THE MECHANISMS OF LOAN MARKET EFFICIENCY

M. KONRAD BOROWICZ*

Abstract

This article develops an account of the mechanisms of efficiency of corporate loan markets and the secondary markets in which loans made to corporate borrowers are traded. In our account: (1) professionally informed trading is the primary source of corporate loan market efficiency; and (2) antitrust law is among the principal policy tools that can foster loan market efficiency by policing market participants' efforts to restrict professionally informed traders from accessing information in the loan market. In an efficient loan market, professionally informed traders incorporate information about the erosion of the quality of the underwritten terms into loan prices and prompt corrections in mispricing in primary markets, thereby contributing to the tightening of the terms subsequently offered in primary markets. From a policy perspective, efficient loan markets can help alleviate the concerns around the erosion of underwriting standards that have become widespread in recent years.

Table of Contents

* Assistant Professor, Tilburg Law School, Tilburg University, The Netherlands. Section III is derived from my doctoral dissertation submitted to Columbia University in 2020. For helpful comments that informed the final shape of this article, I wish to thank Katharina Pistor, and my colleagues from the doctoral program at Columbia, in particular, Adi Marcovich Gross, Maya Olga Shanton, Danielle Ayala Chaim, Nofar Yakovi Gan-Or, Frank S. Giaoui and Lihi Yona. This article has benefited from financial support from the European Research Council under the European Union's Horizon 2020 research and innovation program (Grant Agreement No 725798). All mistakes that remain are my own. Email: m.k.borowicz@tilburguniversity.edu.

I. Introduction

In recent years, the terms of lending in the $2.1 trillion syndicated markets[1] have been generous to corporate borrowers, both in price

[1] The syndicated loan market has three main segments: the investment grade market; the leveraged loan market; and the middle market. Bridget Marsh & Tess Virmani, *Loan Syndication and Trading: An Overview of the Syndicated Loan Market* , *in* INTERNATIONAL COMPARATIVE LEGAL GUIDES: LENDING & SECURED FINANCE 2020 1, 1(Thomas Mellor et al. eds., 2020).

and non-price terms.[2] This development, most pronounced in the leveraged segment of the market,[3] suggests to many academic researchers and policymakers alike that borrowers do not compensate lenders adequately for the lenders' risks.[4] Alternatively, it suggests that lenders are taking on excessive risks.[5] In the past, the policy solutions for addressing the erosion of underwriting standards sought to define the standards qualitatively and encourage lenders to follow them. The

[2] The interest rate is the main price term of a credit agreement. The interest rate represents the cost at which the borrower obtains the funds. The erosion of price terms in credit agreements is typically measured by looking at the spread between the average interest rate and a benchmark rate, such as the London Interbank Offered Rate (LIBOR), representing the cost of funds for the lender. For a discussion of the erosion of price terms, *see e.g.* Seung Jung Lee & Blake Marsh, *What's Driving Leveraged Loan Spreads?*, MACRO BULLETIN OF THE FEDERAL RESERVE BANK OF KANSAS CITY 1, 1 (2019) ("Syndicated loan spreads have declined since the financial crisis, reducing the cost of credit for corporate borrowers.").

The non-price terms of a credit agreement include, in particular, covenants. Covenants in corporate credit agreements are eroding in two ways. First, credit agreements increasingly require that the borrower only complies with the covenants when it undertakes certain actions, such as when incurrence of new debt or payment of dividends, rather than on a continuous basis. *See e.g.,* Edison Yu, *Measuring Cov-Lite Right*, BANKING TRENDS (Fed. Rsrv. Bank of Philadelphia, Philadelphia, Pa.), 2018 at 6. (relying on presence of maintenance covenants as a measure of covenant strength). Second, the scope of covenants is being increasingly limited through various exceptions and deductibles in the credit agreements. *See* Victoria Ivashina & Boris Vallee, *Weak Credit Covenants* (Nat'l Bureau of Econ. Rsch., Working Paper No. 27316, 2020), https://www.nber.org/system/files/working_papers/w27316/w27316.pdf.

[3] In the leveraged market, loans are made to companies seeking to refinance existing debt, finance acquisitions or leveraged buyout (LBO), or fund projects and other corporate endeavors, such as dividend recapitalizations. Marsh & Virmani, *supra* note 1, at 1.

[4] Ivashina & Vallee, *supra* note 2, at 28 (suggesting that weak covenants are not priced at issuance).

[5] *Cf.* Lee & Marsh, *supra* note 2, at 1. ("The combination of aggressive loan pricing and weaker credit protections has concerned market observers. We find that syndicated loan spreads have declined across loan and borrower types since the crisis. We also find the decline has been more pronounced for highly leveraged borrowers and has accelerated since 2016, especially for term loans").

Interagency Guidance on Leveraged Lending Activities of 2013 (Guidance) was the key policy tool adopted for that purpose.[6]

Nevertheless, the Guidance did not achieve the desired result, at least in part because of its non-binding character.[7] Alternative proposals for binding measures advanced more recently represent an unprecedented interference with the freedom of contract.[8]

Against the backdrop of the limitations of the existing proposals to curb excessive risk-taking by lenders to the corporate sector,[9] this article highlights the role of efficiency within the loan market as a possible solution to the erosion of underwriting standards. If loan markets were efficient, loan prices should incorporate information about the quality of the loan terms offered to borrowers in the primary market. In particular, the relevant information to be incorporated in loan prices would concern the limitations of disciplining borrowers through a

---

[6] *See* DEPT. OF THE TREASURY, OFFICE OF THE COMPTROLLER OF THE CURRENCY, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM & THE FEDERAL DEPOSIT INSURANCE CORPORATION, INTERAGENCY GUIDANCE ON LEVERAGED LENDING ACTIVITIES (2013), http://www.fdic.gov/news/news/press-/2013/FR-LL-Preamble-and-Guidance.pdf [hereinafter "2013 LEVERAGED LENDING GUIDANCE"].

[7] In October 2017, the United States Government Accountability Office issued an opinion determining that the Guidance constituted a 'rule' under the Congressional Review Act. The classification of the Guidance as a rule makes it subject to scrutiny by the House of Representatives and the Comptroller General, and requires the issuer to submit to these agencies a report outlining the goal. "No such report was submitted in the case of the 2013 Guidance, because the Agencies determined that it did not amount to the promulgation of a rule." As Wicks noted, "[i]n the absence of the required submissions accompanying a new rule, the 2013 Guidance would appear to have the status of an invalidly promulgated rule that has no effect." Ronan Wicks, *The US Government Accountability Office Determines That 2013 Leveraged Lending Guidance Is a Rule*, SHEARMAN & STERLING (Oct. 26, 2017), https://www.shearman.com/perspectives/2017/10/us-governme-nt-office-2013-leveraged-lending-rule.

[8] *See* discussion *infra* Section V.

[9] *But see* Sooji Kim, Matthew C. Plosser & João A.C. Santos, *Macroprudential policy and the revolving door of risk: Lessons from leveraged lending guidance*, 34 J FIN. INTERMEDIATION 17–31 (2017) (arguing that the guidance was effective at reducing banks' leveraged lending activity, but it is less clear whether it accomplished its broader goal of reducing the risk that these loans pose for the stability of the financial system.)

particular set of covenants that flows, for example, from opportunistic interpretations of covenants by borrowers.[10]

There is some evidence that loan prices are incorporating that type of information.[11] Consider the case of the opportunistic debt restructuring of the American fashion retailer, J. Crew.[12] As part of its restructuring in 2017, the company's management reused the collateral securing its existing debt to issue new debt. The management and its counsel justified the strategy through an aggressive reading of the covenants, which took J.Crew's existing secured creditors, and the loan market at large, by surprise. [13]

In J. Crew's case, "[w]e observe a significant drop in the loan price" occurring after the publicization of information about the J. Crew maneuver.[14] Economists who have studied the case find that "[t]he magnitude of this drop is large, in the 10 percentage point magnitude, which suggests that the dilution of collateral is acute, leading to a lower recovery rate, in a context of high bankruptcy risk."[15]

The significant change in J. Crew's loan prices in secondary markets, and changes in the prices of loans of other borrowers who engaged in similar activities detrimental to the lenders' recoveries,[16] together suggest that loan markets react to the quality of the underwritten terms. This article argues that so long as prices in secondary markets incorporate information about the quality of the underwritten terms, they can correct mispricing in primary markets and perhaps even tighten the terms going forward.

The argument about the crucial role of loan market efficiency for underwriting standards is an extension of the argument made by Professor Whitehead, who, already a decade ago, argued that in contemporary capital markets, "a firm's decision to borrow must increasingly take into account change in the credit market beyond the traditional bank-

---

[10] Charles K. Whitehead, *The Evolution of Debt: Covenants, the Credit Market, and Corporate Governance*, 34 J. CORP. L. 38 (2009).
[11] Ivashina & Vallee, *supra* note 2, at 4.
[12] *Id.*
[13] *Id.*
[14] *Id.* at 21.
[15] *Id.*
[16] Prices of loans of other borrowers engaging in opportunistic interpretations, such as TriMark USA, a distributor of restaurant equipment and supplies, have also moved dramatically following such interpretations. William Cohan, *Lender civil warfare pierces credit euphoria*, FINANCIAL TIMES (NOV. 18, 2020), https://www.ft.com/-content/9be0794a-f107-449f-845c-edf07ae94fbf.

borrower relationship that underlies the standard framing of the firm."[17] His main argument was that secondary market prices can act as disciplining devices.[18] If the borrower does something that could undermine the value of the lenders' claim, such as engage in an opportunistic interpretation of the covenants in its credit agreement, the price of its loan will trade down, and presumably that will impact future terms of its credit agreements.

However, thus far, neither literature in law nor economics has offered an account of the mechanism of loan market efficiency, or how loan markets incorporate new information. To my knowledge, this article develops the first account of the mechanisms of loan market efficiency to address this gap in the literature. Building on the accounts of efficiency of markets for equities[19] and derivatives[20], this article argues that professionally informed trading, which incorporates information about the quality of the loan terms offered to borrowers, is the primary source of loan market efficiency.

The examination of the mechanisms of loan market efficiency offered in this article suggest that institutional limitations exist on access to information for professionally informed traders. The existence of these market *in*efficiency mechanisms contradicts the view that loan markets can be efficient without regulation.[21] Law and economics scholars have historically been skeptical about the impact of securities legislation on market efficiency.[22]

Nevertheless, that skepticism has been rebuffed by studies that suggest disclosure matters for informed traders.[23] This article argues that the same is true for loan markets. Even though loan markets have

---

[17] Charles K. Whitehead, *The Evolution of Debt: Covenants, the Credit Market, and Corporate Governance*, 34 J. CORP. L. 641, 644 (2009).
[18] *Id.*
[19] Ronald J. Gilson & Reinier H. Kraakman, *The Mechanisms of Market Efficiency*, 70 VA. L. REV. 549–644 (1984) (focusing on market efficiency for equities).
[20] Dan Awrey, *The Mechanisms of Derivatives Market Efficiency*, 91 N.Y.U. L. REV. 1104–82 (2016).
[21] Elisabeth de Fontenay, *Do the Securities Laws Matter? The Rise of the Leveraged Loan Market*, 39 J. CORP. L. 725–68 (2014).
[22] Gregg A. Jarrell, *The Economic Effects of Federal Regulation of the Market for New Security Issues Consumer Protection Regulation: A Conference Sponsored by the Center for the Study of the Economy and the State*, 24 J.L. & ECON. 613–75 (1981).
[23] Zohar Goshen & Gideon Parchomovsky, *The Essential Role of Securities Regulation*, 55 DUKE L.J. 713–81 (2006).

become more efficient in recent years, professionally informed traders play a crucial role in facilitating informational efficiency in loan markets.[24] When their ability to access information is limited, loan markets will be less efficient.[25] In markets that restrict such access, addressing the problem of the erosion of underwriting standards by imposing qualitative standards on lenders through banking regulation may be the preferable option.

However, in a market where such access is not as restricted, such as the US loan market, regulators can instead focus on facilitating loan market efficiency. By identifying the mechanisms of loan market inefficiency, this article can help lawyers and policymakers leverage existing institutional frameworks to achieve that goal. On the policy side, it argues that the principal institutional frameworks that can help policymakers achieve that goal are securities and antitrust laws.

The remainder of this article is organized as follows:

Section II explains why investors should care about loan market efficiency. Market efficiency is a measure of the speed by which prices incorporate new information about assets.[26] To understand market efficiency, we need to understand how investors price assets and the mechanisms through which prices incorporate new information.[27] Those mechanisms comprise the active efforts of various types of market participants to acquire and analyze information.[28]

For a long time, when examining market efficiency and its mechanisms, the literature focused exclusively on equity markets. Equity capital markets were the largest capital markets.[29]

---

[24] Edward Altman, Amar Gande & Anthony Saunders, *Informational efficiency of loans versus bonds: Evidence from secondary market prices*, 1-2, 5 (N.Y.U., Working Paper, Oct. 2003).

[25] Linda Allen & Aron A. Gottesman, *The Informational Efficiency of the Equity Market as Compared to the Syndicated Bank Loan Market*, 1, 7 (N.Y.U., Working Paper, Aug. 2004).

[26] Michael J. Boyle, *Market Efficiency*, INVESTOPEDIA (Oct. 23, 2020), https://www.investopedia.com/terms/m/marketefficiency.asp [https://perma.cc/GSX7-EP9J] (last visited Sept. 16, 2021).

[27] Mitchell A. Peterson, *The Groucho Marx Theory of Efficient Markets*, NW. KELLOGG SCH. OF MGMT.: KELLOGGINSIGHT (Aug. 2, 2019), https://insight.kellogg.northwestern.edu/article/the-groucho-marx-theory-of-efficient-markets.

[28] *Id.*

[29] As reported by the Securities Industry and Financial Markets Association, equity issuance, including common and preferred shares, totaled $228.1 billion in 2019. SECURITIES INDUSTRY AND FINANCIAL MARKETS ASSOCIATION,

However, in the last 30 years, syndicated lending markets became an increasingly important source of capital for American corporations.[30] Part of the reason for the syndicated lending market's growth was the emergence of the loan markets.[31] There are many similarities between stocks and loans as tradable assets, but also some key differences.[32] The critical difference is that, unlike stock prices, loan prices reflect the value of lender protections or covenants.[33] Covenants may require borrowers to maintain a certain level of financial health (financial covenants). They may also restrict them from undertaking certain activities that could affect the prospect of repayment (restrictive covenants), such as incurring additional indebtedness, incurring liens, or making certain payments. Financial covenants are generally set with the view to ensure a certain level of the borrower's financial health throughout the life of the loan.[34] They are typically be tested periodically (quarterly or semi-annually) effectively requiring borrowers to maintain their covenants throughout the life of the loan.

Restrictive covenants restrict the ability of borrowers do undertake certain actions that could jeopardize the maintenance of financial health by a firm. Historically, restrictive covenants were tested on a *maintenance* basis, i.e., borrowers were restricted from undertaking any activity that could cause the firm to breach its covenants on an ongoing basis. The most common types of restrictive covenants include debt,

---

Capital Markets Fact Book, 2020 8 (2020), https://www.sifma.org/wp-content/uploads-/2020/09/US-Fact-Book-2020-SIFMA.pdf (last visited Feb 5, 2021).

[30] Bridget Marsh & Tess Virmani, "Loan Syndications and Trading: An Overview of the Syndicated Loan Market," in Thomas Mellor (ed.), Lending & Secured Finance Laws and Regulations (2020); Global Syndicated Loans Review, Refinitiv (2019) (In 2019, the volume of syndicated lending in the Americas was $2.7 trillion).

[31] *See* Marsh & Virmani, *supra* note 1.

[32] *Id.*

[33] Michael Bradley & Michael R. Roberts, *The Structure and Pricing of Corporate Debt Covenants*, 5 Q. J. OF FIN. 1, 4 (2015).

[34] Lenders will be focused in particular on the ratio of the borrowers' debt to earnings (typically expressed as a measure earnings before the deduction of interest and tax or EBITDA) commonly referred to as leverage ratio. A high level of leverage may indicate problems with repayment of principal. A fixed charge ratio (expressed as a ratio of EBITDA to interest expense) is another good proxy for cash flow and repayment of interest and is also commonly used in loan agreements.

lien, and restricted payment covenants. Debt covenants restrict the borrower's ability to incur additional debt.[35] Lien covenants restrict the ability of borrowers to secured additional debt.[36] Restricted payment covenants limit the ability of borrowers to make payments outside of the restricted group, i.e., the group of companies to which the covenants apply.[37]

In the last decade, covenant protections have gradually eroded, interestingly, without a corresponding increase in interest rates.[38] The erosion of underwriting standards in corporate credit agreement presents a puzzle. Section III provides an account of the theories explaining the phenomenon of the erosion of underwriting standards. It describes the main features of the syndicated lending market that explain why covenants are eroding and why interest rates do not reflect that erosion by corresponding increases. The three main features are (1) the increased

[35] In this sense debt covenants address the same problem as financial covenants and financial covenants are in fact often use as a metric determining whether a company can incur additional debt. Debt covenants are typically framed as general prohibitions of incurrence, but lenders will typically grant borrowers a number of exceptions or 'baskets' that allow for incurrence of certain types of debt, including debt that is subordinated to claims of the senior lenders, debt incurred for the purpose of refinancing of the lenders' claims, certain guarantees, inter-company debt, debt incurred in connection with an acquisition, debt under hedging agreements and other customary debt baskets. Loan agreements will typically also include general baskets for incurrence of debt, the size of which can be set at a fixed amount or be accretive in the sense of being represented by a certain percentage of EBITDA or total assets and accreting together with increases in EBITDA or total assets.

[36] The concern with borrower's ability to secure permitted indebtedness is that the borrower could establish effective seniority of new debt claims over the competing claims of the existing lenders. Lenders will commonly agree for certain liens existing on the closing date of the transaction to be grandfathered as well as agree to a number of lien baskets, which the borrower will be free to use to secure certain types of indebtedness permitted under the indebtedness covenant.

[37] The concern here is 'leakage' or migration of value outside of the group, which could potentially reduce the amount unrestricted cash. This, in turn, could have an adverse effect on the ability of borrowers to pay interest at the specified interest period date. It is therefore also commonly restricted except for certain customary baskets, such as those for payment of dividends and other distributions typically up to a capped amount.

[38] Gary L. Storck & Mark D. Sheely, *Leveraged Lending: Evolution, Growth and Heightened Risk*, FED. DEPOSIT INS. CORP. 10, 13 (2019).

bargaining power of borrowers, (2) low policy rates of the Federal Reserve, and (3) market fragmentation. The three features of the loan market suggest that the problem of the erosion of underwriting standards, and in particular the mispricing of weak covenants, is driven by long-term trends. In other words, the problems are likely to persist, which makes the need for policy solutions to the problem even more essential.

Section IV explains how secondary markets can help correct mispricing in primary markets. Loan markets can help by incorporating information about the quality of underwriting standards. Still, loan markets' ability to do that depends on investors having access to that information and being able and willing to trade based on that information.[39] Because of the private nature of the loan market, not every investor has access to that information.[40] Furthermore, even those that do may not be able or willing to trade based on that information.[41] Professionally informed investors are most likely to have access to that information, and that is why this article argues that they are the principal mechanism of loan market efficiency.

In the last two decades, loan markets' institutional structure has developed to make professionally informed trading increasingly easier.[42] Nevertheless, there remain institutional barriers to professionally informed trading and, therefore, loan market efficiency.[43] The main barriers are private information and blacklists.[44] There are also operational issues that may reduce the willingness to trade.

Section V outlines the role of the law in facilitating loan market efficiency. Because loans are not securities, securities can only help foster loan market efficiency indirectly by pursuing cases of insider trading

---

[39] Regina Wittenberg Moerman, *The role of information asymmetry and financial reporting quality in debt trading: Evidence from the secondary loan market* 1, 15 (June 2006) (Ph.D. dissertation, UNIV. OF CHI.) (PROQUEST).

[40] *Id.* at 14.

[41] *Id.* at 2.

42 Glen Fest, *Trading of Leveraged Loans in Secondary Markets Nears Record*, AMERICAN BANKER (Nov. 18, 2013), https://www.americanbanker.com/news/trading-of-leveraged-loans-in-secondary-markets-nears-record [https://perma.cc/RT77-PR2D].

[43] Abbie J. Smith & Regina Wittenberg Moerman, *Privileged Lending: Syndicate Loans and Inside Information*, FORBES INDIA (June 28, 2011), https://www.forbesindia.com/article/chicago-booth/privileged-lending-syndicate-loans-and-inside-information/25912/1 [https://perma.cc/LF8M-AFX9].

[44] *Id.*

based on information obtained in the loan market.[45] Antitrust law can have a more direct impact on loan market efficiency by policing market participants' efforts to restrict certain investors from accessing information in the loan markets. This article suggests that a comprehensive review of the syndicated loan markets and the institutional interactions between that market and the secondary market would allow policymakers to identify anticompetitive constraints on loan market efficiency. A recent study of the competitive aspects of the syndicated loan market commissioned by the European Commission is an example of how such a comprehensive review could look, albeit it has its own limitations.[46]

II. Do Loan Market Investors Care About Underwriting Standards?

A. Asset Pricing, Market Efficiency, and Its Mechanisms

While investors have been picking equities for centuries, it was only in the 1950s that financial theory made the powerful algebra of mathematical statistics available for the systematic study of the optimal strategies of portfolio selection.[47]

The publication of Harry Markowitz's article "Portfolio Selection" in the *Journal of Finance* in 1952 was the milestone step in that direction.[48] It was in that article that Markowitz, for the first time, identified equity *returns* with a probability-weighted mean value of outcomes and *risk* with the variability of those returns.[49] Traditionally, investors looked at risk in terms of how much they could lose from their

---

[45] *Id.*

[46] *See* discussion of the study *infra* Section V.B.

[47] Merton H. Miller, *The History of Finance: An Eyewitness Account*, 13 J. APPLIED CORP. FIN. 8–14 (2000).

[48] Harry Markowitz, *Portfolio Selection*, 7 J. FIN. 77–91 (1952).

[49] *See* Merton, *supra* note 44, at 8–14 (discussing the contribution of Markowitz's article to financial theory and investment practice). It is worth noting that Markowitz's paper was originally a PhD thesis in the University of Chicago's economics department. One of Markowitz's PhD committee members, the famed economist Milton Friedman, voted against the thesis initially on the ground that it was not really economics. Indeed, it had a business flavor to it—Markowitz saw investors as actually applying the model to pick their portfolios using a combination of past data and personal judgment to select the needed means, variances, and covariances. *Id.* at 9.

investment.[50] Markowitz saw risk as the variability of returns, which, in his world, could be more or less measured with the use of statistical formulations, thereby reducing the prospect of loss and maximizing returns.[51]

A decade later, William Sharpe, Jack Treynor, John Lintner, and Jan Mossin transformed Markowitz's mean-variance algorithm into an economics department model of enormous reach and power—the Capital Assets Pricing Model (CAPM), which guided investment decisions for an entire generation of investors.[52] The CAPM formula aims to evaluate whether a stock is fairly valued when investors compare its risk and the time value of money to its expected return.[53] To calculate the expected return of investment (*ERi*) using CAPM, the investor takes

- the risk-free rate (*Rf*), representing the time value of money; and adds to it
- a stock's beta *(βi)* representing the market portfolio, such as the S&P 500 index; multiplied by the market risk premium (*ERm−Rf*), representing the return expected from the market minus the risk-free rate.[54]We can represent the CAPM formula as follows:

$$ERi=Rf+\beta i(ERm-Rf)$$

To illustrate how the CAPM can help investors identify a stock's fair value, consider a stock paying an annual dividend of 5%. What is the fair value of the stock? Assume the stock has a beta compared to the market of 1.5, which means it is risker than the market portfolio. Also, assume that the risk-free rate, e.g., the yield on the Treasury bill is 2% and that the investors expect the market to rise by

---

[50] *Id.*
[51] André F. Perold, *The Capital Asset Pricing Model*, 18 J. ECON. PERSP. 3–24 (2004).
[52] William F. Sharpe, *Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk,* 19 J. FIN. 425–442 (1964); John Lintner, *The Valuation of Risk Assets and the Selection of Risky Investments in Stock Portfolios and Capital Budgets*, 47 REV. ECON. STATIS. 13–37 (1965); Jan Mossin, *Equilibrium in a Capital Asset Market*, 34 ECONOMETRICA 768–783 (1966).
[53] *Id.*
[54] *Id.*

3% per year. What is the expected return on the stock? The answer, as per the calculation below, is 3.5%.

$$2\%+1.5 \times (3\%-2\%)=3.5\%$$

To calculate the stock's fair value, the investor can now divide the market's beta (=1)[55] by the difference between the expected return of 0.035 and the expected market growth rate of 0.03 to arrive at 20.

If it is easy to calculate the stock's fair value, why is it so difficult to make money in the stock market? The reason is articulated by Eugene Fama in his famous Efficient Capital Market Hypothesis (ECMH) that suggests that stock prices already fully reflect all publicly available information.[56] Professor Fama developed the ECHM through a review of empirical tests of market efficiency conducted throughout the 1960s.[57] He classified those tests into three forms: (1) weak form tests, in which the information set is just historical prices; (2) the semi-strong, which the concern is whether prices efficiently adjust to other information that is obviously publicly available and finally,(3) strong form concerned with whether given investors or groups have special access to any information relevant for price formation.[58]

The test results suggested that markets in which prices incorporate all publicly available information did not provide any arbitrage opportunities.[59] Such opportunity, however, exists in markets in which investors have access to private information.[60]

---

[55] By definition, beta of the market is equal to 1. The securities with more than average risk will have beta greater than 1, and less risky securities have beta less than 1. On this scale, the beta of a riskless security is zero. Syed Mohammad Faisal & Ahmad Khalid Khan*, Estimating Beta Values of Stocks in the Creation of Diversified Portfolio—A Detailed Study*, 5 J APP. ECON. & FIN. 89 (2018).

[56] Eugene F. Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, 25 J. FIN. 383, 383–417 (1970).

[57] *Id.*

[58] *Id.*

[59] *See id.* (concluding that "with but a few exceptions, the efficient markets model stands up well"); *Arbitrage*, BLACK'S LAW DICTIONARY (2d ed. 1910) (defining arbitrage as taking advantage of a price difference in two or more markets).

[60] *See* James Dow & Gary Gorton, *Arbitrage Chains*, 45 J. FINANCE 819, 819 (1994).

The ECMH was mostly an empirical contribution and seemed almost trivial.[61] Indeed, prominent economic theorists have largely dismissed it.[62] What made the ECMH non-trivial, however, was "its prediction that, even though information is not immediately and costlessly available to all participants, the market will act as if it were."[63] Financial economists have largely failed to identify market efficiency mechanisms because they focused primarily on testing and validating the predictions of the ECMH rather than on the identification of the causal mechanisms through which information is transmitted into prices.[64] Ronald J. Gilson and Rainer Kraakman made this point, further noting that the lack of an account of such causal mechanisms made it difficult for economists to explain how available information is almost immediately reflected in prices even though the processing of information takes time and is costly.[65]

Their account of the causal mechanisms through which information is transmitted into prices focused on how prices move from the existing equilibrium to a new, fully informed equilibrium.[66] Building on different contributions in the finance literature, they identify four such mechanisms:

- universally informed trading,
- professionally informed trading,
- derivatively informed trading, and
- uninformed trading

and described how the four collectively supply the foundations for a definitive account of price formation.[67] In general terms: *universally informed trading* occurs based on publicly available information;

---

[61] *See* Gilson & Kraakman, *supra* note 13, at 552.
[62] *See* Burton G. Malkiel, *The Efficient Market Hypothesis and Its Critics*, 17 J. ECON. PERSP. 59, 72–73 (2003).
[63] Gilson & Kraakman, *supra* note 13, at 552.
[64] *See id.* at 591, 642.
[65] *See generally id*. (finding that financial economists were troubled by the lack of an explanation for market efficiency, especially given the ECMH's prediction that "though information is *not* immediately and costlessly available to all participants, the market will act as *if* it were").
[66] *See id.* at 560.
[67] *Id.* at 565–92 (outlining the four market efficiency mechanisms and how they work together to "explain the incorporation of new information into equilibrium securities prices").

professionally informed trading occurs based on information that can only be comprehended by professional investors; *derivatively informed trading* occurs based on information that was initially available only to certain insiders or specialists but gets subsequently incorporated into new prices, which then form the basis of investment decisions of the "derivatively" informed traders and, finally, *uninformed trading* occurs based on not facts, but rather opinions, judgments or forecasts and in that sense is more or less speculative.[68]

In the account, the four mechanisms neatly "parallel the criterion for partitioning information sets that implicitly informed Fama's trichotomy of weak/semi-strong/strong form tests of market efficiency."[69] Gilson and Kraakman then describe the properties of information markets, which can be characterized by particular transaction costs—information costs, including acquisition costs, processing costs, and verification costs.[70]In their account, "[m]arket participants shape the cost structure of the information market by their efforts to reduce each category of information costs."[71] These efforts may take various forms, including reliance on contractual provisions or information intermediaries.[72] Firms (as issuers of securities) can also help the market reduce these costs by voluntarily revealing or employing various signaling techniques.[73]

The authors also map the variety of information costs onto the relative efficiency continuum.[74] Recall that markets are strong form efficient if prices reflect the information of insiders.[75] Here, information costs are very high.[76] Concerning semi-strong form efficiency,

Co-operative efforts frequently reduce the total costs of acquiring information in this region and also achieve economies of scale and scope in processing costs, often through the services of information intermediaries such as financial analysts. Moreover, the availability of verification techniques that rely on the cooperation of originators of information now make economizing on verification costs more effective. These techniques include bonding and hostage strategies, the

---

[68] *See id.* at 589.
[69] *Id.*
[70] *See id.* at 593–95.
[71] *Id.* at 595.
[72] *Id.* at 600–02.
[73] *Id.* at 603.
[74] *See id.* at 608.
[75] *Id.* at 607.
[76] *Id.*

use of third party verifiers like certified public accountants, and the good offices of intermediaries such as rating services and financial intermediaries.[77]

Finally, the weak form efficiency corresponds to a low information cost environment consistent with the form of information typically associated with weak form efficiency, namely, historical price information. This information is an ordinary byproduct of market trading: the organized securities exchanges produce it as a routine service, and the financial press serves to collectivize its low cost dissemination.[78]

The core of Gilson's and Kraakman's analysis is that "the cost of information critically determines market efficiency because it dictates not only the amount of information attending a particular security but also the distribution of that information among traders, which in turn determines the operative capital market mechanism."[79]

B. Leveraged Lending and the Loan Market

Traditionally, investors reserved the application of CAPM for *equity markets*.[80] The idea that investment represents a risk, rather than the variability of returns persisted much longer in *debt markets*.[81] Bonds, the paradigmatic debt capital market instrument, represent credit risk, and, for a long time, investors viewed credit risk as something to be avoided, not managed.[82] Bonds also have limited upside potential and hence, as Aswath Damodaran, one of the leading academic authorities on asset pricing, observes, are ill-suited to fit cleanly into the mean-variance framework of asset pricing.[83] Of course, this changes with the increased risk of a bond.[84]

The lower the rating of a bond, the greater the upside potential, and thus, the greater the likelihood that we can estimate bond betas and

---

[77] *Id.*
[78] *Id.* at 609.
[79] *Id.* at 612–13.
[80] *See* Aswath Damodaran, CORPORATE FINANCE: THEORY AND PRACTICE 188 (Susan Elbe et al. eds., 2d ed. 2001).
[81] Scott Page & Payson Swaffield, *An Introduction to the Loan Asset Class*, *in* THE HANDBOOK OF LOAN SYNDICATIONS AND TRADING 3, 5 (Allison Taylor & Alicia Sansone eds., 2007) [hereinafter Page & Swaffield].
[82] *Id.*
[83] Damodaran, supra note 77, at 175 (stating that "the distribution of bond returns cannot be normal, and that the mean-variance framework will generally not work for these investments").
[84] *See id.*

expected returns on them. For a junk bond, for instance, it may be possible to estimate a beta like a stock beta and get an expected return from it.[85]

The same logic applies to corporate loans.[86] Historically, banks originated corporate loans and held them on their balance sheets.[87] Evidence of corporate loan syndication in the United States can be traced back to the late 1970s.[88] However, syndication and trading of loans did not achieve a large scale until the 1990s.[89] From that moment on, the pace of loan market development accelerated quickly—by 1995, trading activity in the loan market was at approximately $40 billion; by the turn of the millennium, it exceeded $100 billion to reach a record $743 billion in 2019.[90] The overwhelming majority of trading occurred and continues to occur in the largest segment of the syndicated market—the leveraged market.[91]

A combination of market and regulatory developments in the 1990s prompted the evolution of loan markets and investors' interest in loans as an asset class.[92] On the market side, it is generally accepted that loan markets developed on the 'back' of acquisition financing in the mid-to-late 1980s.[93] "No single bank could afford to underwrite and

---

[85] Damodaran, *supra* note [X], at 175.
[86] Page & Swaffield, *supra* note 78, at 3.
[87] As Scott Page and Payson Swaffield note describing their experience of joining a lending department of a large New York commercial bank in the 1980s,
[c]ertainly no one was concerned with creating instruments that would trade and be valued in a market. Corporate loans were then, and had always been private, customized contracts between the bank and its customer, not an asset class to be managed using the same portfolio management techniques that are applied to stocks and bonds. Page & Swaffield, *supra* note 78, at 4.
[88]Allison Taylor & Ruth Yang, *Evolution of the Primary and Secondary Leveraged Loan Markets*, *in* THE HANDBOOK OF LOAN SYNDICATIONS AND TRADING 21, 24 (Allison Taylor & Alicia Sansone, eds., 2007) ("Penn Square Bank of Oklahoma's activities at the time have the dubious honor of being the predecessor of pre-1980 syndicated lending.").
[89] *Id.* at 5–6.
[90] MARSH & VIRMANI, *supra* note 1, at 3.
[91] *Id.* at 1. Trading in loans originating in the smaller segments of the syndicated market—the investment grade and middle-market is much smaller.
[92] Page & Swaffield, *supra* note 78, at 7.
[93] *Id.* at 5.

carry the large amount of debt necessary to support the new corporate grail—the LBO."[94]

On the regulatory side, the late 1980s witnessed considerable congressional pressure to limit LBO activity, but regulators faced resistance to clamp down on such activities.[95] In 1989, banking regulators announced that they would afford particular scrutiny to bank involvement in takeover financing.[96] The 1989 Guidelines for Highly Leveraged Transactions captured that sentiment.[97] They made holding risky debt assets of any type, including loans, more expensive, thereby creating the *supply* side in the loan market.[98]

The *demand* for loans came from savings and loans associations, insurance companies, and mutual funds.[99] Nevertheless, high information costs effectively constrained that demand.[100] As Page and Swaffield note,

> [f]ew data on the risk and return profiles of bank loans existed, and the components and structuring features that are taken for granted today were still under development, being tested through trial and error. There was no market pricing or pricing service, no standardized settlement procedures or documentation.[101]

---

[94] Taylor & Yang, *supra* note 38, at 23–24. An LBO is a transaction in which a company, typically a troubled company, is purchased with a combination of equity and significant amounts of borrowed money, structured so that the target's cash flows or assets are used as the collateral to secure and repay the borrowed money. Several LBO firms, such as Kohlberg Kravis Robert, took advantage of the new business model in the 1980s, not without controversy, related mainly to the cost-cutting policies adopted following the LBO completion.

[95] Page & Swaffield, *supra* note 37, at 6.

[96] FEDERAL DEPOSIT INSURANCE CORPORATION, *FDIC Guidelines for Highly Leveraged Transactions*, 4 FED. BANKING L. REP. (1989) [hereinafter Guidelines].

[97] *See id*; Kevin Jacques, *Capital shocks, bank asset allocation, and the revised Basel Accord*, 17 REVIEW of FINANCIAL ECONOMICS 79, 91 (2008) (noting that the capital requirements of the first Basel Accord put further pressure on banks' balance sheets, including on the loans they help).

[98] Guidelines, *supra* note 93; Page & Swaffield, *supra* note 78.

[99] Guidelines, *supra* note 93.

[100] *Id.*

[101] Page & Swaffield, *supra* note 37, at 6.

Another way of putting this is that loan markets were *inefficient*. Loan markets were inefficient in an informational sense in that prices of loans in secondary markets were slow to incorporate new information.[102] Loan markets were also inefficient in an operational sense meaning that the transactions were costly to execute.[103] The primary source of the operational inefficiency, and to some extent, informational inefficiency of loan markets, was their market structure to which we now turn.[104]

C. The Structure of the Loan Market

Unlike stocks, which trade on an exchange, loans trade in the over-the-counter (OTC) markets.[105] As Darell Duffie, one of the principal academic authorities on OTC market structure, notes,

> [a]n OTC market does not use a centralized trading mechanism, such as an auction, specialist, or limit-order book, to aggregate bids and offers and to allocate trades. Instead, buyers and sellers negotiate terms privately, often in ignorance of the prices currently available from other potential counterparties and with limited knowledge of trades recently negotiated elsewhere in the market.[106]

As a result, in many cases, sellers can impose terms on buyers that are likely to be less favorable to them than the terms available on exchanges.[107] Why do then buyers seek to access OTC markets at all? First, certain assets are only or predominantly traded in OTC markets.[108] The infrastructure of exchange markets is costly, and market participants may not be willing to bear that cost if their trading needs in certain

---

[102] Taylor, Market Standards, *supra* note 49, at 68-69; *see generally* Section IV *infra* (discussing the mechanisms through which loan prices incorporate such information.
[103] Page & Swaffield, *supra* note 37, at 6.
[104] *Id.*
[105] DARRELL DUFFIE, DARK MARKETS: ASSET PRICING AND INFORMATION TRANSMISSION IN OVER-THE-COUNTER MARKETS 25 (1st ed. 2012).
[106] *Id.* at 16.
[107] *Id.*
[108] *Id.*

assets are infrequent.[109] Such reluctance is economically justified in the context of customized assets, such as loans and certain derivatives, that tend to trade less frequently than standardized assets, such as stocks.[110]

Second, despite the information asymmetry between sellers and buyers, participation in the private OTC markets may provide individual buyers with the opportunity to obtain information not otherwise available in public markets.[111] For example, information about the price of a loan trading in a secondary market could be an essential source of information about the borrower's credit quality that they may not be able to derive from other sources if the borrower is not a publicly traded company.[112] Under this view, OTC markets provide traders with opportunities for arbitrage.[113]

Notwithstanding these potential benefits, participants in OTC markets face several problems, in particular counterparty risk.[114] From

---

[109] *Id.* at 5. ("In any case, many such instruments could rarely achieve the volume and breadth of participation that would justify exchange-based trade.")
[110] Chizobah Mora, *Why are Most Bonds Traded on the Secondary Market "Over the Counter"?*, INVESTOPEDIA (Aug. 31, 2020), https://www.investopedia.com/ask/answers/09/bond-over-the-counter.asp; John Kramer, *Over-The-Counter Market*, INVESTOPEDIA (July 29, 2020), https://www.investopedia.com/terms/o/over-the-countermarket.asp.
[111] Kesavan Balasubramaniam, *How Do I Buy Over-The-Counter Stock?*, INVESTOPEDIA (June 02, 2021), https://www.investopedia.com/ask/answers/buy-over-the-counter-stock/.
[112] Jin Yeub Kim, *Neutral Bargaining in Financial Over-The-Counter Markets*, 109 AEA PAPERS AND PROCEEDINGS 539, 539–44 (2019)(exploring a model the shows information asymmetry in regards to asset prices for OTC markets).
[113] Research and Editorial Staff, *Valuation "Arbitrage," Private Companies vs. Public Companies*, GREEN LEAF INVESTING, (June 18, 2019), https://greenleafinvesting.org/2019/06/valuation-arbitrage-private-companies-vs-public-companies.
[114] JON GREGORY, COUNTERPARTY CREDIT RISK AND CREDIT VALUE ADJUSTMENT: A CONTINUING CHALLENGE FOR GLOBAL FINANCIAL MARKETS 22–57 (2nd ed. 2013)("Counterparty credit risk (often known just as counterparty risk) is the risk that the entity with whom one has entered into a financial contract (the counterparty to the contract) will fail to fulfill their side of the contractual agreement (e.g., they default).")(Counterparty risk is a subset of credit risk and hence is sometimes referred to as counterparty credit risk). It comes in three forms: settlement, replacement, and default risk. Settlement risk is when a transaction fails to settle or is delayed—such failure or delay results in uncertainty concerning parties' rights and obligations. Replacement is the risk that it may be challenging to find a replacement transaction. Default risk

early on, market participants sought to reduce it by introducing standardized documentation. In 1997, the Loan Syndication and Trading Association (LSTA)—the industry association for loan markets established in 1995—launched standardized loan trade documentation—the LSTA Standard Terms and Conditions (LSTA STC).[115]

The main focus of the documentation was to reduce counterparty risk by improving settlement processes.[116] As Taylor notes, the most significant accomplishment of LSTA since its inception has been the establishment of standard settlement procedures, otherwise known as T+10 for Par Loans (settlement date=trade date+10 business days).[117] The LSTA formally introduced this convention in December 1995.[118] The loan trading marketplace quickly adopted it.[119] There have been no

materializes when the transaction fails to pay because of the failure of the counterparty.

[115] The documentation initially comprised a par/near par trade confirmation and standard terms and conditions for par/near par trades. Par or near par means that the borrower is in a good financial situation and accordingly its loans will be traded in the secondary market at a value similar to its original value (par). Distressed or leveraged are loans to companies that are either in default or in distress. Since purchase of such debt represents significant risks tend to trade at significant discount to their intrinsic value. The LSTA documentation for distressed trades followed in 1998. I discuss the LSTA documentation in more detail in my PhD dissertation. *See* Maciej Konrad Borowicz, *Contracts as Regulation: Model, Applications and Legal Implications in Over-The-Counter Markets* (2016, unpublished manuscript on file with author).

[116] Kenneth L. Rothenberg & Angelina M. Yearick, *LSTA v. LMA: Comparing and Contrasting Loan Secondary Trading Documentation Used Across the Pond*, LEXOLOGY (May 12, 2014), https://www.lexology.com/library/detail.aspx?g=a1f5a3e1-1e78-417b-ab63-f6c1332b7959.

[117] ANDREW FIGHT, SYNDICATED LENDING: ESSENTIAL CAPITAL MARKETS 151 (2004).

[118] *Id.*

[119] Taylor, *Market Standards* (2007), *supra* note [44] at 86. Over time the settlement period for part trades has been reduced to T+7. *See* Section 1 („Target Settlement/Settlement Date/Transfer of Debt") of the LSTA STC. Section 1 only indicates an obligation to conclude the trade "as soon as practicable." +7 comes from Section 6, which defines 'Delayed Settlement Date' as "the date following the Commencement Date on which settlement actually occurs." Commencement Date is defined as "(a) for Early Day Trades, the date fourteen (14) Business Days after the Trigger Date and (b) for all other trades, the date seven (7) Business days after the Trade Date." *Id.* Section 6 ("Compensation for Delayed Settlement").

systematic data on settlement before the LSTA had been created, but anecdotal evidence invoked suggests that it took many weeks to settle par transactions.[120]

By reducing counterparty risk, standardized documentation allows the parties to focus on the loan price as the main driver of the trade costs.[121] If standardized documentation did not exist, counterparty risk would affect the loan's price or 'taint' it with information unrelated to the borrower.[122] From that perspective, standardized documentation also contributes to loan market efficiency in an informational sense.

D. Covenants and Loan Pricing in Primary Markets

Loan market efficiency in an informational sense denotes the speed with which loan prices in secondary markets incorporate new information.[123] Therefore, a distinction should be made between prices of loans in secondary markets from interest rates set in primary markets, even though it is possible to think of the latter as a price of sorts, too—the price of capital.[124] There is also a functional link between prices and interest rates in that market participants conventionally express prices in secondary markets as a percentage of the full value of a loan. How lenders determine interest rates in the primary market can affect loan pricing in the secondary market, and we need to consider how they set interest rates first.[125]

As noted earlier, relationships between borrowers and lenders have long been the driver of interest rates,[126] but that changed with the application of the tools of portfolio selection to debt. The application of those tools to debt makes a particular issue of corporate debt depend essentially on three items:

- the required rate of return on riskless debt;

---

[120] TAYLOR & SANSONE, *supra* note 113.
[121] *Id.*
[122] If delayed compensation applies, it will affect the Purchase Price. *Id.*
[123] Eugene F. Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, 25 THE J. OF FIN. 383 (1970).
[124] Cam Merritt, *How Do Interest Rates Affect the Cost of Capital?*, (2017) CHRON.COM, https://smallbusiness.chron.com/interest-rates-affect-cost-capital-65190.html [https://perma.cc/D839-QRBR].
[125] A.C. Santos Joao & Peter Nigro, *Is the secondary loan market valuable to borrowers?*, 49 THE Q. REV. OF ECON. AND FIN. (2009).
[126] *See infra* Section II(B).

- the various provisions and restrictions contained in the credit agreements commonly referred to as covenants;
- the probability that the firm will be unable to satisfy some or all of the covenants (i.e., the probability of default).[127]

From a portfolio selection perspective, these three elements determine the interest rate on a particular issue of corporate debt or a corporate loan. The required rate of return on riskless (in terms of default) debt is an exogenous factor that the parties to a credit agreement have no control over, even though that rate will affect the interest rate.[128]

What about covenants? How is information about covenants incorporated into interest rates? Is it incorporated at all?
According to the theory of portfolio selection, the interest rate should reflect the quality of covenant protections.[129] Recall that under the theory, a particular issue of corporate debt depends on three factors: (1) the required rate of return on riskless debt; (2) covenants; and (3) the probability of default.[130]

Nevertheless, there is increasing evidence that covenants are not taken into account by lenders when determining the interest rate, at least not to a sufficient extent.[131] A series of cases of opportunistic debt restructurings in recent years suggests that when setting the interest rate on the loans at issue, the lenders did not account for the fact that management could rely on various exceptions to affect unexpected (from the point of view of creditors) transfers of value from creditors to shareholders.[132]

Perhaps most spectacularly, the management of J. Crew used a set of carve-outs and deductibles in its credit agreement to extract a

---

[127] Robert C. Merton, *On the Pricing of Corporate Debt: The Risk Structure of Interest Rates*, 29 THE J. OF FIN. 449–470 (1974) (describing the pricing of corporate debt using the tools of portfolio selection).
[128] Aswath Damodaran, *Estimating risk free rates*, STERN SCH. OF BUS., New York (1999) http://people.stern.nyu.edu/adamodar/pdfiles/papers/riskfree.pdf [https://perma.cc/25XB-JYQ8].
[129] *See* Shunming Zhang et. al., *Portfolio Selection Theory with Different Interest Rates for Borrowing and Leading*, 28 J. GLOB. OPTIMIZATION 67, 67–95 (2004).
[130] Merton, *supra* note 44, at 449.
[131] *See* Peter Coy, *In Finance, 'J. Crew" Is a Verb. It Means to Stick It to a Lender,* BLOOMBERG (June 17, 2019, 5:00 AM) https://www.bloomberg.com/news/articles/2019-06-17/in-finance-j-crew-is-a-verb-it-means-to-stick-it-to-a-lender.
[132] *See id.*

significant share of collateral, which was securing its loan, and issue new debt that was primarily used to refinance expiring unsecured debt.[133] As noted by Ivashina and Vallee, the economic significance of this transfer from J. Crew creditors brought the market's attention to the importance of covenant weakening clauses.[134] Crucially, the market notes that the value transfer from lenders towards shareholders indicates that the incremental risk for creditors resulting from these clauses was not fully priced in at issuance.[135]

E. Covenants and Loan pricing in Secondary Markets

In the previous subsection, we noted that the interest rate should reflect covenant variation, but there is increasing evidence that is not the case.[136] What about loan prices? Do loan prices incorporate information about the quality of the loan terms offered to borrowers? It may be helpful first to explain how investors set loan prices. Consider a firm borrowing $100m at 3.25% for five years in the primary market. This means that for five years, the lenders will get $3.25m and, in the end, $100m. The value of the loan is (5x3.25)+100=116.25. That value can be referred to as the par value or price of the loan in the secondary market immediately following issuance If an investor wants to buy the loan at par value in the second year, the par value or price would be $113m.

Loan prices, in general, are represented as a percentage of the par value.[137] If investors expect the borrower to repay the loan in full, it

---

[133] The move by J. Crew's management has been so bold and consequential that the financial industry now uses "J.Crew" as a verb to denote a situation, in which management, colloquially speaking screws, or rather "J. Screws" creditors. *See id.*

[134] Ivashina & Vallee, *supra* note 2 at 4.

[135] *Id.*

[136] Shunming Zhang, Shouyang Wang, and Xiaotie Deng, Portfolio Selection Theory with Different Interest Rates for Borrowing and Lending (2004).

[137] Section 4 ("Purchase Price Calculation") of the LSTA STC.

"The Purchase Price is calculated by (a) the Purchase Rate multiplied by the funded principal amount of such Purchase Amount as of the Settlement Date minus (b) (100% minus the Purchase Rate) multiplied by the unfunded commitments (if any), which shall include the face amount of any issued but undrawn letter of credit, assumed by Buyer as of the Settlement Date minus (c) (100% minus the Purchase Rate) multiplied by any Permanent Reductions on

should trade at 100%. As the loan starts trading, new risks could arise, which will change the probability of default and make the interest rate an inadequate compensation.[138] When the probability of default increases, the instrument's price will decrease, for example, to 70%.

In J. Crew's case, we observe a significant drop in the price of J. Crew's loan in the loan market.[139] Ivashina and Vallee, who studied the case, find that the magnitude of this drop is large, in the 10-percentage point magnitude, which suggests that the dilution of collateral is acute, leading to a lower recovery rate, in a context of high bankruptcy risk.[140]

F. Loan Market Investors (should) Care About Convenants

There are two significant implications from the above discussion. First, the informational value of a price of debt is different from stocks' informational content.[141] Stock prices reflect the discounted value of the expected dividend and capital appreciation of the stock over the expected holding period.[142] In other words, stock prices reflect expected returns.[143] Loan prices also reflect expected returns, but also, the value of creditor protections, which do not exist in the context of equity rights.[144] As default is more probable, creditor protections become more critical, which perhaps explains why the flaws in that protection become more apparent as default approach.

Second, loan markets can and do correct the mispricing of weak covenants in primary markets.[145] That property of loan prices has crucial, and largely unexplored, policy implications. They can help

---

or after the Trade Date minus (d) any Non- Recurring Fees (as defined below) received by Seller on or before the Settlement Date."

[138] Benjamin Bachrach & Dan Galai, *The Risk-Return Relationship and Stock Prices*, 14 J. FIN. & QUANITATIVE ANALYSIS 421, 429 (1979).

[139] Coy, *supra* note 126.

[140] Ivashina & Vallee, *supra* note 2.

[141] Bachrach & Galai, *supra* note 143.

[142] *Dividend Discount Model*, CORP. FIN. INST. (Sept. 12, 2021, 9:22 PM), https://corporatefinanceinstitute.com/resources/knowledge/valuation/dividend-discount-model [https://perma.cc/5343-KZN8].

[143] Bachrach & Galai, *supra* note 143.

[144] Fischer Black & John C. Cox, *Valuing Corporate Securities: Some Effects of Bond Indenture Provisions*, 31 J FIN 351–67 (1976).

[145] Miranda Marquit & Benjamin Curry, *Investing Basics: What Is a Market Correction?*, FORBES (Sept. 12, 2021, 10:29 PM),

discipline borrowers and potentially close the corporate governance gap opened by the erosion of covenant protections. They can also help reduce the concern that the erosion of underwriting standards poses a threat to financial stability.

Before explaining how efficient secondary loan markets can help correct mispricing in the primary market, this article will describe in more detail why underwriting standards are eroding. The three main reasons are the increased bargaining power of borrowers, low policy rate of the Federal Reserve, and market fragmentation. These reasons suggest that long-term trends drive the problem of the erosion of underwriting standards in the primary market. In other words, the problems are likely to persist, which makes the need for policy solutions even more essential.

III. What Drives the Erosion of Underwriting Standards in the Primary Market?

A. Covenant-lite

Historically, loan agreements in the US included a mix of financial covenants and restrictive covenants.[146] They required that borrowers comply with the restrictions on a continuous or *maintenance* basis.[147] In the early 2000s, loan agreements only with *incurrence* covenants have quickly started gaining popularity.[148] In contrast with maintenance covenants, incurrence covenants are only tested when the borrower seeks to undertake a specific activity.[149] The covenant testing is then required to determine whether that activity is permissible under the loan agreement.[150] Thus, unlike maintenance covenants, incurrence covenants would, for example, permit a borrower to maintain a certain

---

https://www.forbes.com/advisor/investing/what-is-market-correction [https://perma.cc/5HQG-Y5PQ].

[146] Mike McLeod, *What Small Business Loan Holders Need to Know About Debt Covenants*, FAST CAPITAL 360 (Sept. 13, 12:04 AM), https://www.fastcapital360.com/blog/debt-convenants [https://perma.cc/4XGR-9VGK].

[147] *FACTBOX - Debt Covenants in the Spotlight*, REUTERS (Sept. 12, 2021, 11:35 PM), https://www.reuters.com/article/factbox-covenants/factbox-debt-covenants-in-the-spotlight-idUSLD39786420090113 [https://perma.cc/KMF9-RJY9].

[148] *Id.*

[149] *Id.*

[150] *Id.*

level of indebtedness, which exceeds the nominally permitted level as long as this occurred merely as a result of a drop in earnings. This would feed into the ratio calculations and does not arise as a result of the incurrence of new debt.

In the early 2000s, covenant baskets of an increasing number of loan agreements have also become more generous.[151] It was not uncommon around that time to see, for example, debt baskets allowing borrowers to incur debt in multiples of EBITDA exceeding ten times in some cases.[152] One of the key elements of analysis are the EBITDA add-backs to be found in the definition of EBITDA (or consolidated net income, which forms part of the EBITDA definition).[153]

Industry insiders have labeled covenant packages with these manifestly more permissive features as covenant-lite or cov-lite.[154] They have emerged in two major waves—the first one starting in 2004 and subsiding with the credit crunch of 2008 and the second one beginning in 2012. [155] By the end of 2018, 85% of all leveraged loans were cov-lite.[156]

---

[151] Joerg H. Esdorn & Yair Y. Galil, *Loan Covenant Checklist: Restricted Payments*, PRACTICAL LAW 4 (Thomas Reuters, 2021).

[152]*See, e.g.* John Markland, *Cov-lite -The New Cutting Edge in Acquisition Finance*, BUTTERWORTHS J. INT'L BANKING & FIN. L. 379, 381 (2007) (discussing the frequency of more permissive covenants in loan agreements over the past few years with "some being done on terms which are entirely covenant free").; *see also* Richard Beales, *Univision Deal Puts the Bling into the LBO Trend* 1, FIN. TIMES, Feb. 28, 2007, https://www.ft.com/content/b1910742-c75b-11db-8078-000b5df10621.

[153] Sujeet Indap & Eric Platt, *Hot Leveraged Loan Market Puts EBITDA 'Add-backs' Under Scrutiny* 1-5, FIN. TIMES, Feb. 9, 2017, https://www.ft.com/content/ce5d0eee-eea0-11e6-930f-061b01e23655 [https://perma.cc/5JL8-3RH9]. For an in-depth discussion of the strategic considerations in defining EBITDA, s*ee* Adam B. Badawi & Elisabeth de Fontenay, *Contractual Complexity in Debt Agreements: The Case of EBITDA*, 67 DUKE PUB. L. & LEGAL THEORY 1, 2 (2019)

[154] Eric Goodison & Margot Wagner, *Covenant-Lite Loans: Overview*, PAUL, WEISS, RIFKIND, WHARTON & GARRISON LLP 1, https://www.paulweiss.com/media/3978887/goodison_wagner_practicallaw_aug2019_update.pdf (last visited Sept. 12, 2021).

[155] Mitchell Berlin et al., *Concentration of Control Rights in Leveraged Loan Syndicates* 11 (Rsch. Dep't, Fed. Rsrv. Bank Phila., Working Paper No. 17-22, 2017).

[156] Federal Jim Edwards, *The Risky 'Leveraged Loan' Market Just Sunk to a Whole New Low*, BUS. INSIDER (Feb. 17, 2019),

The emergence of cov-lite poses a challenge to the theories explaining covenants' customization in terms of agency costs. Economists commonly recognize that covenants' primary function is to reduce agency costs and that the variation in covenants should reflect the variation in agency costs.[157] The costs are thought to arise as a result of information asymmetries between borrowers and lenders.[158] Borrowers have private information concerning their businesses, such as information regarding their product or service offerings, business performance and results of operations, management changes, and others.[159] While lenders subject borrowers to diligence before making loans, diligence is unlikely to provide lenders with a complete picture of the goings of the borrower's business. This information gap may lead to the making of loans to borrowers exposed to greater risks and are therefore more likely to default, commonly referred to in the law and economics literature as the problem of *adverse selection*.[160]

---

https://www.businessinsider.com/leveraged-loan-record-87-percent-covenant-lite-2019-2 [https://perma.cc/URC6-9FT3].

[157] *See generally* Raghuram Rajan & Andrew Winton, *Covenants and Collateral as Incentives to Monitor*, 50 J. FIN. (1995).

[158] Iris Claus & Kunhong Kim, *Agency Costs and Asymmetric Information in a Small Open Economy* 39 (June 2004), http://fmwww.bc.edu/repec/esFEAM04/up.29634.1082408741.pdf.

[159] *10 Key Steps to Getting a Small Business Loan*, FORBES, https://www.forbes.com/sites/allbusiness/2021/01/30/10-key-steps-to-getting-a-small-business-loan/?sh=6f5b62695b1c [https://perma.cc/RE6W-DJLH].

[160] Empirical studies confirm that covenants can help lenders distinguish between more and less risky borrowers. *See, e.g.,* Ileen Malitz, *On Financial Contracting: The Determinants of Bond Covenants*, 15 FIN. MGMT. 18–25 (1986). Malitz examined a sample of all long-term, senior, non-convertible industrial debentures issued by publicly traded firms between 1960 and 1980 and found a correlation between a firm's choice of covenants and its leverage, size, and relationship with the capital market. Concerning leverage, she found that firms with higher leverage benefit from offering restrictive covenants than firms with lower leverage because of the greater potential risk of expropriation in the case of firms with higher leverage. Concerning size, she found small firms benefit more than larger firms due to greater information asymmetries between smaller firms and their creditors. Finally, firms with a long history in capital markets are also less likely to offer restrictive covenants, presumably because, unlike firms with a short history, they can show a record of non-expropriation. More recently, Bradley and Roberts report similar results for another sample of debt contracts. Michael Bradley & Michael R. Roberts, *The Structure and Pricing of Corporate Debt Covenants*, Quart. J. of Fin., at 1550001-1–37 (May 2015).

The literature also suggests that borrowers tend to act opportunistically after loans have been made.[161] Opportunism is thought to arise due to the limited abilities of lenders to control borrowers' actions after the loan has been made and gives rise to the problem of *moral hazard*.[162] Smith and Warner found that covenants can be a useful tool in reducing agency costs, particularly moral hazard when they are not costly for firms to implement and monitor.[163]

Existing theories are focused on how the severity of agency costs impacts the design of covenants. The weakening of covenants, under this theory, would suggest that these problems must have become less severe. However, there is nothing to suggest that the issues have become less severe. Cov-lite is mostly, if not exclusively, linked to leveraged loans, which constitute a segment of the loan market characterized by borrowers who tend to be *riskier*.[164] This prompts the question why did cov-lite become a feature of loan agreements in the United States? Why have interest rates not increased by amounts corresponding to the increased risk associated with weaker covenant protection?

---

[161] Opportunism in that context typically denotes a situation in which the parties do not seek to enhance cooperation, but rather to leverage their position by sending false or misleading signals, by interpreting the data to their advantage, by costly repositioning, and by otherwise withholding best efforts to realize mutual gains. *See* Oliver Williamson, THE ECONOMIC INSTITUTIONS OF CAPITALISM 47–9 (1985) (using the term opportunism in that sense).

[162] For a classic conceptualization of the problem of moral hazard, *see* John M. Marshall, *Moral Hazard*, 66 AM. ECON. REV. 880–890 (1976).

[163] Clifford W. Smith & Jerold B. Warner, *On Financial Contracting: An Analysis of Bond Covenants*, 7 J. OF FIN. ECON. 117–161 (1979) (examining how debt contracts are designed to control bondholder-stockholder conflicts). Restrictions on payments would fall into this category. When the cost of implementation and monitoring is high, however, there are no contractual restrictions to address this potential cost. This is presumably because the firm's managers conclude that the cost of implementation outweighs the benefits (for example, in terms of reduction of price). Restrictions on liens would fall into this category.

[164] Financial Stability Board, *Vulnerabilities associated with leveraged loans and collateralised loan obligations* (Dec. 19, 2019) at 3 ("Leveraged finance involves lending to corporate borrowers with high levels of debt, low credit ratings, or high spreads.")

B. Bargaining Power

One theory that can be offered suggests that the weakening of covenants reflects the increase of borrowers' bargaining power. [165] The explanation rests on the assumption that borrowers have accumulated greater bargaining power over the past decade and were able to argue for weaker or lighter covenant packages. This explanation seems plausible particularly when viewed against the backdrop of the increased role of financial sponsors (i.e., entities employing aggressive leverage techniques) in the process of the underwriting of leveraged loans.[166] Banks typically engage in leveraged lending in connection with mergers and acquisitions and LBOs.[167] The relationship of the arranging bank with the sponsor (typically a private equity firm) drives the deal and determines the outcome.[168] In seeking financing, the sponsors prepare financial models, which help determine the financial covenants' level.[169] These models tend to be optimistic sponsors manage to get favorable add-backs for calculating the ratios.[170] Relationships with private equity firms are essential to investment banks because private equity firms drive LBOs and, more generally, a significant portion of M&A activity in the United States.[171] From that point of view, it is

---

[165] Albert Choi & George Triantis, *The Effect of Bargaining Power on Contract Design*, 98 VA. L. REV. 1665–1743 (2012) (providing a similar explanation for the erosion of the strength of representations and warranties and closing conditions (e.g., material adverse conditions) in corporate acquisition agreements).

[166] As a report produced by the Financial Stability Board notes, leveraged loans are mainly used for leveraged buy-outs. Financial Stability Board, *supra* note 164. "Typically, LBOs are sponsored by private equity (PE) firms that purchase the issuer by investing a comparatively small amount of equity and financing the remainder with debt. These deals tend to be complex and risky." *Id.* FN 3.

[167] *Id.*

[168] Victoria Ivashina & Anna Kovner, *The Private Equity Advantage: Leveraged Buyout Firms and Relationship Banking*, 24 REV. OF FIN. STUD. 2462–3 (2011) (discussing how leveraged buyout firms interact with banks and determine loan terms).

[169] Benjamin Baldwin, et al., *The Small-Business Borrower and the Continuing Financial Crisis*, 18 Westlaw J. Bank & Lender Liability 3 (discussing how realistic financial models can lead to efficient financial covenants).

[170] *See*, *Id*. (noting that borrowers should strive to create realistic projects so as to avoid being overly optimistic).

[171] Brian Cheffins & John Armour, *The Eclipse of Private Equity*, 33 DEL. J. CORP. L. 6 (2008) (discussing the history of private equity firms in the United Sates).

plausible to suggest that the borrowers' bargaining power has increased and possibly impacted underwriting standards by allowing borrowers to demand weaker covenants without them being penalized by a corresponding increase in the interest rate offered on the loan.

C. Market Conditions

However, the low level of interest can also be explained by market conditions and specifically monetary policy as represented in the policy rate of the Federal Reserve.[172] Empirical studies show that covenants become more restrictive as the rate rises.[173] Some theories seeking to account for cov-lite focus on changes in market conditions and their effect on covenants.[174] Bradley and Roberts find a positive relationship between the inclusion of covenants and the prevailing credit spread, which suggests that an increase in the probability of financial distress increases the agency costs of debt.[175]

> The greater the credit spread, the greater the general risk in the economy and hence the greater the probability that any firm will find itself in financial distress in the future. Similarly, we find that loans made during stock market downturns are more likely to contain restrictive covenants. During times of high market risk, issuers of risky debt compensate lenders for this increased risk by agreeing to include bond covenants in their debt contracts.[176]

How exactly do market conditions affect covenants? Choi and Gulati have suggested that market conditions, specifically the interest rate offered on the loan, "change price, which in turn catalyzes change

---

[172] *See*, FEDERAL RESERVE SYSTEM, THE FED EXPLAINED: WHAT THE CENTRAL BANK DOES 12 (2021) (Describing the how the Fed sets interest rates based on policy).

[173] *See*, *e.g.*, Daniel Green, Corporate Refinancing, Covenants, and the Agency Cost of Debt (Dec. 18, 2018) (thesis, Harvard University) (modeling the interactions between interest rates and restrictive covenants).

[174] BO BECKER & VICTORIA IVASHINA, COVENANT-LIGHT CONTRACTS AND CREDITOR COORDINATION 2 (2016) (noting that some argue cov-lite issuance increases reflects low interest rates).

[175] Bradley & Roberts, *supra* note 70, at 1550001-22 (finding a correlation between greater credit spread, and greater general risk in the economy which leads to an increased probability of financial distress).

[176] *Id.* at 4.

in covenant and collateral provisions."[177] "[P]rice changes do not simply alter the division of gains from trade. When adverse selection or moral hazard issues are present, changes in price affect the severity of these problems and thereby have a significant bearing on optimal covenant or collateral design."[178] In other words, as Choi and Triantis note, price terms affect selection biases and incentives and are thereby essential factors in the design of non-price terms. Their model suggests that changes in credit conditions, specifically credit expansion or contraction will lead not only to corresponding changes in the interest rate but also changes in covenants as a function of lessening or worsening, as applicable, of adverse selection and moral hazard problems.

The model can explain why we see the weakening of covenants in loan agreements without a corresponding increase in the interest rate. The application of portfolio selection tools to loans suggests that when the rate of return on the riskless debt decreases, lenders can also take on greater risks insofar as covenant protection is concerned. Such risk-taking is likely because lower interest rates do not necessarily mean low interest rates. Compared to other asset classes, cov-lite loans could still be attractive because there is typically a higher yield associated with loans relative to other asset classes.[179] This lender behavior has been referred to as the 'reach for yield.'[180] Jeremy Stein, an early proponent of that characterization, pointed out that investors reaching for yield may be willing to forego control rights.[181] This is because yields are visible to investors and included in performance benchmarks, while control rights are less visible and are not explicitly accounted for in benchmarks.[182]

---

[177] Albert Choi & George Triantis, *Market Conditions and Contract Design*, 88 NYU L REV 32, 55 (2013).
[178] *Id.*
[179] Governor Jeremy Stein, *Overheating in Credit Markets: Origins, Measurement, and Policy Responses*, Speech at the "Restoring Household Financial Stability after the Great Recession: Why Household Balance Sheets Matter" Research Symposium sponsored by the Federal Reserve Bank of St. Louis, St. Louis, Missouri (February 7, 2013).
[180] *Id.*
[181] *Id.*
[182] *Id.*

D. Market Fragmentation

Market fragmentation means that loans are syndicated and sold to a variety of investors. Because covenant enforcement requires creditor coordination, market fragmentation reduces the value of covenants.[183] Furthermore, some investors may not even take covenants into account.[184] Consider the operational model of CLOs, the biggest loan market investors, which appears to take covenants into account to a limited extent.[185] Bozanic and others[186] identify three main reasons for this:

First, the selection of leveraged corporate loans as eligible CLO collateral relies on specific and predetermined diversification criteria on borrowers' industry and geography as well as loans' maturity and rating category. These restrictions are imposed at the CLO set-up stage by credit rating agencies that rate CLO notes to diversify away from the idiosyncratic credit risk of each individual loan investment. Thus, covenant-based metrics are largely ignored in determining the structure of the CLO pool.

Second, CLO managers' performance is monitored by specific compliance tests such as over-collateralization criteria of the CLO notes and average loan rating thresholds for the CLO collateral. These monitoring mechanisms exclude information related to the covenant structure of the loans in the pool since assessing the quality of so many covenants and the accounting information used in covenant thresholds is costly and induces subjectivity.

Third, the set of loan characteristics disclosed to CLO investors does not include details about financial covenants, consistent with the fact that investors place less weight on this information to monitor CLO performance or face information-processing costs themselves. Thus, CLO investors receive information only on a narrow set of loan characteristics, such as loan maturities, spreads, ratings, and default rates, which simplify disclosures about CLO portfolio quality.

---

[183] *See* Bo Becker & Victoria Ivashina, *Covenant-Light Contracts and Creditor Coordination* (Swed. House of Fin. Rsch., Working Paper No. 16-09, 2016). (arguing that the problem of creditor coordination accounts for the rise of cov-lit lending).

[184] Zahn Bozanic, Maria Loumioti & Florin P. Vasvari, *Corporate Loan Securitization and the Standardization of Financial Covenants*, 56 J. OF ACCT. RSCH. 45–83 (2018).

[185] *Id.*

[186] *Id.* (describing three main reasons for market fragmentation reducing the value of covenants).

E. The Erosion of Underwriting Standards as a Long-Term Trend

The three main features the syndicated lending market that explain why covenants are eroding and also why that erosion is not reflected in the corresponding increase of interest rates, are: (1) the increased bargaining power of borrowers, (2) low policy rates of the Federal Reserve, and (3) market fragmentation. To illustrate how these features the syndicated lending market impact the process of setting the interest rate, consider the following stylized description of the process of loan syndication.

Specifically, consider a firm soliciting (either on its own or together with a sponsor) loan proposals from several banks interested in arranging the loan. Banks will arrange the loan in the sense that they will scope market interest, and the terms of the deal will be determined. In many cases, the arranging banks will not even guarantee the outcome but only agree to do their best to achieve such an outcome. In other cases, however, the banks may agree to guarantee the deal, in which case the deal will be referred to as underwritten as opposed to best-efforts only.[187]

Once the arranger or, more likely, a group of arrangers is selected, the syndication process starts. The mandated lead arranger (MLA) will prepare an information memo (IM) describing the transactions' terms. The IM will typically include a discussion of investment considerations, a list of terms and conditions, an industry overview, and a financial model.[188] The IM might include information about the prospective borrower that is not available publicly.[189] That is less of a

---

[187] The underwritten nature of the deal is likely to make it more costly in terms of fees. Other aspects that will influence the fees include in particular the complexity of transaction. More complex deals generate higher fees so arrangers will be more interested in those. The leveraged loan primer prepared by the S&P provides an excellent introduction into the market process. S&P Global Market Intelligence, *Leveraged Loan Primer*, SPGLOBAL.COM, [hereinafter S&P Leveraged Loan Primer] https://www.spglobal.com/market-intelligence/en/pages/toc-primer/lcd-primer (last visited Jan. 27, 2021).

[188] *Id.*

[189] Syndicate confidential information generally encompasses information provided to the syndicate at the time or origination as well as in the course of the life of a loan and which may contain material non-public information. The Loan Syndicating and Trading Association, Confidential Information Supplement (Oct. 1, 2008). In the process purchasers may also acquire

problem if the prospective borrower has no publicly traded securities, such as equity, but it could create problems if it does, and the prospective investors trade in those securities. The potential for the abuse of such private information is why the IM will typically be distributed to certain qualified institutions, even though the MLA will sometimes also prepare a public version of the IM with the private information removed.

As the arranging banks' syndication desk prepares the IM, the sales desks contact the (earlier agreed) target group of investors. While that group has historically been limited, the largest and most influential banks understood the mutual benefit for both the buy and sell sides of this new asset class's development.[190] Over the last two decades, the syndicated loan market attracted a wide variety of investors, including CLOs, loan mutual funds, hedge funds, pension funds, brokers, and private equity firms.

As Santos and Shao note, the arrival of these investors boosted the secondary loan market because, in contrast to banks and insurance companies that tend to follow a buy-and-hold investment strategy, the other non-bank institutional investors trade for a variety of reasons, including management of credit risk, meeting liquidity needs, pursuing minimum return target, or boosting equity return via leverage.[191]

There are reasons for them not to pay particular attention to covenants. The acquisition of information about covenants is costly and investors can instead rely on credit ratings. Credit ratings boost the development of the market.[192] A corporate credit rating reflects

---

borrower confidential information, which encompasses information on the borrower, which is not part of the syndicate information.

[190] Page & Swaffield, *supra* note [X], at 5–6("Each year saw the creation of more investors, and the concept gained greater acceptance by all banks, deceasing search and matching costs. As the 1990s progressed, the market grew stronger each year. At many conferences, generally taking the form of one or two panels in a small conference room, the buy- and sell- side communities surrounding syndicated loans, not bonds, began to gather and take form.")

[191] João A. C. Santos & Pei Shao, *Loan Ownership and Liquidity in the Secondary Loan Market*, SSRN JOURNAL (2018), https://www.ssrn.com/abstract=2951451 (last visited Dec. 23, 2020).

[192] Ratings have been available in the US early on, but, for a long time, they were not as available in EU, at least not for private issuers. As David Slade notes, "[h]istorically, the European loan market had eschewed the need for the services of rating agencies." David Slade, Development of the Rating Agencies: the Investor Perspective, *in* THE LOAN BOOK (Nicholas Voisey & Amelia Slocombe, 2011). Instead, the process of "credit estimates" developed, whereby the relevant rating agency performed a desktop credit analysis of the borrower

qualitative and quantitative factors encompassing the business and financial risks of issuers and their individual debt issues.[193] These factors include sector risk, country risk, considerations of management strategy and governance arrangements, group structure, and business profile. The ratings also consider the issuer's financial profile, including its cashflows and profitability, financial structure, and flexibility.

Before the marketing phase, the arrangers will usually also seek a separate rating for the loan.[194] The overall risk for a particular instrument comprises two components: the relative probability of default for the issuer and the likely recovery of each instrument class given default.[195] Rating agencies will estimate the post-restructuring enterprise value, creditor claims, distribution value (which could be affected, for example, by structural subordination), and other factors. By capturing all of the above information about both the borrower and the instrument, credit ratings can improve pricing accuracy in the primary market. Nevertheless, there are open questions about the extent to which credit ratings provide information about covenants. By its nature, information about covenants is exceptionally granular and challenging to capture in a generic credit rating.[196]

---

and the structure and produced and implied rating exposure. When the credit crunch [of 2008-KB] hit, rating agencies reacted quite aggressively, "resulting in severe asset price reductions, suspension of fee payments to managers and fire sales of assets, leading into a downward spiral on asset prices generally. One rating agency—S&P—went further and announced the cessation of the provision of credit estimates for deals involving more than 750mm euro of debt facilities (including undrawn and subordinated)." *Id.* at 140.

Some private equity firms saw this as an opportunity to homogenize the European market and bring it close to the US model. They argued that ongoing complaints about the demands of the loan market for due diligence materials that had limited value in terms of assessing a transaction and incurred significant production costs, could be resolved by a formal rating process, which would undoubtedly be cheaper and satisfy the requirements of many institutions. *Id.*

[193] For a description of corporate rating criteria by Fitch Ratings, *see* Fitch Ratings, *Corporate Rating Criteria* (2020), https://www.fitchratings.com/research-/corporate-finance/corporate-rating-criteria-21-12-2020 (last visited Jan 20, 2021).

[194] *Id.*

[195] For a description of instrument rating criteria by Fitch Ratings, *see* Fitch Ratings, *Corporates Notching and Recovery Ratings Criteria* (2019), https://www.fitchratings.com/research/corporate-finance/corporates-notching-recovery-ratings-criteria-14-10-2019 (last visited Jan 20, 2021).

[196][196] As Fitch Ratings notes

Arguably, credit rating limitation in capturing information about covenants helps explain the emergence of covenant review services in recent years. Several companies in the market analyze debt covenants, such as *Covenant Review*, *Debt Explained,* and *Debt Wire*.[197] Their services are subscription-based and addressed primarily to the buy-side, even though some do allow law firms to subscribe.[198] Most of them have been established by former deal bankers who saw a business opportunity in providing this kind of service, given the erosion of covenant protection in the last decade or so.[199] The bond analyses are available to all subscribers, but there are some restrictions on accessing the loan analyses due to confidentiality.[200]

The description of the impact of bargaining power, market conditions, and market fragmentation of loan syndication stylized above suggests that the problem of erosion in underwriting standards, and in particular the mispricing of weak covenants in the primary market, is driven by long-term trends. In other words, the problems are likely to persist, which makes the need for policy solutions to the problem even more essential.

---

[i]nability to predict the use of such innovative document terms and the potential spectrum regarding the extent of such potential use renders making assumptions with respect to utilization of loose document terms often unrealistic. However, if there is a strong conviction that a specific transaction is likely to occur, and an analyst is able to make reasonable assumptions about purpose, amount and timing, then Fitch's criteria allows analysts to reflect the effect of certain potential transactions in their individual company credit analysis. Additionally, Fitch addresses and analyzes document flexibility broadly within its Terms & Conditions Series of reports. Fitch Ratings, *Lien Jumping & Collateral Passing: The Devil in the Details*, FITCHRATINGS.COM (Aug. 12, 2020), https://www.fitchratings.com/research/corpo-rate-finance/lien-jumping-collateral-passing-the-devil-in-details-12-08-2020 (last visited Feb. 5, 2021).

[197] *See* COVENANT REVIEW, https://covenantreview.com (last visited Oct. 16, 2021); *see also* DEBTWIRE, https://www.debtwire.com/info/ (last visited Oct. 16, 2021).

[198] *Id.*

[199] *Id.*

[200] *Id.*

IV. How Secondary Market Prices Incorporate Information About the Quality of Underwriting Standards

The literature increasingly recognizes that the tools of portfolio selection used by passive investors, particularly CLOs, do not capture covenants to a satisfactory extent.[201] The result is a mispricing of loans in primary markets. This section argues that secondary loan markets can correct mispricing in primary markets. It identifies the mechanisms of loan market efficiency, which comprise structurally informed investors, pricing services, and professionally informed investors. While loan markets can generally rely on professionally informed investors as the principal mechanism of loan market efficiency, institutional impediments exist to their effective functioning. The law can help eliminate this, as described in more detail in Section V.

A. Structurally Informed Trading

How do investors price loans in secondary markets? Investors will use the same portfolio selection tools they would have used in primary markets. The focus is on the required rate of return on riskless debt, covenants, and the probability of default. The main difference between pricing loans in primary and secondary markets is that the sources of information about the borrower and the loan differ.[202]

If the borrower is a public company, the information about the borrowers' financial condition and results of operation should be readily accessible to investors in secondary markets from the borrower's public filings, such as the 10-K filing required by the United States Securities and Exchange Commission (SEC).[203] However, in cases where the borrower is a private company, the information may be more difficult to obtain. In that case, it is much more likely to rely on the accuracy of the

---

[201] See Ivashina v. Vallee, *supra* note 2, at 17; Coy, *supra* note 136.

[202] *See* SEC, *How to Read a 10-K/10-Q*, https://www.sec.gov/fast-answers/answersreada10khtm.html (Jan. 26, 2021); Dee Gill, *Should private companies be required to report their financials?*, Chicago Booth Review (June 22, 2017), https://review.chicagobooth.edu/accounting/2017/article/should-private-companies-be-required-report-their-financials.

[203] SEC, *How to Read a 10-K/10-Q*, https://www.sec.gov/fast-answers/answersreada10khtm.html (Jan. 26, 2021).

price quoted by the financial institutions that make markets in that firm's loans, referred to as dealers.[204]

Although dealers may be the same institutions that arranged and underwrote the loan, this should be avoided.[205] If they are the same as the arrangers, dealers may have private information about borrowers by virtue of their structurally privileged position as arrangers.[206] They can use that information to gain an advantage over buyers and sell the loan at a higher price than they would otherwise be able to.

The structurally privileged position of dealers helps explain why the presence of banks as informed investors adversely affects markets' liquidity. "The bid-ask spreads for loans in which the arranger retains an investment are higher than the bid-ask spreads of loans in which the arranger retains no stake, ceteris paribus."[207]

Further, Santos and Shao find that diversity among investors is beneficial to liquidity. "Loans with larger syndicates, syndicates with more investor turnovers, syndicates with more investor types as well as syndicates with lower concentration in investor- types' loan shares have lower bid-ask spreads."[208] Finally, they suggest that not all investors contribute positively to liquidity.

While an increase in the number of hedge funds and pension funds in a syndicate lowers the loan's bid-ask spread, an increase in the

---

[204] From the perspective of the uninformed trader, the interactions with dealers may in itself be an important source of information and create arbitrage opportunities. *Compare* Kim, *Neutral Bargaining* (2019) *supra* note 48 (discussing the role of OTC markets in arbitrage).

[205] Awrey, *supra* note 20.

[206] *Compare* Awrey, *supra* note 20 (describing dealers as structurally-informed traders in OTC derivatives markets. [D]ealers acquire and aggregate this information as a natural byproduct of their interactions with clients and other dealers as part of the market-making process. Viewed from this perspective, dealers thus represent a new and distinct form of market mechanism: structurally-informed traders. Whereas Gilson and Kraakman's professionally informed traders are incentivized to actively ferret out and trade on new information, structurally informed traders passively acquire this information as a natural byproduct of their market-making activities. *Id.* at 1143–44.

[207] Santos & Shao, *supra* note 86, at 4. Interestingly, they note that the adverse effect of the arranger's presence in the syndicate declines with the share of loan the arranger holds but show that this is driven by those loans in which the arranger acts as a dealer in the secondary market. "In order to perform the dealer role, loan arranger will need to retain a large loan share, which could explain the negative relationship between the bid-ask spread and the arranger loan share." *Id.* at 17.

[208] *Id.* at 4–5.

number of banks and insurance companies has the opposite effect, consistent with existing beliefs that asset managers are active traders but other non-asset management institutions commonly follow a buy-and-hold investment strategy.[209]

To summarize, there is an adverse effect of the informed investors' presence on liquidity and market efficiency, which is likely the result of problems related to the flow of information.

Nevertheless, despite the information asymmetry between sellers and buyers, sellers' ability to extract that information and trade on higher spreads may be limited. A dealer has a limited ability to absorb losses and limited time during which they are willing to be exposed to risk. A dealer, in other words, has to trade, and that will reveal prices.[210]

B. Pricing Services

Structurally informed trading forms the foundations of loan market efficiency even though its role has steadily declined with the arrival of pricing services. Pricing services aggregate information about prevailing prices from dealers and other market participants. In the early days of loan markets, such data was missing. Instead, what happened on a limited scale was that traders faxed their list of holding to all the other traders to obtain quotes on the bid/offer prices so that their controllers would have an outsider's view on the price the trader was recording on his books. However, the traders did not like sharing this type of information with their competitors, and in reaction to their dissatisfaction, in November 1995, the LSTA arranged for an accounting firm to compile a list of loans that the traders were holding and a bid and offer price for each of them. In December 1995, prices on 155 different facilities were disseminated to traders for their month-end price marks, and the old system was replaced for good. The Leveraged Loan Index (LLI) and LSTA/Loan Pricing Corporation (LPC) pricing service eventually replaced the list.[211] The LLI, on a real-time basis, tracks the current outstanding balances and spreads over LIBOR for fully funded term loans in which several of the market's largest investors participate.[212]

---

[209] *Id.* at 5.
[210] Jack L. Treynor, *The Economics of the Dealer Function*, 43 FIN. ANALYSTS J. 27, 27–34 (1987).
[211] *Id.*
[212] *Closed-End Strategy: Senior Loan and Limited Duration Portfolio, Series 34*, INVESCO, https://www.invesco.com/pdf/U-LOAN34-PROFCT-1.pdf.

Today, the LLI exists for leveraged loans in several currencies, including USD, EUR, CHF, GBP, JPY, and others.[213]

The LSTA/LPC pricing service provides secondary market pricing levels through average bids allowing loan market investors to mark their positions to market.[214]

The effect of the COVID-19 pandemic on secondary market prices provide an excellent illustration of the speed with which loan markets incorporated information about the economic effects of the pandemic on the probability of repayment of loans by borrowers, the loans of which are featured LLI.[215] The weighted average bid of the LLI reached its low of 76.23 on March 20, 2020. It climbed to 93.96 on September 16, 2020.[216]

C. Professionally Informed Trading

Professionally informed trading is the third and most important mechanism of loan market efficiency. The reason why professionally informed trading is vital to loan markets is the fact that that they actively trade loans and, therefore, have the incentive to acquire new information continuously. Furthermore, in acquiring new information, professionally informed traders would often focus on the information that other investors appear to neglect when pricing, particularly information about covenants and their opportunistic interpretation.

Consider the aforementioned case of the J. Crew maneuver.[217] As noted, J. Crew "used a set of carve-outs and deductibles in its credit agreement to extract a significant share of collateral which was securing its loan, and issue new debt that was primarily used to refinance expiring

---

[213] S&P/LSTA U.S. Leveraged Loan 100 Index, S&P GLOB., https://www.spglobal.com/spdji/en/indices/fixed-income/sp-lsta-us-leveraged-loan-100-index/#overview] (showing the various currency denominated LLI indexes).

[214] Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change, 78 Fed. Reg. 49,16013 (Mar. 13, 2013) ("The Primary Index uses the average bid for its market value calculation.").

[215] RACHELLE KAKOROUS, *US leveraged loan market wraps 6-month trek from COVID lows to positive returns*, S&P GLOB. MKT. INTEL. (Sept. 6, 2020), https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/us-leveraged-loan-market-wraps-6-month-trek-from-covid-lows-to-positive-returns-60410363.

[216] *Id.*

[217] Ivashina v. Vallee, *supra* note 2, at 3.

unsecured debt."[218] Specifically, it transferred assets to an entity that has been designated under the credit agreement as an "Unrestricted Subsidiary" within the corporate group.[219] Unrestricted Subsidiaries are not subject to covenants.[220] Therefore, the Unrestricted Subsidiary was able to issue new debt secured by those assets structurally senior to the debt issued by the original borrower, meaning that the lenders to the Unrestricted Subsidiary had claims over its assets ranking before the claims of the original lenders.[221]

The J. Crew maneuver was widely publicized and led to industry commentary prompting professionally informed traders to adjust the prices of J. Crew's securities in secondary markets.[222] Ivashina and Vallee conducted an event study on loan and share price from other borrowers to test whether, following J. Crew's re-pledging of collateral to raise new debt, the market, as a whole, updates its view on the risk of the debt contracts that rank high on the use of carve-outs and deductibles.[223] They choose June 17, 2017, or the date of the initiation of the loan amendment enabling the issuance of new debt using the extracted collateral, as the date of the study.[224] As they note, "[t]he loan market prices indicate that among the various announcements, the loan amendment is the key event, consistent with it being the step that leads the majority of old senior creditors to "surrenders" to J. Crew coercive action."[225] And further,

> [i]n our study, the price adjustment for securities results from a market update on the value of the optionality embedded in their credit agreements. Such an update covers both the likelihood of such actions, and the impact

---

[218] *Id.*
[219] *Id.* at 19.
[220] *Id.*
[221] *Id.* at 19–20.
[222] *Id.* at 20; *See, e.g.,* Brian Darsow, *LEGAL ANALYSIS: Revlon could pull a J.Crew style IP transfer with less litigation exposure*, DEBTWIRE (Nov. 7, 2017), https://www.debtwire-.com/info/legal-analysis-revlon-could-pull-jcrew-style-ip-transfer-less-litigation-exp-osure (last visited Feb. 3, 2021).; *see also* Jeff Norton et al., *COVID-19: Prime Time for Priming*, O'MELVENY (July 15, 2020), https://www.omm.com/resources/alerts-and-publications/alerts/covid-19-prime-time-for-priming/ (last visited Feb. 2, 2021).
[223] Ivashina & Vallee, *supra* note 2 at 20.
[224] *Id.*
[225] *Id.* at 21–22.

> they might have for investors. We find a more pronounced reallocation effect from lender to shareholders for firms with credit agreements including a significant amount of weakening clauses, that is: upon updating on how carve-outs and deductibles are used, the value of senior secured claims drops, as expected recovery rates on senior secured debt are revised down, while equity value increases, as the number of states where the firm is in default is reduced.[226]

These effects would not exist if the arrangers held the entirety of the loan and did not share information about the opportunistic interpretation of the covenants. Because the loan was widely syndicated, the information could be disseminated more widely and made it to loan prices via professionally informed traders who were able and willing to trade on this information. Their role in the J. Crew case confirms that professionally informed traders are the primary source of loan market efficiency.

Because the J. Crew maneuver was widely publicized, the significant impact on J. Crew's securities' prices could have been expected. However, in many cases, the information about the quality of the loan terms offered to borrowers may not be as widely available. Professionally informed traders might be the only ones in a position to acquire and adequately analyze that information considering its often private and extremely technical character.

At the same time, it is not entirely clear that the reaction has prompted a large-scale adaptation of covenants in the leveraged segment of the syndicated market. A 2018 Reuters story indicated that senior secured lenders are now including language in loan documents, known as the 'J Crew blocker,' to stop companies from transferring intellectual property, including their brands, into unrestricted subsidiaries.[227] Soon thereafter, Debtwire, the covenant review service,

---

[226] *Id.* at 22.

[227] Jonathan Schwarzberg, *Investors tighten loan documents with J Crew blocker,* REUTERS, May 3, 2018, https://www.reuters.com/article/jcrew-blocker-idUSL1N1SA1W8 (last visited Feb 5, 2021) ("Lenders are tightening up US leveraged loan documents to stop issuers from removing security by transferring intellectual property into new subsidiaries and raising additional debt, an issue which surfaced last year when retailer J Crew did precisely that.")

after reviewing 730 credit agreements since the J. Crew maneuver found only 14 credit agreements contained a J. Crew blocker.[228]

The J. Crew saga's impact on loan prices and the tightening of covenants in subsequent issuances seems to indicate that loan market efficiency is a viable mechanism for addressing the problem of the erosion of underwriting standards in the primary market. While loan market efficiency is unlikely to solve the problem, it creates a channel through which the problem can be addressed in a market-based fashion.

D. Are Loan Markets Efficient?

Still, are loan markets efficient enough to have that kind of an impact. Are the mechanisms of loan market efficiency working well? The mechanisms of loan market efficiency differ from the mechanisms of stock market efficiency described in Section II.[229] Consider the role of dealers and pricing services in information distribution in loan markets—the main reasons these mechanisms emerged in the case of loan markets, but not stock markets, are that stocks are securities that trade on exchanges.[230] Stocks are securities, the issuance of which entails reporting obligations.[231] Investors trade based on that information on an exchange, which aggregates information about bids and asks spreads and posts prices.[232]

In contrast, because loans are not securities, borrowers are only subject to limited reporting obligations under their covenants.[233] When a borrowing firm is also a public company, the information problem is less pronounced, but it still exists to a much greater extent than in the context of stock markets.[234] Investors have less information to go by and

---

[228] Justin Smith, *J Crew Blocker: Don't Believe the Hype*, DEBTWIRE (2018), https://www.debtwire.com/info/j-crew-blocker-don%E2%80%99t-believe-hype (last visited Feb. 5, 2021)

[229] Steven C. Miller, *A Guide to The Loan Mar*ket, STANDARD & POOR'S (Sept. 2011) https://www.lcdcomps.com/d/pdf/LoanMarketguide.pdf [https://perma.cc/62W3-E9WP].

[230] Awrey, *supra* note 20, at 1141.

[231] *Id.* at 1156.

[232] *How Does The Stock Exchange Work*, SOFI, (Aug. 11, 2020), https://www.sofi.com/learn/content/stock-exchange-work/ [https://perma.cc/XUY7-Y5GC].

[233] Awrey, *supra* note 20, at 1131–32.

[234] Anna Louis Sussman, *Differences in the Borrowing Behavior of Public and Private Firms*, NATIONAL BUREAU OF ECONOMIC RESEARCH, (Feb. 2, 2019),

must rely mostly on dealers.[235] They trade in the opaque OTC markets and hence there is a need for pricing services.[236] OTC markets also create counterparty risk addressed through standardized documentation.[237]

The mechanisms of loan market efficiency are more like those of OTC derivatives markets than those of stock markets.[238] In identifying the mechanisms of OTC derivatives efficiency, Awrey highlights the structurally privileged role of dealers, various pricing services, and standardized documentation.[239]He notes the crucial role of the regime of private ordering revolving around the International Swaps and Derivatives Association in facilitating the reduction of information costs and driving the derivatives markets' efficiency.[240]

Like the regime of private ordering for OTC derivatives markets, the regime of private ordering that facilitates loan markets' informational efficiency also has a considerable amount of success.[241] That regime revolves around the LSTA, which is also one of the more critical information sources about the market and its development.

In the past, the LSTA conducted many studies that show that that the relationship between mark-to-market (the accounting measure of the effect of the sold loan on the price of the retained portion) and trade prices has tightened, suggesting traders can more quickly arrive at a consensus as to what the right price is.[242] That result would suggest that loan markets have become relatively efficient in an informational

---

https://www.nber.org/digest/feb19/differences-borrowing-behavior-public-and-private-firms [https://perma.cc/7SHJ-TN6U].

[235] Awrey, *supra* note 20, at 1142.

[236] *Id.* at 1143.

[237] *Id.* at 1151.

[238] *Compare* Awrey, *supra* note 20 ("Second, derivatives markets have not historically benefited from institutional arrangements equivalent to conventional stock exchanges that serve to bring together prospective buyers and sellers, regulate the trading environment, or ensure the widespread dissemination of price, volume, and other trading information.")

[239] *Id.* at 1138–55 ("Importantly, this gives dealers powerful incentives to protect the economic value of the information obtained through their privileged market position.")

[240] *Id.* at 1110–80.

[241] Niva Elkin-Koren, *Copyrights in Cyberspace - Rights Without Laws?*, 73 CHI. KENT. L. REV. 1155, 1161–62 (1998) ("It also facilitates fast and cost-effective information processing that allows real-time feedback on public preferences and choices.").

[242] Taylor, *supra* note 49, at 72–73.

sense, remarkably, without borrowers being subject to disclosure requirements akin to those of securities issuers.

De Fontenay's has recently suggested that the fact that a regime of private ordering could achieve that effect undermines the normative justification for mandated disclosure for loans.[243] The skepticism towards the effectiveness of mandated disclosure that characterizes de Fontenay's argument has a long and respectable tradition.[244] Law and economics scholars have historically been skeptical about the impact of securities legislation on market efficiency.[245] Nevertheless, that argument has been rebuffed by those who suggest that disclosure matters for informed traders.[246]

In the case of loan markets, the LSTA has acknowledged there are some areas in which the relationship between mark-to-market and trade prices has fallen apart.[247] That relationship falls apart particularly in situations where there is some problem with information flows or liquidity.[248] The problems with information flow generally seem to be positively related to firm-specific and loan-specific characteristics associated with a high information asymmetry environment.[249] As Wittenberg-Moerman notes, "there is clear evidence that public reporting decreases information asymmetry in loan trading. The availability of firm-specific and/or loan-specific credit ratings also decreases information costs in the loan trade."[250]

Beyond these firm- and loan-specific characteristics, there is the structural problem of lack of liquidity, which appears to be more pronounced when structurally informed traders are present.[251] The LSTA

---

[243] de Fontenay, *supra* note 22, at 729, 760.
[244] *See e.g.*, Jarrell, *supra* note 23, at 624–75
[245] *See e.g.*, *id*. at 625-27, 639–42.
[246] Goshen & Parchomovsky, *supra* note 17, at 715–31.
[247] Taylor, *supra* note 49 at 73 (noting that there are areas of the relationship between mark-to-market and trade prices where variance shows up, but these areas are expected, being "illiquidity, uncertainty, and risk").
[248] Bridget Marsh & Ted Basta, *Loan Syndications and Trading: A Recap of 2008* (ABA, online), 2009, at 2–3.
[249] Regina Wittenberg-Moerman, *The Role of Information Asymmetry and Financial Reporting Quality in Debt Contracting: Evidence from the Secondary Loan Market*, 46 J. ACCOUNT. &. ECON. 240, 240–260 (2008).
[250] *Id.* at 242.
[251] *See* Nabila Ahmed & Kristen Haunss, *The Blacklist That Rules Wall Street's Loan Market*, BLOOMBERG (Dec. 18, 2014, 7:28 PM), https://www.bloomberg.com/news/articles/2014-12-18/there-s-a-blacklist-in-800-billion-of-u-s-loans-and-it-s-legal.

has taken steps to address that problem through its documentation.[252] As noted earlier, arrangers do not necessarily share all the information when the information constitutes syndicate confidential information or material non-public information, unless the purchaser specifically requests it.[253] The LSTA STCs give purchasers the right to request syndicate confidential information.[254] That information could be valuable and contribute to loan market efficiency even though it is unclear whether and how the information flows throughout the market.

Problems with information sharing are not the only source of illiquidity and inefficiency in loan markets.[255] Blacklists or lists of entities disqualified by the borrowers from being eligible lenders are among the main obstacles for the emergence of a more liquid loan market.[256] The practice of blacklisting can be linked to weak confidentiality protection afforded by the LSTA documentation. Commentators have suggested that blacklisting is problematic as it can limit the liquidity of the loans being traded.[257] As noted in Bloomberg News in 2014, "data gathered by Xtract Research show that 77 percent of all loan deals in the third quarter included provisions giving borrowers the ability to block individual lenders, up from 51 percent at the end of last year."[258]

The most recent version of the LSTA standard form credit agreement includes a language that seeks to address blacklists. The

---

[252] Page & Swaffield, *supra* note 78, at 7.

[253] *See* LOAN SYNDICATIONS AND TRADING ASSOCIATION, CONFIDENTIAL INFORMATION SUPPLEMENT (Oct. 1, 2008).

[254] *Id.* (Paragraph 10 (Syndicated Confidential Information) of the LSTA STC provides that if "Yes" is specified in a Confirmation, Seller shall furnish Buyer a true and complete copy of the Credit Agreement (including all schedules, and, if requested by Buyer, exhibits), together with all amendments thereto, as promptly as practicable following the Trade Date.).

[255] Ahmed, *supra* note 246.

[256] Glen Fest, *Lender Blacklists Gain Traction in Leveraged-Loan Deals*, AMERICAN BANKER (Feb. 19, 2014, 1:32 PM), https://www.americanbanker.com/news/lender-blacklists-gain-traction-in-leveraged-loan-deals.

[257] Greg Margolies, a senior partner at Los Angeles-based Ares Management LP, which manages about $80 billion in assets including speculative-grade debt and real estate. "Ares will not invest in a name where secondary liquidity can dry up immediately because an issuer has decided to blacklist a number of market participants.") Nabila Ahmed & Kristen Haunss, *The Blacklist That Rules Wall Street's Loan Market*, BLOOMBERG.COM (Dec. 18, 2014), http://www.bloomberg.com/news/articles/2014-12-18/there-s-a-blacklist-in-800-billion-of-u-s-loans-and-it-s-legal.

[258] Ahmed, *supra* note 246.

language seeks to mitigate these effects by limiting the rights of disqualified institutions to receive certain information.[259]

From the borrower's perspective, the problem with debt activist investors using private information is that those investors could use it to exploit shareholders and other creditors. At the same time, as recently pointed out by Marcovich Gross, these forms of debt activism may make cov-lite loans costly from the borrower's perspective.[260] As such, debtholder activism can have a positive impact from a policy perspective. I agree that, together with secondary market prices, debtholder activism can be an effective, market-based response to the erosion of underwriting standards on corporate credit agreements.

V. How Law Can Facilitate Loan Market Inefficiency

The erosion of loan underwriting standards poses risks for lenders.[261] Credit rating agencies show that, on a historical basis, weaker covenants impaired recoveries.[262] Furthermore, economists who have studied weak covenants suggest that the incremental risk for creditors resulting from these clauses is not fully priced at issuance, which, in

---

[259] Under the 2014 MCAPs, the list of disqualified institutions is created by the borrower before the closing of the credit facility. After the closing, the borrower may update the list by adding "competitors." The exact definition of competitor is left for negotiation, but it is intended to be defined in reference to the particular borrower and its business.
Barbara M. Goodstein, *MCAPs: Capping off Lessons from the Credit Crisis*, 252 N.Y.L.J. 65 (Oct. 2, 2014). As Goodstein notes,
[A]n assignment or participation in violation of these provisions is not void. Such a result would raise practical as well as legal issues. Instead, a disqualified institution (1) will not have the right to receive and/or access information provided to the other lenders, (2) will not have the right to attend meetings of the lenders, and (3) prior to and following a bankruptcy proceeding of the borrower, will not have voting rights as the other lenders do with respect to certain actions taken under the credit agreement. *Id.*

[260] Adi Marcovich Gross, No Strings Attached: Activist Distressed Debtholders in a World with Covenant-Lite Loans (2020) (unpublished manuscript) (on file with author).

[261] S&P Global, *Settling for Less: Covenant-Lite Loans Have Lower Recoveries, Higher Event and Pricing Risks* (2020), https://www.spglobal.com/ratings-/en/research/articles/201013-settling-for-less-covenant-lite-loans-have-lower-recoveries-higher-event-and-pricing-risks-11687612 (last visited Feb 1, 2021).

[262] *Id.*

turn, could suggest that lenders are taking excessive risks.[263] It would appear that the erosion of loan underwriting standards is, indeed, a policy problem.

Since at least 2018, policymakers have voiced concerns about the impact that the erosion of covenant protection can have on financial stability.[264] For example, in late 2018, Senator Elizabeth Warren sent a letter to the Treasury Secretary, the Comptroller of the Currency, the Chairman of the Federal Reserve, the Chairman of the Securities and Exchange Commission, and the Chairman of the Federal Deposit Insurance Corporation, expressing concerns about underwriting standards in the leveraged loan market, which she says could pose serious risks to the economy.[265]

The fact that the letter had been addressed to four regulators yields an important insight for scholars of financial regulation as case study in emergence of regulatory blindspots.[266] Kim develops a regulatory approach to manage these blindspots in leveraged loan regulation.[267] The proposal relies on the new regulatory infrastructure

---

[263] *See* Ivashina & Vallee, *supra* note 2 at 4 ("The value transfer from lenders towards shareholders indicates that the incremental risk for creditors resulting from these clauses is not fully priced in at issuance.")

[264] ELIZABETH WARREN, LETTER TO SECRETARY MNUCHIN, CHAIRMAN POWELL, COMPTROLLER OTTING, CHAIRMAN CLAYTON, AND CHAIRMAN MCWILLIAMS, (2018), https://www.warren.senate.gov/oversight/letters-/warren-presses-regulators-on-risks-in-leveraged-lending-market- (last visited Sept. 29, 2021) at 1.

[265] *See* Ivashina & Vallee, *supra* note 2, at 1–2. (explaining that loan underwriting, and underwriting standards are weakening.)

[266] *See* Sung Eun (Summer) Kim, *Managing Regulatory Blindspots: A Case Study of Leveraged Loans*, 32 YALE J. ON REGUL. 89, 92 (2015). In Kim's account, the fact that leveraged lending exists in a regulatory blindspot is the result of regulatory conflicts, gaps and myopia. First, the multiplicity of agencies regulating leveraged loans, together with a regulatory strategy that delegates definition- and standards-setting to the supervised institutions, has created an inconsistent "patchwork" approach to regulation *(regulatory conflicts).* Second, tightly drawn regulatory boundaries exclude key players and products from the scope of leveraged loan regulation, allowing the riskiest segments of leveraged lending activities to operate in regulatory shadows *(regulatory gaps).* Third, due to the procyclical nature of leverage, leveraged lending is an area where "microprudential" policies, which focus on ensuring the safety and soundness of individual financial institutions, may inadequately serve or even conflict with the overarching mission of ensuring the safety and soundness of the financial system *(regulatory myopia)*. *Id.* at 92.

[267] *See id.* at 112–20.

and tools offered by Title I of the Dodd-Frank Wall Street Reform and Consumer Protection Act.[268] More specifically, she argues that Financial Stability Oversight Council, and its data collection arm, the Office of Financial Research, can help address the problem.[269]

While banking regulation clearly could address the erosion of underwriting standards, Kim's proposal nevertheless fails to identify the substantive dimension of such regulation. Even more importantly, it fails to note that any such binding measure would represent an unprecedented interference with the freedom of contract. It is not implausible to argue that such interference is warranted, particularly in view of the cyclical nature of underwriting standards. Nevertheless, it is also worth considering whether there exist alternative policy options.

This article proposes an original policy solution to focus on improving the speed with which loan prices in the secondary loan markets incorporate information about the adequacy of the loan terms offered to borrowers in the primary market. If loan markets were efficient, loan prices should incorporate information about the adequacy of the loan terms offered to borrowers in the primary market.[270]

Lawyers have long considered the role of the mechanisms of market efficiency as quasi-regulatory devices.[271] In seeking to capture the mechanisms of loan market efficiency, this article was inspired by the accounts of stock market efficiency of Gilson and Kraakman and the account of OTC derivatives market efficiency of Awrey. Both of those accounts aimed to help lawyers think about loan market regulation and leverage existing institutional frameworks to foster market efficiency. Legal scholars recognize the role of loan market efficiency,[272] but neither literature in law nor economics has offered an account of the mechanism of loan market efficiency. Because of this gap, lawyers have so far been unable to offer an account of how policymakers can leverage existing institutional frameworks to foster loan market efficiency.

This section argues that the primary regulatory frameworks applicable to loan markets are securities law and antitrust law. Because

---

[268] *Id.* at 93.
[269] *Id.* at 112–13.
[270] *See* Eugene F. Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, 25 J. FIN. 383, 383 (1970).
[271] Awrey, *supra* note 20, at 1131.
[272] *See* Whitehead, *supra* note 12, at 648; *see also* de Fontenay, *supra* note 15, at 4 (finding that securities regulation applied to the loan market would likely be neither helpful nor harmful); *see also* Marcovich Gross, *supra* note 117, at 4-5.

loans are not securities, securities law's impact on the efficiency of loan markets can only be indirect by way of the securities markets' regulators pursuing insider trading cases based on information originating from the loan market.[273] Antitrust law can also have an impact on loan market efficiency by identifying anticompetitive practices that adversely affect loan market efficiency, such as blacklisting.[274] Thus far, policymakers have not used antitrust law for that purpose. However, a recent inquiry of the European Commission into the European syndicated lending market can help illustrate the benefits of reliance on antitrust law.

A. Securities Law and Loan Market Efficiency

Securities laws are the principal instrument of fostering market efficiency. However, in the early 1990s, the United States District Court for the Southern District of New York (SDNY) determined that securities laws do not apply to loans.[275] *Banco Espanol de Credito v. Security Pacific National Bank* was the leading case on this point.[276] In

---

[273] *See* Robert M. Bushman, Abbie J. Smith & Regina Wittenberg-Moerman, *Price Discovery and Dissemination of Private Information by Loan Syndicate Participants*, 48 J. ACCT. RSCH. 921, 927 (2010).

[274] *See* Barbara M. Goodstein & Alan M. Christenfeld, *Analyzing Antitrust Issues in Lending*, 249 N.Y. L. J. (2013).

[275] Banco Espanol de Credito v. Security Pacific Nat'l Bank, 973 F.2d 51, 56 (2d Cir. 1992) (holding that loan participations are analogous to commercial bank loans in this case and are not securities but that, in other scenarios, loan participations could be securities), *cert. denied*, 509 U.S. 903 (1993); *See* Richard Roberts & Randall Quinn, *Leveling the Playing Field: The Need for Investor Protection for Bank Sales of Loan Participations*, 63 FORDHAM L. REV. 2115, 2117 (1995) ("Courts generally have held that traditional loan participations are not securities.").

[276] *See id*. The case arose as a result of default by Integrated Resources, Inc. ("Integrated") on unsecured loans made to it in 1988 by Security Pacific Merchant Bank ("SPMB") based in California. *See id*. at 53-54. SPMB sold participations in the loans to various investors. *See id*. "Entities that had expressed an interest in participating in the program usually signed a Master Participation Agreement …," which contained a general disclaimer of liability on part of SPMB. *Id.* Following Integrated's default, the plaintiffs filed suit in the SDNY seeking rescission under Section 12(2) of the Securities Act of 1933. *Id*. at 2120. "The plaintiffs claimed that the defendant bank misled them by representing that the borrower was creditworthy when, they assert, the bank knew the borrower was not creditworthy." *Id*. The SDNY rejected their claim and did not extend the remedies available to investors under U.S. securities laws to creditors on the basis that loan participations were not securities. *See id*.

holding that the loan participations and syndications in question were not securities, it applied tests previously employed by the Supreme Court in analyzing notes (and stock) as securities.[277] In this regard, the Supreme Court has analyzed whether an instrument may be viewed as an "investment contract," is issued in an "investment" as opposed to a "commercial" or "consumer" context, or bears a strong "family resemblance" to a judicially recognized exception to the definition of a security.[278] The United States Court of Appeals for Second Circuit

"Although a majority of the purchasers in the loan note program were not banks, eight of the eleven plaintiffs in the *Banco Espanol* case were banks." *Id*. For a discussion of the case, *see Syndicated Loans as Securities*, PROSKAUER (2011), https://prfirmpwwwcdn0001.azureedge.net/prfirmstgacctpwwwcdncont0001/uploads/bf787ac3a14594cc9839971dd71bd937.pdf (last visited Sept. 16, 2021) [https://perma.cc/LJ85-862P].

[277] *See Banco*, 973 F.2d at 55-56 (stating that in analyzing whether loan participations could be securities in this case, the district court applied the "family resemblance" test as it was previously employed by the U.S. Supreme Court).

[278] *See* Reves v. Ernst & Young, 110 S.Ct. 945, 950-51 (1990) (finding that there are multiple potential tests to determine whether a note can be a security, including an "investment contract" test, an "investment versus commercial" test, and a "family resemblance" test.).

upheld the decisions.[279] A recent decision of the SDNY in *Kirschner v. JP Morgan Chase* has reaffirmed that view.[280]

Despite loans not being securities, loan markets pose an issue for securities regulators.[281] Recent evidence from Bushman, Smith and Wittenberg-Moerman suggests that institutional lenders systematically exploit "confidential syndicate information via trading in the equity market."[282] Ivashina and Sun find that institutional "participants in loan renegotiations subsequently trade in the stock of the same company and outperform trades by other managers and trades in other stocks by approximately 5.4% in annualized terms."[283] Other studies find evidence of possible trading on private information in the equity of the

---

[279] Interestingly, in his dissenting opinion in Banco Espanol, Chief Judge Oakes strongly of the Court of Appels disagreed with the court's analysis. Siding with the views of the SEC, which had submitted an amicus curiae brief, the Chief Judge distinguished the subject program from a traditional loan participation program on the basis of the number and type of participants, the sales approach and the availability of information regarding the borrower. The Judge prefaced his opinion with the remark that the majority opinion "misreads the facts, makes bad banking law and bad securities law, and stands on its head the law of this circuit and of the Supreme Court in Reves v. Ernst & Young." He considered that the participants, rather than being commercial lenders who engage in traditional loan participations, were instead in many cases non-financial entities not acting as commercial lenders but making an investment, and even though there were some banks that purchased the so-called loan notes, they generally did so not through their lending departments but through their investment and trading departments. These participants were motivated not by the commercial purpose of operating a lending business in which participations are taken as an adjunct to direct lending operations, but were motivated by an investment purpose.

[280] For a discussion of the case, *see* Loan Syndication and Trading Association, *Kirschner v. JP Morgan: A Deep Dive*, LSTA (2020), https://www.lsta.org/news-resources/kirschner-v-jp-morgan-a-deep-dive/ (last visited Jan 21, 2021).

[281] Loan Syndication and Trading Association, *What are the regulators really saying about loans?*, LSTA (2019), https://www.lsta.org/news-resources/what-are-the-regulators-really-saying-about-loans/.

[282] Robert M. Bushman, Abbie J. Smith & Regina Wittenberg-Moerman, *Price Discovery and Dissemination of Private Information by Loan Syndicate Participants*, 48 JOURNAL OF ACCOUNTING RESEARCH (JOHN WILEY & SONS, INC.) 921, 922 (2010).

[283] Victoria Ivashina & Zheng Sun, *Institutional stock trading on loan market information*, JOURNAL OF FINANCIAL ECONOMICS 284, 284 (2011).

hedge fund borrowers prior to the public announcements of both loan origination and loan renegotiation (amendments).[284]

By pursuing trading on private information obtained in loan markets, securities regulators could help improve the efficiency of loan markets, albeit indirectly, by reducing lenders' incentives not to disclose information to investors. At least in the United States, the market trend appears to encourage as much information dissemination as possible and allow for trading on all information.[285]

That appears to be the approach embraced by the LSTA, which notes that the confidentiality obligation under the LSTA STCs should be read in conjunction with the LSTA principles on trading on confidential information.[286] The principles do not prohibit loan market participants from trading on syndicate confidential information, if the participant among other things, "reasonably believes that its counterparty has otherwise received such information or, in the case where the counterparty is already a syndicate member, the counterparty has had the opportunity to receive such information" [287] or "reasonably believes that the counterparty is sophisticated."[288] From that perspective, lenders' efforts at disseminating information could be a viable defense against an allegation of insider trading on information obtained in the syndication process or the loan market.

It is worth noting that the European sister organization of the LSTA—the Loan Market Association (LMA)—has adopted a different approach. The LMA guidelines further specify the restrictions on trading regarding confidential information. While they permit trading on syndicate confidential information, they explicitly restrict trading on borrower confidential information, even if both parties to the trade are believed to be in possession of the relevant information.[289]

---

[284] Nadia Massoud et al., *Do hedge funds trade on private information? Evidence from syndicated lending and short-selling*, 99 J FIN ECON 477–499 (2011).

[285] Bushman, *supra* note 277 at 922.

[286] *See* LSTA, Statement of Principles for the Communication and Use of Confidential Information by Loan Market Participants (November 2017).

[287] *Id.* Section III(C)(1)(b).

[288] *Id.* Section III(C)(1)(c)(iv).

[289] *See* David Kidd et al., *Non-Public Confidential Information and Secondary Debt Trading in the Asian Market*, Linklaters (2019). As Fransella notes,

Neither the LMA Guidelines nor the accompanying press release discusses the rationale for this departure from LSTA practice, with which the LMA has in recent years generally tried to move toward harmonizing. The reference to whether a transaction "adversely affect[s] other members of the syndicate/

The differences in market conventions related to information security in the LSTA and LMA documents should prove to be an interesting regulatory issue moving forward. There currently appears to be a divergence concerning information regulation in the US and European loan markets. Paired with a vigorous pursuit of insider trading on private information, the US convention appears to be more beneficial in facilitating loan market efficiency.

B. Antitrust Law and Loan Market Efficiency

Bond investors have long complained about the unfair (and potentially illegal) trading advantage of investors who obtain private information in the loan market.[290] That complaint raises an interesting question: whether the issue could be perceived as one of competition? More generally, what is the role of competition and antitrust law in syndicated lending and loan markets?

For some years now, the US's legal community has been discussing the possibility of an antitrust inquiry into syndicated

---

market," however, suggests that the LMA may view trading that takes place solely among "insiders" to be antithetical to the health of the loan market, and may be trying to promote an ethos in which trading opportunities must be or ought to be shared with the market at large. The LMA Guidelines should also be considered in the context of the market trend toward purchases of loans by borrowers, sponsors, or their respective affiliates or controlled funds, which trend largely occurred after issuance of the LSTA Guidelines and could be seen as increasing the opportunities for insider dealing in syndicated loans to the exclusion of other market participants. Michael Fransella, *LMA Release Guidelines for Use of Nonpublic/Confidential Information in Secondary Loan Trading*, MORRISON & FOERSTER CLIENT ALERT (June 16, 2011), [https://perma.cc/YH63-C4QM] (last visited February 15, 2019).

[290] *EHYA to lobby syndicated loan banks to level playing field on disclosure*, GLOBAL CAPITAL (Oct. 20, 2006), http://www.globalcapital.com/article/k56ttzlpdbsc/ehya-to-lobby-syndicated-loan-banks-to-level-playing-field-on-disclosure ("Rules aimed at preventing insider trading are supposed to stop public investors from acting on private information. But the EHYA will argue that traditional boundaries between market participants are receding, giving private buyers an unfair advantage when playing in the same deals as purely public investors."). *See also LMA and EHYA meet to discuss rules for borrower disclosure*, GLOBAL CAPITAL (Oct. 27, 2006), http://www.globalcapital.com/article/k56xj40j5q56/lma-and-ehya-meet-to-discuss-rules-for-borrower-disclosure.

lending.[291] Nevertheless, thus far, there has not been a substantial review in the US.[292] In the EU, concerns around the organization of this market have also existed for many years.[293] Unlike the US, however, the EU has recently prompted an inquiry into the market. In 2016, the European Commission published a tender offer seeking an assessment of the EU market for loan syndication and possible implications under EU competition rules. The consulting firm Europe Economics and the law firm Euclid Law won the tender and produced a report highlighting antitrust concerns in several areas of the syndicate lending markets,

---

[291] *See e.g.* Barbara M. Goodstein & Alan M. Christenfeld, *Analyzing Antitrust Issues in Lending*, 249 NYLJ (2013), https://www.cliffordchance.com/content-/dam/cliffordchance/PDF/AnalyzingAntitrustIssuesinLending.pdf (last visited Dec 14, 2020) (discussing various lending practices that could give rise to antirust actions, including tying of financial products or services and collusion as well as reviewing examples of case law). While antitrust law applies to banking, there are also specific provision related to competition in banking law. These relate to in particular, review of bank merges. For a review of those rules, see Federal Reserve Bank of Kansas, *Understanding Antitrust Considerations in Banking Proposals*, https://www.kansascity fed.org/publicat/banking/bankerresources/UnderstandingAntitrusAnalysisv3.pdf (last visited Dec 14, 2020). In recent years, there has been a debate on the topic as to whether merger review requires an update. The debate has been started by the Department of Justice. Department of Justice, Antitrust Division Seeks Public Comments on Updating Bank Merger Review Analysis, press release, (September 1, 2020), See e.g., Jeremy C. Kress, *Modernizing Bank Merger Review*, 37 YALE JOURNAL ON REGULATION (2020), https://digitalcommons.law.yale.edu/yjreg/vol37/iss2/2.

[292] Kress, *supra* note 286 at 435.

[293] In the past, national competition authorities have shown an interest in this market. In 2010, the Dutch Competition Authority assessed the syndicated loan market, and the European Commission informed the Organization for Economic Co-operation and Development that a close scrutiny of syndicated loans may be warranted. In 2016, the UK Financial Conduct Authority sent "on notice" letters to a number of syndicated lenders after reviewing evidence suggesting that they may have infringed competition law by disclosing or exchanging information on terms and conditions of loans. Finally, the Spanish competition authority is currently investigating whether four Spanish banks fixed prices and exchanged commercially sensitive information when offering syndicated loans. JONES DAY, EUROPEAN COMMISSION'S ANTITRUST CONCERNS LEAD TO LENDING MARKET STUDY, (2017), https://www.jonesday.com/en/insights/2017/05/european-commissions-antitrust-concerns-lead-to-syndicated-loans-market-study (last visited Dec 14, 2020).

including its intersection with the loan market. [294] They can be classified into several areas:

- the competitive bidding process for appointing individual banks to the bank leading group;
- the post-mandate to loan agreement phases of the syndication;
- allocation of ancillary services across banks, and the pricing of such services;
- use of debt advisors which are also involved in the syndicated loan; and 5) sale of the loan on the secondary market.

What are the antitrust concerns in each of those areas? Consider first the competitive bidding process for appointing individual banks to the bank leading group. The Reports finds that while, in the LBO segment, sponsors generally run the process, there is a risk that "soundings (even generic soundings) with other MLAs (as opposed to exclusively with institutional investors without connections to MLAs) could be abused to facilitate collusive action, even potentially enabling a group of MLAs (particularly one with fewer substitute MLAs) to achieve, and sustain, some degree of collective bargaining power."[295]

The second antitrust concern identified in the report relates to the post-mandate to loan agreement phases. Here, the Reports finds, "the evidence of the multiple interactions between lenders on transactions over time led the authors to conclude that there is a definite risk that lenders can observe each other's behaviours and strategies, which may enable them to engage in some coordination on future loan transactions."[296]

The third antitrust concern identified in the report relates to the allocation of ancillary services across banks and the pricing of such services. The Report notes the risk that a small minority of borrower/sponsors identified, that the MLAs make the provision of ancillary services by them a condition of the loan.[297]

---

[294] EUROPEAN COMMISSION, EU LOAN SYNDICATION AND ITS IMPACT ON COMPETITION IN CREDIT MARKETS: FINAL REPORT (2019), https://data.europa.eu/doi/10.2763/738938 (last visited Nov 30, 2020).
[295] *Id.* at 11.
[296] *Id.* at 12.
[297] *Id.*

The fourth one concerns the use of debt advisors which are also involved in the syndicated loan.[298] Banks who are part of the syndicate often act as advisors.[299] A concern would be where the advising bank attempts to influence the borrower/sponsor towards a strategy or debt structure that suits its lending arm, i.e., subverting the Chinese wall between the advisory and lending functions, and with this not being fully apparent to the borrower/sponsor.[300]

The final area of antitrust concerns identified in the Report relates to lenders' coordination on the sale of the loan on the secondary market.[301] One of the main concerns here is restrictions on secondary trading.[302]

The lenders described restrictions imposed by PF/INFRA sponsors/borrowers as potentially including: no small transfers; an embargo during the construction period and the transfer being subject to borrower approval (except in case of default). Whilst such restrictions may be reasonably motivated (e.g. restricting the dispersion of deal-specific information), these could limit the development and efficiency of the secondary market (at least at the margin).[303]

The Report's findings are consistent with the discussion of the mechanisms of market *in*efficiency identified in the previous section of this article, even though the Report does not identify all practices that could be relevant. For example, the Report does not mention blacklisting despite its obvious implications for the secondary market's development and efficiency. Still, the Report provides valuable insights into the areas of syndicated lending and loan markets that the European Commission should keep on monitoring.[304] Antitrust authorities in the U.S. would be well-advised to pursue or encourage similar inquiries into the U.S. loan market.[305] Considering the oligopolistic structure of the

---

[298] *Id.* at 13.
[299] *Id.*
[300] *Id.*
[301] *Id.*
[302] *Id.*
[303] As the Report further notes, "[g]iven that secondary market pricing data are also used in the primary market (albeit not exclusively relied upon), this could also affect have [sic] (minor) knock-on effects to the development and efficiency of the primary market, at least in the PF/INFRA segment." *Id.*
[304] *Id.* at 16.
[305] *See id.* at 15 (postulating that the beneficial impacts on the primary market are not as clearly apparent in Europe in comparison to that of the U.S. due to size).

syndicated lending market and dealer market in loans, antitrust law can prove to be a viable instrument for fostering loan market efficiency.[306]

VI. Conclusion

This article proposes an original policy solution for the erosion of underwriting standards in corporate credit agreements. Specifically, it proposed that a qualitative improvement in those standards is possible insofar as the law helps facilitate loan market efficiency. Loan markets have the capacity, previously unexplored by policymakers, to correct mispricing occurring in primary markets.

This article also develops an analytical account of the mechanism of loan market efficiency to help policymakers identify the institutional frameworks that can be most helpful in facilitating loan market efficiency. Those frameworks are securities and antitrust laws.

Despite the potential improvements that the policy proposal put forward in this article can bring to the *quality* of underwriting standards, it should be noted that the proposal does not directly address the question as to whether the *quantity* of loans made to corporate borrowers is adequate. In another article, I argue that a host of monetary, behavioral, and institutional factors can explain why that quantity could be too large with macroeconomic consequences to come.[307]

Still, qualitative characteristics of corporate loans matter. Efficient loan markets are already becoming a factor driving improvements in those characteristics. As this article argues, policymakers can do more to foster loan market efficiency by leveraging the existing institutional frameworks of securities and antitrust law.

---

[306] *See id.* at 70.

[307] *See* M. Konrad Borowicz, B*ankruptcy Law and Corporate Leverage: A Theoretical Framework* (unpublished manuscript, on file with author).