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WITHOUT A TRACE: THE IMPORTANCE OF  
INFORMATION IN MARKETS

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**Abstract:** Economists and practitioners alike would agree that information plays an important role in capital markets. But the practical job of gathering, organizing and disseminating information in markets is too often left to chance. This paper dramatizes the difficulties that can occur when that happens by using the high yield market as an example. The transition from rapid expansion in the 1980s to stable growth in the 1990s was not without its informational road-bumps. The main point of the paper is to emphasize the importance of the informational role being played by industry organizations such as the Loan Syndication and Trading Association (LSTA) in the U.S.

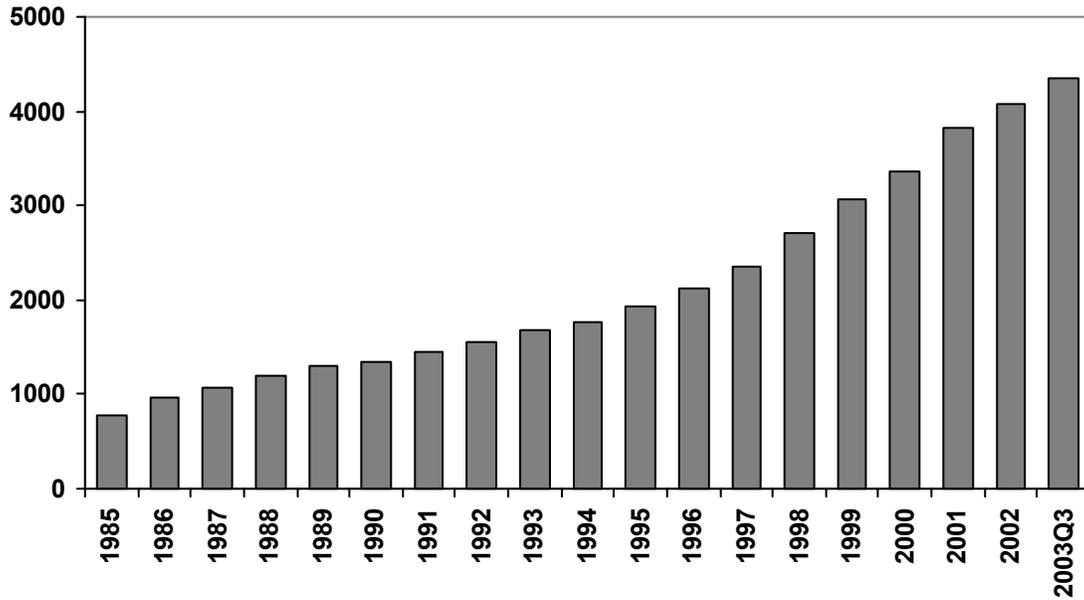
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**JEL Classifications:** E44, G14, O16

Throughout the 1980s, the bond market provided corporations with the capital they needed to fuel the rapid growth of economic expansion. That need for financing did not slow down when the market for publicly traded debt securities was briefly disrupted in the early 1990s (Figure 1). Annual real growth in total corporate debt averaged about 8 percent from 1992 through 2000, virtually unchanged from the average real growth rate in the previous six years (Figure 2). However, as the next decade dawned the form of that financing was about to change. Syndicated loans would become an increasingly important form of corporate financing.

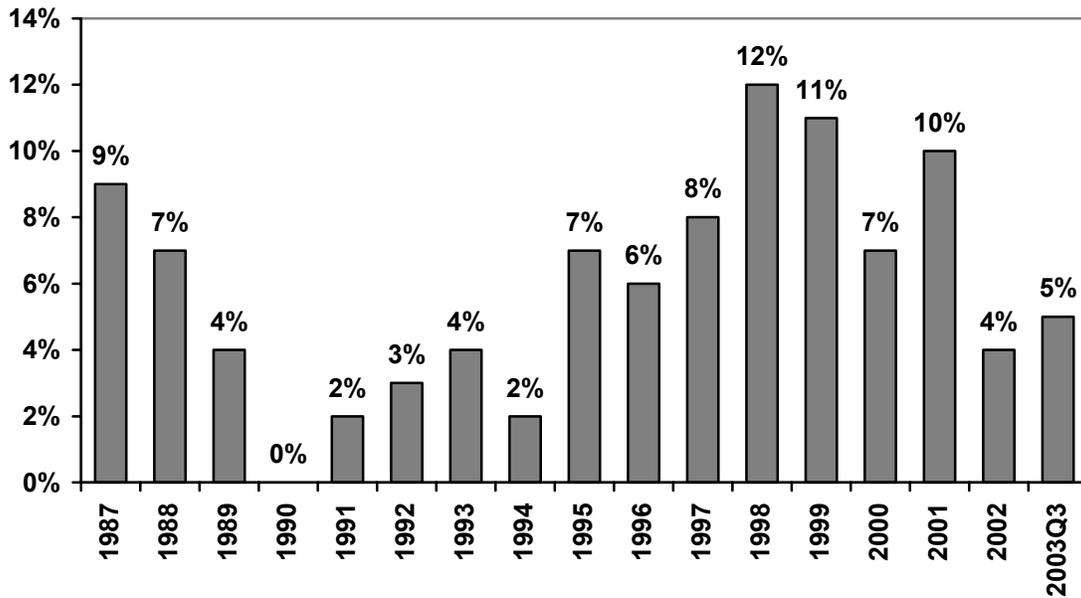
Experiences from the tumultuous transition of high yield securities from “junk bonds” to mainstream finance provide sharp demonstrations of the critical role played by the Loan Syndication and Trading Association (LSTA) as the industry organization charged with organizing market participation.

**Figure 1. Rising Demand for Corporate Debt, U.S.**



Source: Bond Market Association; \$billions (nominal).

**Figure 2. Real Demand for corporate debt rises at a vigorous pace in the 1990s**



Source: Bond Market Association and Milken Institute; % real growth in corporate debt.

## **Something Matters in Corporate Finance**

An active debate exists about the exact dates of credit cycles, whether they are caused by imbalances from the supply-side or the demand-side and whether recessions create or are the result of credit cycles. No one, however, is prepared to deny that there was a tightening of credit in the early 1990s.<sup>1</sup>

In credit market equilibrium, the supply and demand for debt are perfectly balanced. However, with substitute investments available to savers, such as equities or tangible assets, corporations are not always able to meet their financing needs in the credit market. The balancing act economists call “equilibrium” allows the price of debt to rise to a point where otherwise viable projects become too costly to finance this way. The rise in price will theoretically reduce the demand for debt. In reality, the credit market is so often out of balance that many economists believe it runs in cycles. The most commonly discussed out of balance condition is the now familiar “Credit Crunch.”

Some analysts place responsibility for the early 1990s credit crunch on increased regulatory pressure, weakened corporate balance sheets and a reduction in bank lending due to new capital rules. Statistics show that lending growth across virtually every sized commercial bank slowed in 1990 and turned negative in 1991 and 1992.<sup>2</sup> Other analysts place responsibility for the early 1990s credit crunch on the lack of demand by buyers of credit instruments which resulted from falling new-issue bond yields and the increased attractiveness of equity instruments. The high yield bond market had its own unique circumstances affecting supply at the same time. As the economy moved into expansion,

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<sup>1</sup> See the Spring 1991 issue of the *Journal of Applied Corporate Finance*, special section “Perspectives on the Credit Crunch,” for five papers offering expositions on different sides of the debate.

<sup>2</sup> See Lown et. al. (2000) for a complete discussion.

firms that recovered from financial difficulty had their credit ratings upgraded thereby reducing the supply of high yield debt in the secondary market. The upgrades in turn lowered the cost of new debt capital for firms and increased the prices on their outstanding credits, further complicating any attempt to define the causes of the concurrent credit crunch.

Furthermore, despite significant new issuance, the size of the total high yield market did not increase in 1992 as firms redeemed or recapitalized their debt in substantial amounts. Because medium and high-quality issuers were able to issue equity cheaper than debt, companies tapped the equity market and wiped debt from their balance sheets. Regardless of the cause or causes, investors and borrowers faced an out of balance credit market in the early 1990s. As a result, the choice of debt or equity did matter for both investors and corporations.

After the experience of the late 1980s high yield market, there can be little doubt that legal and regulatory changes affect the reality of corporate capital structures. The distinction between debt and equity is at the crux of the debate begun by Modigliani and Miller in 1958.<sup>3</sup> A large body of financial literature since then revolves around trying to explain just exactly what does matter in determining capital structure.<sup>4</sup> For our purposes, we are interested in demonstrating the important implications for the market for corporate debt when a key assumptions in the Modigliani and Miller view of corporate finance does not hold: “*perfect capital markets.*”

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<sup>3</sup> “But the view that capital structure is literally irrelevant or that ‘nothing matters’ in corporate finance, though still sometimes attributed to us (and tracing perhaps to the very provocative way we made our point), is far from what we ever actually said about the real-world applications of our theoretical propositions. Looking back now, perhaps we should have put more emphasis on the other, upbeat side of the ‘nothing matters’ coin: showing what doesn’t matter can also show, by implication, what does.” (Miller, 1988.

## *ImPerfect Capital Markets*

The economic definition of perfect capital markets includes the requirement that information is free and available to all at the same time, a requirement that simply “does not apply” to reality. The following description of the efforts of the early 1990s to correct information deficiencies in the high yield market serve to highlight the importance of the LSTA in the development of a secondary market for trading in syndicated loans.

The problems of information take two forms in the debt markets. The first, which is in common with equity markets, is the burden of disclosure put on issuers in the U.S. public securities markets. This problem was addressed in 1990 by SEC Rule 144A which permitted the issuance of securities for sale to certain qualified buyers with reduced disclosure requirements. This would prove to be a significant event in the debt markets. It not only allowed foreign issuers greater access to U.S. capital markets, Rule 144A securities came to dominate high yield debt and convertible investment grade issuance by the end of the decade.

The other, unique to debt markets, is the lack of contemporaneous trading volume and price information similar to what is available for stock prices on a daily basis in most newspapers. The availability of preprocessed information about investments is useful to all investors, but especially to those new investors who do not have other sources of information available to them (Boot and Thakor, 2001). This second problem of information was corrected in the high yield bond markets in 1994 with the implementation of the Fixed Income Pricing System (FIPS).<sup>5</sup>

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<sup>4</sup> Interested readers should see Ryen, Vasconcellos and Kish (1997). They summarize and evaluate the major points in the history of this discussion.

<sup>5</sup> A description of the development of See the boxed text at the end of this article for the most recent information on FIPS and its successor system TRACE.

During their last two decades of existence, Drexel Burnham Lambert led the industry's efforts at organizing routine high yield market data. However, after their bankruptcy, no one dealer was able to step in to continue the effort toward making market data widely available. Despite immediate recognition by the Senate Banking Committee of the need for a high yield quotation system to replace the informational activities of Drexel Burnham Lambert, it took nearly five years to implement. Even today, the data functions only for a limited number of issues.

### **The Importance of Information**

In October 1989, the Senate Committee on Banking, Housing, and Urban Affairs sent a letter to the Chairman of the SEC expressing concern for, among other things, the lack of transparency in the high yield bond secondary market and suggesting the possibility of developing a quotation system for those securities. In his response, then SEC Chairman Breeden (1990a) stated that the commission shared the Senate's interest in improving the availability of information concerning price and liquidity in the high yield bond market.

At that time, trading data such as actual transaction prices and volume information was not available generally for the high yield secondary market. Any statistics used in 1990 to measure the liquidity of the secondary market were based on conversations with representatives of the active broker/dealers and became, at best, educated guesses.<sup>6</sup> Actual trade data would not be released to the public due to the proprietary nature of that information. Without a centralized data collection source,

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<sup>6</sup> In their Report on Transparency, the SEC (1991) notes that their volume figures are "based on anecdotal evidence from market participants."

aggregate data could not be released confidentially. Although vendors of securities information at the time (e.g., Bloomberg, Quotron, Reuters, Telerate) released corporate bond trading information accumulated by polling brokers, most major dealers stated in 1991 that they did not provide price information to vendors (SEC, 1991), with Merrill Lynch being the most visible exception. In fact, the little data on any corporate debt trading that was made public, mostly quotes and last sale data at the American Stock Exchange, wasn't even collected electronically until 1990, prior to which it was displayed only on "a kind of chalk-board" (SEC, 1991).

At the same time, the value of bonds changing hands was substantial. In 1990, an estimated \$15.7 billion in corporate debt changed hands every day. Of that, \$7 billion to \$10 billion was investment grade and \$0.5 billion to \$1.5 billion was high yield. Compare that to the daily average of \$6.2 billion in equities traded on the NYSE in the same year. The NYSE accounted for only 0.5 percent to 1 percent of total corporate debt trading volume in 1990, largely because few debt issues were eligible for listing. The majority of corporate debt, and high yield in particular, were traded in the over-the-counter market.

To further put the size of the bond market in perspective, consider that the average price of an equity share on the New York Stock Exchange at the time was about \$37 while bonds trade with a minimum face amount of \$1,000. The average trade in high yield bonds was valued at about \$1 million to \$3 million, whereas the average size trade in investment grade bonds was a bit bigger, between \$2 million and \$5 million. Therefore, although the volume of trades (and hence the number of market participants) in the bond market was small, the total daily value of transactions could be quite significant.

If the information key to the development of deep, liquid bond markets was to become available, it was going to require far-ranging changes in the existing market infrastructure. During April 1990, as Rule 144A was passing final rulemaking, the SEC made initial contact with the National Association of Securities Dealers (NASD) to initiate the development of a facility to capture trade reports for secondary trading in high yield debt. One of the main obstacles to an investment in infrastructure to support this disclosure was the high market concentration. Too few users meant that the development costs of the system to individual users could be prohibitively high. In 1989, the seven largest underwriters accounted for almost 90 percent of the offerings in the high yield market (Table 1). That left too few users at the time to support the cost of developing and implementing a system. By March 1991, however, the NASD had substantially completed development of its Fixed Income Prototype System (later renamed the Fixed Income Pricing System, “FIPS”), a rules-based regulatory reporting/surveillance facility to capture trade reports for a small list of representative actively-traded issues. FIPS would also provide limited dissemination of information in the form of high, low and volume aggregates for those issues (see boxed text). The developers recognized that mandating increased transparency for the large segment of the market that is illiquid might further reduce dealer participation. Mandatory disclosure was therefore only practicable where a “critical mass” of market participants existed. It was decided that the efforts to increase transparency in the high yield market would focus, at least initially, on the 40 to 50 most actively traded securities (SEC, 1991).

Daily high and low prices for 35 actively traded high yield securities became public information in April 1994.<sup>7</sup> Yankee bonds, convertible bonds, medium term notes, and Rule 144A private placement issues are excluded under FIPS rules. There were 3,000 issues in the FIPS database in June 2001. All NASD member firms transacting business in high yield debt securities must register as FIPS Participants and report all trades in covered securities. Reporting is mandatory for the 50 most active issues (within five minutes of the trade). Trades in all other issues must be reported by end of day (and there is no quotation obligation with these issues). There is still no long term storage of historical hourly data available to the public, although NASD is aware of the importance of this data for research purpose.

**Table 1 Largest Dealers in high yield debt (alphabetical order)**

1991*	2001**
<i>About 60 broker/dealers</i>	<i>363 FIPS broker/dealers</i>
First Boston Corp.	Bank of America Securities
Goldman Sachs & Co.	Credit Suisse First Boston
Merrill Lynch Capital Markets	Goldman Sachs & Co
Morgan Stanley & Co.	Merrill Lynch Capital Markets
Shearson Lehman Brothers, Inc.	Salomon Brothers, Inc
Salomon Brothers, Inc.	UBS Warburg

\* SEC (1991), estimates.

\*\*Based on new issues underwritten January 4, 2001 through April 27, 2001, Standard & Poor's Bond Guide, February through May 2001.

## Conclusion

A final example from the experience of writing about the high yield market (Yago and Trimboth, 2003) demonstrates the importance of information from the researcher's perspective. The print and electronic publication of news, information and data on the

<sup>7</sup> By April 10, 1995, 39 bonds were subject to dissemination in the form of aggregates. The list was expanded to 50 issues at least by November 30, 1996, although the "official" date is uncertain. The list of Mandatory Bonds is reviewed and subject to change every three to four months. Revisions take into account those issues with the highest volume and trade count.

high yield market expanded enormously in the 1990s. In 1989, beyond the credit rating agencies, only two or three investment firms regularly published market analyses that focused on the high yield market. By 2000, not only had the number of firms publishing reports expanded, but each of these firms was producing specialty magazines for market segments such as the telecommunications, retail and food industries, plus the European, Canadian, Asian and Latin American geographic regions.

For all the expanded coverage of the market, there remain major discrepancies in the measurement of the high yield market. In mid-1999, we surveyed the research departments of four investment firms. The results were dismaying: the U.S. market was somewhere between \$315 billion and \$649 billion, a discrepancy of \$334 billion! Oddly, the higher valuations on the U.S. high yield market were qualified as excluding certain segments (split-rated securities and/or convertible securities), while the lowest figure was given without qualification. The discrepancies were even greater in the European high yield market, which was only becoming organized when the survey was taken: between \$17 billion and \$43 billion. The survey respondents could offer no explanation for the differences.

The most important event of the 1990s for the development of the high yield market was the implementation of the Fixed Income Pricing System by the National Association of Securities Dealers. Most importantly, from the market participant's perspective, the reporting and dissemination of information improves the transparency which will promote even more robust markets. Broad acceptance and utilization of trade data has the potential to reduce and possibly even eliminate future problems.

The example of the experience of the high yield market should serve to demonstrate that industry organizations like the LSTA are critical in the development of markets. They serve the purpose of information repository in order to minimize potential regulatory interference in the future and to maximize participation from the broadest possible spectrum of investors in the secondary market for syndicated loans.

### **Fixed Income Pricing System: FIPS**

*This summary is based on information that was or is available through the NASD's website:*

The Fixed Income Pricing System, "FIPS," is a screen-based system operated by The Nasdaq Stock Market, Inc., that enables Nasdaq to collect and disseminate hourly cumulative and end of day aggregate information on eligible high yield corporate bonds. Quotes are displayed by market makers in the FIPS 50 bonds.

A FIPS participant is any National Association of Securities Dealers (NASD) member that is registered as a FIPS Dealer or Broker. A FIPS Dealer is a broker-dealer with end accounts. A FIPS Broker is an inter-dealer broker. Participation in FIPS is mandatory for NASD members trading FIPS mandatory or non-mandatory bonds.

The obligation to report a transaction in FIPS bonds depends on the role of each party in the trade. In transactions between:

- A FIPS Dealer and a FIPS Broker — only the Broker reports the trade.
- Two FIPS Dealers — only the sell side Dealer reports the trade.
- A FIPS participant and non-participant — only the FIPS participant reports the trade

The FIPS 50 list represents some of the most active and liquid issues currently trading, and as particular issues no longer represent their sector or industry, they are replaced with more representative issues. Nasdaq (and some market data vendors) disseminate quotations on an hourly basis during FIPS operating hours.

Each hour, Nasdaq and market data vendors disseminate summary transaction information that includes the high and low execution prices and volume for transactions reported in that hour and cumulatively in FIPS mandatory bonds, aggregated from individual transaction reports made by members. In addition, an end-of-day summary is disseminated with the day's overall high and low prices and cumulative volume. Transaction information in FIPS non-mandatory bonds is monitored by Nasdaq for surveillance purposes only and is not disseminated publicly.

### **Trade Reporting and Compliance Engine: TRACE**

*This summary is based on information that was or is available through the NASD's website:*

The Fixed Income Pricing System (FIPS) ceased accepting reports at the close of business on Friday, June 28, 2002. Rules relating to FIPS ("FIPS Rules") were rescinded as of the end of the day on June 30, 2002. The FIPS Rules were superseded by the TRACE Rules. Beginning July 1, 2002, a FIPS transaction that should have been reported by close of business on June 28, 2002, must be reported to the Market Regulation Department of the NASD.

The SEC approved SR-NASD-99-65, the TRACE Rules, after more than two years of industry and NASD discussion and review. With the implementation of the TRACE Rules, secondary market transactions in broad categories of registered and unregistered debt instruments became subject to reporting. In addition, price and other transaction information for two types of debt instruments will be publicly disseminated.

The TRACE Rules provide that the NASD will disseminate transaction information relating to transactions in two types of securities: (1) a TRACE-eligible

security having an initial issuance size of \$1 billion or greater that is Investment Grade at the time of receipt of the transaction report (with some exceptions); and (2) a TRACE-eligible security that was designated a FIPS Mandatory Bond immediately prior to the rescission of the FIPS rules.

In order to continue dissemination of transaction information in Non-Investment Grade debt securities, the NASD proposed amendments to the TRACE Rules, which will allow the Association to continue designating up to 50 Non-Investment Grade debt securities for dissemination, using standards that parallel the standards now set forth in the FIPS Rules for the designation of the FIPS Mandatory Bonds (also known as the FIPS 50 securities).

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