

A post-crisis framework for European capital markets

Brussels, June 2020

The effects triggered by the spread of COVID-19 and its economic impact will be severe and long-lasting. The OECD estimates that the COVID-19 Crisis will directly affect sectors amounting to up to one-third of Gross Domestic Product (GDP) in the major developed economies. For each month of containment, there will be a loss of two percentage points in annual GDP growth.¹ Today, we face economic upheaval potentially graver than the Great Financial Crisis. Pressure on the financial system is growing and, clearly, this is a “whatever-it-takes” moment for fiscal and monetary policy.

During this crisis, policymakers have reacted swiftly to inject liquidity into the economy, but ultimately, when solvency is in question, the transformational capacity of banks can be impaired. Equity is needed to buffer exogenous shocks and will be needed more than ever so that public equity markets can, to the best of their abilities, help companies weather the crisis and finance their post-crisis growth. Exchanges facilitate this capital formation, allowing raising capital and trading and supporting risk management, in an orderly and transparent manner. They make possible the access of borrowers to liquid funds, reduce their capital costs, and diversify their funding sources whilst offering investment opportunities and investor protection.

Policymakers must assess what needs to be done to support the economy in its recovery. In this paper, FESE outlines its proposal for a post-crisis framework around two areas:

- The role of capital markets for financial stability and growth, and
- The role of lit markets for liquidity and price formation.

First, we underline the need to develop market-based financing in an environment in which the EU must reduce its dependence on bank lending and promote primary markets. This remains one of the core unmet objectives of the Capital Markets Union (CMU) and, in this respect, the EU needs to be ambitious and aim at significantly increasing the size of equity financing. More financing through equity markets helps achieve higher levels of growth and risk-sharing, diminishing systemic risk.

Second, we are convinced that securing the right market structure is key to avoid liquidity crises turning into solvency crises. Transparency in equity markets must be revamped to allow robust liquidity and price formation to the benefit of issuers and investors.

The post-crisis world will be built upon the choices we make now. Early signs of the new normal are already visible, with some governments taking equity stakes in public companies. Capital markets have a pivotal role to play in this new normal, financing a sustainable economy and confronting the threat posed by climate change, and need to be supported.

¹ See OECD, “Evaluating the Initial Impact of COVID-19 Containment Measures on Economic Activity” (Paris, 2020).

The role of capital markets for financial stability and growth

Equity markets are vital for the real economy, facilitating capital formation and risk management. They offer a reliable risk buffer against exogenous shocks: The loss-absorbing properties of equity, especially through the cross-border and risk-sharing channels, smooth macroeconomic shocks².

Whilst it is important to recognise the value of bank-based financial intermediation, the overreliance on bank lending compared to market-based financing is a limitation on the resolution of financial crises³.

First, financial factors play an important role in modern business cycles: credit-driven business cycles amplify financial accelerator effects⁴ and tend to be followed by deep contractions⁵, bank lending is more volatile and procyclical than market-based financing.

Second, bank lending can have a negative impact on trend growth⁶ as, for example, large banking systems are associated with more systemic risk and can be impaired. In contrast, market-based financial intermediation is associated with countries at the technological frontier⁷ and greater environmental quality⁸.

Additionally, in some respects, non-equity markets can play a comparable role to equity, being an important contributor to risk-sharing and overall financial stability.⁹ For example, properties of convertibles or the stable and predictable returns of fixed income reduce risk¹⁰.

² See Fiorella De Fiore and Harald Uhlig, "Corporate Debt Structure and the Financial Crisis," *Journal of Money, Credit and Banking* 47, no. 8 (December 1, 2015): 1571-98, <https://doi.org/10.1111/jmcb.12284>; Maurice Obstfeld, "Risk-Taking, Global Diversification, and Growth," *The American Economic Review* 84 (1994): 1310-29, <https://doi.org/10.2307/2117774>.

³ Similar analyses and prescriptions were given by policymakers about the Great Financial Crisis, see Mario Draghi, "Keynote Speech at the Eurofi Financial Forum" (ECB, 2014); Valdis Dombrovskis, "VP's Speech on European Banking and Capital Markets Union at the Ambrosetti Forum Panel 'The Agenda for Europe'" (European Commission, 2018).

⁴ As in the canonical model in Ben S. Bernanke, Mark Gertler, and Simon Gilchrist, "The Financial Accelerator in a Quantitative Business Cycle," *Handbook of Macroeconomics* 1 (1999): 1342-90, <https://doi.org/10.3386/w6455>.

⁵ Oscar Jordà, Moritz Schularick, and Alan M. Taylor, "When Credit Bites Back," *Journal of Money, Credit and Banking* 45, no. SUPPL2 (December 1, 2013): 3-28, <https://doi.org/10.1111/jmcb.12069>.

⁶ See *inter alia* Rodolphe Allard, Julien Blavy, "Market Phoenixes and Banking Ducks Are Recoveries Faster in Market-Based Financial Systems?," IMF Working Papers, 2011; Boris Cournède, Oliver Denk, and Peter Hoeller, "Finance and Inclusive Growth," no. 14 (2015), <https://doi.org/10.1787/5js06pbhf28s-en>; Sam Langfield and Marco Pagano, "Bank Bias in Europe: Effects on Systemic Risk and Growth," ECB Working Paper Series, 2015.

⁷ See *inter alia* Franklin Allen, "Stock Markets and Resource Allocation," in *Capital Markets and Financial Intermediation*, ed. Colin Mayer and Xavier Vives (Cambridge: Cambridge University Press, 1993), 81-108, <https://doi.org/10.1017/CBO9780511752056.007>; Bernard S Black and Ronald J Gilson, "Venture Capital and the Structure of Capital Markets: Banks versus Stock Markets," *Journal of Financial Economics* 47, no. 3 (March 15, 1998): 243-77, [https://doi.org/10.1016/S0304-405X\(97\)00045-7](https://doi.org/10.1016/S0304-405X(97)00045-7); Asli Demirguc-Kunt, Erik Feyen, and Ross Levine, "The Evolving Importance of Banks and Securities Markets," World Bank Policy Research Working Papers, 2011; Po-Hsuan Hsu, Xuan Tian, and Yan Xu, "Financial Development and Innovation: Cross-Country Evidence," *Journal of Financial Economics* 112, no. 1 (April 1, 2014): 116-35, <https://doi.org/10.1016/J.JFINECO.2013.12.002>; Ross Levine, "Stock Markets, Growth, and Tax Policy," *The Journal of Finance* 46, no. 4 (September 1991): 1445, <https://doi.org/10.2307/2328866>; Ross Levine, "Finance and Growth: Theory and Evidence," NBER Working Papers, September 2004, <https://doi.org/10.3386/w10766>.

⁸ Ralph De Haas and Alexander Popov, "Finance and Carbon Emissions," ECB Working Paper Series (Frankfurt am Main, 2019), <https://doi.org/10.2866/203304>.

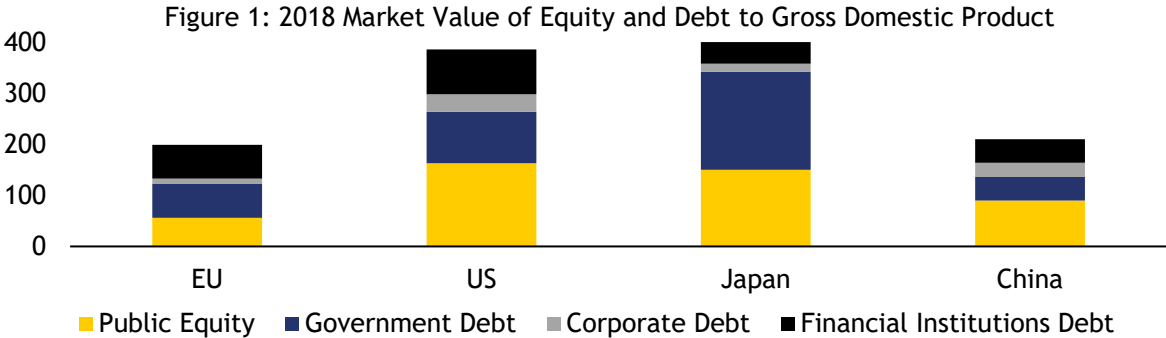
⁹ See *inter alia* Wayne R. Guay, "The Impact of Derivatives on Firm Risk: An Empirical Examination of New Derivative Users," *Journal of Accounting and Economics* 26, no. 1-3 (January 1, 1999): 319-51, [https://doi.org/10.1016/S0165-4101\(98\)00032-9](https://doi.org/10.1016/S0165-4101(98)00032-9); Yanbo Jin and Philippe Jorion, "Firm Value and Hedging: Evidence from U.S. Oil and Gas Producers," *Journal of Finance* 61, no. 2 (April 1, 2006): 893-919, <https://doi.org/10.1111/j.1540-6261.2006.00858.x>; Söhnke M. Bartram, Gregory W. Brown, and Jennifer Conrad, "The Effects of Derivatives on Firm Risk and Value," *The Journal of Financial and Quantitative Analysis* (Cambridge University Press/University of Washington School of Business Administration, 2011), <https://doi.org/10.2307/23018425>.

¹⁰ See the literature on the equity risk premium, e.g. Rajnish Mehra and Edward C. Prescott, "The Equity Premium: A Puzzle," *Journal of Monetary Economics* 15, no. 2 (March 1, 1985): 145-61, [https://doi.org/10.1016/0304-3932\(85\)90061-3](https://doi.org/10.1016/0304-3932(85)90061-3).

Exchanges are pivotal for these different capital markets segments by bridging the gap between issuers and investors: serving the need for capital formation on primary markets and price discovery and risk transfer on secondary markets, while ensuring transparency, integrity, and investor protection. For instance, SME Growth Markets facilitate access for small issuers to an ecosystem with a deep and diversified investor base. This type of market aims for the right balance between investor protection and simplified requirements for SME issuers.

In view of this, the CMU aims to foster financial integration and resilience by lowering the dependence on bank-based financial systems and increasing cross-border capital markets integration. While freedom of movement of capital has been a long-standing goal of the EU, national lines have long created a home bias in capital markets¹¹. Removing these barriers, as outlined previously, will promote better growth performance and risk-sharing¹².

Economic challenges like the COVID-19 Crisis provide a renewed impetus for the CMU: there is considerable room for progress¹³, with the potential benefits of fully integrated and more effectively regulated capital markets in the order of €137 billion per year¹⁴. So far, barriers to integration remain and there is limited evidence that the capital structure of the economy has changed¹⁵: capital markets and taxation systems¹⁶ in the EU continue presenting a bias towards debt financing (Figure 1) and the number of initial public offerings (IPOs) is decreasing¹⁷.



Source: ECMI

¹¹ Zsolt Darvas and Dirk Schoenmaker, “Institutional Investors and Home Bias in Europe’s Capital Markets Union,” Bruegel Working Paper, 2017, <https://doi.org/10.2874/553086>.

¹² See *inter alia* Yuliya Demyanyk, Charlotte Ostergaard, and Bent E Sørensen, “Risk Sharing and Portfolio Allocation in EMU,” 2008, <https://doi.org/10.2765/85145>; Bent E Sørensen and Oved Yosha, “International Risk Sharing and European Monetary Unification,” *Journal of International Economics* 45 (1998): 211-38; Diego Valiante, “Europe’s Untapped Capital Market Rethinking Financial Integration after the Crisis” (Brussels, 2016); Ashok Vir Bhatia et al., “A Capital Market Union for Europe,” *IMF Staff Discussion Note SDN/19/07* (2019).

¹³ See *inter alia* Steven Blockmans et al., *What Comes After the Last Chance Commission?*, ed. Steven Blockmans (Brussels: CEPS, 2019); Guido. Ferrarini, Danny. Busch, and Emiliós. Avgouleas, *Capital Markets Union in Europe* (Oxford; New York: Oxford University press, 2018); Bhatia et al., “A Capital Market Union for Europe”; The Next CMU High-Level Group, “Savings and Sustainable Investment Union” (Brussels, 2019).

¹⁴ European Parliamentary Research Service, “Europe’s Two Trillion Euro Dividend: Mapping the Cost of Non-Europe, 2019-24” (Brussels, 2019).

¹⁵ ECB, “Financial Integration and Structure in the Euro Area, March 2020” (Frankfurt am Main, 2020); Bhatia et al., “A Capital Market Union for Europe.”

¹⁶ Tax reforms to reduce the debt bias can result in significant reductions in the risks and costs of financial crises, see ZEW, “Effective Tax Levels Using the Devereux/Griffith Methodology,” 2018; Sven Langedijk et al., “Debt Bias in Corporate Taxation and the Costs of Banking Crises in the EU,” European Commission Taxation Papers (Brussels, 2014), <https://doi.org/10.2778/70489>.

¹⁷ FESE et al., “European IPO Report 2020 Recommendations to Improve Conditions for European IPO Markets” (Brussels, 2020).

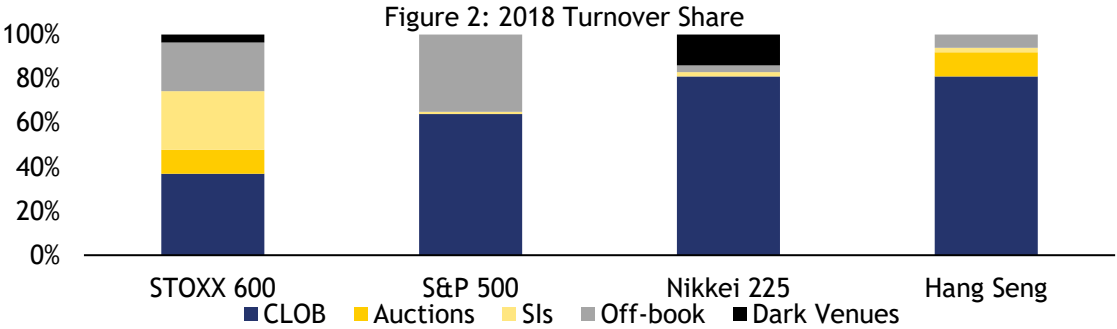
The role of lit markets for liquidity and price formation

At the core of equity markets are regulated markets. Analogously to capital markets, regulated markets contribute to financial stability and economic growth by making possible the access of borrowers to diversified funding sources and providing investment protection and risk management opportunities.

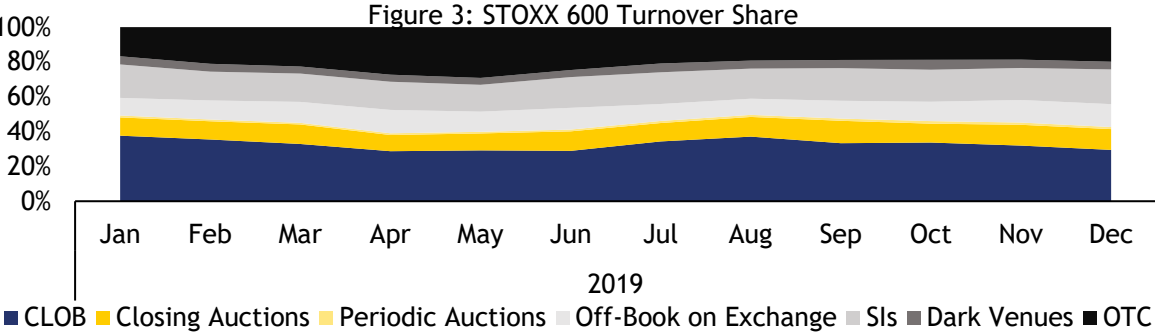
Central to the role of regulated markets and, more generally, lit markets are two key functions: the provision of trading infrastructure with large pools of liquidity and price formation. A well-functioning price formation process enables trading to take place, delivers more efficient markets, and lowers the cost of capital for businesses¹⁸.

In 2007, the introduction of the Markets in Financial Instruments Directive (MiFID I) opened up competition in equity trading while at the same time giving rise to fragmentation and opacity. As a result, the key objectives of MiFID II for equity markets are to protect price formation and address some problems caused by dark trading (i.e. trading not subject to pre-trade transparency) and market fragmentation. For example, following the rise of dark trading conducted through broker crossing networks (BCNs), new rules were put in place to limit the amount of dark trading and to promote trading on lit markets.

However, equity markets in the EU remain less liquid and transparent than their US and Asian counterparts. This is shown by multiple measures of liquidity¹⁹ and a greater proportion of trading taking place on dark and quasi-dark venues (Figure 2). Alongside these trends, there has been a decrease in the share of continuous lit order books (CLOB) and a surge in non-transparent trading (Figure 3).



Source: Fidessa Fragmentation Index, Big xyt, FESE calculations



Source: Big xyt, FESE calculations

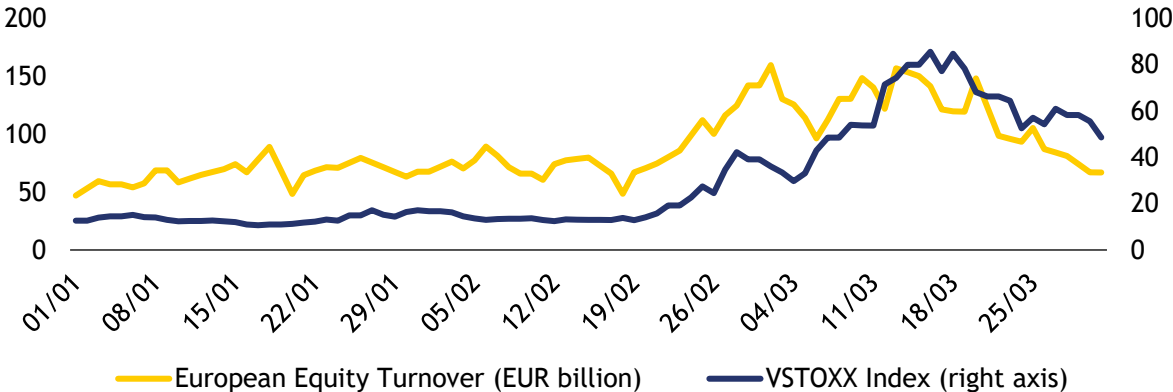
¹⁸ On the links between trading, price formation, equity market structure, and welfare see Oxera, “The Design of Equity Trading Markets in Europe” (London, 2019); Thierry. Foucault, Marco. Pagano, and Ailsa Roëll, *Market Liquidity: Theory, Evidence, and Policy* (Oxford University Press, 2013).

¹⁹ See, for example, PwC, “Global Financial Markets Liquidity Study,” 2015.

Liquidity plays a fundamental role in asset pricing and business cycles: liquidity risk premia significantly affect the cost of capital²⁰ and a variety of self-fulfilling mechanisms²¹ can make liquidity crises become solvency crises.

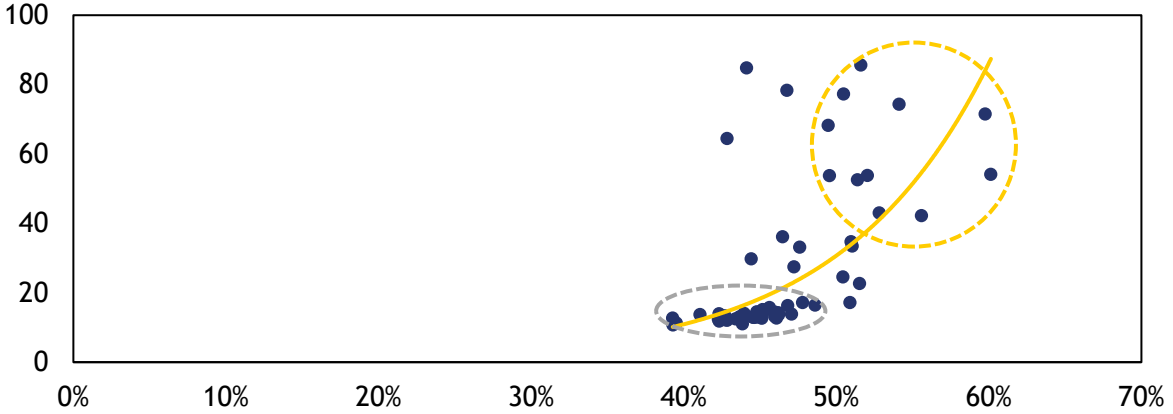
As highly regulated entities, regulated markets are obliged and committed to being operationally resilient. They are designed to ensure the highest levels of safety, integrity, and transparency. These functions have been put to the test during multiple financial crises; when other sources of liquidity dried up, regulated markets successfully continued to operate. Figure 4 and Figure 5 reflect precisely that: during the COVID-19 Crisis environment of heightened volatility and turnover, the share of lit trading has increased substantially. A more granular analysis of the liquidity developments during the crisis can be found in the annex.

Figure 4: European Turnover and Volatility during Q1 2020



Source: Big xyt, FESE calculations

Figure 5: European Turnover Lit Share and VSTOXX Index during Q1 2020



Source: Big xyt, FESE calculations

²⁰ See *inter alia* Viral V. Acharya and Lasse Heje Pedersen, “Asset Pricing with Liquidity Risk,” *Journal of Financial Economics* 77, no. 2 (August 1, 2005): 375-410, <https://doi.org/10.1016/j.jfineco.2004.06.007>; Yakov Amihud, Haim Mendelson, and Lasse Heje Pedersen, *Market Liquidity: Asset Pricing, Risk, and Crises* (Cambridge University Press, 2013).

²¹ See *inter alia* Markus Brunnermeier and Lasse Heje Pedersen, “Market Liquidity and Funding Liquidity,” NBER Working Papers (Cambridge, MA, February 2007), <https://doi.org/10.3386/w12939>; Douglas W. Diamond and Philip H. Dybvig, “Bank Runs, Deposit Insurance, and Liquidity,” *Journal of Political Economy* 91, no. 2 (1983): 401-19, <https://doi.org/10.2307/1837095>.

By attracting order flow away from lit markets, market liquidity is fragmented. Trades not subject to pre-trade transparency requirements also undermine trading information. Such fragmentation could impede, or dilute, price formation as fewer market participants come together on any lit market, while dark venues use reference prices provided by lit venues.

Although it is understood that large trades do not have a substantial impact on price discovery²², dark trading at sizes below large-in-scale (LIS) can be detrimental to price formation and liquidity²³: first, trading on dark venues reduces the information available for the price formation process given that most dark orders are below LIS and should contribute to price formation. Second, by reducing the depth in lit order books, dark trading fragments the order flow²⁴, which can have adverse selection risks and result in higher spreads. Whilst for LIS orders there is a need for alternative execution mechanisms to negate the potential effects of market impact, price formation and transparency are beneficial to all market users.

Furthermore, systematic internalisers (SIs) and over-the-counter (OTC) markets are able to discriminate with whom they choose to do business and are not open to all investors. There are also concerns that some investment firms are establishing networks of interconnected SIs, which could facilitate OTC trading in a similar fashion to BCNs. This would pose potential risks to price formation, as SI networks would be able to replicate *de facto* the multilateral trading nature of trading venues without providing the same transparency.

Finally, yet importantly, liquidity and price formation in non-equity secondary markets are also fundamental. The EU is home to some of the world's largest markets for exchange-traded derivatives (ETDs). These transparent markets are crucial, as some ETDs serve as benchmarks influencing the price of a broad range of financial instruments. Maintaining globally competitive European ETD markets should be a priority.

²² Carole Comerton-Forde and Talis J. Putniņš, "Dark Trading and Price Discovery," *Journal of Financial Economics* 118, no. 1 (October 1, 2015): 70-92, <https://doi.org/10.1016/j.jfineco.2015.06.013>.

²³ At the same time, at low levels, dark trading can be beneficial for market quality, see Comerton-Forde and Putniņš; Thomas Johann et al., "Quasi-Dark Trading: The Effects of Banning Dark Pools in a World of Many Alternatives," *SAFE Working Paper Series*, 2019; Haoxiang Zhu et al., "Do Dark Pools Harm Price Discovery?," 2012.

²⁴ See *inter alia* Hans Degryse, Frank de Jong, and Vincent van Kervel, "The Impact of Dark Trading and Visible Fragmentation on Market Quality," *Review of Finance* 19, no. 4 (July 1, 2015): 1587-1622, <https://doi.org/10.1093/rof/rfu027>; IOSCO, "Issues Raised by Dark Liquidity" (Madrid, 2010).

FESE's post-crisis framework

An adequate capital markets structure is a prerequisite for financial stability and growth. Capital markets will play a crucial role in the recovery and the sustainable recapitalisation of the economy. However, the developments described in this paper are at odds with the spirit of both the CMU and MiFID II/MiFIR. The resilience and transparency of capital markets must be reinvigorated. In light of this, and building on our Blueprint “Capital Markets Union by 2024 - A Vision for Europe”, FESE wishes to underline that:

- A holistic regulatory agenda supporting capital markets has to be framed: MiFID II/MiFIR legislative reviews should be aligned with the CMU. For example, provisions that potentially undermine the resilience and reach of capital markets like “non-discriminatory” access requirements for ETDs or stringent unbundling rules for SMEs should be reconsidered.
- The overall size of EU equity markets should be increased and stock market capitalisation should reach 100% of GDP to boost equity financing.
- Fiscal disincentives against equity financing should be removed in order to rebalance the corporate taxation debt bias and increase the levels of retail investor participation.
- IPOs and secondary markets should be promoted by creating a more flexible regulatory environment for listed small and mid-cap companies (e.g. by simplifying prospectus requirements or stimulating SME Growth Markets) and a large private-public equity fund that would support both IPOs and secondary issuances.
- Lit markets should be supported to protect liquidity and price formation. Using the LIS threshold as the main tool to delineate lit and dark trading, similarly restricting SI trading to above LIS, would be an efficient way to do so. There would no longer be a need for the reference price and negotiated transaction waivers under this scenario.

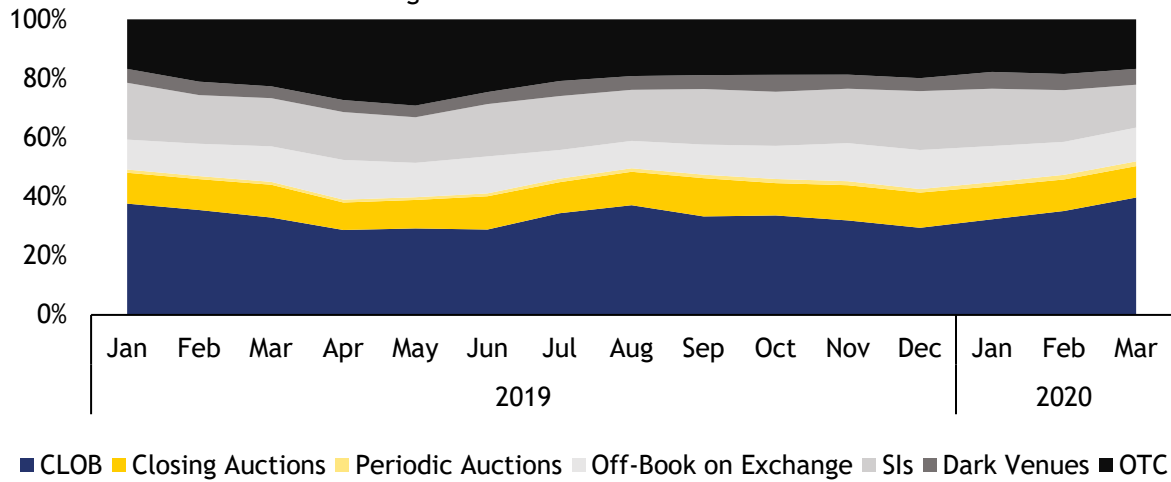
Such changes²⁵ would strengthen the EU economy and have a positive impact on the global competitiveness of European capital markets to the benefit of society at large.

²⁵ Complementary policy proposals are outlined in Julia Anderson, Simone Tagliapietra, and Guntram B. Wolff, “Rebooting Europe: A Framework for a Post COVID-19 Economic Recovery” (Brussels, 2020).

Annex - Liquidity Developments during the COVID-19 Crisis

While the market share of continuous lit order book was decreasing pre-crisis, during the COVID-19 Crisis environment of heightened volatility and turnover, the share of lit trading has increased substantially (Figure 1) compared to historical averages.

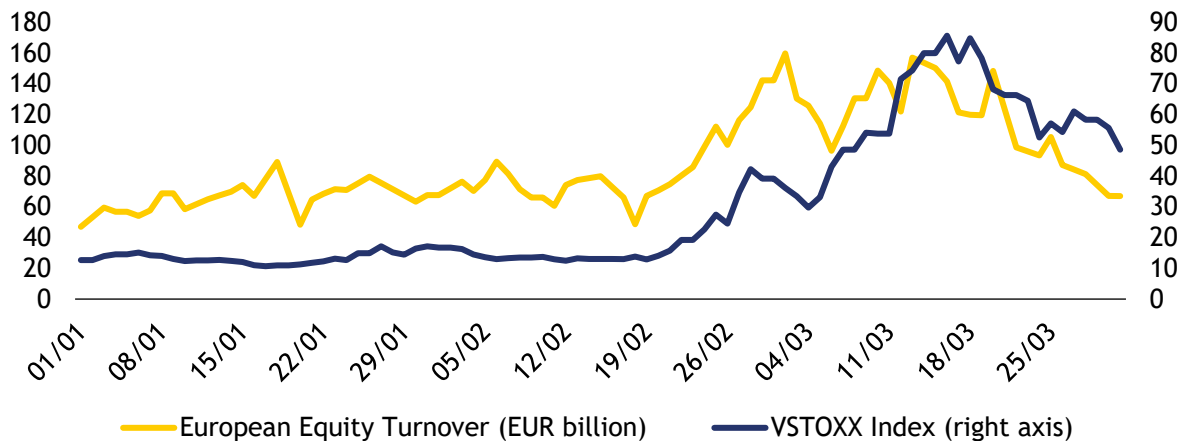
Figure 1: STOXX 600 Turnover Share



Source: Big xyt, FESE calculations

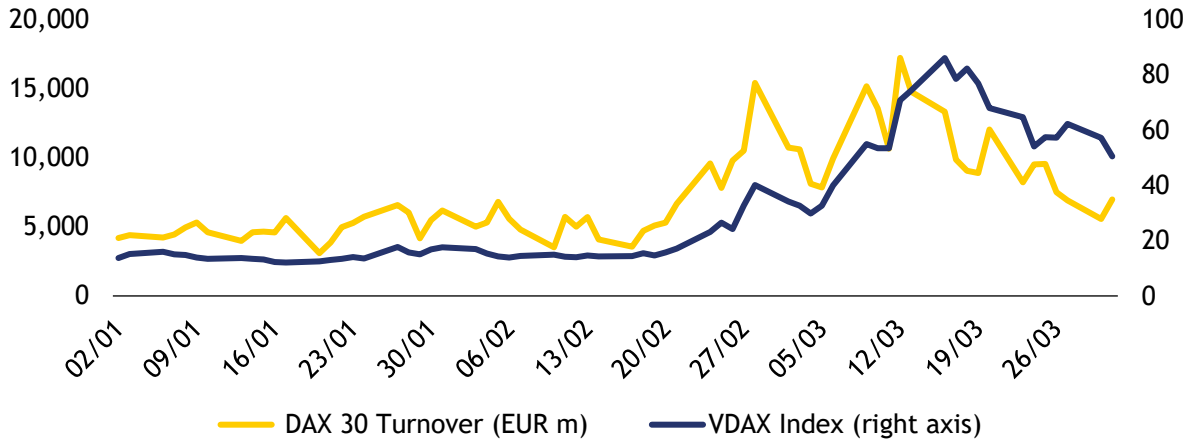
At both the European and national levels, the March spike in volatility measured by implied volatility benchmarks is accompanied by an increase in turnover, which leads volatility by about one week (Figures 2 to 4).

Figure 2: European Equity Turnover and Volatility during Q1 2020



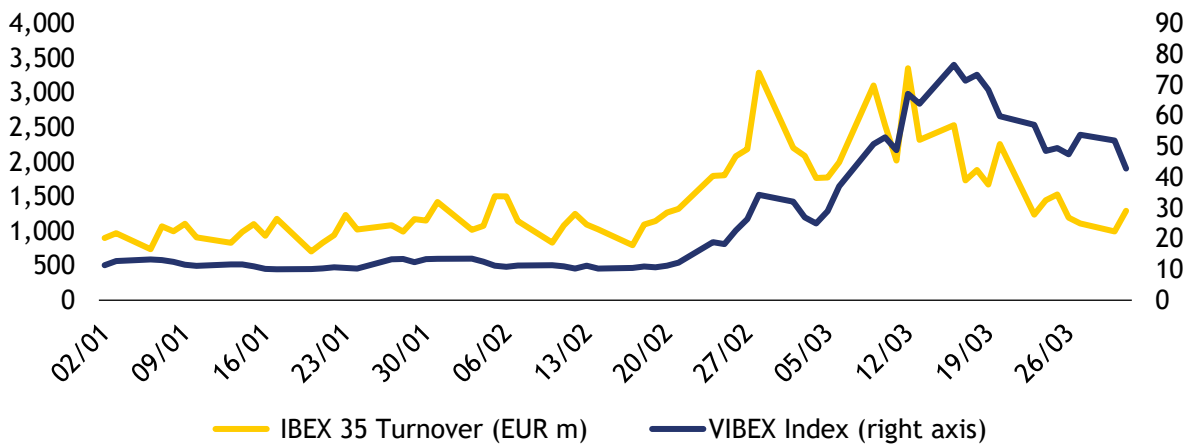
Source: FESE calculations

Figure 3: DAX 30 Turnover and Volatility during Q1 2020



Source: FESE calculations

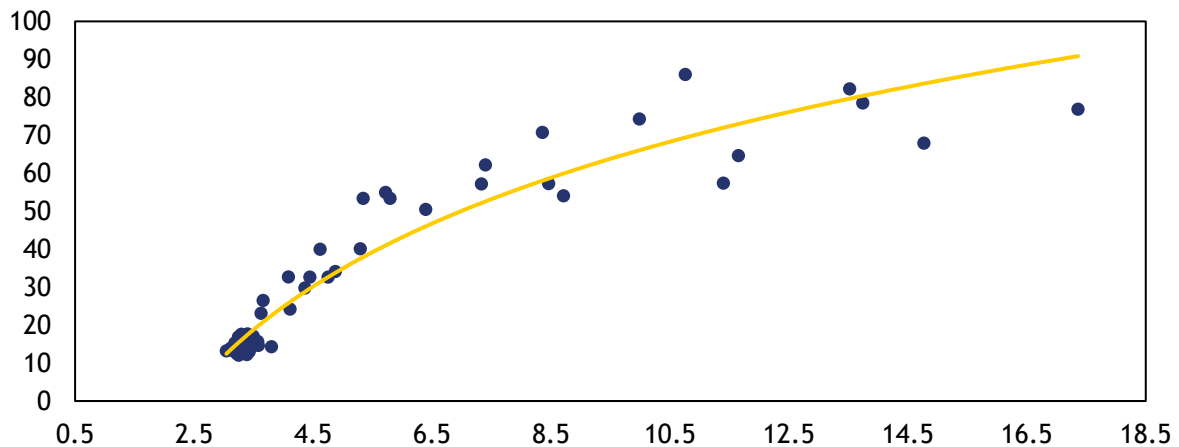
Figure 4: IBEX 35 Turnover and Volatility during Q1 2020



Source: FESE calculations

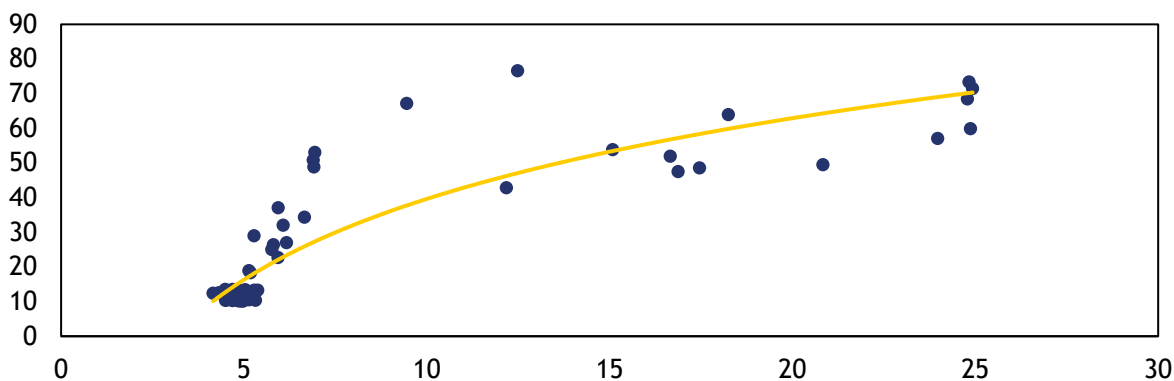
The crisis is also manifest when looking at other dimensions of liquidity: Measures of tightness like bid-ask spreads are higher in situations of high volatility (Figures 5 and 6).

Figure 5: DAX 30 Xetra Spread 10k EUR and VDAX Index during Q1 2020



Source: FESE calculations

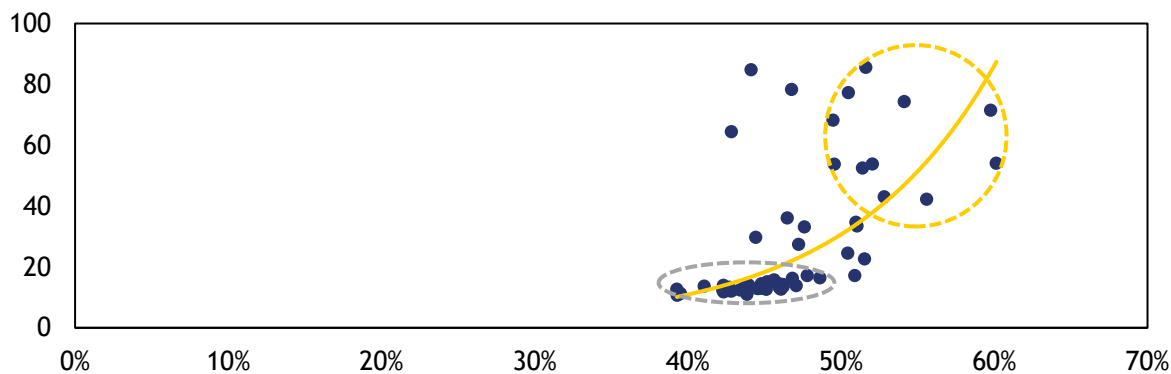
Figure 6: IBEX 35 BME Spread 10k EUR and VIBEX Index during Q1 2020



Source: FESE calculations

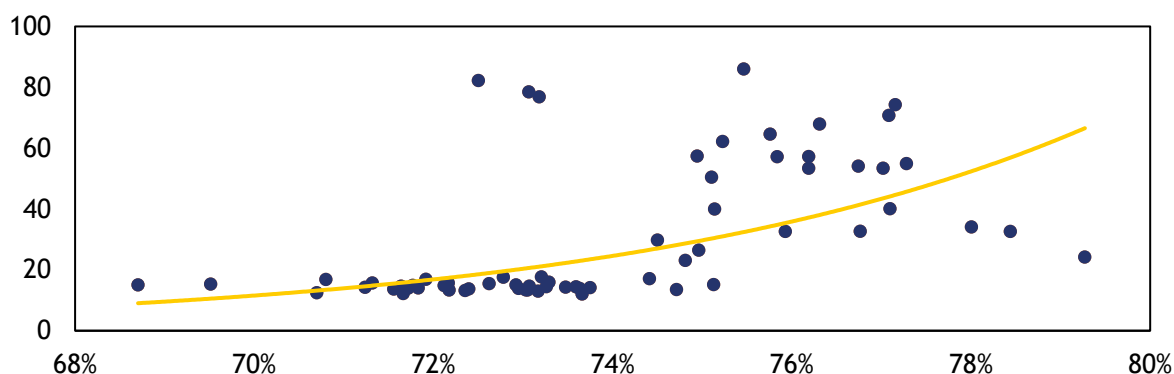
A proxy for the resilience of regulated markets can be the share of lit trading compared to volatility, the crisis has given rise to a new setting of high volatility and lit share (Figures 7 and 8).

Figure 7: European Turnover Lit Share and VSTOXX Index during Q1 2020



Source: Big xyt, FESE calculations

Figure 8: DAX 30 Turnover Lit Share and VDAX Index during Q1 2020



Source: Big xyt, FESE calculations

The described trends will plausibly subside but highlight the importance of transparent markets. Securing the right equity market structure is key to avoid liquidity crises turning into solvency crises. Transparency in equity markets must be revamped to allow robust liquidity and price formation.