



Hedge funds, CDOs and the financial crisis: An empirical investigation of the “Magnetar trade”

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Abstract

The so called Magnetar trade (a kind of capital structure arbitrage on the US housing market, using CDS and synthetic CDOs, and exploiting rating-dependent mispricing of risk) has gained a high publicity due to a Pulitzer Prize awarded media story from two journalists of ProPublica (an online news outlet). The story essentially claimed that the mortgage investment strategy of the hedge fund Magnetar during the period between 2006 and mid 2007 was based on a desire to construct CDO deals with riskier assets so that they could place bets that portions of their own deals would fail. This paper provides several pieces of evidence in line with the argument that tranches from Magnetar-sponsored CDOs present overly risky investments. However, investors and rating agencies appear to have adjusted their required spread levels and ratings to reflect this higher riskiness, at least to some extent.

Highlights

► The Magnetar trade is an arbitrage strategy on the US housing market, using CDOs. ► The hedge fund Magnetar presumably helped creating CDOs that are designed to fail. ► The paper provides evidence that Magnetar-sponsored CDOs are indeed overly risky. ► Initial tranche ratings and yield spreads reflect this higher riskiness.

Introduction

Structured finance products like collateralized debt obligations backed by asset-backed securities (i.e., ABS-CDOs) have been heavily criticized for being, at least partly, responsible for the origin and intensification of the financial crisis 2007–2009. ABS-CDOs from the 2006–2007 vintage indeed showed particularly high collateral default rates and are commonly named toxic assets (Mählmann, 2012a). The ABS-CDO market experienced a fundamental change during the year 2005, characterized by the

introduction of standardized forms for credit default swap (CDS) contracts on ABS (ABCDS) and for CDS on CDOs later in June 2006.¹ This change boosted the origination of synthetic deals which could be executed much more quickly than cash deals and could be much bigger.² However, the advent of synthetic CDOs produced potential conflicts for CDO collateral asset managers in trying to serve the interests of one type of customers (long investors) who were betting mortgage borrowers would continue to make their payments and of other customers (short investors) who were betting the housing market would collapse. Even the incentives of long investors could become conflicted. Synthetic CDOs enabled sophisticated investors to place bets against the housing market or pursue more complex trading strategies, like capital structure arbitrage. In this type of strategy, investors, usually hedge funds, often used CDS to take offsetting positions in different tranches of the same CDO security (i.e., going long the equity tranche and shorting mezzanine and senior tranches). That way, they could make some money as long as the CDOs performed, but they stood to make more money if the entire market crashed. Synthetic ABS-CDOs were a particular promising vehicle for capital structure arbitrage, due to a general mispricing of risk observed in the CDO market, with equity tranches being undervalued and more senior tranches being overvalued.³ This mispricing leads to equity tranches providing relatively high expected returns that, in turn, could be used to finance cheap credit protection on mezzanine and senior tranches.

The prevalence of this arbitrage strategy is evidenced by the numbers shown in Fig. 1. Based on data from a survey of more than 170 hedge funds encompassing over \$1.1 trillion in assets as of early 2010, conducted by the Financial Crisis Inquiry Commission (FCIC), the figure shows that by December 2006, an average medium-size hedge fund (with AUM of around \$6 billion) held \$400 million in equity and lower-rated tranches from ABS-CDOs. These long positions, however, were more than offset by almost \$1 billion in short positions. Obviously, equity investors holding larger short positions in the same deals do not have a great incentive to monitor the credit risk of the underlying portfolio. In particular, a common argument is that hedge funds, by financing the equity tranche, helped creating deals that are designed to fail. This argument is widely connected with the name of the hedge fund Magnetar. Magnetar or the “Magnetar trade” gained high public attention due to two prominent media articles. In particular, motivated by an earlier story in the Wall Street Journal (see Ng and Mollenkamp, 2008), in April 2010 reporters Jesse Eisinger and Jake Bernstein from ProPublica (an independent non-profit newsroom that produces investigative journalism) wrote a story regarding Magnetar’s mortgage CDO investment strategy that was active from 2006 to 2007.⁴ The story essentially claimed that Magnetar “sponsored” mortgage-backed CDOs by agreeing to buy/finance the equity tranche, and then shorted (bet against) mezzanine tranches of those (and similar) CDOs by buying CDS that insured the CDO tranches.

ProPublica raised two main points for criticism. First, by helping to create new mortgage ABS-CDOs just at a time (2006) when the US housing market started to level off and to subsequently decline, Magnetar expanded the exposure to losses when the housing market finally collapsed and exacerbated the impact of the collapse on the financial system and the economy. According to data from ProPublica (see Bernstein et al., 2010), between May and December 2006 Magnetar sponsored mezzanine ABS-CDOs (i.e., CDOs backed by RMBS collateral rated BBB on average) with a total deal balance of \$26.1 billion, and of \$8.8 billion between January and July 2007. These numbers represent 39.0% of the overall mezzanine ABS-CDO market in the former period and 18.6% in the later. Second, the ProPublica article asserted that Magnetar in effect acted as the collateral selection agent in the CDOs it helped creating, and pushed the collateral manager to include the riskiest assets.⁵ This last point is also the subject of several lawsuits concerning Magnetar CDOs.

In the first one, the Dutch bank Rabobank sued Merrill Lynch in June 2009 over a deal called Norma CDO I, a \$1.5 billion CDO that went bust within a year of its creation in 2007 and in which Magnetar was the equity investor. According to FCIC (2011, p. 192): “Court documents indicate that Magnetar was involved in selecting collateral, and that NIR [the collateral manager] abdicated its asset selection duties to Magnetar with Merrill’s knowledge.” The case eventually settled for an undisclosed amount in August 2010. In a related case, the SEC charged JP Morgan over another Magnetar CDO, Squared CDO 2007-1 (see SEC, 2011). The SEC alleged that JP Morgan structured and marketed this CDO without informing investors that Magnetar helped select the assets in the CDO portfolio and had a short position in more than half of those assets. The SEC also separately charged Edward S. Steffelin, who headed the team at the deal’s CDO manager, GSC Partners, responsible for the deal. On June 21, 2011, the SEC announced that JP Morgan will pay \$153.6 million in order to settle the charges.⁶ Fig. 2 presents a round-up of all charges, settlements, and investigations involving Magnetar deals. Magnetar itself has never been charged with wrongdoing, and it has always maintained that it did not have a strategy to bet against CDOs it was involved with. But in May 2012, the Wall Street Journal (see Eaglesham, 2012) reported that Magnetar now is a target of an investigation by the SEC.

This paper provides a first empirical analysis of the Magnetar trade. Based on a sample of 275 ABS-CDOs, originated between 2006 and mid 2007, of which 14 were sponsored by Magnetar, the paper tests for the existence of systematic differences between Magnetar and non-Magnetar sponsored deals and whether important deal participants like investors and rating agencies were aware of the detected differences. The main findings are as follows. First, controlling for deal characteristics, issue quarter, trustee and underwriter fixed effects, collateral pools of Magnetar deals show a significantly higher overall default rate than the pools of their non-Magnetar peers. For example, conditional average collateral default rates are about 23.3–26.5% higher for Magnetar deals, and average collateral ratings are 2.4 notches closer to default. Second, these risk differences also exist within several distinct collateral asset classes. Hence, the higher riskiness of Magnetar deals is not due to asset specialization. Third, I find (weak) evidence that investors demand a (price) discount on debt tranches sold by Magnetar deals. Fourth, tranches from Magnetar CDOs receive on average higher (i.e., closer to default) ratings at origination. And finally, examining the time to an event of default for all of Magnetar’s 28 sponsored deals and the control sample, I find that Magnetar deals have significantly higher default hazards, estimated using a Cox proportional hazard specification. In sum, this is strong evidence for Magnetar deals being indeed riskier than their peers from the same vintage, in line with ProPublica’s claim. Even if this certainly does not prove that Magnetar selected the collateral assets for its deals, it points to an (unknown) mechanism making Magnetar deals high risk investments for “long only” investors. That said, however, it is hard to think of any plausible explanation, other than deliberate selection of risky assets that would account for the results of this paper.

The rest of the paper is organized as follows. Section 2 presents background information on the Magnetar trade. Section 3 describes the data and provides summary statistics for important deal characteristics. Section 4 presents the main empirical results concerning risk differences between Magnetar and non-Magnetar deals. It also focuses on pricing and rating of issued (non-equity) tranches and shows several robustness checks. Section 5 concludes.

Section snippets

The Magnetar trade

In a letter to its investors (Magnetar, 2010a, p. 2), Magnetar describes its mortgage CDO strategy as follows: "... Magnetar's strategy was in essence a capital structure arbitrage. This type of strategy is broadly employed in corporate credit markets, and is based on the relative value between differing components of a company's capital structure (in our case the different tranches or classes of a CDO), and on the supply-demand imbalances which can be exhibited in the pricing of rated and...

Data and descriptive statistics

The data used in this study comes from BARCLAYS CAPITAL LIVE (BCL), a web-based platform that provides access to Barclays (formerly Lehman Brother's) research and fixed income, credit, and equities markets analytics. This database contains detailed surveillance information on virtually the entire population of US ABS-CDOs issued from January 1, 1999 to December 31, 2007. At the end of July, 2010, BCL contains information about 653 ABS-CDO deals. I focus on deals originated between the beginning ...

Deal performance

In a first set of tests I investigate whether the observed differences in deal performance also hold in a multivariate context. My main independent variable of interest, *Magnetar*, takes on the value one for Magnetar-sponsored deals, and zero otherwise. I build a number of control variables (measured at origination) to capture structural features of a deal and initial underlying collateral characteristics that may be correlated with deal performance.

Obviously, the quality of a CDO's collateral...

Conclusion

The results presented here are in line with the general claim that the introduction of single-name credit derivatives (i.e., CDS on ABS and CDS on CDO tranches) changed the nature of the CDO market by creating possibilities for conflicting interests. For example, it could be argued that since the beginning of 2006 synthetic CDOs were mainly initiated by investors who wanted to short the US residential mortgage market on a large scale (like Paulson in Abacus 2007-AC1). Hence, the presence of...

References (26)

T. Mählmann

Did investors outsource their risk analysis to rating agencies? Evidence from ABS-CDOs
Journal of Banking and Finance (2012)

J. Bernstein *et al.*

The Timeline of Magnetar's Deals
(2010)

A.W.A. Boot *et al.*

Security design

Journal of Finance (1993)

M.J. Brennan *et al.*

Tranching and rating

European Financial Management (2009)

J. Coval *et al.*

The economics of structured finance

Journal of Economic Perspectives (2009)

J. Coval *et al.*

Economic catastrophe bonds

American Economic Review (2009)

D. Duffie *et al.*

Risk and valuation of collateralized debt obligations

Financial Analysts Journal (2001)

J. Eaglesham

SEC probes role of hedge fund in CDOs

The Wall Street Journal (2012)

J. Eisinger *et al.*

The Magnetar Trade: How One Hedge Fund Helped Keep the Bubble Going

(2010)

F.J. Fabozzi *et al.*

Looking beyond credit ratings: factors investors consider in pricing European asset-backed securities

European Financial Management (2012)



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