Wealth effects from asset securitization
(the case of Australia)

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Abstract

Asset securitization is one of the most important financial innovations recently. With an impressive growth in terms of volume of issuance, from almost zero to five trillion USD, in a period of 15-20 years, it is one of the most rapidly growing markets in the financial world. Yet, little is known about this, literally invisible market. Companies engage in asset securitization for a variety of reasons and numerous advantages and disadvantages of asset securitization can be found throughout the literature. Asset securitization has an impact on a number of stakeholder groups: shareholders, managers, employees, investors, the financial markets and ultimately the overall economy and society. Asset securitization is one of the reasons for the financial crisis that started in mid 2007. Since the recent financial turmoil, it became clear the asset securitization was the primary funding source for companies in the financial industry and it was the primary supplier of credit in developed economies.

Because of its importance and impact, it is very important that we study the reasons, the motivations, the consequences and the effects from this so powerful financial innovation. And it is important to study it from as many different aspects as possible. Many questions surrounding asset securitization are unanswered and it is important to answer them sooner.

This study investigates the wealth effects from asset securitization on the shareholders of the securitizing companies. We study whether the announcement about a pending securitization transaction has any impact on the stock price of the securitizing company. That way we can discover whether asset securitization creates wealth, destroys wealth or has no impact on wealth at all.

Not many studies have been done on this topic so far. The existing seven studies are focused mainly on the US and the EU market and report contradicting results. In this study, for the first time, data from Australia is being used. The Australian securitization market is the second, single most active securitization market in the world, after the US market. We conduct quantitative analysis on a sample of 98 securitization transactions during the period 2000-2006. With this sample, we cover almost 29% of the number of securitization transactions during that period and almost 39% in terms of volume of issuance. To analyze the data we use standard event study methodology, common for this type of studies.

Our analysis reveals that investors in Australia do not perceive asset securitization favorably. Securitizing companies’ stock price decreases in the 10 days around the securitization announcement day, resulting in statistically significant wealth losses for the originating companies’ shareholders. Furthermore, the wealth losses are significant for less frequent securitizers, for securitizers that engage in small volume securitization transactions and for securitizing companies with low asset quality.

With this study we make theoretical and practical contribution. We lend empirical support to the previous theories and we help managers, shareholders and investors shape their forecasts.

Keywords: asset securitization, wealth effects, stock price, shareholders, originating company, securitization announcement, event, asset-backed securities.
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Chapter 1: Introduction

1.1. Problem background

Asset securitization is a process in which one company (originator) pools and transfers (sells) its assets, which can be mortgage loans, credit card receivables, trade receivables or any other kind of financial asset, to another entity. This other entity is established as a special purpose entity or vehicle (SPE or SPV) and its primary purpose is to provide financing to the originating company and it is a passive entity. The SPE/V cannot go bankrupt and is said to be bankruptcy remote. This is because the equity capital of the SPE/V is nominal and cannot bear a loss. The SPE/V issues securities to the general public which are backed by the originator’s asset pool. This type of securities is called asset-backed securities (ABS). The funds obtained by the issuance of these securities are used to pay the originator for the transferred assets. As the assets in the pool (the trade receivables, loans, etc…) are realized, principal and interest is paid to the holders of the securities. Asset securitization itself, as a process, is complicated and creates a lot of confusion even in the finance community. That is why this process will be explained thoroughly in Chapter 2.

Asset securitization is important even though the activity on the securitization markets today is almost non-existing compared to levels before 2007. Securitization markets were well established in USA and UK even before 2000. In the EU, securitization markets started growing rapidly since 2000 when several important regulatory reforms took place. Besides UK, Spain and Italy are the leaders in the EU, based on the size of their respective securitization markets. In the Asia-Pacific region, securitization markets started developing in the beginning of the 1990s. Australia, Japan and South Korea are the leading countries in this region, in terms of volume of issuance. The volume traded in the securitization markets on global scale reached its highest level in 2006 and since then it is decreasing rapidly. The first reason why we think securitization, as a financial phenomenon, deserves the attention of the finance community is because of the volume of issuance and trading it achieved throughout the world in an extremely short period of time. Since its inception, securitization became an extremely popular financing tool and according to the International Monetary Fund (IMF), the reasons for this rapid growth are that credit rating agencies gave AAA ratings to some securities very easily and because, according to Basel I capital requirements, “capital adequacy risk weights were absent on securitized products that were held in off-balance sheet entities” (IMF, 2009, p. 81). Securitization markets achieved remarkable growth, with volume of issuance from almost zero in 1990 to almost 5 trillion in 2006.

As can be seen from Figure 1, the volume of securitization issuance grew with an amazing speed before 2006. In 2007 the decline started in the US. Shortly afterwards the financial crisis spilled over in Europe and the rest of the world, which resulted in sharp decrease in 2009. Figure 1 shows private label securitization issuance, which means governments’ and central banks’ support programs that were introduced during and after 2008, are excluded. In other words, securitized products sold to governments and central banks are not included in the calculated volume of issuance. Presenting the volume of private-label securitization issuance can provide much better image about the development and the popularity of the

1
phenomenon called asset securitization. By observing only the securitization products issued and sold to the private sector, we can better understand the magnitude of importance this phenomenon reached throughout the years.

Despite the size of the securitization market, it is almost an invisible market. The securities issued are not traded on any exchange. The securitization market is exclusively institutional and very conservative because it releases limited amount of information; and, up until 2007 it did not receive much media attention (Silverman & Sparks, 1998). This fact is an important motivation for our thesis.

In theory, the advantages of asset securitization are recognized. In practice, it is widely accepted opinion, that asset securitization improved the liquidity and the efficiency of the financial markets. Therefore, asset securitization is viewed as a revolution in the financial services industry. This financial innovation contributes to economic efficiency by: 1) offering new investment opportunities; 2) reducing transaction costs, thereby improving liquidity and; 3) by reducing agency costs (Ramsay, 1993, p. 170). Basically, asset securitization enables companies to obtain funds based on the quality of the underlying assets, not on the credit condition of the entity that originates the asset. From the originating company’s point of view, asset securitization is beneficial because it provides funding flexibility and risk-sharing opportunities. For the investors, asset securitization offers more investment choices available to them and investments with higher credit quality than the originating company’s credit quality (Huertass, 2011). In addition, the possibility of structuring the ABSs enables investors to obtain a more efficient market portfolio and to diversify the risks they are facing (IMF, 2009, p. 78).

Many financial experts and institutions, academics, regulators and politicians recognize the advantages of the securitization process. According to many of them, the securitization process, if properly regulated and monitored, brings economic benefits. Asset securitization is often said to be part of the originate-to-distribute model, which means institutions
originate assets (receivables, mortgages, loans, etc...) and then transfer (distribute) them away from their balance sheets, to investors who are willing to purchase ABSs. By allowing companies to originate assets and hold them off the balance sheet, higher levels of leverage are achieved, but also greater economies of scale. By removing assets from the balance sheet, companies can increase their return on assets (ROA) and return on equity (ROE) (Jacobsson & Nordenström, 2009, p. 16; Fabozzi & Kothari, 2007). Financial institutions benefit from asset securitization by having another source of funding, one with lower cost than through standard borrowing, and with more favorable terms. That way, financial and non-financial institutions can disperse the credit risk to a broad and diversified group of investors instead of keeping it on their balance sheets. By securitizing, finance companies can be proactive in managing their credit, lending and liquidity risk, since they no longer have to bear permanent credit risk (IMF, 2009, p. 85). By reducing the risk of their assets, finance firms can easily obtain higher credit rating. Asset securitization gives financial institutions an option in managing their capital requirements and can bring them “maturity matching benefits” (Alles, 2001, p. 6). Financial institutions securitize their assets in order to reduce regulatory capital requirements. Under the old Basel I requirements, the weights that were attached to corporate and retail portfolios of loans were not risk weighted. This makes asset securitization quite attractive and valuable for companies that have difficulties meeting capital requirements. Another theoretical advantage of asset securitization is reducing information asymmetry. In a securitization, a credit rating agency must evaluate the quality of the assets in the pool (individually and of the entire loan portfolio). The credit rating agencies must evaluate the fair values and the loss distribution of the underlying assets. This provides valuable information to investors; one that would not be available otherwise (Hänsel & Krahnen, 2007). IFRS and GAAP financial information generally does not provide useful information about the asset quality to investors. Asset securitization, also, allows companies to separate the funding from the lending function. Through asset securitization, originating companies can separate their activities in several limited roles: originator, servicer, credit enhancer, trustee and investor. That way, companies can focus on the activities in which they have comparative advantage and bear the risks coming from those activities only. In essence, asset securitization provides a source of liquidity and lowers the risk of assets being subject to bankruptcy proceedings, since the assets are transferred to the SPE/V. This means that in the event of financial distress, the originating company’s creditors cannot reach the originator’s assets. The transfer of risk is an important characteristic of asset securitization. Asset securitization allows for disintermediation also. With asset securitization, corporations can obtain funding directly from the capital markets, instead of financial intermediaries such as banks (Fabozzi & Kothari, 2007).

There are also negative consequences of asset securitization pointed out in the literature, for example, its complexity. Securitizing banks’ have become so creative in developing risk-segmentation structures that investors and even regulators have difficulties understanding them and this lead to overconfidence in credit rating agencies. The recent financial turmoil revealed the dark side of asset securitization. The distorted incentives for the participants in the securitization process and multi-layered agency problems, at almost all stages of the securitization chain, came out to the surface. Furthermore, the “hot potato” of bad loans was transferred to unknown base of investors (Shin, 2009, p. 309). The perception is that as companies became more and more able to transfer loans into the capital market, companies
forgot about their responsibility and obligation of evaluating the creditworthiness of potential borrowers. Another deficiency pointed out is that asset securitization is sometimes used for the purposes of earnings management by managers, whose compensation is linked with earnings performance (Dechow, Myers & Shakespeare, 2009). The advantages and disadvantages from asset securitization and relevant theories will be explained in detail in subsequent chapters.

In the early stages, asset securitization transactions involved only mortgages as an asset type, and mostly financial institutions as originators. With time, more and more different types of assets have been securitized; for example, car loans, credit card receivables, commercial mortgages and trade receivables. In addition, trading and manufacturing firms started to securitize their assets. With the intent to satisfy investors’ needs, more and more complex structures were created. This was accompanied by the advent of derivative products. As the financial crisis showed, this situation became unsustainable (Huertass, 2011). “Prior to the crisis, securitization was almost universally hailed as a financial system stabilizer” (IMF, 2009, p. 85). It turned out that it could be universal destabilizer also. Today many blame the process of securitization to be one of the primary reasons for the recent financial crisis, including academics, investment professionals, regulators and the general public. The purpose of asset securitization was to find use for illiquid assets and to transfer credit risk from the banking system. However, the securitization model, as it was, proved to be unsustainable. The intended transfer of risk did not occur, mainly because banks and other financial institutions took the opposite side of each transaction (mostly pension funds, insurance companies, mutual funds and money managers). In other words, the risk stayed in the financial system. Because of this, many small non-bank firms and few large banks were forced into bankruptcy, while governments rescued others through different kinds of support programs, by taking the opposite side of many securitization transactions. Nevertheless, regulators, academics and financial professionals recognize the benefits from asset securitization. Many characterize asset securitization as the most important reform in the financial system recently. Sabry & Okongwu (2009) provide evidence that, in the US, securitization increases the availability of credit and decreases its cost. That is why the IMF, G-7 and some large banks call for new start of the securitization markets. However, the IMF is also calling for accounting, disclosure and transparency improvements in order to prevent investors to blindly rely on credit rating agencies (IMF, 2009, p. 79). In order to revive the securitization markets, many measures were taken and many changes are expected to occur in the future. Originating companies are required to have more “skin in the game”, meaning to retain some of the risk and to ensure that the underlying loans are conforming to the requirements set (the IMF also reports that having more “skin in the game” will hinder the incentives for asset securitization). Second, reforms have been made to ensure that investors have timely access to information concerning the performance of the loans in the asset pool. Third, rating agencies are now under increased monitoring by the regulators. Finally, the Basel Committee increased the capital charges for illiquid instruments held in the banks trading portfolios (Huertass, 2011). Even though asset securitization, in large, is blamed for the recent financial turmoil, the economic value of securitizing is acknowledged. However, some painful reforms will have to take place in order to restore investors’ confidence; one of which is greater education on this topic (Choudhry & Landuyt, 2009).
Since mid 2007, securitization markets around the world are practically frozen. Very few asset securitization issues occurred since then. At the same time we started hearing phrases like “lack of liquidity” and “credit crunch”. This means that since 2007 banks and other financial institutions lack funds in order to originate (to give) new loans. The IMF identifies several factors that lead to the current crisis. These are credit rating agencies conflicts of interest and methodological flaws, accounting standards falling behind the development of the securitization markets and flawed prudential regulation (IMF, 2009, p. 88). In a way, the previously described rapid development of the securitization markets lead to the problems that the world is facing since 2007. The traditional system, where banks were using balance sheet money (deposits) to lend to borrowers was substituted with asset securitization, where mortgages are transformed into financial instruments and sold to the public. This new system functioned well until borrowers started to default on their loans and mortgages. As a consequence of those defaults, banks and other types of originators could not pay principal and interest to the holders of the financial instruments. The result was panic all over the world; market participants lost confidence in financial institutions, financial institutions started facing serious financial problems, credit rating downgrades followed, liquidity vanished and deep financial crisis begun. The occurrence of these two events (frozen securitization markets and credit crisis) at the same time could lead one to think that before the crisis, asset securitization was the primary funding source for banks and financial institutions. This, in turn, could be interpreted as the end of traditional banking (using deposits to fund loans). One fact supporting this theory is that, before 2007, ABSs and covered bonds used to provide 20-60% of the funding for new residential mortgage loans in the US, Western Europe, Japan and Australia. As of June 2009, 19% of the USD18 trillion worth real estate loans were funded by asset securitization (IMF, 2009, p. 78). No matter how interesting this topic looks, it is out of the scope of this study. However, the previous numbers help us understand the importance and the impact of the phenomenon called asset securitization on the global economy and financial stability.

1.2. Choice of topic

From the previously written, it can be seen that asset securitization is a complex financial innovation with many diverse effects on the originators, the investors, the capital markets and, therefore, the overall economy and society. In fact, the financial crisis that started in mid 2007 captures the magnitude of the impact that securitization can have on the global economy (although there are other factors that caused the financial crisis). Because of its importance and impact, asset securitization deserves the attention of the finance community and should be researched; and it is more than relevant topic for a thesis at Master level. In one of the previous paragraphs, we mentioned that the securitization market is an invisible and very conservative market. It does not reveal a lot of information to the general public. In addition, before 2007 the media did not put a lot of attention to these markets. As a result, the general public’s knowledge concerning this matter is very limited. The lack of public information and media attention make asset securitization itself and the securitization markets quite mysterious. Therefore, studying asset securitization is challenging for us, since we wanted to study something that has not received much
attention in the past, something relatively new and surrounded with so many unanswered questions. This was a key aspect in our search for topic for this thesis.

Asset securitization is a relatively new financial phenomenon. Therefore, the literature concerning asset securitization is quite new (mostly, from the last 15-20 years). Nevertheless, asset securitization has been analyzed from many aspects. There are studies on the motives that lead to the securitization decision (Bannier & Hänsel, 2008; Alles, 2001; Fabozzi & Kothari, 2007; Riportella, Medina & Ponce, 2010; Affinito & Tagliaferri, 2010), on the impact it has on firms’ cost of capital and capital structure (Liu, 2007; Lemmon, Liu & Mao, 2010), on the impact on firms’ risk (Lockwood, Rutherford & Herrera, 1996; Franke & Krahnen, 2006; Jobst, 2006; Uzun & Webb, 2007; Liu, 2007; Hänsel & Krahnen, 2007), on the legal issues (Alles, 2001; Gorton & Souleles, 2003; Wolfe, 2000), on the benefits from securitization and on the meaning of the phenomenon for capital and credit markets around the world (Fabozzi & Kothari, 2007; Shin, 2009; IMF, 2009). However, many questions remain to be answered, and it is important to answer them sooner, since we know the power of this financial innovation and the influence it can have on the global financial markets.

As explained above, there are many different motives for securitizing and many different interpretations and explanations of the securitization decision. Investors, both individual and institutional, follow companies and interpret and value the securitization decision, and their reaction on a securitization announcement can be seen on the market, through the stock price movement of the originating company. If investors value the securitization decision and announcement positively, this should reflect positively on the originator’s stock price. In contrast, if investors regard the securitization decision as not value creating, this should reflect negatively on the originating company’s stock price. Thus, this relationship, between securitization announcements and stock price movements will be the subject of this paper. In other words, we will study stock price reactions to securitization announcements. After long and thorough searching for topic for this Master thesis, we decided to study the wealth effects from asset securitization on the originating companies’ shareholders. By studying this topic we intend to make important conclusions about the capital markets’ expectations regarding the securitization decision. We, further, plan to draw important conclusions about the motives and the characteristics of the companies that securitize assets.

1.3. Research gap

To our knowledge, very modest amount of research has been done on the wealth effects from asset securitization on the originating companies’ shareholders. In addition, different, even contradicting results can be found throughout the literature. Some studies focus on the banking industry and some include industrial companies also. We found only seven studies that directly investigate this topic. These studies were conducted in a period of 15 years, starting from 1996 to 2010. Four of these studies use US data; two of them use EU data and one uses data from UK.
A study by Lockwood et al. (1996) finds that stock price responses to securitization announcements are industry specific in the US, with wealth gains for finance firms and wealth losses for banks. Thomas (1999) finds that shareholders realize significant gains, while the market interprets the securitization transaction from a company with poor credit condition as a positive signal of financial health. Thomas (2001) finds that asset securitization is associated with losses when markets are under pressure and gains when markets are calm. Gasbarro, Stevenson, Schwebach & Zumwalt (2005) focus on the US banking industry and provide empirical evidence that asset securitization reflects positively on shareholders’ value, but they recognize that the results may be firm specific. There is no evidence for a relationship between securitization announcements and stock price in the study conducted by Franke & Krahn (2006) who focus on European banks. Liu (2007) concludes that asset securitization brings positive stock price adjustment for UK companies. Finally, Farruggio, Michalak & Uhde (2010) conduct a study on securitizations in the banking industry in the European Union and Switzerland; and find that securitization announcements have negative impact on shareholder value. Detailed description of these studies and our critical opinion will be provided in Chapter 4.

Our initial plan was to study this topic by using data on securitization transactions and stock prices in Sweden. After a month of searching for data on securitization deals in Sweden, we had a very pleasant conversation with Mr. Matias Lampe from “Manheimer Svartling” (law firm). Mr. Lampe has several articles and reviews on the Swedish securitization market and he informed us that asset securitization is a very rare activity in Sweden and that there are around 2-3 securitization deals per year. Apparently, Swedish firms prefer covered bonds over asset securitization as an alternative funding source. Obviously, it was impossible to conduct this study with so little data. Then we spent another month searching for a country with active securitization market (other than USA and UK) and data for that country. We found that, today, the Australian securitization market is considered to be one of the most active securitization markets in the world, after the US market (Liaw & Eastwood, 2000, p. 1). After finding country with active securitization market, our biggest challenge was finding relevant, detailed data concerning securitization transactions for a longer period of time. From today’s point of view, we can say that obtaining that data was the main problem and the biggest obstacle to overcome. After we found the database relevant for the Australian securitization market, we were able to proceed with our thesis without any major problems. Therefore, our thesis investigates the wealth effects from asset securitization by using data on securitization transactions and stock prices from the Australian securitization market and the Australian Stock Exchange.

To our knowledge there is no study on this topic with a focus on Australia. Our intention is to fill in that gap. We intend to do so by conducting a research covering firms listed on the Australian Stock Exchange.

The Australian securitization market started developing in the mid-1990s. Like the most of the world, Australia was largely affected by the financial crisis and since 2007 the level of activity on the securitization market significantly dropped. From almost non-existent in 1995, the volume of private-label securitization issuance on the Australian market reached its peak in 2007. Since then, the amount of securitized assets decreased sharply. The
development and the characteristics of the Australian securitization market will be explained in Chapter 3.

1.4. Research question and research objective

Starting from our initial interest in asset securitization, we managed to narrow down the research problem and to create a specific and answerable research question.

Our research question is:

Is securitization wealth creating or wealth destroying for the shareholders of the originating companies?

We intend to answer this question by examining the relationship between announcements about new securitization transactions and stock price movements of firms listed on the Australian Stock Exchange. In other words, we will try to find out if announcements about securitization affect the stock price of firms listed on the Australian Stock Exchange by looking at the stock price movement around the securitization announcement date. A positive stock price response to a securitization announcement would indicate that the securitization transaction is valuable for investors and wealth is being created. In contrast, a negative stock price response would be interpreted as being wealth destroying.

The subject of our research is to determine if there is a relationship between securitization announcements and stock price movements. The main objective of this study will be to answer the research question. With that in mind, we can end up with two possible scenarios. First, in case we observe a relationship between securitization announcements and stock prices, we will attempt to find mutual characteristics of the firms with positive and with negative stock price reaction to securitization announcements and we will try to draw conclusions about the characteristics of those companies by using theories found throughout the literature. The second scenario is that we find that securitization announcements and the stock prices of the companies listed on the Australian Stock Exchange are not related at all, meaning that securitization announcements do not cause any reaction in the stock price of the originating companies. We sincerely hope for the first scenario. In addition to our analysis on the overall sample, we plan to derive different subsamples and repeat the analysis. That way, we intend to obtain more concrete and more relevant conclusions.

1.5. Contribution of the study

Contribution to the theory and the practice is expected. As mentioned before, the literature and the theories developed on this exact topic are limited. In addition, there is no such study in Australia so far. What makes things even more difficult is the fact that even those few previous studies report different and contradicting results. Therefore, it is a challenging task to make a contribution to the theory. Nevertheless, we can make a contribution by providing evidence about which theories hold and which don’t on the Australian
securitization market. Therefore, we will contribute to the literature, by clarifying few questions hiding behind the phenomenon called asset securitization in Australia.

We hope to help companies by providing them with an insight to what can they expect in case they decide to securitize. Like previously stated, if we find relationship between securitization announcements and stock price, we will try to draw conclusions about the characteristics of those companies. By knowing the results of this study and their own characteristics, companies can more easily forecast whether their securitization decision will be wealth creating or wealth destroying for their shareholders. For example, if we find that for banks, the securitization announcement has positive effect on the originating bank’s stock price, then we are more than certain that companies in the banking industry would want to know this.

Studying the wealth effects from asset securitization is important for many groups of stakeholders. It is important for the existing shareholders of the originating company, as well as for the management of that company. By having empirical evidence on their disposal, shareholders will have information that will enable them to more easily shape their expectations and forecasts about the prices of the shares they own. In other words, they can have clearer idea about the shifts in their wealth. Managers, on the other hand, will have better image about what will happen with the company’s market value, in case they decide to securitize. This study will certainly benefit investors, when making their investment decision. Knowing what happens with a securitizing company’s stock price, might make the investment choice between a securitizing and non-securitizing company easier.

Previously we mentioned that some serious reforms will have to take place in order to prevent another financial crisis and to create transparent, efficient and sustainable global securitization market which will be beneficial for all groups of stakeholders. One of those changes certainly is education. We believe that understanding the phenomenon that lies behind the deepest economic recession in modern history is extremely important for people in the finance community, especially students. In order to understand asset securitization as an important financial innovation and its effects, an understanding about the economics behind the securitization process is needed. This includes information about the participants in the securitization transaction, the flow of money, the motives for the securitization decision, the effects and the consequences. Besides the core topic of our thesis (studying wealth effects from asset securitization), describing the process of asset securitization is an inevitable part of our study, part that we have to provide. A detailed description of this process, together with the advantages and disadvantages related to it will be presented. This descriptive part of our thesis will also be very beneficial and will contribute towards greater understanding of the financial innovation called asset securitization. This in turn, will help the reader to understand one of the core factors that caused the recent financial turmoil and to obtain knowledge in an area that can have so big impact on the global economy. Asset securitization is very important area and every finance student should have, at least, basic knowledge of it.

According to Liu (2007), whether asset securitization affects stock price is unclear; and it is important to discover the wealth effects from asset securitization because those effects
reflect investors’ attitude towards this financial phenomenon. The decision to securitize or not, can affect the market value of the company and any potential securitizer should know the effects from that decision.

In the end, the findings of our study, no matter what they are, are neither absolute nor final.

1.6. Structure of the thesis

The remainder of this Master thesis is organized as follows:

Chapter 2 explains the process of asset securitization and some important issues related to it. This is followed by the advantages and disadvantages of asset securitization.

Chapter 3’s focus is on the Australian securitization market and its characteristics, the regulatory environment and, the actions and proposals for restarting the securitization market in Australia.

Chapter 4 reviews the previous studies on the wealth effects from asset securitization. Also, in this chapter we develop the hypotheses.

In Chapter 5 we devote our attention to the research methodology. In this section we explain our research philosophy, research approach and research strategy. Moreover, we describe the data and the sample, followed by the statistical method used to analyze the data.

In Chapter 6, we describe the sample. In the second section of this chapter, we present the analysis of the data and the results from it.

Chapter 7 concludes. In this chapter, the findings of the study are discussed and a summary of the overall study is provided. Additionally, we explain the limitations of the research and we make suggestion for further research.
Chapter 2: Asset securitization

In order to understand our thesis, the reader must, first, obtain a thorough understanding of the process of asset securitization. After explaining this process, we describe the types of assets that can be securitized. Next, we turn to the types of securities that can be issued. Additionally, we provide analysis of the types of credit enhancement offered in a securitization transaction. We conclude this chapter with the analysis of the advantages and the disadvantages of asset securitization. In consultation with our supervisor, we will write and structure this section assuming the reader has basic knowledge in finance and accounting.

2.1. The process of asset securitization

During the last 20 years, financial engineering has developed into a very complex and sophisticated area. The process of asset securitization is at the center of this area, being viewed by many as most exciting subject, but at the same time, the most controversial. “Securitization has become a financial buzzword in the last fifteen years” and still many investors and investment professionals have difficulties describing precisely what asset securitization is (Graff, 2006, p. 233). The issue of asset securitization gains even more weight and relevance today because of the acceptance of the Modern Portfolio Theory, according to which investment managers can improve the risk-return profile of their portfolios by diversifying the portfolios to the largest possible extent. As a consequence of the acceptance of this theory, diversified portfolios have become a sort of benchmark for evaluating the performance of investment managers (Graff, 2006, p. 233).

In today’s world, asset securitization means a process by which one entity pools its interest in a series of identifiable future cash flows and then transfers the claims on those future cash flows to another entity which is established for the sole purpose of holding those claims. This other entity issues securities which are backed by the claims on the future cash flows. When realized, the cash flows are used to pay principal and interest to the investors over time. Credit support from source other than the cash flows may or may not be used to pay off investors. Therefore, a securitization transaction is used to provide financing (through the sale of assets). However, it is not financing in the common sense of the word, since the entity that securitizes its assets is not borrowing money, but instead is selling cash flows that would accrue to the entity even without the securitization transaction. The entities that securitize assets could be private corporations (financial or non-financial) or public enterprises.

The process of securitization begins with an individual or institution taking a loan or mortgage from a bank, some other financial institution or a company in any industry. This company has many customers (individual and institutional) to whom they give loans to and they expect to receive timely payments from them, in the form of principal and interest. In other words, they have receivables on their balance sheets. Because this company originated the loans, we will refer to it as the “originating company” or the “originator”. Originators can be banks, mortgage companies, finance companies, investment banks and other entities (Rance, 2005). The originator identifies a group or pool of receivables (loans)
that meet some quality criteria and decides to securitize those receivables. This pool of receivables is then transferred to another entity called “special purpose entity” (SPE) or “special purpose vehicle” (SPV). In most cases, the pool of receivables or the asset pool is transferred at par value; that means it is transferred at the outstanding principal of the loans in the pool. The purpose of the SPE/V is to hold the asset pool and to pay to the originator for it by issuing securities. This means that the SPE/V will issue securities (in most cases bonds or commercial paper) to the general public and it will use the proceeds to pay the originator for the asset pool. For now, it is enough mentioning that the securities issued by the SPE/V are evaluated separately by the credit rating agencies and obtain credit rating separately from the originator, based solely on the quality of the assets in the pool, not on the credit condition of the originating company. By issuing the securities, the SPE/V has a liability towards the investors of those securities. The SPE/V should repay the principal and should pay interest in the future. When the asset pool’s cash flows are realized at a later stage; that is, when the borrowers repay the loans in the pool, the SPE/V will use these cash flows to pay the investors of the securities issued by the SPE/V. Therefore, the previously issued securities are backed by the asset pool. Investors in the securities issued by the SPE/V are mostly institutional investors like pension funds, mutual funds, insurance companies and money managers. Usually, these securities are not marketed to retail investors (Rance, 2005, p. 4). The cash flows from the asset pool will be used on a mutually exclusive basis. This means two things. First, the originator does not have any claim on the receivables in the pool. Second, the investors in the securities issued by the SPE/V do not have any claim against the assets of the originator, except to the extent of the guarantee provided by the originator explained later (Fabozzi & Kothari, 2007).

In general, the process of securitization involves the following parties:

1. borrower (individual or institutional);
2. originator (the lender) - the initial owner of the loan;
3. the issuer of debt or equity securities (the SPE/V) – it is a temporary and intermediary holder of the loan documents;
4. the credit rating agencies, who evaluate the credit quality of the securities and assign a credit rating;
5. a credit enhancer (usually a bank), that provides credit support in the form of guarantee for the payments on the securities;
6. a servicer (possibly the initial owner of the assets), who collects payments on the assets and transfers them to the trustee; and
7. a trustee, acting on the behalf on the security holders;
8. an underwriter;
9. the investors (Ramsay, 1993, p. 171).

The following figure is an illustration of the asset securitization chain, where one borrower’s loan or mortgage is transformed and ends up in a portfolio of an individual or institutional investor.
Borrowers are all the individuals and institutions that are in need of funds. They apply for a loan in a bank or another financial institution.

Originators are all entities that provide loans to the borrowers. They give loans to borrowers and that is why it is said that they originate the loan. In most cases these are banks and other financial institutions.

We are aware that most of the confusion surrounding asset securitization comes from the fact that people have difficulties understanding the form and the role of the SPE/V. It is
important to understand the SPE/V as just a separate legal entity with just nominal equity capital, with no employees, whose only purpose is to hold the asset pool and to play a passive, legal role in the issuance of the securities. Therefore, it is important to understand that, when we say the originator transfers the assets to a third party, this third party is not another company, but a simple legal entity called SPE/V. According to Gorton & Souleles (2003), no one works at the SPE/V and it does not have physical location. Moreover, it cannot make business decisions. To achieve the two goals of transferring the assets and at the same time creating some financial instrument, an entity like the SPE/V is created. The SPE/V is a means which provides assurance that the assets are isolated from the risk of default by the originator. This means that the SPE/V is “bankruptcy remote”. This legal entity is created for the sole purpose of holding the transferred assets and for the subsequent issuance of securities backed by those assets. Therefore, in effect, investors do not have to hold the originator’s assets directly. Instead, they do so indirectly through the SPE/V. Practically the SPE/V is a sort of intermediary between the originator and the investors.

The SPE/V is basically an entity with nominal equity capital and with no substance. This means that the SPE/V acquires the asset pool, but it does not have the necessary infrastructure to collect the receivables. Therefore it cannot perform the collecting and servicing function. The servicing function includes services to borrowers, collecting cash flows and redirecting those cash flows to the investors. Because the originating company has the necessary infrastructure and system in place to provide these services, in most cases, it retains the servicing function and it charges a servicing fee. That is why borrowers do not know that their loans have been securitized. However, the originating company does not have the ownership of the assets, like before the securitization transaction. The difference, with asset securitization, is that after collecting the loan repayments, the originator will redirect the cash flows to the SPE/V. The servicing function can, also, be assigned to a third party, if that party has comparative advantage in servicing. This decision depends on the cost of the servicing function (Fabozzi & Kothari, 2007).

Credit rating agencies must assign a credit rating to the ABSs in order for the issue to be regarded as marketable. They give their opinion on the quality of the asset pool and based on that, a credit rating is assigned. Usually the securitization transaction must have AAA credit rating to be seen positively by the investors.

The servicer collects monthly payments from the borrowers and directs those cash flows to the trustee. In most cases, the servicer will retain a fee for doing so, usually 0.5%. This function is considered to be valuable and in most cases the servicing function is retained by the originating company.

The trustee acts on behalf of the investors in the ABSs. The role of the trustee is to monitor the servicer and to make sure the servicer fulfills its duties, to monitor and oversee the payments to the security holders. It is an administrative function.

The underwriter is the initial supplier of capital and the initial purchaser of the ABSs. At later stage, the underwriter plays a key role in forming the structure of the securitization issue.
The investors are the buyers and holders of the ABSs. As previously mentioned the investors in ABSs are mostly institutional investors.

2.2. Assets eligible for asset securitization

For purposes of asset securitization a large pool of assets with homogeneous characteristics (in terms of the cash flow and risk characteristics) is preferred. The larger the asset pool, the greater the economies of scale will be, which will make the whole securitization transaction more profitable. Also, when the asset pool is homogeneous and the documentation for the underlying assets is standardized, the credit rating agencies can more easily assess the risks (Alles, 2001, p. 7).

In most securitization transactions, the financial assets must provide payment of a fixed amount of principal, no later than a specified future date. As previously stated, asset securitization is basically transforming illiquid assets (here we don’t mean low quality assets; we mean assets that cannot be turned into cash right away) into easily tradable liquid assets. There are many different types of asset-backed securities. In most cases, the type of asset-backed security depends on the type of the underlying asset. Most common asset-backed securities are securities backed by mortgages (residential and commercial), credit card receivables, automobile loans, student loans, trade receivables and lease receivables (Rance, 2005).

The difference between these types of assets is large, but pooling them together makes the credit losses more predictable because of diversification. Investors do not know the individual characteristics of every loan on the pool, but they are familiar with the criteria used to choose the assets and to create the pool. Pooling these assets increases liquidity (Gyntelberg & Remolona, 2006, p. 66).

Another type of asset that can be securitized is corporate bond that is already traded in the secondary market. These securitizations are mostly directed towards transforming risk, rather than enhancing liquidity. Corporate bonds are pooled together. This pool is further structured in tranches reflecting different levels of risk, to suit investors’ demand. The security that is created this way is usually called “collateralized debt obligation” (CDO). The result of this type of asset securitization is senior tranches of securities that are of higher quality than the rest of the pool (Gyntelberg & Remolona, 2006, p. 66).

2.3. Asset-backed securities (ABS)

The name of the final product in a securitization transaction can vary and depends on the type of asset being securitized. In this Master thesis, we will refer to the securities issued in a securitization transaction as ABSs for practical reasons. Therefore, the securities that are issued by the SPE/V are called asset-backed securities (ABS). There is a difference between ABSs and other types of financial instruments (for example, bond). When investors buy other types of financial instruments (bonds) they are exposed to all the risks that the issuers’ business is exposed to. In other words, investors are exposed to the issuer’s business risks. In the case of ABSs, the investors are only exposed to the risks of the assets
in the pool, not the issuer’s business. This is a great advantage for the investors in those securities. For example, if the originating company goes bankrupt, the investors in the ABSs will be unaffected, which is not the case with bonds. The only effect on the whole securitization process will be through the servicing function (if the originator is the servicer), but this can be easily resolved by assigning another company to perform this function. In any case, the cash will continue to flow towards the investors.

What is important to remember is that investors in ABSs are exposed only to the risks of the asset pool. The risks of the asset pool include defaults on the loans in the pool, delays, prepayments and possibly some legal issues. The exposure only to the risks of the asset pool makes the ABSs to be claims only on the asset pool, but not a claim on the entire entity (Fabozzi & Kothari, 2007). That is why, in practice, investors are interested in the characteristics and the quality of the underlying asset pool, the rules for their servicing, the timing and receipt of cash flows and the distribution scheme for those cash flows (Rance, 2005, p. 3).

The securities issued by the SPE/V are structured into different types of classes, more commonly called tranches. Most securitization transactions include more than one class of securities. The securities issued by the SPE/V are grouped and classified according to the quality of the assets in the pool. Each tranche of securities is assigned a separate credit rating. The goal of this tranching is to create different types of securities, in order to satisfy different investors’ needs and requirements. Different names are used to describe these trances throughout the literature and in practice. The tranches may be senior or junior; senior, mezzanine or junior; senior or subordinated; class A, class B and so on. The highest tranche has the highest credit rating and the lowest tranche has the lowest credit rating. Usually the senior tranche (the one with highest credit rating) offers the lowest risk, but also the lowest return. The subordinated tranche (the one with lowest credit rating) offers the highest risk, but also the highest return.

![Figure 3: Structure of a securitization issue](Source: Authors’ creation)
Usually, interest is paid to all tranches. The difference between the different tranches is in the way the principal is paid to each tranche. There is a level of subordination. This means that the senior tranches receive principal payments first. After all the principal is repaid to the first tranche, the second tranche starts to receive principal payments and so on. However, the distribution of the losses goes in the opposite direction. When some of the borrowers defaults on his/her loan, principal is not paid to investors (depending on the level of credit enhancement described later) in the ABSs and losses begin. In a structured transaction, with multiple tranches, the losses are absorbed by the lowest tranche first. When the losses are higher than the principal of the lowest (subordinated) tranche, the second lowest tranche starts absorbing the losses. It should be obvious by now for the reader that the senior tranche is protected from losses by the subordinated tranches. It is said that the senior tranche has a cushion against losses.

It is easier to understand the above through an example. Suppose we have three classes or tranches of securities. Let’s assume that the principal of tranche A to be paid is equal to 95% of the total principal of the loans in the asset pool. Tranche B’s principal is equal to 3% of the total principal and tranche C has an outstanding balance of 2% of the total principal. Any losses caused by defaults of the loans in the asset pool, will first be absorbed by tranche C. When those losses exceed 2%, tranche B will start absorbing the losses and investors that purchased securities from that tranche will suffer. When the losses exceed 5%, the total of tranche C and B, tranche A will start bearing the losses. Because of this, senior tranches will obtain the highest credit rating (typically AAA). Subordinated tranches or tranche C will have the lowest credit rating and because of that it is difficult to find investors to invest in those securities. For that reason, subordinated tranches are, in most cases, retained by the originator (Fabozzi & Kothari, 2007).

It would be wrong to assume that senior tranches are preferred by investors, since they offer the lowest return. Different investors have different investing needs in terms of liquidity, time horizon, tax concerns, legal issues, as well as personal preferences. By tranching and modeling the ABSs, investors have broader spectrum of investment opportunities.

The tranching of the ABSs is one of the most important features of the asset securitization process. The securities are structured in way that would bring the probability for extreme losses to the lowest possible level. The structuring or tranching of the ABSs is based on the probability distribution of default risk (see Figure 4). From Figure 4, it can be seen that the probability of loss is higher for the lowest tranches and it decreases as we move up towards the senior tranches.
One other point that can be made from Figure 4 is that in order to achieve this kind of distribution, the loans in the pool must be diversified. Having only one loan will result in two possible scenarios; the loan will either perform or default. So it is clear now that companies must select more than one asset in order to perform securitization transaction. The question is how to select the assets to be included in the asset pool. There are specific criteria that should be met in order for an asset to be included in the asset pool. These criteria, in turn, are selected based on the desired quality of the asset pool. The criteria for asset selection are not of big importance for our thesis. The point that we would like to make here is that companies usually select their best assets (the ones with highest quality) to be securitized. This reasoning has its own support throughout the literature, but we will refer to this later in the thesis.

2.4. Credit enhancement

The assets in the pool are subject to different risks. The types of risks related to each asset can be different, but in general there are several types of risks that are mutual for almost every type of asset. These are credit risk, liquidity risk, interest rate risk and prepayment risk. While these types of risks are extremely important for investors in ABSs, they are not very important for our thesis and therefore we will not elaborate them in details. The important thing to remember is that, like with any other investment, there are certain risks related to ABSs also.

As previously shown in section 2.1., credit rating agencies are part of the securitization chain and their role is very important and ultimately crucial for the success of the issue of the ABSs (see Figure 2). The rating that credit rating agencies assign to an ABS reflects only credit risk, but not other risks related to the market, to changes in interest rates or related to prepayments (Rance, 2005, p. 5).
Because of the risks related to ABSs, originators must put some mechanisms in place to mitigate those risks and to protect investors. Companies that wish to securitize their assets must provide some guarantees against defaults and losses. Since the credit rating of the ABSs is determined independently from the credit condition of the originator and solely on the basis of the asset quality; the originator must provide some sort of guarantee to the investors. These guarantees, in turn, depend on the desired credit rating. The higher the credit rating the originating company desires, the more guarantees it will have to offer. This type of support against losses is called credit enhancement. The credit enhancement can be internal or external. There are several types of credit enhancement (See Table 1).

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<th>Internal credit enhancement</th>
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<td>Excess spread</td>
<td>Insurance</td>
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<td>Overcollateralization</td>
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<td>Subordinated structure</td>
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Table 1: Types of credit enhancement

Excess spread - The mean interest rate, paid by the borrowers, on the loans in the pool is called weighted average interest rate. The mean coupon rate paid to the investors in the ABSs is called weighted average coupon rate. The difference between the two rates is the excess spread. The excess spread can be used in two ways. It can be invested in money market instruments, which are highly liquid, default-free securities. Or, it can be kept on a separate account (cash reserve). Either way, the excess spread is used to absorb losses when defaults occur. Whenever credit losses in the underlying asset pool occur, the excess spread account is used to cover those losses.

Overcollateralization - This type of credit enhancement occurs when the value of the assets in the pool (the collateral) is greater than the par value of the ABSs. For example, if the funds raised equal USD50 million and the value of the asset pool is USD60 million, then we have USD10 million overcollateralization. These funds are then used to absorb losses in case of defaults.

Subordinated structure - This structure was previously explained in section 2.3. (see Figure 3). With this type of credit enhancement, senior tranches are protected from losses by the existence of subordinated tranches. This is common for almost every securitization transaction.

External credit enhancements - If the guarantees are provided by a third party, such as a financial guarantee company or an insurance company, the credit enhancement is external.

There is one other type of credit enhancement. The subordinated tranche in every securitization transaction is backed by low quality assets, it is the most risky tranche and it is the tranche with lowest credit rating. Because of this it is difficult to market these securities. That is why in most cases the originating company retains the subordinated tranche i.e. the originator takes a first loss position. To achieve this, the originator buys the subordinated tranche, which absorbs all default losses up to a certain amount (Franke & Krahnen, 2006).
2.5. Advantages of asset securitization for originating companies

The theoretical advantages and disadvantages of asset securitization for the originating companies are of importance for this thesis. There are positive and negative consequences of asset securitization for the investors and the overall society and economy, but these are out of the scope of this study. Here, we recognize that in practice, the theoretical advantages and disadvantages depend on the exact motivations behind the securitization decision and a number of company policies. However, the exact motivations and intra-company policies are difficult, almost impossible to observe. Therefore, the practical benefits from asset securitization are an empirical matter.

According to the European Securitization Forum (ESF), asset securitization offers more efficient and lower cost financing source compared to bank or capital markets financing alternatives. The reason for this is the ability to issue securities with higher credit rating (and lower interest cost) than the credit rating of the originating company. As previously stated, the credit rating assigned to the ABSs depends only on the quality of the asset pool and not on the overall credit condition of the originating company. This means that even if the originator has low credit rating, but has high-quality assets in its portfolio, it may be able to obtain higher credit rating for the securitization issue.

The ESF, also suggests that asset securitization allows for diversification of the financing sources. This line of reasoning is supported in Lockwood et al. (1996). The authors argue that asset securitization offers expanded borrowing capacity and that way the company can pursue additional positive NPV projects. The proceeds from the securitization issue can be used to retire existing debt, thereby reducing interest expense, increasing earnings and shareholder equity. Moreover, Cebenoyan & Strahan (2004) find that loan sales activity allows banks to invest in higher-risk/higher-return assets.

According to Affinito & Tagliaferri (2010) there are four main determinants behind the securitization decision. These are: need for new funding source, transfer of credit risk, capital saving and new profit opportunities. The authors argue that banks may securitize their assets instead of raising deposits and that brings liquidity and funding benefits. In addition, this funding source is not subject to insurance requirements, as is the case with deposits. Furthermore, asset securitization is related to accounting gains, when the market value of the loans exceeds their book value. In addition, banks can use the proceeds from the securitization transaction and invest in more profitable business opportunities.

Furthermore, by using asset securitization, originators can remove assets from their balance sheets. That way some significant improvements of some financial ratios can be achieved. For example, leverage can be reduced.

Another advantage pointed out by Bannier & Hänsel (2008) is that asset securitization enhances liquidity. In a securitization transaction, the underlying assets are effectively removed from the originator’s balance sheet (it is off-balance sheet activity). Instead cash is injected into the originator’s balance sheet. Therefore, asset securitization offers balance sheet restructuring possibilities to originating companies. Depending on the use of the
proceeds, originators can shape the structure of their balance sheets. Additional advantage is that the cost of obtaining these funds is independent of the originator’s credit rating. The funding cost of a securitization transaction is solely dependent on the credit quality of the underlying assets in the pool.

In line with the previous reasoning, Gyntelberg & Remolona (2006) write about two main advantages of asset securitization. First, generally illiquid assets can be turned into reasonably liquid instruments. And second, instruments of high credit quality can be created out of debt of low credit quality.

According to the IMF (IMF, 2009, p. 78), asset securitization offers improved access to funds. Furthermore, originators benefit even more from the market-based valuation of the securitized assets and from the improved asset-liability management. In particular, originators can perfectly match the cash flows from the securitized assets to the cash flows paid to investors in the ABSs.

Alles (2001) and the IMF (2009) argue that the risk of the balance sheet assets can be unbundled to different elements (credit risk, interest rate risk and liquidity risk). That way the risk can be managed more effectively. Affinito & Tagliaferri (2010) point out that asset securitization is one of the main instruments to transfer credit risk away from the originators’ balance sheet. However, they acknowledge that banks have incentives to securitize high-quality assets and retain low-quality assets. In this respect, Hänsel & Krahnen (2007) argue that the risk transfer does not occur per se. According to them, how the risk transfer will affect the bank’s systematic risk is unclear, depending on the assets that will substitute the transferred asset. If the transferred assets are substituted with less highly correlated assets, then the bank’s equity beta is expected to decrease. If, on the other hand, the transferred assets are substituted with highly diversified asset portfolio; the correlation with the market portfolio is expected to rise and the equity betas to approach market betas.

Furthermore, Bannier & Hänsel (2008) argue that banks usually retain the subordinated tranche; therefore effectively keeping the default risk on their balance sheets. One positive aspect of this (for investors), is that banks also keep their monitoring incentives and reduce information asymmetries. By keeping the assets on their balance sheets, banks must keep monitoring the performance of the assets in the pool. At the same time, by selling the senior and mezzanine tranches banks transfer part of the risk of losses to the investors at full compensation. Consequently, asset securitization brings more efficient economic risk sharing and allows funding of new assets through the capital market. That way, financial distress costs are reduced.

Bannier & Hänsel (2008) find three main motivations for asset securitization: regulatory capital relief, reduction in financial distress costs and risk appetite. According to the old Basel Capital Accord from 1992, banks were required to hold capital of 8% of the reference asset pool. Moreover, the capital requirements were not risk weighted and that is why all assets were treated the same. It made no difference for the financial institutions whether they hold more or less risky assets. Because of this, the authors argue that banks may have incentives to remove low-risk assets from their balance sheet and retain only high-risk
assets in order to preserve capital. The less assets banks have on their balance sheet, the less capital they should provide as protection. These incentives are expected to be reduced with the new Basel II Accord, but it is a strong belief among the finance community that the previous capital requirements contributed to the growth of asset securitization.

Calomiris & Mason (2004) find that banks use asset securitization in order to set their capital relative to risk in a manner consistent with the market rather than regulatory requirements and that the securitization decision is motivated by legitimate capital saving. This is in line with the findings in Cebenoyan & Strahan (2004), who find that loan sales activity allows banks to hold less capital.

Hänsel & Krahnen (2007) contend that under the Basel I capital requirements, the weights that are attached to corporate and retail loans are not risk weighted and that this makes asset securitization valuable for firms that struggle to meet their minimum equity requirements. Since, as we previously said, the lowest rated tranche is usually retained by the originator, the required equity capital will be lower. Affinito & Tagliaferri (2010) explain that the reasons for engaging in asset securitization are to adapt to mandatory capital ratios or to free up portions of capital in order to expand assets.

Thomas (1999) argues that asset securitization allows financial institutions to specialize in the activities where they have comparative advantage. The process of asset securitization can segregate some functions performed by financial institutions that were inseparable before this financial innovation. In the traditional banking model, the funding and the origination function always go together. Financial institutions, especially banks, take deposits and give loans. However, with asset securitization, financial institutions can continue originating and servicing loans, but they can fund themselves by securitizing assets. By separating the origination, servicing and funding functions, financial institutions can outsource the functions where they are disadvantaged and focus on those activities where they excel. Therefore, asset securitization can be extremely beneficial for companies that have no problem originating loans, but have funding problems.

Another positive aspect of asset securitization’s contribution towards disintermediation in the banking industry is that by separating the origination, funding and servicing functions, banks have additional sources of fee income (Wolfe, 2000, p. 354).

Wolfe (2000) also explains how asset securitization can reduce information asymmetry and overcome Akerlof’s “lemon” problem. He argues that banks have informational advantage over investors concerning the creditworthiness of their clients (borrowers). Because of this, investors would not invest in ABS if they feel disadvantaged. That is why banks must offer credit enhancement or other form of guarantee to investors. As a result of this guarantee, banks can obtain fair market price for their asset pool. Otherwise the prevailing price would be the one of a “lemon”. Additionally, banks provide statistical information on the asset pool prior the transaction.

DeMarzo (2005) also argues that asset securitization reduces information asymmetry. By pooling and selling assets, asset securitization allows financial intermediaries to avoid the “lemon” price of their assets. By pooling and selling assets at their true price,
intermediaries can raise cash for future asset purchases. The author argued that originators wish to leverage their capital to exploit its private information. Therefore, asset securitization allows financial intermediaries to leverage their capital more efficiently and to increase the returns related to the private information they own.

According to Lemmon et al. (2010), asset securitization involves the transfer of assets from the balance sheet to a bankruptcy remote SPE/V. This makes the asset pool untouchable for creditors. In case the originator files for bankruptcy, the underlying asset pool is not considered part of the bankruptcy estate and creditors cannot reach the assets in the pool. Instead, the assets in the pool are used only for the benefits of the investors in the ABSs. That is why, Gorton & Souleles (2003) argue that securitization and off-balance sheet financing is most advantageous for companies that are risky or that face large bankruptcy costs.

Hänsel & Krahnen (2007) also argue that asset securitization transforms the traditional lending business, from a relationship based to a more market based transaction. In other words, the funds obtained in this way come at a market-determined cost. This can have impact on the lending decisions. The authors expect that this link to the capital market may weaken the properties of the traditional banking, for example, insurance against adverse firm developments.

According to Alles (2001), financial institutions engage in asset securitization in order to: reduce capital requirements, access sources of financing under more favorable terms, better match the maturities of their financial assets and liabilities, and balance the exposure of their balance sheet assets to geographical and economic sectors and for liquidity management purposes. Furthermore, the unbundling of functions makes it possible for financial institutions to specialize in certain areas and to focus on those areas only, thereby achieving economies of scale.

2.6. Disadvantages of asset securitization for originating companies

Even though the advantages of asset securitization are widely recognized throughout the literature, there are number of authors that point out negative consequences of asset securitization for the originating companies.

One disadvantage of asset securitization pointed out by Alles (2001) is that financial institutions that securitize have disincentive to monitor the originated loans. Banks and other financial intermediaries provide loans to customers and one of their primary roles is to monitor the performance of those loans. In other words, monitoring the loans and the borrowers, after the loan approval, reduces the problem of moral hazard, where borrowers may be tempted to take excessive risks with the borrowed capital. As mentioned before, asset securitization separates the function of loan origination and loan funding. Usually, in a classic banking scheme, there is no detachment point between the borrower and the lender. With securitization, the link between the lender and the borrower is disconnected (Choudhry & Landuyt, 2009, p. 61). Through asset securitization the originators have reduced incentive to monitor the loans. This is so because of two reasons. First, monitoring
is costly and second, the cash flows from the securitized assets accrue to the investors in the ABSs, not the originator. In other words, after the securitization, the credit risk is transferred to the investors in the ABSs and because of that, originators have reduced incentive to monitor the performance of the loans in the asset pool.

According to Rance (2005), in order for the ABS issue to be successful, originating companies can find themselves under pressure to securitize only their best assets. Consequently, the quality of their asset portfolio will be reduced. Also, knowing that they can sell assets with high risk, originating companies may relax their credit standards and originate lower quality loans.

A criticism of asset securitization is that, because originating companies retain the lowest rated tranche (as a form of credit enhancement), they effectively do not transfer the risk out of their balance sheets, but instead are exposed to the full amount of the losses on the protected assets. Rance (2005) argues that companies retain the same credit risk exposure as if they keep holding the assets on their balance sheets.

In their paper, Lemmon et al. (2010) argue that it is not clear whether asset securitization lowers the overall cost of capital. If companies transfer their high-quality assets and retain their low-quality assets, the overall company risk should increase, therefore rising the cost of capital. If everything is fairly valued, there should be no change to the cost of capital (Miller & Modigliani, 1958).

Furthermore, an originating company faces reputational risk. Like previously said, originators often take the role of servicers. In addition, they provide credit enhancement. “The securitization of assets whose performance has deteriorated may result in a negative market reaction that could increase the spreads on an institution’s subsequent issuances” (Rance, 2005, p. 14).

Dechow & Shakespeare (2009) provide evidence that suggests that managers are timing securitization transactions to manage earnings. They find increased amount of securitization transactions before the end of the reporting period. Lemmon et al. (2010) write that keeping the SPE/V off-balance sheet is the key condition for earnings management.
Chapter 3: The Australian securitization market

In the first section of this chapter we analyze the characteristics of the Australian securitization market. In the second section, we provide brief analysis of the regulatory environment for asset securitization in Australian. Finally, we complete this chapter with the actions and the proposals for restarting the Australian securitization market.

3.1. Characteristics of the Australian securitization market

Australia has a well-established and sophisticated securitization market. The Australian securitization market is one of the oldest in the world. Therefore, most of the structural, regulatory and legal issues have been successfully addressed by the Australian authorities. Moreover, Australia is characterized with political stability, strong foreign currency rating and innovative capital markets. In addition, Australian capital markets are known for the high credit quality of the financial assets, which is of crucial importance. All this put together means that Australia provides favorable environment for the development of a securitization market (Cox & Green, 2008, p. 91).

The Australian securitization market started developing since 1995. The volume of asset securitization issuance can be seen in Figure 5. From almost non-existent in 1995, asset securitization issuance reached its peak in 2006 of about USD 102bn. Mortgage-backed securities dominate the Australian securitization market with around 90% of the issues. Australian issuers see greater potential and opportunity to access larger pools of investment funds abroad. Therefore, in 2006 almost half of the issues were sold outside Australia (IFSL, 2007, p. 5).

![Figure 5: Securitization issuance in Australia 1996-2006; amounts in billions of USD](source: Standard and Poor’s in IFSL, 2007, p. 6)

The growth of asset securitization in Australia is in large part as a consequence of the change in the composition of lenders in the mortgage market. In the mid 1990s many new mortgage originators, who relied on asset securitization for funding, entered the market (see
Figure 6). These mortgage originators could easily find market, primarily because of the general decline of interest rates in the mid 1990s. This decline reduced the banks’ competitive advantage of raising low-cost retail deposits. As a consequence, mortgage originators accounted for almost 35% of the total residential mortgage-backed securities issuance prior the financial crisis. Overall, this contributed to a large shift in the Australian housing market. In addition of this structural change, almost all of the banks in Australia adopted programs to securitize their assets. These changes just fuelled the securitization industry growth in Australia (Salter, 2000, p. 1).

![Figure 6: Issuers of residential mortgage-backed securities in Australia](source: Reserve Bank of Australia in Debelle, 2009, p. 45)

An asset securitization in Australia is usually conducted in two possible ways. In the first type, the title of the assets is transferred to a trust, which issues securities that represent equity interest in the trust. These securities are known as “pass-through securities”. In the second type of securitization, the entity issues debt instruments for which the payment of principal and interest is secured by the underlying assets. These securities are known as “pay-through securities” (Ramsay, 1993, p. 171).

Although mortgage-backed securities dominate the Australian securitization market so far, growth in the asset backed securities market is noticeable. As previously said, the Australian capital market is highly innovative. Residential mortgage-backed securities are attractive in Australia for number of reasons; for example, Australian residential mortgages have a reputation of low credit risk and strong underwriting standards. Crucial reason for the popularity of the residential mortgage-backed securities is that housing prices are more stable in Australia than Europe and the US; and the fact that the rate of default is low (see Figure 8). Besides residential mortgages, there are securitizations backed with auto loans, as well as corporate loans. Furthermore, there are a number of securitization issues backed by “credit derivatives, aircraft leases, equipment leases, property leases and receivables of various forms” (Salter, 2000, p. 1). In 2006 the number of non-residential mortgage-backed transactions exceeded the number of residential mortgage-backed transactions (but not the volume). 57% of the total securitization transactions in that year were non-residential mortgage-backed transactions. Among the others, the following types of assets are
securitized in Australia: commercial real estate, sub-prime mortgages, construction loans, trade receivables, credit card receivables, sale contracts and others (Cox & Green, 2008, p. 98). The dominance of the residential mortgage-backed securities can be seen from Figure 5 and 7.

Two types of SPE/Vs can be noticed in Australia. The first is individual trusts, which are established to securitize a pool of loans and once the loans are repaid they stop operating. The second type is conduits, which are established to securitize revolving pool of loans. Individual trusts’ assets mostly are comprised of residential mortgages and they fund themselves by issuing bonds backed by those mortgages. Conduits are sponsored by banks and they securitize assets owned by the bank (assets on the bank’s balance sheet) or assets that belong to the bank’s corporate clients. Compared to trusts, conduits hold more diversified portfolio of assets (individual loans, asset backed and non-asset backed bonds). Conduits fund themselves by issuing asset backed commercial papers.

Issuance on the Australian securitization market has dropped since mid-2007, although signs of recovery can be seen in 2009 (see Figure 7). In 2007, the amount of total Australian issuance on the securitization market declined to USD 68bn. In 2008, the securitization market practically froze with USD 18bn of issuance which is 17.65% of the peak level in 2006. In 2009, issuance recovered slightly to USD 21bn. Like in many other countries, the Australian government had to intervene and help the financial markets. The Australian Office of Financial Management (AOFM) purchased most of the securities issued in 2008 (around 80%). However, there is less dependence on the AOFM in 2009 and 2010, since less than 10% of the issuance required government support in late 2009. The upward trend continued in 2010, as investor confidence was being steadily restored. As mentioned before, the high quality of the underlying assets played important role in restoring demand. Mortgage-backed securities and particularly residential mortgage-backed securities continue to dominate the Australian securitization market.

Figure 7: Securitization issuance in Australia 2000-2009; amounts in billions of USD
Source: Reserve Bank of Australia in IFSL, 2010, p. 5
The Australian Securitization Forum (ASF) is an organization established in 1989 formed by major banks, smaller banks, deposit institutions, non-bank financial institutions, trustees, accountants and lawyers. The purpose of this organization is advocacy, building industry consensus and education. According to the ASF, the Australian securitization markets did not have the credit problems of the US and some European markets. Instead they argue that the performance of the Australian mortgage and asset backed securities were “stellar”. Therefore, they blame the global panic, fear and aversion towards structured finance to be the reason for the decline of the Australian securitization market and the damaged reputation of securitization itself. In addition to this, the Australian assistant governor states that there was an oversupply on the Australian securitization market. He further notes: “Australian RMBS were sold, not because of any intrinsic problem with them, but because the SIVs were no longer able to fund themselves. Australian RMBS thus suffered collateral damage (so to speak) on a number of fronts, even though the collateral on which they were based remained perfectly sound” (Debelle, 2009, p. 46). The credit quality of Australian residential mortgage-backed securities is indeed high compared to Europe and the US. This can be seen from the following figure; the share of non-performing housing loans in Australia is under 1%, which is very low.

![Figure 8: Non-performing housing loans (percent of loans by value)](source: APRA, Bank of Spain, Canadian Bankers Association, Council of Mortgage Lenders, Federal Deposit Insurance Corporation, RBA in Debelle, 2010, p. 7)

Furthermore, the bulk of the Australian residential mortgage-backed securities are backed by prime loans. Prime loans are loans made to borrowers that satisfy financial institutions’ standards lending criteria. 97% of the residential mortgage-backed securities are backed by prime loans (see Figure 9). Establishing sound and stringent criteria confirms that Australian financial institutions work in responsible and sound manner. In addition of the strict criteria that should be fulfilled, all these securities are insured, which gives investors additional protection.
3.2. Overview of the regulatory environment for asset securitization in Australia - based on Salter (2000)

Australia is functioning as a Federal system, where the constitutional power is divided between the central Commonwealth government and different State and Territory governments. Therefore, law concerning securitization in Australia exists at Commonwealth and State and Territory levels.

There are several types of companies that have interest in securitization in Australia. These are banks, non-banks (building societies and credit unions) and life companies. All of these firms are subject of regulation by the Commonwealth Banking Act 1959 (banks, building societies and credit unions) and by the Commonwealth Life Insurance Act 1995 (life companies).

The main authorities that supervise these firms are the Reserve Bank of Australia (with limited power) and the Australian Prudential Regulatory Authority (APRA). After long years of efforts to create uniform regulation concerning companies’ activities, finally the Corporations Law was introduced in 1990 all over Australia. The regulatory body that supervises this law is the Australian Securities and Investment Commission (ASIC). “The Corporations Law regulates all aspects of the corporate activities of Australian corporations, including the local securities and futures industries” (Salter, 2000, p. 2). The types of firms mentioned above are all subject of the Corporations Law.

The Prudential Standard APS 120 - "Securitization” is the main instrument regulating asset securitization in Australia. This instrument applies to all Australian banks and their participation in securitization of assets, whether or not the bank is the originator. It also applies to foreign banks operating in Australia. The principles of the Prudential Standard APS 120 apply to building societies and credit unions also.
With the Prudential Standard APS 120, the regulatory authorities warn banks that asset securitization may expose banks to pressures to support the SPE/V beyond the legal obligation. Basic principle of the Prudential Standard APS 120 is that banks must resist such pressures. The Prudential Standard APS 120 is focused on three basic aspects. First, the Prudential Standard APS 120 attempts to minimize the pressure on a bank by ensuring that there is sufficient separation between the bank and the SPE/V. There should also be adequate disclosure to investors of the relationship. The second aspect focuses on the requirements that a bank has to fulfill if it provides facilities to the SPE/V and the capital needs for these facilities. The third aspect sets out the requirements that a bank must fulfill in order to be relieved of the need to hold capital against the assets transferred to the SPE/V.

Prudential Standard APS 120 requires a clear separation between the bank and the SPE/V. In order to achieve this, the SPE/V must not have the word “bank” in its name; the bank must not have ownership or beneficial interest in the SPE/V; the bank must not have control over the SPE/V for accounting purposes; the number of directors that sit on the board of the SPE/V is limited and the bank itself cannot act as manager or trustee of the SPE/V (although it can through subsidiary). In addition, there are requirements concerning the marketing material. The information memorandum should be designed in way that will not be misleading investors. It should be clear that the SPE/V is not backed by the bank beyond any legal obligation. The bank must make sure that investors understand that the securities are not deposits in the bank and that they are subject to investment risk.

According to the Prudential Standard APS 120, a bank may provide different kind of services to the SPE/V if some requirements are satisfied. The material covering this area is exhaustive and detailed. It covers, for example, credit enhancements provided by banks, liquidity, underwriting commitments, advice to investors, purchasing securities or repurchasing of assets from the SPE/V and others. The requirements differ depending on the type of facility or service in question, but there are some general preconditions. For example, the facility or service must be provided on an arm’s length basis and market conditions. Further, it must go through the bank’s regular internal approval procedures.

The third aspect of the Prudential Standard APS 120 concerns circumstances in which a bank may be relieved from the need to hold capital against the assets sold to the SPE/V. The regulator here states that it will be concerned if the bank sells its high quality assets and causes decrease in quality of the remaining assets. In this case, the regulator may restrict selling the assets or it may impose higher minimum capital requirements. In order the assets to be transferred, the beneficial ownership must be transferred (the legal ownership doesn’t have to be transferred). Also, the risk and rewards must be transferred to the SPE/V. In addition, external audit and legal opinions are required to certify for compliance to these requirements.

It must be said that the market’s response to this regulation was very positive and this regulation is considered to set the basis for the expansion of the securitization market.
3.3. Restarting the Australian securitization market – actions and proposals – based on ASF (2009)

There have been a large number of support programs that provide government guarantees to deposit taking institutions’ wholesale funding on the Australian market. The first step that was taken was a government support program, according to which, the government would purchase AUD 8bn of new issues, through the AOFM. These government programs resulted in increased investors’ preference for government guaranteed instruments, which in turn, further reduced the demand for mortgage and asset backed securities. Overall, the shortage of funding for lending that does not attract government guarantees resulted in shortages of credit for some sectors like commercial property, plant and equipment and small and medium enterprises. Consequently, these funding shortages on the supply side have negative impact of the overall business activity. Just to illustrate how important was asset securitization in terms of providing funding for housing credit we present Figure 10.

![Figure 10: Share of housing credit funded by asset securitization](image)

Source: ABS, RBA in Debelle, 2010, p. 2

Based on the previous conclusions, the ASF created several proposals for the Australian government in order to revitalize the securitization market. The benefit from this revitalization, according to the forum, is that the securitization market provides important part of the flow of credit to both, households and businesses. Therefore, the ASF made proposals concerning the primary and the secondary securitization market. Activity on the primary securitization market could be encouraged by government guarantees of residential mortgage-backed securities, government supported liquidity facility or some modifications to the current program of the AOFM. Covered bonds are also one of the proposals for helping the primary securitization market. To help the secondary securitization market the ASF suggests purchases of securities by the government and a government provided liquidity scheme. These measures can be used individually or in combination. However, the forum warns that a lot of work should be done on the general perception that the securitization market is “dead”.

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3.3.1. Government guaranteed residential mortgage-backed securities (RMBS)

The first proposal that is made is that the government should practically establish a new asset class that satisfies investors’ demand for government guarantees. According to this program, the government sets criteria which should be satisfied in order to earn the guarantee. In this way the government could control the quality of the underlying assets and this should provide protection for the public. This program would be open for all lenders, major banks, regional banks, building societies, credit unions and non-bank lenders, on a competitive basis. The key difference between this proposal and the previous form of government guarantees is that, here, the government focuses the guarantee to a specific asset class, by simultaneously applying more stringent criteria for selection. By applying strict criteria for eligible collateral to be used as an underlying asset, the government attempts to make sure that the use of the guarantee would be fully applied to Australian lending and not to fund some other business activities, which may be the case with guarantees of wholesale funding. This proposal, if pursued properly with solid and sound criteria, would help reduce the pre-crisis problem of not knowing the quality of the underlying assets. In a way, it would bring more transparency to the market because strict benchmarks for the quality of the assets are now readily available and investors can use them to make decisions. Since the market is not yet recovered from the financial crisis and it prefers government guarantees, this proposal should increase the demand for government guaranteed securities and directly address the problem of shortage on the supply side on the lending market.

3.3.2. Government purchase of assets in the secondary market

The secondary securitization market is important because there are a number of securitized assets available for trading that affect the price and the demand of new issues. In this respect, the ASF turns to experiences from other countries. The tools to achieve this goal in other countries are actual acquisition of the papers, providing favorable funding lines to third parties so they can purchase securities or providing some form of put option to some investors. However, before taking any actions, the forum warns that several things should be considered first. For example, the government’s capacity to pursue program like this, the amount of outstanding assets, the price at which the assets would be purchased, the perception that off-shore investors will benefit from these purchases, the potential risk for the government and the time needed for results from this program.

3.3.3. Government liquidity scheme

Small deposit taking institutions and non-banks are mostly hit in terms of liquidity. They have difficulties exploiting the benefits of the support programs simply because of the fact that they are small compared to the other major and regional banks. That is why they need additional support to improve their liquidity. The ASF suggests that the AOFM should provide lending facilities to qualified entities with securitized assets used as collateral. In addition, the AOFM could buy and sell residential mortgage-backed securities in the market to increase liquidity. According to the forum, this would boost investors’ confidence as they will see the AOFM as a way out. This proposal, as pointed out, should be accompanied with appropriate legislation.
3.3.4. Modifications of the AOFM securitization program

The securitization program started by the AOFM was launched at a time when it was expected that the activity on the securitization markets will go back to normal levels in the following year. This assumption was shortly affected by the collapse of Lehman Brothers. Nevertheless, the program provided substantial support to lenders and helped them to stay competitive. As time goes by, the ASF suggests some modifications to the program. For example, it is proposed that the size and the duration of the program should be increased. Further, there should be adjustments concerning the eligible collateral, since the original program does not offer support for small businesses.

3.3.5. Proposals by the Reserve Bank of Australia

In his speech on the Australian Securitization Conference on November 18, 2009, Dr. Guy Debelle, assistant governor of Australia, stated that he expects asset securitization to play an important role in the future, but it will not be at the same level as before the crisis. He even compared asset backed securities with junk bonds, even though they have different ratings. The assistant governor believes that most of the work that should be done is recovering the asset securitization brand and this can only be done after a long period of time. However, he proposed several actions that can be taken. First, the differentiation between Australian and US mortgage and asset backed securities must continue and should be emphasized even more, since the Australian asset backed securities are of high quality. This is an important point, since the investing public, influenced by the media and the general panic in the US, believes that securitized products are risky per se and should be avoided. The second point made by Dr. Debelle is that securitized products should not be kept in cash portfolios, since these securities are far away from cash. He, further, explains that standardization would be a desirable and positive thing but difficult to achieve in the real world because of the many factors involved and the differences between them.
Chapter 4: Previous studies and hypotheses development

Prior research on this topic is an important input to our thesis. In section 1.3., we mentioned that, to our knowledge, there are seven previous studies directly addressing the wealth effects from asset securitization. In this chapter, we provide detailed analysis of those studies. We will present our analysis of these studies in a chronological order, as they were published. First, the assumptions underlying each study are presented. We consider the assumptions of every study to be an extremely important part because they provide the basis of every research and help us understand the perspective of the researchers. Second, we describe the methodology and the data used. Third, we present the results from each study, followed by our critical opinion. After reviewing the previous literature on this topic, we conclude this chapter with the development of the hypotheses.

4.1. Larry J. Lockwood, Ronald C. Rutherford and Martin J. Herrera (1996)

The first study examining the wealth effects from asset securitization was conducted in 1996 by Larry J. Lockwood, Ronald C. Rutherford and Martin J. Herrera. The authors test five propositions. The first is the general proposition that asset securitization leads to wealth effects for shareholders of issuing firms. The general assumption used by the authors is that the benefits or the previously described advantages of securitization should be positively viewed by the market and should bring positive wealth effects for the shareholders of the issuing firms. On the other side, the disadvantages should be negatively perceived by the market, resulting in wealth losses.

The second proposition examined in this study is that the wealth effects from asset securitization are different for different industries. In other words, it is assumed the wealth effects are industry specific. The authors divide their data in groups by industry. The argument used to test this proposition is the one made by Greenbaum & Thakor (1987) that banks securitize their best assets and retain their low quality assets, which leads to asset quality deterioration. According to the authors, banks should experience wealth loss at the time of the securitization announcement because of the asset quality deterioration.

The third proposition tested in this study is that wealth effects differ on the basis of financial slack status of the issuing company. Lockwood et al. (1996) hypothesize that securitization announcement of companies with little financial slack will be viewed negatively or less favorably by the market than securitization announcement of companies with solid financial slack position. Further, the authors argue that low financial slack may be viewed as an indication of eroded capital base and financial distress. Related to this proposition, the authors explain that it is unlikely that a letter of credit will be acceptable as credit enhancement from a bank with little financial slack. Thus, if the bank wants a successful securitization issue, it will have to provide additional enhancement, which will probably be more expensive. Another possibility for the originator is to reduce the size of the loan portfolio. According to the authors, this is also bad news for investors and negative wealth effects are expected.
The fourth proposition tested is that wealth effects differ depending on the type of asset being securitized. The authors test for different wealth effects of securitization of auto loans, credit card receivables, trade receivables and lease receivables.

The last proposition in this study is that securitization issue leads to change in market and interest rate risk of the securitizing companies. The assumption behind this proposition is that securitization leads to reduced leverage and earnings smoothing, and therefore, reduces firm risk. On the other hand, the negative consequences from asset securitization like asset quality deterioration and reduced loan portfolio size are likely to increase firm risk.

Lockwood et al. (1996) use sample of 294 securitization transactions from 39 originators in the USA, from the period 1984-1992. The firms included in the sample are listed on the NYSE, NASDAQ or the American stock exchange. Their sample is mostly dominated by banks, followed by automobile companies, other industrial firms and finance firms. To analyze the data, the authors use standard event study methodology, more specifically the market model. The authors examine the wealth effects around the securitization announcement date. A 100 day estimation period [-111, -11] and a 21 day event period [-10, +10] is used.

According to the authors, four major findings were found. First, the wealth effects of asset securitization were industry specific, with finance companies realizing wealth gain and banks realizing wealth loss at the time of the securitization announcement. No change in wealth was observed for automobile and other industrial firms. Second, strong banks in terms of financial slack experienced significant wealth gain, while weak banks saw significant wealth loss. Third, there were no significant wealth effects depending on the type of asset being securitized. Fourth, market and interest rate risk decreased after the securitization announcement for automobile, finance companies and strong banks; while the risk increased after the securitization announcement for weak banks. For the overall sample of 294 transactions, the results indicate that shareholders experience significant wealth gain of 0.45% on the announcement day (day 0).

In our opinion, the arguments and the assumptions used in this study are quite solid, based on reasonable economic logic. However, the results obtained by the study could be different if other sample period was used, since large portion of the sample are distressed banks. This might have an effect on the results, especially the results for the banking industry. Another aspect that might have seriously influenced the results is the large number of banks in the sample. However, this is understandable, since banks are the most frequent securitizing entities. In addition, not even one securitization of mortgages is included in the sample. This could also have an effect, even though the authors found that there are no wealth effects depending on the type of asset. We mention this because today most of the assets being securitized are mortgage loans.
4.2. Hugh Thomas (1999)

Thomas (1999) studies the wealth effects from asset securitization on both, the shareholders and the bondholders of the issuing company. The author’s assumptions are in large part similar to those in Lockwood et al. (1996). However, Thomas (1999) puts a lot of attention to the separation of functions which the securitization process provides. Obviously, for Thomas (1999), the unbundling process of separating the funding and the lending function is most important. He also states that banks would securitize their best assets, retaining their low quality assets, but he argues that this view does not explain the rise of securitization in the non-banking sector. One assumption made by Thomas (1999) that cannot be seen in Lockwood et al. (1996) is the following: since managers can choose when to securitize, one should expect that managers would wait for the most favorable conditions and therefore a securitization announcement by most healthy firms would be perceived positively by the market, resulting in wealth gain. On the other hand, forced sale of asset by a financially distressed firm would be negatively viewed by the general marketplace.

Another assumption made by Thomas (1999) is that securitizations by non-bank companies would be better received by the market than securitizations by banks because of the funding disadvantage they have compared to banks. Non-bank firms have funding disadvantage compared to banks. Securitization is a funding source and therefore, when some non-bank firm manages to successfully market ABSs, the market should react positively.

One other aspect discussed by Thomas (1999) relates to the use of the funds from the securitization issue. According to him if some financially distressed company has some valuable assets in its portfolio, the company may choose to securitize those assets and that way to obtain funds which can be invested in positive NPV projects. By using this reasoning, there should be positive wealth effects for the originating company.

To investigate the wealth effects for the shareholders, Thomas (1999) uses a sample of 236 securitization transactions from the US securitization market, covering the period from 1991-1996. The sample in this study is largely dominated by banks, followed by industrial companies and finance companies. Two banks especially dominate the sample with around 30% of the transactions. The types of assets in this sample are credit card loans (more than 60%), auto loans, equipment leases and receivables, mortgage loans and others. Like in the previous study, Thomas (1999) uses standards event study methodology to analyze the data, more specifically the model with market adjusted returns. The author recognizes the problem related to the date when the securitization transaction becomes public knowledge. In studies of this type the date when the general marketplace learns about the event is crucial. However, serious practical problems exist in establishing those dates. We faced the same problem during this study. Thomas (1999) recognizes this and mentions that announcement dates are used where possible. In other cases one day after the issue date is used. The author uses event period of 50 trading days [-48, +1].

The overall results of this study reveal that shareholders experience significant wealth gain of 4.9% for the 50 days before and one day after the announcement or issue date. Another finding is that the wealth effects are larger for manufacturing companies than for banks and
finance firms. Furthermore, wealth gains and creditworthiness are inversely related. This means that wealth gains are greater for companies with poorer credit condition and lower for companies with better credit condition. This result is explained with the funding disadvantage argument. When the market learns about a securitization transaction from a company with poor credit condition, it interprets the information as a signal of good financial future. This last finding contradicts the findings made by Lockwood et al. (1996) about the relation between wealth and financial slack. This discrepancy is explained with the differences in the samples. One last, but still very important finding is that wealth gains accrue to companies that securitize more frequently.

The sample used by Hugh Thomas is largely dominated by: first, banks and second, just two banks. That may make the results company specific and brings the study’s generalization power into question. Another potential disadvantage is the usage of issue dates, where announcement dates were unavailable. Thomas (1999) does not check the data for, so called, confounding events during the estimation period. These are other events, besides the securitization announcements that may affect the stock price.

4.3. Hugh Thomas (2001)

In his continued effort Thomas (2001) studies wealth effects from asset securitization on shareholders and bondholders, but from a slightly different perspective. In this article Thomas (2001) investigates several questions. First, the author is studying the general proposition: is securitization wealth creating or wealth destroying? Second, he attempts to find a relation between wealth gains and other variables like offering size and frequency of issues. Another question of interest in this study is the relation between the wealth effects and capitalization, creditworthiness and identity of the securitizing company. In studying these propositions, the author uses several assumptions.

In general, the author assumes that the previously elaborated advantages of securitization should be positively viewed by the market, resulting in wealth gains; while the disadvantages should result in wealth losses. At the same time, the author acknowledges that the wealth effects from asset securitization ultimately depend on the motives and reasons behind the securitization decision. One different view in this study is the view on securitization as a part of the disintermediation process. When companies securitize, they use the proceeds to reduce debt financing from financial institutions. Since companies can obtain funds directly from the market, the author poses the question: why financial institutions are necessary? There are previous studies that prove that financial institutions are necessary (because of information asymmetry and transaction costs), but there are also studies that prove that securitization can alter the function of the financial institutions. The author then explains the reasons for asset securitization. He uses three major explanations. Signaling is used by the author as a motive for the securitization decision. He assumes that banks securitize their best assets and by doing that they provide valuable signal to the market about the quality of their assets. In addition, Thomas (2001) notes that the securitized assets have different levels of insurance protection, with the more quality assets having more protection, in terms of credit enhancement. Thomas (2001) assumes that the greater the regulatory burden that banks bear, the more they will securitize.
The second explanation for asset securitization is avoiding underinvestment. The famous Myers (1977) underinvestment problem means that companies can miss out on some profitable, positive NPV projects because of lack of funds. According to the author, this problem can be solved by securitizing assets. Thomas (2001) however, recognizes that the theory that securitization can solve the underinvestment problem does not give clear indication about the wealth effects from asset securitization. He admits that the wealth effects depend on the usage of the proceeds from the securitization issue, after the issue.

The third argument that Thomas (2001) uses is that companies have comparative advantages in some functions. If companies can outsource the function where they have comparative disadvantage and retain only the function where they perform the best (for example loan origination and servicing), than positive wealth effects should accrue to the shareholders of the originating company. Thomas’s (2001) reasoning is: if the major motive for securitization is addressing a comparative disadvantage in funding, one should expect positive wealth effects for the securitizing companies’ shareholders of such companies. In other words, the more distressed the company is, the greater the benefits from asset securitization.

According to Thomas (2001), frequent securitizing companies should not experience any wealth change because the market would already have priced the originator’s equity. He expects wealth changes only for companies that securitize for the first time, if the securitization was less then fully expected by the market. However, for frequent securitizers, Thomas (2001) argues that credit rating agencies can play unique certification role. Therefore, positive stock price response may be expected.

Thomas (2001) conducts his second study by using data on 1,416 securitization transactions from 141 originators in the USA for the period 1983-1997. In this study, for the first time, the data sample is more balanced in terms of type of originating companies. The securitization transactions come from banks, non-bank financial institutions and non financial institutions almost evenly. Another fact that makes this study different than the previous ones is that mortgages are the predominant type of asset being securitized. Mortgages are almost 60% of the assets being securitized. Thomas (2001), like previously, uses standard event study methodology and again he uses the model with market adjusted returns. In this article, he uses only issue dates instead of announcement dates. Again, Thomas (2001) uses 50 trading day event period counting back from the day after the issue date [-48, +1].

In general, Thomas (2001) finds that asset securitization causes losses of 0.67% over the event period, which is statistically significant at 10% level of significance. Further, when markets are “calm” securitization is associated with wealth gains and when markets are “under pressure”, securitization brings wealth losses. The losses are typical for shareholders in mortgage-backed securities (MBS) issuers, when there are regulatory and market pressures. In times of normal operating of the capital markets, the author finds that large and frequent MBS securitizers earn abnormal shareholder returns. Another finding is that first time issuance of MBS results in shareholder gains. In addition, frequency of securitization is also wealth increasing. In this study, Thomas (2001) confirms the findings of the previous study that wealth gains are greater the poorer the credit condition of the
originating company. Thomas (2001) also finds that banks’ shareholders experience greater wealth gains than shareholders of other financial and non-financial institutions, indicating that asset securitization can alleviate regulatory burden.

A very positive circumstance of this study is that the author eliminated the data from years where markets performed poorly and investigated a calm period for the financial markets, therefore observing the true wealth effects of asset securitization. This was a serious flaw of the previous two studies. Like in his first study, Thomas (2001) uses issue dates instead of announcement dates, which can seriously affect the results of the study. Another limitation is that the author does not check the data for confounding events during the estimation period.


This relatively newer study is different from the previous ones in that that its focus is the banking industry only. The authors move from industry comparison to comparison within the banking industry. The analysis in this study is slightly different because of the partitioning of the data. Gasbarro et al (2005) divide the data on subsamples based on several characteristics and draw conclusions for each subsample. The analysis in this thesis will be similar to the one in Gasbarro et al (2005).

Generally, the assumptions used are already seen. The authors assume that the previously elaborated advantages of asset securitization should be wealth creating and the disadvantages should be wealth destroying. Emphasis is put to several advantages that guide the study.

The first assumption made by the authors is that securitization reduces information asymmetry and the moral hazard observed by outside investors. This in turn brings market completeness, since the securities will be priced closer to their true value and not at the average value. The argument used here is that companies know the quality of their assets better than anyone else. In addition, the companies have right to choose when and which assets to securitize. If they want the transaction to be successful they must securitize their best assets. Added to this is the certification role played by rating agencies. That way, through securitization, banks provide information to the market and reduce information asymmetry. The authors argue that the securitization process is used by banks for the purposes of reputation building. It is further argued that banks with a continuing history of securitizations have strong financial position and that these banks would even sacrifice their financial capital to preserve their reputational capital. That is why some banks provide credit enhancement even when they are not legally obliged to do so (or in larger amounts).

The second assumption made in this study is that securitization reduces the underinvestment problem and helps companies to move towards optimal capital structure. Gasbarro et al. (2005) argue that securitization is a new source of funds and it can offer companies something else, other than what the pecking-order theory stands for. According to the pecking-order theory companies would choose internal funds (retained earnings),
debt and equity, in that order. Securitization offers other source of funding. The securitization process itself cannot directly alter the capital structure of the firm if the assets are sold at book value, but if the assets are sold at a value greater than the book value, the companies’ equity will increase, thereby reducing the leverage.

The third assumption made in this study is the one related to disintermediation and comparative advantage. The authors do not expect banks to have comparative advantage in funding loans through deposits, but they do admit that banks have comparative advantage in origination and servicing of loans. Banks have comparative advantage in origination because of their screening mechanisms and their information gathering ability. For a bank it is crucial to have comparative advantage in originating loans, since it is a source of revenue. Therefore, through securitization, banks can get rid of the functions in which they are disadvantaged and focus on the functions in which they outperform the competitors. Thus securitization is a signal that the bank has comparative advantage and it should be received positively by the market.

Gasbarro et al. (2005) use data on 233 securitizations from 24 multibank holding companies in the US, covering period from 1992 to 2000. The sample is dominated by two large banks, Citigroup and MBNA, which make more than 55% of the sample. Like all the previous authors, the author of this study use standard event study methodology by using the market model. The problem with identifying the announcement dates appears here too and the authors use sold, launched, issued or priced as announcement dates. An estimation period of 255 days is selected ending 46 days before the announcement date [-300, -46]. The event window covers 5 days [-2, +2]. Robustness test are also performed. The data is partitioned in this study to analyze the different assumptions. Different proxies are used to partition the data like credit rating, leverage ratios, non-interest expense, bad debts and frequency of issues. In addition, the data is divided between the two largest banks and the others in order to remove the influence of the two dominating banks.

The authors find that, on the overall sample, securitization brings 0.54% wealth gain, which is significant at 10% significance level. Because of the dominance of only two banks, Gasbarro et al. (2005) recognize that the results may be firm specific. By partitioning the data, they find positive stock price reaction for banks that: have high credit rating, have high financial leverage, have low non-interest expense, have high provisions for bad debt and are frequent securitizers. Another finding coming from this study is that stock price reaction to securitization announcements is negatively related to the financial soundness of the company prior to the event.

The study by Gasbarro et al. (2005) is the first study on this topic with focus on one single industry and that involves partitioning of the data on the basis of financial indicators. This adds value in the way that firm specific factors and results can be observed for the first time. However, because of the dominance of just two banks, the results should be interpreted with caution. Furthermore, it is the first study employing robustness checks, which adds credibility. The findings of this study are refreshing, since it is the first study that reveals some firm-specific characteristics of origination companies. It sets the ground for further research.
4.5. Gunter Franke and Pieter Krahnen (2006)

Franke & Krahnen (2006) study the issues surrounding asset securitization from a totally new perspective, giving a lot more attention to the impacts on default and systematic risk. In this study, the authors focus on the European bank industry. More specifically, they study a sample of European collateralized debt obligations (CDOs) issues. The impact of asset securitization on default and systematic risk is not directly related to our topic. That is why we will mention the findings only briefly. In short, the authors find that there is increase of the banks’ betas after the securitization announcement. The bank can use the proceeds from the securitization to invest in new loans, thereby expanding and diversifying its business, which affects systematic risk. This is the explanation that the authors offer for their finding. In addition, the authors study whether shareholders consider asset securitization to be value enhancing.

The authors argue that in securitization transaction, banks often retain the subordinated tranche. This is because the bank has inside information about its asset quality (information asymmetry problem). The lowest tranche is of low quality and high risk and it is difficult to market it. By retaining the so called “first loss piece”, banks reduce information asymmetries. However, the authors question the extent to which the risk is actually transferred away. According to the authors, the effect on the overall bank risk from asset securitization depends on how the proceeds from the securitization will be used. It is assumed that if the bank uses the proceeds to invest in risk-free assets or to reduce its debt, than the overall risk should be reduced. In contrast, if the bank invests in new risky assets (originate new loans), than the bank: first, retains the lowest tranche and second, takes additional risks. Franke & Krahnen (2006) assume that even though the asset portfolio is better diversified, the overall risk should be higher than before the securitization. Additionally, they assume that this effect should be stronger for banks that securitize frequently. By observing higher betas after the securitization announcement, this second assumption is confirmed.

One interesting observation is made in this study. The senior tranches in every securitization transaction are backed by the assets with highest quality. On the other hand, all the other tranches are backed with lower quality assets. In this study, the authors argue that a steeper loss rate distribution (meaning more risky assets) is associated with higher number of mezzanine tranches. That means, the more low quality asset the bank is trying to securitize, the greater the number of mezzanine tranches. According to this line of reasoning, the number of mezzanine tranches can be seen as indication of asset quality.

In their analysis on the wealth effects from asset securitization, Franke & Krahnen (2006) assume that these effects are in large part determined by investors’ expectations (which is expected), but more specifically by the information given in the securitization announcement. Negative stock price reaction is assumed if the bank does not plan to reinvest the proceeds from the securitization transaction in risky assets. More specifically, it is assumed that bondholders will benefit at the expense of the shareholders because of the reduced risk of the bank’s assets. Risky reinvestment strategy after the securitization transaction is assumed to bring positive stock price adjustment.
Another assumption is that investors may view the securitization transaction as unfavorable information regarding the bank’s funding ability and react negatively, lowering the price of the equity. In the end, the authors state that the transaction cost of securitization is non-negligible and can also bring negative stock price effect. However, Franke & Krahnen (2006) do state that the impact of securitization on the banks’ stock prices is difficult to predict, since it is an empirical matter dependent on the predominating effects.

A sample of 73 securitization transactions from 27 banks in Europe is analyzed, between 1999 and 2002. As previously stated, the focus is on collateralized debt and loan obligations (CDOs and CLOs) and there are no mortgages as an underlying asset in the sample. Again, standard event study methodology is used with the use of the market model. The estimation period is 200 days, symmetrically around the event period. The event period is 41 days [-20, +20].

The general finding of this study is that there is no significant stock price effect around the announcement date of a CDO/L issue. The authors observe no change in stock prices around the securitization announcement date.

This study sheds new light on the financial innovation called asset securitization. It examines the problem from a different perspective, one that is not seen in the other studies on this topic. The emphasis in this research paper is on the consequences for the banks’ risk from asset securitization. The authors recognize that their findings are preliminary, mostly because of the assumptions and the data used. Their sample is quite small, covering very short period of time, of only four years. Additionally, they use only two polar explanations for the observed outcome. That is risky and risk-free reinvestment policy after the securitization issue. Obviously, banks can choose combination of both policies.


In this study the author is focused on the UK market. Besides the wealth effects from asset securitization, the effect on cost of capital and overall company risk is studied. Since these areas are out of the scope of our Master thesis, we will only mention the results, without going too deep in the analysis. First, the author finds that asset securitization reduces overall cost of capital. Second, asset securitization reduces interest and prepayment risks, therefore allowing companies to reduce their leverage level.

When analyzing the wealth effects from asset securitization, the author provides detailed description of the relevant literature on the advantages and the disadvantages of the securitization process (described in section 2.2.) and like all previous authors, assumes that the advantages would result in positive stock price reaction and the disadvantages in negative stock price reaction.

Liu (2007) uses data on 542 securitizations originated by 133 companies in the UK, from 1993 to 2005. The sample is largely dominated by banks and financial institutions (around 85%). In terms of underlying asset type, the sample is balanced with residential mortgages
having slight advantage over the other types of assets. As usual, standard event study methodology is used, more specifically the model with market adjusted returns. An event period of 101 days is used [+1, +10].

According to Liu (2007), for the entire sample, asset securitization brings positive wealth gain of about 0.83%. Further, the results show that the wealth effects are industry specific, with financial companies, banks and retailers benefiting the most from asset securitization. The results also show that wealth effects of asset securitization are asset specific, with commercial mortgages offering positive stock price adjustment and residential mortgages negative stock price adjustment. Moreover, the author concludes that investors view large volume issues more favorably. Furthermore, companies with higher financial slack gain more from asset securitization in terms of market value and surprisingly, companies that lack growth opportunities experience positive wealth effects from asset securitization. The explanation for this last observation is that asset securitization helps solving the underinvestment problem. Another important result from this study is that in UK, investors do not value frequency of securitizations.


This study’s focus is on the banking industry within the EU countries and Switzerland. As usual with these types of studies, the authors make some assumptions based on grounded economic reasoning before analyzing the data. The logic behind the analysis is that if securitization is beneficial, the market will notice and reward that. In contrast, if asset securitization is not value creating for the originating company, the market will have negative view and wealth losses are expected. The advantages and disadvantages of asset securitization used in this study are the same like those described earlier, with emphasis on the following arguments: reducing economic and regulatory capital requirements, liquidity and funding source and reducing the bank’s overall risk exposure. The authors recognize that positive stock price adjustment is expected with regard to the first two advantages, while the effects from the third one are still unclear and difficult to predict. Moreover, the authors expect positive wealth effects if it is expected that the originating bank will use the proceeds from the securitization issue to originate new loans or to retire existing debt. Negative wealth effects are assumed if the originating company retains the lowest tranche (so called first loss position) as a signal for the quality of the bank’s assets. This means that the lowest, most risky tranche will not be sold to investors (because of the low quality and high risk), but instead will be retained by the originating company. Furthermore, negative stock price reaction is assumed if the originating bank follows risky investment strategy after the securitization issue; or, if the proceeds are used to pay dividends or repurchase equity, meaning higher leverage ratios.

Farruggio et al. (2010) use sample of 381 securitization transactions issued by 53 banks in EU plus Switzerland. The period under study is 1997-2007. The sample is dominated by mortgage-backed securities and collateral debt obligation. Almost 50% of the transactions were executed to securitize mortgage loans. Again, standard event study methodology is used to analyze the data, by using the market model. The authors filter the data by using all the screening criteria prescribed by the event study methodology. An estimation period of
200 trading days is used [-211, -11]. Four different event periods are analyzed in this study: [-4, 0], [-4, +1], [-4, +4] and [-6, +2] around the announcement and issue date. The data is also analyzed in two different time periods: from 1997-2002 and 2003-2007. The data is partitioned and analyzed by controlling for some financial characteristics such as: underlying reference portfolio, issue frequency, bank’s size, bank’s capitalization, bank’s liquidity, bank’s profitability and bank’s portfolio quality.

Baseline results from this study indicate that announcement of asset securitization transaction has negative effect on originating banks’ stock price. Another finding is that wealth effects from asset securitization in the European banking industry are time dependent, with statistically insignificant 0.32% loss for the period 1997-2002 and statistically significant 0.39% loss for the period 2003-2007. The results are not different when issue day is used as event day. Furthermore, the results stay the same for different event periods.

Farruggio et al. (2010) find that securitization announcements have significantly negative impact on the originating company stock price when residential mortgages are being securitized. Additionally, the researchers observe significant wealth loss of 0.64% for frequent securitizers and significant wealth losses for large banks. The authors partition the data even further, discovering that there are significant negative effects for highly leveraged banks explaining this as a market interpretation for financial distress. Furthermore, significantly negative stock price reaction is observed for banks with low liquidity ratios and low profitability prior the event. One surprising founding is that there are significant negative effects for both, banks with high and low portfolio quality.

One interesting observation made in this study is the frequency of the securitization issues by quarters. The authors note that there is higher frequency of securitization issues in the second and the fourth quarter of the year. Also the volume of the securitization issues is higher in these periods. This can be interpreted as an indication of earnings management. This is by far the most statistically sound research done on this topic. The findings hold under various robustness checks and that adds credibility. Even though there is no difference in the results obtained when announcement and issue dates are used, this is a positive aspect of this study. It also adds credibility to the previous studies where authors were having problems in determining the announcement date. However, one aspect that might have an influence on the results is the inclusion of data from 2007. The financial crisis could be felt in that year and the results may be blurred. Further tests can be carried to see if this has any major impact.

4.8. Hypotheses development

Different authors find different, even contradicting results. First, Lockwood et al. (1996), Thomas (1999), Gasbarro et al. (2005) and Liu (2007) find that originating companies’ stock prices increase as a result of the securitization announcement, leading to positive wealth effects. On the other hand, Thomas (2001) and Farruggio et al. (2010) find that asset securitization brings negative wealth effects for the originating companies’ shareholders. Franke & Krahnen (2006) contribute even more to the confusion, since they find that
announcements about a securitization transaction do not affect the stock price of the originating companies.

*Second,* Thomas (1999), Thomas (2001) and Gasbarro et al. (2005) find that shareholders in companies that engage in asset securitization more frequently encounter positive wealth gains from asset securitization. In contrast, Liu (2007) and Farruggio et al. (2010) find evidence that frequent securitizes suffer wealth losses as a result of the securitization announcement.

*Third,* the results from the previous studies, also, differ in terms of the industry of the originating companies. Lockwood et al. (1996) and Farruggio et al. (2010) find that banks experience wealth losses. Contrary to this, Thomas (1999), Thomas (2001) and Liu (2007) find that banks encounter positive wealth gains in the period around the securitization announcement.

*Fourth,* Liu (2007) finds that securitization transactions of high volume bring wealth gains to the originating companies’ shareholders. On the other hand, Thomas (2001) provides evidence that the volume of the securitization transaction does not play an important role in the determination of the wealth effects from asset securitization, but provide evidence of wealth gains for large issues over long event period.

*Fifth,* the wealth effects from asset securitization differ depending on the type of the underlying asset. Liu (2007), Thomas (2001) and Farruggio et al. (2010) find that losses accrue to shareholders when residential mortgages are securitized. Liu (2007), also, finds that wealth gains are associated with securitization of commercial mortgages. In contrast, Lockwood et al. (1999) finds that the type of the underlying asset is not associated with the wealth effects from asset securitization.

*Sixth,* Lockwood et al. (1996) and Liu (2007) find that strong banks (with higher financial slack prior the securitization announcement) earn wealth gains, while weak banks earn wealth losses. In addition, Gasbarro et al. (2005) find that higher credit rating is associated with wealth gains around the securitization announcement day. Opposite of this, Thomas (1999) and Thomas (2001) find that wealth gains accrue to companies with poorer credit quality. To create even greater confusion, Farruggio et al. (2010) find that banks with high and low portfolio quality experience wealth losses in the period around the securitization announcement.

Based on the theoretical advantages and disadvantages of asset securitization and on the results from the previous studies that directly address the wealth effects from asset securitization, we can now develop our hypotheses.

In general, our assumptions are very similar to those of the authors of all the seven previous studies. We will simply analyze whether the previous theories concerning asset securitization hold on the Australian market.
During this analysis, we should make one thing clear. Ultimately, the wealth effects from asset securitization depend on the motivations behind the securitization decision and numerous intra-company policies. These are not easily observable. Therefore, the impact of asset securitization on the originating company’s stock price is hard to predict. As Franke & Krahnen (2006, p. 17) conclude: “…it is an empirical matter as to which effects dominate.”

The reasoning is simple; we analyze whether investors perceive asset securitization to be value creating or value destroying. Our whole analysis is based on the assumption that the theoretical advantages of asset securitization bring positive wealth effects and the disadvantages bring negative wealth effects. In other words, if the asset securitization transaction is value creating, the originating companies’ stock price should increase around the securitization announcement day, bringing positive abnormal returns and shareholders should realize wealth gains. If the investors perceive the securitization transaction to be value destroying, this should translate into lower stock price, which means negative abnormal returns and a wealth loss around the securitization announcement date. Also, with this line of reasoning we intend to interpret the results from our analysis. It is also possible that we observe no changes in the originating companies’ stock prices around the securitization announcement day. These three scenarios are summarized in Figure 11.

Having all this into consideration, we develop our hypotheses as follows.
First, we test whether the stock price of all companies in our sample reacts to an announcement about a securitization transaction. We test whether shareholders of all originating companies in our sample earn abnormal returns around the securitization announcement date. Therefore, we develop the following hypotheses:

\[ H_0: \text{The cumulative average abnormal returns around the securitization announcement day are equal to zero;} \]

\[ H_1: \text{The cumulative average abnormal returns around the securitization announcement day are not equal to zero.} \]

This is the basic hypothesis of our study. With this hypothesis, we first want to determine if the securitization announcement causes any change in the stock price of the originating companies in our sample. After that, we will try to explain the direction of the change (upwards or downwards) by using the previously developed theories.

After establishing the effects (positive or negative) of the securitization announcement on the originating companies’ stock price, we will try to dig deeper in order to discover the determinants of those effects. We intend to do that by creating subsamples of the overall sample. The sample partitioning procedure is explained further, in section 5.3.9. Our plan is to control our sample for various variables. We basically test the same hypothesis for each subsample. The purpose of this is to find some pattern and mutual characteristics of the originating companies.

The variables for which we will control our sample are chosen based on the contradicting results obtained by previous authors studying the wealth effects from asset securitization.

First, we will try to see whether the wealth effects from asset securitization are associated with the frequency of securitizing. We will try to see whether there is difference in the abnormal returns for companies that securitize more compared to those that securitize less.

Second, we analyze whether the wealth effects from asset securitization are industry specific. We will analyze whether there is difference in the abnormal returns for the different industries in which the companies in our sample operate.

Third, we analyze to what extent the wealth effects are associated to the volume of the securitization transaction. We analyze whether there is difference in the abnormal returns between companies that engage in large volume securitization transactions and companies that engage in small volume securitization transactions.

Fourth, we will try to see if the wealth effects from asset securitization are dependent on the type of the underlying asset. We analyze whether there is difference in the abnormal returns for companies that securitize residential mortgages compared to companies that securitize other types of assets. The separation of “residential mortgages” and “others” is because the residential mortgages, as underlying assets, largely dominate the Australian securitization market.
Fifth, we analyze if the wealth effects from asset securitization are determined by the asset quality of the originating companies. We analyze whether there is difference in the abnormal returns for companies with high asset quality compared to companies with low asset quality. We previously said that ABSs are issued in tranches. We also, explained that the lowest tranche is backed with the lowest quality and most risky assets. Therefore, to measure asset quality, we use the ratio of the principle balance of the subordinated tranche to the principle balance of all tranches in a single securitization transaction. In other words, we find the portion of low-quality assets as a percentage of all underlying assets. For example, let us assume we have three tranches in one securitization transaction, with the following principle balances: tranche A = AUD100, B = AUD150 and C = AUD70. To proxy asset quality, we find the ratio: balance of tranche C / balance of tranches A, B and C. For our hypothetical securitization, we have $\frac{70}{320} = 0.21$ or 21%. Therefore, we assume that 21% of the underlying asset pool is comprised of low-quality assets. We do this for all the securitization transactions in our sample and we divide the sample in companies with high asset quality and companies with low asset quality.

With this analysis, we hope to put light on some unanswered questions concerning the wealth effects from asset securitization in Australia.
Chapter 5: Research methodology, data and statistical method

In the first section of this chapter, we present our methodological choices. More specifically, we explain the research philosophy, the research approach and the research strategy used in this study. In the second section of this chapter, we explain the data collection process, the types of data and the data sources, followed by a short critical review. Furthermore, we elaborate the sample selection criteria. The third section provides thorough description of the statistical method used to analyze the selected data. Chapter 5 concludes with a review of the research quality criteria.

5.1. Research methodology

When doing a research, every researcher has his/hers previous knowledge and more or less defined stance on certain important subjects. This knowledge has been acquired through one’s education and professional experience. In addition, this knowledge and interests guide one researcher in many things related to the research, for example the choice of the topic. Many students choose their topics not because they are interested in the topic, but because of other factors like the easiness of finding data or the area of expertise of their supervisor. We choose the topic of this Master thesis because of our strong interest in asset securitization. We wanted to dig deeper and learn more about this so puzzling phenomenon that, undoubtedly, has the power to bring the greatest economies in the world down to their knees. Our background can be found in the opening part of this paper. No matter how familiar we were with this topic at the beginning of the writing process, further learning was necessary. The literature review is crucial part, without which we could never write this thesis. The previous studies help us in focusing our research problem and determining our research objective. We knew asset securitization was important, but only after thorough literature review we understand the true importance of this phenomenon. It helps us learn how to conduct our study, how to formulate our expectations and assumptions. Ultimately, it helps us interpreting the results from our research. Reading the previous literature directs us in the right direction and mitigates the problem of being too strongly driven by our beliefs. However, reading the previous literature can also have negative impact, since it can limit the researcher’s creativity. So, by using our previous knowledge, experience and the literature review, we can now shape our assumptions and expectations.

5.1.1. Research philosophy

Research is a process where new knowledge is discovered, interpreted and then communicated. The knowledge obtained through research has the power to influence the understanding of the outside world (Ryan, Scapens & Theobald, 2003). The research philosophy is important because it relates the nature of the knowledge to how knowledge is developed. Moreover, it determines the researchers’ perception of the world, more specifically the researchers’ assumptions. The researchers’ assumptions are of particular importance, since they shape and strengthen the research strategy and the research method (Saunders, Lewis & Thornhill, 2009). In other words, it is important to determine our view
towards knowledge in order to understand the meaning of it. There are two major views on how we treat knowledge across the literature.

**Epistemology** deals with the question: what should be regarded as acceptable knowledge? Should social and natural science be studied using the same principles and methods? (Bryman & Bell, 2003). There are three epistemological positions: positivism, realism and interpretivism. According to the first, the *positivistic* stance, social reality exists independently from social actors and that is why social reality can be studied using natural science methods. By using mathematical formulas in the analysis, the positivistic view can achieve more objective results because mathematical formulas lower researchers’ ability to make subjective analyses and interpretations (Saunders et al., 2009, p. 114). According to this view, the theory is used to develop hypotheses and those hypotheses should be tested in order to generate new knowledge, thereby strengthening the credibility of the theories under examination (if confirmed). Also, the researchers must be objective in their analysis (Saunders et al., 2009). Only facts are considered as knowledge.

The second approach is *realism*. According to this view, methods used in both, social and natural sciences should be used to collect, analyze and interpret the data (Bryman & Bell, 2007). According to this view, there is no single and absolute interpretation of the data. The social reality can be interpreted in more than one way. Realism is theory focused, but the value of human experience is recognized in interpreting social reality (Saunders et al., 2009, p. 114).

The third view is *interpretivism*. This view does not allow the use of natural science methods to study social reality. In this view, social actions have meaning on their own and that is how difference is being made between people and objects of the social reality (Bryman & Bell, 2007). Interpretivism involves feelings and a great deal of human interpretation. It is recommended for analyzing complex problems (Saunders et al., 2009, p. 116).

Regarding our epistemological stance, it is obvious that we have positivistic view of reality. We use previously developed theory to develop hypotheses about the wealth effects from asset securitization and then we test those hypotheses, hoping to generate new knowledge. More importantly we use natural science methods to do so. In addition, we try to observe the Australian stock market’s reaction, which is not something that can be influenced. Therefore, objectivity and independent interpretation of the results is achieved.

The second stream of thinking related to the treatment of knowledge is **ontology**. There are two ontological groups of thinking: objectivism and constructivism. *Objectivism*, as an ontological stance, ascertains that social reality exists separately and independently from social actors (Bryman & Bell, 2007). In other words, social actors cannot influence the social reality with research, meaning that social phenomena are independent. On the other end of the continuum, *constructivism* ascertains that social actors construct the social reality and that they interact with it. This means that social phenomena are dependent.

In this paper, we adopt objective stance. This is so because of several reasons. First, we use natural science methods. Second, the analysis of the data i.e. determining the stock price
reaction to announcement of asset securitization does not require any subjective interpretation. We are observing the overall market reaction to the securitization announcements without going into deeper analysis of the motives and reasoning of every investor. The data is given and absolute. Furthermore, because of size effects, single investors (as social actors) cannot create wealth effects by themselves. In this case, social actors’ single actions do not create reality. All together they do, but the social phenomena are independent of one single investor’s actions.

5.1.2. Research approach

There are three different research approaches based on the relationship between research and theory. These are: inductive, deductive and abductive.

According to the deductive approach, we are supposed to draw conclusions by testing and analyzing empirical data. At first, scientific knowledge is explored and based on that knowledge, hypotheses are developed. The next step is to collect empirical data in order to test the hypotheses. In the end, the previously developed knowledge can be confirmed and strengthened or evidence against it can be provided (Bryman & Bell, 2007; Saunders et al., 2009). In essence, prior theories are tested using empirical data. The theory guides the research. It is of essential importance that researchers observe the empirical data independently and in an objective manner. Only that way, relevant findings can be obtained.

On the other side is the inductive research approach. According to this scientific approach, empirical data is collected and observed and based on that observation, theory or some conclusions about social phenomena are drawn. So here, we move from theory testing towards theory development. In this view, the theory is the result of the research. Moreover, it is said that the inductive research approach is closely tied to qualitative data obtained in various ways.

The third type of research approach, the abductive approach is a combination of the previous two.

The research approach relevant for our Master thesis is the deductive approach. First, we started with learning the previous scientific knowledge related to asset securitization and wealth effects from asset securitization. Based on the previous findings on our topic, we developed a set of hypotheses. The next logical step, according to the deductive approach is data collection. This was the major challenge of this study. We spent substantial amount of time searching for the empirical data. Besides all the trouble we had finding the data, we somehow managed to solve this problem. The data collection process will be explained in section 5.2. Therefore, we fulfilled all the preconditions to conduct our study. In the end we test the empirical data in order to confirm or reject our hypotheses.

The stages of the deductive research approach can be seen in the following figure.
5.1.3. Research strategy

Bryman & Bell (2007) suggest two research strategies: quantitative and qualitative. According to them, the quantitative research strategy is created by quantification of the data, using natural science methods. This in turn, suggests deductive research approach. In addition, the quantitative strategy perceives social reality as external to social actors. The features of the quantitative method are focused more on the present time and the study is carried out in a more structured and standardized way (Olsson & Sörensen, 2007).

On the other hand, there is the qualitative research strategy. Saunders et al. (2009) argue that with this strategy, qualifications and words are used to analyze and interpret the data, rather than quantities. In other words, non-numerical data has the key role. Halvorsen (1992) argues that the qualitative method is more relevant for studies that use smaller population and few variables. Its purpose is to discover something extraordinary within a certain area and to gain understanding of that area.

There is an increased amount of opinions that it is for the best if both qualitative and quantitative methods are used in conducting research. The use of mixed research gained a lot of supporters in recent years. One can argue that a mix of both research strategies should be adopted for our study, since there is substantial amount of qualitative and quantitative data included in the study.

However, in this study we employ quantitative research strategy. This research strategy is a natural consequence of our epistemological stance. We previously stated that we adopt the positivistic epistemological view, according to which natural science methods can be used to study social reality. In addition, our ontological standpoint furthermore supports our
choice of research strategy. Since we perceive reality as external, we should use quantitative methods to study it. Furthermore, we adopted deductive research approach, which further bolsters our choice of research strategy.

To summarize our methodological choices we offer the following figure.

![Figure 13: Summary of methodological choices](image)

5.2. Data and sample construction

5.2.1. Data collection process

The whole idea about writing our Master thesis on this particular topic comes from our previous knowledge and interest in this matter. We quickly found the previous, relevant literature studying this area without major problems. After reading a small portion of the previous studies, we wanted to make sure that we can find the relevant data before we proceed with this topic more seriously. Collecting the data was the most challenging task of this research. From today’s point of view, it was the greatest obstacle we had to overcome. Essentially, this study wouldn’t be possible without the relevant data. To be able to conduct our analysis, we basically needed 2 types of quantitative data: data on stock prices and detailed data concerning asset securitization transactions. The first type of data was easily obtainable, but the search for the second one was quite complicated. As we explained earlier, the securitization markets are invisible and very conservative. There is no single public source of any kind of information at all.

Like we previously mentioned, our primary intention was to conduct this study with relevant data from Sweden. We sent a great amount of e-mails to many relevant state
institutions, law firms, data providers, forums, associations and financial media. This search lasted around 3-4 weeks. Finally one very pleasant gentleman, named Matias Lampe agreed to have a phone interview with us. From that interview, we learned that asset securitization is not very common activity in Sweden and that there are around 2-3 securitization transaction per year. Furthermore, Mr. Lampe informed us that Swedish companies prefer to use cover bonds as an alternative funding source. Therefore, after 3 weeks in January, we were still unable to continue working on our Master thesis, as the whole topic was brought under question. Then we decided to search for other active securitization market. However, we did not want this to be USA or UK, since there are previous studies on wealth effects from asset securitization using data from these countries. We learned that the Australian securitization market is the world’s second most active market, after the US market. Then, we started looking for detailed, relevant data concerning asset securitization transactions from the Australian securitization market. We spent another month of looking for the data. We must say that we were very persistent in this search, since we were very determined to write our Master thesis on this particular topic. After almost a month of sending e-mails and searching for online databases with the data we need, we finally found one company specialized in offering timely and accurate information on asset securitization transactions in Australia. The sources of the data used in this Master thesis are described in the following paragraphs.

5.2.2. Primary data and sources

To find the data for this Master thesis, we used many data sources. Like we previously said, to be able to conduct this research, we needed: 1) history of stock prices and 2) detailed information on securitization transactions (the specific information used will be explained later). The complete history of stock prices for the companies in our sample was retrieved from Thomson’s financial database, DataStream. At first we used Yahoo! Finance, but since Thomson’s database covers longer period, we finally decided to use that one. This was not a major problem. The information on each securitization transaction in our sample was obtained from a specialized, Australian based, data provider named ABSPerpetual (https://www.absperpetual.com/). According to the company website, ABSPerpetual offers timely and updated information on almost all public Australian asset and mortgage-backed securities on issue, beginning from 1999. The information that this company is using comes directly from the information memorandum or the offering circular, for each securitization transaction, that is disseminated to the market participants. Since this source was suggested to us by several of the people we contacted in Australia and it was the only one we found, we decided to use it. ABSPerpetual offers three types of subscription: bronze, silver and gold. The bronze subscription, which can be used free of charge, satisfied our needs. In the end, after long search for the data, we managed to get it and we didn’t even have to pay for it. Just for comparison, Standard&Poor’s asked for USD2.000 to create a report according to our needs. Thus, the stock price history and the information on each securitization transaction are considered to be primary data in this study.

In order to give an answer to our research question, we needed specific data for each securitization transaction in our sample. The information we needed is presented in the following table.
ABSPerpetual.com

Name of originating company;
Securitization announcement or issue date;
Industry of the originating company;
Type of underlying asset;
Volume of each securitization transaction in Australian dollars;
Volume of the lowest rated tranche in each securitization issue.

Datastream

Stock price history for each originating company;
Price history of each stock market index on the Australian Stock Exchange.

Table 2: Type and source of data

5.2.3. Secondary data and sources

Even though, the qualitative data used in this Master thesis is easier to obtain, it is by no means less important. All of the academic literature used in Chapter 2, 3 and 4 comes from scientific journals found in databases like Business Source Premier, ScienceDirect and Emerald. Additionally, Google Scholar was used. Besides academic articles; books, studies, lectures, speeches and surveys published by Australian and international institutions, global companies and regulators were used. State regulation was studied too. In very few cases (for descriptive purposes), informal Internet sources were used. All this data is considered to be secondary data.

5.2.4. Criticism of data quality

We are aware that the quality of the findings in one study is heavily determined by the data used to create that study. The data used in this Master thesis was used to shape our understanding and assumptions, to develop the hypotheses, to analyze and to interpret the results. Overall, the data used to write this Master thesis is valid and reliable. Since all the databases are reputable and credible, we do not hesitate to use them. One could question the credibility of the source for our primary data (ABSPerpetual), but this source was recommended by almost all people we contacted in Australia, from both private and public institutions. However, the primary data used in this study is extensive and could be subject to unintentional, human error, during the retyping process. Nevertheless, we do not expect the results from the study to be affected in any way. We strongly believe that the data used to write this Master thesis is reliable and of high quality.

5.2.5. Sample selection criteria

As stated earlier, we subscribed to ABSPerpetual’s bronze subscription. With this subscription, we got access to a database on almost all asset and mortgage-backed securities on issue in Australia. At the time this analysis was carried, there were 340 securitization transactions. The calendar range of these 340 securitization transactions was from 1999-2010. To obtain our final sample, these 340 securitization transactions were subject to further screening. The sample selection criteria are as follows:
a) A securitization transaction must occur during the period 2000-2006;  
b) The securitization announcement or issue date must be identifiable;  
c) The originator must be a publicly traded company, listed on the Australian Stock Exchange (ASX) at the time when the securitization transaction occurred;  
d) The originator must not have missing stock prices (missing daily returns) during the period under study (the estimation and the event period explained later) and;  
e) There must not be overlap of the estimation or the event period for securitization transactions by the same originator.

Regarding the first criterion, we are aware of the effects of the global financial crisis that started in 2007. We know that the global capital markets are still, even today, feeling the effects of the crisis. In order to obtain more relevant and correct conclusions, we decide to exclude the years 2007, 2008, 2009 and 2010. That way we can remove the effects from the financial turmoil and prevent our findings from being distorted. We only want to observe effects from asset securitization in “normal” and “calm” periods for the financial markets.

The second criterion is of crucial importance. Since we want to observe stock price reactions around the securitization announcement data, it was extremely important to be able to identify the date when the securitization becomes public knowledge. That way we know the period for which we can expect stock price movements. However, many of the previous studies recognize the practical problems related to the determination of the securitization announcement dates (see Chapter 4). Some of them use securitization announcement dates, some use issue dates and some use a combination of the two. In this study we use the date of the information memorandum or the date of the offering circular. These materials are disseminated to investors in order to provide them with detailed information about the securitization issue. We consider this date to be the first time when the market learns about a securitization transaction. Where securitization announcement dates are not available, we use issue dates. We must mention that issue dates are used in limited number of cases.

The requirement that the originator must be publicly traded company is logical, since we want to observe the effects from asset securitization on the originating companies’ stock price. This would not be possible is the originator is a private company. This does not mean that the originating companies must be listed companies today. Some of the originating companies in our sample are not publicly traded companies today, but they were at the time of the securitization announcement. They were either taken private or acquired, and therefore delisted. This does not change anything in our study.

The trading in a company’s stock may be interrupted for a number of reasons. The stock exchanges can suspend or delist companies for a period of time. During that period, there is no available price on a company’s stock. The purpose of the fourth criterion is to eliminate this problem. The fourth screening criterion means that the trading in the originating company’s stock must not be interrupted during the period of our interest, the estimation or the event period. This means that the stock price history must be complete.

Some companies announce securitization transactions very frequently. The securitization announcements dates are very close (clustered), sometimes a month or even a week apart,
blurring the effects from asset securitization. This can distort the results from our statistical analysis and therefore, we decided to eliminate securitization transactions from the same originator where the securitization announcement or issue dates are so close, that they cause overlap of the estimation or the event period. This way, we hope to obtain better image about the wealth effects from asset securitization.

After filtering our original sample using the above mentioned sample selection criteria, we obtained a final sample of 98 securitization transactions (N=98), originated by 20 companies, for the period 2000-2006 (see Appendix 1). The characteristics of this sample will be thoroughly described in the next chapter.

5.3. Statistical method - event study methodology

To measure the wealth effects from asset securitization (the market’s reaction), we will measure if the originating companies’ shareholders can earn abnormal (excess) returns around the securitization announcement date. To do this, we will use standard event study methodology, described in Brown & Warner (1985). The underlying assumption of this methodology is that stock prices adjust rapidly to the release of all public information, and therefore, reflect all available public information. This is the semi-strong form of the efficient market hypothesis (EMH). Additionally, it is assumed that abnormal returns can be earned only if the new information is not anticipated by the market. The steps of this methodology are presented in Figure 14.

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<th>Event study methodology steps</th>
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- Event definition
- Establishing the estimation period
- Establishing the event period
- Measuring actual daily returns
- Measuring normal (expected) returns
- Measuring abnormal (excess) returns
- Measuring average abnormal returns
- Measuring cumulative average abnormal returns
- Significance tests
- Findings

Figure 14: Event study methodology steps
5.3.1. **Event definition**

In this study, we attempt to study the wealth effects from a social phenomenon, in order to see what the consequences of this phenomenon are. The phenomenon under study is asset securitization transaction. More specifically, it is the announcement of asset securitization transaction by a company. Of particular importance for our study is the moment when the asset securitization transaction becomes public knowledge i.e. when the general marketplace learns that a company will engage in asset securitization. Market participants learn about the securitization transaction through a securitization announcement, information memorandum or offering circular. Additionally, the market can learn about a securitization transaction through the public information provided by the stock exchanges, the credit rating companies or other media (these sources are considered less reliable in terms of timing). However, in this study we will treat the information memorandum or the offering circular as a mean through which market participants learn about the securitization transaction for the first time. Therefore, we define the general dissemination of the information memorandum or the offering circular as “event” and the date of the information memorandum or the offering circular as “event day”. We have 98 securitization transactions in our sample, which means we have 98 events.

5.3.2. **Establishing the estimation and the event periods (steps 2 and 3)**

To study the wealth effects from asset securitization, we need to establish a time period, both before and after the securitization announcement, for which we will perform our analysis. This time period before the securitization announcement is used to predict the parameters of the model (step 6) and to perform the significance tests (step 9) explained later. This period is called “estimation period”. Different lengths of the estimation period have advantages and disadvantages. For example, choosing longer estimation period can give more accurate predictions. On the hand, longer estimation periods may capture other events that can distort the results. There are divided opinions on the length on the estimation period. However, according to many authors, the length of the estimation period is a matter of choice. That is why, we decided to establish a 60 trading days estimation period beginning 65 trading days before the event day and ending 5 trading days before the event day \([T_1, T_2] = [-65, -6]\). There are also practical reasons for the choice of estimation period.

The event period is the period for which we will look for stock price changes i.e. abnormal returns as a result of announcements about asset securitization. This whole study is based on the following assumption: if there are wealth effects from asset securitization, we expect to observe them during the event period. The event period is a period before and after the securitization announcement i.e. the event day. One may find it strange that we study wealth effects from asset securitization before the securitization transaction actually occurs. It is a valid question: why would we expect stock price reaction to the securitization announcement, before the securitization announcement? However, there is reasonable explanation for this. As we stated earlier, the securitization market is invisible, even mysterious. The investors in the ABSs are exclusively institutional investors. Thomas (1999) argues that securitizations are arranged on a book-building basis. Because of the size of the issues, the need for high credit rating and the small number of institutional investors,
Securitizations are structured in advance by contacting potential buyers. Investment bankers contact potential investors in advance to obtain knowledge of the market demand. In addition, contacts in advance are needed to determine the amount, the structure and the pricing. This thinking is in line with Gasbarro et al. (2005). According to them, securitization transactions are marketed in consultation with investors prior to the launch. Highly sophisticated, institutional investors have large amount of information about the upcoming securitization issue and the preliminary bond ratings. Consequently, we analyze stock prices, looking for abnormal returns, for each day: the 5 days preceding the event day, the event day and the 5 days following the event day. In addition, we establish event periods longer than one day. Brown & Warner (1985) find that there is no test statistic misspecification if longer than one day period is used as event period. The length of the event period is a matter of choice and that is why we select 4 different event periods: \([t_1, t_2] = [-5, +5], [-2, +2], [-1, +5] and [+1, +2]\). The event period \([-5, +5]\) will be used as baseline period to test our hypotheses. Even though we assume that the event period \([-5, +5]\) should capture the effects from the event, we cannot exclude the possibility that the other event periods can provide better information than the baseline event period.

![Figure 15: Estimation and event period](image)

5.3.3. Measuring actual daily returns

To measure the actual daily returns, we use stock price history around each event day. We have 98 securitization transactions in our sample, which means we have 98 time series of stock price history, retrieved from Thomson’s DataStream. For each securitization transaction we use 71 daily return observations around and including the event day \([-65, +5]\). We use daily adjusted closing prices. This means that the stock prices are adjusted for dividends and share repurchases. One well known criticism when using daily stock returns is that they are not normally distributed. As we will explain later, this does not have any impact on our analysis or the results from it.

We calculate actual daily returns by using the following formula:

\[
R_{i,t} = \left( \frac{P_{i,t}}{P_{i,t-1}} \right) - 1
\]

where:
- \(R_{i,t}\) – actual daily return for event \(i\) on day \(t\);
- \(P_{i,t}\) – adjusted closing price for event \(i\) on day \(t\) and;
- \(P_{i,t-1}\) – adjusted closing price for event \(i\) on day \(t-1\).
5.3.4. Measuring normal (expected) daily returns

The performance of the overall stock market is measured through stock market indexes. Stock market indexes represent the performance of a group of securities. Sample or all the securities traded on a certain stock exchange can be included. These indexes can be price weighted or value weighted. There is different methodology for calculating each index. The returns on the stock market portfolio or the stock market index are called normal or expected returns. They are called normal or expected because all market participants expect to earn, at least, the return like the rest of the market. They would not be satisfied with less than that.

The normal (expected) returns on the overall market are determined in the same way like the returns on an individual security. The difference is that, we are now calculating the returns for a group of securities. We calculate normal returns by using the following formula:

\[ R_{m,t} = \left( \frac{P_{m,t}}{P_{m,t-1}} \right) - 1 \]

where:
- \( R_{m,t} \) – return on the stock market index on day \( t \);
- \( P_{m,t} \) – price of the stock market index on day \( t \) and;
- \( P_{m,t-1} \) – price of the stock market index on day \( t-1 \).

There are several stock market indices on the Australian Stock Exchange, measuring the performance of the market by capitalization, by sector, depending on a strategy or volatility. Within the group of capitalization indices, there are indices measuring the performance of different groups of securities (largest 20, 50, 100, 200, 300 companies and others). The choice of benchmark stock exchange index can be crucial. In order to obtain more relevant image about the overall Australian stock market, we use stock market index that captures a large portion of the companies traded on this exchange. That way we can gain more in terms of generalization power. For these reasons, we use the broadest stock exchange index available on the Australian Stock Exchange, the S&P All Ordinaries Index. The S&P All Ordinaries Index represents the 500 largest companies listed on the Australian Stock Exchange and market capitalization is the only eligibility requirement.

5.3.5. Measuring abnormal daily returns

Abnormal return on a security is the return earned in excess of the market. Market participants expect to earn, at least, as the overall market. If they are able to earn more than the general market, it is said that they earned positive abnormal return. In contrast, if they lose more than the market, they earn negative abnormal return. The difference between the actual return and the expected return is called abnormal return.

Brown & Warner (1985) describe three ways for calculating abnormal returns.
a) **Mean adjusted returns**

The formula for calculating the abnormal returns is:

\[ \text{AR}_{i,t} = R_{i,t} - \hat{R}_i \]

\[ \hat{R}_i = \frac{1}{60} \sum_{t=-65}^{t=65} R_{i,t} \]

where:
- \( \text{AR}_{i,t} \) – abnormal return for event \( i \) on day \( t \);
- \( R_{i,t} \) – actual daily return for event \( i \) on day \( t \);
- \( \hat{R}_i \) – mean actual daily return for event \( i \) over the estimation period of 60 days.

b) **Market adjusted returns**

The formula for calculating the abnormal returns is:

\[ \text{AR}_{i,t} = R_{i,t} - R_{m,t} \]

where:
- \( \text{AR}_{i,t} \) – abnormal daily return for event \( i \) on day \( t \);
- \( R_{i,t} \) – actual daily return for event \( i \) on day \( t \) and;
- \( R_{m,t} \) – return on the stock market index on day \( t \).

c) **OLS market model**

The formula for calculating the abnormal returns is:

\[ \text{AR}_{i,t} = R_{i,t} - \alpha_i - \beta_i R_{m,t} \]

where:
- \( \text{AR}_{i,t} \) – abnormal daily return for event \( i \) on day \( t \);
- \( R_{i,t} \) – actual daily return for event \( i \) on day \( t \) and;
- \( R_{m,t} \) – return on the stock market index on day \( t \);
- \( \alpha_i \) and \( \beta_i \) – regression parameters from the estimation period.

The abnormal returns are of particular interest in this Master thesis. We are trying to discover if shareholders of originating companies earn abnormal returns around the securitization announcement date.

In this study, we use the market adjusted measure (b) to obtain abnormal returns. That way we obtain 98 time series of abnormal returns, each composed of 71 observations around and including the event day [-65, +5].
In their study, Brown & Warner (1985), analyze if the three measures of abnormal return give different results. They find that the various measures have similar standard deviations. They note: “…the alternative measures of excess returns will exhibit similar ability to detect abnormal performance when it is present” (Brown & Warner, 1985, p. 10).

5.3.6. Measuring average abnormal returns (AAR)

So far we managed to calculate 98 time series of abnormal returns, each with 71 observations. In order for the reader to obtain a better image, we had 98 columns and 71 rows in Microsoft Excel.

After calculating the abnormal returns for each event and around each event day, we have to aggregate the data across the sample, in order to be able to draw conclusions for the entire sample. We do that by averaging the abnormal returns for the 98 securitization transactions for each day of the estimation and event period. That way we move from 98 time series of abnormal returns to only one time series of abnormal returns with 71 observations. We use these average abnormal returns to draw conclusions for each day of the event period (separately) including the event day and for the event period intervals described in section 5.3.2.

The formula for calculating the average abnormal return is:

\[
AAR_t = \frac{1}{N} \sum_{i=1}^{n} AR_{i,t}
\]

where:
- \(AAR_t\) – average abnormal return on day \(t\);
- \(AR_{i,t}\) – abnormal daily return for event \(i\) on day \(t\);
- \(N\) – number of events within each day of the estimation and event period.

5.3.7. Measuring cumulative average abnormal returns (CAAR)

We previously explained that some institutional investors have knowledge of a pending securitization transaction before the securitization announcement. This may cause effects before the event day. Additionally, if there are some effects from the securitization announcement, we cannot expect to observe those effects only on the day after the securitization announcement. The effects can occur on the second, third, fourth or even at a later day. Because of this, we selected four event period intervals \([-5, +5]\), \([-2, +2]\), \([-1, +5]\) and \([+1, +2]\). We expect these event periods to capture the effects from the event. In order to measure the cumulative effects during these intervals, we take the AARs in each day of the interval and sum them up. In the first interval we have 11 observations, in the second 5, in the third 7 and in the fourth 2 observations (including day 0 – the event day).

The formula for calculating the cumulative average abnormal returns is:

\[
CAAR_{(t1, t2)} = \sum_{t=t1}^{t2} AAR_t
\]
5.3.8. Significance tests and interpretation of findings (steps 9 and 10)

According to Brown & Warner (1985), the null hypothesis tested with this methodology is essentially the hypothesis that the AAR for each day of the event period and for the selected intervals equals zero. This formulation is a two-sided or two-tailed hypothesis test.

When testing the significance of the AAR for each day of the event period, the test statistic (t-statistic) is the ratio of the AAR for each day of the event period \( t = -5, -4, -3, \ldots, +5 \) and the standard deviation of the AAR during the estimation period \([-65, -6]\).

According to Lockwood et al. (1996), the formula for calculating the t-statistic is:

\[
\frac{\text{AAR}_t}{S(\text{AAR}_t)}, \quad t = -65, \ldots, -6
\]

where:
- \( \text{AAR}_t \) – average abnormal return on day \( t \);
- \( S(\text{AAR}_t) \) – standard deviation of the AARs over the estimation period of 60 days, \( T = [-65, -6] \).

When testing the significance of the CAARs for each interval, the t-statistic is the ratio of the CAAR for each interval \([-5, +5], [-2, +2], [-1, +5], [+1, +2]\) and the standard deviation of the CAARs for each specific interval.

Again, in accordance with Lockwood et al. (1996), the formula for calculating the t-statistic is:

\[
\frac{\text{CAAR}_t(t_1, t_2)}{S(\text{CAAR}_t(t_1, t_2))}
\]

\[
S(\text{CAAR}_t(t_1, t_2)) = [t_2 - t_1 +1]^{1/2} S(\text{AAR}_t)
\]

where:
- \( S(\text{CAAR}_t(t_1, t_2)) \) – standard deviation of the CAARs over the selected event period;
- \( t_1, t_2 \) – days of the event period.

Brown & Warner (1985) conclude that these t-statistics are well specified.

Furthermore, if we assume that the AARs are independent, identically distributed and normal; the t-statistic follows Student-t distribution with \( n-1 \) degrees of freedom. Therefore, the critical values (rejection points) are determined by the selected level of significance \( \alpha \) and the \( n-1 \) degrees of freedom. The level of significance \( \alpha \) represents the probability of Type I error i.e. the probability that we reject the null hypothesis when it is true. Since, we
are working with two-tailed hypothesis test, we have two critical values: one negative and one positive.

After determining the t-statistics and the critical values, we compare them. If the absolute value of the t-statistic is greater than the critical value, we can reject the null hypothesis. If the absolute value of the t-statistic is below the critical value, we cannot reject the null hypothesis.

Additionally, the p-value is used to determine the statistical significance. The p-value is the lowest level of significance at which the null hypothesis can be rejected. Therefore, if the p-value is lower than the selected level of significance $\alpha$, we can reject the null hypothesis.

5.3.9. Sample partitioning

Interesting aspect of the event study methodology is that it allows for sample partitioning. Brown & Warner (1985) see this as mean of addressing the problem of variance increases. They argue that the sample can be partitioned based on economic reasoning, such as whether the event is “good news” or “bad news” and that way the conditional variances in each subsample can be reduced. The sample can be partitioned in the following way. First, we should decide on which basis to partition the sample. In other words, we should decide for which variable we want to control the sample. Second, we find the median of that variable. Then, we divide the sample in two groups, above and below the median, in order to draw conclusions for the two subsamples.

To partition the sample, we use median and the reason for this is the fact that the median mitigates the effects of extreme observations in the sample i.e. outliers.

5.3.10. Criticism of the practical research method

In section 5.3.3., we mentioned that a very well known criticism of the actual daily returns is non-normality. As it is obvious by now, in this study we focus on average abnormal returns i.e. mean abnormal returns. Even if the actual daily returns are not normally distributed, the Central Limit Theorem guarantees that the distribution of the mean of the actual abnormal returns will be approximately normally distributed, as the sample size increases. In most of the literature, a sample of 30 observations is considered large. Our sample counts 98 observations. Therefore, “the non-normality of daily returns has no obvious impact on event study methodologies” (Brown & Warner, 1985, p. 25). The authors find that, even though the daily abnormal returns are highly non-normal, the AARs in a cross-section of securities are approximately normal, as the sample size increases.

Furthermore, Brown & Warner (1985) find that the t-statistics are well specified even for smaller sample size of 5 or 20 observations. This is an additional advantage of this research methodology, since it allows us to conduct more tests.
5.4. Research quality criteria

There are numerous criteria that can be used to assess the quality of a research. Gibbert, Ruigrok & Wicki (2008) argue that according to the positivist tradition, there are four commonly used criteria to assess the rigor of a research. These are: internal validity, construct validity, external validity and reliability.

5.4.1. Internal validity

Internal validity is also called logical validity and it refers to the causal relationship between the variables and the results. The goal for the researcher here, is to provide plausible causal argument and logical reasoning that is powerful and compelling enough to defend the research conclusions (Gibbert et al., 2008, p. 1466).

In this study, we test whether previously developed theories hold in the real world. The reasoning that we use to explain our results is based on previously developed theories, by well known researchers, academics and professionals, about the advantages and the disadvantages of asset securitization. These theories are based on sound economic reasoning. In addition, the arguments that we use, are the only ones seen throughout the literature on this matter. Therefore, in our opinion our research has strong internal validity.

5.4.2. Construct validity

Construct validity refers to the operationalization of a relevant concept. It refers to the extent to which a study investigates what it claims to investigate. It also refers to the extent to which a procedure leads to an accurate observation of reality (Denzin and Lincoln, 1994 in Gibbert et al., 2008, p. 1466). The goal here is to allow the reader to reconstruct how the researcher went from the initial research questions to the final conclusions (Yin, 1994, p. 102 in Gibbert et al., 2008, p. 1466).

There is no doubt whether our study investigates what it claims to investigate. We managed to create clear, direct and sufficiently narrow research question and to answer it. The procedure that we use i.e. event study methodology provides us with a reliable and accurate observation of reality, since it directly helps us in studying the abnormal returns around the securitization announcement day. It is the only practical method for studies of this type and it is used in all of the previous studies on this topic. Additionally, our thesis is organized in a manner that allows the reader to reconstruct the entire analysis easily.

5.4.3. External validity

External validity or generalizability means that the researcher must show that the theories account for phenomena not only in the setting in which the study is conducted, but also in other settings (Gibbert et al., 2008, p. 1468).

Without a doubt, the findings of this study apply on the Australian market. First, we use large and extensive amount of data that spans over long time period of seven years. We can
also argue that the findings of this study hold in other markets with high asset quality, as is the case in Australia. Moreover, the findings of this paper can apply to countries with strong and enforced regulatory framework concerning asset securitization, such as Australia.

Even though we use large amount of data, spanning over long time period, our findings are neither absolute nor final. Therefore, the findings of this study should be taken with caution, in terms of generalization. Our findings apply on the Australian market and for a certain period. We would like to think that our findings are general and applicable everywhere, but this would be oversimplification. The reason why we are not sure about the generalization power of our study is that all of the previous authors on this topic studied countries with larger securitization and capital markets and, still, their findings are not universally applicable. This is so, because they report different, even completely opposite results. As it will be shown later, the results from our study contribute even more to the existing controversy.

5.4.4. Reliability

A research is reliable if it allows subsequent researchers to arrive at the same findings if they conduct a research by following the same steps. Reliability can be enhanced thorough increased transparency. More specifically, careful documentation and clarification of the research procedures should be provided. Additionally, replication can enhance reliability and it can be achieved by presenting the data used in the analysis part, so other researchers are able to conduct the study (Gibbert et al., 2008, p. 1468).

The findings of this study are highly reliable. The statistical procedure used to analyze abnormal returns is clearly and thoroughly presented. In addition, we provide a list of the securitization transactions in our sample, retrieved from ABSPereptual.com in Appendix 1. By providing this information, we enable any reader to replicate our study.

One fact that contributes towards more reliable findings is the usage of event study methodology as a statistical method, which in a way, is a traditional way to conduct studies of this type. Our findings are strengthened by the fact that all of the previous authors that study the wealth effects from asset securitization use this statistical research method.

Moreover, we are dealing with factual, quantitative information, which does not leave us any space for manipulation and bias. Therefore, our analysis and sampling procedures are not affected by data mining, sample selection bias or look-ahead bias. Intentionally, our study covers specific time period, but we choose this period in order to remove the effects of the current financial crisis. That way, we hope to obtain more relevant results. One might say that our study is time-period biased. But, choosing this specific time period brings more relevance to the research.
Chapter 6: Analysis

We will begin this chapter by presenting a description of the sample of asset securitization transactions. After describing the sample, we will present the analysis of the collected data. We will simultaneously present the results from our analysis.

6.1. Descriptive statistics

As we explained in section 5.2., our initial population of securitization transactions from ABSPerpetual consisted of 340 securitization transactions over a period of 11 years, starting from 1999 to 2010. This initial population was subject to 5 screening criteria. After filtering the 340 securitization transactions, we obtained a final sample of 98 securitization transactions (N=98), performed over the period 2000-2006. This time span was arbitrarily selected in order to exempt the effects from the global financial crisis, which began in mid-2007. By focusing on more “calm” period for the global capital markets, we intend to add more relevance and reliability to our study. The 98 securitization transactions in our sample are originated by 20 companies. In order to provide better image for the size of the sample and analysis covered by this study, we offer the following table.

<table>
<thead>
<tr>
<th>Number of securitization transactions</th>
<th>Volume (in AUD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final sample</td>
<td>98</td>
</tr>
<tr>
<td>Population</td>
<td>340</td>
</tr>
<tr>
<td>Coverage</td>
<td><strong>28.82%</strong></td>
</tr>
</tbody>
</table>

Table 3: Number and volume of securitization transactions

From the above table, it can be seen that with this analysis we cover almost 1/3 of the population in terms of number of securitization transactions and more than 1/3 in terms of volume of the securitization transactions. The next figure presents the distribution of the number of securitization transactions in our sample by year.

![Figure 16: Number of securitization transactions by year](image-url)
From Figure 16, it can be seen that the largest portion of the securitization transactions in our sample occurred in the years 2004, 2005 and 2006. One might argue that the results of our study can be affected by specific year effects. However, year effects are not expected, since this period is considered a “normal” period for the Australian financial markets. Additionally, Figure 16 confirms the development of the Australian securitization market over the years. Therefore, our sample mirrors the overall Australian securitization market.

The following figure presents the distribution of the volume of our sample of securitization transactions by year.

![Figure 17: Volume of securitization transactions by year](image)

Figure 17 offers another proof that our sample is representative i.e. it represents the overall population properly. The volume of the securitization transactions in our sample increases significantly since 2004. The growth of the volume of the securitization transactions in our sample follows the growth of the overall Australian securitization market, and therefore is representative of the entire population.

The 98 securitization transactions in our sample are originated by 20 companies. The frequency of securitization transactions by originator can be seen from Figure 18.
From the above figure, it can be seen that some originators dominate our sample. For example, Bank of Queensland, Challenger Limited, Macquarie Bank and St. George Bank originate 43 of the 98 securitization transactions in our sample i.e. 44%. Therefore, the results from the analysis of the overall sample can be seriously influenced by these companies and their characteristics. The 20 originators in our sample operate in five different industries (see Figure 19).
As expected, the banking industry is the dominant industry in our sample. 61% of the securitization transactions in our sample of 98 securitization transactions are originated by companies in the banking industry. The second most originating industry is the so called “diversified financials” industry. This industry is represented by non-bank financial companies. For these two industries, we run separate analysis. It is reasonable to expect that the results from the analysis of the overall sample will be largely affected by these two industries.

The classification by industry was made by using the Global Industry Classification Standard (GICS). The GICS industry groups were retrieved from the Australian Stock Exchange website (http://www.asx.com.au/).

When we described the Australian securitization market in Chapter 3, we explained that residential mortgage-backed securities (RMBS) are the most common type of ABSs. In other words, ABSs in Australia are mostly backed by residential mortgages as underlying type of asset. This applies to our sample also. This can easily be seen from the following table.

<table>
<thead>
<tr>
<th>Type of underlying asset</th>
<th>Number of securitization transactions</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automobile and equipment contracts</td>
<td>7</td>
<td>7.14</td>
</tr>
<tr>
<td>Commercial equipment contracts</td>
<td>1</td>
<td>1.02</td>
</tr>
<tr>
<td>Commercial mortgages</td>
<td>5</td>
<td>5.10</td>
</tr>
<tr>
<td>Corporate bonds/loans</td>
<td>1</td>
<td>1.02</td>
</tr>
<tr>
<td>Property pre sale contracts</td>
<td>1</td>
<td>1.02</td>
</tr>
<tr>
<td>Repacks - ABS</td>
<td>5</td>
<td>5.10</td>
</tr>
<tr>
<td>Residential mortgages - non conforming sub prime</td>
<td>1</td>
<td>1.02</td>
</tr>
<tr>
<td>Residential mortgages - prime</td>
<td>75</td>
<td>76.53</td>
</tr>
<tr>
<td>Residential mortgages - prime 100% low doc</td>
<td>2</td>
<td>2.04</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 4: Number of securitization transactions by type of underlying asset

Our sample of 98 securitization transactions is largely comprised of RMBSs. Therefore, when we analyze whether the abnormal returns are determined by the type of underlying asset, we conduct our analysis for two groups of underlying asset pools: residential mortgages and other asset types.

Before we begin with our analysis of the abnormal returns around the securitization announcement date, we would like to present one very interesting finding. We sorted the securitization announcement dates in our sample by quarters in the year when the securitization transactions took place. By doing that, we obtain the quarterly distribution of the 98 securitization transactions in our sample; which can be seen from the following figure.
The previous figure itself does not have any special meaning. Now let’s try to put Figure 20 into context. The fiscal year or the financial reporting year in Australia begins on July 1st and ends on June 30th each year. The fact that the largest number of securitization transactions in our sample occur before the end of the reporting period (June 30th) i.e. the second quarter, can be indicative of earnings management. This means that managers may be timing the asset securitization transaction in order to manipulate the financial statements at the end of the year. This is in line with the findings in Dechow & Shakespeare (2009) and Farruggio et al. (2010). This is only one step of the analysis in this direction, but it is out of the scope of this study. However, it opens space for further research and additional analysis should be done before making any conclusions.

6.2. Analysis

As previously stated in section 4.8., we begin our analysis by testing whether the stock price of the originating companies in our sample shows any reaction at all to an announcement about a securitization transaction. Therefore, the stock price of the originating companies can remain unchanged, can increase or decrease as a result of the securitization announcement. In other words, we test whether the shareholders of the originating companies in our sample earn abnormal returns around the securitization announcement date. By testing our baseline hypothesis, we will determine if there is a change in the originating companies’ stock price and we will determine the direction of that change, upwards or downwards.

By applying the formulas described in section 5.3., we test our hypothesis and the results can be seen from Table 5. The results are presented for each day of the event period separately and cumulatively for the four selected event period intervals.
<table>
<thead>
<tr>
<th>Event day</th>
<th>AAR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-5</td>
<td>0.0015</td>
</tr>
<tr>
<td>-4</td>
<td>-0.0023*</td>
</tr>
<tr>
<td>-3</td>
<td>0.0000</td>
</tr>
<tr>
<td>-2</td>
<td>-0.0001</td>
</tr>
<tr>
<td>-1</td>
<td>-0.0007</td>
</tr>
<tr>
<td>0</td>
<td>0.0006</td>
</tr>
<tr>
<td>1</td>
<td>-0.0024*</td>
</tr>
<tr>
<td>2</td>
<td>-0.0009</td>
</tr>
<tr>
<td>3</td>
<td>0.0003</td>
</tr>
<tr>
<td>4</td>
<td>-0.0011</td>
</tr>
<tr>
<td>5</td>
<td>-0.0015</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Event period</th>
<th>CAAR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>[-5, +5]</td>
<td>(-0.0066^{*})</td>
</tr>
<tr>
<td>[-2, +2]</td>
<td>-0.0035</td>
</tr>
<tr>
<td>[-1, +5]</td>
<td>(-0.0057^{*})</td>
</tr>
<tr>
<td>[+1, +2]</td>
<td>-0.0033</td>
</tr>
</tbody>
</table>

Table 5: AAR and CAAR for the overall sample, N=98

*Statistically significant at 10% level, using a two-tailed t-test

**Statistically significant at 5% level, using a two-tailed t-test

***Statistically significant at 1% level, using a two-tailed t-test

By looking at the results from our analysis of the overall sample of 98 securitization transactions, we can conclude that: first, the stock price of the originating companies does react on the announcements about asset securitization and second, the stock price of the originating companies decreases as a result of the securitization announcement on days -4, -2, -1, 1, 2, 4 and 5. Also, the cumulative effect from the securitization announcement is a decrease in the originating companies’ stock prices for all of the chosen event period intervals. For our baseline event period of 11 days, [-5, +5], the shareholders of the originating companies in our sample achieve negative CAAR of \(-0.0066\%\). This means that the stock price of the companies in our sample decreases more than the general market in the days around the securitization announcement. This result also confirms our previous assumption that the consequences from the securitization announcement can be felt not only after the announcement, but also before the securitization announcement.

The result of negative CAARs over the baseline event period is statistically significant at 10% level of significance. In addition, the negative CAAR for the event period intervals [-1, +5] and [+1, +2], of \(-0.0057\%\) and \(-0.0033\%\) respectively, are also statistically significant at 10% level.

Nevertheless, since we previously explained that we will test our hypothesis by using the event period of 10 days, symmetrically distributed around the event day, we can conclude with 90% confidence that we can reject the null hypothesis of no abnormal returns.

The negative effect that the announcement of asset securitization has on the originating companies’ stock price can be better seen from the following figure.
The decrease in the AARs five days before and on the event day can be clearly seen from the kink in the line on day -5 and day 0.

With this analysis we can conclude that the originating companies’ shareholders encounter statistically significant wealth losses in the period around the securitization announcement day.

6.2.1. Controlling for securitization frequency

We continue our analysis by controlling our sample of securitization transactions for the frequency of securitizing to see whether the wealth effects from asset securitization are associated with the frequency of securitizing. More specifically, we test whether the results of the previous analysis are associated with securitization frequency. We will compare the abnormal returns of originators that securitize more to those that securitize less and we will try to see whether there is difference in the abnormal returns for companies that securitize more compared to those that securitize less.

We start this analysis by determining the number of securitization transactions performed by each originator in our sample. The frequency of securitization transactions by originator was previously explained with Figure 18. The next step is to partition (to divide) our sample of 98 securitization transactions in two groups: securitization transactions originated by companies that securitize more frequently and securitization transactions originated by companies that securitize less frequently. To do this, we find the median of the number of securitization transactions by originating company (again, see Figure 18) and we divide the sample in two groups: above and below median. The originating companies in the group below the median are considered to be “less frequent” originators and the companies in the group above the median are considered to be “more frequent” originators.
By applying the formulas described in section 5.3., we test our hypothesis and the results can be seen from Table 6. The results are presented for each day of the event period separately and cumulatively for the four selected event period intervals.

<table>
<thead>
<tr>
<th>Event day</th>
<th>Below median - low frequency, N=22</th>
<th>Above median - high frequency, N=76</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AAR (%)</td>
<td>AAR (%)</td>
</tr>
<tr>
<td>-5</td>
<td>0.0015</td>
<td>0.0015</td>
</tr>
<tr>
<td>-4</td>
<td>-0.0059**</td>
<td>-0.0013</td>
</tr>
<tr>
<td>-3</td>
<td>-0.0011</td>
<td>0.0003</td>
</tr>
<tr>
<td>-2</td>
<td>0.0028</td>
<td>-0.0009</td>
</tr>
<tr>
<td>-1</td>
<td>-0.0024</td>
<td>-0.0002</td>
</tr>
<tr>
<td>0</td>
<td>-0.0005</td>
<td>0.0009</td>
</tr>
<tr>
<td>1</td>
<td>-0.0016</td>
<td>-0.0026*</td>
</tr>
<tr>
<td>2</td>
<td>-0.0010</td>
<td>-0.0009</td>
</tr>
<tr>
<td>3</td>
<td>-0.0016</td>
<td>0.0008</td>
</tr>
<tr>
<td>4</td>
<td>0.0016</td>
<td>-0.0019</td>
</tr>
<tr>
<td>5</td>
<td>-0.0061**</td>
<td>-0.0001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Event period</th>
<th>CAAR (%)</th>
<th>CAAR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>[-5, +5]</td>
<td>-0.0144*</td>
<td>-0.0044</td>
</tr>
<tr>
<td>[-2, +2]</td>
<td>-0.0027</td>
<td>-0.0037</td>
</tr>
<tr>
<td>[-1, +5]</td>
<td>-0.0117*</td>
<td>-0.0040</td>
</tr>
<tr>
<td>[+1, +2]</td>
<td>-0.0026</td>
<td>-0.0035*</td>
</tr>
</tbody>
</table>

Table 6: Sample partitioning by frequency of asset securitization transactions

*Statistically significant at 10% level, using a two-tailed t-test
** Statistically significant at 5% level, using a two-tailed t-test
*** Statistically significant at 1% level, using a two-tailed t-test

The first conclusion that we can draw from Table 6 is that it confirms our previous findings. Table 6 shows that the stock price of both, less and more frequent originating companies decreases in the period around the securitization announcement day. For the group of less frequent originators the decrease of the AARs is significant on day -4 and 5, at 5% level of significance, while for the more frequent originators, the negative AAR is significant on day 1, at 10% level of significance.

The results from this analysis are more informative if we look at the CAARs. Less frequent originators earn statistically significant negative CAAR of -0.0144% during the baseline event period [-5, +5]. The negative CAAR of -0.0117% for this group are also statistically significant for the event period [-1, +5]. However, for the group of more frequent originators, the result of negative CAAR of -0.0044%, during the baseline event period, is not statistically significant.

As a result, by using the baseline event period and with 90% confidence, we can reject the null hypothesis of no abnormal returns for the group of less frequent originators, but we cannot reject the null hypothesis for the group of more frequent originators.

Therefore, we can conclude that shareholders of less frequent originators encounter significant wealth losses, while shareholders of more frequent originators encounter
statistically insignificant wealth losses in the period around the securitization announcement day.

6.2.2. Controlling for the industry of originating companies

In this section of our analysis, we analyze whether the wealth effects from asset securitization are industry specific. In other words, we analyze whether the previous results are associated with the industry in which the originating companies operate. We analyze and compare the abnormal returns among the different industries to which the originating companies in our sample belong.

Earlier in this chapter, we showed that the originating companies in our sample mainly operate in two industries; that is the banking industry and “diversified financials” industry (see Figure 19). Companies that operate in these two industries originate 84% of the 98 securitization transactions in our sample. Therefore, we analyze these two industries separately and we put the remaining 16% of the securitization transactions in a third group, “other”.

By applying the formulas described in section 5.3., we test our hypothesis and the results can be seen from Table 7. The results are presented for each day of the event period separately and cumulatively for the four selected event period intervals.

<table>
<thead>
<tr>
<th>Event day</th>
<th>Banking industry, N=60</th>
<th>Diversified financials industry, N=22</th>
<th>Other industries, N=16</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AAR (%)</td>
<td>AAR (%)</td>
<td>AAR (%)</td>
</tr>
<tr>
<td>-5</td>
<td>0.0032**</td>
<td>-0.0025</td>
<td>0.0004</td>
</tr>
<tr>
<td>-4</td>
<td>-0.0007</td>
<td>-0.0032</td>
<td>-0.0072**</td>
</tr>
<tr>
<td>-3</td>
<td>0.0003</td>
<td>-0.0025</td>
<td>0.0024</td>
</tr>
<tr>
<td>-2</td>
<td>0.0009</td>
<td>-0.0008</td>
<td>-0.0026</td>
</tr>
<tr>
<td>-1</td>
<td>-0.0009</td>
<td>0.0018</td>
<td>-0.0032</td>
</tr>
<tr>
<td>0</td>
<td>0.0009</td>
<td>0.0000</td>
<td>0.0001</td>
</tr>
<tr>
<td>1</td>
<td>-0.0013</td>
<td>-0.0044</td>
<td>-0.0036</td>
</tr>
<tr>
<td>2</td>
<td>-0.0011</td>
<td>-0.0037</td>
<td>0.0036</td>
</tr>
<tr>
<td>3</td>
<td>-0.0012</td>
<td>0.0052</td>
<td>-0.0012</td>
</tr>
<tr>
<td>4</td>
<td>-0.0015</td>
<td>-0.0017</td>
<td>0.0010</td>
</tr>
<tr>
<td>5</td>
<td>-0.0028*</td>
<td>0.0023</td>
<td>-0.0017</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Event period</th>
<th>CAAR (%)</th>
<th>CAAR (%)</th>
<th>CAAR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>[-5, +5]</td>
<td>-0.0041</td>
<td>-0.0096</td>
<td>-0.0120</td>
</tr>
<tr>
<td>[-2, +2]</td>
<td>-0.0015</td>
<td>-0.0072</td>
<td>-0.0057</td>
</tr>
<tr>
<td>[-1, +5]</td>
<td>-0.0078**</td>
<td>-0.0006</td>
<td>-0.0050</td>
</tr>
<tr>
<td>[+1, +2]</td>
<td>-0.0024</td>
<td>-0.0081*</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Table 7: Sample partitioning by industry of originating companies

*Statistically significant at 10% level, using a two-tailed t-test
** Statistically significant at 5% level, using a two-tailed t-test
*** Statistically significant at 1% level, using a two-tailed t-test
By looking at the AARs, we can see that banks’ stock price significantly decrease on day -5 and 5, while we do not observe statistically significant negative AARs in the “diversified financials” industry. For the other industries represented in our sample, we observe significant negative AAR on day -4.

Turning to the CAARs, which provide better image and are more informative, we see that all three groups encounter negative CAAR, for each event period interval. The CAAR of -0.0120% for the baseline event period is largest for the “other” group, while it is lesser for the banking and the “diversified financials” industry. However, none of the CAARs during the baseline event period are statistically significant. Moreover, the CAAR of -0.0078% for the event period [-1, +5], for the banking industry is statistically significant at 5% level of significance. The CAAR of -0.0081% during the event period [+1, +2] for the “diversified financials” industry is also statistically significant, but at 10% level of significance.

Since we do not observe any statistically significant result during our baseline event period [-5, +5], we conclude that we cannot reject the null hypothesis of no abnormal returns around the securitization announcement day for each of the three industries.

Therefore, the wealth effects from asset securitization are industry specific, with different industries showing different results. Banks seem to perform better than non-bank financial companies, which in turn perform better than non-finance companies. However, none of the results are statistically significant. Therefore, we can now conclude that the industry to which an originator belongs to does not determine the wealth effects from asset securitization.

6.2.3. Controlling for the volume of the securitization transaction

In this section we control our sample for the volume of the securitization transaction. We analyze if and to what extent are the wealth effects from asset securitization associated to the volume of the securitization transaction. We analyze whether there is difference in the abnormal returns for the shareholders of the originating companies when the securitization transaction is of large volume compared to small volumes. Furthermore, conclusions can be drawn for companies that engage in large volume securitization transactions compared to companies that engage in small volume securitization transactions.

To be able to conduct this analysis, we first partition the sample in two groups: securitization transactions of low volume and securitization transactions of high volume. We do this by finding the median of the volumes of each securitization transaction in our sample of 98. Then, we partition our sample in two groups: below median or low volume securitization transactions and above median or high volume securitization transactions. For each group we run the already known analysis.

By applying the formulas described in section 5.3., we test our hypothesis and the results can be seen from Table 8. The results are presented for each day of the event period separately and cumulatively for the four selected event period intervals.
Table 8: Sample partitioning by volume of asset securitization transactions

<table>
<thead>
<tr>
<th>Event day</th>
<th>Below median - low volume, N=36</th>
<th>Above median - high volume, N=62</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AAR (%)</td>
<td>AAR (%)</td>
</tr>
<tr>
<td>-5</td>
<td>0.0012</td>
<td>0.0016</td>
</tr>
<tr>
<td>-4</td>
<td>-0.0042**</td>
<td>-0.0012</td>
</tr>
<tr>
<td>-3</td>
<td>0.0020</td>
<td>-0.0011</td>
</tr>
<tr>
<td>-2</td>
<td>0.0012</td>
<td>-0.0009</td>
</tr>
<tr>
<td>-1</td>
<td>-0.0022</td>
<td>0.0002</td>
</tr>
<tr>
<td>0</td>
<td>0.0004</td>
<td>0.0007</td>
</tr>
<tr>
<td>1</td>
<td>-0.0013</td>
<td>-0.0030*</td>
</tr>
<tr>
<td>2</td>
<td>-0.0035*</td>
<td>0.0006</td>
</tr>
<tr>
<td>3</td>
<td>-0.0015</td>
<td>0.0013</td>
</tr>
<tr>
<td>4</td>
<td>0.0002</td>
<td>-0.0019</td>
</tr>
<tr>
<td>5</td>
<td>-0.0039**</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Event period</th>
<th>CAAR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>[-5, +5]</td>
<td>-0.0116*</td>
</tr>
<tr>
<td>[-2, +2]</td>
<td>-0.0053</td>
</tr>
<tr>
<td>[-1, +5]</td>
<td>-0.0117**</td>
</tr>
<tr>
<td>[+1, +2]</td>
<td>-0.0048*</td>
</tr>
</tbody>
</table>

The results from Table 8 show that when the securitization transaction is of small volume, the negative AAR on day -4, 2 and 5, of -0.0042%, -0.0035% and -0.0039% respectively are statistically significant. For the securitizations of high volume, statistically significant negative AAR of -0.0030% can be observed only on day 1.

When looking at the CAARs, which are of our interest, we see that the CAARs for the low volume securitization transactions group are negative and statistically significant for almost all event period intervals, except the interval [-2, +2] (the result for this interval was almost statistically significant at 10% level). For the most interesting event period for us, the baseline event period, the CAAR is -0.0116% and significant at 10% level of significance. For the other group of high volume securitization transactions, the CAARs for each event period interval are also negative, but statistically insignificant.

As a result, by using the baseline event period and with 90% confidence, we can reject the null hypothesis of no abnormal returns for the group of low volume securitization transactions, but we cannot reject the null hypothesis for the group above the median.

Finally, we conclude that shareholders of originating companies that engage in small volume securitization transactions suffer significant wealth losses, while shareholders of originating companies that engage in large volume securitization transactions suffer statistically insignificant wealth losses in the period around the securitization announcement day.
6.2.4. **Controlling for the underlying asset type**

In this section we control our sample for the type of underlying asset. We analyze if and to what extent are the wealth effects from asset securitization associated to the type of asset that underlies each securitization transaction. We analyze whether there is difference in the abnormal returns for companies that securitize residential mortgages compared to companies that securitize other types of assets.

The separation of “residential mortgages” and “other asset types” is because the residential mortgages, as underlying assets, largely dominate the Australian securitization market. Residential mortgages as a type of underlying asset also dominate our sample. This can be seen from Table 4, where it is shown that residential mortgages are used as underlying assets in more than 78% of the securitization transactions in the overall sample. Therefore, we divide our sample of 98 securitization transactions in two groups, securitizations of residential mortgages and securitizations of other assets.

By applying the formulas described in section 5.3., we test our hypothesis and the results can be seen from Table 9. The results are presented for each day of the event period separately and cumulatively for the four selected event period intervals.

<table>
<thead>
<tr>
<th>Event day</th>
<th>Residential mortgages, N=77</th>
<th>Other asset type, N=21</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AAR (%)</td>
<td>AAR (%)</td>
</tr>
<tr>
<td>-5</td>
<td>0.0021</td>
<td>-0.0009</td>
</tr>
<tr>
<td>-4</td>
<td>-0.0021</td>
<td>-0.0032</td>
</tr>
<tr>
<td>-3</td>
<td>-0.0005</td>
<td>0.0021</td>
</tr>
<tr>
<td>-2</td>
<td>0.0003</td>
<td>-0.0013</td>
</tr>
<tr>
<td>-1</td>
<td>-0.0005</td>
<td>-0.0014</td>
</tr>
<tr>
<td>0</td>
<td>0.0007</td>
<td>0.0002</td>
</tr>
<tr>
<td>1</td>
<td>-0.0028**</td>
<td>-0.0010</td>
</tr>
<tr>
<td>2</td>
<td>-0.0006</td>
<td>-0.0021</td>
</tr>
<tr>
<td>3</td>
<td>0.0004</td>
<td>-0.0001</td>
</tr>
<tr>
<td>4</td>
<td>-0.0009</td>
<td>-0.0019</td>
</tr>
<tr>
<td>5</td>
<td>-0.0011</td>
<td>-0.0028</td>
</tr>
<tr>
<td></td>
<td><img src="#" alt="Table 9" /></td>
<td><img src="#" alt="Table 9" /></td>
</tr>
</tbody>
</table>

Table 9: Sample partitioning by type of underlying asset

*Statistically significant at 10% level, using a two-tailed t-test

** Statistically significant at 5% level, using a two-tailed t-test

*** Statistically significant at 1% level, using a two-tailed t-test

Table 9 shows that the originating companies’ stock price decreases in each day of the event period. However, none of the negative AARs is statistically significant, except the negative AAR of -0.0028% on day 1 in the group of securitization transactions where residential mortgages are used as underlying asset.
To obtain more quality information about the AAR around the securitization announcement day, we now observe the CAARs. The result is similar. All the CAARs are negative, but none of them are statistically significant, except the negative CAAR of -0.0033% for the event period [+1, +2] in the group of securitization transactions where residential mortgages are used as underlying asset. For the event period of our interest, [-5, +5], we observe statistically insignificant negative CAARs for both groups.

Based on the results from our analysis of the baseline event period, we conclude that we cannot reject the null hypothesis of no abnormal returns for both, securitization transactions backed by mortgages and securitization transactions backed by other types of assets.

Therefore, our analysis shows that the wealth effects from asset securitization are not associated to the type of asset being securitized. The type of asset being securitized does not play any role in the determination of the wealth effects from asset securitization.

6.2.5. **Controlling for the quality of the underlying assets**

In this section, we control our sample of 98 securitization transactions for the quality of the underlying assets. Our intention is to test whether and to what extent the wealth effects from asset securitization are associated and determined by the quality of the assets on the originating companies’ balance sheets. We analyze whether there is difference in the abnormal returns for companies with high asset quality compared to companies with low asset quality. In section 4.8., we explained how asset quality is measured. We explained that to measure asset quality, we find the portion of low-quality assets as a percentage of all underlying assets with the following ratio:

\[
\frac{\text{Principle of subordinated tranche}}{\text{Principle of all tranches in a securitization transaction}}
\]

After calculating this ratio for all securitization transactions in our sample, we find the median of the 98 ratios. By doing this we are able to partition the sample into two groups, below and above the median. If a securitization transaction falls in the group below the median, it means that small portion of the underlying assets is of low quality. Therefore, the originating companies in this group have high-quality assets. On the other hand, if a securitization transaction falls in the group above the median, it means that large portion of the underlying assets is of low quality. Therefore, the originating companies in this group have low-quality assets.

By applying the formulas described in section 5.3., we test our hypothesis and the results can be seen from Table 10. The results are presented for each day of the event period separately and cumulatively for the four selected event period intervals.
Table 10 reveals quite interesting results. For high asset quality originators, the results are mixed, with both stock price increases and decreases during the 11-day event period. None of the AARs are statistically significant, except the positive AAR of 0.0035% on day -5, which is statistically significant at 10% level of significance. On the other side of Table 10, we have the AARs for originators with low asset quality. For this group we observe stock price decreases on every day of the event period. Moreover, the negative AAR of -0.0047% on day -4 is statistically significant at 1% level, the negative AAR of -0.0029% on day 1 is statistically significant at 10% level and the negative AAR of -0.0030% on day 2 is significant at 5% level of significance.

Even more intriguing results can be seen by the second panel in Table 10. The CAAR for the baseline event period, for the group of high asset quality originators, is positive i.e. 0.0013%. For the other event period intervals, the CAARs are negative. However, none of the CAARs for this group are statistically significant.

On the other side, the CAAR for the baseline event period, for the low asset quality group is negative at -0.0149%. Moreover, it is statistically significant at 1% level of significance. The CAAR of -0.0058% for the event period interval [+1, +2] is also significant at 1%. The CAARs for the remaining two event period intervals, for this group, are also significant, but at 10% level of significance.

Based on the results in Table 10 for the baseline event period, we cannot reject the null hypothesis of no abnormal returns for the group of originators with high asset quality.
However, by using the baseline event period [-5, +5] and with 99% confidence, we reject the null hypothesis of no abnormal returns for the group of originators with low asset quality.

Finally, our analysis shows that shareholders of originating companies with high asset quality earn insignificant wealth gains, while shareholders of originating companies with low asset quality suffer strongly significant wealth losses in the period around the securitization announcement.
Chapter 7: Conclusion

7.1. Discussion of findings

Like previously stated in section 4.8., our whole study is based on the assumption that the theoretical advantages of asset securitization, explained in section 2.5., should bring wealth gains to the originating companies’ shareholders. On the other hand, the theoretical disadvantages of asset securitization should result in wealth losses.

First, the results from the analysis of the overall sample show that the stock price of securitizing companies decreases as a result of an announcement about a securitization transaction. The shareholders of the originating companies suffer statistically significant negative CAARs in the period around the securitization announcement day, which means they encounter wealth losses.

Therefore, the results from our analysis show that market participants do not consider asset securitization as additional funding source and as liquidity enhancing. Our results, also, suggest that investors do not perceive asset securitization as a mean to transfer and reduce risk or as process that brings capital savings, through avoidance of the regulatory capital requirements. Moreover, our results suggest that, in practice, asset securitization does not lead to separation of functions and does not allow companies to focus on their comparative advantage. Also, information asymmetry is not reduced and the underinvestment problem is not mitigated. Instead, our results suggest that market participants consider asset securitization to be complicated process where distorted incentives and agency problems at many levels occur. These problems are mainly related to the obligation to monitor the performance of the asset pool. Furthermore, the negative wealth effects can be explained with the subsequent asset quality deterioration argument. Investors, also expect that originating companies will relax their credit standards after the securitization transaction, which will lead to origination of low quality assets. Investors do not consider asset securitization as a mean to transfer risk; instead they interpret the securitization decision as taking additional risk, in the form of reputational risk. Furthermore, our analysis provides sufficient evidence to believe that investors see the securitization decision as a tool to manage earnings, before the end of the reporting period. This result is in line with Dechow & Shakespeare (2009) and Farruggio et al. (2010). Another explanation for our results is that investors view the securitization decision as unfavorable information regarding the originator’s funding ability and as indication of financial distress.

The results from our study are not in line with Lockwood et al. (1996), Thomas (1999), Gasbarro et al. (2005), Franke & Krahnen (2006), and Liu (2007). In all these studies, the authors find that asset securitization brings positive abnormal returns to the originating companies’ shareholders, resulting in wealth gains. However, our results are in line with Thomas (2001) and Farruggio et al. (2010).

Second, the results show that the wealth losses for less frequent originators are significant and are greater compared to the wealth losses for more frequent originators. We explain this result with the argument used by Thomas (2001), that frequent securitizing companies
should not experience any wealth change because the market would already have priced the originator’s equity. He expects wealth changes only for companies that securitize for the first time, if the securitization was less than fully expected by the market. Also, the argument used by Gasbarro et al. (2005) can be used here. Banks use asset securitization for reputation building. The authors argue that banks with continuing history of securitizations have strong financial position and provide credit enhancement even when they are not legally obliged to do so, just to preserve their reputational capital. That is why the wealth effects for more frequent originators are expected to be smaller. On the other hand, asset securitization by less frequent originators is viewed by the market as addressing funding disadvantage and as a signal of financial distress. The results from our analysis are not in line with Thomas (1999), Thomas (2001) and Gasbarro et al. (2005), in terms of the direction of the stock price movement. In these studies, the authors find that wealth gains accrue to shareholders of more frequent originators. However, our results are consistent to some point: the wealth effects for more frequent securitizers are better than for less frequent securitizers, meaning that the wealth gains are greater and the wealth losses are smaller for more frequent originators. In terms of the direction, positive or negative, of the wealth effects, our results are in line with Lui (2007) and Farruggio et al. (2010). These authors find that wealth losses are associated with higher securitization frequency, which cannot be observed in this study.

Third, our analysis shows that the industry in which the originating companies operate does not determine the wealth effects from asset securitization. We find no statistically significant results and the wealth losses in each industry can occur simply by chance. However, if we take a look at the size of the negative CAARs, we can see that the negative CAARs for non-finance companies are higher than for non-bank finance companies, which in turn are higher than the negative CAARs for banks. Banks seem to suffer the least. This finding can be partially explained with the argument used by Greenbaum & Thakor (1987) that banks securitize their best assets and that this leads to asset quality deterioration. According to the authors, banks should experience wealth loss at the time of the securitization announcement because of the asset quality deterioration. Banks in our sample do experience losses, but compared to the other industries they perform much better. Furthermore, our findings can partially be explained with the argument used in Thomas (1999) that non-bank companies have funding disadvantage compared to banks and that is why asset securitization by a non-bank company should be better received by the market. As our results show, asset securitization by a non-bank company is not better received by the market. Instead, the market sees the funding disadvantage as sign of financial problems and maybe distress. Our findings can be explained with the argument in Thomas (2001) that asset securitization can alleviate regulatory burden, even though in that study the author finds that asset securitization is associated with wealth gains. Nevertheless, the author finds that banks’ shareholders experience greater wealth gains than shareholders of other financial and non-financial institutions. This is consistent with our results, in the sense that wealth effects from asset securitization are much more beneficial for the banking industry than for the other industries. In this view, our results are also consistent with the findings in Liu (2007), who finds that banks benefit most from asset securitization.
Overall, our finding that the wealth effects are industry specific is in line with Lockwood et al. (1996), Thomas (1999), Thomas (2001), Liu (2007) and Farruggio et al. (2010). However, the results from the other studies are statistically significant, while ours are not.

*Fourth*, our findings show that shareholders of originating companies that engage in small volume securitization transactions suffer significant wealth losses, while shareholders of originating companies that engage in large volume securitization transactions suffer smaller and statistically insignificant wealth losses in the period around the securitization announcement day.

Thomas (2001) and Liu (2007) also find that investors view large volume issues more favorably than small volumes. However, they find that securitization transactions of large volumes bring positive wealth effects i.e. wealth gains. The wealth effects in this aspect are probably related to the reputation and the company-specific characteristics of the originating companies. Further analysis should be done in order to determine the reasons and the determinants of these results.

*Fifth*, the analysis in section 6.2., shows that the wealth effects from asset securitization are asset specific, but the type of underlying asset does not determine the wealth effects from asset securitization. For the two groups of underlying assets under study, residential mortgages and others, there are negative CAARs around the securitization announcement day, but statistically insignificant. Moreover, the negative CAARs are lower for the group of securitization transactions where residential mortgages are being securitized.

Our finding is in line with Lockwood et al. (1996), but is not consistent with the previous findings in Thomas (2001), who finds that wealth losses are typical and significant for shareholders of originating companies that securitize residential mortgages. Liu (2007), also, finds that the wealth effects are asset specific, with commercial mortgages offering positive stock price adjustment and residential mortgages negative stock price adjustment. Our findings are consistent in that, we also, find that residential mortgages bring negative stock price adjustment, however insignificant. Farruggio et al. (2010), also, find that securitization announcements have significantly negative impact on the originating company stock price when residential mortgages are being securitized.

*Sixth*, our analysis shows that shareholders of originating companies with high asset quality earn insignificant wealth gains, while shareholders of originating companies with low asset quality suffer strongly significant wealth losses in the period around the securitization announcement.

We must mention that other studies do not directly address asset quality as this study. Our study is the first study that addresses asset quality in the way described in section 4.8. and 6.2.5.

We can use the argument in Lockwood et al. (1996) to explain our finding. According to the authors, low financial slack may be viewed as an indication of eroded capital base and financial distress. Additionally, if the bank wants a successful securitization issue, it will have to provide additional enhancement, which will probably be more expensive. Another
possibility for the originator is to reduce the size of the loan portfolio. According to the authors, this is also bad news for investors and negative wealth effects are expected. If we consider a company with little financial slack to be a company with low asset quality, then our findings are in line with Lockwood et al. (1996), who find that strong banks in terms of financial slack experienced significant wealth gain, while weak banks saw significant wealth loss. By using the same logic, our findings are consistent with Liu (2007) also.

According to Thomas (1999), since managers can choose when to securitize, one should expect that managers would wait for the most favorable conditions and therefore a securitization announcement by most healthy firms would be perceived positively by the market, resulting in wealth gain. However, the explanation for the negative wealth effects for the originators with low asset quality is that forced sale of assets by a financially distressed firm should be negatively viewed by the general marketplace. And indeed, it is. We do not know if the companies in our sample are financially distressed. On the contrary, we previously stated that the mortgage loans in Australia are of top quality, with extremely low default rates. That is why we cannot say that the companies with low asset quality are financially distressed. However, our results can be explained with this line of reasoning and asset securitization may be viewed as an indicator of financial difficulties. Despite the assumptions used, the findings in Thomas (1999) are not in line with our findings. His finding of inverse relationship between wealth gains and creditworthiness is explained with the funding disadvantage argument, meaning that the market reacts positively to a securitization by a financially distressed company. This finding is later confirmed in the author’s continuing study in 2001.

If we assume that high asset quality leads to high credit rating, then our findings are also consistent with Gasbarro et al. (2005) who found positive stock price reaction for banks that have high credit rating.

Our findings are partially consistent with Farruggio et al. (2010), because they find that banks with both, high and low portfolio quality, experience significant negative wealth effects.

7.2. Summary

Asset securitization is regarded as one of the most important innovations in the financial world recently. With an impressive growth in terms of volume of issuance, from almost zero to five trillion USD, in a period of 15-20 years, it is one of the most rapidly growing markets in the financial world. Yet, little is known about this, literally invisible market. Many financial professionals, institutions and academics try to theorize and to discover the reasons for and the consequences from this financial phenomenon. Asset securitization is also, one of the reasons for the global financial crisis that started in 2007. Today it is clear, that before the recent financial meltdown, asset securitization was the main source of funding for most of the companies in the financial sector and for almost all of the banks. It is even more obvious, that asset securitization was the main provider of credit in the developed economies.
Because of all of the above, we think that it is very important that we study the reasons, the motivations, the consequences and the effects from this so powerful financial innovation. And it is important to study this phenomenon from as many different aspects as possible.

In this Master thesis, we study the wealth effects from asset securitization. We study how the stock price of securitizing companies reacts to announcements about a pending securitization transaction. We study this topic by using data from Australia.

The baseline results from our analysis show that on average, shareholders of originating companies experience significant wealth losses of -0.0066% in the 10 day period around the securitization announcement day. We can conclude this with 90% confidence. With this result, we conclude that asset securitization is wealth destroying for the shareholders of the originating companies. Therefore, our research question has been answered.

Besides the baseline result; five, additional, major findings emerged:

- Asset securitization is significantly wealth destroying for companies that do not securitize frequently;
- The wealth effects from asset securitization are not determined by the industry in which the originators operate;
- The wealth effects from asset securitization are not determined by the type of the underlying asset;
- Asset securitization is significantly wealth destroying for shareholders of originating companies that engage in small volume securitization transactions, and;
- Asset securitization is insignificantly wealth creating for shareholders of originating companies with high asset quality, but significantly wealth destroying for shareholders of originating companies with low asset quality.

The baseline results from our study suggest that market participants perceive asset securitization unfavorably. They view asset securitization as a complicated process with multi level agency problems. Furthermore, investors’ expectations are that asset securitization leads to subsequent asset quality deterioration. Investors, also expect that originating companies will relax their credit standards after the securitization transaction, which will lead to origination of low quality assets. Investors do not consider asset securitization as a mean to transfer or reduce risk; instead they view the securitization decision as taking additional risk. Furthermore, our analysis provides sufficient evidence to believe that investors expect the securitization decision to be used as a tool to manage earnings. Another explanation for our results is that investors view the securitization decision as unfavorable information regarding the originator’s funding ability and as indication of financial distress.

It is not entirely clear why is a securitization transaction negatively received by the Australian capital market, since the underlying assets are of high quality. We previously
mentioned that the rate of default of the housing loans in Australia is below 1% (see section 3.1., Figure 8). Moreover, Australia has stringent and efficiently enforced regulatory framework concerning asset securitization.

This study gives answers to few questions related to the effects from asset securitization i.e. the wealth effects. It provides evidence as to which of the previously developed theories apply to the Australian market. At the same time, our study contributes to the existing confusion, since some of the findings in this study contradict the findings in the previous studies.

We hope that the findings of this study will be beneficial, not just in the theoretical world, but also in the practical world. By knowing the results of this study and their own characteristics, companies can more easily forecast whether their securitization decision will be wealth creating or wealth destroying for their shareholders.

7.3. Limitation of the study

In the introduction of this Master thesis, we stated that the findings of this study are neither absolute nor final. The findings are not absolute because they only apply on the Australian market and only on the studied sample of 98 securitization transactions and only for the period from 2000 to 2006. Therefore, if other data set or other period is studied, different results could be observed.

The findings of our study are also not final. This means that even for the same securitization market, different results can be observed in the future.

Moreover, our study is subject to several limitations.

First, the wealth effects from asset securitization are largely dependent on the motivations behind the securitization decision and a number of intra-company policies. These are extremely difficult to observe and we cannot know them.

Second, one may argue that our study is time-period biased. This is because we select a specific time period to study. The findings could be significantly different if other time period is studied.

Third, we use shorter estimation period compared to the previous authors that study this topic. The choice of estimation period can seriously affect the results from the analysis.

Fourth, our sample of 98 securitization transactions is dominated by four originating companies. Therefore, the results of our study could be affected by company specific characteristics.

Fifth, we test our hypotheses and we draw our conclusions by using only the baseline event period [-5, +5]. We may observe different results, if another event period is used.
7.4. Contribution

This study tests the practical, real life application of several, previously developed, theories on the Australian market. The analysis offers sufficient evidence that investors do not perceive asset securitization positively, that the market value of securitizing companies decreases because of the securitization decision and that asset securitization is wealth destroying. This study does not generate new theories, but lends practical support to certain theories concerning asset securitization. Therefore, this paper contributes to clarifying several questions about the effects from asset securitization; more specifically the wealth effects on the securitizing companies’ shareholders.

This study, also, makes practical contribution. Because of its importance, asset securitization affects many groups of stakeholders. Managers, shareholders, investors would all be interested in the results from this kind of study. By using the results of this study and the company specific characteristics, managers of companies with high-quality assets know that their securitization decision will most likely have positive impact on the company’s stock price. On the other hand, managers of companies with low-quality assets know that their securitization decision will certainly have negative impact on the company’s stock price and market value. Shareholders, also, know what to expect when they vote for or against asset securitization. Investors will also benefit from this study. For example, investors will probably want to avoid investing in companies that are less frequent securitizers or that engage in small volume securitization transactions. Finally, having the results of this study enables all stakeholder groups to more easily shape their expectations and forecasts about the market value of securitizing companies.

The importance of asset securitization for the global financial stability is emphasized in this study. This paper offers extensive and detailed description of the process of asset securitization, its advantages and disadvantages and the necessary reforms that should take place in the future. Therefore, with this paper we contribute towards the education on the financial phenomenon. Education is one of the most important reforms that will have to take place in the future, in order to restart the securitization markets around the world and to restore the lost confidence.

7.5. Suggestion for future research

With this study we study only one aspect of asset securitization, more specifically the wealth effects from it. As can be seen from the overall Master thesis, asset securitization is complicated topic and studying it requires taking a lot of variables into account. Besides studying the wealth effects from asset securitization, a number of issues deserve the attention of researchers in the finance community. Here we will suggest few ideas for studying asset securitization.

More studies should be conducted on a country level. That way we can see whether the wealth effects from asset securitization are market specific and we can study the reasons for the observed wealth effects more easily.
In this study we showed that the largest amount of securitization transactions occur before the end of the reporting period, which could be seen as an indication of earnings management. Even though some studies have been conducted in this area, it is our belief that more analysis should be done.

Furthermore, since most of the authors and the professionals have favorable view towards asset securitization, regulators should definitely pay additional attention to the regulation concerning asset securitization, in order to allow companies and the overall economy to benefit from this financial innovation, but at the same time to prevent another financial turmoil.

Further research should be done on the motivations behind the decision to securitize assets. This is probably the most difficult area to research, but efforts should be made in this direction because discovering the motivations for asset securitization would make all the other issues related to this phenomenon more understandable.
References:


[Retrieved: April 10, 2011]

[Retrieved: June 13, 2011]


http://www.securitization.net/pdf/legalissaus.pdf  
[Retrieved: July 24, 2011]


<www.ABSPerpetual.com>  [Retrieved: June, 2011]


Appendix 1: List of securitization transactions

<table>
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<tr>
<th>Number</th>
<th>Transaction name</th>
<th>Originator by ASX code</th>
<th>Asset Type</th>
<th>Original Balance (AUD)</th>
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<td>Repacks - ABS</td>
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<td>Repacks - ABS</td>
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