Vincent Lindner
Konrad Lucke
Loriana Pelizzon

Market Transparency and Dealer Behavior. Lessons From MiFIDII/MiFIR Transparency Requirements

SAFE White Paper No. 119 | March 2026

Leibniz Institute for Financial Research SAFE
Sustainable Architecture for Finance in Europe
policy_center@safe-frankfurt.de | www.safe-frankfurt.de

Leibniz Institute for Financial Research SAFE
SAFE White Paper No. 119

Market Transparency and Dealer Behavior. Lessons From MiFID II/MiFIR Transparency Requirements*

Vincent Lindner† Konrad Lucke‡ Loriana Pelizzon§

March 31, 2026

Summary

This policy paper examines the effects of the introduction of the MiFID II / MiFIR framework on the transparency regime for sovereign bonds. The main purpose of the framework is to provide markets with real-time information and lower market asymmetries, thereby increasing liquidity in the market. Combining regulatory transaction data from BaFin with MTS limit order book data, we find contrasting results. While mandatory trade reporting had the desired effect in over-the-counter markets, as it narrowed spreads and improved liquidity, the MTS limit order book tells a different story. Once quotes and trades became generally public, dealers reacted by widening spreads and curtailing their quoting agressiveness which ultimately undermined liquidity and deteriorated price discovery. These findings have important consequences for further market integration efforts under the Savings and Investment Union umbrella. Policymakers must carefully consider the unintended consequences of desirable policy outcomes, such as market transparency, and should tailor policy solutions to venue type.

*SAFE policy papers represent the authors' personal opinions and do not necessarily reflect the views of the Leibniz Institute for Financial Research SAFE or its staff.

†Vincent Lindner, Leibniz Institute for Financial Research SAFE, Email: Lindner@safe-frankfurt.de
‡Konrad Lucke, Leibniz Institute for Financial Research SAFE, Email: lucke@safe-frankfurt.de
§Loriana Pelizzon, Leibniz Institute for Financial Research SAFE, Email: Pelizzon@safe-frankfurt.de

Key messages

- Transparency mandates in MiFID II/MiFIR improve liquidity in opaque German sovereign bond markets, but its benefits are not uniform across trading venues.
- In over-the-counter markets, mandatory reporting reduced spreads and improved price efficiency. In contrast, the same transparency rules had negative effects on the MTS limit-order book, as public pre-trade disclosures led dealers to widen spreads and reduce activity. Price discovery was weakened.
- The core mechanism is information leakage: When trading intentions become visible, market makers adjust behavior defensively, increasing transaction costs and undermining market quality.
- Policymakers should consider these differences and adopt a venue-specific approach to transparency, as well as prioritizing post-trade transparency and consolidated tapes.
- For the Savings and Investment Union, poorly calibrated transparency rules risk fragmenting liquidity; a tailored framework is essential to support deep, integrated sovereign bond markets that can serve as a reliable foundation for cross-border investments and retail investor participation.

1 Introduction

With the Savings and Investments Union (SUI), the European Union (EU) is undertaking a major project with far-reaching implications for financial markets. The SIU aims to integrate European financial markets, remove trading frictions, improve supervision, and mobilize household savings and channel them into productive investments. Building on Capital Markets Union (CMU), which has harmonized regulatory regimes in the last ten years, geopolitical developments as well as the EU's growth deficit have created a new sense of urgency. Part of the SIU agenda are amendments to the Markets in Financial Instruments Directive and Regulation (MiFID II/ MiFIR) framework implemented in January 2018. A major component of this framework is the transparency regime for bonds. It mandates that investment firms have to publish firm quotes and transaction prices and quantities for instruments they trade. The EU introduced these requirements with the aim of increasing market quality by lowering execution costs and improving price discovery. Providing the entire market with real-time information on the current fair price was meant to lower information asymmetries, decrease search and bargaining costs and thereby heighten competition and increase the liquidity of the market.

Since 2018 these requirements have been continually revised, most importantly through the introduction of a consolidated tape for trade reporting in bonds, which was introduced in 2024. The most recent proposal by the EU Commission adds supervisory competences of pan-European market operators for ESMA and an enhancement of the consolidated tape by requiring it to display the identity of the venue offering the best current bid and offer prices for shares and exchange-traded funds.

Against this background, this paper looks at evidence from the German sovereign bond (Bund) market, which shows that transparency has venue-specific effects. Lucke (2026) demonstrates that mandatory trade reporting narrowed spreads and reduced price dispersion in the previously opaque over-the-counter (OTC) segment, thereby improving liquidity. By contrast, when quotes and trades on the Mercato Telematico dei Titoli di Stato (MTS) limit order book became public, dealers widened spreads and curtailed their quoting aggressiveness, undermining liquidity and weakening the link between displayed quotes and subsequent trade prices. The price discovery role of MTS deteriorated because dealers feared information leakage.

Consequently, we argue that transparency is beneficial overall for sovereign bond markets but must be calibrated to avoid harming order-book liquidity and price discovery. A consolidated tape and robust post-trade disclosure can enhance competition and inform investors, but transparency should be tailored to venue type. Policymakers should carefully consider unintended and possibly negative consequences of transparency mandates for market liquidity.

2 Market Design Under MiFID II and MiFIR

2.1 The Structure of the Bund Market

The German Bund market is one of the largest sovereign bond markets in the euro area, yet it is highly fragmented across both instruments and venues. Liquidity concentrates in a few deliverable bonds, while many other issues trade only sporadically or not at all (Kerssenfischer, Lucke, and Scherrieble (2026)). For the most part, the market can be characterized as a dealer market where liquidity is predominantly provided by primary dealer banks acting as market

makers. These sit at the center of a complex trading network that is highly fragmented across trading venues and protocols. The existing trading protocols can broadly be categorized into three distinct types (see Figure 1):

- **Bilateral OTC trades (including interdealer brokers).** These trades encompass off-venue negotiations, systematic internalisers, and broker-intermediated transactions. Before MiFID II, they were largely invisible beyond the two counterparties or the broker. Nonetheless, they accounted for the majority of trades prior to MiFID II. As illustraded by Figure 1, these transactions are commonly negotiated via phone.
- **Request-for-quote (RFQ) platforms.** Multilateral trading facilities, organized trading facilities and regulated markets (such as Bloomberg MTF and Tradeweb) enable clients to request quotes from multiple dealers on an electronic platform, giving the client an immediate overview of the liquidity conditions in the market (see Figure 1). After receiving the quotes, the client can select the most favorable one and execute it. Already prior to MiFID II, these platforms already offered some degree of transparency by aggregating and publishing dealers quotes. The importance of these platforms in bond markets has grown in the past years.
- **Central limit-order book (CLOB).** A limit order book is a trading system where market makers send limit orders with prices at which they are willing to buy (bid price) or sell (ask price). These orders get aggregated to form a book. When an investor sends a market order they receive the best currently available price in the limit order book. Alternatively, if bid and ask prices of two limit orders overlap, these are automatically executed. The only major CLOB for Bunds is provided by MTS. It is an interdealer platform with a minimum trade size of €2.5 million and an order book that often exceeds €100 million. The trading volume on MTS represents less than 10% of the Bund market but its high trading frequency give it an important role as a benchmark venue for Bund prices.

Each of these trading protocols features a different degree of cost, practicality, anonymity or transparency and dealers and investment firms choose them for these feature depending on what kind of trade they want to execute. For example, a hedge fund might specifically choose to negotiate a transaction over the phone in order to dissipate as little information as possible to other market participants. The effect of a regulatory requirement mandating the same minimum level of transparency will thus naturally differ across trading protocols and venue types.

2.2 Transparency requirements

MiFID II / MiFIR introduced two major aspects of transparency to bond markets:

- **Pre-trade transparency.** Market operators and investment firms operating a trading venue must publish current bid and ask quotes and the depth of trading interest at these quotes. The precise pre-trade transparency are calibrated for different types of trading systems. Initially, pre-trade transparency for non-equities applied equally to limit order books and RFQ platforms. The 2024 MiFIR review lifted these obligations for the latter.
- **Post-trade transparency.** Investment firms must report all executed bond trades. Reports have to include the transaction price, volume and quantity and need to be published

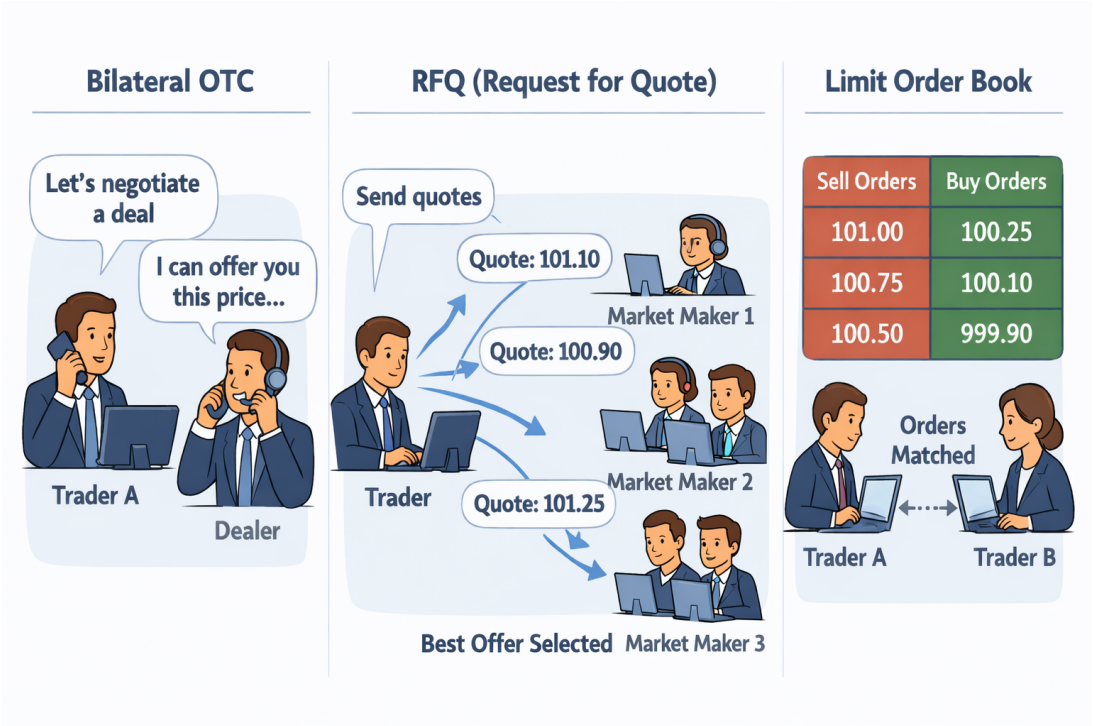

Figure 1: Available trading protocols in the German sovereign bond market.

in near real-time. Only for large or illiquid trades, regulators allow deferred publication to protect dealers from adverse selection. Initially publication of trade reports was fragmented across multiple venues and Approved Publication Arrangements (APAs). In June 2025 the European Commission adopted the technical standards needed to enable EU consolidated tapes (published in the Official Journal in November 2025), and ESMA selected Ediphy (fairCT) as the first EU bond consolidated tape provider in July 2025. Once authorised and operational, the bond consolidated tape should aggregate post-trade reports into a single EU-wide feed.

The effect of transparency on market quality is empirically and theoretically unclear and has been an object of academic debate going back all the way to the 90s. One set of papers argues that transparency reduces transaction costs by increasing competition between dealers (see Bessembinder, Maxwell, and Venkataraman (2006), Edwards, Harris, and Piwowar (2007), and Goldstein, Hotchkiss, and Sirri (2007)). These papers look at the introduction of the Trade Reporting and Compliance Engine (TRACE) in 2002 which mandated the reporting of trades in the US corporate bond market, a classical dealership market. Another set of papers finds beneficial effects of transparency in limit order books due to increased informational efficiency (see Eom, Ok, and Park (2007), Boehmer, Saar, and Yu (2005), and Hendershott and Jones (2005)).

Other papers such as Madhavan, Porter, and Weaver (2005) and Simaan, Weaver, and Whitcomb (2003) argue that instead transparency can be detrimental to market conditions as it reduces the incentives for market makers to provide liquidity. This concern is especially pronounced on limit order books where limit orders by market makers can immediately be executed (see Madhavan (1995)).

The mixed evidence on the effect of transparency suggest that each transparency regime

should be evaluated individually as results will change according to the prevalent market structure. In order to improve future regulatory developments, this analysis reviews the effect that the introduction of the MiFIR transparency requirements had on the Bund market.

3 Empirical evaluation of the 2018 MiFID II/MiFIR introduction

Lucke (2026) assesses the effect of MiFID II/MiFIR on market quality by combining regulatory transaction data from BaFin with MTS limit order book data from 2016 to 2020. The BaFin data contain details of every Bund transaction involving an entity regulated in Germany. The fields that have to be reported to BaFin include the date and time of the transaction, its price and volume, the trade venue where the transaction is executed, as well as the identity of the parties involved in the trade. The MTS data contain the complete MTS limit order book at any point in time, as well as the market orders and information on their execution.

Comparing conditions in the Bund market in 2016–2017 (pre-transparency) to those in 2018–2019 (post-transparency), the paper finds that the effects of transparency were mixed, with their outcome depending on the trade venue: More opaque venues, such as OTC, benefitted while the previously transparent and very liquid MTS centralized limit order book was negatively impacted.

3.1 Liquidity gains in OTC trading

Prior to MiFID II, Bund trades conducted bilaterally via voice brokers or RFQ platforms were relatively opaque. Prices and quantities were visible only to the parties involved. The introduction of mandatory post-trade reporting narrowed bid–ask spreads and reduced price dispersion in this market segment. By comparing OTC trades with those executed on multilateral trading facilities (MTFs), the study shows that the liquidity gap between OTC and RFQ trading shrank after 2018, suggesting that transparency improved competition and price discovery in these venues. The effect can be seen in Figure 2 below. It plots the time series of average price dispersion in all bonds across bilateral OTC trades and trades executed on RFQ platforms.

The effect visualized by Figure 2 is further substantiated by regression results (see Lucke (2026) for the full results):

- MiFID II/MiFIR reduced the price dispersion of OTC trades. Interpreting price dispersion as a proxy for bid-ask spreads in OTC markets, this indicates a decrease in execution costs and higher market liquidity. A difference-in-differences regression comparing bilateral OTC trades (treatment) and RFQ trades (control) found that the interaction coefficient (Post × OTC) is negative and statistically significant (about 0.4 basis points). This implies that price dispersion declined more for OTC trades than for RFQ trades after the reform, and the effect holds for on-the-run and frequently traded bonds.

- However, the effect was driven by convergence of trading platforms rather than by uniform improvement across all venues. Aggregate market liquidity measures remained largely unchanged. MiFID II leveled liquidity conditions across trading venues without materially altering overall market performance. Thus, the relative improvement in OTC trading reflects a rebalancing: Mandated transparency has the highest positive effects on markets in which search costs and information frictions were highest pre-reform.

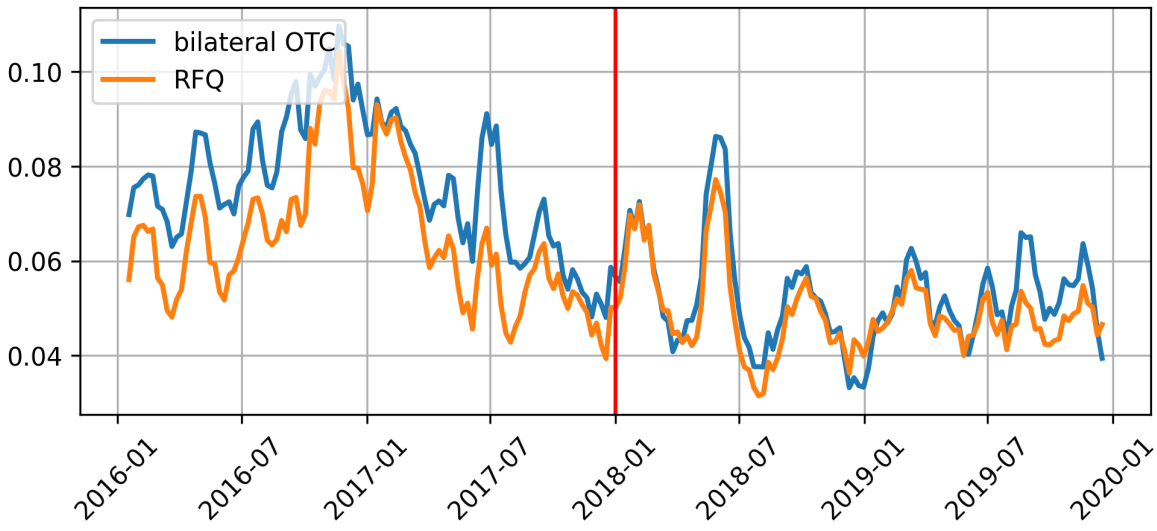

Figure 2: Volume weighted average price dispersion by venue category. The blue line shows price dispersion for bilateral OTC (XOFF and SI) trades; the orange line shows price dispersion for trades on RFQ platforms (MTFs, OTFs, and RMs). The measures are shown as 4-week moving averages. The vertical red line marks the introduction of MiFID II on January 1, 2018.

3.2 Liquidity Deterioration on the MTS Limit Order Book

Prior to MiFID II/MiFIR, quotes and trades were visible only to members. The reform required MTS to publish bid and ask quotes and executed prices publicly, introducing full pre- and post-trade transparency also for non-members. Dealers responded by widening their bid–ask spreads and reducing their quoting aggressiveness. That means they did not track price movements as closely as before. This behavioral shift reflected concerns about revealing information to the broader market and their clients. The change in behavior was reflected in a number of ways:

- **Widened spreads**. When MTS quotes and trades became publicly visible, dealers widened bid–ask spreads, thereby making the market less liquid. This change reflects the more cautious behavior of dealers follwoing the introduction of MiFID II/MiFIR. As they were no longer tracking price movements as closely as before the reform, they had to reduce the aggressiveness of their quote to avoid losses on their trades when the securities value moves outside the quoted spread.

- **Lower mid-price volatility**. As shown by Figure 3, average and median volatility of the MTS mid-price declined after MiFID II, showing that wider spreads were not driven by increased uncertainty but by slower adjustments.

- **Higher transaction costs**. At the same time, high-frequency transaction costs for OTC trades — measured relative to a mid-price observed up to five minutes before a trade — increased approximately threefold around the introduction of MiFID II. A growing share of OTC trades occurred at prices outside the contemporaneous MTS spread, indicating that the CLOB no longer bounded transaction prices.

- **Loss of price discovery**. Regressions of MTS mid-price returns on aggregate order flow

show that the correlation between returns and order flow was positive before MiFID II but turned negative afterwards. This reverse relationship is strongest for dealer-to-client and dealer-to-dealer subsamples. The decline reflects a weakened link between trading activity and price formation: MTS quotes became less informative about market conditions.

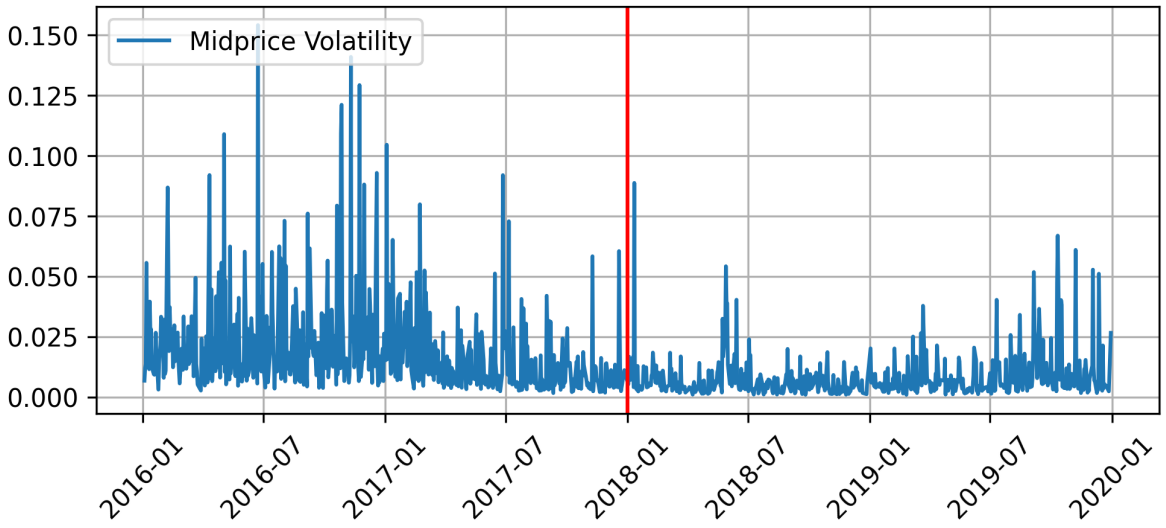

Figure 3: Daily average midprice volatility on the MTS CLOB across all German sovereign bonds. Midprices resulting from a spread larger than 1 pp are excluded to avoid the result being driven by a contemporaneous MTS rule change. The vertical red line marks the introduction of MiFID II on January 1, 2018.

In sum, the liquidity on the MTS venue and the informative value of its quoted prices decreased due to the introduction of transparency requirements.

3.3 Mechanism: Fear of Information Leakage

The reason for the decline in order-book liquidity and price discovery can be found in the information leakage that occurs due to the MiFID II/MiFIR transparency requirements. Before 2018, quotes and trades on MTS were visible only to fellow dealers. MiFID II/MiFIR mandated that these be made public, exposing the information on the platform clients and the broader market. Dealers reacted by quoting more conservatively and widening spreads. High-frequency transaction costs rose despite lower mid-price volatility because quotes were less responsive. These behavioral shifts weakened the MTS order book's role as a benchmark for price discovery, demonstrating that transparency can have adverse effects in interdealer limit-order-book markets.

4 Implications for Savings and Investment Union and recommendations for policymakers

The Bund market findings have direct implications for the SIU and MiFIR review, as removing barriers and increasing market transparency are explicit policy objectives. Liquid sovereign

bond markets are furthermore necessary to increase retail investor participation, as they provide a safe asset and benchmark for pricing other securities. If transparency rules discourage liquidity or simply shift liquidity between venues without overall improvement, they could undermine investor confidence and deter participation.

The proposed amendments to MiFIR aim to enhance the consolidated tape for shares and ETFs by requiring real-time information on the best available prices. While these assets and their markets are very different to sovereign bonds, the effects of transparency may be similar. Policymakers should thus consider potential downsides of transparency and make sure certain venue types are not damaged by their regulation. In particular, they should:

1. Support the consolidated tape and robust post-trade transparency. A centralized tape covering sovereign-bond trades will reduce data fragmentation and provide reliable price information to investors across the EU. The tape should include depth-of-book information where feasible but must protect the anonymity of order-book participants.

2. Calibrate pre-trade transparency to preserve price discovery. Mandatory quote disclosure should be tailored by venue type and trade size. On interdealer limit order books like MTS, regulators should allow indicative quoting and deferred publication of trade sizes to mitigate information leakage. For RFQ and bilateral OTC trades, public post-trade reporting should remain the primary transparency tool.

3. Align transparency reforms with the SIU's integration goals. By fostering liquid and transparent bond markets without compromising price discovery, calibrated transparency will encourage households to invest in capital markets and support cross-border capital flows. Regulators should monitor market-maker behavior, adapt deferral thresholds as markets evolve and coordinate with national authorities to ensure consistent implementation.

These recommendations reinforce the simple message that transparency is beneficial overall, but must be implemented thoughtfully to avoid harming limit-order-book venues. Calibrated transparency can ensure that the EU's sovereign-bond market remains both a reliable investment destination for citizens and a resilient foundation for the broader financial system.

References

Bessembinder, H., W. Maxwell, and K. Venkataraman (2006). Market Transparency, Liquidity Externalities And Institutional Trading Costs in Corporate Bonds. *Journal of Financial Economics 82*(2), 251–288.

Boehmer, E., G. Saar, and L. Yu (2005). Lifting the Veil An Analysis of Pre-trade Transparency at the NYSE. *The Journal of Finance 60*(2), 783–815.

Edwards, A. K., L. E. Harris, and M. S. Piwowar (2007). Corporate Bond Market Transaction Costs and Transparency. *The Journal of Finance 62*(3), 1421–1451.

Eom, K. S., J. Ok, and J.-H. Park (2007). Pre-trade transparency and market quality. *The Journal of Financial Markets 10*.

Goldstein, M. A., E. S. Hotchkiss, and E. R. Sirri (2007). Transparency and Liquidity: A Controlled Experiment on Corporate Bonds. *The Review of Financial Studies 20*(2), 235–237.

Hendershott, T. and C. M. Jones (2005). Island Goes Dark Transparency, Fragmentation, and Regulation. *Review of Financial Studies 18*(3), 743–793.

Kerssenfischer, M., K. Lucke, and W. Scherrieble (2026). Bunds.

Lucke, K. (2026). Transparency and Dealer Behavior - The Case of MiFID II and the Bund Market. *SSRN Working Paper*.

Madhavan, A. (1995). Consolidation, fragmentation, and the disclosure of trading information. *The Review of Financial Studies 8*, 579–603.

Madhavan, A., D. Porter, and D. Weaver (2005). Should securities markets be transparent? *Journal of Financial Markets 8*, 266–288.

Simaan, Y., D. Weaver, and D. Whitcomb (2003). Market Maker Quotation Behavior and Pretrade Transparency. *The Journal of Finance 58*(3), 1247–1267.