terms of the way they handled credit and then were compared with what is carried out nowadays by credit rating agencies, mainly the Big Three—Standard & Poor's, Moody's and Fitch. Theoretically speaking, Max Weber's arguments about legitimation of domination—both traditional legitimation and legal/rational legitimation—were adopted to explore the legitimacy of credit rating agencies via critical discourse analyses. In addition, via interviews with bond traders,

the connection between academic discussions in this thesis and practical experiences in the trading context is thus enhanced.

This research found that, first, after the comprehensive review of the four banking families in terms of credit and information, what they conducted actually was similar to what credit rating agencies function in the modern era. Yet, no term such as credit rating was used back to several centuries ago, partially owing to the linguistic unavailability. Thus, the origin of credit rating agencies is argued in this thesis to be as early as the fifteen century instead of the nineteen century claimed by most researchers. Second, the creation of credit rating agencies should not be taken for granted; their long-term historical background and rational developments contribute to their legitimacy as well as dominance in the global financial market. Last but not least, the developmental process of credit and credit rating agencies unveils the changes in forms of the society, shifting from a traditional society into a modern society based on specialization and professionalism.

With this thesis, it is expected that readers can get access to credit rating agencies with historical understanding and rational judgment. Furthermore, the trust on credit rating agencies can truly be regained.

Key words: credit, rating, credit rating agency, legitimacy, dominance

Declaration

I herby declare that this doctoral thesis does not incorporate any material previously submitted for a degree of diploma in any university without acknowledgement. Also, to my knowledge, this thesis does not contain any materials previously published or written by another person except where due reference is made in the text.

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Chapter 1: Introduction

The world has been suffering from a recession since the overnight collapse of several gigantic investment banks in the 2008 financial crisis, which made a huge amount of loss worldwide. It was estimated that the global loss from the financial crisis might reach $15 trillion.[1]

Some people probably still hold a vivid memory of what had happened then while others focus on events and changes in the current financial market. After all, the market is where actors strive to make profits for the investors at this moment in time rather than being nostalgic for the past. However, the news about Deutsche Bank in September of 2016 must have switched, to some degree, the attention of the public back to the 2008 financial crisis.

1.1 Stories after 2008 Financial Crisis

In September of 2016, Deutsche Bank was asked by the U.S. Department of Justice (DoJ) to pay $14 billion[2] for miss-selling mortgage securities from 2005 to 2007, which partially led to the 2008 crisis. The news was shocking and the aftermath was dramatic. As the biggest bank as well as lender in Germany, the Bank's New York-listed shares fell 7.4 percent[3] hours after receiving an initial claim of $14 billion. Meanwhile, shares were also down, ranging from 2.5 to 4.5 percent[4] in some other large European banks which were waiting to agree a certain settlement with DoJ for the similar allegation and they included Barclays and Union Bank of Switzerland. Deutsche Bank at the first moment showed no intent to settle this claim with the amount requested.

Deutsche's Chief Executive said that he wanted to resolve the legal case as soon as possible but a lower amount, similar to that agreed by peer banks, was what he had expected; it definitely would not be anything like the figure of $14 billion.

Relevant analyses were offered after the Deutsche event. It was reported that people were actually still trying to understand how the financial crisis had happened. In addition, it was argued that the feedback over the Deutsche event proved that the wounds from the crisis are "still bleeding…arousing anger and confusion"[5] in the current market with negative interest rates and low bond yields.

It was even suggested, before the American presidential election on 8th of November 2016, that the next president of the U.S. re-launch the investigation into some senior bankers who actually avoided prosecution and that the Federal Bureau of Investigation (FBI) release the notes about investigations. Undeniably, the failure to punish any senior bankers from any investment banks over the scandal still outraged "the populist left and right, the world over."[6] Before the election, in the harsh debates between two candidates of the U.S. presidential campaign, one commitment both parties had rarely in common was to bring back Glass-Steagall Act,[7] passed in 1933, which separated commercial banking from investment banking and barred commercial banks from insurance businesses and the investment banking. Yet, before the legal case of Deutsche Bank, some settlements had been finalized while others remained unsolved.

1.1.1 Settlements of Banks

Before the claim from DoJ against Deutsche Bank was filed, some big American banks such as Goldman Sachs, JPMorgan, Morgan Stanley, Bank of America and Citigroup had already reached settlements with the U.S. authorities over the similar mis-selling mortgage-backed securities (MBS) after negotiating the numbers down. One

of the examples is the case of Bank of America Corporation with the highest amount of money in this kind of settlement. In August of 2014, DoJ announced the $16.65 billion settlement with Bank of America Corporation[8] to end the federal and state claims against this bank and its subsidiaries, which became the largest civil settlement with single entity in American history. $7 billion of the amount was shared by struggling homeowners, borrowers and communities affected by the bank's conduct. According to Attorney, this unprecedented resolution with such a largest settlement on record "is appropriate given the size and scope of the wrongdoing at issue."[9]

For other banks which ended the deals with DoJ already, J.P. Morgan Chase & Co. in November of 2013 agreed to pay $13 billion[10] settlement to resolve a number of legal claims, City Group in July of 2014 finally paid $7 billion,[11] Goldman Sachs ended up paying about $5 billion[12] in early 2016, and Morgan Stanley in February of 2016 agreed to pay $2.6 billion.[13] All the settlements were part of the efforts of President Obama's Financial Fraud Enforcement Task Force[14] and its Residential Mortgage-Backed Securities Working Group[15] under DoJ. Averagely speaking, regarding the settlements of mis-selling mortgage securities, the U.S. banks paid approximately 4.5 percent[16] of the amount of the securities they issued.

In Deutsche's case, as $71 billion of the controversial securities were issued, $3.2 billion of pay, about 4.5 percent of the securities once issued in similar cases, was expected accordingly. It was unveiled that Deutsche Bank by June of 2016 had actually built up €5.4 billion of reserves and also a further €1.7 billion of unreserved litigation liabilities for the coming legal case.[17] For the sake of the lower cost, negotiating the amount down was a must for the bank.

After some twists and turns as well as lots of talks with the U.S. authorities over three months, Deutsche Bank agreed to pay $7.2 billion, about half of the original

amount required, to resolve with the DoJ the case of the alleged mis-selling of mortgage securities. $3.1 billion of the amount was for the civil penalty and the rest $4.1billion would be spared to relieve consumers, with the latter, according to Deutsche, mainly "in the form of loan modifications and other assistance to homeowners and borrowers…and delivered over a period of at least five years."[18]

The Deutsche's case is significant for at least two reasons. For one thing, it was the first legal case, regarding investment banks' misbehavior prior to the 2008 financial crisis, from DoJ to settle with an investment bank headquartered out of the U.S. For the other, the whole procedure, from filing the lawsuit to reaching the settlement, took a comparatively shorter period of around 3 months while the similar procedure in the case of Goldman Sachs took around 11 months.

Following the agreement of Deutsche Bank, Credit Suisse, the second non-American bank in the similar cases, also agreed to pay $5.28 billion[19] to resolve the similar probe; DoJ had asked Credit Suisse to pay between $5 billion and $7 billion to settle the probe about toxic mortgage securities but was rejected in the very beginning. Moreover, the other case just started as DoJ had also sued Barclays as well as two executives, towards the end of the 2016, over allegedly fraudulent MBS during the peak of the housing bubble prior to the 2008 financial crisis. The prosecutors charging the bank claimed that the bank "securitized billions of dollars of loans it knew had material defects and financed lenders that it knew were issuing mortgages to customers who would be unable to repay them."[20] Barclay, failing to reach any deal with DoJ by the end of 2016, had started to pursue in the civil court. Details of banks' settlements are summarized as Table 1.

The cases of the three Europe's biggest lenders, Deutsche Bank, Credit Suisse, and Barclays, could be grouped together to illustrate the hope from DoJ to achieve maximum public impact as well as the financial solidarity of banks before the American presidential election[21] which took place on November 8th, 2016. Furthermore, after the settlements were finalized with U.S. banks such as Bank of America and JPMorgan and European banks such as Deutsche Bank and Credit Suisse, and after Royal Bank of Scotland (RBS) and Barclays were officially sued, the focus is expected to turn to other European banks, for example, Union Bank of Switzerland and HSBC. It is worth mentioning RBS was reported to have spared $3.8 billion for the expected penalty from DoJ over its mis-selling toxic mortgage securities "which helped to fuel the 2008 market meltdown."[22]

Table 1. Payments of Settlements between DoJ and Banks after 2008 Crisis

	Bank Name	Headquarter Location	Settlement Amount	Date of Settlement
1	J.P. Morgan	New York City, U.S.	Done ($13.00 billion)	Nov. 2013
2	Citigroup	City, New York, U.S.	Done ($7.00 billion)	July. 2014
3	Bank of America	New York City, U.S.	Done ($16.65 billion)	Aug. 2014
4	Goldman Sachs	New York, U.S.	Done ($5.00 billion)	Jan. 2016
5	Morgan Stanley	New York City, U.S.	Done ($2.60 billion)	Feb. 2016
6	Deutsche Bank	Frankfurt, Germany	Done ($7.20 billion)	Dec. 2016
7	Credit Suisse	Zurich, Switzerland	Done ($5.28 billion)	Dec. 2016
8	RBS	Edinburgh, UK	Sued, Nov. 2015	N/A
9	Barclays Capital	London, UK	Sued, Dec. 2016	N/A

Source of Data: DoJ[23]

As what DoJ originally started to pursue was the domestic investment bank, the fact that Europe's banks were probed and some agreements having been made absolutely relieved the banks' shareholders. The settlements between DoJ and Deutsche and Credit Suisse, with the amount of $12.48 billion in total imply "a line under what has become an increasingly worrisome topic for shareholders."[24] Yet, it also shows that the story of 2008 financial crisis has actually not yet ended and what remains confusing and unsettled also includes the credit rating agencies (CRA). CRAs are also one of the targets of some legal organizations for investigation and several settlements were finalized as well.

1.1.2 Aftermaths of Credit Rating Agencies

In April of 2010, it was reported that the behavior of two CRAs "in the run-up to the financial crisis"[25] had been criticized by U.S. senators and the investigation followed accordingly. In this report, Standard & Poor's Global Ratings (S&P) and Moody's Investors Service Inc. (Moody's), the biggest two CRAs in the world, were claimed by the U.S. Senate committee to instill unwarranted high confidence in some risky financial products. A testimony from officials of Moody's and S&P was held later. It was about two years after the financial crisis but the story of this type seemed just getting started. In February of 2013, a lawsuit was filed and S&P was facing the lawsuit from DoJ over its inaccurate rating of investments which partly led to the financial crisis. The following statement may show how the public felt about the rating agencies: three big CRAs were still trying to "restore reputations damaged by the high ratings"[26] they had given actually risky securities before the financial meltdown. The three big rating agencies are S&P, Moody's and Fitch Ratings Inc. (Fitch). The similar message

was revealed from the public media: "Standard & Poor's expects lawsuit over subprime ratings—S&P says it is to be sued …over the assessment of mortgage bonds before the financial crisis."[27]

At least three things can be summarized from the above reports. First, the information about rating agencies could be learned by the individual investors from the public media. Second, the political party members and the governmental institution from the U.S.—Senators and DoJ—had started examining the rating agencies via the legal system. Finally, the reputation of CRAs had been destroyed one way or another among the public and needed to be rebuilt from the investors, especially those who were involved in the subprime mortgages. Therefore, before the settlements were closed, it is supposed to be difficult for these CRAs to be trusted by investors anymore after the crisis. Yet, it might be just one side of the story.

Nowadays, very few people, especially those who get involved in any security exchange, would be unfamiliar with the scene—multiple monitors, four or six or even more, that brokers or analysts watch carefully—which can be seen often in movies or other mass media; that is the Bloomberg System. Brokers or analysts stare at the monitors of the Bloomberg terminals all the time, watching carefully the numbers that change almost every second. Besides, they also check all the information offered by various institutions in order to make the best choice for the investors that they take care. With countless investment choices in the market, the results from different CRAs play a critical role. These results are presented in a very systematic and analytical manner and spread around all over the world. Investors and people who work in the relevant financial fields cannot work without the information from CRAs.

In addition to the public investors, some countries concern about the results from CRAs as well. That is to say, when the result toward a country is positive, it will be

treated as a type of good performance and more funds are expected to join the market that country is associated with. On the contrary, when the result toward a country is negative, the anxiety follows and some actions may be taken to clarify or even try to change the result.

In 2010, it was reported that A European Commissioner had warned it might be "necessary to further regulate the role of CRAs."[28] This response was driven by the rapid deterioration of credit rating from rating agencies for Greece, one of the most economically stricken counties in the 2008 financial crisis; S&P downgraded Greek debt to 'junk' status, making it almost cut off from the global financial market. After that, it was even suggested to establish a new agency in the EU rather than S&P, Moody's nor Fitch to rate governments' credit.

When Portugal was downgraded by Moody's to 'junk' status in July of 2011, the spokesman of the European Commission severely criticized CRAs and doubted if their behavior was appropriate. He thought it was strange that not a single rating agency was established in Europe and considered creating a new rating agency to rate the credit of governments. His comments corresponded to the comment from Greek Foreign Minister who claimed the agencies' actions in the debt crisis to be mad; both Greece and Portugal were downgraded by CRAs several times after the 2008 financial crisis. In addition, German Finance Minister stated that he wanted to limit the influence of the rating agencies and "break the oligopoly"[29] of them. Moreover, a European Commissioner for Internal Market and Services said to the European Parliament that it was necessary to go further to look into the impact of the credit ratings "on the financial system or economic system as a whole."[30] He fully realized the power of these agencies, not only for companies but also for states, so powerful that none of any central bank can break the monopoly, but wondered the reason why. This is what happened in

Europe. On the other side of the Atlantic Ocean, the similar scenario could be seen as well.

In August of 2011, it was reported that that S&P decided to downgrade America's rating, from its AAA status to AA+ one.[31] It was the first time that S&P downgraded the AAA rating for the U.S. Right after this announcement, a Treasury Department spokesman claimed that S&P's analysis was flawed. Later on, just a couple of days after this news, the U.K. Prime Minister David Cameron,[32] in a phone conversation with French President Nicolas Sarkozy, discussed not only the eurozone finances but also the U.S. credit rating being downgraded. At that moment, it might be beyond anyone's expectation that downgrading would also happen to the U.K.

One and half years later, in February of 2012, Moody's announced that it had downgraded its rating for the U.K. economy, from AAA to Aa1, the first time that the U.K. lost its AAA rating since 1978. Soon after the announcement, Chancellor responded that it was a reality check for the political system that Britain "…can't waver in the path of dealing with our debts."[33] It was a coincidence that, around two months later in 2013, the Fitch also downgraded the U.K. to AA+ based on a weakened economic outlook.[34] This time, Chancellor explained and defended the government's austerity plan. In addition, the Prime Minister David Cameron also concerned about this issue. In fact, the downgrade by Moody's was also treated as a political embarrassment for the government of David Cameron as he had promised to protect the U.K.'s triple-A credit rating; when being elected in 2010, he vowed to safeguard the U.K.'s credit rating with a "credible plan to eliminate the bulk of the structural deficit"[35] in the coming five years.

At least four characteristics about CRAs can be elicited from the above events. First, CRAs, in spite of being private enterprises, can rate countries, as security issuers,

under which sovereign they were established. The United States of America as a country is also one of the targets for the CRAs and would be rated although the three biggest rating agencies were founded under the American sovereignty. Second, the results announced by the CRAs are influential. Whenever the negative rating result is reported, somebody as top executives would come out, explaining or clarifying the situation. Thirdly, the credit rating result affects, one way or another, both the country being rated and other countries which are closely related to that country. In this case mentioned above, the downgrading of the U.S. also became the concern for the U.K. and France. Last but not least, even big economies like the U.S., the U.K, and France would respond quickly to the results from these rating agencies. Also, all the U.S. and the U.K., European Commission would address comments on CRAs, the biggest three ones. Owing to the negative rating they received, their comments were filled with confusion or even fury.

If we bother to check further the websites of the three big CRAs, we may not be able to find anything special from the information given. Seemingly, they are just like other American private companies. However, they are so powerful as to not only guide the investors in the global markets but also irritate countries for the negative rating results, as discussed above. Furthermore, little seems to be able to change the power of CRAs despite of the related regulations or lawsuits whether finalized or not.

1.1.3 Settlements of Credit Rating Agencies

After the financial crisis, reforms on CRA were required from some legal or financial organizations. One of the examples is a public statement from U.S. Securities and Exchange Commission (SEC) in 2014[36] targeting at the role of CRAs during the

2008 financial crisis and the rules and amendments for them in the future. SEC emphasized the importance of reforms on CRAs and supported the rules and amendments finalized.

The statements from SEC consisted of three parts. In the first part of the statement, CRAs were rigorously blamed for the crisis as they were open to legitimize the explosive influx of mortgaged-backed securities and collateralized debt obligation into the market with housing bubbles. It was claimed that "rating agencies were not just facilitators of the crisis—they were its linchpin."[37] That is, without the assurance from CRAs, it would be almost impossible for investors to accept such highly complex structured financial products. Moreover, when the housing bubbles began to collapse, CRAs failed to correct the misleading ratings which had been issued previously and such delay indeed intensified the crisis. The second part elaborated the flawed rating process as the CRAs presumably yielded to profits. Driven by the concern to maximize the revenues and market shares, CRAs tended to please some clients by lowering their rating criteria. In order to reach that target, certain internal control programs were even forced to be changed. Consequently, the rating results on structured products turned to be less defensible and CRAs would rather prey on investors than sacrifice the profits gained from customers who needed better rating results. It can be argued accordingly that the rating procedures were filled with "loosened internal control, inadequacy and non-transparency."[38] The last part shifted the attention to future rules and amendments which not only recognized the necessity to shield rating agencies from further negative influences but also made the procedures more transparent to investors.

There are three rules and amendments.[39] First, SEC prescribed some factors that CRAs must consider for better internal control structures while giving the agencies the

flexibility to revise their rating procedures. Second, regarding conflicts of interest, SEC absolutely prohibited rating agencies from considering marketing shares in the rating, by which the participation of sales and marketing personnel was not allowed in the proceedings of credit rating. Third, any conflict of interest concerning the former employees must be reexamined. To be more specific, SEC required that the agency must determine immediately if the rating needs to be revised when rating agency's review showed the influence of any former employee's interest. With the rules and amendments, it was expected that investors keep relying on credit ratings which, under more safeguards from SEC, offer as accurate and reliable credit ratings as possible. Meanwhile, several legal cases were cleared from American organizations.

One of the cleared cases happened on January 21th of 2015 as it was announced by SEC that charges against S&P had been issued for its fraudulent misconduct in ratings some commercial mortgage-backed securities (CMBS), which violated the law of federal securities. S&P ended up with paying about $58 million to settle the SEC's charges, initiated in April of 2012, as well as an additional $19 million, $77 million in total, to settle parallel cases announced on the same day by the New York Attorney General's office ($12 million) and the Massachusetts Attorney General's office ($7 million). Investors depend on CRAs like S&P to "play it straight when rating complex securities like CMBS," said Director of the SEC Enforcement Division, "But S&P elevated its own financial interests above investors"[40] by loosening the rating criteria for more businesses and obscuring the changes. He added that the enforcement actions were to reflect the aggressive commitment of SEC to the integrity and transparency of the credit ratings process. According to SEC, in the first-ever charge against a major

CRA, the main purpose was to reflect its commitment to policing the integrity and transparency of the ratings process in an aggressive manner.

SEC also issued three orders and all were agreed by S&P though its denial of any wrongdoing. The first order is that S&P take a one-year timeout from rating CMBS based on its admissions that a certain rating methodology different from that in 2011 was indeed used to rate more than six CMBS transactions prior to the 2008 financial crisis. The second order is that S&P retract the false and misleading Great Depression-related data and correct the inaccurate descriptions in its publications since S&P research about the losses of the Great Depression was based on flawed or inappropriate assumptions and data. The final order is that S&P enhance and improve its internal controls environment based on S&P's failures in internal controls to examine the rating of MBS, making the rating less conservative and inconsistent with the specific assumptions and criteria published by the agency itself. According to SEC, these CMBS-related enforcement actions against S&P illustrated that "race to the bottom behavior by ratings firms"[41] would be tolerated by neither the SEC nor other regulators. It was highlighted that different stories could always be told when CRAs were obliged to compromise in pursuit of market share. One good thing in the whole procedure is that S&P cooperated with the investigation and self-reported misconducts to SEC, which contributed to not only the quicker and more efficient results but also a reduced penalty for the agency.

In addition, the lawsuit from the California Public Employees' Retirement System (CalPERS), the nation's largest pension fund, also came to an end. The case involving inflated grades of residential-mortgage deals that later faltered was cleared with the result that S&P, in July of 2009 being sued for the ratings of the structured investment

vehicles, agreed to pay $125 million.[42] The suit against S&P stemmed from the losses of CalPERS; the formerly triple-A-rated RMBS that the pension fund had bought defaulted after the housing market collapsed in 2008. In fact, regarding the settlement of $1.375 billion between S&P and DoJ, California State received more payout, "around $200 million, than other states"[43] owing to the larger investment losses incurred by its public pension funds. The settlement between CalPERS and S&P brought to the latter a total payout of more than $1.5 billion to resolve crisis-era lawsuits in the U.S. In addition to the claim against S&P from CalPERS, Fitch and Moody's were also named in the same lawsuit and both cases were cleared in 2011 and 2016 respectively.

In the settlement between Moody's and CalPERS, finalized in March of 2016, Moody's agreed to pay $130 million for its misconduct prior to the 2008 financial crisis. In July of 2009, CalPERS alleged in a lawsuit that Moody's and two other ratings firms made careless misrepresentations when they awarded "rosy grades to residential mortgage bonds that later soured."[44] The pension fund had been relying on credit ratings from these CRAs to purchase bonds. Moody's, failing to admit doing anything wrong, said they had set up certain compliance and risk departments to prevent business interests yielding to bond grades and believed that the resolution was the best result for the company and its shareholders. It is worth noting that Moody's in the very beginning claimed the lawsuit to be without merit and was confident in the claims against it being dismissed. By contrast, in the settlement between Fitch and CalPERS, finalized in August of 2011, Fitch, denying any wrongdoing as well, would make no payment to CalPERS.[45] As the smallest of the major rating agencies, Fitch stated that it was not aware of any government investigations involving the firm itself. After all these settlements, further investigations were assumed to shift to other smaller CRAs.[46]

Around one month later, there came another announcement, in early February of 2015, and this time it was from DoJ. The lawsuit that claimed S&P's inflated ratings on mortgage derivations to win businesses was terminated by DoJ. This time, what S&P was expected to pay to settle the claim was about $1.4 billion, amounted to about six months of revenue for S&P. It was reported by DoJ that "it and 19 states as well as the District of Columbia had entered into a $1.375 billion settlement agreement"[47] with S&P and its parent corporation McGraw Hill Financial Inc. for their engagement in a scheme to defraud investors in structured financial products including residential mortgage-backed securities (RMBS) and collateralized debt obligations (CDOs) from 2004 to 2007. The 19 states consisted of the States of Arizona, Arkansas, California, Connecticut, Colorado, Delaware, Idaho, Illinois, Indiana, Iowa, Maine, Mississippi, Missouri, New Jersey, North Carolina, Pennsylvania, South Carolina, Tennessee, and Washington. It was put in the agreement that the S&P's conducts which were surveyed covered (1) all activities connecting with the issuance and confirmation on the credit rating of structured financial instruments as well as modifications and adjustments of the procedures and methodologies used to rate those instruments; and (2) all statements connecting the integrity, objectivity, business ethics, independence and lack of market concerns of S&P's issuance and confirmation on the credit rating of structured financial instruments. S&P, though failing to admit the violation of any law, claimed that it did introduce new research and procedures to make sure the correct ratings and agreed to settle it this way for the best interests of the company and shareholders. The $1.375 billion was divided into $687.5 million for DoJ and another $687.5 million for 19 state attorney-general offices as well as the District of Columbia, both of which sued S&P between March of 2010 and October of 2013.

According to the settlement agreement, the allocation of the payment varied in different states. However, besides the lawful usages including attorneys' fees and other costs of further investigation or litigation, the allocation of the payment could be divided into three types. The first type aimed to compensate the states for the harms to their operating revenues after the financial crisis. The second type was concerned with the public protection and education purposes, for example, enhancing public education relating to consumer fraud or financial literacy and student loan issues. The third type was related to efforts to prevent any financial fraud or unfair practices. As the first case among CRAs being sued and fined by DoJ, the event reached the climax of the government's investigation into whether fraudulent behavior of the CRAs contributed to the financial crisis. The case came to an end in early February of 2015 after the negotiation about the settlement amount had been done between DoJ and S&P, being sued in 2013 for lying about "its objectivity and independence and issuing inflated ratings for certain structured debt securities."[48]

Table 2. Payments of Settlements of CRAs after 2008 Crisis

	SEC	CalPERS	DoJ	Total
S&P	$77 million (2012.4~2015.1)	$125 million (2009.9~2015.2)	$1.375 billion (2010.3~ 2015.2)	$1.577 billion
Moody's	N/A	$130 million (2009.9~2016.3)	$864 million (2016.2~2017.1)	N/A
Fitch	N/A	$ 0	N/A	N/A

Source of Data: DoJ, SEC and Financial Times[49]

About one week before the new President Donald Trump took office on Jan. 20th, Moody's also agreed to pay $864 million[50] to DoJ ($437.5 million as a civil penalty) and other 21 states and the District of Columbia ($426.3 million) associated with bond

grades which were issued before the 2008 housing bubble. Moody's, not admitting any wrong doing, actually failed to adhere to its own credit rating standards in rating mortgage bonds. The company said in a statement that it had determined to accept such an agreement in order to remove any legal risk and to avoid any cost and uncertainty of possible continued investigations. It was also emphasized that the improved methodologies be used on complicated bonds and analysts be excluded from any commercial discussions. The settlement between Moody's and DoJ was the last expected settlement from the governmental organizations and implied the ending of investigations into the financial crisis under President Barack Obama's administration. Table 2 summarizes all the settlements between three different organizations and CRAs by April of 2017.

1.2 Research Questions

Since this trauma of financial crisis, people from all walks of life have been thinking and discussing why all this happened, what went wrong with some modern financial mechanisms which used to be trusted deeply, the CRAs included. The descriptions above uncovered what happened to the CRAs after the 2008 financial crisis. From the reports, it can be unveiled that CRAs, especially the Big Three, S&P, Moody's and Fitch, were complained, blamed, criticized, or even sued by investors or governmental organizations over their inaccurate rating, which partly led to the financial meltdown. In comparison with banks which were much severely sued and fined, not to mention the bankruptcy, bailouts, merging, reshuffle or reorganization of many banks worldwide, CRAs not only drew lesser attention but actually survived much better than

banks. It was never heard that any CRA collapsed because of their seemingly incorrect behavior. Apparently it is difficult for these CRAs to be trusted by investors any more. Yet, it is just one side of the story; they are still influential.

In addition, countries worldwide would respond quickly, either positively or negatively, when being upgraded or downgraded by CRAs. Consequently, it can be seen in the real life that CRAs are severely criticized but highly valued at the same time. The lawsuit against rating agencies is still going on; however, the public never stops deriving information from them. Take the bond market for example, despite of scrutiny, investors still "overwhelmingly rely on ratings from S&P, Moody's and Fitch"[51] when pondering what bonds to purchase. Moreover, as private enterprises, CRAs not only rate the country under which sovereign they were established but also those beyond their territory. They remain dominant however being complained or sued by investors about some misleading information.

How was the legitimacy of CRAs gained? Why are they so dominant? When were the rating agencies formed and how they became what they are today? What do they rate and why do countries have to be rated as well? Particularly, why are the CRAs, especially the Big Three, are so powerful in the bond market? Why do investors rely on them deeply while complaining about their somehow inaccurate information and the economically strong countries such as the U.S., France, and the U.K. also succumb to these private enterprises? These questions puzzled me.

1.3 Research Purposes

The purpose of this thesis is to explore the legitimacy of CRAs while focusing on

the field of global bond market. That is, this thesis aims to examine how the legitimacy of CRAs was gained and how they became dominant in the global financial market from a historical and sociological perspective. Most previous researchers tended to discuss the CRAs from business or marketing points of view, for example, the changes of stock or bond prices after credit rating or the impact of rated credit on a certain industry. However, little attention was paid to the formation of the power of CRAs in the long run. To be more specific, the purpose of this study is to explicate how the CRAs were shaped so as to gain the legitimacy and how they became dominant globally from a long-term perspective, rather than claiming whether or not the credit rating result from any CRA is correct or how they influence the market. In this thesis, I will explore the legitimacy of the CRA from both traditional and legal/rational perspectives based on Max Weber's arguments. Furthermore, the legitimacy of the CRAs is also grounded on the assistance of other systems, in an equivalent manner, of the society as a whole. The ideal outcome will be offering an alternative approach to interpret the CRA as a modern financial institution, its influence beyond the border, and changes in forms of the society. Talks via interviews with some bond traders were also arranged to uncover how credit rating operates in the practical context. In this highly developed modern society, people get involved in finance in their lives more or less, directly or indirectly, and willingly or unwillingly. However, owing to its non-transparency and complication, finance is somehow difficult or tricky for most people to understand. It is expected from the research that readers can be pointed to the CRAs with historical understanding and rational judgment.

1.4 Potential Contributions

Two outcomes can be expected from this research project as academic contributions to the study of the bond market as well as the global finance. The first one is to offer an alternative description of the CRA from both the social and the legal perspectives, which is different from a business or marketing perspective contributed by pervious researches, by tracing the origin of credit rating from a long-term historical point of view. In this way, the formation of the legitimacy of CRAs and even the formation of credit, both of which tend to be taken for granted by previous researches, can be illustrated from a broader angle. The second one is to unveil the transparency of CRAs and to understand their practice in the bond market as well as in the global finance market from a broader perspective.

1.5 Structure of the Thesis

This thesis is organized into eight chapters. Chapter one, Introduction, gives the background of the puzzles derived from the 2008 financial crisis. Chapter 2 analyzes the researches regarding credit rating or CRAs. Chapter 3 describes the research methods used in this dissertation. Chapter 4 unveils credit and relevant issues from a historical perspective. Chapter 5 explores the experiences concerning credit from four banking families via case studying. Chapter 6 explains the formation and development of the bond market. Chapter 7 details the creation, changes, and the dominance of CRAs. Finally, Chapter 8 offers comprehensive discussions which include making a claim about the origin of CRAs. What follows is the conclusion in the end.

Chapter 2: Literature Review

CRAs have been playing an important part in the commercial and financial fields since they were formed. After the burst out of 2008 financial crisis, they became one of the targets of blame and also the topic of media reports or even movies. In the academic field, they were discussed as well by scholars from different fields. All efforts were put in order to uncover the truth about CRAs. In addition, more studies from the business schools can be found. However CRAs were defined, as referees or information providers, it is doubtless that in the real life investors have been used to getting access to them for judgment upon investment. In the following part, documents and researches about CRAs are reviewed.

2.1 General Review

As mentioned previously, most researchers tend to interpret issues related to CRAs from business or financial points of view, somehow different from the sociological or the historical perspectives that this thesis adopts. As far as I am concerned, the content of the researches about CRAs can be generally categorized into at least four types.

The first type of research, the largest portion of all, is the analysis of CRAs from the business, financial, or marketing perspective. The focus can be one issue such as changes of stock prices, changes of revenues, the transformation of mortgage, default, the liquidity, the credit cards, the financial statement, capital adequacy, or corporate bonds. For instance, Holthausen and Leftwich (1986) studied CRAs' downgrades and suggested that downgrades by both Moody's and S&P were relevant to negative

abnormal stock returns after the press release by the rating agency. In addition, Han and Holthausen (1992) also examined the bond returns connected with announcements from S&P's Credit Watch List and to rating changes by Moody's and S&P. The typical survey would be from JC Goh and LH Ederington (1993) who were directly inquiring whether a bond rating downgrade was bad news, good news, or no news for stockholders and further examined what actions the firm would take to transfer wealth from bondholders to stockholders. The analysis from the business angle can also be concentrating on the influence of credit rating upon the commercial banks, financial institutions, or government bonds, for example, the market share of financial banks after the credit rating. For instance, R Gropp and AJ Richards (2001) explored rating agency's actions on pricing of debt and equity of European banks, trying to unveil the connection between private sector monitoring and bank soundness. Besides, RW Faff and J Hillier (2004) focused on the national market impact of sovereign rating changes, elaborating various factors, quantitative and qualitative, contributing to the sovereign ratings assessment. In addition, AC Allen and DM Dudney (2008) discussed the impact of rating agency's reputation on the yields of local government bonds, based on the data of municipal bond issues from 1986 to 2002. Research papers of this type tend to be published in journals of business, finance management or marketing.

The second type of research targets at the legal system or the relevant laws related to the formation and the practice of CRAs. There can be systems and laws in a certain country or a comparative analysis between two or more countries. For instance, Hill (2004), triggered by Enron's bankruptcy, discussed the necessity of more regulations and called for changes in a number of industries including the CRAs. White L.J. (2007) surveyed the new law for bond rating industry and its consequences after President Bush signed the Credit Rating Agency Reform Act of in 2006. Partnoy (2009)

published a unique paper, commissioned by the Council of Institutional Investors, aiming at educating investors, policymakers, and the general public about important CRAs' regulation proposals and their potential impact on investors. By contrast, Kormos (2008) was dedicated to the research of regulations on CRAs in Canada and illustrated their impact on loans, debentures, and other forms of debts. After the 2008 financial crisis, researchers of law would put directly how they were orchestrated by the disaster for further investigation. For instance, Carbone (2010) centered on the impact of the Dodd-Frank Acts over credit rating agencies' reform on public companies after the collapse of the financial markets in 2008. Besides, Brummer (2012) analyzed the new politics of transatlantic CRAs and agued that any full harmonization of approaches would be difficult owing to various political and economic realities motivating regulations of CRAs in different markets of the U.S. and Europe.

The third type of research deals with how a certain company, industry or area was directly affected by CRAs. Treacy and Carey (1998) reviewed the credit risk rating at some large American banks and discussed the descriptions of rating criteria and procedures from Moody's and S&P. Also, G. Ferri (2004) drew attention to the operation of CRAs in less developed countries while Archer and Biglaiser (2007) studied how the regime type affected the CRAs in the developing world. The research can be comparative study as well, for example, the research of Yoon and Moore (2003) on the rating differences between Japanese firms by the two leading U.S. rating agencies and the two leading Japanese agencies and the research of Bartels and Wede (2013) on the sovereign rating difference from a large European rating agency and that from the Big Three. It is not surprising that financial scandals or crises initiated more related research, for example, the research of Hill and Rev. (2002) on the bad behavior of CRAs in the case of Enron.

The last type of research in my category is critical analysis of the CRA itself, for example, conflicts of interest, information asymmetry, the transparency of CRAs, the factors affecting CRAs, the importance of CRAs in the financial market, the reform of CRAs, the monopoly of CRAs, or the informational value of credit rating and so on. Before the 2008 financial crisis, some researchers had been devoted to the issue of conflicts of interest of CRAs. Covitz and Harrison (2003) carried out the test about bond rating agencies and thus provided the evidence that rating changes were not affected by rating agency's conflicts of interest. By contrast, Mukhopadhyay (2003) chose the moral hazard with the rating agency as the topic and argued that moral hazard problem could be solved by a certain way of payment to the rating agency. Also, Strier (2008) discussed the conflicts of interest in the credit rating firms by means of critiques on some reform proposals. It is worth mentioning that the 2008 financial crisis seems to strongly initiate the research of credit agencies' reformation in terms of its property, control and responsibility. For instance, Cheng and Neamtiu (2009) suggested an empirical analysis of changes in credit rating properties, mainly timeliness, accuracy and volatility by investigating how CRAs responded to the pressure and criticism from the market. Besides, Wolfson and Crawford (2010) elaborated the lessons the CRAs got from the financial crisis and discussed whether they needed to be re-structured. Boylan (2012) also concerned the same issue, analyzing the potential effectiveness of government reforms to improve the accuracy of credit ratings in the American financial markets.

While most of the researches focused on the America rating agencies, others from Europe or China were also available and two papers about China attracted my attention. One was done by Lo (2014) who studied the credit rating of bonds, generalized financial bonds, in China and one of the findings was that Chinese CRAs

tended to over-rate the issuers from domestic enterprises. The other research, done by Huang (2015), illustrated shadow banking in China by reviewing the development of interbank activities and explored their relationship with bank's credit rating. In fact, the CRAs of China will not be included in the discussion, which is to be explained in Section 2.3.

2.2 A Historical Perspective

Based on the historical perspective adopted in this thesis, in the following part, I review in a detailed manner some research papers of this type and present more relevant thoughts for further discussion. The first and the most comprehensive academic paper is Richard Sylla's "A Historical Primer on the Business of Credit Ratings", prepared for the conference The Role of Credit Reporting Systems in the International Economy held by The World Bank in March 2001 in Washington, D.C. In this informative and insightful analysis of the credit rating, the author reviewed the historical origins of bond rating agencies in the capital markets of the twentieth century, especially the U.S. market. Based on these descriptions, the scholar then discussed why and how the capital markets could function before the bond rating agency was set up. Then, the American experience with agencies' ratings from the early nineteenth century to the 1970s was reviewed, basically starting from the establishment of Moody's. Also, the business of the credit rating on the global scale was explored. Some of my questions seemingly have been answered by this paper but more puzzles came out.

First, the reason why bonds before the establishment of CRAs did not require credit rating was explained by the fact that most bonds were in the public, or sovereign, debts of nations and governments. It was partially true; however, some historical data

have shown that the default also happened in governments and nations could be debt ridden. Therefore, the identity of a nation or government cannot guarantee good credits. Secondly, it was suggested that after 1850, railroad corporations in the U.S. grew larger, more capital was needed, and territories were expanded as well, which contributed to investors' difficulties in understanding the market and thus CRAs were created accordingly. Unfortunately, relevant quantitative data were lacked, which makes it hard to understand the whole picture. Thirdly, about the U.S. again, Sylla described how a network of agents sold subscribers information to investors all over the United States. Yet, the role of agents had been available in Europe, which was not discussed in this paper claimed to be with a historical viewpoint. Also, Sylla suggested the number of The Mercantile Agency's subscribers grew hugely in the second half the nineteenth century but failed to explain why. Finally, it was described that some German-Jewish immigrants who established investment banks in the U.S. shifted their way of acquiring credit reporting from family and other personal connections to the modern CRAs but no reason was given. With all the puzzles, I, as a new researcher in this field, am neither willing nor able to criticize anything. Rather, I will be glad to piece together the whole story in response to the puzzles I mentioned. More details in this regard will be revealed in Chapter 8.

In addition to Sylla's research, Lauer (2008) in "From Rumor to Written Record: Credit Reporting and the Invention of Financial Identity in Nineteenth-Century America" also elaborated how the modern CRA was formed from a historical point of view. Yet, some things could have been explained more clearly and here four things of them are listed. First of all, it was claimed that the model of the early credit reporting agency had been available before the company was set up under the name of agency. By contrast, in this thesis, the claim is that that type of information had been available

much earlier, before it was provided in the form of reporting. Secondly, as to New York City, not a researcher nowadays would deny the importance of New York City as a global financial center. Yet, back to 160 years ago, there must be reasons that the commercial credit reporting agency moved to New York. Thirdly, according to Lauer, the Mercantile Agency located in New York opened the first branch office in Boston in 1843, and then in Philadelphia and Baltimore. Geographically speaking, the headquarter office and the early branch offices were all located in the northern east part of America. It was not an accident. More background information is provided to elaborate the geographical concentration of early CRAs. Finally, it was described that some large firms started to hire traveling reporters in different places of the U.S. to collect various information associated with credit of businessmen and Thomas Wren Ward, a Boston local, who worked for Baring Brothers, London-based company, was taken as an example. It shows that the job of credit reporting extended beyond countries. With all the issues, more are discussed in Chapter 8.

Besides Sylla and Lauer, Poon (2012) in the paper "Rating Agencies" stated that credit rating was an offshoot of nineteen-century credit reporting and also treated the Mercantile Agency as the first credit report agency. In Poon's research paper which actually inspired this thesis, the historical development of the CRAs was illustrated. According to the author, the development of the credit rating system could be divided into different stages. First, it stood for mercantile credit via reporting for credit assessment. After that, the reported included more, for example, memories of merchants in a written form. Later on, the published copies were requested but what people needed was just information. It was not until the regulatory use of ratings was mandated did the rating system become "symbiosis" of the governmental rules. Later on, it was put into business. Finally, the rating system was associated with legal systems and CRAs

became profit-oriented. However, what happened before the establishment of the first credit report agency was not surveyed even though it was put that firms such as S&P and Moody's are supposed to be as old as the market for rating itself,. My puzzle in response to his statement is—how about before the mercantile reporting?

It is worth mentioning that Olegario (2000) in "Credit-reporting Agencies: Their Historical Roots, Current Status, and Role in Market Development" focuses on the issue of asymmetrical information when discussing the historical developments of CRAs and only started it since the nineteenth century. The same argument can be found in "Credit, Classification and Cognition: Credit Raters in 19th-century America" by Carruthers and Cohen (2009) and "Mediating Reputation: Credit Reporting Systems in American History" by Lipartito (2013). That is to say, these three studies stuck to the U.S. and to the nineteenth century upon the discussion of the history of credit rating. Once again, no attention was paid to the situation before the establishment of CRAs.

With regard to credit, it was examined in several articles of *Credit Reporting System and the International Economy* (Miller, Ed., 2003) but the analysis of credit rating was claimed to be starting from the Mercantile Agency in 1841, just like other arguments. Besides, when Olegarion (2006) was discussing credit in *A Culture of Credit*, he started with the mercantile credit in Britain and America and treated Mercantile Agency as the origin of CRAs. In addition, in Sinclair's "Good, Bad, or Indifferent: The Emergence of Rating" (2008), the scholar elaborated the formation of rating by introducing the history of Moody's and S&P since 1860. Coincidentally, Carruthers and Cohen (2009) in "Credit, Classification and Cognition, Credit Raters in 19th century America" also explained the formation of CRAs based on America in the nineteenth century and stated that the industry of credit rating grew rapidly in both geographic reach and the number of firms. In Carruthers' another book co-authored with Ariovich

Money and Credit (2010), he introduced the trade credit and started the period in the middle of the nineteenth century as well. Finally, Winnerlind in *Casualties of Credit* (2011) discussed the formation of public credit from political and economical points of view as well as some problems of private credit. By starting with the English financial revolution from 1620, he also failed to mention anything about private credit before that. All in all, the situation concerning credit rating or credit reporting before the nineteenth century was confusing. For all these puzzles, I try to unlock them in this thesis from a much longer perspective.

To summarize, most of the reviewed researches on CRAs are carried out from financial, business, or marketing perspectives. They are supposed to be based on the training from the business school as different kinds of data, figures, price changes or even formulas can be read to highlight how a certain amount is influenced by credit rating or CRAs. There are also some studies related to laws or regulations and scholars tend to be from law schools. Surprisingly, this type of topic had been popular before the 2008 financial crisis, rather than being hotly debated only after the crisis, which also unveils the significance of legal regulations on CRAs. By comparison, fewer researches center on the discussion of CRAs from alternative perspectives, either sociological or historical ones.

Regarding the historical research of CRAs, Richard Sylla, from Department of Economics and Josh Lauer from Department of Communication presented their research on CRAs in 2002 and 2008 respectively from a historical perspective. The former one centered on the credit rating in the bond market while the latter one targets at the stories after the nineteenth century. However, little survey was found about the formation of credit or credit rating before the establishment of CRA as an organization. By contrast, this thesis argues that the task of credit reporting or even credit rating had existed before

any agency was founded. As long as there is the market and exchange, credit is available and needs to be checked. Therefore, the origin of credit rating, credit reporting, and CRA needs to be traced much longer back to the fifteenth century since exchange and commerce started. Then, the field should be moved back to Europe where commerce or modern finance was shaped, rather than America. As a new researcher, I am deeply inspired by the pervious scholars in this field and am working to fill the gaps in their studies.

It is worth mentioning that, China, the second largest economy in the world, has also been trying to develop its rating agencies and make it influential in the global financial world. As a matter of fact, some trial runs had been made but the feedback was far from being satisfactory. In May of 2011, Dagong Global Credit Rating, the biggest CRA in China, founded in 1994, downgraded the U.K.'s credit rating from AA- to A owing to its sluggish growth. European head of economic research at Standard Chartered commented, "Obviously this is not one of the main rating agencies that markets pay close attention to."[52] In the same period, all big three Western rating agencies still awarded the U.K. the top AAA rating but Dagong rated its home country China AA+, three notches above that of the U.K. and much higher than that ranked by western CRAs. Two more months later, the similar scenario happened between Dagong and the U.S. and the results were no difference as well. In August of 2011, Dagong downgraded U.S. sovereign debts to A+ after the U.S. Federal Reserve System (the Fed) made the decision to continue loosening its monetary policy. Once again, the biggest three western agencies kept the U.S.'s rating as AAA and China was ranked higher than the U.S. was by Dagong. In Dagong's point of view, the U.S. just deserved "an A rating, on par with Russia and South Africa, but lower than China, Malaysia and some 23 others."[53] Nevertheless, no sign showed that Dagong's ratings cut had any major

implications in the bond market as most investors relied on ratings from the big three firms—Moody's, S&P and Fitch.

Chinese rating agency has not been accepted as one of the influential CRAs for at least the following reasons. The legal system was problematic in different ways as it tends to favor locals rather than keep ahead with the western systems, Firstly, the country lacks the regulations to protect copy rights, trademarks, and intellectual properties; neither the common people nor the elites take it seriously. Secondly, there remains a less fair reciprocal trading agreement, under which assets from China pour into other countries but trading barriers keep foreign assets away from China. Thirdly, western internet websites are blocked in Chinese markets so that local companies creating the similar websites take them all automatically Politically speaking, human rights have never been guaranteed, neither has the right of land ownership, which has caused conflicts between people and the government and criticisms from the international community. Based on all the discrepancies between the Chinese society and the western society, it is difficult to compare or judge things relating to CRAs from both parties. Thus, the CRAs in China will not be discussed further in this thesis.

2.3 Manifestation of Theoretical Concepts

In this section, some theoretical concepts from Max Weber and Emile Durkheim respectively are explained. These concepts are to be adopted to analyze both the legitimacy of CRAs and the changes in forms of the society with the developments of CRAs. Although neither of the scholars has ever directly discussed credit rating or the

agencies, the following theoretical concepts from their researches unveil some essences which correspond to the historical developments of credit rating agencies.

Legitimations of dominance by Weber

Weber in "Politics as a Vocation" (1919) argued for three inner justifications on the discussion of modern states and termed them the "basic legitimations of domination" (Gerth and Mills, 1946, p. 78). They are traditional domination, charismatic domination and the domination by virtue of legality. Given that the power of CRAs was termed as superpower by Thomas Friedman and was compared to that of a country which can destroy the entity by credit downgrading (discussed in Section 7.3.2), Weber's argument on domination—mainly traditional domination and legal/rational domination—is to be adopted to analyze the domination of CRAs.

Weber defined traditional domination as "the authority of the eternal yesterday" (Gerth and Mills, 1946, p. 78). That is to say, the type of traditional dominance has its root in the historical background. He also took for instances the mores which were sanctified, some unimaginable ancient recognition, and habitual orientation which people conformed. This statement implies that no such dominance that the public may take for granted now is shaped overnight. Instead, the formation of dominance is through long-term historical developments enmeshed by lots of habits, agreements, and changes, so is the formation of dominance from CRAs. As long as the lending activity was initiated by human beings, credit was available accordingly and certain information associated with credit was required as well. For instance, lenders or creditors were concerned about whether they could surely get back the money as well as the interests, if there was any, when the loan was due. On the other hand, borrowers also needed to understand who was rich enough to lend the money. In a comparatively narrower social

network and a simpler market, information was easier to fetch, for example, by either words of mouth or street wisdom.

However, as the social network has expanded in terms of scale and scope (e.g. for regional exchange to national trading, from domestic financial market to international or global market or off-shore Euro-dollar markets), the collection of information is destined to become more difficult while information itself has also become various and complicated. People then are supposed to be in need of more information for comparison or evaluation in order to make the best choice regarding credit. By the same token, the continuous growth of the financial market makes it difficult or even impossible for investors to get the whole information and data, not to mention analyze them. That brought forth the need of special organizations such as CRAs though it takes a long time to develop into what they look today. Based on this, the historical background, the “eternal yesterday”, of the CRAs needs to be surveyed so that their ancient recognition and habitual orientation can be ascertained.

Weber also defined legal/rational domination as domination “by virtue of legality” (Gerth and Mills, 1946, p. 79). Moreover, the virtue of believing in the validity of legal statute and functional competence is based on rules which were created rationally. As a matter of fact, rationality can be suggested to be the core of Weber’s arguments, especially in the discussion of Western civilization, being claimed to be one of the key factors for the superior civilization in the West.

Max Weber is of course not the first one to discuss rationality. The practice of rationality or reason had been the core theme of Voltaire, Montesquieu, Kant, Comte, and so on. However, those discussions of the rationality prior to Weber were so “empirically oversimplified or morally overoptimistic” (Brubaker, 2006, p. 3) that people nowadays tend to not believe in them. By contrast, Weber’s conceptions on

rationality or rationalization speak directly to our experiences in a world which has been increasingly shaped by scientists, industrialist, and bureaucrats (Brubaker, 2006). By the same token, as the exchange in the financial market has been at a huge amount and with high complexity, the information or data cannot be derived by word of mouth or street wisdom anymore. It requires a rational process coupled with the endorsement of some bureaucratic systems, rules and regulations. That partially explains how the CRAs were formed and function accordingly.

Some concepts by Durkheim

In Durkheim's *Professional Ethics and Civic Morals*, some issues were mentioned which are related to the development of credit rating agencies. In the following parts, three issues associated with credit rating agencies are pointed out and then discussed based on the concepts offered by Durkheim. The first one is the growth of collective-consciousness. After the huge loss of the investors, more people started to pay attention to the rating agencies and the way they practice in the market as more new media offered the reports about rating agencies. For example, as put in Introduction, a lot of reports about how credit rating agencies were criticized, sued, and even punished were provided by the mass media and some of them were just free media channels such as BBC and CNN. These reports not only made CRAs more transparent but also led investors to pay more attention to the consequences caused by the practices of credit rating agencies. All of these show the increase of the social consciousness upon the rating agencies.

The second concept is the growth of professionalism of credit rating and credit rating agencies. This professionalism was witnessed vividly from some interviews that I

made on the first day of my field job and it can be categorized in three types. First, regarding educational background, of all the employees in the bond department interviewed, five out of six majored in finance related subjects (finance, accounting, economics, international trade and finance, business administration, or business management) for both undergraduate and graduate programs. Second, as to working experiences, except for two who just obtained their degrees, all the others had years of finance related working experiences which enhanced their abilities in carrying out their daily jobs about bond markets. Finally, with reference to the daily job of the interviewees in the bond department, they showed the professionalism by reviewing and analyzing various kinds of financial charts, tables, graphs, and reports based on either academic trainings or practical working experiences. Most importantly, the developments of credit rating agencies over the past several hundred year.

The third concept that this research adopts from Durkheim is about the intervention of states as authority. Partly because of the growth of social consciousness and partly because of some financial chaos, governments stepped up to get involved and took more strict legal actions to govern the practice of credit rating agencies. Legally speaking, as the American companies, the biggest three rating agencies are obliged to follow the laws of the U.S. On the other hand, the fact that credit rating agencies followed the laws and rules also implies their status to be supported by the government. In the end, all these legal regulations triggered by the drawbacks in the system not only further enhanced the legitimacy of the three rating agencies but also made the financial market more mature and professional with legal systems.

More discussions based on theoretical concepts of above two sociologists are presented in Chapter 8.

Chapter 3: Methodology

In this chapter, the following three main research methods chosen for this thesis and the processes of proceeding interviews and organizing data are detailed. In order to investigate the central research questions (i.e. *How* was the legitimacy of CRAs gained, *when and how* were the rating agencies formed to be what they are today, and *how* can their influence go beyond the borders and especially the Big Three become so powerful), the research is aimed to understand related issues and events from historical and sociological perspectives.

This thesis is a qualitative research. According to Teun and Dijk (2008), the qualitative method portrays a socially constructed, complex and ever changing world by dealing with multiple realities and making interpretations via in-depth, long-term interaction with them. Given this, qualitative researchers are expected to devote themselves to making sense of relevant stories and the ways they interact with each other. With the historical and social background of credit rating and CRAs that this search aims to dig out, the qualitative method is definitely more appropriate than quantitative one. Besides, as a researcher, I am willing to unveil the underlying stories behind the multiple realities. Story telling also requires methods as they make the results not only trustworthy but also useful. However, it is also advised that "to be without method is deplorable, but to depend on method entirely is worse" (Teun & Dijk, 2008, p.3). Therefore, I do not stick to these research methods but keep open to other skills which are helpful to illustrate the whole story.

The main research methods in this research consist of case study, critical discourse analysis and interviews, which are explained in the following sections.

3.1 Case Study Method

By definition, case study is an “approach to research which has been fed by many different theoretical tributaries, giving far more emphasis to the objective observer, study the case” (Somekh & Lewin, 2005, p. 33). In this thesis, I use this method to examine four wealthy banking families, the Medici, the Fugger, the Baring, and the Rothschild. Rather than exploring how their wealth as well as power was gained as most reports did, I target at how information about credit was handled in a certain specific context before the establishment of the CRAs. The active years of those four banking families range from the fifteenth to the nineteenth century, with the environment shifting slowly from Europe to the U.S. According to the results from the case studies, what those private bankers did actually shows little difference from the operations of the CRAs in essence but in different forms, which paves the way for the future formation of CRAs.

The main strength of case study method is for researchers to take an example of an activity, an instance in action, and to explore and interrogate it. In this regard, the materials from the four studied cases do illustrate some valuable points responding to key issues discussed in this research. On the other hand, weaknesses of the case study method remain. One of them is the difficulty to generalize from limited cases. The statement is indeed true for this research. To put it another way, there were much more private bankers, either well-known or anonymous, over the past four centuries and some important ideas relating to this research could have been extracted from them as well. They just fail to be explored. Therefore, the four cases studied can only illustrate some patterns of how information about credit was dealt with. The other weakness of case study method is the difficulty of drawing the boundaries owing to the social and

historical circumstances of each case. In these four cases, the era of two cases —the Baring and the Rothschild—is overlapped and every private banker was supposed to inherit something from the earlier others. Therefore, they are exactly not separate cases but with some social and historical traits in common. Some comparison and contrast are to be made for further clarification.

3.2 Critical Discourse Analysis

The second research method in this research is critical discourse analysis. By definition, critical discourse analysis focuses on how "social power abuse, dominance, and inequality are enacted, reproduced, and resisted by text and talk" (Teun & Dijk, 2008, p. 352). In reality, most studies done by critical discourse analysis deal with issues such as power, domination, social inequality, media discourse, political discourses and so on. Besides, in most cases, power and domination are connected with specific social domains, for example, politics, media, law, education and science. Correspondingly, the discussion of power and domination, of CRAs, is actually one of the key issues in this research. Based on the fact that the CRAs are powerful, being criticized by investors but irreplaceable, and the Big Three are dominant, covering about 95 percent of the global market, I will analyze how those situations were formed from the data and documents collected.

As to the sources of data and documents, in addition to specialized books and journals on finance or sociology, a lot of reports from the online news media are referred, for example, *Financial Times*, *Wall Street Journal*, *New York Times*, and *the Economist* as well as others which provide not only reports but also professional analysis from experienced journalists or correspondents. These articles may not have

any credit in academic publications approved by SSCI (Social Sciences Citation Index) but reflect the social facts in everyday lives promptly and sincerely. Some websites of official organizations such as the United States Department of Justice and the Security Exchange Commission also offer plentiful materials for this research. With reference to the theoretical concepts behind the analysis, Max Weber's arguments on legitimations of domination, mainly traditional domination and legal/rational domination, are woven into the discussion. In addition, 2008 financial crisis is interpreted via the theory of fields by Neil Fligstein. Finally, the concept of 'a set of sets', provided by Fernald Braudel, is discussed in this research as well.

3.3 Interviews

According to Corrine Glesne (1998), researchers are encouraged to use multiple data-collection methods including participant observation, interviewing and document collection methods for richer data and more persuasive findings. In addition, overall speaking, the most common research methods for qualitative research are interviews, documentary analysis and observation. In this thesis, interviews and observation were also carried out for data collection, Thanks to the arrangements and the social networks of my advisor Professor Chen, I was able to conduct more than a dozen of interviews, as well as observation, with bond traders and a couple of entrepreneurs and collect a lot of materials for this research in the summer of 2016. The whole fieldwork lasted for two months. In the process, I tried to play the roles of not only a researcher but also a learner. Based on the relationship which had been built up between my interviewees and me in various occasions, the interviews were done well and effectively.

With regard to the method of observing, it implies to observe people in the

everyday lives with the researcher himself or herself as the main instrument to collect sensory data through sight, hearing, taste, smell and touch. It has been one of the most popular methods of data collection in social science regardless of its controversy owing to the complexity of human behavior and the subjectivity of the researcher. Once again, I was lucky enough to stay in the company where my interviewees were working and thus to observe their daily jobs during the interview breaks, mostly via unstructured observation and participant observation. Modern technology (tape-recoding, transcribing, video-recoding, digital images) was used for recoding what was observed. All in all, the experience of interviewing people in the working field is invaluable and irreplaceable, facilitating stronger links between the academic research and practical experiences.

Chapter 4: From Commercial to Financial Credit

As discussed in previous sections, CRAs were overwhelmingly complained, especially after the 2008 financial crisis, and even sued by official organizations. Yet, never has their influence faded away as the investors or the market remains highly dependant on them. It can be argued that CRAs are important mainly because credit is extremely significant and thus there must be something special about credit. Credit should not be taken for granted. In this chapter, the meaning and implication of credit is detailed. What follows are the discussions of several key developments of credit, particularly the changes of forms of credit, from commercial credit to financial credit. Only when the essence of credit is fully understood can it be possible to realize why credit, credit rating and CRAs are so powerful and influential.

4.1 The Formation of Credit

So, what is credit? It is used so often such as in 'credit cards' that most people tend to take it for granted. It can be more abstract in the Chinese translation *xinyong* since we Chinese people say it not only in 'credit cards' but also in a certain statement—somebody has or has no *xinyong*. Under what condition can a person have or have no credit and what does that imply? Based on this puzzle, I am diging into the meaning of credit, first from the lexical and then the historical perspectives.

4.1.1 The Meaning of Credit

According to Longman dictionary, the definition of credit is "delayed

payment—an arrangement with a shop, bank, etc. that allows you to buy something and pay for it later."[54] In this explanation, the idea of 'delayed' or 'pay for it later' is crystal clear but also confusing; how can a shopper or a banker make sure that the payment will definitely be made in the end and then accept the delayed payment? In this regard, the definition of 'credit' from Oxford dictionary gives us more clues: "The ability of a customer to obtain goods or services before payment, based on the trust that payment will be made in the future."[55] That is to say, the reason why a delayed payment can be accepted is mainly owing to the trust of the debtor on the creditor and therefore a certain ability of the creditor really matters. In short, where there is no trust in that ability, there is no credit. Moreover, the explanation from the etymological angle makes the originality of 'credit' much clearer. It is stated that 'credit' lexically originated in 1520s "from Middle French *crédi* implying 'belief, trust,' from Italian *credito* or Latin *creditum* implying a loan, thing entrusted to another."[56] These descriptions illustrate that 'credit' literally means that customers' or debtors' delayed payment in the business or from a loan is accepted. More importantly, the underlying meaning is that the trust of belief, on customers or debtors, contributes to the acceptance of delayed payment. It is as argued by Ferguson that the foundation of credit was "the underlying credibility of a borrower's promise to repay" (Ferguson, 2008, p. 31). Braudel also claimed that credit is "the exchange of two promises separated in time" (Braudel, 1992.1, p. 470). Based on this, when we Chinese say somebody has or has no *xinyong*, it generally implies whether that person can be trusted or cannot be trusted to keep the promise of paying. By the same token, the way of using credit in our daily lives is similar.

Regarding the meaning of 'credit' for the public, the most popular way to use the term is 'credit card' as an alternative of paying by cash. Holders of the credit card use the card to pay first, within his or her credit limit, and then pay the money to the banks

afterwards, though the popularity of the credit card depends on the area or the country. It is convenient for the individual users as they do not have to prepare much cash for big purchases, for example, luxurious products. It is a trouble solver for people who travel overseas because exchanging or carrying a big amount of foreign currency is tiresome or even prohibited, especially in global travels with which various currencies would be required in different countries. It is also a life saver for people who are short of cash temporarily as they can borrow money with the credit card and return the money after a while, though interest, more or less, will be charged. The credit card is really a helper in terms of individual's consumption or finance management though the money which can be used or borrowed is limited and there is always the due date for returned money and also interest charged after the due date.

For business people, especially those who do the international trade with the foreign customers, the other occasion to be associated with credit is letter of credit. When the deal between buyers and sellers is done, a few things will be put on the purchase order. In addition to some items such as the items with detailed specifications, quantity required, prices offered, and delivery dates, the payment term is also important and letter of credit is highly preferred. The letter of credit is backed up by banks to guarantee that the money for purchased products will be paid to the beneficiary (the seller or the exporter) while the applicant (the buyer or the importer) can avoid or reduce pre-payment. In practice, before the beneficiary ships the products to customers, they need to receive the letter of credit from the issuing bank assigned by the applicant. Despite of different requirements or conditions put on the letter of credit, it is a guarantee for the money to be paid. That is, even if something wrong happens to the applicant, in another country or far away from beneficiaries, the money will be paid by the issuing bank. Even though, very unluckily, something wrong happens to the bank,

the beneficiary can get access to legal systems for protection and get the money back.

Whether for individual credit card holders in the everyday life or for business people using a letter of credit for payment in the trading, the procedure to use credit is so easy that everything seems as natural as sunrise or sunset. It might be neglected that, during the procedure, one of the things that both the holders of credit cards and the applicants of the letter of credit have in common: being entitled to the delayed payment. It also implies that both parties to be paid, either the shop owners who accept credit cards or the beneficiaries who receive the letter of credit before shipping the products overseas, trust or believe the delayed payment will be made and thus be willing to accept it. However, why would people from one party which accept the delayed payment trust or believe that the money will surely be paid from people who they do not know (for example, between shoppers and customers) or who they even never meet (for example, between international traders and their foreign buyers)? How would they trust or believe those customers and buyers have the ability to pay? What is the foundation for this type of trust or belief? How is the trust or belief behind credit gained? Credit just cannot be taken for granted.

4.1.2 Credit between Fifteenth and Eighteenth Centuries

The usage of credit that implies delayed payment, regardless of its term, can be traced back to as early as twenty centuries before the Christian era; Ferguson (2008) suggested that loans with simple advances from royal or religious storehouses were available in Babylon Empire twenty centuries B.C. According to Braudel (1992.1), people in Rome were familiar with current accounts coupled with debit and credit figures in the book. By at least the twelfth century, in Italian towns such as Genoa and Venice as well as others in the Netherlands, credit spread quickly though large payments

were still being made in cash. In addition, Islamic merchants got used to all the instruments of credit including bill of exchange, promissory notes, letters of credit, bank notes, cheques, which could be found in their documents of the tenth century A.D., especially in synagogues in Cairo nowadays. Yet, the way credit was used is different from how it is today. In summary, the concept and the usage of credit is as old as time; credit exists as soon as people start to pay or receive. It is just that it has not yet termed as 'credit' before this word was created linguistically. Given that not until the early sixteenth century was the word 'credit' used lexically, the discussion of credit in this research basically targets at the era since the fifteenth century, for the sake of sufficient documentation and full context, which also corresponds to Braudel's discussion about civilization in *Civilization and Capitalism*.

The economic realities between the fifteenth and the eighteenth century were portrayed by Braudel via a triple division, though not separated but overlapped one way or another. The first part, a shadowy but rich zone, is expressed in terms of material life and associated with the infra-economy. It is a world of self-sufficiency with barter of goods and services within a very small radius. The second part is market economy, which, transparent and visible, implies the mechanism of production and exchange. The market economy led to the prosperity driven by rural activities in places such as small shops, work shops, banks, exchanges, fairs and markets. The last part implies some circuits and calculations for the privileged rather than ordinary people, for example, foreign exchange. It manifests real capitalism, multinational and with monopolies. In order to proceed with discussion of personal credit, the first part and a small portion of the second part of economic lives—material life and part of the market economy—are examined first in this section to reflect their connection with credit.

In Braudel's arguments, bartering remained to be the general rule over enormous

areas between the fifteenth and eighteenth centuries and thus formed the material life. People exchanged what they had for what they needed in everyday lives. Then, whenever bartering was unsatisfactory or when goods could not be bartered in sufficient quantities, money was used. Money which could be in very primitive forms such as shells and pebbles thus appeared and circulated. Then, when money in turn was unsuitable, either because of shortage or because of its inconvenience in settling trade balances, credit was required. In other words, people started to allow delayed payment and receive it in various ways. For instance, shopkeepers, tailors and butchers granted credit directly to their customers while they preferred the rich to the poor. Interestingly enough, some bakers gave credit by recording on two pieces of wood which were marked simultaneously with chalk every day. Then, one piece of wood would be kept by the baker and the other, by the customer. Also, the tavern-keepers gave credit; "the drinker chalked up his bill himself on the wall" (Braudel, 1992.3, p. 73). In addition to credit between shop-keepers and customers, credit was given by the landlords to peasants as well. For example, the lord would advance seed-corn to peasants as credit and then was repaid at harvest. Even after metal money—gold, silver and copper—was invented, with its shortcomings such as heaviness and difficulty in carrying or shortage of precious metal, it was proved to be very inadequate and thus paved the way for further development of credit. As a matter of fact, under that scenario, it was always credit that offered the services.

To summarize, the usage of credit at this stage was comparatively primitive. It was generally among locals or even acquaintances in a limited area and trust rooted in what they could see and based on face-to-face agreement, as a type of personal credit. Simple methods were used to record credit while there was no guarantee or law to govern anything or anybody. More usage of credit, in various forms, was later triggered

mainly by the shortcoming of money, or, more specifically, heavy metal. When this type of personal credit exchanged with money became insufficient, plentiful types of credit were evolved accordingly, ranging from “pawnbroking activities of the Lombards and Jewish merchants to the bills of exchange and speculation of the great trading centres” (Braudel, 1992.1, p. 439). Ever since then, the usage of credit expanded into commercial credit and more others, though it takes a long time, little by little.

4.2 Commercial Credit

For travelers who visit European cities, especially those of central European countries such as Italy, Germany, Austria, Old Town ranks number one in the must-see list. Most of old towns, with thousands years of history, are reserved and maintained well and look alike in some ways. For instance, the paths are narrow, with either irregular stones or pebbles, for horses or carriages but not modern vehicles. There is always a big square in the center of Old Town and the church or the cathedral remains to be the tallest, and basically the most attractive, construction there. There is no exaggeration to say Old Town changes little in the way it looks, in comparison with how it looked several thousands years ago. However, the way it functions is totally different. While visitors are wondering about the shops, markets and fairs for food or souvenirs, would they ponder over the history? Could they imagine those shops, markets and fairs in towns used to supply various products essentially for local people? It was claimed that “the role of the town…the extremely important fact that even the humblest town-dweller must of necessity obtain his food-supply through the market” (Braudel, 1992.1, p. 481). More importantly, shops and fairs served not only the core of national

economy but also the embryo of credit economy.

In Braudel's argument about the economical lives between the fifteenth and the eighteenth centuries, the second part is market economy coupled with activities in shops, work shops, banks, exchanges, fairs and markets. Moreover, credit improved to a higher level along the way. Peddlers are just peddlers; they are convenient but what they can carry is limited in terms of exchange. By contrast, shops are bigger in space, various in products and complex in trading. Shops function as retailers, working with dealers that further trade with wholesalers, which comprise of a trading network. With the town expansion and economic development, deals within this network grew so big that money could not serve sufficiently. Let us imagine shop keepers needed to hoard a big amount of products which might take months to sell but more products were expected to come simultaneously to avoid product shortage. Also, wholesalers and dealers kept much more products in the warehouse all the time to suffice the market. Products had to be able to be bought and sold on credit, via issuing a bill which could circulate until they were in a position to repay the creditor in goods, cash, or in some other form of paper.

For example, one party (the buyer) issued a bill of exchange in Florence and the bill taker (the seller) was paid in Vienna, three months later, with the rate of exchange calculated. Actually, this was just the solution which had already been devised by the Italian merchants in the fifteenth century. In other words, for exchanges among shops, the circulation or the storage of money could not make it in time but credit always could. It is no wonder that credit was claimed to be the principal reason for the development of shops. To be more specific, one step up from the shops, the dealer granted the credit and so the shops paid what we may call instalments nowadays. One more step up from the dealers, the wholesaler granted credit, too, and so the dealer only paid part of the money

and delayed the rest of it. It was recorded that the wealthy Florentine merchants who imported Sicilian products “sold pepper from their warehouses to retailers with eighteen months’ credit” (Braudel, 1992.1, p. 471). Nevertheless, shops are shops; however big or various they might grow, shops must be situated in a fixed location of a certain place. By contrast, fairs and markets must not be.

For those who might be unfamiliar with fairs, visiting any exhibition in Taipei World Trade Center can be helpful to some degree. Take the International Cycle Show for example. In this 4-day event, a full range of bicycles, bicycle parts and related accessories are presented and it attracts thousands of buyers—wholesalers, dealers, retailers, international traders, shoppers and even end-users—from all over the world. Moreover, it is just the beginning of a serious of bike shows around the year. Normally there will be similar events in some key markets such as the U.S., Germany, France, China, Japan and so on. Similar items will be exhibited and even same people will meet. Products are promoted, orders are placed, payment terms are agreed, information is changed, and rumors are spread. The product exhibition is a carnival, a fair, now in the exhibition hall but long time ago in the town.

Though credit is probably as old as the world, it is certainly the case that the “fairs developed the use of credit” (Braudel, 1992.2, p. 90). The fair itself created credit because businessmen moved from fair to fair, from market to market, which could never possibly work well without prolonging credit. Take Piacenza, a city northern Italy, for instance. The fair was held four times a year in Piacenza. Business people gathered there with their best products, hoping to win the best deal with the most generous customers. It was suggested that “merchandise came to the fair, and very little cash, but literally masses of bills of exchange” (Braudel, 1992.2, p. 91). The bill of exchange,[57] by which the recipient signed it and sold it, was one of the most frequent forms of credit.

It was even claimed that merchants concentrated more on credit than on commodities. The sixteenth century was said to be the great age of the fairs and what made it possible was the "the impact of the top-level circulation of money and credit, from one fair to another" (Braudel, 1992.2, p. 135).

Generally speaking, explicated by Braudel (1992.2), there were three occasions in the western history when there was an expansion of credit so unusual as even being visible to the naked eye: "in Florence before and after 1300; in Genoa in the latter part of the sixteenth century and the first two decades of the seventeenth; and in Amsterdam in the eighteenth century" (Braudel, 1992.2, p. 392). The first occasion for the popularity of credit, before and after 1300, is when the bill of exchange was invented. The first known and recorded endorsement of bills of exchange was in 1410, though the circulation of them was differentiated from what it turned out to be later. However, it is undeniable that bills of exchange in the fourteenth century spread through "the whole length of the Mediterranean coupled with the success of the Crusades" (Braudel, 1992.1, p. 471). The second period of the expansive credit, between the sixteenth century and early seventeenth century, was connected to the rise of towns and cities, mainly in Italy. Those fairs and markets in Old Town remain till now to be the most attractive spots for countless nostalgic hearts from all over the world, for visitors instead of locals, though. The third era that credit was overwhelmingly used, in the eighteenth century, linked to the development of long-distance trade. In this regard, Amsterdam took the lead for a long time, despite of Portugal and Spain as pioneers, before Britain triumphed in the naval war in the late eighteenth century.

The Netherlands was not only the worldly economic centre but also the wealthiest area in the seventeenth century. It was filled with wetlands and lakes and even today, after the construction of some man-made land, there is about one third of its land below

the sea level. Luckily, miracle was created from this special geographical feature and silver herring was the shining superstar in the miracle.[58] For centuries till now, during the current shifts of the North Sea in the summer, huge schools of herring flocked toward the northern coast of the Netherlands. They sufficed locals as diet and more importantly brought big amounts of wealth via exporting herring to European countries, particularly England. Starting from the fishing business, the Netherlands developed and became the core of international transport, distribution and exchange of commodities via long-distance trade. Many reasons contributed to this achievement, for example, rich marine resources, excellent fishing skills, well trained labours, and neatly designed boats. Yet, the vital reason that the Netherlands triumphed in the competition with other nations which also shared the same fishing resources was credit.

Back to the eighteenth century, credit was indispensible in any trading centre but unique in Amsterdam, not only because of the a huge volume of commodities being bought, stored, and then exported only several months later, but also because of many advanced payments, derived from credit. The advanced payment made Dutch merchants excel their competitors by guaranteeing better terms for buying and selling. As a matter of fact, the Dutch served as the main credit supplier of the whole Europe. According to Braudel (1992.3), this cheap credit was available for firms or merchants of Dutch cities, especially Amsterdam, and went beyond various channels, from the highly respectable trades to the notoriously speculative ventures. The practical realization of credit can be illustrated by the following example.

It was stated that, in 1766, Italian merchants who planned to buy wholesale silk in Italy in order to sell it to English and French manufacturers could not have accomplished any deal without Dutch credit. To be more specific, Italian merchants had to pay cash for the silk they planned to buy. Then, after delivering the silk to the

manufacturers, they granted the manufacturers with roughly two years of credit. That is the lead time for raw materials to be transferred into manufactured products through various processing and reworking. More products, more credit. It might end up with piles of credit as well as debt, complicated and expensive in the long run. Easy and cheap, Dutch credit mattered. With the development of long-distance trading and international commerce, the use of credit expanded to other European areas accordingly. However, while flourishing commerce supported by credit were bringing prosperity and wealth to European countries, problems arose.

The powerful and beneficial credit system of the Netherlands encountered several serious crises since 1760s and "crises all resemble each other and appear to be connected with credit" (Braudel, 1992.3, p. 267). The total amount of commercial paper for credit seemed to go beyond its limit. That is, various types of credit piled up and reached to such a considerable amount that, according to exact record, it turned out to be fifteen times greater than the case of real money in Holland. The credit crisis was just like the bubble blowing out. What followed was the shortage of currency since a lot of money failed to be returned upon due dates. With more crises spreading, bankruptcies happened accordingly.

The Bank of Amsterdam, established in 1609, did provide merchants with cheap, convenient and secure paper currency. However, the circulation of paper currency completely relied on hoarded coins, so it was difficult for the Bank of Amsterdam to expand the amount of money as it intended. At the same time, some Italian banks in Florence, Venice, and Genoa also allowed merchants to conduct transactions without the use of metallic coins. For instance, a merchant was able to instruct the bank to transfer funds to the bank of another city where the commodities were delivered from. Sometimes, the instructions would be put on checks or receipts of deposits so that the

banks could follow accordingly. However, this type of operation, though safe and convenient, was never with general circulation.

About money shortage, it was caused by metal shortage for merchants with structural reasons. First, there was basically not sufficient gold or silver available to cope with all transactions of money, not to mention the increasingly expanding trade and commerce. Second, with the King of Spain hoarding most of the world's precious metal then, other nations which asked for more metal from Spain needed to pay much more by means of commodities, a truly heavy burden to bear for most nations. Last but not least, people's integrity was worrying as using gold or silver made various people get access to it and the opportunity of making counterfeit increased accordingly, let alone theft or robbery.

In summary, credit at this stage had expanded its scope to commercial credit beyond the personal credit. In contrast to personal credit which was generally used in shops of local towns or cities, commercial credit was popular in fairs and markets. Credit was used when merchants travelled around for commodity exchanges which took a long time and thus required credit for quicker and easier circulation. After the development of long-distance trading, credit was thus further improved and became one of the key factors for merchants to expand their businesses and for the cities to flourish. In this regard, Amsterdam took the lead in the eighteenth century but over expansion of credit brought forth problems at the same time.

It is worth noting that during the Dutch credit crises, the private banks in the City of London, serving as agents and correspondents for regional banks, stepped up "to redistribute credit and to transfer surplus capital from regions like south-east England to the active north west" (Braudel, 1992.3, p. 607). More importantly, while the public, especially the commercial community, were wondering what should be done to prevent

credit from deteriorating and further secure credit for its best use, history shows that England answered the call by re-establishing public credit, purposefully not but accidentally.

4.3 Public Credit

While the Netherlands as well as Amsterdam were enjoying the wealth and prosperity that the commerce supported by credit brought to the nation in the early seventeenth century, England, across from the Continent and on the other side of English Channel, was also facing unprecedented social changes which paved the way for the nation to become the most powerful empire then. After Glorious Revolution (1688-1689), King James II of England was overthrown and replaced by a union of English Parliamentarians and the Dutch stadtholder William III coupled with his wife Mary II of England. William III succeeded in initiating a serious of economical and financial reforms by introducing Dutch innovations to England, termed Financial Revolution, which included the new taxation system, the first issue of the kingdom's government bonds and the establishment of Bank of England in 1694, mainly by merchant bankers and legislators. In the process, never could the significance of credit be ignored.

As pointed out by Charles Davenant (1698), an English mercantilist economist, credit was simultaneously fantastic and precarious. It was fantastic because the new credit system as well as other relevant mechanisms implemented during the Financial Revolution transformed England thoroughly. Bolstered up by the modern financial system consisting of widely circulating credit currency and an active security market

and other relevant mechanisms, English was thus able to become a powerful fiscal-military state and a powerful global empire. Credit was also precarious; before credit grew mature and secure, there was a long and windy road to go. While credit had been based on interpersonal trust and honesty among limited social networks, it also implied instability and uncertainty. In the long-distance trading, for example, the journey took months or even several years, all the changes or accidents during the journey were unexpected, not to mention some disasters caused by humans. Nowadays what we hear from movies or novels about how sailors who battled with pirates and even sacrificed themselves anonymously in turbulent waters is in fact the reality back to three hundred years ago. When something wrong or miserable during the trading route or on human behaviors happened, credit meant nothing. Just like the Dutch, the English faced the similar challenge about credit.

It was recorded that credit had been central to the social life in England by the sixteenth-century. Despite of the popularity of credit, the way it functioned was only little more than a primitive manner. To be more specific, credit was basically grounded on personal social networks but it was sometimes complicated and confusing. Credit nowadays requires the contract from both parties but most of the early credit contracts were just in the form of verbal agreements in face-to-face interactions. There were promises but no guarantee could be offered. Even though credit contracts were presented more formally later, with rights and obligations put and in the form of notes, pledges, and even bonds, it happened often that nothing was realized towards the due date. As a matter of fact, contemporaries often complained about the disadvantages of England's credit system. One of the most serious problems was the comparatively shorter terms of most credit agreements, both private and public, which prevented the capacity of credit from wide circulation. And because of credit's limited ability in

circulation, merchants were obliged to hoard more money in the form of silver, which thus raised the need for more precious metal. And when precious metal was in shortage, disasters such as bankruptcies happened and credit became more expensive and tougher. All appeared to be a vicious circle for the merchants as well as the public, frustrated but helpless. Observers in England witnessed the risks and realized it was about time that something be done with the monetary system in England if it "were to prosper commercially and enhances its geopolitical clout" (Wennerlind, 2011, p. 2). In other words, what matters was not solving the repeated problem of temporary money shortage but creating a monetary system which could suffice the use of credit in the long run.

In this regard, Winnerlind (2011) in *Casualties of Credit* explains clearly how credit was established in England between the second half of seventeenth century and the early eighteenth century among both the merchants and the public from a historical perspective. His discussion uncovered that the maturity of public credit was reached not only through the financial market but also via the governmental authority. That is, credit was originally shaped from the commercial community, instead of the authority, in a bottom-up manner. The fact that credit could thrive was rooted in people's understanding of credit, honesty in information, respect for contracts and mutual trust. However, with the increasing complex forms and popularity of credit, the insecurity or uncertainty grew. Thus, something was required to assist in the information of honesty, provide surveillance over dishonesty, and even carry out punishment to secure respect and trust accordingly. In Wennerlind's study, legal framework was the key; it was the legal system in English, though constructed step by step, that enhanced the value of credit, guaranteed its security, guarded against harmful consequence and even partially contributed to the greatness of England in terms of international commerce and global dominance. In short, only via the legal systems from the authority could credit be

coercive enough to be entirely trusted and relied in practice. All in all, there is no exaggeration to say that the credit in England won back people's trust via the collaboration from all walks of life to establish the legal systems.

After the Glorious Revolution, England was desperately anxious for recovery from war and stability in societies to guard the Revolution and the Parliament and thus open to all good plans while facing a plenty of social problems—huge expenditures from wars (mainly with French Louis XIV on ground and with Dutch at sea), bad harvests, trade deficit, short of silver and so on. Various proposals were offered basically by political economists, and the key group was Hartlib[59] Circle.

Hartlib Circle, as an academic group, consisted of a group of intellectuals from multiple fields, for example, Sir Isaac Newton[60] (1643-1727) from the scientific community, and tended to offer insightful and influential suggestions. Deeply believing that through the continuous pursuit of knowledge and innovation, infinite progress could be made, they not only offered constructive ideas but also devoted to spreading the innovative ideas among the public. By this, Harblit circle further provided the intellectual foundation for their innovation and originality. In addition, they argued that human intervention, accompanied by proper knowledge and via systems or policies, was required to control over nature. Bearing those concepts in mind, they offered a lot of plans for the nation to combat the social problems and pursue prosperity. For instance, in terms of economy, what they supported included increasing land productivity to stabilize prices, expanding manufacturing, especially in the navy industry (staff, ships, sails and so on, cloth industries, ironworks industries), increasing foreign trades, and expanding colonies. With reference to finance, people welcomed their suggestions about policies of rearranging fiscal administration on land tax, customs tax, bill of exchange, exchanged foreign coins, checks, and promissory notes.

Regarding money shortage as well as credit, multiple experiments were made before the validity of credit was built up solidly. People from the Circle first submitted the proposal to expand currency with alchemical knowledge to transmute lead into gold and even started production after full research and development. The project failed in the end. They later attempted to transmute silver to gold but never really made it because of being unable to get the secret formula from alchemists. After different trials and errors, thinkers from Harblit Circle[61] turned their focus to a widely circulating currency coupled with the establishment of a bank. In the end, it was concluded that wealth was infinite while money stock was definite and only by introducing a monetary mechanism to facilitate changes and growth infinitely could the problem of money shortage be solved eternally. Besides, they contended that it was not the intrinsic value of the gold or silver coin but the trust that people put on paper notes that made money circulate. The answer was credit, a widely circulating credit currency. It is inspiring to me, that, according to Wennerlind (2011), those thinkers were basically not interested in material wealth at all but their passion for innovation and their patriotism for the nation motivated them to reveal the unknown in metals.

As mentioned previously, Hartlib Circle valued the spreading of innovation among the public so that the new system, concerning credit and money, could become a type of culture and even part of people's lives. For instance, during that time, two pamphlets related to credit were published in order to advocate the advantages of credit currency with its characteristic of "capacity of enriching this Nation, in a sort of infinite" (Wennerlind, 2011, p. 68). Just like what they expected, the knowledge about credit needed to be spread around in both the commercial community and the public.

In detail, the proposals submitted by Hartlib Circle included a system of generally circulating credit instruments to form trust instead of existing network of personal credit,

government's willingness and capability to prosecute those engaging in corruption, over-issuance, forgery, or counterfeiting by death penalty, and a transparent mechanism with security managed by men of highest reputation. More importantly, Bank of London was established for more sophisticated systems with credit, government bonds were circulated for more liquidity and security than coins, finally, the office of credit was even set up to avoid too much trust in particular people like managers, directors, public officers. Of all the renovations, almost nothing could be more important than the founding of Bank of England in 1694. It not only offered new types of government borrowing via long term bonds and company stocks with lowered risks, contributed to the formation of better organized securities market, but also avoided England's bankruptcy after wars in the end. However, the way to fully realize the dream of full circulation of credit was filled with twists and turns.

In 1710, a credit crisis burst out in England mainly owing to the unprecedented expenditure in the War of Spanish Success (1701-1714).[62] With reference to the expense of the war, it was the issuing of a perpetual public debt as well as lottery loans and the establishment of the Bank of England in 1694 that made it possible for the government to borrow a huger amount of money with a lower interest. However, the prolonged war, coupled with extra cost for expanded arm force, triggered an increasingly heavy discount on the government bonds, which severely deteriorated the public credit that had just been set up stumblingly. It also evoked the concern of political parties, especially Tories and Whigs, both originating during the 1670s.

Tories, mostly comprising old landlords, valued the expansion of domestic market instead of wars, while Whigs, basically comprising merchants, bankers, and financiers, preferred continuing the war so that they could gain more interest from governmental bonds. Opposite thoughts accompanied by hot debates from the two parties turned

public credit into a political issue and elevated the credit crisis to a national emergency. What both leading parties used was the public sphere to raise their voice and further manipulate public opinion in order to fulfill their own needs. As a result, public credit, public sphere, and public opinion intricately interweaved with each other, which, as part of financial innovations, became "permanent fixtures of English society" (Wennerlind, 2011, p. 162).

It is worth noting that Conservative Party, the current governing party in the U.K., had its origin from Tory Party back to the late seventeenth century. As discussed in Chapter 4, Tory Party used to fight and debate earnestly with Whig Party for the reassurance of public credit. This historical background may partially explain why credit has been a highly concerned issue for the Party and stressed by the political figure from time to time, which was rarely seen in other political parties or countries. Take for example David Cameron, who served the Prime Minister of the U.K. from 2010 to 2016 and also the Leader of the Conservative Party from 2005 to 2016. He asserted to safeguard the credit rating of the U.K. in several conventions. In April of 2010, David Cameron, as the leader of Britain's opposition Conservative Party, promised to "protect the country's triple-A credit rating"[63] in a speech which aimed to lay out its policy platform. In the 118-page manifesto, it was pointed out that the Party would safeguard the credit rating of Britain with a credible plan to eliminate the structural national deficit. About half a year later, in a keynote speech of the Party conference, the significance of credit was highlighted again. In response to what happened to Greece after the financial crisis—falling confidence, rising interest rates and high unemployment rates, the Party Leader voiced, "The world has backed us. Our credit rating – the mark of trust in our economy – has been preserved."[64] In another speech targeting at the economic growth, the significance of credit rating was underlined once again; it was delivered that "We'd

be talking about the dangers of our credit rating being downgraded"[65] and worrying about the falling confidence in our economy. Few counties treats credit as seriously as the U.K. does and that is because the credit owes its origin in the public sphere and legal support legal mainly in the U.K.

Speaking of public sphere, some people may think of coffee houses, from legends or stories. It is true. Visitors heading to old cities or towns in Europe must have been recommended some coffer shops which several big historical events were associated with and some extraordinary figures had visited in the past. For example, young Ernest Miller Hemingway (1899-1961) enjoyed pondering and writing in the coffee shops of Paris and Pablo Picasso (1881-1973) loved coffee shops in Barcelona so much that he held his first exhibition in one of them. In fact, long before that, coffee houses were where information of trading and securities was exchanged. Also, lots of debates and arguments on slave trade lasted for long in coffee shops, pubs, and other public spheres of London before Slavery Abolition Act was passed in 1833.

Moving back to a century ago, the issue of credit was also one of the issues discussed in the public spheres including coffee houses. The way that public credit was debated and promoted by the two leading political parties can be categorized into four types. First of all, they hired outstanding experts from multiple fields to discuss and debate the meaning and the importance of the public credit. Second, they made the best use of mass media including publications such as newspapers, pamphlets and even ballads to voice their opinions. In this regard, the vibrant print business contributed to the popularity of all these publications. Third, they also used some sites including pleasure gardens, the Royal Exchange, Exchange Alley, alehouses, and even coffee houses to promote their ideas about public credit and related policies. In these public

places, all the comments were welcomed, positive or negative, rational or irrational ones. Last but not least, the public credit was even presented in a very easy but alive way: novels like *Lady Credit* or *Popular Opinion* (Wennerlind 2011: 194). This method truly turned the issue of public credit, serious and a little abstract, into something interesting and practical. The ambition behind all the ways was crystal clear: everybody needed to be reached. With all these efforts, debates and arguments, the culture of credit was shaped and the financial literacy was realized little by little.

The 1710 credit crisis was weathered, though temporarily, via the establishment of the South Sea Company in 1711. The company performed a debt-for-equity and private-for-public swaps in order to win back the public's confidence on public credit. Bond holders could exchange company stocks of the South Sea Company for their unsecured governmental bonds—some so badly discounted as 40 percent off—and the government simultaneously paid a higher interest on the debt absorbed by the Company. By all these elaborations, the public credit supported by the government was trusted again and it could be proved by the public's active participation in security markets.

It was suggested (Wennerlind, 2011) that the number of the people who derived ideas from public spheres and then put their ideas about credit into action surged more than three times in a decade; there were around eleven thousand bond buyers in 1710 and the number approximately reached forty thousand in 1720, before the bursting of the South Sea Bubble. In addition, the number of investors who held stocks of Bank of England increased in the similar pattern, moving from twelve hundred in 1694 to forty-four hundred in 1712. A variety of choices were offered for the convenience of trading in the security market. For instance, more than half a million £10 bond tickets were issued by the government and sold in popular and well-equipped pubs in early 1710s. The peak was the lottery loan issued by the Bank in 1711 for resuming the public

credit. The majority of investors in the security markets were metropolitan residents, local and foreign, and women also played a major role. All unveiled the public's trust, even faith, in the public credit as the government grew increasingly stronger.

The method to dissolve the credit problem of 1710 ended up with another bubble and crisis of public credit. Yet, every time the public credit was ruined, the government would rebuild it by various ways including resorting to the public opinion. Finally, the public credit was no longer associated only with traditional elites including the Crown, the wealthy financiers, or the elites but with the public. On the other hand, as the public credit influenced not only the success of the Financial Revolution but also people's trust in the legitimacy of the authority, re-building public credit unanimously became a must among different, even opposite, political parties. While two hostile parties, the Whig and the Tory, tried hard to persuade the public to support their suggestions towards public credit, public credit not only turned into a national issue but contributed to a certain culture. It is no exaggeration to say that "the stability of the fiscal-military state, the continuity of the financial apparatus, and indeed the security of England relied on a rapid solution to the crisis of public credit" (Wennerlind, 2011, p. 168).

To summarize, in order to overcome the hurdles of credit deterioration in England, the government, the intellectual communities and the political parties were all involved in rebuilding people's trust in public credit by making it an issue to be discussed in public spheres. Proposals were widely offered for guarding reputation of honesty, conducting various financial innovations, carrying out severe punishments, all aiming to intensify public credit to be held firm after the Glorious Revolution as well as the Financial Revolution. Before any suggestion about public credit was accepted and became policies, countless discussions, debates, and arguments had happened. The culture of credit was thus shaped. Also, it was crystal clear that, after that 1710 credit

crisis, the essence of public credit had been transformed and the role of the government or the authority was also different. Moreover, the financial credit, differentiate from commercial credit was shaped accordingly.

4.4 Financial Credit

No matter how public credit is valued by different political parties with its historical background, it is undeniable that reassurance of public credit backed up by the legal system is the key to the transformation from commercial credit to financial credit. Table 6 lists the differences between commercial credit and financial credit to in a general, comparative but systematic manner though the changes did not happen overnight but via a long and windy road.

Table 3. Commercial Credit vs. Financial Credit

Commercial credit	*Financial Credit*
1. Used by business people with the purpose of making money	1. Used by governments, big enterprises with the purpose of raising funds
2. More private investors	2. More institutional investors
3. Comparatively riskier	3. Comparatively more secure
4. Lower liquidity	4. Higher liquidity
5. Informal, backed by personal ties	**5. Formal, backed by legal systems**
6. Comparatively shorter terms	6. Comparatively longer terms
7. Comparatively smaller amounts	7. Huge amounts
8. More transparent, less complex	8. Less transparent, more complex

To be more specific, in the practice of commercial credit, basically before the eighteen century, the credit was generally used by merchants or wholesalers, first in fairs and markets and then in the long-distance trading or wholesaling. The goal of debtors tended to make money in the process of doing businesses and creditors were normally the public. However, there existed the default risk mainly because nothing guaranteed the creditor against loss. Take for example long-distance trading which was time-consuming and filled with fluctuations during the journey. When traders came across unexpected disasters, loss was shared by credits unavoidably. Besides, the commercial credit was coupled with lower liquidity; when would creditors be paid back was not known owing to the changes in the exchange process. More importantly, when default unfortunately happened, neither creditor nor their assets could be protected due to the informal relationship between debtors and creditors. That is, the manner both parties worked was grounded on informal personal ties. Even though there might be agreements or contracts between them, no legal system could support the creditors.

By contrast, in terms of financial credit, which was getting mature after the eighteen century, the credit was one of the financial tools for governments, industries, especially big enterprises to raise fund and the main goals range from funding wars or infra-structure projects for governments to industrial developments or innovations for entrepreneurs. Regarding investors, institutional investors were the main group despite of the participation of the public investors. Just as in the practice of commercial credit, the default risk existed as well for financial credit but the latter was comparatively more secure mainly because of the legal support behind the practice of financial credit. To be more specific, the default would be handled via the legal system and creditors were expected to be covered based on the formal contracts.

Regarding differences in trading, commercial credit functions with comparatively shorter terms while financial credit can be working with very long terms such as several decades. Besides, commercial credit tends to deal with smaller amounts in compared with what can be dealt with financial credit such as a huge amount for funding wars. Finally, the operation via commercial credit appears more transparent, less complex; by contrast, that via financial credit is full of non-transparency and complexity, the examples for the latter being the derivative financial tools nowadays. In case that long-distance trading signifies the way how commercial credit is used, the bond market is undoubtedly the typical mechanism to illustrate how financial credit works, which is to be elaborated in Chapter 6.

In conclusion, the representative system in politics made the sophisticated credit instruments, practices, and institutions—including the establishment of Bank of England in 1694—be trusted by the public. In addition, it was only when the public credit was re-established legally after the Glorious Revolution as well as the Financial Revolution in Britain that the financial credit was workable and that the transformation from commercial credit to financial credit was realized accordingly.

Chapter 5: Case Study of Banking Families

In this chapter, the case study of four banking families details how these private bankers handled information about credit to improve credit management and avoid risks from credit expansion or deterioration. They are the Medici, the Fugger, the Baring and the Rothschild, ranging from the fifteen century to the nineteenth century, also from the continental Europe, to Britain, and partly to the United States of America. Different from how public credit was shaped in Britain and by the authorities, these bankers who owned not only wealth but also power, used closed networks consisting of kinship, friendship, connections with the royals, or advanced corporation systems, to deal with information about credit. Before the formation of CRAs, the bankers themselves played the role of collecting information and checking credit, similar to what the CRAs do nowadays, though in different forms with a smaller scope. They are the pioneers in this regard even though they failed to claim it or used the modern terminologies either credit rating or CRAs. The four family cases in this chapter explicate their historical background, family banking businesses, the way how credit information was managed and then followed by the summery. More is to be discussed in Chapter 8.

5.1 The Medici

Very few people who have visited Florence, Italy, would miss the Statue of David, the hero who defeated Giant Goliath[66] with his strong faith in God. The talents of the sculptor Michelangelo (1475-1564) has been overwhelmingly admired for several centuries. However, similarly very few people may ponder over the long term financial

support from the Medici family who contributed to the spectacular achievements of not only Michelangelo but also other artists who created the wonders of the Renaissance as well as Florence. From the fifteen to eighteen century, for more than 300 years, the Medici family members were patrons of artists such as "Botticelli, Donatello, Fra Angelico, Michelangelo, Raphael and Verrocchio, and writers, poets, philosophers and scientists including Galileo Galilei."[67] With its artist taste and amazing wealth, the family was indeed the glory of Florence and godfathers of the Renaissance. It was suggested what distinguishes the Medici family from others is that they "systematically commissioned work and sponsored artists"[68] in an unprecedented manner in Florence. Moreover, the family was anxious for power and full of political ambition, with two popes (Pope Leo X and Pope Clement VII) and one French queen (Catherine de'Medici) originating from this family. In order to get power, the family members even poisoned their enemies, inside and outside the family, and bribed their way into the papacy occasionally. Whether it was the support for arts or the ambition for power, finance for the Medici was not only the tool but also the purpose.

5.1.1 Background

The history of the Medici covers three and a half centuries, from 1400 to 1748. The entire family underwent the changes from medieval to modern history; it was the time period that the main political power in Europe shifted from the independence of small, isolated city states of Italy (Florence, Venice, Milan, and Naples) to the northern nations such as France, England and Germany in the areas where they now occupy, after centuries of transition.

In the fourteen and fifteenth centuries, Italy was the most powerful economy in

the western world and its merchants were the leading business people. They were the middlemen handling luxurious products from the eastern world, for example, spice, perhaps the backbone of the Italian trade, silk, cloth, wool and others. Besides the principal merchants, the Italians were also the main bankers and the biggest client of the Italian banking and mercantile companies was the Church. While money-changers and pawnbrokers served local needs for credit accommodation, foreign banking dealing in bills of exchange was primarily in the hands of the Italian merchant-bankers coupled with superior business organizations. In fact, Italian merchant-bankers had established the foundation for most of the business institutions today. That is, they not only created the partnership but also developed measures for managing companies which had branches in foreign lands for remote control to overcome the hardships of long distance. In addition, Italian merchants invented “double-entry bookkeeping (the first unquestionable example being in 1340) and the bill of exchange in draft form, and experimented with marine insurance” (Roover, 1966, p. 19).

During those two centuries, the major Italian trading centers included Florence, Genoa, and Venice. Since Genoa and Venice were coastal cities, their activities were oriented toward the sea. Florence, by contrast, located inland, was the leading banking place while it also had flourishing woolen and silk industries and trading in luxurious products. Moreover, in 1406, it conquered Pisa and its port, Porto Pisano, and thus acquired the direct access to the sea, which made Florence the core for large mercantile and banking companies which controlled a network of branches abroad based on partnerships. It thus became the most flourishing state in Europe in terms of trading, commence, and banking. With regard to the wealth of Florence, it was stated that the revenue, disregarding the depreciation of the precious metals, was equivalent to “six hundred thousand pounds sterling, a larger sum than England and Ireland, two centuries

later, yielded to Elizabeth" (Cerf & Klopfer, 1933, p. 19). As a matter of fact, Florence remained a republic at a time while most of the North Italian cities fell into the hands of despots and that is basically due to the city's "great merchant families whose commercial interests extended throughout the civilized world" (Rowse, 1955, p. 5).

5.1.2 Banking Business

The origin of the Medici family can be traced back to as early as 1201, when Chiarissimo, the eldest son of Giambuono de' Medici as well as a member of the Town Council, became famous for owning various houses and towers in Florence. However, it was Giovanni de' Medici (1360-1429), the only branch of the family then, who made his family well-known in history. Giovanni de Medici was highly respected for his character and business ability. He gained the family's most wealth from the wool trade and textiles and founded the Medici Bank of Florence in 1397. Before that, he had managed a bank in Rome and then transferred his headquarters to Florence. Giovanni "not only invented limited liability and the accounting practice double-entry bookkeeping" (Cerf & Klopfer, 1933, p. 15) but also pioneered financing the Italian Renaissance in the name of the family. Giovanni had two sons, Cosimo the Elder (1388-1464) and Lorenzo (1395-1440). Cosimo had been married to Contessina de' Bardi, the eldest daughter of another rich banking family in Florence. The Bardi family had been gradually ruined owing to the loss of a huge sum of money, lent to Edward III of English but never paid back, before Cosimo's marriage to the family. With this marriage, the Bardi palace was turned into the possession of the Medici family. The Medici Bank went through a period of expansion which ended with Cosimo's death in 1464. The bank, established in 1397, lasted for approximately one hundred years till 1494, when the Medici were expelled from Florence and all their property, business

investments and real estates were put into the hands of receivers. With several of their ancestors taking part in public affairs, the family's "extensive political network allowed them to effectively rule the city of Florence" (Roover, 1966, p. 17).

Being well known in history for the prominent contribution to the Italian Renaissance, the Medici family's roles as bankers as well as traders attracts comparatively lesser attention. However, the financial power was actually the key factor that made the family seize political power, support artists, and promote humanism. The Medici, from Giovianni di Bicci down, was occupying the upper position of the social ladder as the tax records showed that they were "by far the richest family in the entire city of Florence" (Roover, 1966, p. 5). In addition to the land property, the family was dedicated to banking and trading and the combination of both. For instance, they bought wool from England and Spain, dyed from the East and spun silk from Lombardy. Then, with their skills in manufacturer and a highly organized banking system, the family was able to sell the cloth and silk in Florence and in many other places. The Medici family made a major contribution by developing the bill of exchange for international trading in order to reduce the demand of shipping gold and silver from one country to another, which was not only troublesome but also risky. Regarding banking, there were more concerns, for example, the prohibition against usury. As the usury was severely prohibited, any interest in the face value of a bill or a note was not possible. However, it was permissible to speculate on the exchange. The merchants therefore adopted cumbersome procedures such as complicating bookkeeping and then required bankers to operate with a network of correspondents in other places, which led to the significance of information collection and credit checking.

5.1.3 Credit and Information

The records show that the Medici was very cautious about making businesses and avoiding risks. Therefore, the information about the borrowers was crucial, so was the mechanism to collect information about borrowers as well as their credit. The ways for the family to control the borrowers was via its bank branches and correspondents.
The Medici family set up nineteen branches in some key places and assigned mangers to those branch offices, with whom the working contracts needed to be signed. Upon leaving Florence to take the position in a certain place, the branch mangers would be provided with instructions shown in the contract. From two of the contracts we can understand the way branches were controlled by the main office in Florence. One example demonstrated orders and a set of rules or suggestions given to Bartolomeo de' Bardi, a relative of Cosmo's wife, before he went to Rome in 1420 to handle the Medici branch in the Eternal City. The orders for Bartolomeo de'Bardi, in Rome, especially pointed to the "dangers of granting credit without discrimination" (Roover, 1966, p. 90). Bartolomeo was reminded of the fact that it would be more profitable to do business with merchants than with Curia because they made great promises while having nothing to offer. By contrast, the contract also stressed the fact that a creditor putting pressure on his debtors in order to collect his claims took the risk of losing friends as well as money; the social network mattered. Bartolomeo had to fully inform the Florence office of the business conditions and the credit condition of customers.

Another example showed the instruction for Gerozzo de' Pigli, a reliable friend of the family, who in 1446 was sent to London to take charge of the branch. The instruction, put in the contract, for Pigli illustrated directly that the Medici very much worried about "the injudicious granting credit and feared above all the accumulation of losses through bad debts" (Roover, 1966, p. 92). Therefore, Pigli was expected to follow a policy of caution in making loans and selecting agents. The instruction dealt with not

only the relations Pigli should establish with his staff but also credit policies. Based on these instructions, Pigli had to promise not to dice or gamble, but following the detailed instructions regarding the firms to lend safely and the amount of credit to give. For the sake of security, when Gerozzo just arrived in London 1446, he was told to deal with customers with good credit record listed rather than granting credit to those who the Medici family was not familiar with.

For the branch manger, there were some things to do for checking the credit of the borrowers. Take for example Bartolomeo, the branch manger in Rome, again. The instruction for him contained a formulation of the policy for Bartolomeo to follow, given that the main problem was trying to know to whom he could safely lend and how much. In order to carry out this mission, he first needed to consult his main assistant, Antonia di Lazzaro Bertini, who was very good at dealing with skippers. Then, Bartolomeo should be very aware of avoiding extending credit to any dealers, particularly Roman traders or small merchants because, in terms of security, they were somehow unreliable, with very little to offer. Bartolomeo was instructed impressively that "granting credit gingerly was better than to be too liberal as least bad debts swallow everything, capital as well as profits" (Roover, 1966, p. 204).

The other example unveils the instruction for the branch manger in Venice, which stressed that lending to Germans, not Venice permanent residents but staying occasionally in the German House, was a very dangerous game since no one knew if they would come back and pay the bills.

An overview of the surviving contracts between the Medici and their general managers presents the close corroborations between the branches and the Florence office. What is more, it reveals that Cosimo greatly feared the cumulative effect of small mistakes as much as the dangers arising from risks. For example, branch managers were

instructed if any borrower had no funds standing to his credit in another place, he had to find someone willing to accept his drafts and to pay them when due. Some of the branch offices were trustworthy business partners while others were related to the Medici by marriage. Each branch office of the Medici Bank formed a separate company with its own manager, who could be a partner of the firm as well, but the Medici retained control of the business by keeping more than half of the shares in the hands of the family members.

When the Medici had no branches, correspondents would be sent. Correspondents were selected with care among reliable merchants and those who gave the family business were preferred. For instance, in 1427, as the Medici had no branches in Naples, Bruges or London, though the businesses had started as earlier as around 1416, correspondents were sent as the bank representatives. They won commission as it was recorded that in Naples, from 1426 to 1471, the Medici Bank was represented by correspondents who "handled its business on a commission basis" (Roover, 1966, p. 245). However, they would be replaced very quickly when being found not qualified. Around 1430, the Medici family hired representatives from the Bardi and the Borromei firms to be their correspondents, in both Bruges and London. However, the correspondents gave unsatisfactory service. The Medici in 1436 decided to send Adoardo Portinari, the son of the manager of the Venice branch, instead. He was ordered to recover outstanding claims, to settle other differences, and to explore possibilities for future businesses.

5.1.4 Summary

The Medici family was well known for its patron of plenty of artists and thinkers in fourteenth and fifteenth centuries, which contributed to the glory of Italian

Renaissance as well as the splendor of Florence. Moreover, they played an important role in political and religious regimes. Either in arts or in politics, the financial practice coupled with international trading was crucial, though it was somehow neglected, and the Medici bank was a pioneer in terms of the financial banking.

The Medici bank, established in 1397, reached its peak under Cosimo from 1414 to 1476. The Medici members were bankers to the Papacy, a position which brought them "profitable business of a very varied kind" (Rowse, 1955, p. 36). The papal taxes collected in a certain place abroad could be handed over to the Medici banks in other places. They could also be used in international trading to pay for the purchase of commodities in different countries by means of bills of exchange. In the process of money loaning or money transfer, the information about credit was vital and was derived by branch managers or the correspondents who won commissions based on tasks of the banks. The data on the picture tell us there were nineteen locations and in some key places, such as Ferrara, Milan, Naples, Perugia and Venice, there were at least three correspondents. Managers or correspondents were limited to kinships or close partners since "business information was a closely guarded secret, probably more so in the Middle Ages than it is today" (Roover, 2011, p. 21). Branch mangers were under surveillance of Florence head office as they were given specific instructions concerning policies they were expected to follow when working with subordinates and merchant customers. As credit was crucial, the branch managers were even urged to deal with locals rather than with strangers whose credit was unfamiliar.

5.2 The Fugger

Greg Steinmetz, a former journalist with the *Wall Street Journal* and now a securities analyst in New York, claimed in his book *The Richest Man Who Ever Lived: The Life and Times of Jacob Fugger* that Jacob Fugger was both “the most influential businessman who ever lived and the richest man in history.”[69] In comparison with the Medici family whose names remained at least on several splendid buildings in Florence, the Fugger family is much less known, not to mention being celebrated. However, in the eyes of Greg Steinmetz, the Fugger was actually a better banker from a financial point of view. It was also argued that, some 500 years ago, the Fugger was the most powerful banking family in Europe, “a model of prudence and ruthlessness, and a vital source of funds for various wars in the Continent” (Strieder, 1931, p. vii).

The Fugger family originated from Augsburg, a city in Bavaria of southern Germany. It is as if the noble tends to found his setting in castles, peasants in the field, “so did the businessman flourish in the town” (Strieder, 1931, p. vii). For the Fugger, the trade within and between towns as well as fairs was the point that the family business started with. Regarding the key figure Jacob Fugger, according to a contemporary chronicler, he was a certain figure that “emperors, kings, princes and lords have sent to treat with him. The Pope has greeted him as his well beloved son. . . . He is the glory of Germany.”[70] It was stated that Jacob Fugger was very foresighted, continuously active, and rational rather than emotional. He believed in saving his income for further investment and diversifying the investments. As a young man, Fugger once vowed that he would never stop making profits as long as he could. He also foresaw that buying and selling of goods and credit would be the purpose itself someday. The typical style that the Fugger did the business was the family partnership. That is, based on the temporary partnership which developed in Italian cities, the Fuggers allowed the individual businessmen to form a joint-stock company and finally

the corporation which held different firms together. The German family dominated European businesses during the fifteenth and sixteenth centuries.

5.2.1 Background

The Age of the Fuggers was a transitional period; the economic center of Europe was shifting from the Mediterranean toward the Atlantic Ocean and the locus of finance moved from northern Italy cities such as Venice and Genoa to the Netherlands, only briefly resting in Augsburg. The Fugger family happened to stand between the two eras. It was also the period that the Medici just disappeared from the European arena of financial activities and the Fuggers built their relationships with the Pope. Since the end of the fifteenth century, their relations became much closer, reaching the family's peak under the governance of Jacob Fugger (1459-1525) in the first decades of the sixteenth century. The Fuggers were the chief financial aid of the merchants in northern and eastern Europe for more than two decades. The family also lent money to monarchs directly despite of their often unreliable credit. Jacob Fugger was the first person to introduce double-entry bookkeeping into Germany, which built his reputation among merchants. He also firstly arranged so-called news service to inform his business conditions. Fugger's international network of offices coupled with the centralized control over foreign businesses functioned as the modern multinational corporation. More importantly, Jacob Fugger served as the financier to the eminent House of Habsburg.

The Habsburg family was originally from the Habsburg Castle, in Switzerland today, in the eleventh century and became the ruler in Austria after 1279. The Austrian rulers, via a series of royal marriages and vies, controlled much of Europe over following years till the early twentieth century, though some places were occupied just

temporarily. Such an achievement would never have been realized if there had been no robust financial support. And such a robust financial support would never have been possible without the full assistant of the Fugger family in early years. The Habsburgs reached the first peak of its power under the reign of Emperor Maximilian I (1459-1519). Maximilian I was often short of cash to fight wars, to pay for the family's marriages or to maintain the political alliances, which gave the Fugger great opportunities to establish the tie with this imperial client and others from its network.

5.2.2 Banking Business

The history of the Fugger family can be traced back to Hans Fugger in the late fourteenth century. Hans Fugger was one of the weavers, a common occupation in his hometown, Swabia in southern Germany, for centuries, under the domestic system of Augsburg merchants. Convincing that Augsburg would have a better chance for an advancing economical life, Hans Fugger moved into the city from the little village in 1367. The expansion of weaving in the South Germany later offered a niche for the development of mercantile enterprises. Hans became one of the Augsburg merchants who controlled the import of raw cotton through Venice and the export of the finished cloth. Soon he got involved in the businesses of more products in the German-Italian trade. His two sons Andreas and Jacob I also participated in the family business.

Until the middle of the fifteenth century, Han's two sons worked together on the business inherited from their father but then separated. Jacob I did well in his business but the business run by Andreas Fugger as well as his sons went bankrupt and disappeared from the mercantile community of Augsburg soon. However, when Jacob I (1398-1469) died in 1469, most of his children were too young to handle the business. Luckily, the capable widow, a daughter of a master of the mint, guided the family

enterprise “with a sure hand through the dangerous waters of the transition to the next generation” (Strieder 1931: 53) until her sons, Ulrich (1441-1510), George (1453-1506) and Jacob II (1459-1525) were able to take charge of the family business. It was the two older brothers who developed the wide geographical range of the Fugger business relationships, reaching from Italy in the south to the Netherlands in the north, and to Silesia, Poland and Hungary in the east. It was also the older brothers who tied financial relations with the papacy and the Emperor. Yet, it was Jacob II, later known as “the Rich” who led the family to its peak after two of this brothers passed away.

Jacob Fugger’s wealth as well as power grew mainly by financing the territorial ambitions of the House of Habsburgs. This relationship began when Frederick III, the Holy Roman Emperor, was given a loan by Fugger’s brother Ulrich in spite of poor credit. Jacob II, inheriting the connection that his brothers had built, became the principal banker to Frederick III’s son, Emperor Maximilian I, who significantly expanded the influence of the Habsburgs. In addition, Jacob II, also based on the well built network, maintained a good relationship with the Pope. With reference to the taboo of the usury banned by the Catholic Church, Jacob II took his concern and argument to Pope Leo X directly, who had been personally benefited from the generosity of Jacob II. The pope was so sympathetic as to rewrite the ban in 1515, which redefined the usury as “a profit that is acquired without labor, cost or risk.”[71] Backed by the new interpretation, the Fuggers’ business was accepted because the family did take some risks with clients of poor credit. Fugger’s steady relationship with the Vatican was maintained via the service of an extensive branch networks through which the pope could transfer offerings from Germany to Rome with about a three percent of commission for the Fuggers in return.

In terms of trading, Augsburg was a free city then, well-positioned on the trade route between Italy and the Netherlands and close to central Europe with great silver and copper mines. Bearing this geographical advantage, the Fuggers were able to obtain control of commodities such as silver from Austria and copper from Hungary. Jacob II built a smelter to refine the copper and traded it beneficially. Moreover, the Fuggers, along with other Augsburg merchant-bankers, made decent profits by providing loans to local rulers in order to secure the produce of their mines.

The decease of Jacob II's two older brothers, in 1506 and 1510 respectively, contributed to his only leadership in the family for the following one and half decades till the end of his life. He followed the contracts issued together with his brothers fairly, dutifully and carefully, not only guiding the younger in the business but also binding the family members tightly. The following texts show s part of the brothers' contract, from terms such as 'mutually binding upon ourselves', 'bound ourselves mutually', 'determined to carry on' and 'common trade' we can see how Jacob II, as an uncle, were dedicated to the family businesses and the cultivation of his nephews.

> "…we severally made contracts mutually binding upon ourselves, as follows… These contracts were made in similar terms, and in them we bound ourselves mutually for ourselves and our various heirs in such a way that, …. my two brothers' sons become familiar with the trade, I have determined to carry on and mange the business myself, and to take industriously in hand my two brothers' sons, namely Ulrich and Hieronymus, sons of my brother Ulrich, and Raimund and Anton, sons of my brother George. I therefore invite them to join me in my common trade and in the Hungarian trade, and hereby do take them in with me in my business. (Strieder, 1931, p. 192)

The Fuggers reached its peak under the leadership of Jacob II. According to the

contract, the contract needed to be followed seriously for the following six years and some businesses were split among the young and its next generations. After the death of Anton (1560), a nephew of Jacob II, when the leadership of the firm was passed over to his son Markus and other family members, the Fuggers lost a big amount of their wealth after the bankruptcies of the national government.

5.2.3 Credit and Information

Jacob II was a genuine private banker. To churchmen, he made loans to the popes for political or military purposes and transferred papal taxes and offerings to Rome and among different cities. To private individuals, he not only received deposits, changed coins, bought and sold bills of exchange, sold letter of credits but also loaned them money and transferred credits. As a matter of fact, when Jacob II attained to the leadership of the Fugger enterprise in 1490's, it already differentiated his business from other Augsburg merchants. That is, orchestrated by his influence in the mining interests, he made the best use of credit and pushed "the credit business gradually into the leading place in the Fugger undertaking" (Strieder, 1931, p. 105). In terms of credit giving, Jacob II, though bold and adventurous in running the business, was described as a cautious banker, which could be shown by a couple of his principles.

Firstly, the sovereign loans made by him were generally backed by sound collateral. Jacob Fugger denied unsecured credit to even the most powerful ruler of his time. He always stuck to his maxim: "business is business and must be so dealt with" (Strieder, 1931, p. 18). The advancing of credit with the Habsburg and other princes had been initiated since 1476 by Jacob's brothers but grew larger after Jacob II entered into the leadership of the family in 1510. He loyally served the House of Habsburg as long as he could support with the power of his wealth and his credit. However, never did he

let his proud royalty yield to the pressure from the imperial officials or the financial agent so as to neglect the calm business calculations. To the imperial financial agents who asked for the granting of unsecured credit, he insisted on keeping his principle about credits instead of satisfying the creditors with words of flattery.

In addition, for private debtors, Jacob II preferred smaller but more certain undertakings to larger but riskier ones. Given this, never did he consider a speculative misuse of the great capital resources, which other Augsburg merchants in the sixteenth century might give it a try for potentially higher profits. At that time, nothing demonstrated a person's credit more than "the obvious and striking impression of wealth conveyed by large holdings of land" (Strieder, 1931, p. 94). That is also why bankers of medieval Italians as well as Europeans deliberately tried to acquire estates or build magnificent constructions, at home and abroad, to increase their credit. By the same token, a small debt from a bedridden debtor would be refused by Jacob II, which made him seem coldhearted. For Jacob Fugger, "the granted credit was only justified from a purely commercial point of view" (Strieder, 1931, p. 21).

Just like the Medici family and other private bankers, which used the branch managers and correspondents to delivery the up-dated information about the business and other affairs which might affect the financial practice, the Fuggers set up their own mechanism to get the latest information as soon as possible via at least three ways. First of all, it was through mutual cooperation between the Fuggers and the royal friends. It was argued that in history, there was no other mercantile house which so effectively and consistently as the Fugger House "employed its financial resources for its princely friends" (Strieder, 1931, p. 13) and Jacob Fugger indeed had invincible talents for that. Through either the routine transactions with the financial agents of the Crown or frequent visits of the Habsburgs as well as other highly-positioned members in

Augsburg, Jacob II became familiar with most secret policies in advance. The precious gifts from Jacob II opened many silent months undoubtedly. In spite of the labor and cost, Jacob Fugger knew exactly what he was doing—adding new and powerful friends while keeping on the support for old ones so as to raise the reputation of his House continuously.

Second, Jacob Fugger had organized his own net of commercial posts which spanned all of the Europe as far as within his control. In addition, with Jacob II's thirst for quick information about trade and commerce, he created "a network of couriers" that were required to report to Augsburg swiftly and routinely. The reports were even printed and distributed to other clients in the form of a primitive newspaper. It was argued that "Fugger had invented the world's first news service."[72] Last but not least, the district managers of the Fugger House played a key role in providing and delivering the information among the business units. They mainly comprised family members or partners. Some children in the family were capable and indeed satisfactory district managers.

The connections with the Habsburgs that Jacob Fugger's brother had established did pave the way for the closer partnership with the dynasty. After Jacob's brothers George and Ulrich passed away by 1510, Jacob became the only actual and legal controller of the family business. During those fifteen years before his own decease in 1525, he fully followed the contract that the three brothers had signed in 1502 to maintain the integrity of the family and collaborate with the young generation for the family business. Thus, the family members were the best delivers for the latest information.

However, credit was never an easy issue. It somehow bothered even the excellent financier and forced Jacob II to make the balance among maintaining a good

relationship, taking the risk, and making the profits. According to the record, he was strongly insistent on the some credit principles but, from limited resources, he was obliged to negotiate with his clients and reaffirm his commitment to credit. Part of the following two letters uncovered how challenging credit granting could be and how firm but humble Jacob II was when handling the credit.

The first letter was offered by Emperor Maximilian's two representatives to the Emperor on 2nd October, 1515 in Augsburg to forward Fugger II's response about the late payment after the due date.

> "Thereupon the said Fugger gave us an answer as follows, namely: that to him **such dealing was entirely unreasonable,** and **it would not redound to his credit…and delay of the payments,** he was forced to take into consideration that, if he did this once, and the payment became due again, he would again be involved in discussions and arguments over a delay in payment, **and the like, which was not reasonable to him as a merchant, and might indeed involve discredit**…" (Strieder, 1931, p. 209).

The other letter was offered by Jacob Fugger himself to the Elector Frederick for the Pfzla on 22nd August 1522 in Augsburg:

> "…Your Princely Grace well remembers that you are to pay to the Company Rem and in part to me **at the Frankfurt autumn fair** the fourth part of the 14,000 Rhenish gulden,[73]… It is therefore my humble request to Your Grace that **you bear this debt in mind, and arrange to pay… It is my humble request that this be done**…." (Strieder, 1931, p. 214).

5.2.4 Summary

The Fuggers were argued by some researchers to be the truly earliest European bankers by the way the family functioned. They sometimes made loans to the religious leaders and temporal princes, for example, the pope and the Habsburgs dynasty. Moreover, Jacob II Fugger and his family were said to be the first modern businessmen

as they played multiple roles including wholesalers, retailers, manufacturers, common carriers, and most importantly bankers. Thus, viewing Jacob Fugger only in his relation to Augsburg of German, the place where the Fuggers originated from, would be setting too narrow limits to the historical position of the family. In fact, Jacob II Fugger was a leading figure in the economic life of Europe, not to mention that the family's enterprises had reached far beyond the boundaries of the Holy Roman Empire. In either trading or finance, credit was crucial and Jacob II Fugger was especially cautious about controlling and granting credit. In order to get the latest information, he used his royal friends, the news network carried out by couriers, and the family members serving as district managers so as to judge and manage the credit of the clients.

5.3 The Baring

In late February 1995, a twenty-eight-year-old trader named Nicholas W. Leeson in Barings Futures Singapore put speculatively $29 billion of the firm's money on the line and lost approximately $1.3 billion of it. That young man, working in Singapore then, was sentenced to six and a half years and put to prison in Singapore after pleading guilty to two counts of "deceiving the bank's auditors and cheating the Singapore exchange."[74] Afterwards, Dutch bank ING purchased the collapsed Barings Bank in 1995 for the nominal sum of £1. The news hit the headlines then, making Baring well-known to the public worldwide. For the younger investors, what remained little known is that the Barings Bank, an investment bank based in London, had already survived nearly two and a half centuries of ups and downs before the collapse. It was one of the leading banks in the glorious days of British merchant banking in the

nineteenth century. The Baring Family once vied with the Rothschild Family, to be elaborated in the following section, for leadership in the London capital market for much of the nineteenth century.

The inception of the family's banking business was in the 1770s via serving as a contractor for British government consuls as the government required finance to meet the cost of the British war in North America—American War of Independence, from 1775 to 1783. The business of financing wars became more important during some other wars such as that with France from 1793 to 1815, which made Barings Bank emerge as the most powerful merchant bank in Europe. In addition, the Barings acted as paying agents which were particularly associated with some countries including American, Argentine, Canadian and Russian governments. The overseas clients of the banks were worldwide, ranging from "the Canadian Pacific Railway Co. to the Buenos Aires Water Supply & Drainage Co Ltd."[75]

5.3.1 Background

The era when the Barings began the banking business was a period of banks' transition from mercantile businesses to industrial ones, for example, the industries of railways and water supplies. The Barings, as a merchant banker, performed most of the functions as the previous merchant banks, for instance, receiving deposits, changing coins, buying and selling bills of exchange, and loaning money. Beyond that, they also developed certain specialization in finance which included financing trade and then a combination of trading and investment banking. This combination of functions shed light on the large private bankers "who rose to prominence in the United States late in the nineteenth century" (Hidy, 1949, p. 48).

What is worth noting is the formation of the sovereign bonds at the same period.

The first government bonds were issued in the city of Amsterdam in 1517. Since Netherlands as a country had not been available till 1839, the bonds issued by Amsterdam were considered to be the predecessor of Netherlands government bonds. By contrast, the first bond issued by a national government was the sovereign bonds issued by the Bank of England in 1694. When extra expenditure is required by a nation, governments normally have two options, to raise taxes or to issue bonds. The former way is unwelcomed by the tax payers and unpopular because of the lengthy legal process. Therefore, sovereign bonds are preferred as if governments take loans from the market, investment banks included. The reason why the Bank of England issued the sovereign bonds was not only to raise money to fund a war against France but also to carry out a series of financial innovations, discussed in Section 4.3. Later on, other European governments and the United States of America also began to issue bonds to raise funds for wars or other national spending, followed by the issues of corporate bonds. Bonds are to be discussed more in Chapter 6.

5.3.2 Banking Business

The history of Barings Bank has its origin from the life of Johann Baring (1697-1748). As a clothier from Bremen of Germany, he moved to Exeter of England in 1717 to learn wool trade. Johann Baring then gained the English citizenship, established his business as a merchant and manufacturer and also became one of the leading businessmen there. Several years after the death of Johann Baring, his three sons—John Baring, Thomas Baring, and Francis Baring—set up the merchant house of John & Francis Baring & Co. in London in 1762, later known as Baring Brothers. This house bought and sold various commodities in British and overseas markets, like what previous bankers did, but traded on its own account and on joint accounts with other

merchants as well. Moreover, the Baring Brothers simultaneously behaved as London agents for overseas merchants, handling shipping and insurance, making and collecting payments, and even financing the trading activities of these merchants via bills of exchange. This type of banking business was "a mainstay of the firm's work from the eighteenth until well into the twentieth century."[76]

In 1803, Francis (1740-1810) gradually withdrew from active management, bringing in the younger generation, including his son Alexander Baring (1774-1848), to be partners and the company name was changed into Baring Brothers & Co. The Barings attained its zenith of reputation under the leadership of Alexander Baring in Europe from 1803 to 1828. During this period, the Baring was thought to be the leading trader in both English and European security markets. Alexander once served on the Board of the Bank of England for nine years, from 1805 and 1817. He was said to be one of the best-informed men in England and, more importantly, one who used his outstanding position in the financial world to "exert every influence he could to preserve world peace" (Hidy, 1949, p. 48). As to the market on the other side of the Atlantic, the competition also started in no time. Between the reorganization of the firm in 1809 and the termination of the Napoleonic Wars in 1815, Baring Brothers & Co had been serving "their American clients and to enhance their reputation with American houses" (Hidy, 1949, p. 48). More businesses expanded continuingly. The picture on page 104 shows part of the family genealogy.

5.3.3 Credit and Information

Just like other previous banks, the Baring Brothers also made the use of branch offices and correspondents to deliver information about the credit condition of the clients and the market. However, what differentiates Baring from previous European

bankers is that its market went beyond Europe and reached the U.S. Before any branch was set up in the States at the beginning, correspondents played a crucial role in realizing and enlarging the market. In this regard, Baring was very successful in finding excellent agents or correspondents and making partners work with agents and correspondents effectively and harmoniously, particularly in the decade after the reorganization of the company in the early 1990s, with the banking business going beyond Europe and creeping into the U.S. Most of the agents or correspondents were family members or distant relatives, very few being outsiders. However, it is worth noting that excellent agents or correspondents would be invited to join the Bank and became the partner, though scarcely.

In the summer of 1828, the Baring Brothers & Co. just went through another company reorganization and six members were picked to become a new team which included Alexander Baring (1774-1848), Francis (1800–1868), Humphrey St. John Mildmay (1794-1853), Thomas Baring (1799-1873) and John Baring (1801-1888), sons of Sir Thomas, and Joshua Bates(1788-1864), a friend and Baring Brothers partner. The work division and the collaboration among them contributed to the great accomplishment of Baring in the first half of the nineteenth century. Alexander, the youngest leader from the second generation of the banking family, almost retired from active direction of the firm during the reshuffle of the family banking, taking none of the profits. Francis Baring, Alexander's second son, unfortunately was seldom helpful in either business or politics even though he traveled to the U.S. and Mexico between 1820 and 1825, meeting lots of his father's friends and visiting leading trade centers. Humphrey St. John Mildmay was the husband of Alexander's eldest daughter and joined the House of Baring by marriage. He remained as a partner owing to his business ability and social network. He once served as a Parliament member and a director of the Bank

of England for years and always returned “with information of great value to the firm” (Hidy, 1949, p. 80).

Thomas Baring was perhaps the most remarkable one of the team as his advice was highly valued by those who were launching corporate institutions in the U.S, on the Continent, and in England. Joshua Bates, comparatively speaking, had a very different background. He was born in Weymouth, Massachusetts, worked as an agent in Europe, and then was recommended to Baring owing to a certain family relationship. He ended up becoming a partner of the Barings and spent most of his time in the U.S. as a partner. Partners worked and traveled everywhere, forwarding the latest information among the banking family.

In addition to the family members and partners, the agents were vital to the company, especially those in America, a new market and a novel world, and Thomas Wren Ward (1786-1858), a retired Boston attorney, as well as and his two sons were as important as any team member. Thomas W. Ward was a prominent Boston merchant, first following his father into the mariner’s trade and later establishing his own business. He was recommended by Joshua Bates and thus worked as the American agent for Baring Brothers from 1830 to 1853. The function of agents was widespread, ranging from building up or maintaining the personal relationship with businessmen and politicians to determining the strategies in the market. Most important of all, offering “a steady flow of reliable information was a prerequisite to correct decisions” (Hidy, 1949, p. 99) especially in the era when American economic and political conditions were changing rapidly. For Ward, in the first period till 1832, his chief task was to “select reliable correspondents and grant commercial credits” (Hidy, 1949, p. 98). Ward’s social position, wide acquaintance among the leading businessmen of Boston and New York, and his own business success were very desirable characteristics for an excellent agent.

Moreover, the record demonstrated that "his view on American affairs were usually correct" (Hidy, 1949, p. 101). Ward as an agent of the Barings felt honored when he was asked to become a partner of the New York firm in 1832. He did not accept it for a personal reason. After his retirement, his sons Samuel and John resumed his duties as the agents of Baring Brothers.

The new team worked hard in order to maintain the position of Baring Brothers in not only London but also other new markets, such as the U.S. and Mexico, particularly the U.S. Since the partners had already determined upon an expansion of their American operations, there was a lot of work to do. By 1828, Baring Brothers were one of the pioneers to "facilitate American commerce and marketing American bonds" (Hidy, 1949, p. 85). By then, clients from Latin America and Far Eastern had depended on the maximum use of the bank's capital and the minimum of foreign credit. In trading, long-term credits were also given. Between 1828 and 1833, the reputation of Baring's stability and integrity was much better than other banks and plenty of American merchants preferred holding credits on the Barings. In terms of credit, the Barings heavily relied on "the integrity and judgment of hundreds of remote correspondents" (Hidy, 1949, p. 94) in the cities wherever neither partners nor agents were available. The judgment from the correspondents was not less important than the decisions of the partners themselves.

As to information, the market reports and recommendations concerning credit granting and relevant issues had to be forwarded from partners to Ward and other correspondents. The issues on the reports were concerned with how to choose trustworthy and wise clients, how to develop and maintain a good personal relationship with American merchants and politicians, and how to acquire a steady flow of information. Beyond that, political events in all parts of the market had to be watched

closely and reported quickly. Also, legislative rules were also crucial, particularly those related to custom duties, money or public finance. Information was not only shared among partners but also with key people out of the family for closer ties. For example, it was said that Francis Baring's information on all subjects proved to be highly invaluable to his political friends. To develop closer relationships with influential people in governments was extremely important in the public relation policy of the Barings.

With reference to the collection of information on credit, the managing partners actually had "spent more than one year in collecting information upon American economic affairs (Hidy, 1949, p. 95), through the agents and correspondents, before they visited the land in 1828. Partners and agents traveled often, too. For instance, the journey arranged by correspondents took Thomas Baring to coastal towns from New Orleans to Boston and also offered him comprehensive knowledge on both sides of the Atlantic Ocean.

The Baring experienced a commercial expansion between 1830 and 1832 and credit was greatly used. Following the instruction from Baring in London, Ward granted a larger volume of credit to an increasing number of American merchants, large or small, but in various ways, depending on the environment and conditions of clients. For instance, for credit granted to American purchase of commodities in the U.K, on the Continent, in the West Indies, and in China, credit was granted comparatively easier because of the stability and prosperity of those markets. Some credits of important firms would even be renewed automatically. By contrast, extension of credit to South America and Calcutta and other East Indian ports was comparatively harder, "concerning the strength and integrity of all Latin American firms" (Hidy, 1949, p. 104). Expansion of all these operations by Baring Brothers & Co. required more strong and reliable local correspondents. As Sir Francis Baring had stressed the potential harm of "lack of

satisfactory control over operations in merchandise and credit" (Hidy, 1949, p. 42), correspondents later followed it cautiously. In places where agents or correspondents were not yet available, credit granting could not be more carefully.

5.3.4 Summary

According to Benjami Disraeli, Prime Minister of the U.K. from 1874 to 1880, Alexander Baring was "the greatest merchant England perhaps ever had" (Hidy, 1949, p. 48). The Barings was definitely a phenomenon. They worked in the international market, across the Atlantic Ocean. Besides commercial credit, they were dedicated to industrial credit and active in the international security markets. Out of the Continent, local assistants were thus required and there were agents and correspondents besides the team consisting of partners and family members. Information traveled among different offices, partners, agents and correspondents while providing information and credit checking were extremely important. Building up and maintaining good and long-term relationship with very important people such as financiers and politicians was thus the key measure to obtain first-hand information, no to mention that a couple of family members were served in the high positions in the government.

The general organization of Barings Bank was similar to that of the Rothschild Family, to be discussed, and two families were often compared in many ways. Alexander Baring (1774-1848) used to be compared with Nathan Rothschild (1777-1836) as both of them worked a long time in London. Even Francis Baring (1740-1810), from the following generation, would be compared with Nathan. The two banking empires do have some things in common and one of them is their devotion to the security markets. For Alexander, besides following his father's major policies and working on commercial operations, his strength was indeed in marketing governmental

securities, either those of the U.K., the U.S. or other countries. Coincidentally, bonds were also the key factor that The Rothschilds accumulated their wealth. More is to be discussed in the next section.

5.4 The Rothschild

The Rothschild family is claimed to be one of the most excellent capitalists and bankers in history. Since the establishment of its financial industry in 1800s mainly in Europe, the Jewish descendents have kept active and influential worldwide till now. It was put by Reeve that "history does not record another instance of such unparalleled success" (Reeves, 2009, p. 2) as the immense fortune of a non-royal family was made in such a short time by so smart people in such adverse circumstances. Being the minority and starting from scratch, the Rothschild family is more than a legend; it is somehow mystery because very few of the family wealth has been public. It goes without saying that the sharp contrast between the shabby background of the original family and its extraordinary position nowadays would highly surprise most people. After about three centuries of changes and developments, "it would be insufficient to sum up the family as still very wealthy" (Morton, 1962, p. 5). Moreover, the everlasting brilliant achievements made by the descendant or successors never stop thrilling people. In this regard, Birmingham also claimed that "the Rothschilds were the greatest private bank in the world and were unaccustomed to enter any deal they could not dominate" (Birmingham, 1967, p. 136). While people might be still debating how the family got involved in some critical wars, changed the history, and dominated many banks worldwide or even the gold market, it is undoubtedly certain that the family is

influential and powerful in terms of world finance. The influence of the Rothschild family in banking and finance stays strong till the modern era though the family remains mysterious to some degree. What makes the family filled with mysteries is partially related to its identity as a Jewish family.

5.4.1 Background

It was not until 1948 that Jewish people established their own country, the State of Israel. It was as put by Biale that the history of Jews was "abnormal due to their lack of territory for such a long period of time" (Biale, 1987, p. 6). Before that, they were living or wandering in different counties, mainly in Europe, and discriminated one way or another. For instance, the place that the Rothschild family originated from was the isolated ghetto. The house of the Rothschild which meant Red Shield and was later turned into the surname of the family was located at the Jewish Ghetto of Frankfurt in Germany. As described by Wolfgang Goethe,[77] the Ghetto was "as a town within a town, fortress within fortress……to him a very terrible place" (Hubbard, 2005, p. 112). In 1744, Mayer Amschel Rothschild was born. His father Amschel Moses Rothschild worked as a dealer in curiosities and old coins to support the family. Being expected to become a rabbi in the synagogue, Mayer A. Rothschild (1744-1812) was educated with knowledge of the Jewish faith. However, Theology was not his taste. By contrast, "his instinct for business was too powerful to resist" (Reeves, 2009, p. 12). His parents' plan for him to be a rabbi was abandoned in the end.

When Mayer was just nine years old, he was taken by his father for business trips. He used to follow his father to see the wonderful collection of coins of the landlord and thus knew other children out of the Ghetto. When being asked about the yellow patch on the breast of his jacket, the little boy would answer slowly but proudly that the patch

meant he was a Jew and he lived in the Ghetto. It was recorded that he would even emphasize his identity as a Jew, just like his father's and all other folks' and, most important of all, they were the Chosen People of God! After the decease of his father when he was twelve years old, Mayer Amschel took to his father's business "as a bird takes to the air" (Reeves, 2009, p. 119).

5.4.2 Banking Business

The talent for business seemed innate for Mayer A. Rothschild. His natural shrewdness and skills in making bargains compensated him for his youth and inexperience. Not only did he enjoy it, the business also blossomed. The products he sold ranged from jewelry, old coins, and curiosities to paintings. When he was twenty, he traveled to Hanover to visit a kinsman and worked as a clerk in a bank. However, Mayer Amschel fully realized that changing currencies would never make him a fortune but trading and making loans would possibly be. More crucially, he understood the necessity of obtaining the protection and patronage from the Prince. With these thoughts in mind, he returned to Frankfurt, "one of the major centers of European commerce" (Muhlstein, 1983, p. 17) in 1763, and transformed his father's little store into a bank which became the trading center for people in Frankfurt Ghetto. With his achievements in banking businesses and social networks, he became a phenomenon.

In order to create the social network, Mayer Amschel targeted at Prince Wilhelm IX (1743-1821), said to be one of the richest men in Europe then, owing to a large inheritance from his father and handsome profits from investment in English government bonds. Wilhelm was the young and new Landgrave of Kassel, the third biggest city in northern Germany, where The Rothschilds could reach by coach in an hour from Frankfurt as the biggest city in that area. Owing to his origin and identity as a

Jew, Mayer Amschel did not feel secure or brave enough to deal directly with Wilhelm. Therefore, he tried to get acquainted with his financial advisor, Karl Buderus, who worked closely with the royal family. Mayer Rothschild succeeded befriending him by sharing some rare coins he had in good deals. They had the similar ambitions in becoming rich. In the end, Buderus' investments in bonds and real estates were also handled through The Rothschilds.

After several trips to Kassel and realizing the personalities of the Prince such as greed and capriciousness, Mayer Rothschild in 1787 offered Wilhelm some fine jewels and coins at an exceptionally cheap price. Trust was then built up gradually and The Rothschilds ended up serving the Prince as a broker. As Prince Wilhelm IX, the Landgrave, owned large surpluses and planned to buy large amounts of foreign state bonds, the Rothschilds were in charge of matching the Landgrave with right borrowers, negotiating the price, interest rates, and dates of maturity.

Mayer Rothschild also established a close relationship with another key person Gentz, the secretary and financial adviser of Prince Metternich (1773-1859). In comparison with his loyalty to the country, Gentz apparently had more passion for personal benefits. His diary in 1818 shows that, after long conversation with the members of the Rothschild family, he would be "providing the Rothschild's with an important source of political information and a connection with Prince Metternich" (Muhlstein, 1983, p. 197), serving as the Austrian Empire's Foreign Minister for several decades from 1809. He was particularly paid for supplying The Rothschilds the "political information" (Corti, 1972, p. 370) and the correspondence with Gentz was carried on in the form of private letters. Gentz was rewarded with a luxurious life and the relationship continued until his death. To this point, The Rothschilds had paved the way and "taken the first steps toward becoming a real banker" (Muhlstein, 1983, p. 20).

Beyond Germany, Rothschild's reputation grew so much that the Habsburg Empire in Vienna in 1833 appointed The Rothschilds, mainly Mayer Rothschild and his first son Amschel, to be the Imperial Crown Agents. Metternich even appointed The Rothschilds over the head of his "Paris ambassador" (Corti, 1972, p. 399) as the channel of communication between him and the French cabinet.

In Frankfurt, the original little bank, basically a trading house dealing with discount and exchange, had been converted into major banking center. In addition to typical banking businesses and their traditional exchange of textiles and curiosities, the Rothschilds were also involved in a major wholesaler business with large stocks of wool, cotton cloth and flour. The prices of these commodities surged to an extremely high level owing to the burst of French Revolution (1789-1799) and brought forth huge profits. Regarding the businesses related to wars, the Rothschilds gained a contract to supply wheat, uniforms and other equipments for the Austrian army. The family was even assigned to handle the regular distribution of soldiers' wages. Based on the needs of all the commodity transportation, the agency of transportation and forwarding was also set up. In addition, the family was engaged in the specie and bullion businesses among different key European cities. Moreover, since Mayer Rothschild, the family had traded in wine, the business just opened to Jews. With the development of banks in other cities, businesses expanded and varied and one of the most important operations was bond trading, especially government bonds.

The Landgrave Wilhelm became much wealthier, partly thanks to the careful calculation of Mayer Rothschild working as a broker. The richer he was, the more obsessed he was with making money. At the same time, he was also under pressure from several European royal families to lend out money at very low rates of interest. To overcome this hurdle, Wilhelm preferred anonymous investments and it was the

Rothschild who first recommended “partial bonds”[78] (Elon, 1996, p. 116) which had been just introduced in the market. The Rothschilds worked with other two banks and helped Wilhelm’s Danish distant relatives, poverty-stricken, to issue the partial bonds and, on the other hand, assisted Wilhelm to buy them. Through partial bonds, Wilhelm was able to lend the money anonymously by buying up these bonds through trustworthy intermediaries. The Rothschilds were very cautious handling the business, though the profit, commission included, for the bank was just modest at the very inception. However, with the increase of the business, both profits and commission multiplied quickly. Later on, the Rothschild started to negotiate the businesses alone among European countries and profits surged accordingly. It is worth noting that the Rothschilds also preferred being anonymous leaders. The anonymity in markets coupled with the family’s humble lifestyle failed to reflect their huge wealth, not at all.

5.4.3 Credit and Information

Mayer Rothschild sequentially sent his five sons to different European cities besides Amschel, the eldest son, staying in Frankfurt—Salomon to Vienna, Nathan to London, Carl to Naples and James to Paris— when they were old and mature enough to learn and handle the family business. To be more specific, they followed Mayer Rothschild everywhere watching and learning before settling and working independently in a new place. For example, Amschel and Salomon, the two oldest sons, joined their father in the family businesses at sixteen and fifteen years old respectively and James, the youngest son, was sent to Paris at the age of nineteen. Also, Mayer Amschel never hesitated to take his sons to the social events as long as the appropriate opportunity came. These five young men also followed the pattern, sending their sons to different places, learning and handling the family business little by little. An intense

network fundamentally consisting of males from the two generations of the family was thus formed and information was travelling among the Rothschild houses in different cities. Moreover, in order to "strength the family's power and autonomy" (Elon, 1996, p. 181), marriages between family members were highly encouraged. It was recorded that about two thirds of grandchildren of Mayer Rothschild married each other. In this way, information only travelled around family members but not outsiders. For the purpose of gaining the latest information and passing it among family key members, the Rothschilds designed an unusual and excellent system.

It was stated that Nathan Rothschild set up a "private courier system" (Muhlstein, 1983, p. 47) that definitely surpassed all the other competitors and even the royal families. In the beginning, the system ran between Dover of the U.K. and Calais of France, both ends of English Channel, and it then expanded to link four cities—London, Paris, Vienna, and Frankfurt—where the Rothschild houses were located. Particularly, because of the bad weather over the English Channel, Nathan recruited fearless captains who were willing to take great risks with large bonuses while prohibiting them from accepting passengers but delivering messages only. Therefore, a Rothschild messenger often crossed the Channel on boat when no other one did. About information delivery on the land, the family acquired an impeccable reputation, too. It was described that, during the chilly winter, the Rothschild courier took six days to go to Vienna from Paris. By contrast, the mail coach, pretty much like the express service today, might take ten days, four days slower than the Rothschild. As a result, the Rothschilds always had the news before anyone else, ministers included. In addition to the private courier system, Salomon also kept a group of runners at his disposal, whose only duty was to "run backwards and forwards from him to Rothschilds with reports of all the fluctuations in prices" (Ferguson, 1998, p. 382). It is crystal clear that "runners" were in charge of

delivering messages among the family members in no time.

It is worth noting that the correspondence among the Rothschild family members was extremely difficult for others to figure out because of the language and writing style used. That is, their correspondence was always carried on in “faculty German transcribed into Hebrew characters” (Muhlstein 1983: 46) with almost unreadable handwriting, not to mention that some people’s handwriting, such as Nathan’s, was even much harder to read for his brothers. The young generation actually could speak German, English, French and Italian (Elon 1996:178) but, in letter writing, German with Hebrew letters was basically the only choice for the sake of confidentiality. Even when it was necessary to transfer someone’s English information to the other family members, they would translate the texts into Hebrew. Moreover, the text would become more obscure once some people began to discuss secret matters. To be more specific, they would fill the letters with deletions and additions in order to mislead any unexpected reader. Furthermore, code names would be used, for example, ‘uncle’ for ‘Prince Metternich’, ‘Langbein’ for Nathan, or a rabbi’s name for a certain person. Thus, to break all their codes would be like deciphering any moribund language. Given this, even any family who was travelling on businesses could also be able to keep abreast of latest events. With all the skills and methods, the brothers successfully pioneered in their speed and reliability of delivering the information.

One of the most special things about letter hand-writing is that even women were expected to write in a blurry manner, making their letters as light as possible, when they needed to write to family members. Since women in the Rothschild family did not play any key role in the family business, not at least by the nineteenth century, most of the messages in the letters would be irrelevant to the business. However, keeping the content secret was still vital because letters were delivered by couriers, none family

members.

The texts of hand-written letters might never be comprehended but from the limited publicized correspondence of the family members, some information about investments was read. In 1836, Nathan (1777-1836), the third son of Mayer Rothschild, in London wrote to his son:

> "He wishes you to go on selling English Securities and Exchequer Bills, as well as £20,000 India Stock more… He also said you are to sell … the securities that the Portuguese Government has given for the money they owe us, not minding one or two per cent" (Ferguson, 1998, p. 297).

In 1840, Saloman (1774-1855), the second son of Mayer A. Rothschild, in Vienna, wrote to his brothers Nathan:

> For Russia 3 percent paper you offer 70, less commission of 2 percent makes 68! Is that a reasonable price, when you consider that… Australian 3 percent 81 and Belgian 3 percent 71? When the bonds of a state which has scarcely emerged from revolution are valued as such prices" (Ferguson, 1998, p. 382).

The above two pieces of correspondence show that the information about prices, benefits, interests, and creditors were exchanged and the debtors were also discussed. In fact, regarding the decision of whether to grant the loan to the Russian government or not, Nathan drew up a report and sent it to Salomon, describing the political situation of Russia and its warship with Turkey. They also made the extensive use of Gentz by paying more to get more information and asked for the comment from Metternich.

Apart from the solid and efficient information system, the social connection with powerful people was always the first priority, which had been carried out by Mayer

Rothschild even before he started his business. The style was passed over to the younger generation. Building the local connection was not only crucial but also challenging; however, all efforts were worthwhile for the sake of gaining the valuable information. In this regard, the experience of James (1792-1868), the youngest son of Mayer Rothschild, is taken for example here to illustrate how he built up the social network in Paris. He followed his elder brothers to take an active part in the business of Paris and was sent there at the age of nineteen.

Paris in the early nineteenth century was totally different from London, where James' older brother stayed. London had been prosperous since the sixteenth century while Paris was rebuilding the city after the French Revolution which lasted from 1789 to 1799. In terms of the Jewish population which the Rothschilds tended to contact with in a new place, a Jewish community of approximate six thousand people had been shaped in London while there were no more than a handful of Jews in Paris. Despite of Jews' amazing talent in finance and commerce and their countless efforts, Jews had not established themselves in the French capital successfully by that time (Muhlstein 1983: 41). Things were obviously difficult when James arrived in the early nineteenth century and therefore Nathan assisted him a creating a social network.

In Paris, James had no trouble avoiding being bothered by friends while he was working, because he basically had no friends, which coincides with what Malthus described the migratory who left "their families, connections, friends, and native land, to seek a settlement in untried foreign climes" (Malthus, 2004, p. 17). However, such isolation would be harmful to the business and therefore, from London, Nathan gave the youngest brother a hand with all of his influence to get access to government circles. One of the key persons that James became intimate was Decazes, a French statesman and also the favorite of Louis XVIII. James Rothschild always saved his most valuable

information for Decazes while he in return promised to keep the Rothschilds informed of the latest events. Little by little, increasingly broadening networks paved the way for James as well as the family to the center of things. Because of the excellent connection, the Rothschilds were always receiving the most important and confidential information in spite of the "complete change" (Corti, 1972, p. 393) in affairs. After the government circles were created and expanded, the financial operations grew like the rolling snow ball. The Rothschilds even succeeded in working as "the agent in the transfer of the French indemnity earmarked for Austria" (Muhlstein, 1983, p. 55). As a result, very few people would ignore such a family which "had become a veritable power and had gained such control of the international capital" (Muhlstein, 1983, p. 60). To conclude, building the social connection was always the first step towards getting the information.

In terms of making the best use of information, very few events could be more dramatic and fascinating than the speculation of Nathan Rothschild, the third son and the most famous one of Mayer Rothschild. Nathan was sent to London in his early twenties to expand the family business. It was claimed Nathan was outstandingly "skillful at exploiting the abnormal conditions" (Corti, 1972, p. 111) and speculating in exchanges in such conditions. It is no wonder that he was said to be the richest one among the five brothers. Following the commercial success in England, Nathan tried to negotiate state loans and got involved in the bond market. One of the most famous and successful deals would be that during the Napoleonic crisis. This event fully unveiled how the information was used to the extreme.

On June of 1815, toward the end of the Second Hundred Years' War starting from 1689, Napoleon led more than seventy thousand French troops to battle with sixty-seven thousand British and other European troops in the northern east of Paris. In order to get the updated information about the war as early as possible, Nathan Rothschild sent his

most trusted agent Rothworth to the front line, very near the battlefield. As soon as the battle was coming to an end, Rothworth returned to London very quickly, delivering the news to Rothschild about twenty-four hours ahead of other couriers. Having known from his courier that Napoleon would lose the war, Nathan began to sell huge numbers of British government bonds openly in the stock market. What happened afterwards was just what he had expected. That is, when the investing public watched him selling British sovereign bonds, they assumed that Napoleon must have won and followed Nathan to sell their British bonds as well. The price of that bond fell sharply immediately. Nathan simultaneously made his agents buy up all the hugely devalued bonds immediately. After it was publicized that Britain actually won the battle, the bond price surged soon and Nathan thus made a huge amount of money.

Such a legend would not have been possible without the swift delivery of the latest information as well as the genius of a financer. Information during the war was extremely crucial and worth more efforts or expenditure. Back to the period before the French revolution in 1789, the Rothschilds also depended on the latest information brought by the messengers, to and fro between Paris and Frankfurt, to firstly receive the news before others and thus prevented a potential huge loss in the securities. It happened that during turbulent days the correspondence was sent to and fro Paris and Frankfurt nine times a day. If they had been living and working in the modern era like today, they would not have needed to do that; they just need to stare at Bloomberg terminals for the latest information.

5.4.4 Summary

The Rothschild is the first of the great international bankers as well merchants and arbitragers. The power as well as influence of the banking family was so great in

the nineteenth century then into the twentieth century. The case of the Rothschild family illustrates the information was delivered via the correspondences among family members by the private courier system, the oral delivery or letters by messengers or the runners. Besides, the information was kept as confidential as possible. It was claimed that, inside the Rothschild family, anything the three people knew about was not a secret anymore. The significance of information is beyond words.

Interestingly enough, at the very inception when the Rothschild family was introduced to the Landgrave as a debtor, Prince Wilhelm also “ordered a report on Rothschild’s reputation and financial assets” (Elon, 1996, p. 87), and asked directly how reliable he was and how good his credit was. The report put that Rothschild’s reputation was exceedingly good as he tended to pay the highest prices, remained punctual in paying debts and therefore deserved to be given credit. Unable to get a clear picture of the family’s financial reserves, people showed the Prince the taxes that the family had paid for the previous fifteen years, not a surprising amount though because most of the family’s wealth was invisible. The records uncovered that the Rothschild was only granted credit for £800. By contrast, the credit approved by the Prince for Kassel court-agent Feidel David, the Rothschild’s main business competitor, was £25,000, three times more. Several months later, the Rothschild further applied for £10,000 in credit but was only authorized £2,000 (Elon, 1996, p. 88). After the Rothschild’s family business flourished and the service for the Prince became better, the credit that Rothschild was granted by the Prince increased year by year accordingly and ended up with serving as the Prince broker. To build and maintain the credit was a long and laborious road for the Rothschilds, either as the creditor or as the debtor. The credit granted actually depends on the information derived.

In addition to the financial service, the family business covers various industries

such as curiosities, military equipments, mining (De Beers diamond perhaps the most famous one), energy, farming, wine, perfume, charities and real estate. Its wealth is divided among various descendants till now. It is no exaggeration to say that the world succumb the power of the House of Rothschild even today, which can illustrated by the following two events.

German bank Commerzbank in February 2017 hired Rothschild to be the advisors on "the sale or initial public offering of its structured financial and investment products business"[79] as part of a restructuring plan which aimed to cut a fifth of its workforce. Also just one day later, Greece also announced that it was planning to appoint Rothschild to advice on its debts. The country attempted to finalize this appoint before the upcoming meeting held by finance ministers of Eurozone to make a decision about Greek debt. It was reported that unless Greece received fresh funds, it could not make €7 billion of debt payments due in coming July. With the plan, Rothschild was expected to advise Greece on all issues concerning the national debt, including "negotiations with creditors, potential inclusion in the European Central Bank's €80 billion-a-month bond-buying program and the resumption of Greek government bond sales."[80] Whether or not or how long the problems of that German bank and Greek debt can be solved remained unknown, but the reputation of the Rothschild family undeniably stays strong.

This chapter centers on the case study of four banking families and introduces them via four sections separately, the historical background, their banking businesses, credit and information, and the summary. All of these banking families played the leading role in terms of their financial achievement at a certain time though how their financial power was used differed case by case. A couple of them might have been forgotten while several of them remain influential one way or another. Overall speaking, they have at least three things in common in their financial operations. First, they

worked with high-ranking clients, ranging from the Pope to royal families, and further used the relationship to create more and thus expand their businesses. Second, they had a complete network comprising the family kinship mainly, partners, agents, brokers, branch offices and so on, which collaborated in various ways to contribute to prosperity of the banking family. Thirdly, they valued information so much that they enforced the well-established relationship to get the latest information and simultaneously keep the valuable information away from outsiders of their social ties. Last but not least, they emphasized credit and granted credit by the information derived from their social networks. All is mutually related. However, there remain a couple of differences, as far as this research concerns, among the four cases studied. First, the area the Medici and the Fugger reached was basically inside Europe consisting of city states. By contrast, the markets that the Baring and the Rothschild got involved in were beyond Europe, more with national states in a global market. Secondly, while the Medici and the Fugger did most commerce and finance, the Baring and the Rothschild conducted the bond trading. For instance, London in the eighteenth century was an international market, with more than half of total sovereign bonds issued by banks in London. More discussion is to be made in Chapter 8.

Chapter 6: Developments of the Bond Market

In the summary of Chapter 5, it was stated that two cases of the banking families studied—the Baring and the Rothschild—were involved in the bond market through which a considerable amount of wealth was accumulated. Comparatively speaking, the bond trading played a less important role for the other two banking families, the Medici and the Fugger. The discrepancy actually indicates the different eras among those banking families and associates with the development of the bond market. Based on this and also for the purpose of this research, the bond market is examined in this chapter, which includes the historical review and the description of the current bond markets.

6.1 Fundamental Concepts of Bonds

A bond in finance is defined as an instrument in which the issuer (debtor or borrower) promises to repay to the investor (lender) the amount borrowed plus interest over some specified period of time (Fabozzi, 1989, p. 1) via the agreement between two parties. Bond is one of the ways that governments or corporations raise money in the security market and it can be denominated in either the foreign or the domestic currency. The other parallel way is stock which seems more familiar to the public owing to the almost daily reports from the mass media. Both bonds and stocks are tradable in the security market. Yet, there remain some differences between bonds and stocks. Governments can issue bonds but not stocks while corporations as private sectors can do both. In terms of trading, one of my interviewees offered the following interpretation, providing more information about the difference between bonds and stocks.

> If you buy bonds, you probably hold them until the maturity date. But for stocks, there's no such a thing as maturity date. When you think the price is good enough, you should stop. But when is the good timing to stop, or how long should the period be? It is hard to control. Bonds are stable, attracting many investors because of stability and predictability. But for the stock, it's like a dream. Bonds are special because there is always a maturity date, so usually people consider them avoiding risks.

Bonds can be categorized into at least two types based on issuers, government bonds and corporate bonds. Government bonds, issued by national governments, tend to be used to fund wars, infrastructure or other big projects. By the way, besides bond issuance, governments have another option to get funds—raising taxes to meet their expenditure. There are also municipal bonds which are issued by local governments for multiple constructions such as sub-way systems, libraries, or programs of paying teachers or taking care of the old. On the other hand, corporate bonds are issued by corporations and can be divided into four types in general according to Fabozzi (1989). They are utilities (for example, companies of electric power, gas distribution, water or communication), transportations (such as airlines, railroads), various industries, and banks and finance companies. For corporations, bonds generally offer issuers several advantages over stocks and the most important of all is related to ownership. Those who buy stocks of a certain corporation gain rights of ownership in it, which may weaken the founders' control over decision or policy making. In contrast, bond buyers do not dilute the ownership of shareholders at all. Besides, bonds are normally securer, more liquid, and more stable in benefits. Last but not least, in terms of the volume, the bond market dwarfs the trading of stocks in the global security market.

In comparison with bank loans by which corporations or governments can borrow money as well, bonds are still better off. The bond issuer can save the cost by selling

bonds to investors directly rather than via the bank as a middleman which tends to charge a tier of interest rate. In addition, bond issuing is more efficient than bank loans as the issuer can be spared the burden of negotiating a separate loan agreement with each potential creditor. That is to say, large amounts of funds are expected to be borrowed from countless investors via the bond issuance.

Because of the developments of financial operation and technology, the form of bond agreement has changed over time. However, regardless of the form, a typical issued bond will specify three significant things among others. First, the amount to be borrowed (principal) will be put. Second, it will show the fixed date when the principal is required to be repaid, so-called the maturity date. The bond can be resold repeatedly before the agreed maturity date thought it is meant to be kept for a longer time. Third, the bond agreement will indicate the amount and the intervals to pay the interest which is called the coupon rate. Given this, the nominal yield, the interest paid divided by the face value of the bond, can be got.

Not a single financial instrument is free of risk, neither is the bond, despite of its advantages over the stock. Generally speaking, the risks the bond investors may be exposed to include interest rate risk, default risk, inflation risk as the maturity date can be years later, foreign-exchange rate risk if denominated in a different currency in the end, marketability/liquidity risk (Fabozzi, 1989, p. 2) and others with the increasingly complexity of the financial instruments as well as the financial market. Driven by the complexity and the risks the bond brings, information in the bond market is crucial for estimating the issuers' ability to live up to its future contractual obligation, the delayed payment. That is credit.

According to MacKenzie (2008), almost every corporation and government in the world issues bonds. Besides, for financers, the bond is also one of their favorite

instruments for financial management, just like two of the banking families discussed in the previous chapter. Take for example the Rothschild, one of the cases studied in this research. It was argued by Ferguson (1999) that the family held a large proportion of their immense wealth in the form of bonds till now.

However popular or powerful the bond is, just like credit, the formation of the bond market takes a long time. In addition, how it was operated in the past is totally different from how it is now. In the following section, how the bond market was shaped is studied from a historical perspective.

6.2 Key Developments of Bonds

It takes a long time for any financial instrument or facility to form what it looks like and how it works today, so do bonds as well as credit discussed in Chapter 4. In addition, the changes or developments never stop. The development of the bond or the bond market can comprise several great books and that is beyond what this research can do. However, regarding credit rating, the topic of this research, some developments in the history of the bond market do illustrate the significant background for CRAs to be shaped. Given this, the following section introduces developments of the bond market from a historical perspective and then connects them with the construction of the CRAs, to be discussed in Chapters 7 and Chapter 8.

Bond was claimed by Ferguson (2008) to be the second great revolution in the historical development of money, credit being the greatest one. The bond was invented with changes in people's lifestyle. Therefore, the way the bond functioned in the primitive age is very different from the bond trading that we understand today. After

bartering, heavy metals, or even bills were not sufficient for a more advanced lifestyle in both the everyday life and the commercial world, more advanced exchange tools were constructed and the bond was suggested to be the most important one.

6.2.1 Bond Trading in Italian City-States

The earliest record about bond trading can date back to the late twelfth century in the Mediterranean region and especially in the city-states of northern Italy. Public debt consisted of the largest part of the bond trading. The most common form was the short-term debt contracts, about one to four years. The funds raised in the bond market were primarily used to adjust the short-term imbalances between revenues and expenditures and to fund military innovations and ventures. In addition, the flourishing commerce and the expansion of economic activities also contributed to the formation of the bond market. What followed the bond issuing tended to be new taxes embarked on the citizens of the city-states to increase the revenue. Since citizens had the right to oppose the some new taxes, it set the limit of the national debt to some degree.

In terms of the original place of the bond market, Venice had developed a system of public debt earlier than other Italian cities. It was stated that the public debt had played an important role in funding Venice's wars with Genoa and other rivals (Ferguson, 2008, p. 73) till the fourteen century. The bond exchange was popular in Italian cities because of its efficiency in collecting funds. On the other hand, investors were various because of the ease of purchase and disposal. For instance, in Venice, bond buyers were said to be ranging from merchant bankers to wealthy individuals. In this regard, Ferguson (2008) also claimed that, about eight hundred years ago, the bond market had grown to a vast size.

Moving south a little to Florence, its citizens later turned into the biggest group of

bond investors. According to the record, by the early fourteenth century, about two thirds of Florentine households had contributed to financing the public debt via the bond trading, despite of the fact that a few thousand wealthy individuals or families accounted for the bulk of bond subscriptions. For instance, a growing portion of Medici's assets, under the manipulation of Cosimo, were in the public debt of Florence. In other words, the Medici was outstanding not only in the scale of the family's wealth but also in the extent of their contributions to the city-state's coffers at the same time. As the main patron for some excellent artists as well as the Renaissance, the bond trading was one of the Medici's channels to collect and manage funds. There is no wonder that Ferguson (2008) claimed that both the family banks and the bond market offered the material basis for the wonders of the Italian Renaissance.

The bond not only sufficed the needs of funds on the national level, but also went beyond the border to fund other empires indirectly. For instance, according to Álvarez-Nogal and Chamley (2014), Charles V, Ruler of the Spanish Empire from 1516 to 1556, signed the contract (*asientos*) with the Fugger to get fund. Later on, Philip II, ruling King of Spain from 1556 to 1598 and also the head of the widest empire till his time, signed contracts with Genoese bankers between 1575 and 1577. The contracts were actually backed by the domestic bonds (*juros).* Besides, the debt could be refinanced by *juros* repeatedly.

In either Italian or other European cities, the bond trading system functioned well and one of the main reasons was associated with the structure of the government. As shown in the picture on page 79, the northern-central part of Italy in the fourteen and fifteen centuries consisted of some city-states and the rest of Italy down south was occupied by the Papal Church, the Kingdom of Naples and the Kingdom of Sicily. Although some city-states often succumbed to foreign rules such as Duchy of Milan,

they were basically able to maintain their independence in governance. The city-state's government was partially controlled by a few wealthy families, so was the governmental finance. In that sense, those who issued the government bonds in city-states such as Florence were largely the same group of people who bought those bonds. It goes without saying that the bond investors were satisfied with getting the interests by trading in the bond market. For instance, it was unveiled that public debt was a very secure investment for the Medici because the family also controlled the governmental finance. However, the double identities of the bond issuers as well as investors did not guarantee the full security of the bond trading. There always remained a limit for the government to gain funds in this way as citizens started to resist the new taxes for some unproductive wars. As a matter of fact, the more debts Italian cities accumulated, the more bonds they had to issue and the greater the risk of default increased.

All in all, Ferguson (2008) claimed that, by the early fifteenth century, borrowed money accounted for approximately seventy percent of the cities' revenue and the expenditure for wars was considerable. Therefore, it can be argued that, the wars among the medieval city-states including Florence, Pisa and Siena and other Italian towns were "waged as much by money as by men" (Ferguson, 2008, p. 70) and the bond trading was one vital source to gain funds.

6.2.2 Development of Bonds in Netherlands

Bonds flourished with the development of long distance trading as well. For international traders, the long-term bond was the most popular form to get funds. Given that the voyage to another continent always took several years and required a considerable fund, to raise funds from the bond market by which a big amount of

money from various investors is expected to be raised and retuned some years later would be one of the ideal ways. Therefore, following the rising of the bond markets in Italian city-states, cities in Northern Europe also resorted to the bond market for capital to fund their overseas adventures and commercial activities. It is worth nothing that merchants and politicians among those Catholic regions had been struggling with the problem of financing deficits without “falling foul of the Church” (Ferguson, 2008, p. 74) and the formation of the bond market undoubtedly unveiled an alternative and acceptable channel for them. Of all the cities which initiated the bond trading following the Italian city-states, Amsterdam was assumed to be the frontrunner of the modern bond market while London got the reputation of being the pioneer of the genuine bond market backed by the system of the modern state.

The Republic of the Seven United Netherlands (1581-1795), or the United Provinces, now the Netherlands or briefly termed Holland, in the seventeenth century combined the advantages of city-states with the scale of a nation-state (Ferguson 2008). Based on this, the Dutch could finance their wars by developing Amsterdam as the market with a full range of new securities including not only bonds and stocks, but also life and perpetual annuities and even lottery loans by which investors might probably get a large amount in return. As early as more than three centuries ago in 1609, *Amsterdamsche Wisselbank*, Bank of Amsterdam—claimed to be the first modern central bank—was established by the Dutch. Thereafter, the Republic gradually developed, regardless of the form, most of the key components of a modern financial system which included a stable monetary system, a strong public credit, a central bank, and securities markets trading in stocks and bonds. As a matter of fact, much earlier before that, the Dutch had already been running a government bond market for some decades with continuing growth.

No way can we visit Amsterdam back to four centuries ago, but we may image it, claimed to be the most liberal city then, from the words of Writer Shorto, who used to live in Amsterdam for years. As illustrated by him, about five minutes of walk from the synagogue in the downtown area, there was the mansion of the Dutch East India Company, the world's first multinational company. Then, the world's first stock exchange could be found a few minutes on. In the seventeenth century, the city had four times the income per capita of Paris, largely thanks to the advanced financial system and flourishing trading and commerce. No wonder that it was suggested that little Amsterdam had "influenced the modern world to a degree"[81] in terms of finance and other things that no other city probably has.

According to Ferguson (2008), by 1650, there were already more than 65,000 Dutch investors, out of less than 200,000 as the total population, who had invested their money via one of the debt instruments in order to assist the Republic's long-term combat to preserve its independence. To be more specific, the Republic's national debt increased from 50 million *guilders* (the local currency) in 1632 to 250 million in 1752, fivefold of growth. However, with the expansion of the credit, the yield rate fell year by year. As demonstrated on the record, the yield on Dutch bonds declined continuingly for years till 1747 to the lowest point but investors kept on investing money in the bond market. That implied not only the abundant capital in the United Provinces but also investors' confidence in the Republic as well its financial system. Given this, the Republic went on to become "the leading economy of the seventeenth century" (Sylla, 2001), driven by its prosperous achievements in overseas commerce and exchanges, and Amsterdam was the core of the leading economy. On the other hand, Amsterdam also signified the end of a certain type of government. It was indicated by Braudel (1992.3) that the age of empire-building cities came to an end till Amsterdam. In other words,

with Amsterdam, it was the last time that an empire of trade and commerce was held by a city in her own right. Instead, the trading empire was to be sustained by the forces of a modern state and London was the first one to be formed in this regard.

6.2.3 Development of Bonds in Britain

The life of human beings is mainly improved via either imitation or innovation, so is the financial system. In the Glorious Revolution 1688, the Dutch leader, William of Orange, was invited by the English to be their king and rule the empire. After the revolution, the Parliament was re-organized to run democratic governance and the power of the monarch was delimited. William enrolled some excellent and experienced financiers from Dutch to follow him and introduced all the financial innovations to England. By and by, via imitation coupled with some innovation, England also cultivated most of the key elements of a modern financial system, through some twists and turns. For instance, the Bank of England was established in 1694 and it issued government bonds in the same year, mainly to finance the war against France. Also, the public credit was assured via plentiful discussions and debates among the public and the political communities, followed by the establishment of legal systems discussed in Chapter 4. Triggered by the triumph of some overseas battles, the success in the naval ambition, the colony expansion, First Industrial Revolution and so on, England turned into the leading economy of the world in the eighteen and nineteenth centuries and the bond market played the most important role in capital gain.

Compared with the bonds issued by Amsterdam or some state-cities in Italy much earlier, the British government bond issued by the Bank of England was the first bond backed by a national government rather than a city as before. After the Glorious Revolution as well as the establishment of the Bank of England, the discrepancies

between Britain's financial system and other European cities' grew larger. First, the land which used to be owned by the crown had been sold off, which weakened the influence of the crown. Secondly, the parliament owned more power to control the royal expenditure, which avoided more tax embarkation on the citizens driven by the over-expenditure of the royal families. Last, the professional and observable civil service had been constructed to serve the public, which decreased the defaulting cases and somehow gloomed the private bankers. Institutions such as Bank of England and the Credit Office belonged to this type of professional bureaucracies. It was stated that a thriving bond market had been formed in London by the middle eighteen century and it kept on improving. That is, government bonds with comparatively higher liquidity were the major securities traded, by which even foreign investors such as the Dutch were attracted. Moreover, in addition to British government bonds, banks in London also sold bonds of other nations including France, Russia, Austria and Brazil. It was estimated that "between 1815 and 1859, London House issued fourteen different sovereign bonds and the total face valued was nearly £43 million, more than half of the total bonds issued by all banks in London" (Ferguson, 2008, p. 87). It is undoubted that London was the international financial center in the nineteenth century.

There was an interesting statement from Niall Ferguson (1998) about how the government was motivated to establish the appropriate political system by the bond market. After the Napoleonic Wars, the Prussian government planned to apply for a loan in London in order to avoid any political turbulence that might happen on the homeland. The Prussians in 1817 approached the London branch of the Rothschild House. Nathan Rothschild, head of the London branch then, indicated the law to the Prussians and frankly required the lands as the security for the loan owing to their absolutist form of government. Part of the letter is shown below (Ferguson, 1998, p. 23):

> [T]o induce British Capitalists to invest their money in a loan to a foreign government upon reasonable terms, it will be of the first importance that the plan of such a loan should as much as possible be assimilated to the **established system of borrowing** for the public service in England, and above all things that some security . . . should be held out to the lenders . . . . Without some security of this description any attempt to raise a considerable sum in England for a foreign Power would be hopeless[;] …the **representative system** now established in that Country, **the sanction of the Chamber** to the national debt incurred by the Government affords a guarantee to the Public Creditor which could not be found in a Contract with any Sovereign uncontrolled in the exercise of the executive powers.

To be short, for the Rothschilds, only under a well-established representative system backed up by the Chamber of the government, which had been available in Britain, could any loan to a foreign government be possible. By contrast, the system of an absolutist government would never help in terms of the foreign loan and thus the lands for security must be provided. It was not indicated whether the Prussian went ahead with the establishment of representative systems soon. Nevertheless, it is undeniable that more countries, in Europe and other continents, adopted constitutions and representative forms of government during the nineteenth century, which contributed to the growth of the international bond market in scale and scope. In this period, government debts accounted for the biggest part of the bond market. On the other hand, business people in Europe resorted to banks or stocks to meet their capital needs. It is worth mentioning that Nathan Rothschild was also identified as the master of the bond market (Ferguson, 2008, p. 79) as well as the master of European politics by means of finance.

In the nineteenth century, international banks were dedicated to very different

banking activities: traditional commercial banking and investment banking. Commercial banks dealt with financing commodity exports and imports and one of the typical banks was Baring Brothers which offered loans to US trades with England. By contrast, investment banks focused on arranging long-term funds to finance infra-structural and industrial developments. Among the successful investment banks during that period, the Rothschild succeeded in obtaining the monopoly of railroad building in some European countries such as Austria, Spain, Belgium and northern Italy. It was reported that profits were generated "by gains on the sale of the stock of the ventures it promoted" (Davis, 1976, p. 13) and fees from the government loans.

6.2.4 Development of Bonds in the U.S.

Regarding the financial system, front-runners such as Amsterdam and the Britain remained the role model for others, especially for new countries such as the U.S. On the other side of the Atlantic, as the U.S. was just founded as an independent country in 1776, the way to reconstruction seemed long and winding. Yet, in terms of financial system, thanks to Alexander Hamilton (1757-1804), one of the Founding Fathers "most aware of the Dutch, English (and also French) financial precedents" (Sylla, 2002), the patterns from those advanced front-runners were inherited and made the reconstruction on the right track. It is worth noting that when the thirteen colonies declared jointly their independence from the Britain, there was not even a uniformed currency and they remained depending on the Britain economically.

Hamilton initiated modern financial and monetary systems during his term as the first Secretary of the Treasury from 1789 to 1795. During this period, the federal government of the U.S. consisting of two chambers—the Senate and the House of Representatives—was established; the Senate which was created in 1787 convened its

first session on March of 1789[82] while the House of Representative was also set up in the same year, a scenario of "accomplishment, struggle, and compromise on the path to a more perfect union"[83] of democracy. The Constitution came into force in 1789 after it was created in 1787 via several months of Constitution Convention. It is fair enough to argue that further economical and financial developments were firmly grounded on the primitive political and legal systems.

Alexander Hamilton had worked as the military aid of President George Washington who served as the country's leader from 1789 to 1797 and was also a renowned financier. He was illustrated to be "the architect"[84] of the structure of the Treasury Department. During his governance, the Treasury was designed to focus on not only the collection and disbursing of public revenues but also for the promotion of the economic development of the country. Back to the late eighteenth century, the U.S .was almost a bankrupt country after the Revolutionary War (1775-1783). Facing a heavy treasury burden after the war, Hamilton was firstly devoted to the repayment of the war debt upon his taking office. He affirmed that the debt of the U.S. was the price of liberty and needed to be paid, during 1790 and 1791, via a revenue system based on custom duties and excise taxes. Moreover, under the urging of Hamilton, Congress established the First Bank of the United States—functioning as the central bank—in 1791 and headquartered in Philadelphia. As the largest corporation in the country, First Bank was "dominated by big banking and money interests."[85]

As a result, in 1795 as Hamilton finished his term as the Secretary of the US Treasury, the country had stable currency and banking systems, strong public finances, and the security market trading bonds and stocks in several cities. It was as if the English had succeeded the Dutch to become the economic and financial leader, the Americans went on to succeed the English in multiple ways as the world's pre-eminent

national economy within no longer than two centuries.

Regarding the bond trading in the U.S., besides financing the war, the great construction project also gained the funds via the bond trading. It was recorded that in 1911, the US Treasury sold 50-year bonds to fund the construction of the Panama Canal. In addition, a particularly strong effort was made to market the bonds to individual investors, which made those bonds popular. Just like what bonds were used in the past, wars also contributed to the issuance of bonds in the U.S. During World War I (1914-1918), the Treasury also issued bonds for raising funds. The war was financed through taxes and the sale of war bonds was termed Liberty Bonds. Meanwhile, the portion of corporate bonds in the American market increased hugely, especially after the end of World War II, and there were more bond issuances for big infrastructure projects like the construction of Panama Canal. In addition, according to Homer (1975), the bond market in 1910s was mainly to gain funds for the western utilities, especially the rails. It was even suggested that some capitalists made fortunes by carrying big blocks of such bonds on credit. The bond over infrastructure projects not only differentiated itself form former bond issuers in London or continental cities but also partially contributed to the rise of CRAs, to be discussed next chapter.

To make a summary, the bond market went through lots of changes and developments over the past several centuries and thus turned into what it is today. In this chapter, some key developments were demonstrated owing to their historical significance. First, by the fifteenth century in Italy, the bond market was grounded on a particular government structure which comprised independent city-states. Besides, most bond investors were also bond issuers because of their position in the government. Second, moving to northern Europe, Amsterdam followed the Italian trend and also

established the bond market, partly triggered by the flourishing commercial activities. What distinguished the bond market of Amsterdam from the preceding cities is that the bond market was under a sound financial system coupled with the establishment of Bank of Amsterdam. Third, London set the standard for the later bond market owing to its particular political system and the founding of Bank of England. It was as argued that "London lies between two successive phrases of economic hegemony" (Braudel, 1992.3, p. 175), between the age of the city and the era of modern territorial state, a national economy. Thus, the bond market was actually under the representative system of the modern political framework.

By the twentieth century, the frequent wars among city-states or nations, with the funds mainly gained via the bond trading, contributed to the flourishing bond market and thus made the government debts the biggest portion of the market. Finally, the U.S. followed the Britain to build up the financial system backed up by the representative systems in the government. Thanks to the ending of big wars, despite of wars in other forms, government bonds normally for financing wars waned while corporate bonds waxed in terms of scale and volume. In this regard, the US bond market took the lead and New York also turned into one of the main global financial centers after London. Either government or corporate bonds, there emerged another field, Euro-dollar market.

6.3 Euro-dollar and Euro-bond Markets

On the Bloomberg screen which I saw on the first day of my field trip in the trading company, what was presented in the column 'Market Issued' was Euro-dollar. According to my key interviewee, Chief of the bond trading department, about 95

percent of the international bond deals were issued in the Euro-dollar market. The Euro-dollar market plays such an important role in the international bond trading that Euro-dollar and related issues require some illustration here. The aim of this section is to explain the historical background and developments of the Euro-dollar market and the role it plays in the international market till the present time.

6.3.1 Euro-dollar Market as an Off-shore one

As explained by Little, Euro-dollar is a "deposit denominated in US dollars at a bank located outside of the United States" (Little, 1975, p. 13). From this statement, it can be asserted that *Euro* here is actually a prefix which implies the Euro-dollar is deposited out of the U.S., essentially having nothing to do with Euro as a currency or Europe as a continent, and is denominated in US dollars. Euro-dollar market was also explicated as "an international market dealing in short-term funds denominated in the U.S. dollars" (Clendenning, 1970, p. 5). This description further explains that the market is an international market and, again, in US dollars. Based on the two definitions above, the Euro-dollar market is actually a virtual world. That is to say, physically speaking, the trading is not necessarily outside of the U.S.; it can be inside the U.S., part of the international market. However, the practices, the procedures, and the rules of the Euro-dollar market are different from those of the domestic market in the U.S. In other words, the Euro-dollar market is a type of off-shore market. With the dominance of Euro-dollar trading in the international bond market, more descriptions about the off-shore market are offered here.

Regardless of various interpretations of off-shore, the following definition provided by Palan is crystal clear. That is, off-shore "takes place in specially designed juridical enclaves distinguished from their onshore counterparts by the removal of some

or all state regulation" (Palan, 2003, p. 19) . To be more specific, the offshore market runs in a different juridical realm, contrary to onshore, with a relative lack of regulations and taxation but it can take place on-shore physically. As a matter of fact, some global financial centers such as London, New York, and Tokyo remain where most offshore financial transactions are undergone but just in another system, different from that for domestic financial transactions.

Despite of the origin of the off-shore finance in early nineteenth century, the offshore market expanded massively since the late 1960s, orchestrated by some supervening social necessities. It has been serving industries bothered by less favorable local conditions in terms of taxation and regulations since its inception. For example, in the 1970s, offshore financial markets had functioned via real territorial enclaves, so-called special economic zones and export processing zones in some countries, Taiwan included.[86] Nowadays, in terms of the type of industries, banking, insurance and ship registration are the biggest ones in the offshore market. As a virtual market, the offshore market has succeeded in providing "protection from national regulation and taxation without the need to physically relocate" (Palan, 2003, p. 83). The way Euro-dollar functions is just like how the off-shore economy works. However, it requires some more historical background for the Euro-dollar market to develop and form what it is today.

6.3.2 Historical Background of Euro-dollar Market

The origin of the Euro-dollar market dates back to the end of the Second World War (1937-1945). However, it was not until 1957 did the Euro-dollar market start to grow and several key conditions in a somehow sequential manner are indicated briefly as follows. First of all, towards the ending of World War II, some foreign banks tended

to accept US dollar deposits and placed them in the U.S. money market. Some deposits were later lent to other European banks or customers in Europe, which contributed to the deposit placement outside the U.S. money market. Later on, when the available supplies of US dollars in Europe looked for profitable outlets, the comparatively rigid U.S. banking system with considerate low interest rates made some European countries retreat. They preferred to hold their funds in European banks rather than keep them in American banks. After a while, the sterling crisis of 1957[87] coupled with the restricted use of sterling to finance foreign trades forced British banks to overcome the problem by using US dollars instead. Thus, there raised a demand for US dollar deposits in Europe as well as for European banks mobilizing US dollars. Last but not least, under Regulation Q[88] in the U.S., with the deposit interest rate as low as 1 percent on time deposit between 1957 and 1958, most capital was obliged to remain in Europe. Consequently, European banks overshadowed US banks for US dollar deposits and the Euro-dollar market by which the deals with US dollars were conducted out of the U.S. was thus formed and expanded accordingly.

According to Clendenning (1970), Regulations Q played a key in the growth of the Euro-dollar market and the manner how Regulation Q enhanced the Euro-dollar market can be explained from both the supply and the demand sides. From the perspective of the supply side, under Regulation Q, deposit rate differentials were “for several years substantial” (Clendenning, 1970, p. 25) between the U.S. and Europe. In order to maintain or further expand the volume of domestic activities, US banks were willing to pay higher deposit rates to compete among themselves. However, restricted by Regulation Q with low interest rates, they had no choice but compete for deposits in the Euro-dollar market. Once the deposit rates in the Euro-dollar market were raised, the intention for fund owners to place deposits in the Euro-dollar markets became stronger.

On the other hand, from the angle of the demand side, a program for controlling short-term capital flows was effective in 1965 (Clendenning, 1970) and thus limited the volume of short-term leading by US banks. As a consequence, the ability of US banks to finance foreigners in dollars shrank, which forced foreign borrowers to turn to the Euro-dollar market to meet their dollar financing needs. Even though the terms of Regulation Q ceased in 1986, gaining capital from the Euro-dollar market had been a trend for international borrowers.

The process how the Euro-dollar market got formed was driven by some historical coincidences of multiple restrictions on capital movements in different countries. Yet, the market indeed favors international debtors owing to its several advantages. For instance, it is extraordinary free from sovereign regulations. It was argued that the Euro-dollar market is truly an international mechanism “beyond the control of any single national authority” (Little, 1975, p. 3). That is what happens in reality; governments and banking associations have tried to control the market, owing to its connection with tax evasion, but in vain. As the saying goes, “If you cannot beat them, join them.” The fact that governments and banking institutions are key borrowers in the Euro-dollar market absolutely reflects it. Moreover, the Euro-dollar market has been speedy to respond to changes almost anywhere in the world. With the big jump of Euro-dollar interest rates, the market unveiled that a huge volume of funds could be raised in such a short time as overnight in the sophisticated market.

To sum up, as put by Little (1975), the autonomy, the swift pace and the giant size of the Euro-dollar market has made itself one of the most important financial creations since its launch in the early 1950s. Clendenning (1970) even claimed that the Euro-dollar is similar to capitalists’ ‘invisible hand’, a term borrowed from Adam Smith. It has also been treated by central banks as a revolution owing to its convenience,

liquidity and the availability in the Euro-dollar market. Based on the similar scenario coupled with the growth of the Euro-dollar market, the Euro-bond market developed and grew simultaneously.

6.3.3 Eurobond

Similar to *Euro* in the term Euro-dollar market, *Euro* in Eurobond is a prefix which implies the off-shore issuance of bonds. Given that it is off-shore, the Eurobond can be denominated in any international currency rather than the domestic currency of the market where the bond is issued. In addition, just like the Euro-dollar market, the Eurobond market is virtual, free from the sovereign governance. In comparison with the Euro-dollar market, a source of short-term capital, the Eurobond market provides long-term loans as other bonds. In summary, the Eurobond market is an international bond denominated in a currency different from that in the country where the bond is issued. It was contended by Roberts and Arnander (2001) that the formation of the Eurobond market set a milestone for the Euro-dollar market.

The first issuance of the Eurobond is the one of Autostrade in 1963, a US dollar-denominated bond, internationally syndicated as well as traded, and tax-free. Autostrade is the name of an Italian project, aiming to join Italy's roads between the south and the north and thus forming the Italian national system. The lead manager of this Eurobond issue was S.G. Warburg, a London merchant banker. According to Giovanni Castellucci, chief executive of Autostrade in 2015, back to some fifty years ago, capital was not so accessible and the company wanted to reduce its reliance on the Italian government. Therefore, it resorted to the Eurobond market. The company was proud of being the pioneer in this type of construction by stating, "It was the first very big toll road anywhere and it was then copied."[89] The company also unveiled their

concern over the weaknesses in Europe's banking systems, which further asserted its faith in the Eurobond market. The forms of Eurobond issues have gone through some experimentations in response to the changing market conditions, for example, convertible and warrant issues.

Owing to the advantages of higher yields as well as tax minimization or tax evasion, with both security and liquidity unaffected, the Eurobond market attracted investors. The main holders include governments, the Bank for International Settlements which have invested funds for its various member Central banks, commercial banks and big enterprises such as oil companies, tobacco companies and firms of international standing. For instance, after the 2008 financial crisis, the Eurobond was issued to finance some debt-driven European countries such as Greece, Spain and Ireland by means of rescue funds. It was commonly believed among EU leaders that the potential advantages of the Eurobond included its ability to "compete with US Treasuries and win the confidence of global investors."[90] Yet, few opponents were concerned about the fiscal discipline. For continental holders, keeping dollar deposits with western European banks is more convenient because of closer geographical proximity. As to holders in America, investors consist of more non-residents than residents though both are welcomed.

The growth of Euro-dollar and Eurobond markets with advantages of higher liquidity, security and yield has shrunk the traditional channels for short-term and long-term capitals. As a consequence, the volume of funds available increased and the international banking operation was stimulated. Einzig (1964) argued that the rise of the Euro-market would lead to a revolutionary banking activity owing to the various sources, the wide destination of the dollar deposits, and the multiple usages of the dollars. In terms of the trading locations, London was claimed to be "the only European

financial center to play host to the Euromarket" (Roberts and Arnander, 2001, p. 13) and it soon took the leading position.

Interestingly enough, now even investors in China where capital flows tend to be comparatively more strictly controlled by the government cannot beat the trend of raising capitals overseas. In fact, banks, property developers and other corporate borrowers have been quietly encouraged to raise money offshore in other currencies, mainly in US dollars. It was reported just in early 2017 that borrowers in China has raised "$26.1billion from offshore bond sales compared with $21billion at home"[91] mainly driven by the lesser depreciation of *renminbi* against dollars in the offshore markets. With the continuing growth of the market, the Euro-market has undoubtedly not been expanded widely enough.

6.4 Market Expansion

From a long term perspective, the bond market had been growing at different speeds but since 1970s the global securities market has experienced a "transatlantic revolution" (Michie, 2006, p. 352) starting from North America and West Europe and then expanding to the rest of the world. Take international bonds for instance. Figure 1 illustrates the volume of bond trading over the past fifteen years since the very inception of the twenty-first century, during which period the amount reached a milestone of 100 trillion US dollars in 2015.

6.4.1 Factors for Market Expansion

Many events contributed to the expansion of the bond market, domestic or international. Events in different domestic markets are destined to be various while

those related to the global market have significant effects on the expansion.

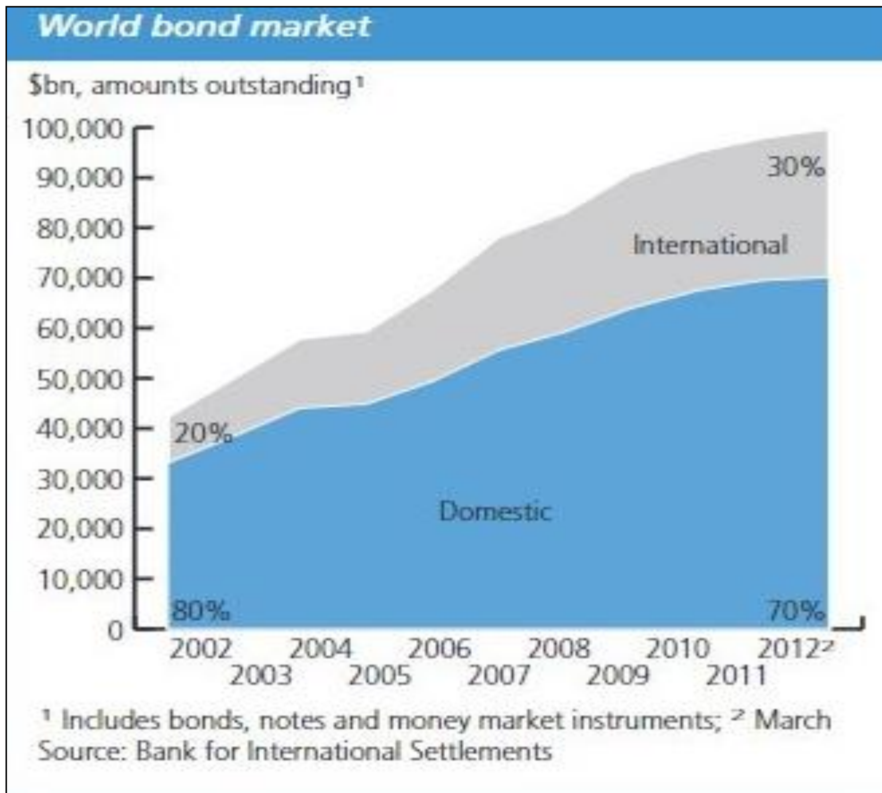

Figure 1. Milestone of $100 Trillion in World Bond Market

Source: "Bond Markets" in *The City UK*[92]

Relaxed controls & petrodollars

The first force is the relaxation of exchange control: the decline of barriers between countries under the collaboration of some national governments. The issue of regulation or deregulation used to be debatable in different periods, especially after the collapse of the Bretton Woods System[93] in 1973. However, motivated by the expansion of the capital market and the request from investors, deregulation or relaxed control has been the trend since the nineteenth century. In addition, after the oil crisis in 1973, the international capital market was filled with "petrodollars" which flowed from countries with surpluses, most oil exporting countries enjoying the rise of oil price, to countries in

deficits which included the industrial countries, the non-oil developing countries and even the Communist ones. The capital flow not only prevented the recession of some countries in deficits but also took the global capital market to another level. It can be seen from Figure 2 that the market soared in 1974, following the rise of oil prices. The market size grew five times larger within less than ten years.

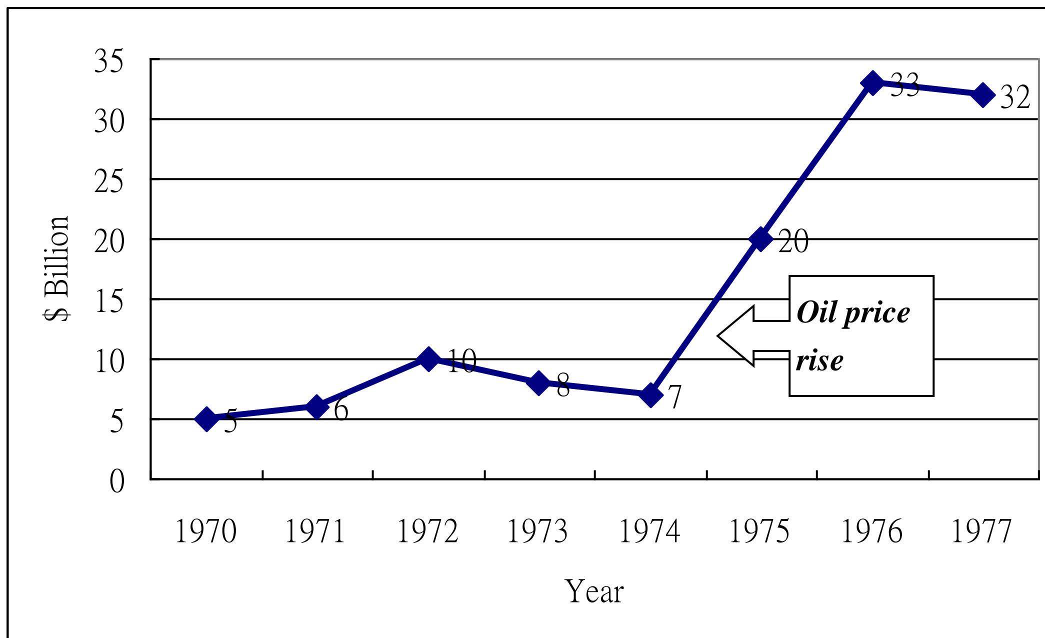

Figure 2. Volume of International Bonds between 1970 and 1977

Source of data: *Money on the Move* (Mendelsohn, 1980)

Institutional investors

Institutional investors such as insurance companies and pension funds also play fundamental roles in the global financial markets nowadays. According to Joost and Gelderblom (2009), the emergence of institutional investors started from the Amsterdam security markets and then in the rest of the world, basically in advanced countries from 1500s till 1800s. Institutional investors used to get involved in the domestic real estate market, but since the 1800s, they have been active in the security markets, especially the

bond market, after the domestic regulations were loosened. That directly contributed to the expansion of the capital market.

In the U.S., the rise of institutional investors can be traced back to baby boom in the 1950s, after World War I (1914-1918). After several decades, people born in the 1950s were scheduled to retire but ended up discerning that the corporation they devoted themselves to might fail to pay the pension. What followed were some pension plans which allowed pension funds to be invested in the capital market, for example, the passage of the Employee Retirement Income Security Act of 1974.[94] Overall speaking, before the crisis, state and local pension funds were estimated to consist of around 2,700 funds which totally managed $1,400 billion on behalf of 21 million employees such as teachers, firefighters and other municipal workers.[95] However, in the 2008 financial crisis, the public covered by the US pension funds became one the biggest groups of innocent victims, losing lots of money from the premiums because public pension funds faced the worst-ever losses since its inception. To be more specific, in nine months towards end of September 2008, the average state pension fund lost 14.8 percent.[96] The innocent public might neither realize nor take part in the investment of their funds; they did not do anything wrong, even without sense of greed, but just lost so much. They just passively invested in the derivative financial products because the pension funds where their money was kept did it.

The other factor which led to an influx of capital into the market can be referred to the stakeholder theory which suggests that “the firm was beholden not only to shareholders but to other stakeholder groups” (Cetina and Preda, 2012, Intro.). That is, in order to the get the biggest welfare for both shareholders and stakeholders, the enterprise was obliged to try its best to get the biggest profit. Thus, participating in the capital market is one of the ideal choices. In contrast, shareholders and stakeholders

belong to the institutions they worked and automatically let the institutional investors make the decision for their investment. It was argued that institutional investors imply their importance in “providing access to the securities market for savers otherwise unable to enter it…” (Atack and Neal, 2009, p. 71).

Technology

Another force which contributed to the huge growth of the capital market is the advanced computer technology. It made the electronic marketplace an alternative, efficient and economical, for capital exchange in the global market. For one thing, investors can join the capital market anytime, anywhere on the Internet as long as they have some basic technical facilities such as various ‘smart’ gadgets. For another, the advanced technology is very helpful for analyzing large amounts of changeable data for investors to make better decisions. As I recalled, on the first day of my fieldwork in the bond trading department, what unveiled in front me were several big monitors which demonstrated various and complex data, curves and figures, shifting quickly all the time. Besides, all the people working there stared at the screens, all the time as well, not to mention that my first interviewee was even accustomed to check the information from the computer, turned-on twenty-four hours a day and seven days a week, while waking up unintentionally at midnight.

The importance of technology can also be proved by the different job positions of the technology staff. In most enterprises, people in charge of information technology used to belong to another unit about management. However, the fact that the position of CIO, Chief Information Executive, is set in most big enterprises nowadays truly illustrates the information technology has played a critical role. Furthermore, technology is more than just a tool in the financial field; “technologies crystallize rules

of exchange, formatting the possibilities of action of market participants… they present and scope what is increasingly a disembodied and dislocated marketplace" (Cetina and Preda, 2012, p. 568). Michie (2006) also underscored that the way how the international financial market was promoted could not be possible without the improvement of the telecommunication system and the high technology. In terms of the technological skills in credit rating, the information from the CRAs cannot be analyzed or presented without the innovative technology, with Bloomberg as the most popular one.

6.4.2 Some Trends in the Current Market

In addition to the developments of the bond market in terms of scale and scope, more changes have kept happening and thus increased complexity of the bond market. Some of them coupled with current events are organized below.

Negative yields

In the very beginning of July 2016, Switzerland's entire stock of government debt traded at negative yields when yields on a certain Swiss bond dropped below zero for the first time; Swiss 10-year bonds traded at minus 0.66 percent. It implies that some investors preferred to pay more in order to hold the bond rather than get back the interest. According to the data, government bond yields have fallen to new lows around the world as investors anticipated "years of ultra-low interest rates."[97] For instance, the yield on UK's 10-year bonds reached a new low of 0.78 percent after the decision from the referendum to leave the EU on June 23th of 2016. When I asked my interviewee why it would be accepted, his answer was short but powerful—it is safe. He said,

> "It is safe. Also, you don't have other choices. As the overall economic environment is bad, people will think that making investments can be

> dangerous, and there is no other place for them to invest in. Therefore, they will invest their capital in a safer place like this, even if they need to pay a little to protect the asset. If investing capital in other ways, maybe they will have a huge loss."

Perpetual bonds

By June of 2015, while companies were locking in the market with the historically low interest rates, perpetual corporate bond issuance hit $38 billion,[98] the highest on record for this period of the year, which accounted for 3.4 percent of total corporate debt issuance. In the whole year of 2014, the amount of global issuance of corporate perpetual bonds was $61 billion. Of the bond issuers, Chinese companies took the lead, accounting for almost half the issuance while French and German companies were also large issuers. For example, Total, a French energy company, issued a perpetual bond worth $5.7 billion in February and Volkswagen, a German carmaker, issued a similar $2.6 billion bond in March. According to Deutsche Bank, the surge was indeed encouraged by historically low bond market yields. He added that the perpetual bonds could help non-financial companies "strengthen balance sheets and support credit ratings."[99]

Bonds with long maturation

In October of 2010, Mexico raised $1 billion with the largest 100-year bond offer, century bonds, since 1995. This bond is to be due in 2011, offering investors a yield of 6.1 percent, which was claimed to be the boldest moves by an emerging-market sovereign entity. According to Goldman Sachs Group Inc., many borrowers could not help but come to the market during this period, owing to "interest rates and credit spreads."[100] In March of 2014, Mexico sold another 100-year bonds denominated in

British pounds for the first time, posted the best returns from major Latin American countries this year. This 1 billion pounds (around $1.66 billion then) governmental security due in March 2114 was to yield 5.75 percent, according to Bloomberg, and the sale showed global interest and confidence in Mexican assets and the government's finances. It is worth nothing that Mexico sold the century bonds after Moody's had upgraded the country's credit, citing the country's steps to "open up the energy industry to foreign investment and broaden sources of tax revenue."[101] In April of 2015, Mexico again sold its first euro-denominated century bond, at a yield of 4.2 percent, ensuring the country's status as one of the most favored sovereign borrowers in the developing world. It was reported that "Mexico is one of the darlings of the global investment community."[102]

In March of 2016, Ireland's debt office announced its first 100-year bond, €100 million deal at a yield of 2.35 percent, which represented investor's confidence in this country. Moody's reported earlier that Ireland was the only country in the region on review for a ratings upgrade. To be more specific, its economy was growing at one of the fastest paces as in the last quarter of 2015, the economy "grew by 9.2 percent compared to the same period in 2014."[103] It is worth nothing that yields on Ireland's outstanding debt collapsed since the country accepted €67 biillion emergency bailout in 2010. The country was recovering from the financial disaster. In April of 2016, one month after Ireland's issuing of a 100-year bond, Belgium also issued a centennial bond, as negative rate policies created new dilemma in the global debt market. The coupon of just 2.3 percent a year until 2116 suggested that investors either would believe inflation to remain for years or that they were supposed to be investors "with a specific need, such as an insurer attempting to match long dated liabilities."[104]

In addition, on October of 2016, the Italian government issued bonds which, with

the yield of 2.8 percent, would mature 50 years later. The fact that investors accepted such low returns on long-dated government debts indicated that markets were pricing in "minimal economic growth for decades to come."[105] Coincidentally, in the same month, Austria also issued a long-dated government bonds, 70-year bonds with the yield of 1.5 percent. It really challenged investors' confidence in future generations as the issuing date of the bonds will be in November of 2086. According to the analysts, long-dated debt was "highly sensitive to movements in bond yields."[106]

Jumbo bonds

There are also quite a few jumbo bonds nowadays, bonds issued with a huge amount. One of the most recent cases is the merge between Bayer, a multinational chemical and pharmaceutical company established in German, and Monsanto, a multinational agricultural biotechnology corporation established in the U.S. In mid September of 2016, it was confirmed that Bayer bought Monsanto in a $66 billion deal which orchestrated funds in both the stock and the bond markets. In terms of bonds, Bayer intended to raise $19 billion from a mix of convertible bonds and an equity rights issue. This type of bond via a combination of loans and bonds is "typical for the debt component."[107]

The other well-known case is the merge between SABMiller, a British-based brewer, and Anheuser Busch InBev, a beer manufacturer in Belgium. In October of 2015, SABMiller accepted the $108 billion takeover offer from Anheuser Busch InBev, ending up with the world's biggest beer company. Moreover, the bonds of $46 billion were issued in January of 2016 to fund part of the takeover fee. It is commonly believed that cases, like them mentioned above, issuing jumbo bonds have been especially favorable owing to "negative rates in Japan and the eurozone."[108]

The largest debt sale of this type actually goes to the deal between Verizon and Verizon Wireless, two communication and telecom companies back to September of 2015. In this $130 billion acquisition of the 45 percent stake in Verizon Wireless, the bonds of $49 billion were issued to finance part of the merge fees. It was reported that investors around the glove lined up to buy the bonds right after the issue had been announced. This deal was treated as a good test on corporate bond market's anxiety associated with the coming monetary policy moves of the Fed. With $100 billion in orders for the bonds, it seemed that "investors are finally getting over that anxiety."[109] Triggered by the environment with unprecedented low interest rate coupled with slow global growth but rising competition, jumbo bonds have been preferred with negative rates in some markets.

Changes and developments are often unexpected. Markets are getting more and more complex as well. In addition to bonds with unprecedentedly long maturity, the size of bonds also outpaces previous ones, partly thanks to the tendency to merge. In no way can the future in 50 years or even longer be anticipated by common investors. When it is beyond the public's ability to judge or to estimate for the future, some aid is undoubtedly needed.

Chapter 7: Developments of Credit Rating Agencies

When the term, *rating agency,* is read or heard from mass media, mostly in the categories of global business or finance, we usually get something in a certain alphabetical order, with capital or small letters and/or plus or minus signs, for example, Aa, BB, C+ and so on. In addition, three CRAs—S&P, Moody's and Fitch—enjoy the most visibility on the related reports. It was put by S&P that "Standard & Poor's Ratings Services provides high-quality market intelligence in the form of **credit ratings**, research, and thought leadership."[110] Besides, Moody's is explained to be "an essential component of the global capital markets, providing **credit ratings**, research, tools and analysis that contribute to transparent and integrated financial markets."[111] Also, Fitch says that the company "provides market participants with data and analysis on default and recovery rates and broad **credit** trends in the fixed income markets."[112] These is at least one thing in common among these descriptions—credit; they are actually the agencies of credit rating. In Chapter 4, the meaning and implication of credit has been introduced from a historical perspective. Then, what is rating?

Linguistically speaking, *rate* is defined as to "assign a standard or value to (something) according to a particular scale"[113] in Oxford dictionary. In terms of etymology, it is interesting that *rate* originally implies "to scold"[114] which was coined from French *reter*, when it firstly appeared in the English world in the late fourteenth century. Later on, in the mid fifteenth century, the meaning turned into "to estimate the worth or value of something."[115] More importantly, it was not until 1809 did the word *rate* carry the meaning of ranking, something what CRAs are doing now in terms of that alphabetical order.

From all the interpretations above, it can be concluded that to rate is to give a certain value based on something or to rank. By the same token, to rate credit, as what is introduced by the three rating agencies, is to give credit a certain value, though it can be positive or negative, or to rank it. Combing with the meaning of credit—the ability of a customer to obtain goods or services before payment, we may understand that credit rating basically implies to estimate the worth or value of the customer or debtor in terms of his or her ability for late payment and/or to rank furthermore. Given that credit is grounded on trust, discussed in Chapter 4, it can be argued that the definition of credit rating is to estimate the worth or value of the customer or the debtor which can be trusted for late payment and/or to rank the worth or value.

The meaning of credit rating seems clearer but none of definition implies that it must be connected with some type of order as seen nowadays, Aa, BB, C+ and so on. That is just one of the forms to represent the rating as if restaurants are rated by stars of Michelin Guide, the fortune of the rich is rated via ranking of Forbes, and universities may be rated by tier. In fact, the content, the form, and even the purpose of credit rating have been going through a lot of changes till now. The whole procedure takes a long time, so does the formation of CRAs.

An agency is a modern organization which was firstly termed in the seventeenth century. To be more specific, the word *agency,* originating from Medieval Latin *agentia*, was only available after 1650s and it implied "active operation" or "a mode of exerting power or producing effect"[116], rather close to the meaning of *agency*–"a business or organization providing a particular service on behalf of another business, person, or group"[117] defined in the Oxford dictionary. Lexically compared with *credit*, having been used in early sixteenth century, and *rating*, used much earlier in the mid fifteenth century, the usage of *agency* is quite late. However, the late appearance in the lexical

field should not hinder the agency from functioning. It is as if cure got started before the hospital was established and education was given before the school was founded as well. By the same token, credit rating must be done much earlier before the CRA was set up. To put in another way, credit rating was supposed to be carried out as long as credit was available, just in a different form, maybe with a strange term, or even in another way instead of being done via an agency.

Based on the purpose of this research, the discussion of CRAs is to be separated into two parts, credit rating and CRAs. The following traces the origin of CRAs via two paths. One is the how credit rating was conducted before the establishment of rating agencies and the other is about the formation of CRAs. It is expected that their function and forms are unveiled from a historical viewpoint.

7.1 Information Matters

The meanings of credit rating and CRAs were just elaborated from a linguistic perspective. In the academic research, the issue related to information is one of subjects in the debates.

Of all the researches reviewed, this thesis was highly inspired by Poon's "Rating Agencies" (2014). He described credit rating as an evolution issued by a third party, assumed to be CRAs, to rate a credit transaction. Besides, credit rating was claimed to be not just any freestanding assessment of credit quality but an information product dealing with information provision and information analysis. Overall speaking, according to Poon, credit rating was designed to transfer from an information provider into an operating business and CRAs were launched to be specialized companies which

produce and sell a certain sort of information.

There are other interpretations about credit rating. In *Money Banking, and Credit Made Simple* (1994), a guide book for finance learners, Doed defined credit rating as the score assigned to a borrower based on his or her credit history while credit was termed as a mechanism that permits borrowers to pay later. Even when the credit risk in the bond market was highlighted, it was put that “professional money managers use various techniques to analyze information on companies” (Fabozzi, 1989, p. 123) in order to value the issuer’s ability to realize the future contractual obligations. That is credit rating in the bond market.

Credit rating agency as a term is interpreted differently but similarly. Cantor and Packer (1994) claimed that the CRA plays the role of a major publishing company with a strong business information focus. Besides, in the discussion from Sylla (2002) about the historical development of CRAs, it was argued that CRAs gather all types of pertinent financial and other information, analyze it, and use it to rate the intrinsic value or quality of a security so as to form a convenient way for investors to judge quality and make investment decisions. Also, when Lauer (2008) introduced the early development of the CRA, it was explained that the agency was established basically for the purpose of procuring information, via resident and special agents, for country merchants. Beyond that, the role of CRAs was suggested to be as information producers (Fulghieri, Strobl and Xia, 2014). As a matter of fact, in the advertisement of the early CRA Dun & Bradstreet, it was announced that this organization was set up to make sure via information whether people applying for credit are “worthy of the same and to what extent” (Lauer, 2008, p. 303).

From the above statements, it can be summarized that credit is all about information—to collect, to gather, to procure, to analyze, to assess, to provide, to

produce, or to sell all sorts of information. With all the statements above and the relevant discussions in previous sections about *credit*, *rating,* and *agency* so far, it can be argued that credit rating implies to estimate the worth or value of customers or debtors, based on the information, in terms of his or her ability for late payment and CRAs are one of the organizations to carry it out. In short, credit rating can not be possible without information.

What follows partly presents how information is studied in the academic research and, similarly important, how it is handled in the real trading context.

7.1.1 Information in Research

The significance of information to credit rating or CRAs can also be highlighted in other relevant studies. In the research of Copeland and Ingram (1982), the relation between municipal accounting information and bond rating changes was surveyed to demonstrate the particular importance of accounting information which presented directly the quality and assets of governmental issuers. In terms of accounting, Matolcsy and Lianto (2000) also surveyed the impact of bond rating revision on the market by testing the accounting information offered by Australian CRAs. This research also contended that, in the stock market which changes at any moment, the efficient information cannot be emphasized more. Speaking of the efficiency of information, in the survey of Norden and Weber (2004), they centered on the response in the markets of credit default swap (CDS), a derivative financial instrument in the security market, to the credit rating announcements, with the data collected from 2000 to 2002, to shed light on the significance of efficient information. By the same token, the slowly updated information is asserted to be harmful to the market as well as investors. Löffler (2004) also examined the reason why some CRAs appeared slowly reacting to the latest

information to discuss how to avoid the rating bounce and information loss.

Information was also studied from alternative perspectives. For example, its value associated with the market was studied by Followill and Martell (1997) who examined the relation between the value of information provided by the Big Three and the market efficiency in the bond trading. Also, it was suggested that information provided by the CRAs in different countries may function differently. Last but not least, information asymmetry has grown to be one of the key research focuses in recent years. For instance, in the study of Olegario (2000) on the history of credit-reporting agencies in the U.S., the issue of asymmetrical information was underscored and treated as the main reason for good borrowers to pay unsatisfactory interest rate. More than that, Nayar (2001) discussed the issue of asymmetric information based on the information provided by voluntary CRA and the Rating Agency of Malaysia (RAM) respectively. Besides, White (2001) in the research of the credit rating as an industry dealt with the role of CRA. It was advised that CRAs keep playing the role in helping issuers and investors “pierce the fog” of asymmetric information in the financial market but let the market participants themselves decide what type of role to be played. Also, Carruthers and Cohen (2009), in their review of the early evolution of CRAs, pointed out how investors and lenders tend to depend on the sources from the third party—CRAs—to resolve information asymmetries. However, in this study, they turned their attention to the protection of intellectual property and the reduction of legal liability.

All the researches mentioned above, either about information efficiency, information asymmetry or about the information in a specific field such as that in accounting, further indicates the significance of information for credit rating or CRAs. Beyond what is studied in the academic papers, information is actually one of the focuses of the trading context in the real life, which is to be discussed from the

interviews in the field work.

7.1.2 Information in Trading Context

During the one month of field work in the bond trading department, I interviewed all the seven people there and watched them working. During the interviews, a big part of their statements were concerned with information; that is, how information was handled, collected, analyzed, interpreted, and used in their daily jobs. In other words, not only the up-dated information but also the professional interpretation was needed for deriving the truly meaningful information to satisfy the requirements of the investors for the best investment. In the following part, the key points associated with information form my interviews are provided and discussed.

Speaking of the importance of information, interviews indicated it with different ways. Ben firstly shared with me:

> "Actually we absorb the information at any moment. We will see whether it is going to cause any impact on our targeted investment. We rely on the information to do our jobs and serve clients."

Besides, L. also emphasized that information was not just information; what is highly valued is the meaningful and useful interpretation before it can be considered for investment. In this regard, P.T. also assured me of the importance of interpreting the information by saying that, with the information, they had to judge it by themselves. Different from P.T. and L., S.K. was devoted to the collection of various information rather than the interpretation of them. What he explicated about his daily work totally reflected the complexity of the information. According to him:

> "After finding the suitable investment objects, I will check out the conditions that banks can offer…As you know, the credit rating information is changing every day, which can be driven by the financial statements, some events like the UK's

> decision to leave EU, or some specific governmental policies such as the rising or falling of the interest rate. We also have to understand the exchange rate of foreign currencies. Everything is related to each other so that we have to keep an eye on many different things at the same time."

As the Chinese saying goes, "The gap between different professional jobs is as wide as the gap between mountains." That is exactly how I felt then. S.K. continued impressing me by sharing more he needed to notice for a better understanding of the market, for example, bribes in Brazil, economic cycles and changes of the industry, the related laws and regulations, and even culture, all in international context. The only female trader Yu was basically dedicated to data maintenance about clients but shared some jobs of information collection. She said she started to pay attention to the changes as soon as the bond was issued and besides getting the relevant information via the websites of CRAs, she also tried to collect all the information from different sources, exchange the information with others and make the comparison.

To make a summary, the main business of this bond trading department is to search for the ideal bonds in the global market for their clients to invest via information which ranges from financial statements, occasional events, credit rating, interest rate, exchange rate, a specific industry or country to governmental policies, economic situations, laws, regulations and even culture. It is almost about everything that I can think of. As discussed previously, credit rating implies to estimate the worth of value of the debtor in terms of the debtor's ability for late payment and CRAs are one of the organizations to carry it out. Similarly, my interviewees are giving the bond issuers a certain value so that they can trust that the issuer will pay the coupon on schedule as put on the contract and no default will happen. That is exactly credit rating except that some specific concerns from their clients also need to be considered. Then the

recommendation from the bond trading department will be made and reported to their clients, which is one part of what CRAs are set up for.

7.1.3 Information as Core of Credit Rating

Markets change every second. Anything transient anywhere in the world may cause a big impact on the worldwide market as well as the assets of the investors. Consequently, information highly matters. That is why bond traders are destined to look into the information all the time. Moreover, when being asked about the source of the relevant information, every interviewee mentioned Bloomberg unanimously! That is another subject to be discussed in the next chapter.

The role that information plays in credit rating or CRAs is similar to the engine in the mobile; it is the origin of all operations. Information needs to be collected in a comprehensive manner so that not a vital clue will be missed. It is extremely preferred to organize various and plentiful information systematically so that the key points can be highlighted. Information must be completely accurate and true so that the correct analysis can be made accordingly. One of the strategies to certify the accuracy of data is making the comparison among various sources. Moreover, without intelligent and professional analysis, information is destined to be no use. It is also definitely necessary to update the information from time to time in order to the keep path with changes in the market. Lastly, delivering or offering the information effectively and efficiently when necessary can never be too important. All in all, information is the inception of credit rating and CRAs. Everything about credit rating in the bond market commences with information.

Interestingly enough, even though we put aside how information is woven into the implementation of credit rating in the bond market, information is required in the

practice of credit cards for personal usage and letters of credit for business exchange. When people apply for credit cards, they are always asked to offer some personal information including the name, addresses, email addresses, phone numbers, nationalities, the age, the gender, the marital status as well the family status. In addition to those basic things, more information such as the educational background, the occupation and the salary are particularly required because it is closely related to the credit limit granted. On the other hand, before a firm can issue the letter of credit, the bank must have surveyed some information of the firm, which basically includes the firm's type, main products, the number of employees, the performance, the reputation and so on. More importantly, the information on the sales and the finance would be definitely checked and evaluated in order to decide the credit limit. To summarize, information is indeed the core of credit, credit rating, and CRAs.

7.2 Developments of Credit Rating

There was a long way for the primitive CRAs to be shaped into what they look like today, thanks mainly to the endeavor of some dedicative front-runners. In addition, the harsh competition between the rival firms did motivate more innovations. Moreover, when disadvantages were discovered, revisions followed which also contributed to further developments. In the following part, some significant changes about the developments of CRAs were outlined from a historical perspective and based on the characteristic. These changes were made either by the Mercantile Agency (later termed the Dun Company) or by the Bradstreet Company, which are two pioneering firms in the credit rating industry, being established in 1841 and 1849 respectively; more details

are to be introduced in next section. However, changes kept on happening all the time so that some may fail to be discussed a dichotomous manner. To be more specific, issues including what type of information was offered, by whom the information was provided, and how the information was organized are to be dealt with. It is expected the historical reviews unveil on how the early CRAs changed into what we know nowadays.

7.2.1 From Personal Information to Financial Statements

As the establishment of the Mercantile Agency (in 1841), by Lewis Tappan, was partially triggered by the debt crisis and the merchants were the first group to be served, the financial status of the debtor or the potential business partners was supposed to be the first priority of credit information. That is true in essence but somehow hard to carry out in reality. The main reason is that systematic and reliable financial statements were hard to obtain then, not to mention whether they were exactly available or not. Instead, apart from the information about people's assets and businesses, the information about the debtors or the potential business partners' personality carried almost the same weight. That is to say, it was from the information about people themselves that the credit to be granted was indirectly judged and given.

Take Tappan's agents for instance, the primary task was explained to understand whether the debtors or businessmen owned property, whether they had good personalities, whether they did speculative businesses, and whether they were competent and something like that. Even for Thomas Ward who worked as the agent of Baring Brothers in America for over two decades in the first half of the nineteenth century, the character of the people targeted was also the center of the information in addition to their capital. For example, it was put in one of his reports that a certain person was energetic in businesses and tended to like strongly and dislike strongly. As a

matter of fact, according to Lauer (2008), in one of the Agent's advertisements in 1858, it was just described that, via the agency, false and fraudulent behavior by a purchaser would be unveiled ruthlessly, plausible swindlers detected, the incompetent trader described, and the extravagant checked by the Agent.

The statement above did remind us of how credit might be checked much earlier from Weber's description in *The Protestant Ethic and the Spirit of Capitalism:*

> "'The most trifling actions that affect a man's credit are to be regards,' Benjamin Franklin instructed. 'The sound of your hammer at five in the morning, or eight at night, heard by the creditor, makes him easy six months longer; but if he sees you at the billiard-table, or hears your voice at a tavern, when you should be at work, he sends for his money the next day'" (Parsons, 1992, p. 49).

Weber in this book also borrowed Benjamin Franklin's sentences including "time is money" and "credit is money." At the same time, Franklin highlighted some characteristics such as industry, frugality, punctuality, justice, honesty and prudence, which Weber claimed to be the spirit of modern capitalism. Coincidently, it is ascertained in the Bible that the fortune gained via working will be become more: "…but he who gets a store by the work of his hands will have it increased (Proverb in Bible 13:11)." As credit is money, the increased store can be analogous to more credit and that is derived via working. It is worth noting that the Biblical scripture is extracted from the Old Testament which the Jewish people such as the Rothschild family deeply believe in, not only in religious ceremonies but also in everyday lives.

From the discussions above, it can be claimed that the credit agencies, at least in the first half nineteenth century, centered on collecting information about people themselves while their property, corporation operation, and financial performance were similarly important. Regarding the information about people, it underscored not only the

characteristics such as industry and competence but also the morality such as integrity and honesty which were also highlighted in Franklin's advices or in the Bible. In other words, information about credit during this period was not just whether one was financially able to repay the debt but also whether he or she belonged to a type of people who were self-constrained to such a level that they could be trusted in terms of late payment. Yet, there were some problems with this type of information.

One of the problems was related to the quality of the information. As mentioned earlier, what was offered basically contained the people's personal information and their assets including their businesses. Because the former could be fragmented while the later could be transient, it sometimes confused the clients. That further led to merchants' challenge in decision making, especially when negotiating with customers with whom, as outsiders, they shared no common social networks in a certain area. For instance, in some cases in the early nineteenth century, the information provided by the agency had some confusing descriptions that someone was a sound credit risk but not likable or that someone enjoyed a poor reputation as a man but had money. It happened often that when one's financial records were rather scarce, more personal information such as the marriage statues, the working experiences would be provided but not useful at all for judging his or her ability of returning debts. All in all, blurred, insufficient, fragmented, ambiguous, or even somehow paradoxical information made clients puzzled and frustrated.

Another problem was associated with the subjectivity of the information owing to its sources. Back to two centuries ago, by no means could people get access to any officially publicized data or archive, not to mention that personal information was somehow confidential owing to its connection with credit granted. Under this scenario, rumors, gossips, anecdotes, conversations, personal opinions and local newspapers

could be where the personal information was obtained and then organized or summarized by the agent. Things could be worse in rural areas where political or religious leaders governed people's everyday lives more and thus prejudices were common. Information from those sources could be subjective, possibly far from being central or correct.

Comparatively speaking, numbers on financial statements are much more objective and therefore personal judgment or even prejudice could be avoided one way or another. Bothered by the disadvantages about the credit information, the credit agents were apt to rely more on financial statements or data than on personal things. During the 1870s, firms were required to offer their balance sheets when working with credit agencies. At the same time, credit agents were trained to be specialized in certain industries, which made judging the accuracy of information concerned with those industries much easier and more efficient. However, some firm owners refused to reveal the financial statements and even hid some of the facts. It was not until the founding of National Association of Credit Management[118] in 1897 were the problems solved one by one and the quality of information improved accordingly. To be more specific, the Association was in charge of improving the service of mercantile or credit agencies and stressed the accuracy and speed of the commercial information provided, particularly statistic data. The Association even went ahead with its own statistics, encouraged and pushed Dun and Bradstreet, one of the earliest mercantile agencies, to include the comprehensively financial statements in the credit reports. With all the endeavors, the significance of financial statements of data was thus strongly enhanced and the objectiveness of credit information improved as well.

7.2.2 From Amateurs to Professionals

Given that information is definitely the core of credit rating, as discussed in the previous section, those who offer the information do matter. Changes of their identities and roles not only influence the quality of the credit information but also change the essence of credit rating and the agency. Some changes were triggered by drawbacks in practice while others were driven by structural constraints. The following section examines how the information providers, direct or indirect, transferred from the common people to professional agents.

It was recorded that Tappan, the founder of The Mercantile Agency, started his business by gathering information from a network of agents and sold it to subscribers. In addition, Tappan contracted with local attorneys (Lipartito, 2013) to offer reports concerning the creditworthiness of individuals and corporations. He also hired many unpaid local correspondents as the agents, which was one of the main reasons for his earlier success. There were several advantages for these volunteers, for example, low cost, quick in messaging, and with geographical proximity to local affairs. These unpaid correspondents, mostly consisting of new attorneys, offered local information to the credit agency and were rewarded for referrals in the prosecution of debt collections in their communities. Tappan highly admired these local agents and thought they always provided the first-hand information and thus performed better than stranger agents, those who traveled around to get information. That is, some correspondents served as travelling reporters who, as how they were termed, traveled around and collected relevant information in each area they headed for. Since they were strangers to the local areas, getting information from other sources indirectly was unavoidable. During the time when the personal information was no less important than the financial records, traveling correspondents might obtain information by personal observation, by easy conversation, or by limited experiences.

According to Lauer (2008), there were over 300 correspondents in 1844 in The Mercantile Agency under Tappan's governance. That number more than doubled in 1846 and increased to more than 10,000 by the early 1870s, under the leadership of Dun and Douglas, about thirty years later after the launch of the Agency.

It happens occasionally that credit information could be obtained neither through correspondents nor via reliable sources, and then letters of recommendation would be accepted instead. They tended to be written by prestigious people such as attorneys, clergymen, bankers, and businessmen and the focus was assumed to be personality oriented, based on the personal experiences of recommendation writers. Such letters become much more common with the business expansion in other areas out of the headquarters. In addition, some cases about credit information were carried out via commissioned investigations, which was highly preferred for distant strangers. As it was the paid case, information provided basically tended to be reliable. When the Agency, located in the northern American, planned to unveil new businesses in the southern area, local lawyers or individual storekeepers would be reached to take charge of local credit information for merchants in the north. Those tentative methods were workable one way or another but pointed to problems, more or less.

Regarding unpaid correspondents, the biggest concern would be the quality of the information; since no pay was offered, the governance on them was little and so was the assurance of the information. Some clients even complained outspokenly that several correspondents were just rookie lawyers, unable to find any decent jobs so as to serve voluntarily for a while, under which quality failed to be guaranteed. Actually, it was true that during 1890s, these unpaid attorneys whom credit agencies could only attract were complained to be the source of unreliability. As to travelling reporters, it was slow, costly, and time-consuming for the credit agency, not to mention that travelling was

laborious. By contrast, that some big firms privately employed travelling reporters seemed more effective and appropriate. One famous example was Baring's American agent Thomas Ward. With his good reputation and a prestigious network, he did deserve the access to the precious information and opinions from his acquaintances. In addition to unpaid correspondents and traveling reporters, letters of recommendation seemed far from perfection as well, mainly because it was so easy to get but lacked helpful or certified information. Beyond these concerns, the biggest trouble was actually related to the attribution of responsibility which might even be involved in legal cases.

The fact that the credit information could affect the credit granted as well as the related business made the role of credit agents somehow sensitive or even unpleasant. To make things worse, some people might mercilessly label correspondents or agents as spies. Therefore, local correspondents preferred not to be identified or avoided to be recognized. However, when the information was found to be so misleading or even inaccurate as to harm the credit of clients, very few would step up to deal with it. For unpaid correspondents particularly, in no way would they claim the responsibility. In one of the examples, one merchant's purchase order was rejected because of his poor credit from the agency. However, the credit information was only grounded in the rumor that the local correspondents overheard unintentionally. The merchant filed for a legal claim. As a result, it was the boss of the Mercantile Agency, Douglass, who insisted on hiding the identity of correspondents and thus was put to jail for around three weeks. By contrast, correspondents remained anonymous, mysterious, or just unknown.

With these problems mentioned above, apparently some concrete changes had to be made though it took time. One of the observable changes was the employment of full time agents. To foster expansion of the Mercantile Agency, Douglass established local offices and employed full-time agents—reporters and interpreters of credit

information—after taking over the leadership. They were turned into be skilled or experienced agents, obviously superior to the unpaid correspondents or local ones who relied on somehow doubtful sources for credit information. It is impressive that four U.S. presidents once served reporters of the Mercantile Agency:[119] Ulysses S. Grant, Grover Cleveland, William McKinley, and the most famous one, Abraham Lincoln. Thanks to the improved transportation and communication, and most important of all, the flourishing business activities, of that time, new clients were brought in and superb information could be accessed via the network of local offices. All made credit reporting a new profession and agents were far from amateurs. Based on this, the way how the information was provided and delivered also went through various changes accordingly, to be presented in the following section.

7.2.3 From Verbal Messages to Publications

When the Mercantile Agency was just set up in 1841, the information provided was basically confidential. First, only subscribers were able to get it and most of them were merchants and wholesalers, bankers and insurance companies included. Second, only in the office of the Agency could subscriber get the information; subscribers were obliged to head to the office for information. Finally, only the verbal message was provided. To be more specific, the summarized information was read by considerate clerks of the Agency and subscribers jotted it down while listening; neither written information nor copied notes was provided. If the subscribers happened to have a closer relationship with the Agency, they might be lucky enough to get extra information mumbled by the clerks. In short, the information was intensively controlled and highly confidential. Later on, owing to the increasing amounts of information which was hard to be presented by verbal messages only and thus replaced by handwritten reports. It

was described that the hand-copied files had to be prepared for all the branch offices of the Agency and new information must be updated in all offices as well, which made clerks exhausted extremely.

However the form of the information changed, the Mercantile Agency focused on serving merchants with information rather than make profits purposely although cost and reasonable profits had to be considered. In addition, the subscription-based service was firmly established by Tappan very early though there was no assessment of the information but reports, in either verbal or hand-written forms. More importantly, information remained confidential and open to subscribers only. With the development of information management, the market became more competitive after the debut of the Bradstreet Company in 1849. Both credit agencies lured more clients but the competition made running businesses more critical and difficult. It was obviously that some innovation was required.

In 1851, the Bradstreet Company published the first multi-volume reference books of commercial credit reports, hoping to increase circulation. They were just loose-leaf sheets but with plentiful volumes, which made organizing files exceptionally laborious. The following description recorded from the Mercantile Agency's central New York office in 1851 shows how it looked. As Lauer (2008, p. 308) stated, "Upwards of thirty men are constantly occupied in the details of this office alone, condensing, copying, and giving out reports, carrying on the correspondence" (also cited in Cetina and Preda, 2012, p. 274). It was put that the reports consisted of over 100 books and there were 600 to 700 pages for each book. Moreover, most of the information was still written by hand. The reason why they failed to be printed was the concern for secrecy as before. The reference book was later transformed into a heavy quarto volume known as *Bradstreet's Reports*, or 'red books' in the vernacular, and

popularized among the trading community across the country. The printing version took a big pile of paper so that making the data more compacted became critical for the agencies.

The new comer in the credit reporting industry set a milestone in the history of credit information system due to the classification of the information. In 1857, the Bradstreet, a pioneer publisher, started to publish a bound reference book, *Bradstreet's Improved Commercial Agency Reports* that contained information and also presented the data indicated by numerical words to show abbreviated credit rating. For instance, a certain number signified 'making money' while another meant 'good morality character' or 'prudent credit'. Some information was classified in other ways, for example, corporations being categorized by industry while others by city or by alphabetical order. The brand-new way of organizing data did make huge amounts of information much more compacted and easier to use. As put by Carruthers and Cohen (2009), classification implies simplification, leading clients to use the category system to center on only a few dimensions they were concerned.

After the publication of the reference books by Bradstreet, Dun in the Mercantile Agency changed his mind though he had been resisting the way of publishing books. Just like what happened previously, inconveniences or drawbacks led to changes and even innovation however reluctant people might be. One of the drawbacks was from the supplier's side, the Agency—laborious and costly in organizing the files, delivering them among the branch offices (in Boston, Philadelphia, and Baltimore, not to mention those in Canada and London), and updating them from time to time. It is as argued by Sylla (2001) that at the time when most businesses were run locally, transactions were basically limited to people who knew each other. By the same token, when the field broadened, information was forced to be handled differently. The other drawback was

from the client's side—inconvenience in heading to the Agency often for information, torture with reading the reference book with several hundred pages, difficulty in finding the useful information. To make things worse, information began leaking out to nonsubscribers, which led to the decreasing subscription.

Facing all the visible problems, the increasing market demand, and especially the soaring popularity of the rival's reference books, Dun had no choice but follow the trend and publish its own reference in 1859 in response. In addition that more people and firms as well as related information were included, the rating was carried out in a more systematic, specific and reliable manner. For instance, besides an overall rating, the separate numerical rating was also provided for different creditors based on classification of industries. More than that, the information for rating was traced back to the historical facts as long as eighteen years ago. These reference books were sent to subscribers when being published, firstly annually and four times a year later on. When the third version of the reference book was published in 1864, the rating system was similar to what we see nowadays but in a primitive form, followed by more and continuing modifications afterwards till now.

It is worth noting that, from written reports to the printed books, what people requested from the agencies basically remained to be the reports about personal information relating to the worth of the credit applicants, for example, the real estate, cash, personal property, the merchandise owned and the business operating condition. In addition, what agencies offered was just service via reporting the information in a certain form, neither rating nor ranking. Undeniably, credit reporting firms were operating on a massive scale by the early 1870s. In 1875, Dun purchased 100 typewriters and impressed visitors by the new office technology and a big group of employees dedicated to typing. At the same time, since the 1870s, credit firms requested

companies' balance sheets and owners' financial statements when being asked to work on credit reports. The CRAs which were set up afterwards followed that trend.

Interestingly enough, the initial purpose of data classification and the rating style was just to organize the content of lengthy texts in a simpler way. Yet, it accidentally introduced a more economic and efficient way for publishers to print the reference books, for users to refer to the information and for merchants to make the credit decisions quickly after referring to the key information. More importantly, Bradstreet would offer the abstract from the full reports and indicated the overall credit by a certain number, the first time that rating words showed up. To borrow the interpretation of Carruthers and Cohen (2009), these changes involved "the transformation of 'soft' information into 'hard' information." To put it another way, the reports used to be qualitative, descriptive and unsystematic; by contrast, the rating result was standardized, precise and systematic. However, the written reports and credit rating results were still printed separately; it was unusual to put rating results together with written reports till the 1890's.

7.3 Establishment of Credit Rating Agencies

As discussed in Chapter 4, the prosperity brought forth by the development of long-distance trade in the eighteen century mainly ignited the popularity of credit. Since long-distance trade not only took several years but also required the involvement of different people such as merchants, agents, middlemen, bankers, traders, normal investors and so on, trade credit was extremely hard to organize and trace. To make things worse, traders tended to be, as Poon claimed, "ranked behind those of banks and

other secured lenders and were among the last to be paid" (also cited in Cetina and Preda, 2012, p. 273) in case of legal claims. It was reported that the percentage of business collapse in the nineteenth century was 60 percent (Poon, 2012). Unfortunately, traders were always the least protected group. The situation remained the same till the nineteenth century. In addition, the scope of overseas trading was further beyond closed social networks or kinships which investors used to depend on for information. Thus, traders as well as investors anxiously desired to select the trustworthy trading partners in order to decrease risks and secure their asset. It is no wonder that commercial exchange was the focus upon the establishment of the CRAs.

At the same time, the worldwide capital market kept growing and became more and more complex. It was beyond the capacity of individual investors or merchants to get a clear whole picture. When something wrong happened, it was just like a long-distance rail got derailed on the way; the whole rail stopped and loss was made accordingly. Under this scenario, something was required to be done to overcome the huddle or at least to try to assure investors or merchants that things were expected to work on the right track. Obviously it is the CRA that answered the call and breathed the new life into the commercial community. The origin of CRAs was claimed by most researches to be the brainchild of Lewis Tappan.

7.3.1 Establishment of Dun & Bradstreet

The Mercantile Agency was claimed in most studies to be the first CRA that we understand today and it was founded by American Lewis Tappan (1788–1873) in New York City, Tappan, learning from his father, a dry goods store keeper, became a wholesaling merchant of dry goods as well as silk and worked actively in areas of commerce. Besides the identity as a wholesaler, Lewis Tappan was also an abolitionist,

an advocate for civil rights and the freedom of the illegally enslaved Africans. Because of his job as a wholesaler and his earnest participation in public affairs including anti-slavery, education, church establishment, Tappan built up strong social networks among the merchants, high-quality attorneys, and missionary communities, which later became not only his sources of credit information but also the foundation of his career in the credit reporting industry.

Badly stricken by the 1837 panic[120] with defaulted debts but highly motivated, Tappan established the Mercantile Agency in July of 1841. Tappan's first intention was just to launch a network of correspondents to offer a source of reliable and consistent credit information so as to help American merchants with their decision-making. It is worth noting that an American federal bankruptcy law[121] enforced in 1841 tended to provide the debt-striven with some legal and financial protections, which made debt collecting more difficult upon defaults. As a consequence, creditors were more eager to find reliable business partners, particularly among those whom they entirely did not know or those who lived far away, by means of information.

The Agency served merchants at first, offering information about trade credit to facilitate mercantile exchange. The Agency was just a little shop in New York at the very inception and mainly served the City's wholesalers. Then the business grew largely triggered by the need of clients out of the city and even acquired international ones. The first branch office was opened in Boston in 1843 and followed by Philadelphia and Baltimore in 1845 and 1846 respectively. Tappan in 1849 turned the booming business to Benjamin Douglass, a previous clerk, and the Mercantile Agency kept expanding. In 1859, the Mercantile Agency was transferred to Robert Graham Dun, Douglass' brother-in-law, and the name was changed into R.G. Dun & Company, with the mission of continuous expansion. In the following forty years under Dun's lead coupled with

Douglas's previous devotion, some innovations were introduced, and consequently businesses were extended across international boundaries. By 1870, around thirty branch offices were available around the U.S. and with several offices in Canada and one in London.

During the growth of the Mercantile Agency, there appeared other competitors; the most important and similar firm, the Bradstreet Company, was founded by John M. Bradstreet in Cincinnati in 1849 and later became a tough rival of the Mercantile Agency for several years till the merge. The other new comer of the industry was McKillop's Commercial Agency in around 1860, seemingly emulating the operational style of the two agencies but much less influential. The Bradstreet initiated some innovations in a parallel manner with the Mercantile Agency which later was called the Dun's Company and the tense competition between these two firms remained for several decades, ending up with the merge.

By 1875, there had been sixty-five Bradstreet's branch offices in northern America. In 1933, driven by rivalry and economic depression, R.G. Dun and the Bradstreet Company merged to form Dun & Bradstreet, still underscoring the importance of service via information provision. The merger was engineered by Dun's CEO Arthur Whiteside whom was said to be with first-rate diplomatic skills. Whereas both companies sold information as products previously, Whiteside increasingly stressed the importance of service via information. In 1962, Dun & Bradstreet bought Moody's Investors Service , one of the biggest three CRAs (but both separated in 1999). With great leadership, he not only led the Dun & Bradstreet out of the depression but also achieved an explosive growth in the 1960's and 1970's with the aid of new communication technologies such as typing machines. Dun & Bradstreet remains active in the credit rating industry till now but S&P, Moody's, Fitch, the Big Three, have cast a

shadow over it since the late nineteenth century.

7.3.2 Establishment of Big Three

Toward the late nineteenth century, the market of credit reporting or credit rating became more competitive, especially after S&P, Moody's, Fitch were founded in 1860, 1909, and 1913 respectively. Among other more rating agencies, they survived and became the biggest three ones after some mergers and reshuffles. Other CRAs are available but far lesser influential than the Big Three. It is worth mentioning that the establishment of the Big Three and other contemporaries was closely associated with the growth of railway building in the 1990s. With the construction of railways, collecting capital by bonds was popular and it was agued that "the railway was the symbol of the age" (Michie, 2006, p. 87). Figure 3 shows the growth of the railway construction of 1850 and 1990. More broadly speaking, the expansion of the world capital market and the structural changes in the U.S. also contributed to the prosperous development of the credit rating industry, more to be discussed in Chapter 8.

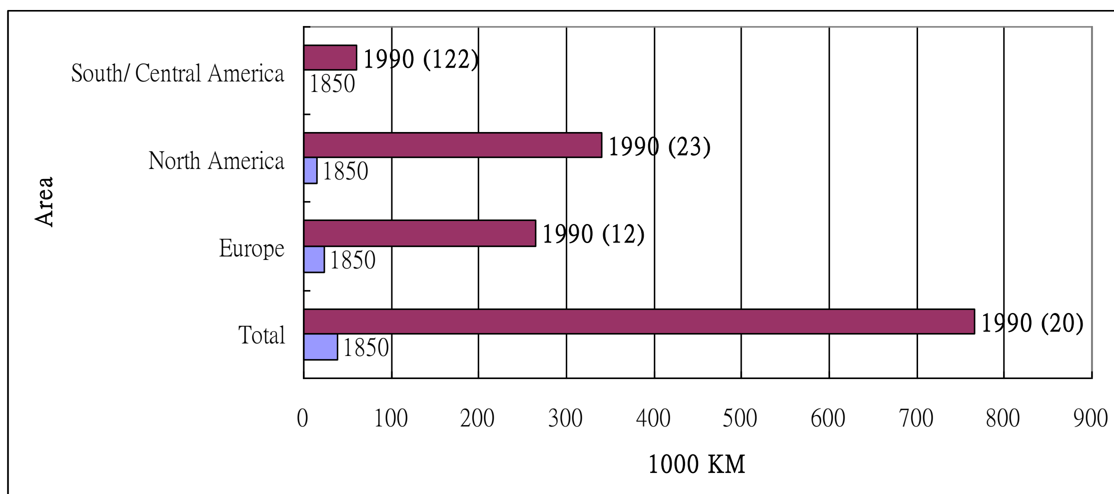

Figure 3. Railway Mileages between 1850 and 1990 *(and times of growth.)*

Source of data: *The Global Security Market* (Michie, 2006)

Upon the establishment of S&P and Moody's, they had focused on offering the organized and rated financial data, despite of descriptions to some degree, rather than personal information any more. In addition, their main clients consisted of various investors in the financial markets. As Poon claimed, "Standard & Poor's and Moody's were originally established to provide published compendiums of information to investors about different companies" (also cited in Cetina and Preda, 2012, p. 276). What is more, the focus of rating on commercial exchanges also expanded into various organizations and financial exchanges in the security market. What follows is the brief introduction of the Big Three, what we read or heard from the mass media the most in the current financial market.

Standard & Poor's

Henry Varnum Poor (1812-1905) is the founder of Standard &Poor's, despite of some reshuffles and mergers before the corporation that we know of today was established. He once worked in a law firm and set up his own law office with his brother John Poor before his debut in the industry of credit rating. Via the investment in the flourishing timber business in Maine, his hometown, two brothers became wealthy. They later shifted their attention and invested in European and North American Railway, which turned them into magnates. In addition, Henry himself got involved in the development of railroad construction in various aspects. For example, his brother purchased *the American Railroad Journal*[122] in 1849 while Henry worked as the manager and editor. In 1860, he finished the book *History of Railroads and Canals in the United States*,[123] in thick manuals, and had it published. It was aimed to collect and organize comprehensive, but descriptive, information from both financial and

operational perspectives for investors. The manuals targeted at the U.S. railroad companies while the Bradstreet just published a reference book about commercial exchanges three years earlier. In 1862, Henry Poor was assigned to be a governmental commissioner to a newly chartered Union Pacific Railroad.[124] In the same year, he was also elected as the first secretary of the railroad company. It is no wonder that Henry Poor was described as "the greatest contemporary chronicler of the railroad boom."[125] All the efforts coupled with his multiple networks associated with railroads paved the way for his career in the credit rating business.

In 1868, Henry Poor founded H.V. and H.W. Poor Co. with his son and two guidebooks were published, *Poor's Manual of the Railroads of the United States* and *Poor's Directory of Railway Officials*, hard-covered and annually dated. Back to the late 1800s, both the railroads and canals were the most capital-intensive industries, followed by the telegraph industry and others. Therefore, multiple guidebooks in this regard were published or exchanged. For instance, James H. McGraw in 1888 purchased *the American Journal of Railway Appliance*s which was aimed to keep people informed of the latest news and commentaries of the railway industry. In addition, in 1897, John H. Hill acquired the publication of *American Machinist*, a trade magazine focusing on the machinery industry such as machine building. In 1917, McGraw and Hill merged their publishing companies and formed the McGraw-Hill Publishing Company, Inc.

Several decades later, the financial information of non-railroad companies were provided as well, mainly by the Standard Statistics Bureau which was launched in 1906 by Luther Lee Blake.[126] This bureau focused on financial statistical data of non-railroad companies with most advanced computing techniques. In 1914, Black incorporated

Standard Statistic Company and started to rate corporate securities, especially mortgage bonds in 1923. In 1941, Poor's Publishing Co., and Standard Statistics Co., merged and became Standard & Poor's Corp., extending the field of financial information service. In 1966, the company was purchased by The McGraw-Hill Companies, remaining dedicated to financial credit rating.

Moody's

John Moody (1868 – 1958), an American investor and financial analyst, founded John Moody & Company in 1900 and published *Moody's Manual of Industrial and Miscellaneous Securities* in the same year, which was later changed into *Moody's Manual of Railroads and Corporation Securities* and finally, into *Moody's Analyses of Investments*. The purpose of this guidebook was to provide information and statistics specifically about issuers of stocks and bonds, which ranged from governmental organizations, financial institutions, industries of manufacturing, mining, utilities and manufacturers of food. It was a popular publication nationwide; it was recorded that the publications had sold out within two month as "circulation had exploded and Moody's Manual was known from coast to coast."[127] Unfortunately, the business was forced to cease owing to insufficient capital after the stock market crash in 1907.

The year of 1909 signified Moody's return to the market by founding Moody's Analyses Publishing Company and publishing *Moody's Analyses of Railroad Investments* which added analytical information about the value of railroad securities rated. That is, Moody had entered the business of analyzing the stocks and bonds of America's railroads, which made his company the first CRA to rate public market securities. What followed was the credit rating of other government bonds, city, state

and municipal bonds included, which got started in 1914. By that time, the ratings from Moody's had become a key factor in the bond market. In the reports, Moody's would also offer concise conclusions about the relative investment quality. What is more, Moody's would explain to readers the analytic principles that were used to assess a railroad's operations, management, and finance. The new manual and strategy were overwhelmingly welcome in no time. In the 1970s, Moody's expanded his service to the commercial paper market and bank deposits.

After Moody's Investors Service was launched in 1914, the rating business was separated from Moody's Analytics. To be more specific, Moody's Corporation is the parent company of Moody's Investors Service and Moody's Analytics. The former offers credit ratings and research on debt instruments and securities. By contrast, the latter provides leading-edge software, advisory services and research on credit and economic analysis and financial risk management. Moody's now has approximately 10,600 employees working in 36 countries worldwide. According to the reports from Moody's, the company's ratings and analyses track debts covering not only 120 more sovereign nations and approximately 11,000 corporate issuers but also 21,000 public finance issuers and 72,000 structured finance obligations. In 2016, the revenue was reported to be approximately $3.6 billion.

John Moody was claimed to be the pioneer of bond rating, adopting the rating scale for mercantile reports and shifted it to bond rating. Moody's is also the first credit rating company to charge security issuers which asked for credit rating while other credit reporting firms beforehand tended to charge investors subscription fee. The change implied that the task of credit rating required a higher level of reward owing to the increasing scope and complexity of the capital markets. Moody's influence can be fully reflected by the statement of Thomas Friedman[128] in 1996, much earlier than the

2008 financial crisis:

> 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."[129]

As a matter of fact, this statement may hold true not only for Moody's but also for S&P, Fitch and many other smaller or potential CRAs, but in various degrees, all over the world as long as the financial market remains available.

Fitch

John Knowles Fitch (1880-1943) was the founder of Fitch Ratings Inc. Before starting his credit rating career, he worked with his father in the printing business in New York City. In 1910, the business was incorporated as Francis Emory Smith Inc. and John Fitch became the president. In 1913, he founded a new corporation, The Fitch Publishing Company, dedicated to the security market with the publications of *The Fitch Stock and Bond Manual* and *The Fitch Bond Book*. In l997, Fitch merged with IBCA of London, subsidiary of a French holding company, and kept running under the company name Fitch Ratings Inc.

Fitch Group has branch offices in more than 30 countries. In terms of credit information service, the Group mainly comprises of Fitch Ratings and Fitch Solutions, in charge of credit ratings and risk services respectively. Fitch Rating has dual headquarters in New York and London.

Now the rating agencies issue credit ratings for the debt of governments, public

and private corporations and other financial institutions. The rates of the Big Three are shown by letter scales, principally categorized by investment grade and non-investment grade coupled with more categories such as short term rating vs. long term rating. The rating analyses focus on borrowers' or security issuers' quality and the investment risk. Here are a couple of examples about bond rating to demonstrate how they work in the security market.

7.3.3 Ratings from Big Three

In this section, a couple of examples are provided to unveil how the CRA rated bond issuers and explained the result and what impact the credit rating might have on the market accordingly. More discussions are to be carried out next Chapter.

The first example is the corporate bond rating associated with two multi-national enterprises. In late March of 2016, the news that Hon Hai Precision Industry from Taiwan acquired Yen 288 billion in new Sharp shares from Japan hit the headline news. It could be seen from the media that CEO Terry Guo, proud and happy, was on the way to Japan, with his whole family including his elderly mother on the wheelchair, to sign the deal. After the acquisition deal was signed, S&P upgraded Sharp's CCC credit from negative to positive outlook. In fact, Sharp had been downgraded to CCC from CCC+ one week before the acquisition because the delayed takeover was assumed to lead Sharp to troubles over the loans from Japanese banks. The history was changed after the deal. According to S&P, "… we think its financial standing would improve materially."[130] After the acquisition was successfully agreed and credit upgraded, Sharp's main lender extended the maturity date of existing syndicated loans by one month. It was commonly believed that the reason why the maturity extension was accepted by lending banks was that Hon Hai's credit rating was much higher than that

of Sharp. S&P also added that Sharp's credit rating may be upgraded further when more supports from banks become more concrete.

The second example goes to the government bond rating. In the coup of Turkey on July 15, 2016, some people were killed in Turkey and "more than 1,400 wounded as a result of an attempted coup overnight."[131] No later than a couple of days after the coup, Turkey was downgraded by S&P from double-B to junk coupled with a negative outlook, warning that Ankara (the capital) "faced unpredictable capital flows that could constrain its levered economy following last week's failed coup attempt."[132] It was also highlighted that the aftermath of the failed coup had increased the risk of the country's rolling over its external debt. At the same time, S&P not only downgraded Turkey's foreign currency denominated debt one notch but also lowered its opinion of Turkey's local currency debt one notch, both to double-B plus, with the latter making its lira obligations into junk as well. That led to the sharp fall of its currency lira, as much as "1.4 percent to 3.0834 per dollar"[133] almost as low as 3.0752, the lowest one back into September 2015.

Implications

The founding the Big Three officially transferred the credit rating industry's orientation from commercial credit rating to financial credit rating. According to Timothy Sinclair (2005, p. 24), it was the transition "between issuing compendiums of information and actually making judgment about the credit-worthiness of debtors" (also cited by Cetina and Preda, 2012, p. 276). The disparities are shown in different ways.

First, what CRAs are devoted to nowadays focuses on organized and statistical data about companies or governments as stock or bond issuers, instead of just

information of merchants. Second, the data offered are analyzed or evaluated and then rated by means of a solid letter rating systems and have become an important guide for subscribers and investors to make decisions rather than just for reference. Last but not least, the groups which are served by CRAs consist of various investors in the security market worldwide while the served groups used to be merchants or business people only. The main battle field for CRAs has been transferred from the local commercial market to the global security market.

The creation of credit reporting companies or credit rating agencies was mainly driven by social needs from commercial exchanges and then the security market. However, it was through the legally defined procedure that the status of CRAs was ascertained and the Big Three became so dominant.

7.4 Legally Defined Credit Rating Agencies

Based on the previous discussions, it can be argued that the establishment of the CRAs is exactly based on the social needs or wants. To briefly review the points discussed previously, the credit, the late payment, is assumed to be available as long as people started to loan. Afterwards, the usage of credit expanded following the flourishing commercial exchange, either in fairs or in long-distance trading. However, chaos followed the convenience of expanded credit as it was difficult to grantee the return of late payment. Consequently, the credit reports were filed to meet people's desire or need for secure credit and CRAs were created despite of its long time of developments and transformations. All was triggered by the growing complexity and expansion of the commercial or financial exchanges. Finally, there appeared the Big

Three, not only well-known but also influential in the global financial market though they are actually rooted in the U.S.

Legally speaking, as the American companies, the Big Three must follow the laws of the U.S. The fact is that it was not until the very early 1940s did the American government start to regulate CRAs, about several decades later than the establishment The Mercantile Agency. However, once the legal system started to operate, it never stops hereafter. To be more specific, in addition to the new laws and regulations autonomously originating from governmental organizations, laws and regulations would be amended, changed, revised or added from time to time to regulate the operation of CRAs, which often happens over some drawbacks found in certain financial crises. By the ways CRAs are governed and supervised by the American government, the agencies not only got the support from the government but also derive their rationale based on the legal practice simultaneously. As a result, CRAs have turned from socially required organizations into legally defined ones.

The following section introduces some key early regulations from the American government since the 1940s. That is to say, the review centers on how CRAs were governed by the American legal regulations and thus transformed the way they operated in the global market.

7.4.1 Rating Requirements from OCC

In 1931, the Office of the Comptroller of the Currency (OCC)—a department of US Treasury which takes charge of supervising nationally chartered banks—set the regulation for banks to use the rating result from CRAs for secure investment. The standard was actually adopted from that for institutional investors. Under the 1931 regulation, securities were divided into investment and non-investment grades

according to the rating result. Based on this, bonds which were rated as investment grade are to be carried at book value by banks. By contrast, those low-rated bonds have to be written down to market value. It was the first time that CRAs were included in the governmental system, which implies that the status of the CRAs was not only woven into the US financial system but also enhanced under the national system.

As this emergent decision was made and announced after a wave of defaults and plummeting bond prices in 1931 following the Great Depression, a couple of researches (Flandreau, Gaillard and Packer, 2009; Flandreau and Sławatyniec, 2013) hypothesized that it was because CRAs overrated the market and partially led to the chaos. However, it ended up with little evidence to be found in support of this viewpoint. One of the plausible statements would be that the charging system of the CRAs had changed—from selling subscribers manuals to charging the rated security—and could be involved some conflicts of interest. Therefore, OCC decided to step up, get involved and make the rule.

Whatever the background could be, the regulation in 1931 did unveil the era that CRAs would be more heavily relied on in the financial market hereafter. It is exactly shown in OCC's official reports that some data are presented in terms of investment grade and non-investment grade. For instance, it was read in OCC's *Quarterly Report on Bank Trading and Derivatives Activities Second Quarter* 2015 that "The credit derivatives market…21.2 percent of investment grade and 15.9 percent of non-investment grade transactions…."[134] Some other data show the same pattern, for example, contracts referencing non-investment grade vs. investment grade. The disparity concerning investment grade and non-investment grade was thus defined. It also became the key consideration for bond trading in the market.

The role of CRAs was extended moreover in 1936 by OCC. As the bond value is

associated with intrinsic value of the corporation, the financial accounting was included in the procedure of rating. In 1936, OCC further restricted the purchase of securities by banks. In practice, in order to further define and enforce prudent investments, both the OCC and the Federal Reserve Board (FRB) extended the use of the credit rating result to supervise them. It was as put by Poon (2012) that these two organizations prohibited banks from purchasing bonds “not rated investment grade by at least two agencies” (also cited in Cetina and Preda, 2012, p. 277). In other words, the bonds which were claimed to be suitable for banks’ investment must be rated positively by at least two CRAs. Since then, banks were obliged to obtain credit ratings for their assets from more than one CRA to ensure that they met the requirement. With the involvement of FRB—under the American Federal Reserve System—this regulation did no less than rationalizing the legal status of CRAs.

7.4.2 Capital Requirements from SEC

Since prudent investment has become one of the main concerns for CRAs, the operating control became critical as well. During those decades, some collapse cases show that exchange in the market could be far beyond the capacity of an enterprise and the lack of adequate and permanent capital was the key factor. One of the examples is the case of the Penn Central Transportation Co., which was ordered by a federal court to file for bankruptcy in 1970 mainly owing to tight money after mis-management.[135] Driven by the concerns about the liquidity and creditworthiness of the enterprises, the SEC in 1975 decided to adopt more strict net capital requirements for broker-dealers. It was ruled in SEC’s Rule 153c-1 that broker-dealer must keep a cushion of capital in order to ensure it is truly able to pay all obligations in case of a delay in liquidating assets.[136] Moreover, new rules were set about the minimum net capital requirements to

further assure the quality of the bonds of the broker-dealers' portfolios. It was read on Rule 153c-1 that the net capital rule targets at liquidity, designed to protect securities customers, counterparties, and creditors via the requirement that "broker-dealers have sufficient liquid resources on hand at all times to satisfy claims promptly."[137] In other words, the asset quality carries no less weight than the asset volume and investors' asset can be guarded solidly.

In practice, the Rule 153c-1 gave detailed regulations regarding the net capital requirements. It firstly underscored that "every broker or dealer must at all times have and maintain net capital no less than the greater of the highest minimum requirement"[138] applicable to its specific ratio requirement. The rules mainly consist of four parts. The first part is concerned with ratio requirements for brokers or dealers in general. It was put in the Rule that "No broker or dealer…shall permit its aggregate indebtedness to all other persons to exceed 1500 percent of its net capital (or 800 percent of its net capital for 12 months after commencing business as a broker or dealer)."[139] Alternatively speaking, brokers or dealers shall not allow its net capital "to be less than the greater of $250,000 or 2 percent of aggregate debit items computed."[140] The second part deals with brokers or dealers which carry customer accounts and the rule said that a broker or dealer shall maintain net capital of no less than "$250,000 if it carries customer or broker or dealer accounts and receives or holds funds or securities for those persons."[141] The third part concentrates on brokers or dealers which introduce customer accounts and also receive securities and the rule was put that a broker or dealer shall maintain net capital of no less than "$50,000 if it introduces transactions and accounts of customers or other brokers or dealers to another registered broker or dealer… and if the broker or dealer receives but does not hold customer or other broker or dealer securities."[142] The last part focus on brokers or dealers which are engaged in the sale of

redeemable shares of registered investment companies and certain other share accounts. As per the rule, they shall maintain net capital of no less than "$25,000 if it acts as a broker or dealer with respect to the purchase, sale and redemption of redeemable shares"[143] of investment companies and so on. Under this rule, CRAs were obliged to pay close to the data on financial statements as well as balance sheets especially the net capital or case flow of the entity which credit is to be rated.

7.4.3 Identifications from NRSRO

As mentioned earlier, there are multiple laws and regulations which shaped the legal statues of CRAs. One of the most important, to avoid the confusing information to be released by the investors themselves to disturb the market, the SEC in 1975 set up a brand-new regulatory category for bond rating firms—nationally recognized statistical rating organizations (NRSROs). The purpose is to assign directly which institutions could do the regulatory rating for investors. In other words, NRSRO was designated to select the rating firms to serve the market and it is one of the most influential factors contributing to the formation of the Big Three. S&P, Moody's and Fitch were the only CRAs initially designated as NRSROs.[144] In addition, Lawrence (2010) revealed that from 1975 to the end of 2000, only four CRAs were designated by the SEC as NRSROs besides the Big Three. They are Duff & Phelps, granted in 1982, McCarthy, Crisanti & Maffei in 1983, IBCA in 1991, and Thomson BankWatch in 1992 respectively. McCarthy, Crisanti & Maffei was bought by Xerox[145] in 1985 while the other three were acquired by Fitch later on. In other words, the three biggest rating agencies were not the only ones to be approved over the past three decades. It is just that few rating companies had been removed from this field after mergers or acquisitions and several new ones joined the market but has not been influential.

Table 5 demonstrates the changes of NRSROs in certain years. For instance, in 1994, there were six rating organizations which were designated as NRSROs: S&P, Moody's, Fitch, Duff & Phelps, Thomson BankWatch, and IBCA.[146] Of all the six rating agencies, IBCA was a London-based English company while the others were American agencies. By contrast, there were only the Big Three as NRSROs in 2003. More joined the field in following years. In 2016, there were ten CRAs registered as NRSROs.[147] One is a Mexican company, another is from Japan and the rest are American companies.

Table 4. NRSROs in Some Years

Company	**Country**	**1994**	**2003**	**2005**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Numbers		***6***	***3***	***5***	***10***	***10***	***7***	***9***	***9***	***10***	***10***	***10***	***10***
S&P	U.S.	V	V	V	V	V	V	V	V	V	V	V	V
Moody's	U.S.	V	V	V	V	V	V	V	V	V	V	V	V
Fitch	U.S.	V	V	V	V	V	V	V	V	V	V	V	V
A.M. Best	U.S.			V	V	V	V	V	V	V	V	V	V
DBRS	U.S.			V	V	V	V	V	V	V	V	V	V
JCR	**Japan**				V	V	V	V	V	V	V	V	V
EJR	U.S.				V	V		V	V	V	V	V	V
KBRA	U.S.							V	V	V	V	V	V
Morningstar	U.S.							V	V	V	V	V	V
HR Rating	**Mexico**									V	V	V	V
Duff&Phelps	U.S.	V	Acquired by Fitch in March of 2000[148]										
BankWatch	U.S.	V	Acquired by Fitch in late 2000[149]										
IBCA	U.K.	V	Merging with Fitch in 1997[150]										
Realpoint*	U.S.				V	V	Acquired by Morningstar in 2010[151]						
LACE **	U.S.				V	V	Acquired by Kroll in 2010[152]						
R&I ***	**Japan**				V	V	V						

Source: NRSRO[153]

* Realpoint: Realpoint LLC

** LACE: LACE Financial Corp.

*** R&I: Rating and Investment Information, Inc.

Regarding how to select, NRSRO provided a number of specific criteria as well as explanation. It firstly stressed that the rating agency is in fact nationally recognized by the predominant users of ratings in the U.S. as an issuer of credible and reliable ratings. In addition, the criteria to be considered consist of (1) the organizational structure of the agency; (2) the financial resources of the agency; (3) the staff size and their quality; (4) the agency's independence from the companies to be rated and its reputation for integrity in the field; (5) the rating procedures of the agency; (6) the establishment and the compliance of the agency's internal procedures to prevent misuses of non-public information.[154] Potential CRAs need to apply for recognition annually and NRSRO will provide the annual reports as well.

Besides the key regulations as well as organizations discussed above and others which failed to be reviewed in this research, there was in fact one organization which had participated in shaping the rationale of CRAs much earlier—the National Association of Credit Men (NACM) established in 1896. NACM was set up collectively by 62 business leaders on June 23, 1896 in Toledo, Ohio. It was triggered by national needs to standardize credit policies and to get free exchange of business information. Back to over one century ago, it was just the organization which had inspired Dun and Bradstreet to add the financial statements in the credit reports, which was vital to the developments of CRAs. Nowadays one of the services of NACM includes the release of Business Credit Reports by which the collection of information about a potential customer is expected to enhance the quality of the credit granting decision. Besides, the same information also has strategic implications—"to strengthen a company's understanding of its customer base and lead to expanding that base."[155] It functions as an information warehouse within any company.

The CRAs are originally founded to rate the credit and belong to private financial

institutions which may not be entitled to the same backing from the government as official organizations. Yet, all the laws and legal regulations discussed above ascertained the rationale of CRAs. Moreover, three credit rating agencies have been dominant.

7.5 Dominance of Big Three

In the first Chapter, Introduction, Table 1 illustrates the settlements between the U.S. Department of Justice and investment banks which were declared to have sold mistakenly mortgage securities and they were nine banks in total. By contrast, Table 2 demonstrates the payments of settlements between multiples organizations and CRAs which offered incorrect ratings and they are only three agencies. The discrepancy in the number of entities somehow shows the monopoly of the Big Three. In fact, almost nothing has ever belittled their global influence since the inception of the Big Three.

Back to 1994 when there were six NRSRO approved CRAs, (discussed in Section 7.4.3), Standard & Poor's and Moody's had played vital roles. According to Cantor and Packer (1994), by January of 1994, among 1,018 banks worldwide which long-term bonds were rated**,** Standard & Poor's and Moody's were in charge of 55 and 64 percent of all respectively. Even with the sample limited to just 580 rated banks out of the United States, Standard & Poor's and Moody's still covered up 46 and 57 percent of rating respectively. By contrast, IBCA—the only London-based English company recognized by NRSRO that year—was in the third position, accounting for 31 percent of the issuance. Both Standard & Poor's and Moody's were thus claimed to be the two most powerful CRAs, not only in bond rating but also in many other industry sectors. Nowadays, the data still show that the three big ratings never got a downgrade of their

own since the crisis; investors are overwhelmingly relying on them to decide whether to buy bonds just like before. Those settlements have not "slowed their dominance"[156] over the industry; they are actually stronger than ever.

According to the 2016 annual report of SEC (The Securities and Exchange Commission), approximately 2.3 millions of credit rating were conducted in 2015 by ten NRSRO certified CRAs, as shown in Table 5. Of all the ten NRSRO CRAs, HR Rating is a Mexican company, JCR is based in Japan and the other eight agencies are American companies. In addition, the rated were categorized into six types—financial institutions, insurance companies, corporate issuers, asset-backed securities, government securities—and most ratings are concerned with government securities.

Table 5. Breakdown of Credit Ratings by Category in 2015

Number of Outstanding Credit Ratings as of December 31, 2015 by Rating Category*						
NRSRO	**Financial Institutions**	**Insurance Companies**	**Corporate Issuers**	**Asset-Backed Securities**	**Government Securities**	**Total Ratings**
A.M. Best	N/R	7,710	1,445	18	N/R	9,173
DBRS	8,487	143	3,536	12,848	16,947	41,961
EJR	11,251	1,015	6,384	N/R	N/R	18,650
Fitch	43,798	3,077	16,734	41,517	198,375	303,501
HR Ratings	N/R	N/R	N/R	N/R	347	347
JCR	770	59	2,227	N/R	428	3,484
KBRA	443	4	4	4,259	55	4,765
Moody's	50,094	3,175	42,821	68,494	637,898	802,482
Morningstar	N/R	N/R	N/R	3,306	N/R	3,306
S&P	60,005	6,896	51,105	64,222	964,704	1,146,932
Total	**174,848**	**22,079**	**124,256**	**194,664**	**1,818,753**	**2,334,600**

* N/R indicates that the NRSRO was not registered in the applicable rating category as of the reporting date.
Source: NRSRO annual certifications for the 2015 calendar year, Item 7A on Form NRSRO

Source: 2016 Annual Report on NRSRO, SEC.[157]

As demonstrated on Table 5, most of the ratings were carried out by the Big

Three—Standard & Poor's, Moody's, and Fitch. To be more specific, the market share of the Big Three was approximately 96.5 percent while the other 3.5 percent of market share belonged to the rest of seven NRSROs. Moreover, when the Big Three are reviewed separately, S&P took the lead (49.1 percent), followed by Moody's (34.4 percent) and Fitch ranked the third place (13 percent).

Besides, in terms of the revenue, approximately US$5.9 billion of annual revenue of the credit rating industry worldwide between 2012 and 2015, the achievement carried out by the Big Three is also extremely easy to recognize from Table 6. That is, for consecutive four years from 2012 to 2015, about 94 percent of the global annual revenues in the credit rating industry were generated by the Big Three, despite of the operation of other seven NRSRO certified CRAs. The result also corresponds to that counted by numbers of rating.

Table 6. Percentage of Total Reported NRSROs' Revenue in 2015

Credit Rating Agency / Year	2012	2013	2014	2015
S&P, Fitch, and Moody's	**94.7%**	**94.5%**	**94.3%**	**93.2%**
All Other NRSROs	5.3%	5.5%	5.7%	6.8%
Total	100%	100%	100%	100%

Source: 2016 Annual Report on NRSRO, SEC.[158]

As the data above were concerned with security issuers or securities themselves, it is worthwhile to see alternatively how CRAs are judged by the public after the crisis. Take the stock performance of Moody's for example. Moody's has reached the agreements with CalPERS and DoJ (shown in Table 2) and paid $994 million so far while the result of the lawsuit from SEC has not yet announced. Yet, the stock price seems scarcely affected from a longer perspective.

Figure 4. Stock Prices of Moody's

Source: Equities from *Financial Times*[159]

Figure 4 illustrates that the Moody's stock price decreased for around three years after the 2008 crisis just like most companies in the post financial disaster period. Nevertheless, the stock price soared sharply after 2011. By the end of 2015, it surged about 5 times compared with that in 2008. That is to say, even though Moody's was severely complained, blamed, or even sued for offering incorrect information for the investment and thus partly led to financial disasters as well as the huge loss from investors worldwide, it remains to be influential and powerful, so do Standard & Poor's and Fitch. The public investors still have strong faith in them.

Last but not least, in terms of the credit rating of government securities, according to the 2016 annual report, both S&P and Moody's jointly accounted for about 88 percent of the rating, demonstrated in Figure 5. Given that the category of government securities is the biggest portion of all five rated categories (77.9 percent of all the total number of credit rating), the fact implies that Moody's and Standard & Poor's are actually the biggest two rating agencies of the Big Three in terms of the rating of the government

security. (They might be termed Big Two.) Moody's was the first CRA which was contemplated to specialize in rating government securities, as discussed in Section 7.3.2. No wonder Moody's was compared by Thomas Friedman to a superpower in the credit rating industry as the statues of the United States in the world.

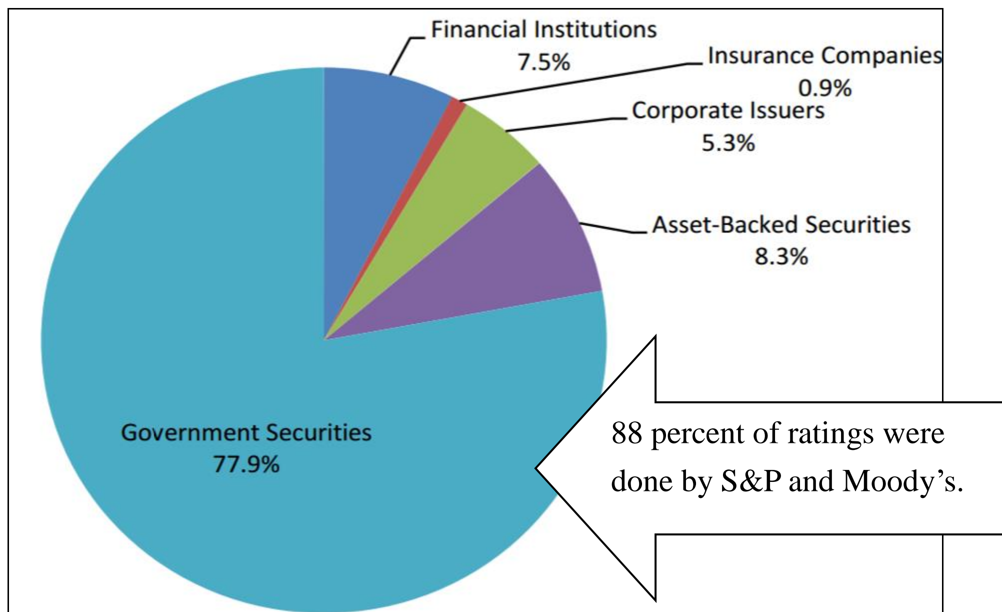

Figure 5. Portions of Different Types of Securities rated by CRAs

To make a summary, from both aspects of numbers of credit rating and annual revenue, the Big Three undoubtedly dominates the global credit rating industry. It can thus be claimed that term Big Three is almost analogous to the CRAs as a whole.

Chapter 8: Discussions and Conclusions

After all the studies on credit, bonds, credit rating and CRAs, it is time to move the focus onto the puzzles which triggered this research—how was the legitimacy of CRAs gained? Why are they so dominant? In this dissertation, the questions are aimed to be answered via Max Weber's arguments on legitimation of domination. This chapter starts with the statements of the practical impact from credit rating, which sheds light on the dominance of CRAs in the global market. What follows is the analysis of CRAs' legitimacy based on Max Weber's arguments on legitimation of domination. To fulfill the purpose of the thesis, two types of legitimacy are to be discussed, traditional legitimacy and legal/rational legitimacy. After that, the changes in forms of the society which manifested with the developments of CRAs were highlighted. Finally, the chapter ends with directions for future research and the conclusions.

8.1 Dominance of Credit Rating Agencies

The dominance of CRAs was reflected in the response from both the public and the countries, as discussed in Introduction. In the eyes of the public, especially institutional investors, CRAs deserved blaming as their misleading information caused a huge loss of countless investors. However, the public stays dependent on CRAs despite of the legal settlements or lawsuits. On the other hand, for countries as security issuers, the negative rating result from CRAs irritated some which were downgraded and also caused concerns among relevant countries. Yet, no single country can keep itself from the influence of CRAs, not even the U.S. by which systems was the Big Three

established. For instance, when the credit of Greece and Portugal as bond issuers was downgraded, the power of CRAs was criticized; a couple of financial leaders from international organizations vowed to limit the influence of CRAs. It was even insisted to break the monopoly or the oligopoly of CRAs. However, all was in vain. The somehow furious reaction is owing to the practical impact from the credit rating on cost.

8.1.1 Practical Impacts from Credit Rating

When the credit of a certain bond is downgraded, it implies higher risk and speculation; in practice, lower prices of the bond are unavoidable. The downgraded credit rating may push original investors to sell bonds they hold or refuse to buy newly issued bonds from that bond issuer owing to the higher risk. For potential investors, the yield may be higher and that is because the bond issuer needs to pay higher interest rate to borrow money. In other words, the cost for bond issuers to get the fund from the market will increase. On the contrary, bonds with comparatively higher credit rating imply that raising capital in the bond market is comparatively cheaper and easier due to the lower risk. Generally speaking, credit ratings reflect at least two things that investors are tremendously concerned—if they can get the money back upon maturity and get the interest payments on time as read on the contract. Similarly important, the result of credit rating is closely associated with the leveraged value of the bond. That is, bonds with comparatively higher credit rating tend to be entitled to a lower requirement on cash flows from investors and vice versa. Therefore, banks will refer to the ratings from CRAs to decide the leveraged value of the bonds. In the following section, three examples of government bonds, the biggest portion of rated entities in the credit rating industry, are offered to demonstrate the practical impact of credit rating.

The first example is related to what happened to Greece, as a bond issuer, after

the 2008 financial crisis. In fact, Greece has been downgraded several times since the burst of the crisis. To make things worse, in 2010, Greek debt was downgrade by S&P to 'junk' statues—typically rated 'BB' or lower by S&P and 'Ba' or lower by Moody's. The deteriorated credit rating was claimed to make Greece "almost cut off"[160] from the global bond market. The comment was cruel; it might make it very difficult or almost impossible for the country to raise capital in the global bond market for some time. However, the comment indeed holds true for at least three reasons. First, junk bonds, generally coupled with inferior quality of the issuers and comparatively higher probability of default, tend to be less favorable to investors. Second, the expected higher yields imply higher cost for the issuers to acquire capital, which would do more harm to the seriously stricken country in the crisis. Last but not least, according to the regulation from OCC in 1936, the bonds purchased by banks needed to be rated positively, investment grade, by at least two rating agencies, discussed in Section 7.4.1. In other words, banks as bond buyers would be excluded from the purchase of junk bonds, non-investment grade, which thus made having sufficient buyers more difficult. In this regard, according to interviewees, only bonds rated above the investment grade will be recommended by them to clients; by no means will they choose junk bonds.

The second example shows the opposition scenario. When the credit of a governmental bond is upgraded, it implies the quality of the issuer has been improved. What follows is the comparatively lower borrowing cost, which makes raising capital in the market easier and less expensive. Let us look into Hungry. The country's credit rating in September of 2016 was upgraded by S&P one notch to triple-B minus, an investment grade, thanks to the economic recovery coupled with the declining unemployment, by which GDP growth was expected to be at 2.5 percent between 2016 and 2019. After the announcement of the up-dated credit rating was made, the 10-year

borrowing costs of Hungary fell “2.9 percent from as high as 6.7 percent at a peak in 2013.”[161] Obviously even though it was just one notch of upgrade to triple-B minus, the bottom one among the investment grade ratings of S&P, from the ‘junk’ status, the difference in the interest rate was big. It is worth noting that at the same time Moody’s still kept its Ba1 rating, the highest non-investment grade.[162] That is to say, even just a slight upgrade from one of the main CRAs may bring significant impacts.

The third example is not related to the Big Three but, as a matter of fact, even though the credit rating is offered by other CRAs instead of the Big Three, the impact remains. Take Portugal for example. In August of 2016, Portuguese was warned of its worsening credit by DBRS, another NRSRO. The warning was crucial for the European Central Bank’s bond-buying plan. At the start of that week after DBRS’s expressed its doubt about the duration that Portugal could keep its investment grade rating, “the benchmark 10-year yield jumped about 11 basis points to 2.94 percent, up from 2.68 percent,”[163] causing the increased interest rate as well as borrowing cost. The case unveils the fact that the credit rating result will definitely have impacts on the market whether it is provided by the Big Three or not.

To make a summary, the impacts of credit rating on the bond issuers as well as the market are significant and prompt. When the result toward a country, as a bond issuer, is positive, the borrowing cost becomes comparatively inexpensive and more funds are expected to be attracted to join the market. On the contrary, in case that the rating result is negative, particularly the ‘junk’ status, it will be full of difficulties for bond issuers to raise capital owing to the risk that the inferior credit rating brings. With regard to CRAs, besides the Big Three, others are also powerful enough to generate similar impacts. The dominance from credit rating is genuinely reflected on the market in the aspect of the value of bonds and the borrowing cost. Such dominance of CRAs,

especially the Big Three, does not originate actively from the agencies only; investors' dependence on them also matters.

8.1.2 Dependence from Investors

The power of CRAs, especially the Big Three, is undoubted. However, not only actively but also passively do they dominate investors or the markets one way or another. That is to say, the growing dependence from the investors or the markets has also contributed to the dominance of CRAs and particularly enhanced the statues of the Big Three. The following section targets at two key reasons that cause investors to heavily depend on CRAs.

Expansion of the capital market

The capital market has been growing so huge that it is far from the public's capacity to get a whole picture of it. In other words, the social network by which information used to be derived has expanded to a degree beyond the reach of the public. For instance, in the early 1990s, most bonds were issued by domestic railroad companies and there were only several choices. In addition, people were somehow able to see or hear when the construction was finished, how the operation went, and how much benefits were earned. It was comparatively easier to understand what had happed. By contrast, now there are over one million issuances, according to the interviewee, listed in the market, which implies uncountable organizations, in different fields and from everywhere in the world. The much enlarged scale and scope of the global capital market prevents the public from understanding details. By contrast, everything which might slightly affect the value of the security or the market is evaluated by CRAs.

Complexity of the security market

How complex the security market is can be unveiled by what are examined by CRAs. First, they rate various security issuers including those of bonds and stocks, which also range from corporations of different industries to countries from highly-developed to under-developed ones. Everything is worldwide. Second, there are different rating criteria for different types of issuers. All the criteria set up must be closely related to the risk management for potential investors. Third, the criterion must be congruent with the legal systems of the U.S., SEC and NRSRO included, by which regulations the CRAs are allowed to rate while the area served is worldwide. Fourth, the information must be updated in no time based on what is happening in the whole world, changeable and somehow dramatic. Last but not least, the financial products have been much more complicated than they used to be, for example, the confusing derivative products (CDO, CDS etc.) in the financial crisis. All is too complex for the investors to comprehend upon making investment decisions.

All in all, the gap or asymmetry of knowledge or information (Olegario, 2000; White, 2001; Sylla, 2001; Lauer, 2008; Carruthers and Cohen 2009) between the public investors and the specialized institutions leads to investors' increasing dependence on CRAs. Thanks to worldwide rating agencies, over 4,500 professional credit analysts[164] and financiers they hired are in charge of the credit rating of the global capital market.

8.1.3 New York City as the Core of CRAs

In the discussion of credit and bonds, the European towns such as Venice and Genoa were said to be where both of them originated. By contrast, in the study on CRAs, American cities such as New York as well as Cincinnati were argued to be where the earliest agencies were established. The shift from Europe to America is obvious. In

addition, the Big Three which covers up over 96 percent of the worldwide business of credit rating all has their headquarter offices in New York, though Fitch has another one in London. Even though we just count the market share of both S&P and Moody's, the figure is as high as 84 percent approximately. That is to say, geographically speaking, New York is in charge of over 84 percent of the credit rating businesses on earth. To make a summary, CRAs not only had their debuts in America, instead of Europe, but also centered on New York. Interestingly enough, back to the mid nineteenth century when the Mercantile Agency was set up, the U.S. was inferior to England in terms of financial status, so was New York City to London. It is worthwhile to examine why it is New York that became the original place for CRAs to be formed.

In the study on CRAs, some researches drew the attention to geography at different points. For instance, Sylla (2001) claimed that the need for information increased partially because the scale and geographical scope of economical transactions expanded. Also, Lauer (2008) argued that letter of recommendation, once treated as the proof of credit quality, became more common with the expansion of geography of American commerce. In addition, Carruthers and Cohen (2009) suggested that the rapid growth of the credit rating industry could be judged from its geographic reach. No detail was given by the above researchers. Yet, their statements are surely reminders that never can social researchers neglect the 'weight of numbers', the first lesson that Braudel in the first volume of *Civilization and Capitalism* gave us. In this research, the answer to the above question is to be answered from history and by numbers.

In the following section, the changes in the population and the territory of the U.S. during the period that CRAs began to be founded are illustrated to echo with the arguments of researchers mentioned above. Afterwards, the attention is turned to the significances of New York City in the developments of CRAs. To be more specific, the

statues of New York as a national commercial and financial center and then as a global financial core paved way to the birth and continuous developments of CRAs. Collectively speaking, the structural changes—the increase of population and the expansion of territory—led to larger social networks and made it harder to collect and deliver the information. Those changes coupled with the prosperity of commercial and financial activities with New York as the core, in both the national and global scopes, further contributed to the launch and developments of CRAs owing to the social needs in the much enlarged networks and markets.

Population growth and territory expansion of the U.S.

From the data in Figure 6, an explosive growth of population between 1790 and 1920 with three immigration waves can be seen. That is, the population of the U.S. increased more than 38 times within 130 years. At the same time, the territory of the U.S. kept expanding, mainly due to the fact that the American's acquisition of territories which had been colonized lands was carried out year by year. Since the United States of America was created in 1776 after its declaration of independence, the country has expanded across North America as well as other areas, growing from the original thirteen states in the northeastern part to fifty states till now. Regarding the land expansion by the nineteenth century, as illustrated in the Figure 7, the period between 1790 and 1850 showed an extremely rapid expansion; the land area in 1850 is almost as triple as that in 1790.

In short, the soaring growth of population, not to mention various ethnics groups of immigrants, and territory expansion implies not only the much larger social networks but also the difficulty of information collection and circulation. All the changes basically contributed to the need for special organizations of information.

1790	3,929,214
1800	5,308,483
1810	7,239,881
1820	9,638,453
1830	12,866,020
1840	17,069,453
1850	23,191,876
1860	31,443,321
1870	39,818,449
1880	50,155,783
1890	62,947,714
1900	75,994,575
1910	91,972,266
1920	105,710,620

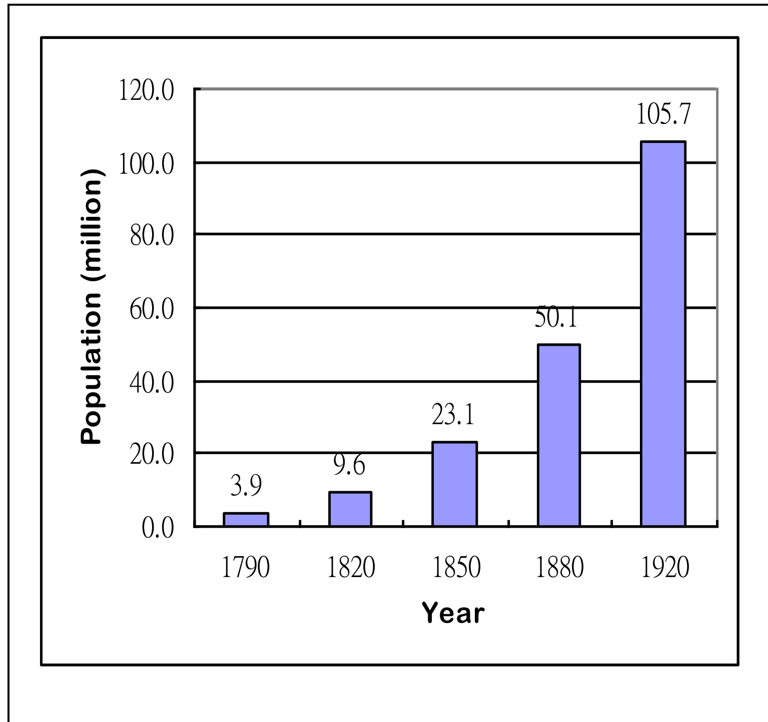

Figure 6. Population Growth in the U.S. between 1790 and 1920

Year	Land/sq. mi.
1790	864,746
1800	864,746
1810	1,681,828
1820	1,749,462
1830	1,749,462
1840	1,749,462
1850	2,940,042
1860	2,969,640
1870	2,969,640
1880	2,969,640
1890	2,969,640
1900	2,969,834
1910	2,969,565
1920	2,969,451

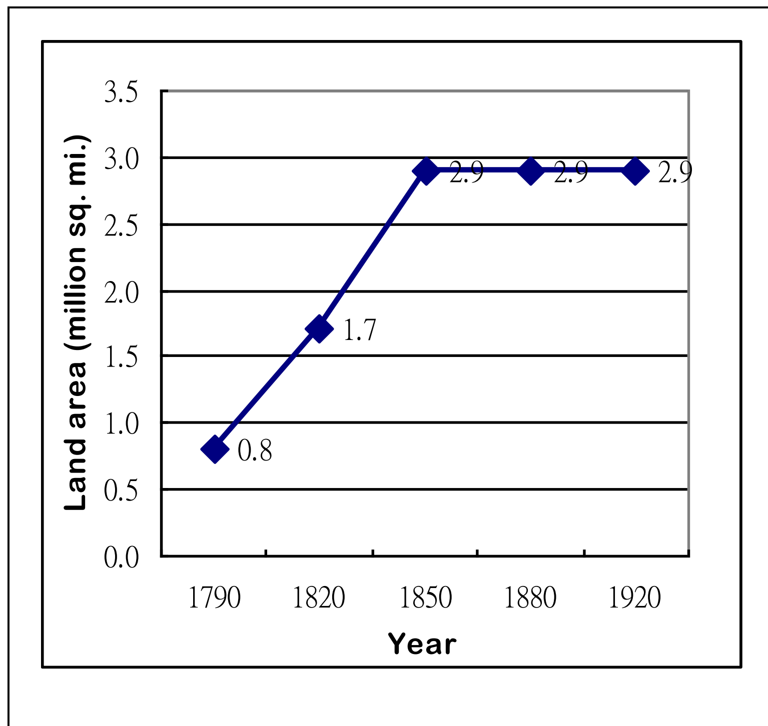

Figure 7. Territory Expansion in the U.S. between 1790 and 1920

Source of Data of Figure 4 & 5: United States Census Bureau[165]

New York as a commercial and financial center

As claimed by researches reviewed, the expansion of population and territory did pave the path for the creation of organizations such as CRAs for information collection and exchange in a much enlarged social network. However, the most important reason for New York to be the core of the credit rating is because of its significance in commerce and finance in both national and global scale with a long time development.

Being a country mainly consisting of immigrants, the U.S. attracted new comers and they tended to live in urban areas where more jobs were offered, which contributed to the growth of urban areas. Another foundation for urban prosperity lay in the expanding communities with growing needs for manufactured products in daily lives. This further made the development of towns and cities as distributing centers and shaped the economic growth of New York, Philadelphia, Chicago, Boston and others mainly in the New England metropolis. Besides functioning as distributing centers of products in the everyday life, towns and cities were also communities of commerce and foreign trades, which thus attracted more new comers. Consequently, some places during the first half of the nineteenth century became the destinations of immigrants and then turned into full-fledged commercial centers "completely dependent upon European connections" (Eisenstadt, 1962, p. 101) in the early nineteenth century. What is more, each town or city was in charge of somehow different commerce and played different roles accordingly.

For example, New York[166] focused on flour, furs, and textile industries, and more importantly, the importing and exporting industry. The textile manufacturing was one of the most significant industries in the early nineteenth century, thanks to not only the development of new machines and technology in the first industrial revolution in Europe, from about 1760 to sometime around 1840, but also Samuel Slater (1768-1835),

an English-American industrialist, who brought British textile technology to America. Olegario (2000) pointed out that New York City in the 1850s covered up five-sixth of American textile imports. Textile manufacturers also sent other goods ordered by customers back home in England, for example, dry goods, groceries, drugs, hats, shoes, books, jewelry and saddles, just a variety of products.

In New York, as the biggest importing and exporting center, the main textile manufacturing location, the vital entrance for immigrants, the supplying center of dry-goods, and also the core of wholesaling businesses, the commercial information could never be more important for merchants. According to Carruthers and Laura (2010), merchants in New York typically received payment in one of two month's time after shipping the goods to customers, by which extended credit was used. Regarding long-distance trades, for example, exporting goods from New York City to faraway states, on "sixty- or ninety-day credit" (Carruthers and Laura, 2010, p. 89). Therefore, suppliers desperately desired to know who was trustworthy enough to deal with. Information on credit was socially needed, particularly in New York, the most important national commercial center.

For immigrants to the U.S., one big portion of jobs provided was based on the infrastructure. In the nineteenth century, highways were said to be the most rudimentary public utilities but there were others such as bridge, wharves, engineering projects (Eisenstadt, 1962) and, more importantly, railways which construction grew rapidly from the mid nineteenth century till the twentieth century. As discussed in Section 7.3.2, collecting capitals for infrastructure construction in the bond market became popular, which was also supported by banks as well as the government. Being the national commercial center with a big amount flow and exchange of capitals, New York gradually turned to be the national financial center after the security market trading

bonds and stocks had been formed in the late eighteenth century, as discussed in Section 6.2.4., mostly thanks to the devotion of Alexander Hamilton to the establishment of American financial systems. Given that the establishment of the Big Three was mainly orchestrated by the need of information for railway businesses, New York as the national financial center accordingly because their first choice for starting locations of credit rating businesses.

In addition to the status of New York as both the national commercial and financial center, the formation of Euro-dollar as well as Eurobond markets since the mid twentieth century further made New York one of the key global financial centers. With the quick expansion of the off-shore markets, discussed in Section 6.3, the role of New York in the global capital market grew ever stronger.

It was stated (Eisenstadt, 1962) that in the drama of American history during the late nineteenth century, no act was more important than the rapid emergence of big businesses. For example, John D. Rockefeller started his oil refining business in 1859, Carnegie Steel Company was established in 1892, and Henry Ford Company was founded in 1901. Founders of which and other industrialists later become magnates in their industries. The industrial developments led to the need for various information. As we reviewed the period that the early CRAs were established—the Mercantile Agency in 1841, S&P in 1860, and Moody's in 1909—we found the coincidence. That is, the period when they were founded was just when both the population and the land area increased hugely and when manufacturing and commercial activities were flourishing and New York was the key center. Later on, with the growth of the global security market, the city turned into a financial center and the credit information required covered more about finance accordingly. Both the significance in commerce and finance thus shaped New York into the core of the credit rating industry.

8.2 Legitimacy of CRA's Dominance

The road to form CRAs was long and winding, filled with barriers and challenges which might hinder the development of credit rating as people's trust in them fades away and doubts arose, especially after the financial crisis. Tracing back to the historical process, we might notice some rules or regulations were created owing to the social needs to overcome those negative practices. When the socially created rules or regulations were not sufficient, the legal system originating from the authority got involved. It is the rationality or legality woven into the legal system that ascertained the status of CRAs.

Based on the arguments of Max Weber, the purpose of this discussion is aimed to explore how the legitimacy of dominant CRAs was formed via the historical evolution coupled with legality or rationality embedded in the long-term developments. In other words, this analysis is not to claim whether the rating results from the rating agencies are correct or not, since it mostly lies in investors' expectation about CRAs. To be short, both the traditional dominance and legal dominance are argued to jointly contribute to the legitimacy of CRAs.

8.2.1 Traditional Legitimacy of Dominance

Traditional domination was interpreted by Weber as "the authority of the eternal yesterday", as discussed in Section 2.3. In other words, this type of legitimacy of dominance is to be gained by sanctity of "age-old rules and powers" and grounded on "what actually, alleged, or presumably has always existed" (Kronman, 1983, p. 44). That is, the long-term history contributed to the legitimacy and shaped the dominance

accordingly. Given that credit is what CRAs were created for, the historical development of credit is vital, so are those of credit rating and CRAs.

The historical background of credit has been elaborated in Chapter 4. Summarily speaking, as suggested by Ferguson (2008), credit could have been invented in ancient Mesopotamia, around 3100 to 539 B.C. although most Babylonian loans were simple advances from religious storehouses or royal families. He also underlined that the idea of credit was unveiled in a remarkably belated and hesitant manner. It is also linguistically reasonable because 'credit' as a term was not available until 1520s. In practice, according to Braudel (1992.2), fairs in the fourteenth century propelled the use of credit, for granting late payment, even though credit is supposed to be as old as the market. Hereafter, three stages of credit expansion were unveiled. Therefore, it is certain that people's behavior of using credit, allowing late payment, was much earlier than what could be recorded in the form of language. It is the same for credit reporting or credit rating, claimed in this research.

Claim making

In thiss research, the claim is made that people had started to handle the information on credit much earlier before the term 'rating' was linguistically available in the late fourteenth century and its meaning of ranking in the early nineteenth century. In fact, the first intention in this research was to assume that getting the information on credit, regardless of the terms or forms, is as old as credit. That is, when people began to have the behavior of granting late payment, the information on credit was required. However, the claim was given in to the limitation of linguistic availability—'credit' and 'rate'—and written records. By contrast, the behaviors of some earlier financiers do allow us to get a glimpse at what they did in terms of credit information, to compare it

with the operation of CRAs, and thus to certify the above claim. Moreover, based on that claim, it is also argued that the origin of CRAs needs to be traced back to a much earlier era—about three centuries earlier—than 1841, the year of the establishment of The Mercantile Agency, that most researchers suggested to be the origin of CRAs.

As put in previous sections, the establishment of The Mercantile Agency in 1841 tends to be treated as the origin of CRAs that the public now know of. By contrast, how credit was treated before that era drew very little academic attention. At most, it was stated that both the strong intro-network and inter-network (Pak, 2013) offered the advantages of gaining information on credit. The former network was grounded on the kinship networks or religious ties while the latter generally consisted of trustworthy clients and collaborators, by which the information was spread within the close networks. Beside that statement, Sylla (2001) claimed that the reason why the CRAs failed to be founded much earlier was that the investing over the four centuries ago was mainly in the public or sovereign, debts of nations and governments that investors trusted. For instance, the Pope from very early days had called on credit to balance the papal finances (Braudel, 1992.2, p. 522) and won the public's trust because of the religious prestige. This claim holds true but fails to explain the whole story; that is, the trust upon debtors does not guarantee their creditworthiness in the end, which can be explained from three viewpoints.

First of all, risk existed partly because of "the proliferation of currencies—metal and paper" (Davis, 1976, p. 7)—and partly because of risk from foreign exchange. Since usury was religiously prohibited, traders tried to gain interest return via exchange which might cause risk. Second, according to Davis (1976), when the extension of credit was required by either the noble family members or Pope, it needed to be based on security coupled with collateral such as saleable jewels or personal assets to avoid

risk. Last but not least, the trust from the public is one thing while the probability of defaults is another. In fact, defaults from national debtors were not unusual and did exceptionally much harm when they happened. Here are some examples.

First, for the Medici family, the London office offered loans to Edward IV but suffered a lot from its "periodic defaults" (Davis, 1976, p. 9). Besides, the Milan branch financially supported Duke of Milan beyond the credit limit—around 168 percent of the branch's capital. Besides, the Bruges office also exceeded its limited to assist Charles the Bold of Burgundy. In the end, loan losses from several individual branches coupled with low cash reserves and other political factors led the family to the ultimate demise. Another example is about Philip II. His regular stopped payments respectively in 1557, 1560, 1575 and 1596 (Nogal and Chamley, 2014) let Habsburg Spain be termed "the first serial defaulter" (Reinhart and Savastano, 2003; also cited in Drelichman and Voth 2010) in history. Philip II failed to honor his debts at least four times. It is no wonder that Braudel (1966) argued that only the indulgence of irrational bankers would allow Spain to incur towering debts while the fiscal position was deteriorating. In reality, the banking families kept lending new funds to the Habsburg family just to protect existing loans. It is no exaggeration to say that the Fugger bank owed "its ascent and collapse to the Habsburg Family" (Davis, 1976, p. 10). Other cases also contributed to the meltdown of the Fugger family. The Fugger family actually lost the bulk of their wealth during the sixteen and seventeen centuries as a result of the bankruptcies of the national governments, "especially the Spanish and the Dutch" (Strieder, 1931, p. 184). In the end, the once-glorious family ended up collapse owing to the huge loans of Habsburg family. Last but not least, the default of some national debts after the 2008 financial crisis is just one of the examples in this regard.

The above statements about risk, collateral, defaults illustrate the historical

insecurity of credit and, on the other hand, the importance of it. In other words, since default was possible among royal or governmental debtors, the significance of information on credit is undeniable. Braudel also pointed out that the security in commerce in the sixteenth century depended on "the personal credit of the correspondents" (Braudel, 1992.2, p. 145). In addition, according to Davis (1980), it had been a trend for merchants to do the own "credit investigation" beforehand and distribute the findings among the merchants, so did the banking families before the establishment of The Mercantile Agency in the nineteenth century. It is just that the merchants or private bankers failed to term it one way or another. The four banking families discussed in Chapter 5—the Medici, the Fugger, the Barings and the Rothschild families—played various roles in their times. They were bankers, financiers, wholesalers, and merchants, having closer connections with reputable national rulers, noble families, overseas merchants or even Papacy and tending to invest a huge a mount of money either in wars, banking, importing and exporting businesses or, in later times, in industrial developments or merchandise and the security markets. Information on credit can never be too important to them.

Based on this, in the following part, the main points about how information on credit was dealt with by these four banking families, discussed in Chapter 5, are highlighted and compared with what has been conducted by CRAs that we know of today, ranging from the Mercantile Agency to the Big Three. Moreover, following that claim, it is also argued in this thesis that the origin of CRAs needs to be traced back to a much earlier era—about three centuries earlier—than 1841, the year of the establishment of The Mercantile Agency, which most researchers suggested to be the origin of CRAs.

Banking families vs. CRAs on information of credit

For the following comparison among the banking families and CRAs, any quantitative analyses may carry little meaning in this research owing to the different spatial or temporal contexts. Instead, in this review spanning over five centuries, the focus is on how the information of credit is derived, collected and then spread in order to unveil the similarities as well as differences among the banking families and CRAs, mainly the Big Three. Generally speaking, the discussion targets at four aspects—organizations, information providers, information on credit, and more other facts. What follows is the chapter summary in the end.

First of all, regarding organizations, of all the four banking families studies and CRAs—from The Mercantile Agency to the Big Three—have their branch offices but with different scopes. The branch offices of the Medici and the Fugger were states-wide, respectively in Italy and some parts of where Germany is located today. By contrast, offices of the Baring and the Rothschild were located in places out of their countries, or even away from the European continent owing to the expansion of markets; in fact, some British-owned banks also extended their network and set up foreign branches in Latin America and South Africa (Davis, 1976). The private financiers' offices were not only the centers where information was collected and spread but also the locations where other financial or merchant routine jobs were conducted. For CRAs such as the Big Three, it is taken for granted that their locations have been worldwide since the formation of the global capital market. As portrayed by the way they are called, they are specialized CRAs; all the businesses are associated with credit.

Secondly, in terms of information providers, for banking families, both intra and inter social networks are what they heavily relied on to get access to information. Regarding intra-networks, family members or relatives by marriages were always the

first priority for the choice of business partners. Information would be collected separately but gathered together among people with kinship relationships. As to inter-networks, managers, correspondents, and agents, mostly commission-based, were hired to help with information collection and delivery and they tended to have some connections with the financiers, for example, religious ties or business collaborations. It is worth nothing that the Baring pioneered in hiring full-timers to be agents and worked collaboratively and productively. By contrast, the Rothschild was outstanding in collaborating with nobles in an extremely luxurious, effective, and consistent manner for valuable information though others did that, too. It is more than reasonable to argue that Gentz, the right-hand man of Prince Metternich, was no difference from “a salaried employee of the Rothschild” (David, 1976, p. 13). For CRAs, un-paid lawyers or prestigious people based on commission-based tasks were the main group in charge of credit information at the very inception. By contrast, Douglass in the Mercantile Agency was the first one to employee full-time agents and trained them to be professionals. Now, the well-trained and professional credit analysts, managers and economists take charge of information collection and analyses worldwide.

Thirdly, with regard to information on credit, for the Medici and the Fugger, some descriptions could be found on the contracts signed by the financiers and mangers, agents or correspondents. For instance, on the contracts between the Medici family and the managers of branch offices, lending policies were made and credit limits were mentioned as well (Davis, 1976). Generally speaking, in both families, the danger of granting credit carelessly was warned and prohibited and the ways to grant or extend credit were explained. Besides, some sorts of clients were said to be superior or inferior to others, for example, merchants better than Curia, locals better than non-permanent residents, and the rich better than the poor, or, more specific, people with obvious

wealth conveyed by large holdings of land better than a bedridden debtor, which actually demonstrated a simply way to classify creditors, similar to the way Bradstreet classified the information about credit in the reference book *Bradstreet's Improved Commercial Agency Reports* in the nineteenth century. More importantly, it was recorded that business reports including the credit condition of clients needed to be sent to the head offices from branch offices swiftly and routinely. The Fugger was special in that the information on credit was spread among clients.

Contrary to the way that information was shared by the Fugger, for the Baring and the Rothschild families, the information was delivered in a desperately confidential manner, only open to limited business partners or kinship families. What they also distinguished from the previous banking families is that the information on credit was more specific and data-related rather than descriptions about people or credit. In this regard, they were actually not inferior to the Mercantile Agency. Take the Baring for example. Clients from some areas such the U.K., Europe, and even China tended to be granted better credit by the Baring owing to the stability and prosperity of those markets. However, it was comparatively hard for clients from places such as South America, Calcutta or other East Indian to get good credit condition. Clients were classified by where they were from. Also, take the Rothschild for instance. As the dominant players in an increasingly international London bond market, the Rothschild family stayed exceptionally cautious about investment risk and dealt with only what would now be "called investment grade securities" (Ferguson, 2008, p. 89). The clients were indeed rated and ranked as if what is done by the Big Three nowadays.

For CRAs, various data carry much more weight than others. As I recalled, on the first day of my field work, data appeared abundant. On the reports from the Big Three, data tell almost everything. They are GDP, interest rate from the Fed, exchange rate,

yield, coupon rate, and employment rate, financial statements of countless bond issuers of various industries and countries and so on. All are about data.

Finally, in addition to the similarities and differences discussed above, a couple of points are worthwhile noting. Back to the sixteenth century, Jacob Fugger had issued his own net of commercial posts around Europe as far as where he could reach. The reports were printed and then distributed to other clients as nascent newspaper, despite of multiple kinds of information instead of credit only. By which, Fugger was argued to have invented the world's first news service, discussed in Chapter 5. In other words, it is the first circulated credit report, though in a primitive form, much earlier than the publicized reference books from the Bradstreet Company in 1851 or any manuals about industries or railroads published by S&P or Moody's. In addition, it is about the private courier system of the Rothschild family, which made their information spread much earlier than others of his time, both on lands and over seas. Thus information was always delivered swiftly and frequently among their branch offices on both ends of the English Channel. It was recorded that that during turbulent days of the French Revolution, the correspondence was sent to and fro Paris and Frankfurt nine times a day. Nowadays, with the much more advanced transportation system, the non-stop flights between Frankfurt and Paris in twenty-four hours are no more than eight flights from Lufthansa Airline or Air France. What the Rothschild family achieved in terms of the transportation efficiency was somehow superior to the modern system.

What CRAs nowadays are carrying out basically existed long time ago, at least in the realm of some banking families discussed above. First, organized systems had been formed for the collection and reporting of credit information although they were not called agencies. Second, people were commissioned or paid to take charge of the tasks about credit although they might be neither called credit analysts nor well-trained like

what we know from the Big Three today. Third, the information collected and spread was not only related to people but also associated with credit directly, not to mention some data that the Baring and the Rothschild families handled. In both families, clients were classified to some degree but in simpler ways. Last but not least, the printed reports, though in primitive form, was available among the social network of the Fugger family while the rated data, though in a different format from the Big Three's, were filed obviously by the Rothschild family. All proved that what the banking families did in terms of credit before the nineteenth century is almost similar to what the CRAs are working on today, despite of different terms or forms.

To make a conclusion of this section, part of what is done by the CRAs nowadays was indeed carried out by four of the banking families, cases studied in Chapter 5. It might not be termed anything such as credit reporting or credit rating, credit investigation, credit assessment, credit checking or credit scoring as put in some researches. The forms are different as well. However, regardless of the terms or the forms, the behaviors of these banking families are almost the same as those of CRAs. Thus, the origin of the CRAs is actually those banking families; it needs to be traced back to as early as the sixteen century. Based on the long-term history, the traditional legitimacy of CRAs is thus gained.

8.2.2 Legal / Rational Legitimacy of Dominance

Legal/rational legitimation of domination was defined by Weber as domination "by virtue of legality" (Gerth and Mills, 1946, p. 79). It was claimed to rest on a belief in the legality of enacted rules and the right of those who issue commands under such rules. In *Economy and Society*, it was further elaborated that the type of legitimacy lies

in the acceptance of the validity of two mutually inter-dependent ideas. The first one is that “any given legal norm may be established by agreement or by imposition”(Roth and Wittich, 1978, p. 217), to be obeyed by part of the members of the organization. The second one is that “every body of law consists essentially in the consistent system of abstract rules” (as above) which have been established. Based on his arguments, the legal/rational legitimacy of dominance CRAs is grounded on the legal systems and relevant laws associated with the agencies. More importantly, these systems and laws are accepted and followed by members of the credit rating communities. In fact, the well established, popularly accepted and fully followed, though somehow reluctantly, legal systems are one of the mains factors that CRAs, despite of most being American private companies, are entitled to the power and dominance of rating all types of security issuers, either corporations or countries, in the global capital market.

Laws and regulations

Table 2 in Introduction demonstrates the payment settlements between the Big Three and three organizations including SEC (the U.S. Securities and Exchange Commission), DoJ (The United States Department of Justice) and CalPERS (The California Public Employees' Retirement System). Both SEC and DoJ are American governmental units while CalPERS is America’s biggest pension fund, which, as an institutional investor, lost almost 20 percent of its assets, close to $40 billion,[167] within four months in the 2008 financial crisis. The business scope of the Big Three is worldwide but they are obliged to follow the American laws and regulations, by which the legal legitimacy was ascertained accordingly. Table 1, about the settlements between top investment banks and DoJ, illustrates more clearly how American laws and

rules were followed in the global field. Of all the banks listed, two are from U.K., one from Germany and another one from Switzerland besides the rest five American companies. None of them rejected the settlements despite of some explanations, arguments, debates and successful negotiations about payments, by which the legal legitimacy was also gained. In addition to SEC and DoJ, other organization as well as the relevant regulations also contributed to the legal legitimacy of CRAs. As discussed in Chapter 7, OCC (Office of the Comptroller of the Currency), FRB (Federal Reserve Board), NRSRO (nationally recognized statistical rating organizations) set various laws, rules and regulations for CRAs worldwide to follow, which not only ascertained the legal legitimacy of CRAs but also enhanced their status as trustworthy credit raters.

Besides the examination from current legal systems, laws and regulations are subject to revisions and tend to be amended from time to time, especially after certain events such as the Enron scandal in 2001 or financial collapses. For example, since the financial collapse in 2008, there have been assumptions and guesses about the possibility of bringing back Glass-Steagall Act, or the Banking Act of 1933. The Act effectively separated commercial banking from investment banking and prohibited commercial banks from underwriting or dealing in securities except for governmental securities. Nevertheless, the Gramm-Leach-Bliley Act passed in 1999 repealed the provisions of The Glass-Steagall Act. The declaration to re-enact Glass-Steagall Act was provided by two American president candidates, Hillary Clinton and Donald Trump, during the campaign. It was also supported by Treasury secretary, Steven Mnuchin,[168] of President Trump's administration. A lot of rules, laws and regulations[169] have been made or amended following many investigations, lawsuits and settlements after the

2008 financial disaster. All is expected to re-set the somehow inappropriate polices on the right track.

Also, new laws or regulations may be set up to join other organizations to reinforce regulations and one of them is the Dodd-Frank Wall Street Reform and Consumer Protection Act, the Dodd-Frank Act or the Act. The Act was enacted on 21 July 2010 in response to the dramatic loss after the 2008 financial crisis. It was read that the objectives of this ACT are to "promote the long-term sustainability of the U.S. financial system…to protect investors, enhance market stability, and promote capital formation."[170] The SEC adopted final rules for 67 mandatory rulemaking provisions of the Dodd-Frank Act, which covered various entities such as private funds, security-based swaps, clearing agencies, asset-back securities, CRAs and so on. Regarding CRAs, it was put in the Act that critics and governmental regulators had attributed the rating failures to CRAs' "lack of internal controls, conflicts-of- interest inherent in the issuer-pay business model, a lack of transparency and a perceived absence of accountability."[171] Besides, the over-reliance on credit ratings from the market was also blamed. Therefore, the Act aimed to address these deficiencies "with new governance and compliance requirements, new liability rules and penalties…restrictions on conflicts of interest, accountability for ratings procedures, required procedures and methodologies, enhanced disclosure requirements…and enhanced SEC supervision."[172] To make a summary, according to MacKenzie (2011), there have been over 100 federal laws and 50 regulations which incorporated credit rating or CRAs.

In addition to laws and regulations, it also happens that new organizations are founded in response to the financial crisis and The Financial Crisis Inquiry Commission

is one of them. It was founded as part of the Fraud Enforcement and Recovery Act passed by Congress and signed in May of 2009 by President Barack Obama. The purpose of the institution was to "examine the causes, domestic and global, of the current financial and economic crisis in the U.S."[173] The Commission instructed 22 specific topics for inquiry and called for the examination of the loss that major financial institutions suffered. Some of the topics associate with fraud and abuse in the financial sector, Federal and State financial regulators, the global imbalance of savings, international capital flows, and fiscal imbalances of various governments, monetary policy and the availability and terms of credit, accounting practices, tax treatment of financial products and investments, capital requirements and regulations on leverage and liquidity and so on. The CRA is one of the topics to be reviewed and the focus is set on "reliance on credit ratings by financial institutions and Federal financial regulators, the use of credit ratings in financial regulation, and the use of credit ratings in the securitization markets."[174] The other topic related to credit rating is "financial institution reliance on numerical models, including risk models and credit ratings."[175]

The way laws and regulations are made, amended, revised, enacted, and followed and the way new organizations were established and operated have been working over the developmental process developments of credit, credit rating and the establishment of CRAs, not only in the U.S. but also in the U.K., from a longer-term perspective. For instance, in the discussion on public credit in Chapter 4, it was explained that the formation of public credit originated from the social needs of the commercial communities but tended to be so vulnerable and unstable that the trust of the public was lost gradually. It was through the governmental authority and legal systems, between the second half of seventeenth century and the early eighteenth century, coupled with

surveillance, regulations, and even death penalty that the deteriorating public credit was stabilized, intensified, and firmly established, which paved the way for further financial developments in the U.K. In this regard, Wennerlind (2011) also argued that the institutionalization and bureaucratization of the state in the early eighteenth century restored the nature of credit to its former glory and legislative decisions were to back institutionalization and bureaucratization.

Rationality in practical context

Besides legality, rationality is also fully reflected in the practice of credit rating. As mentioned in earlier sections, information is the core of credit rating and, after over a century of revolutions and developments, information has been overwhelmingly presented by data via rational calculation. To be more specific, when the securities or securities issuers are rated, besides the rating results in the numerical form, more comments coupled with explanation are always given to support that rating. For instance, regarding corporate bonds, the comments consists of multiple types of data including the sales volume, the profit growth, new products in detail, the debt condition, the capital, the cash flow, financial supports from banks, potential mergers or acquisitions at a certain expected value, in addition to the structural factors such as the change of interest rate from the Feb or central banks. More over, all factors have different criteria in different industries. On the other hand, for governmental bonds, more factors need to be considered upon rating, for example, GDP, the national debt, the unemployment rate, not to mention the political stability—some unexpected events such as coups, the victory of a somehow unfavorable political leader, the natural disaster, a country's "divorce" from a union, "black swans"—the financial crisis;

anything may have a huge impact in the capital market. All are be demonstrated in the form of numbers based on the rational calculation.

When we recall the historical development of credit information, things just changed tremendously over the past century. In the very inception back to the late nineteenth century, the credit information was from rumors, word-of-mouth, street talks, or subjective impression or limited networks. Also, it was about peoples' personality, ethic behavior, routines, personal reputation or even the personal life such as marriage statues. They are history. By contrast, now only concrete, specific, and calculative data can be persuasive and referable for credit. In this regard, the technological tools play a vital role. It is as what put by Weber, "Had not rational calculation formed the basis of economic activity" (1978, p. 67), there had not been certain particular conditions in its economic background and rational technology would never have come into existence. In other words, rational calculation coupled with rational technology leads to the rational legitimacy of CRAs. This argument can be fully reflected by the experiences of my interviewees.

According to the interviewee P.T., "The rating agencies will write the reasons why they rate it like this. There will be rational content about why they rate this company like this." With regard to rational technology, the Bloomberg system is exactly the tool that every interviewee relies on and works with almost all day long in the trading context to access important information. As a matter of fact, the system is overwhelmingly used in the financial community as the one of the key tools for traders, investors, bankers, and money managers. It is estimated that users of this distinctive black terminals were approximately 324,500[176] in 2016 despite of its costly annual fee, $22,000. The terminals, with the clunky keyboard, text colors and black background on

the blinking screens, four, six, or even more, are the most important tools for the worldwide users. The terminals are more than ubiquitous; some users admitted “a near-addiction”[177] to the Bloomberg system. It was highlighted that there are more than sixteen functions which “Wall Streeters can not live”[178] without the Bloomberg terminals, for example, Bloomberg Map (a function like Google Earth but better), financial analysis, graph price, relative strength, Bloomberg messaging, relative rotation graph, supply chains, trade history function, currency volatility and so on. No wonder it was even said that “Wall Streeters can’t live without their Bloomberg Terminals.”[179]

8.3 Changes in Forms of the Society

The discussions from Chapter 5 and Chapter 7 illustrate the historical developments of how information on credit was dealt with by either banking families or credit rating agencies. In Chapter 6, the changes of the bond market which accounted for a big portion of entities in the credit rating industry were explained from a historical perspective. Broadly speaking, all the differences which were made in the process actually have led to the changes in the forms of the society. To be more specific, the developments over time have had some impacts on our lives and thus transferred our living environment from a traditional society into a modern society. The key factor that the modern society could be formed lies in specific division of labor, specialization and professionalism. The following part offers the analysis about how the credit rating agencies have been functioning in response to the form of the modern society. As discussion in Chapter 7, the essence of credit rating is information and thus how

information is handled matters indeed.

Specialized organizations

In Section 7.2.1, the changes for forms of information on credit were explicated, which uncovered the gradual shift from person-oriented message to finance-related information. For the former, it ranged from creditors' characteristics, marriages, and habits to their assets, occupations and social status. By contrast, for the latter, all the information is mainly based on countable data via rational calculation, with the aid of advanced technology though. What lies behind the provision of different forms of information is the organization which used to be the banking families and then is the credit rating agency nowadays. Although this thesis argued that the banking families between the fifteenth and eighteenth centuries are the origin of credit reporting or credit rating, it is undeniable that the Mercantile Agency established in 1841 is the first specialized organization which concentrated on the task of credit information in the form of agency. That is, the organizations in the banking families might be similar to those in the modern multinational corporations but they simultaneously handled various businesses such as banking, loaning, wholesaling and various commercial exchanges, the collection of credit information included. By contrast, it was not until the founding of the Mercantile Agency that the specialized organization focusing on credit information and coupled with specific divisions of labors, in Durkheim's term, was established. Ever since then, followed by the setting of other rating agencies, most importantly the Big Three, the specialization of the credit rating industry was formally built up and enhanced year by year, step by step.

The specialization of CRAs was shaped from different aspects and periods. First, it was originally triggered by the social needs and increasing dependence of the

investors. It was as put by Coleman that individuals find it more beneficial “to transfer rights to control certain of their actions to a corporate actor” (Coleman, 1994, p. 371). That is based on the assumption that the outcome will be better off for investors’ rights to be excised by specialized corporate actors such as CRAs than to be excised individually. The asymmetric information or knowledge between common individuals and specialized organizations entirely reflected the specialization of credit rating.

Secondly, the specialization of CRAs is also enhanced by the continuous expansion and highly complexity of the market as well as the financial instruments. Now the entities rated by crating agencies are generally classified into six types—financial institutions, insurance companies, corporate issuers, asset-backed securities, government securities. Each types has its specific terms, rating criteria, methods of credit surveying and overall speaking there are the rating scales mainly from the Big Three. In addition to the rating result given, the rating agencies also offer professional explanations, comments, outlooks and even estimations, all based on rationally calculated data.

Last but not least, the specialization of CRAs is solidly assured by the legal system consisting of laws and regulations from specialized organizations such as DoJ, NACM, NRSRO, OCC and SEC. As stated in Section 8.4.1, there have been over 100 federal laws and 50 regulations which governed the practice of credit rating. In this regard, Durkheim’s statements entirely shed light on the meaning of specialization in the credit rating industry: “This specialization of function is, indeed, more immediately apparent in the commercial code which regulates, pre-eminently, the contracts special to business” (Durkheim, 1993, p. 125). The formation of CRA as a specialized organization can never be easy and quick; it takes a lot of efforts and a very long time.

Professional personnel

Section 7.2.2 reviewed the types of people who used to work and those who are now working on credit information, however it was termed—branch managers, agents, correspondents, partners, reporters, lawyers, attorneys, analysts, managers and economists—and the different patterns can be discovered. In the past, the main concern for the personnel was the social relationship and therefore kinship family members were destined to be the best choice. Little about their professional ability was cared though some did have the talents. For the sake of cost saving, some people worked for the credit firms for free and the quality could not be guaranteed. By contrast, professionalism is the top priority for CRAs, by which they can survive in the competitive market. Take S&P for example. There are approximately 1,500 well-trained and professional employees serving the worldwide clients in 28 countries, giving credit rating to different entities in countless industries. It is no wonder that according to S&P, they also need to get involved in frequent discussions with senior managers and industry leaders. All is professionalism.

Specialized publications with specific information

Section 7.2.3 also reveals that the information on credit was originally provided through verbal messages and then turned into publications, though it took several decades. Once the form of publication became popular, the specialization grew in terms of the content and the form of the information.

In the beginning, owing to the flourishing railroad constructions, the publications focused on it, for example, *The American Railroad Journa1* (published in 1849), *History of Railroads and Canals in the United States* (published in 1860), *Poor's Manual of the Railroads of the United States* and *Poor's Directory of Railway Officials*

(published in 1868), and *the American Journal of Railway Appliance*s (purchased by 1888).

Later on, with the expansion of various industries, publications in this regard became abundant accordingly, for instance, *Moody's Manual of Industrial and Miscellaneous Securities* (published in 1900 and later changed into *Moody's Analyses of Investments)*, *Moody's Analyses of Railroad Investments* (published in 1909) *and The Fitch Stock and Bond Manual* and *The Fitch Bond Book (published in 1913).* Also, Olegario (2006) mentioned *The Complete English Tradesman*, *A Practical Treatise on Business* and *Hunt's Merchants' Magazine* but little introduction was made. In addition, even for potential commercial immigrants, some specialized publications were also available in order to encourage new immigrants to head for the U.S. It was recorded that various reference books were offered to potential business people since the nineteenth century and the content included "summaries of arguments for and against incorporation, compilations of the incorporation laws of the different states, and general information on technicalities of incorporation" (Eisenstadt, 1962, p. 84). There were also others, for example, *Industrial Commission,* a 200-page book published in 1900, *The Organization and Management of a Business Corporation,* published in the same year by a lawyer Thomas Conyngton.

These publications played the key role in the provision of various types of information about commerce or industrial developments. Though several early publications might not be necessarily designed for information on credit only but their various information about "borrowers, debtors, and equity shares that corporation issued" (Sylla, 2001) were essentially related to credit in an indirect manner.

Specialized tools

Regarding specialized tools that are used for credit rating, almost nothing can be more representative than the Bloomberg terminals that Wall Streeters were claimed to be unable to live without. It was suggested that the manipulation of tools "requires specific skills, and existing skills, in their return, require specific tools" (Preda, 2009, p. 138). Consequently, the manipulation of tools and relevant technologies further generate professional institutions with skillful and professional groups who thus differentiate themselves from outsiders. In other words, as contended by Lipartito (2013), the emphasis on professionalism and solid facts derived by the tools prevented credit reporting and CRAs from the charge of carelessness and thus made them irreplaceable. In the global capital market with such big data, the specialized tools and technology manipulated via rational calculation contributed to the firm grounds of rationality of credit rating as well as the legitimacy of CRAs.

Overall speaking, the specialization and professionalism of CRAs—illustrated by specialized organizations, professional personnel, specialized publications with specific information, specialized tools—are what they distinguish themselves from what were carried out by the earlier banking families. Those changes and developments in the forming process of specialization and professionalism also contribute to the changes in the forms of the society and turned the traditional society into the modern one. With the modern society as a high social type, the greater development of the division of labor is unavoidable as if what is demonstrated by CRAs. To borrow the term from Durkheim, the modern society signifies a high society in which our duty is "not to spread our activity over a large surface, but to concentrate and specialize it." (Durkheim, 1993, p. 401) That is exactly what the modern society unveils to us.

To make a summary of this chapter, the historical background of CRAs, with its origin being traced back to the sixteen century in this research, contributed to traditional

legitimacy of CRAs. On the other hand, the legal support based on all the laws, regulations, organizations coupled with relevant settlements and penalties and the rational operations of CRAs let them gain the legal/rational legitimacy. Both types of legitimacy can only be realized in such as a circumstance with all the relevant systems including politics, economics, culture and social hierarchy developing and maturing in a consistent manner. Based on all the conditions discussed, the dominance of CRAs, especially the Big Three, is thus obtained.

8.4 Limitations and Future Directions and Conclusions

With all the data collected and analyses made, there remain a few limitations that might have hinder further interpretation of credit rating or CRAs. In addition, some other issues are not only academically relevant but also practically meaningful so that it is worthwhile to study and examine them for the future researches. In the following part, several relevant or unsolved issues are provided to shed light on the possibility of more advanced studies of credit rating or CRAs in the future, despite of their limited discussion in this research. Relevant issues about credit rating agencies can be enormous. Here one set of limitations was discussed—competition, paying systems and conflicts of interest of CRAs. Besides, the other issue which can be associated with the development of CRAs in the U.S. is presented here for future researches.

Limitations

Back to 2008, CRAs had been criticized by the authorities around the globe for giving high ratings to low-quality assets, especially those based on risky mortgages,

which then partly caused bubbles in the credit market to collapse. One of the factors behind the incorrect information, more specifically, overrated credit, is supposed to be the competition within the credit rating industry. The competition within the industry grew more severe after more CRAs, particularly Fitch, joined the market which had been dominated by S&P and Moody's. Even though now a huge market share belongs to the Big Three, their revenues as well as profits shrank for sometime right after the financial crisis; they stayed in the front line of the financial battlefield and cannot be more sensitive to the changes of the market. As a matter of fact, Moody's undertook a job cut in September of 2016 because of the slimmed-down profits in the turbulent market. The job cut was mainly concerned with analysts and some staff from other departments of the company.[180] Some strategies for cost saving were adopted, which included hiring employees in more inexpensive areas such as India, Sri Lanka, China and Costa Rica, according to Raymond McDaniel, Moody's chief executive. It is worth noting that the job cut was highly associated with the payment from settlement agreements with the governmental units such as the SEC and the DoJ. While competition seems to be the factor on the surface, the underlying issue is actually related to the paying system as well as conflicts of interest.

Rating agencies used to charge the investors for the credit information but the rating fee nowadays is paid by the security issuers. Given this, the paying system triggers the debate about conflicts of interest because profit is claimed to be easier made by pleasing agencies' clients with better rating results. In this regard, interviewees provided valuable information and their insightful opinions. One of the interviewees L. once revealed that he failed to fully believe what the rating agencies report and he explained, "It is just the bond issuer who pays CRAs for rating the bonds it issues. There must be conflicts of interest because the bond issuer is actually both agencies'

client and the target to be rated." One interviewee elaborated the same issue:

> "CRAs are under pressure from clients. Since CRAs have received the money from clients, they are reluctant to give poor credits. On the other hand, the bond issuer prefers CRAs which tend to give good ratings. Therefore, CRAs will try to satisfy clients. In *The Big Short*,[181] it was S&P which uttered this concern and chose to assign good ratings on subprime mortgage bonds. Rating is a business and agencies need to get more clients, making more money. Some big bond issuers are also share holders of some CRAs. How do you think they would rate the company of their own?"

The fact that CRAs were willing to accept the settlement agreements implied not only the concern of best interests for shareholders but also the issue of interest conflict. It was found in the legal investigations that CRAs including S&P and Moody's had obviously been aware of the problem of conflict of interests, based on some internal documents with statements such as 'conflict of interest' and 'market share'[182] and others. According to Chair of the House of Representatives oversight committee, the agencies should not have insisted that the huge downgrades of mortgage-based assets during the financial crisis were unpredictable. It was thus concluded that the CRAs, occupying a special place in our financial markets, "broke this bond of trust."[183]

Regarding how to avoid conflicts of interest, one of the methods is assumed to prevent anyone associated with market share objects from joining any committee which assigns credit ratings. In fact, this issue was pointed out seriously in the laws. For example, in the Dodd-Frank Act, "conflicts-of-interest inherent in the issuer-pay business model"[184] were highlighted to be one of the rating failures from the Big Three prior to the 2008 financial crisis. In addition, according to the rules from NRSRO, one of the criteria by which CRAs are expected to be certified "the agency's independence from the companies to be rated and its reputation for integrity in the field"[185], that is,

avoiding the conflicts of interest. Yet, there is always more than credit read on the paper and there is more than rating shown on the screen. Regardless of the regulation from the legal system and the expectation from the public, how the CRAs manage conflicts of interest really matters but remains unknown in this research. Therefore, it is academically meaningful to discuss whether the rating agencies are objective enough to assign the credit rating of the security issuers that happen to be the clients of the CRAs.

Directions for future research

In the study of the immigration history in the U.S., another issue concerning Jewish caught my attention. Jewish immigrants somehow faced unequal opportunities in the job market and other type of discrimination in their lives. For instance, in 1849, a journal advertisement for a number of shade painters put, “No Jews wanted here” (Sloan Irving J. Eds., 1978, p. 85) and debates arose accordingly. In fact, it was not the first time that Jews faced a certain type of discrimination as it was stated that the objects of so much “mean prejudice and unrighteous oppression as the Jews had been for ages” (Sloan Irving J. Eds., 1978, p. 87). Also, the agents of Underwriters’ Agency of New York City, were instructed, sometime in the middle nineteenth century, to refuse making insurance on property which belonged to Jews.

Yet, it was evidently impossible to put American Jews into any underprivileged economic status. On the contrary, as shown from Figure 8, the proportion of Jews devoted to professional, entrepreneurial, managerial, and clerical positions was considerably higher than that of other groups. In other words, undeniably, the occupational barriers upon American Jews were not working at all. There were always sufficient alternatives available for them to pay the way for living. Besides, another door was opened for Jews; not being accepted in the job market was claimed to become

one of the reasons that Jews preferred to run their own businesses rather than try to be hired. That is, with the occupational discrimination, self-employed job somehow became their last resorts. Moreover, American Jews excelled in commerce and finance and those from German took the lead in this regard (Wagley and Harris, 1958).

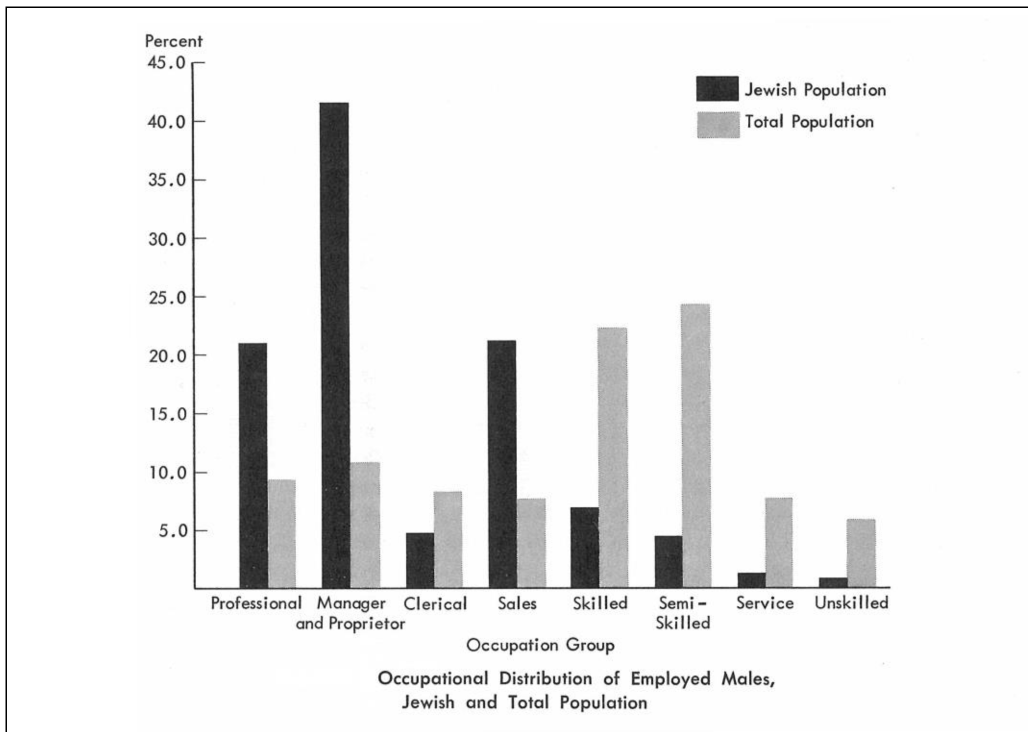

Figure 8. Occupational Distribution of Jewish, 1621-1977
Source: *The Jews in America 1621-1977*

Nevertheless, no matter how successful American Jews were in businesses, commerce, or finance, they remained isolated and behaved like outsiders. They were assumed to be outsiders for various reasons and it was largely associated with their religion. For instance, in the 1870s, a large number of Russian Jews began to immigrate to the U.S. and they were increasingly characterized as outsiders, foreign and different, also referred as “Orientals which implied that they were considered unassimilable” (Pak,

2013, p. 90). In case that Jewish played an important role in the commercial or financial filed but remained so mysterious, it was supposed to be very difficult to get information from them or about them. Since information is vital to the credit rating, the fact that Jewish merchants were important but hard to reach might also propel the establishment of CRAs. In the future, I will be glad to do more research on Jewish merchants or bankers in the U.S. and see how influential they might be.

Finally, from a much broader perspective, the American commercial communities in the early nineteenth century when the Mercantile Agency was founded need to be examined further. Sylla (2001) claimed that the need for information increased not only because the scale and geographical scope of economical transactions expanded but also because the U.S. investing class expanded. To put it another way, since the American credit rating agencies such as the Mercantile Agency and S&P or Moody's were meant to serve merchants and then security investors, the growth of these people must be the force behind the establishment of CRAs. A deeper study in this regard, for example, the number of investors, the growth of industries and financial units which participated in the national and global security market, the increase of institutional investors such as pension funds, and the changes of the security market is expected to give more clues to the study CRAs.

8.5 Conclusions

Credit is as old as time. The evolution of credit, the acceptance of late payment based on trust, is driven by social needs; every economy, when finding itself restricted by metallic currency, "fairly quickly opened up instruments of credit of its own accord" (Braudel, 1992.1, p. 471). Credit is extremely significant. Acording to Marx, the modern

commercial activities can never be formed without the establishment of credit (Marx, 1894, p. 294). Moreover, it was claimed that, without the foundation of credit, scarcely could "the economic history of our world have got off the ground" (Ferguson, 2008, p. 32). Ferguson even termed credit as the great revolution in the ascent of money and compared the evolution of credit with any technological innovation in the rise of civilization.

In other words, where there are exchanges or markets, credit is available before it could be linguistically demonstrated. So is credit rating; credit rating is important because of the significance of credit and it was available, despite of the terms or forms, before the availability of proper languages. The core of credit rating is information, required by creditors or investors driven by the concern of security.

Contrast to most researches which might take the existence of credit rating for granted, this dissertation interprets credit and credit rating from a historical perspective. With the continuous expansion and increasing complexity of the capital market, information is obliged to be presented in a more systematic, analytical, and rational manner, which partially contributed to the establishment of credit rating agencies. Also, while most researches claim the founding of the Mercantile Agency in the nineteenth century to be the origin of rating agencies, it was argued in this dissertation that the time needs to be pushed back much earlier. That is, the banking families between the fifteen and the eighteenth century are indeed the first groups to work on the information of credit, though what they carried out failed to be termed anyway. The claim in this thesis is actually congruent to what was argued by Poon (2012)—"names such as Dun & Bradstreet, S&P, and Moody's are as old as the market for rating itself" (as cited in Cetina and Preda, 2012, p. 272).

The claim is presented in the following figure. Since credit is such an old

mechanism as argued by several scholars, credit rating must be as old as it because of the significance of information about credit for the security concern. Yet, the fact that researchers treat the establishment of the Mercantile Agency in 1841 as the origin of credit rating agencies fails to explain how credit was evaluated or checked before the special organization was founded. In this dissertation, the question was answered—the banking families, at least four of them from the case studying, which had started the task of credit rating even though there was not such a linguistic term. What is more, from the operations in the four banking families, we can also see the changes of credit from commercial credit, mainly both the Medici and the Fugger families, to the financial credit, mainly both the Baring and the Rothschild families, as they had begun to take part in exchanges in the international bond market. In the mean time, the establishment of financial and legal systems following the founding of national countries partly brought forth the solid financial markets.

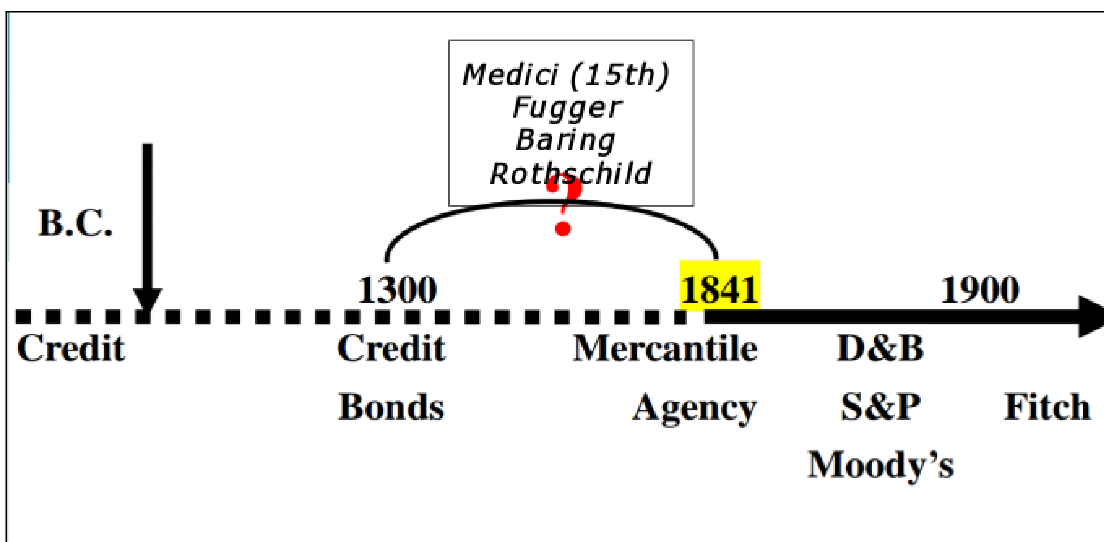

Figure 9. Explanation for Claim Making

Organized by the author of this dissertation

Theoretically speaking, the dominance of credit rating agencies is grounded on two

types of legitimation of domination, in Weber's term, traditional and legal/rational domination. For the former, the long-term historical development of credit, credit rating or any analogous term, and CRAs contribute to its traditional legitimacy of dominance. For the latter, not only the rational operation but also the legal support realized the legal/rational legitimacy of dominance and further enhanced the status of credit rating agencies. Both types of dominance lead to the legitimacy of credit rating agencies well as the power of them, particularly the Big Three. Consequently, even economically superior countries as security issuers in the global financial market succumb to the power of credit rating agencies. The formation of specialized credit rating agencies further portrays the changes in the forms of the society, transforming from a traditional society into a modern society.

Finally, besides the traditional and legal legitimacy discussed above, the dominance of CRAs also needs to be grounded in a set of equivalent systems, which can be termed 'a set of sets' (1992) by Fernald Braudel or 'society as a whole' by Max Weber (1978). To be more specific, no single organization can be functioning well without the congruent development of other mechanisms in a society. Braudel also used the term 'ensemble des ensemble' (1992) to further elaborate his concept. According to him, any given society is contained in a certain greater set. In other words, any economic activity being a collection of variables, "it required and implies the existence of other collections of variables outside itself" (Braudel, 1992, p. 459).

Over eight years has passed since the burst of the 2008 financial crisis which triggered this research. It was estimated that the total global losses from the 2008 financial crisis was approximately $15 trillion.[186] However, the story seems have never ended—the crisis manifested itself as a slow-motion bank run, as described by Dodd

(2014)—so does the loss. For instance, it was reported that in the investigation of RBS's decision to carry out a rights issue in 2008, over 160,000 documents[187] had been reviewed by a team of specialist legal accountants, financial regulators and banking experts. Besides, some banking institutions—the Financial Conduct Authority, the Prudential Regulation Authority, the Federal Reserve Bank of New York, the Serious Fraud Office and the Financial Reporting Council—were also involved. In case that the cost for all the lawsuits cases discussed in Introduction is counted, the loss from the 2008 financial crisis is definitely invaluable and even endless for the society as a whole. As claimed by Dodd (2014), the social costs, from both the crisis itself and the policies used by governments and central banks to alleviate its after-effect, were devastating.

In some discussions about the 2008 financial crisis, the CRAs were claimed to have played the key role in the process as the Big Three took charge of over 90 percent of the credit rating business in the global financial market. No matter how these rating agencies defined themselves, referees or information providers, it is doubtless that investors have been used to getting access to them for information and then judgment upon investments. That is to say, whether the exactly accurate information could be offered by CRAs is one thing but the truth that the investors worldwide heavily rely on them is another. In addition to the theoretical interpretation regarding their legitimacy, the truth in reality can be argued to be that there is no alternative to credit rating agencies, especially the Big Three, for information credit. When they are the only choice in this regard of such a huge capital market which requires countless information for judgment, the authority has been obtained automatically. The CRA is just like how Braudel interpreted capitalism (1992.3, p. 623)—"It is often ill but it never dies."

Notes:

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[61] Hartlib Circle "contributed voluminously to the pool of improvement ideas. Apart from their interest in the basic nature of knowledge, they submitted proposals for how to improve the productivity of all sectors of the economy, including new insights about mining, drainage, distillation, gunpower, navigational technology, fishing, and medicine" (Wennderlind 2011:60)

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south, forming the Italian national system, was completed in 1964.

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