EURONEXT EQUITIES:

MARKET QUALITY ANALYSIS

The strength of 'Made in Italy' Equity Trading

November 2024

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Methodology

- Market quality metrics are analysed for the main Indexes representing Euronext stocks. Trading venues considered are Euronext, Cboe Europe (Cboe), Aquis Europe (Aquis) and Turquoise Europe (Turquoise).
- The market quality data in this study is sourced by the independent provider BMLL Technologies. The Welch *t*-test is conducted to assess statistically significant changes in metrics, with the first period spanning 2022 through March 2023 (prior to the Optiq[®] migration) and the second period covering from 27 March 2023 (post-migration) through the end of September 2024:
 - \circ $\;$ Average Spread: the mean bid-ask spread of the day, given in basis points relative to the mean mid-point price.
 - European Best Bid & Offer (EBBO) Setting: the number of events where a venue improved the consolidated best ask and bid price, as a percentage of the number of all consolidated ask and bid price improvement events for the instrument.
 - Liquidity around BBO Notional (\in K): the time-weighted average amount of notional around the BBO.
 - Liquidity around BBO Number of Shares (K): the time-weighted average amount of shares around the BBO.
 - Unique Time Presence at European Best Bid & Offer (EBBO) in percentage: The percentage of time during continuous trading when a venue is the sole one at the consolidated best bid and ask price.

Executive Summary

- 1. **Performance**: Milan outperformed other markets, with the FTSE MIB index climbing 28% back in 2023, outpacing the US (S&P 500 up 25%) and broader European markets (Eurostoxx 50 up 19%), largely driven by gains in the banking sector as a result of increased interest rates.
- 2. Trading Value Growth: Euronext Milan's daily trading value exhibited steady growth, particularly notable after the Optiq[®] migration in March 2023, with Milan's contribution to Euronext volumes peaking at 31% in H1 2024. The Italian market maintains a robust domestic ecosystem, with local brokers accounting for over 30% of volumes. Euronext Milan remains the preferred venue for trading on Italian securities, stably increasing its market share, consistently above 71%.
- 3. **Market Quality Improvement on FTSE MIB:** Following Optiq® migration, market quality metrics for Euronext Milan registered a long-term improvement.
 - The average spread decreased by 1.3 bps, from 5.8 bps to 4.5 bps;
 - Liquidity around BBO increased by an average of +€8.2K, from €45.4K to €53.6K;
 - The percentage of EBBO setting events by Euronext Milan increased from 49.7% to 66.1% post-migration, making the venue +24.8% more present at unique times at EBBO.
- 4. Market Quality on FTSE MID:
 - On less liquid stocks, such as the components on FTSE MID, Euronext Milan outperforms other MTFs in market quality leading in key metrics such as EBBO setting percentage (73.7%) and unique time presence at EBBO (82.0%).
 - In terms of liquidity, Euronext Milan also offers the highest notional liquidity around BBO at €10.6K.



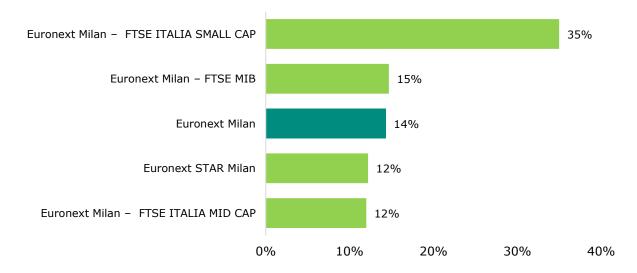
1. Equity volumes and performance: Italy has been the most resilient market in Europe since 2023

- Milan outperformed other markets back in 2023, with FTSE MIB index registering a +28% surge in 2023, surpassing both the US (S&P 500 at +25%) and European Markets overall (Eurostoxx 50 at +19%). The favourable momentum witnessed by the FTSE MIB in 2023 has persisted in the first quarter of 2024, flattening in the rest of the year.
- This achievement was largely attributed to banking sector's gains from increased interest rates. The top-traded stocks on Euronext Milan are dominated both in 2023 and 2024 by companies in the **banking sector**, followed by the energy sector and automotive.



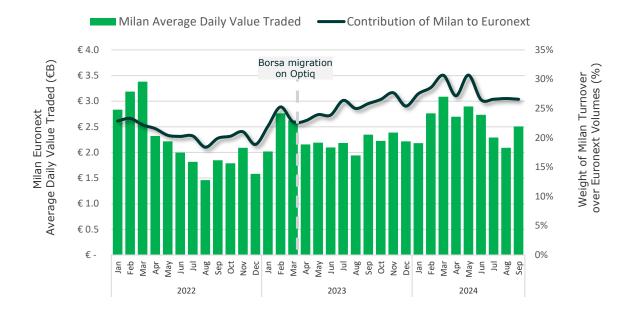
5 Most Traded Stocks on	Average Daily Value Traded (€M)		
Euronext Milan	2023	2024	
UNICREDIT	228.7	306.0	
INTESA SANPAOLO	241.7	311.0	
ENI	180.9	237.3	
STELLANTIS	167.6	221.2	
ENEL	147.3	189.6	

Growth of Turnover by Italian Equities Segments January - September 2024 vs January - September 2023



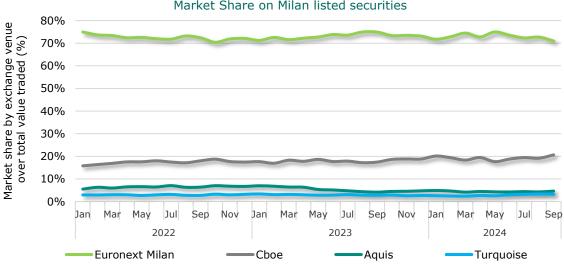


2. Milan contributed to over 31% of Euronext Group volumes in Q2 2024, with a sharp growth since the Optiq[®] migration



While trading volumes across Europe have generally contracted over 2023, Milan market stands out with a consistent increase in activity in the last year.

- The growth of **Average Daily Value traded** (ADV) for Euronext Milan has been strongly visible after the Optiq[®] migration at the end of March 2023, thanks to the synergies of a single platform. From January 2022 until the migration, the ADV stood at €2,258 million – increasing by 6% to €2,391 million from the migration through September 2024.
- The weight of Milan value traded (in percentage of Euronext Group volumes) has reached a peak of 31% in March and May 2024, 9% higher than the average weight of 22% from 2019 to Q1 2023.
- The Italian local ecosystem contributes a significant portion of the value traded on Euronext Milan, with an estimated 20% to 25% being driven purely by retail investors. There are currently more than 60 members actively trading on Euronext Milan.
- Thanks to the migration of Milan to Optig[®] and improvements of market quality, Euronext Milan has consistently maintained a **market share above 71%** since the migration in March 2023.

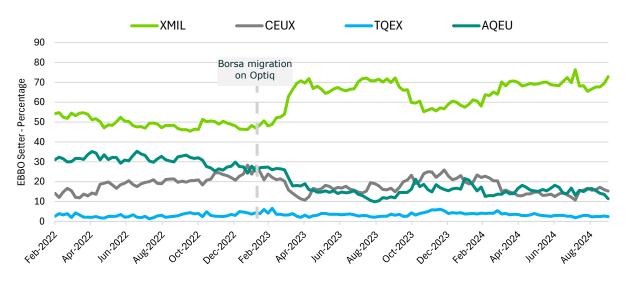


Market Share on Milan listed securities

Source: Quanthouse, including all on book trading categories (Lit Continuous, Lit Auctions, Dark, Periodic Auctions).

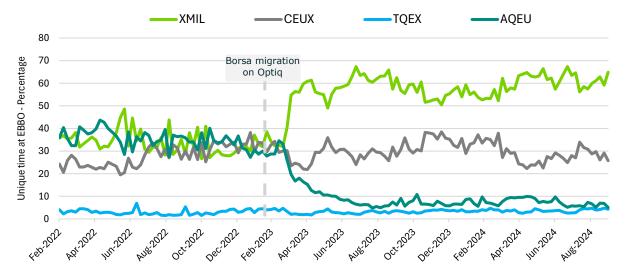


3. Milan market has experienced a significant improvement in market quality following the migration to Optiq®.

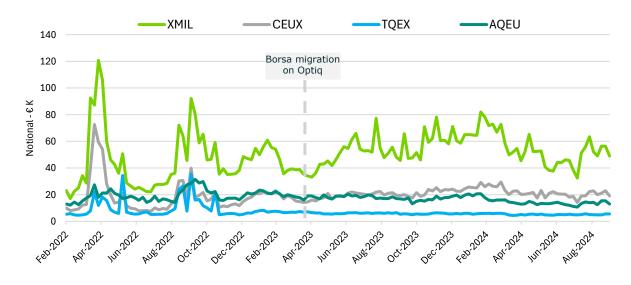


EBBO Setting (%): how often do venues set the best prices on FTSE MIB stocks?

Unique EBBO Presence (%): how often do venues uniquely display best prices on FTSE MIB stocks?



Liquidity at BBO (Notional): which venues displays largest liquidity at touch on FTSE MIB stocks?





FTSE MIB: Market Quality Metrics before and after Optiq[®] migration¹

The enhancements in Euronext Milan's market quality metrics stemmed also from the improved ability for Liquidity Providers to provide better quotes for Italian securities, following to the **inclusion of the FTSE MIB stocks in the SLP** (Supplemental Liquidity Provider) scheme of Euronext.

EBBO Setting Percentage (%) FTSE MIB	Euronext Milan	Cboe Europe	Aquis Europe	Turquoise Europe
Before Optiq migration	49.7%	18.9%	30.5%	3.2%
After Optiq migration	66.1%	17.3%	15.5%	3.4%
Absolute variation (After vs Before)	+ 16.4%***	- 1.6%***	- 15.0%***	+ 0.2%**

Average Spread (bps) FTSE MIB	Euronext Milan	Cboe Europe	Aquis Europe	Turquoise Europe
Before Optiq migration	5.8 bps	6.9 bps	5.8 bps	18.4 bps
After Optiq migration	4.5 bps	5.3 bps	5.5 bps	11.1 bps
Absolute variation (After vs Before)	- 1.3 bps***	- 1.6 bps***	- 0.3 bps***	- 7.3 bps***

Liquidity around BBO Notional (€K) FTSE MIB	Euronext Milan	Cboe Europe	Aquis Europe	Turquoise Europe
Before Optiq migration	45.4 €K	17.9 €K	19.3 €K	NA ³
After Optiq migration	53.6 €K	20.9 €K	16.4 €K	5.7 €K
Absolute variation (After vs Before)	+ 8.2 €K***	+ 3.0 €K***	- 2.9 €K***	NA ³

Liquidity around BBO (thousand number of Shares) FTSE MIB	Euronext Milan	Cboe Europe	Aquis Europe	Turquoise Europe
Before Optiq migration	7.7 K	2.2 K	3.1 K	NA ³
After Optiq migration	10.3 K	2.6 K	2.2 K	0.7 K
Absolute variation (After vs Before)	+ 2.6 K***	+ 0.4 K***	- 0.9 K***	NA ³

Unique Time Presence at EBBO (%) FTSE MIB	Euronext Milan	Cboe Europe	Aquis Europe	Turquoise Europe
Before Optiq migration	35.9%	29.0%	35.6%	3.4%
After Optiq migration	60.7%	31.0%	8.7%	3.4%
Absolute variation (After vs Before)	+ 24.8%***	+ 2.0%***	- 26.9%***	0.0% ²

Source: BMLL Technologies, daily data on FTSE MIB 40¹ stocks from 01/01/2022 to 30/09/2024. Venues considered for the analysis are Euronext Milan, Aquis Europe, CBOE DXE Lit and Turquoise Europe. Significance of Welch T-Test, *:10% level, **:5% level, ***:1%, ¹Not Significant. ²No data available for the full period.



4. FTSE MID: Market Quality Metrics in 2024

The FTSE MID Cap index consists of the **next 60 largest shares in market capitalisation on Euronext Milan, after the 40 included in the FTSE MIB**. As of September 2024, in terms of sectors the index is composed of 18% Construction and Materials companies, 16% Consumer Products and Services, 13% in Financial Services, and 12% Technology.

Although the Euronext SLP (Supplemental Liquidity Provider) scheme does not cover stocks from the FTSE MID Cap, **Euronext still demonstrates significantly better market quality** for the stocks within this index.

FTSE MID 2024 YTD	Euronext Milan	Cboe Europe	Aquis Europe	Turquoise Europe
EBBO Setting Percentage (%)	73.7%	14.5%	9.8%	2.0%
Time Presence at EBBO (%)	88.6%	51.6%	27.8%	14.0%
Unique Time Presence at EBBO (%)	82.0%	14.1%	3.1%	0.9%
Liquidity around BBO Notional (€K)	10.6 €K	3.4 €K	3.8 €K	2.3 €K
Liquidity around BBO (nb of Shares, in K)	2.8 K	0.7 K	0.9 K	0.5 K

Source: BMLL Technologies, daily data on FTSE MID stocks from 01/01/2024 to 30/09/2024. Venues considered for the analysis are Euronext Milan, Aquis Europe, CBOE DXE Lit and Turquoise Europe.

Focus on: Euronext Mid-Point Match

On Euronext listed securities in Milan, midpoint trading accounts on average in 2024 for c. **3.5% of on book volumes**. Euronext has entered the market with Euronext Mid-Point Match on 8 April 2024, guarantying execution at the mid-price between best bid and offer and the possibility to sweep to the central limit order book. Euronext Mid-Point Match in Milan has reached 1.7% market share of dark volumes as of September 2024.

Top 10 Most Traded Stocks on Euronext Mid-Point Match Milan (Apr-24 - Sep-24)	Turnover (M€)	Euronext market share in Dark Value Traded
UNICREDIT	28.4	1.9%
INTESA SANPAOLO	13.2	1.7%
STELLANTIS	12.3	0.9%
ENEL	8.3	1.5%
BPER BANCA	5.0	6.3%
BANCO BPM	4.2	11.1%
FERRARI	4.2	1.1%
TENARIS	3.9	2.9%
PRYSMIAN	3.9	0.9%
BANCA MPS	3.7	3.0%

Source: Quanthouse from 01/01/2024 to 30/09/2024. Venues considered for the analysis are Euronext Milan, Aquis, CBOE DXE, CBOE CXE, CBOE BXE and Turquoise. Dark below LIS.

Further acceleration of Euronext dark volumes is expected before end of year, following the launch of a liquidity scheme for Euronext Mid-Point Match, and given the steady onboarding of **local brokers bringing unique liquidity onto the platform**.



Conclusion

The migration of Euronext Milan to the Optiq[®] platform has strengthened Milan's position within the Euronext Group and Europe as a whole:

- Over the past two years, Milan has outperformed other European markets in trading volumes.
- Key market quality indicators such as Spread, EBBO Setting, Liquidity around the Best Bid and Offer and Unique Time at EBBO have shown significant improvements after the Optiq[®] migration, highlighting Euronext Milan's enhanced position as the reference venue for price formation and market quality.
- The platform's enhanced liquidity provisions, the unique pool of local brokers, and the contribution of international brokers, have confirmed the position of Euronext Milan as the leading venue for Italian equities, with consistent and growing advantages over competing trading venues.





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