

EXECUTIVE SUMMARY

CORPORATE BOND
MARKET LIQUIDITY IN ISRAEL
AT HETEROGENEOUS TRADE SIZES

Dustin Plotnick, Koret-Milken Institute Fellow
Dr. Gitit Gur-Gershgoren, Chief Economist, Israel Securities Authority



Department of Economic Research
Israel Securities Authority



MILKEN INSTITUTE

Acknowledgments

Special thanks to the members of the Economics Department of the Israel Securities Authority: Itzik Shurkey, Rita Yankelovich, Liza Teper, Rachel Wind, Rinat Nachum, Liran Katsov, Efrat Margalit, and Yoni Fenning; the Koret-Milken Institute Fellows at the ISA: Dennis Varshavsky, Asaf Hovav, and Shaul Zilberman; Glenn Yago, Carl Caplan, Alma Perez-Gadot, and Orly Movshovitz-Landskroner for their invaluable support and advice; Lisa Renaud for her editorial support; and the Koret-Milken Institute Fellows program.

About the Koret-Milken Institute Fellows Program

The Koret-Milken Institute Fellows Program accelerates Israel's economic growth through innovative, market-based solutions for long-term economic, social, and environmental issues. The program focuses on connecting government, philanthropic, and business resources that are vital to national growth and development.

Directed by the Milken Institute Israel Center, the Koret-Milken Institute Fellows Program awards annual fellowships to outstanding graduates of Israeli and international institutes of higher education. Fellows serve yearlong internships at the center of the nation's decision-making—the Knesset, government ministries, and other Israeli agencies—and aid policymakers by researching and developing solutions for various economic and social challenges.

In addition, fellows craft their own policy studies aimed at identifying barriers to economic and employment growth in Israel. The fellows' studies, carried out under the guidance of an experienced academic and professional staff, support legislators and regulators who shape the economic reality in Israel. The program offers the ultimate educational exercise, combining real-life work experience with applied research five days a week.

Throughout the year, fellows receive intensive training in economic policy, government processes, and research methods. They acquire tools for writing memorandums, presentations, and policy papers, and they develop management, marketing, and communication skills. The fellows participate in a weekly workshop, where they meet senior economic and government professionals, business leaders, and top academics from Israel and abroad. They also participate in an accredited MBA course that awards three graduate-level academic credits that are transferable to other universities in Israel. The course, which focuses on financial and economic innovations, is taught at the Hebrew University of Jerusalem's School of Business Administration by Professor Glenn Yago, Director of the Milken Institute Israel Center and Director of Capital Studies at the Milken Institute in California.

Fellows Program alumni can be found in senior positions in the public and private sectors. Some serve as advisers to government ministries while others work at private-sector companies or go on to advanced studies at leading universities in Israel, the United States, and Great Britain. Within the program's framework, more than 80 research papers have been published, catalyzing reforms, reducing barriers, bringing about economic growth, and improving the quality of life for Israeli citizens.

The Koret-Milken Institute Fellows Program is nonpolitical and nonpartisan. It is funded by the Koret Foundation, the Milken Institute, and other leading philanthropic organizations and individuals in the United States and Israel.

More about the program: www.kmifellows.org

Contact us: info@kmifellows.org

Executive Summary

The Israeli corporate bond market is highly transparent and predominantly traded on the Tel Aviv Stock Exchange (TASE) continuous limit order book. Two thirds of the face value of the Israeli corporate bond market is listed on the TASE,¹ and approximately 90 percent of the trading volume in exchange-listed corporate bonds takes place on the exchange. In contrast, corporate bond markets in the U.S. and Europe are structured as dealer-based over-the-counter (OTC) markets; there is little-to-no volume on the exchanges, even for exchange-listed bonds (IOSCO 2004). Legislators in the U.S. appear to prefer exchange trading; in the wake of the crisis they are presently trying to move derivatives markets from OTC trading to the exchange.² In Europe there is at least some interest in doing the same for the corporate bond market.³ However, exchange trading is not necessarily superior to OTC trading. This report highlights the relevant issues for assessing market quality in Israel and puts forward a detailed empirical analysis of the liquidity of the tradable corporate bond market in Israel.

In our sample we find that the Israeli corporate bond market is characterized by larger quoted spreads at *larger* trade sizes (consistent with U.S. equity markets) but larger effective spreads at *smaller* trade sizes (consistent with foreign bond markets). This trend is observed for all except the largest trade sizes, where costs again increase with trade size. Equities on the TASE exhibit the same pattern for quoted spread and effective spread distribution by trade size. Corporate bond market effective spreads on the TASE are comparable to or better than the cost of trading in corporate bonds around the world, and better than equities' effective spreads on the TASE.

Quoted inside spread (QIS) was lower for corporate bonds in January 2010 (median security's mean over the period = 96 bps) than for equities in the same period (309 bps) or for corporate bonds in March 2009 (263 bps). We find that effective spreads are substantially lower than quoted spreads (whole spread, not half spread), with transaction medians of 11.45 bps (Jan 2010 corporate bonds), 12.65 bps (Jan 2010 equities), and 13.50 bps (Mar 2009 corporate bonds).

The March 2009 period had considerably higher yield estimates than the January 2010 period. Corporate bonds in the middle decile by yield had an average yield of 10.42 percent in March 2009 and 4.59 percent in January 2010. March 2009 falls within what is considered to be the Israeli corporate bond crisis, during which many corporate bonds lost much of their value as measured by market capitalization. The March 2009 yields coincide with considerably higher transaction costs. After transaction costs, the yield estimates for March 2009 and January 2010 were much closer to each other: Subtracting the average cost of transacting NIS 100,000 over the relevant bonds results in average yield estimates of 4.05 percent and 2.55 percent in the two periods, respectively.

We also test to see if an ex-ante liquidity measure that analyzes liquidity "down the book," the CRT(D), is useful to investors. Down-the-book liquidity measures seek to capture both the price and size component of liquidity, answering the question: "What are my costs given that I wish to trade X number of shares or value of currency?" Benston et al. (2000) put forward the CRT(D) measurement and test it for information contribution by seeing how well it predicts subsequent transactions relative to quoted spreads in the Toronto equities market. Replicating their procedure, we find that for a sample of TASE equities, CRT(D) does contribute additional information to investors. However, we fail to find that CRT(D) contributes additional information on either a matching sample of bonds or a broad sample of corporate bonds over the relevant period.

Currently, traders on the TASE have public access to the top three best bid and ask quotes. Our finding that CRT(D) contributes added information relative to the top bid-ask quotes in the equities suggests that it may be beneficial for market participants to see greater depth on the limit order book.

In this report we focus on liquidity. We also believe that market structure and transparency can affect market stability. While we do not assess market stability in this report, we caution the reader that assessing the liquidity of varied market structures without also considering their effect on stability presents an incomplete picture.

FELLOWS | KORET
PROGRAM | MILKEN INSTITUTE

תוכנית עמיתי קורת – מכון מילקן
בית מילקן, רחוב תל חי 13
ירושלים, 97102

info@kmifellows.org
www.kmifellows.org