

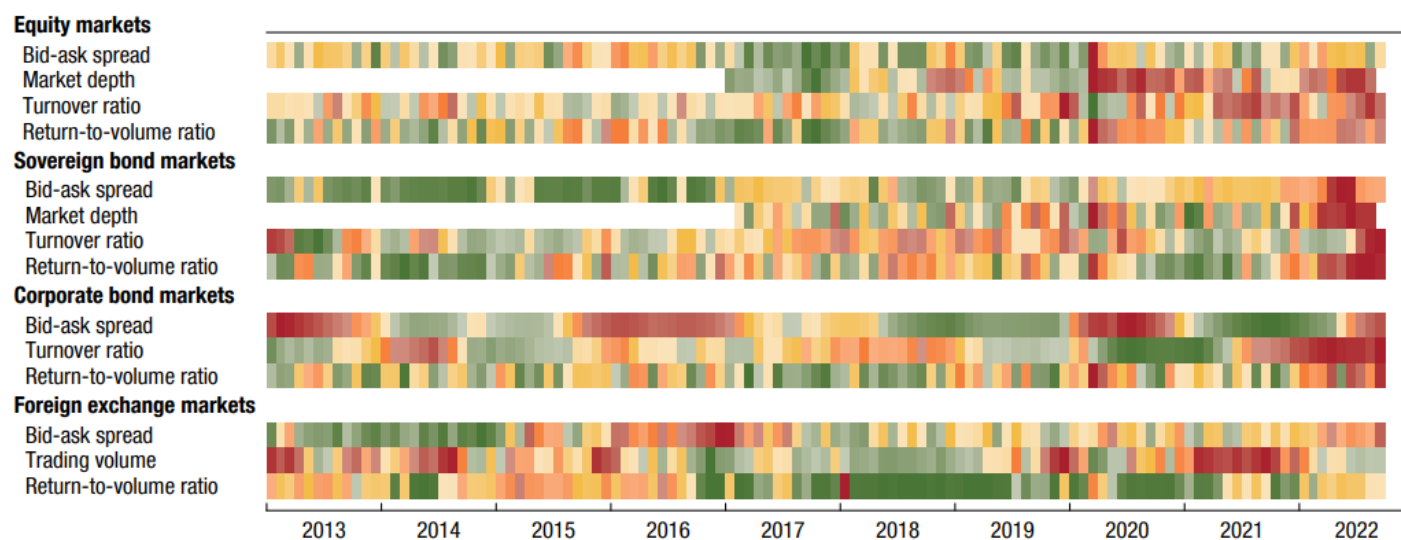
---

ECB Bond Market Contact Group  
Market functioning and the monetary policy normalisation of central  
banks

November 2022

# Monetary Policy normalisation and the impact on various asset classes

Market Liquidity conditions from IMF Global Financial Stability Report<sup>1</sup>



Volatility Fear/Uncertainty Gauge– 3m ATM Implied vol, 1yr History - Implied vs Realised Volatility across asset classes<sup>2</sup>

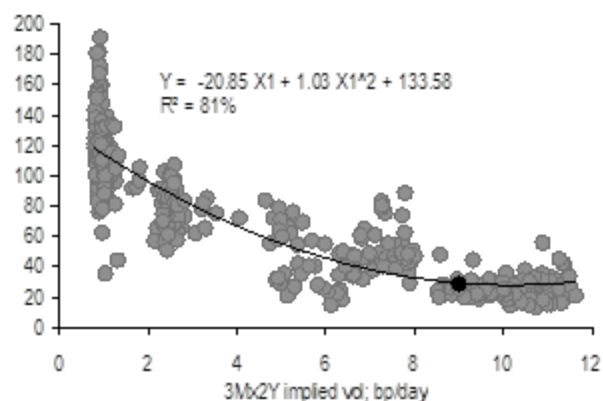
Asset	Current	Low	Low date	High	High date	5th percentile	5th percentile	Upside	Downside	Implied/realized volatility
S&P 500	24%	15%	05-Nov-21	28%	13-Jun-22	19.5%	24.7%	4%	9%	0.9x
EuroSTOXX	20%	14%	05-Nov-21	39%	04-Mar-22	20.5%	25.0%	19%	6%	1.4x
Nikkei 225	20%	17%	05-Jan-22	27%	09-Mar-22	18.9%	21.8%	7%	3%	1.0x
Hang Seng	32%	17%	13-Jan-22	39%	15-Mar-22	20.7%	25.9%	7%	14%	0.7x
MSCI EM	26%	15%	13-Apr-22	41%	11-Mar-22	21.1%	25.2%	15%	10%	0.9x
Gold	16%	13%	18-Jan-22	27%	08-Mar-22	14.7%	17.1%	11%	3%	1.0x
Oil (brent)	47%	34%	18-Nov-21	73%	23-Mar-22	43.7%	51.0%	26%	13%	1.5x
Copper	30%	24%	16-Nov-21	35%	15-Jul-22	27.0%	29.5%	5%	6%	0.8x
BB commodity index	26%	17%	10-Nov-21	30%	26-Jul-22	18.5%	27.2%	4%	9%	1.3x
EUR/USD	11%	5%	05-Nov-21	13%	28-Sep-22	6.6%	10.4%	2%	6%	1.1x
USD/NOK	15%	10%	08-Nov-21	18%	12-Oct-22	12.0%	14.8%	2%	5%	1.2x
USD/JPY	12%	6%	31-Dec-21	14%	21-Oct-22	7.0%	11.7%	2%	6%	1.4x
GBP/USD	13%	6%	07-Jan-22	19%	28-Sep-22	7.6%	11.4%	6%	7%	0.8x
USD/CHF	10%	6%	31-Dec-21	11%	28-Sep-22	6.7%	9.3%	1%	4%	1.1x
10y Treasury futures	135	72	08-Nov-21	187	12-Oct-22	88	137	52	63	0.8x
10Y bund futures	139	51	05-Nov-21	179	11-Oct-22	68	138	40	88	1.0x
CDX IG	57%	40%	05-Nov-21	76%	07-Mar-22	53.7%	62.9%	18%	17%	1.9x
CDX HY	56%	37%	05-Nov-21	68%	07-Mar-22	51.9%	59.7%	12%	19%	2.0x
iTraxx	63%	36%	08-Nov-21	86%	07-Mar-22	55.7%	65.4%	23%	27%	2.1x
iTraxx X/O	58%	42%	08-Nov-21	85%	07-Mar-22	57.8%	64.7%	27%	16%	2.3x

1.Sources: Bloomberg Finance L.P.; Haver Analytics; Japan Bond Trading; JPMorgan Big Data and AI Strategies; MarketAxess; Reuters; Securities Industry and Financial Markets Association; and IMF staff calculations.

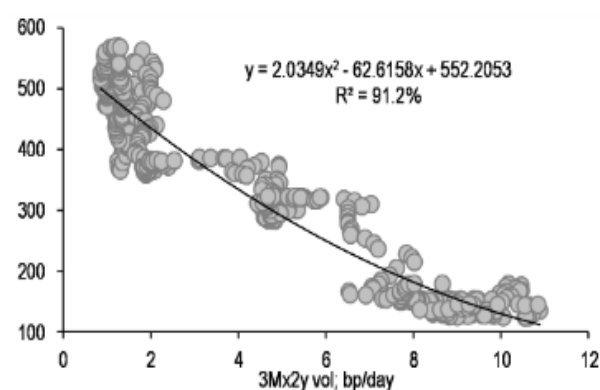
2.Source: J.P. Morgan. Bloomberg Finance L.P.

# Volatility, Market Depth & Liquidity - A Repricing of Liquidity

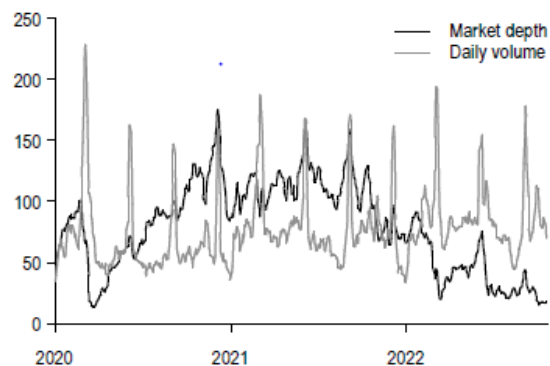
Bund Market Depth vs Volatility



Treasury market depth vs Volatility



Bund market depth (€mm equivalent) and Bund daily trading volume (€bn equivalent) since 1 Jan 2020



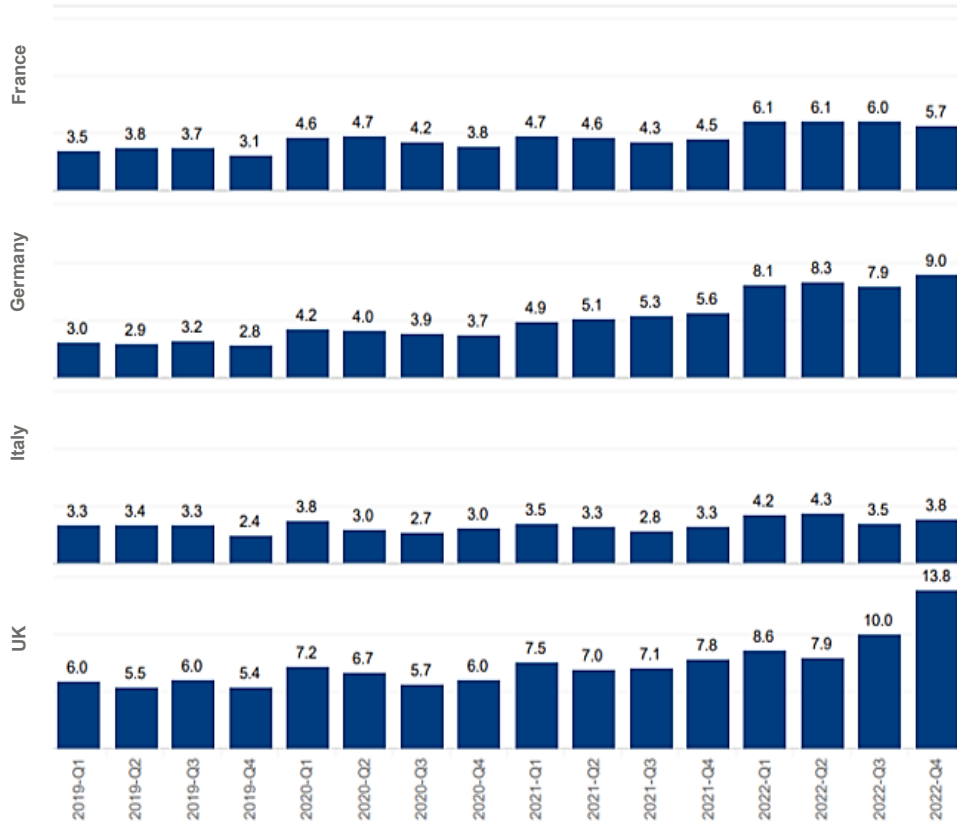
Market depth and average daily volume for German Eurex future

	Market depth (€mm equivalent)				Volume (€bn equivalent)			
	Current	YTD Avg	Last 5Y Avg	Last 5Y Min	Current	YTD Avg	Last 5Y Avg	Last 5Y Min
Schatz	135	259	1476	62	53	56	40	13
Bobl	48	96	423	29	48	63	51	14
Bund	17	42	87	14	84	86	77	24
Buxl	2	5	8	1	9	9	7	2

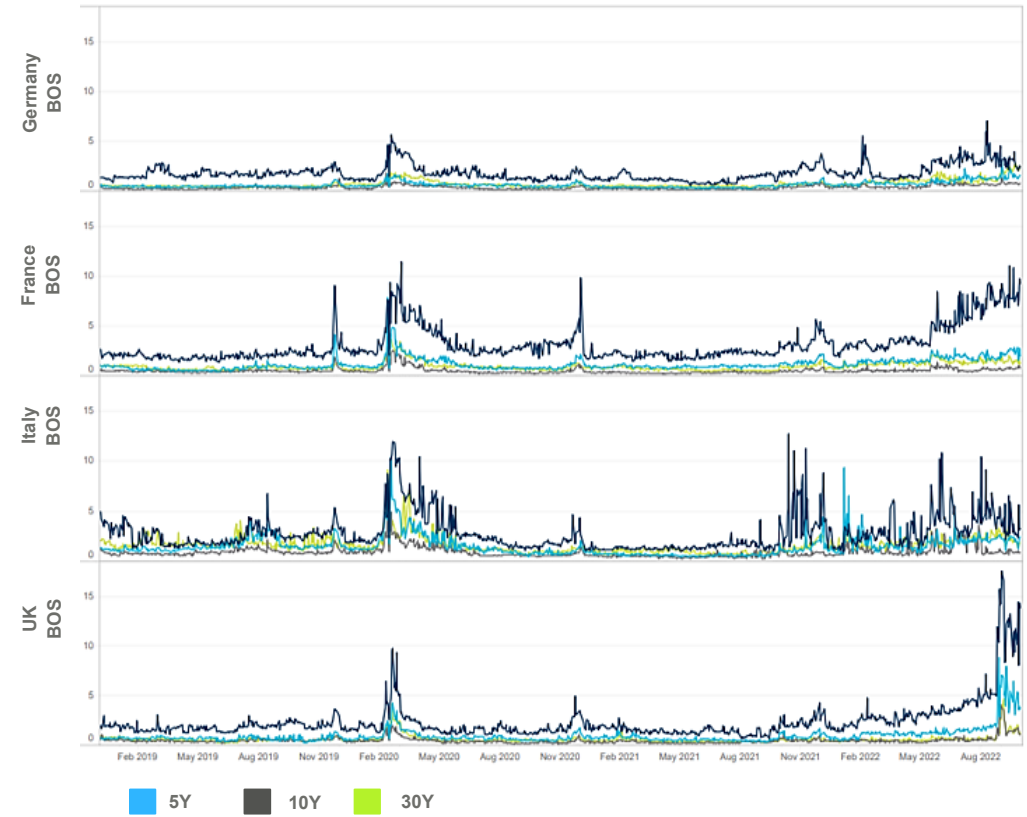
Sources: J.P. Morgan research

# Volatility, Market Depth & Liquidity - A Repricing of Liquidity Contd

Average daily notional volume in € Bn



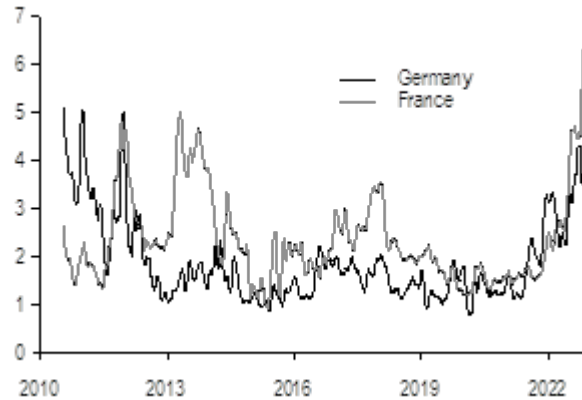
Benchmark BOS in bps



Sources: Tradeweb

# Is the liquidity evenly distributed? A multi-tiered approach to liquidity with more concentrated flows

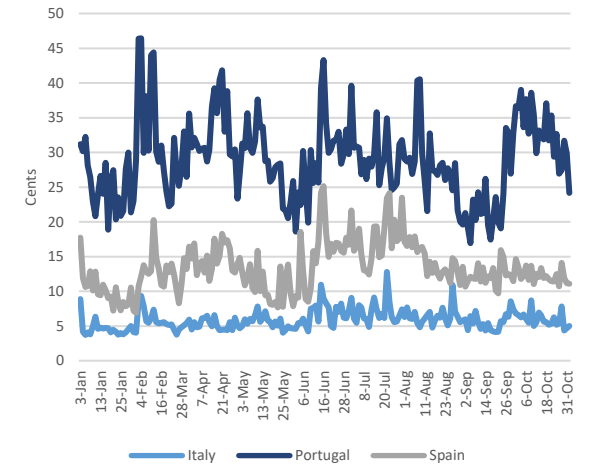
1M MA of yield RMSE for German and French par curves; bp<sup>1</sup>



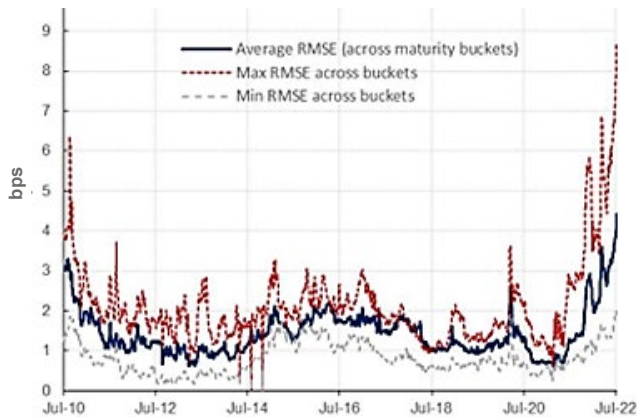
1M MA of yield RMSE for Italian and Spanish par curves; bp<sup>2</sup>



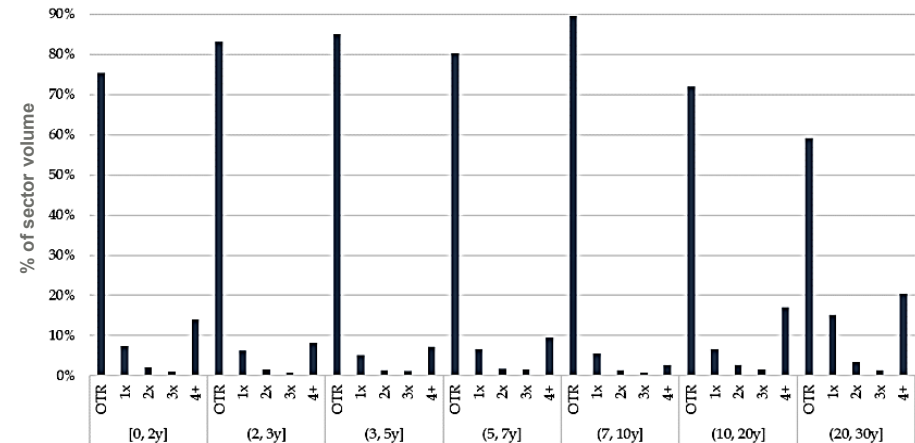
BondVision Composite Daily B/O Spreads: NON-CORE 10-Yr Benchmarks<sup>3</sup>



Root Mean Square Error (RMSE), a measure of US Treasury Curve Deviations<sup>4</sup>



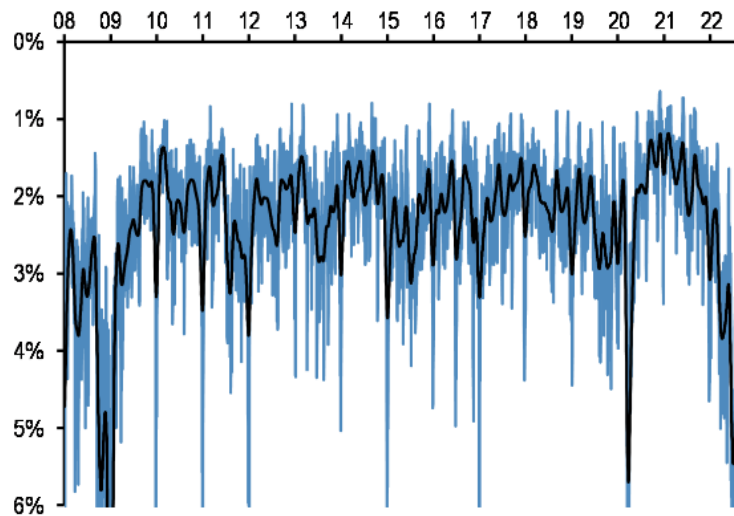
On-and-off-the-run nominal coupon volumes, share of sector volume Based on average daily volumes in DV01 in 2022<sup>5</sup>



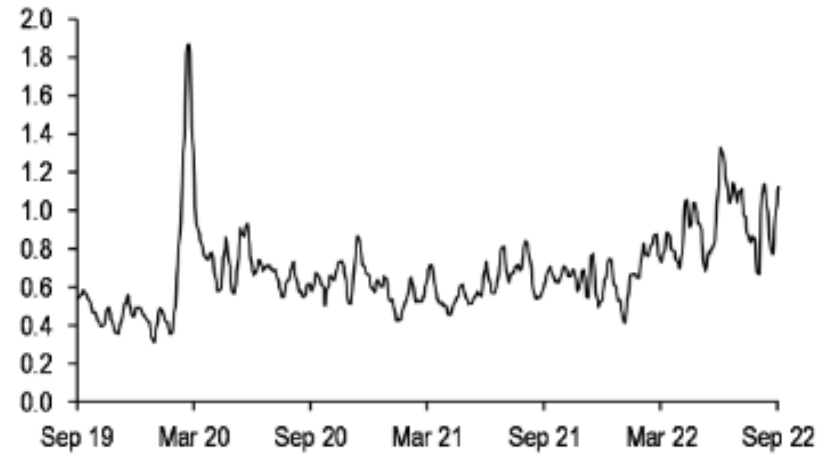
1. – 2. Sources: J.P. Morgan Research  
 3. Sources: MTS  
 4. Sources: J.P. Morgan Research  
 5. Sources: FINRA TRACE, US Department of Treasury

# Price impact of trades increasing – Fixed Income markets getting less resilient

Weighted average Hui-Heubel liquidity ratio for 10y futures on US, German, Japanese, UK, French and Italian government bonds<sup>1</sup>



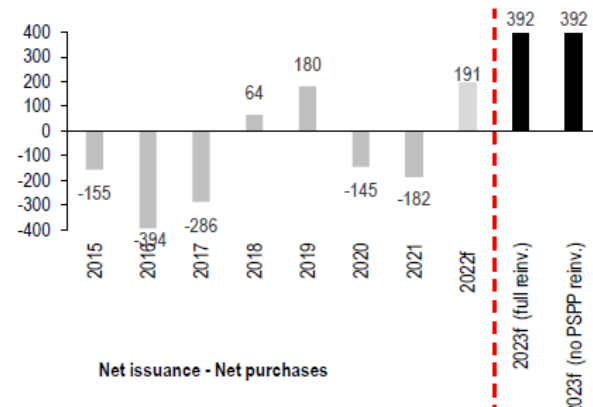
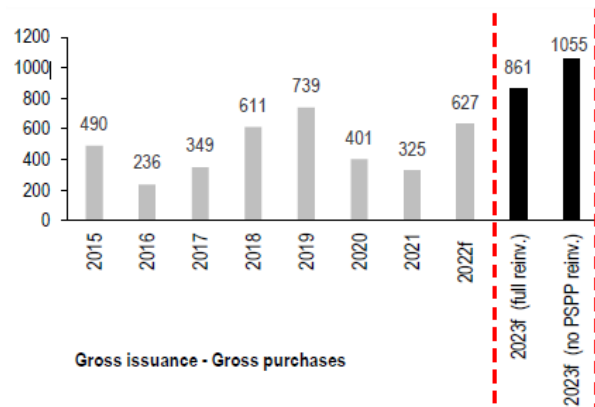
10-year Treasury price impact, 5-day moving average; 32nds<sup>2</sup>



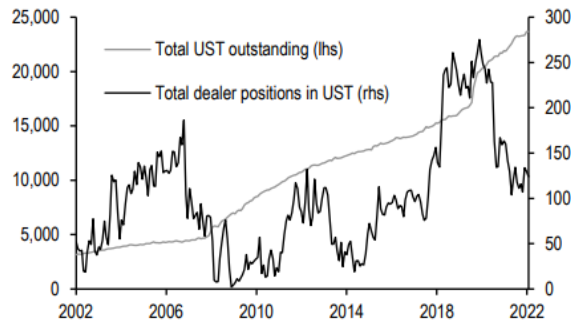
1. Sources: Bloomberg Finance L.P., J.P. Morgan  
2. Sources BrokerTec, J.P. Morgan

# Dealer balance sheets may be getting more constrained at the same time as supply is increasing and fund flows turning negative

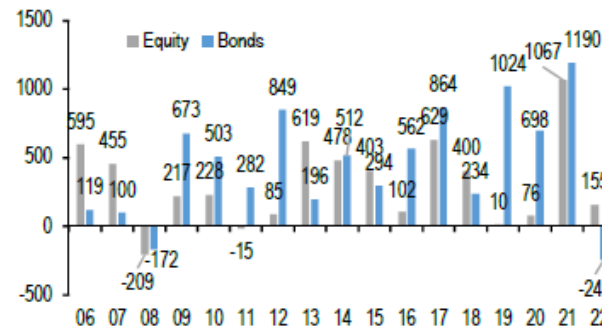
2023 supply vs ECB Purchase dynamics: material deterioration for Euro area sovereigns, even without QT <sup>1</sup>



Total marketable US Treasury debt outstanding (lhs, \$bn) versus absolute value of primary dealer positions in Treasuries (1m moving average, rhs, \$bn)<sup>2</sup>



Global equity & bond fund flows <sup>3</sup>



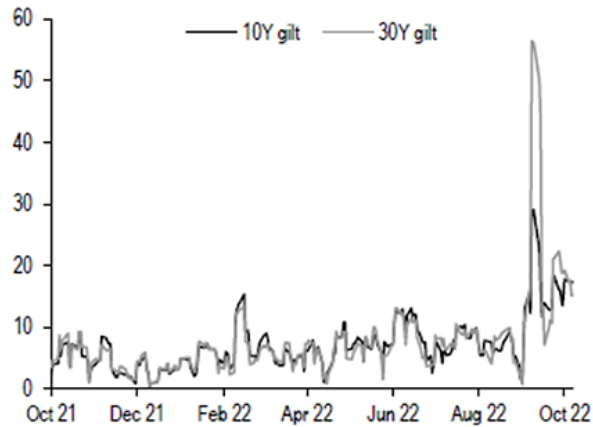
1. Sources: J.P. Morgan

2. Sources Federal Reserve Bank of New York

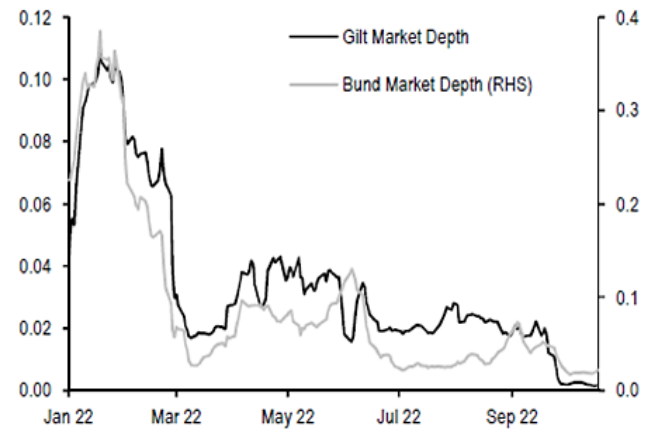
3. Sources: ICI, EPFR, EFAMA, Bloomberg Finance L.P., J.P. Morgan

# Lessons from Sterling Market – Following the broad trend, but with sui generis catalysts and lingering scars

5D rolling standard deviation of daily yield changes; bp<sup>1</sup>



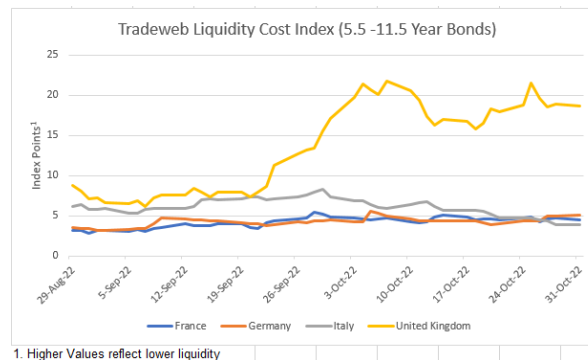
Gilt and bund market depth (contracts 000's), adjusted by volatility<sup>2</sup>



Levels and changes for selected UK rate market metrics; bp unless levels<sup>3</sup>

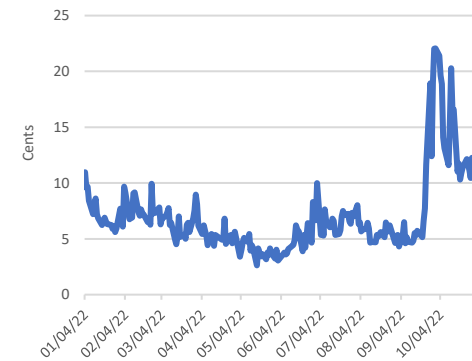
	27-Oct	22 Sep, COB	12 Oct, COB	Change		Retracement
				22 Sep - 12 Oct	12 Oct - current	
Nov 22 MPC OIS	295	289	330	41	-35	87%
1Yx1Y SONIA, %	4.63	4.89	5.64	0.75	-1.01	135%
10Y gilt, %	3.60	3.59	4.58	0.98	-0.98	99%
30Y gilt, %	3.60	3.76	4.85	1.09	-1.25	114%
10s/30s gilt	0	16	27	11	-28	247%
10Y swap spread	19	4	28	24	-9	36%
30Y swap spread	-25	-49	-35	14	10	-
30Y UST, %	4.09	3.64	3.89	0.25	0.20	-
30Y Bund, %	2.08	1.93	2.45	0.52	-0.37	70%
30Y gilt - UST	-49	12	96	85	-145	172%

Tradeweb liquidity Cost index<sup>4</sup>



1. Higher Values reflect lower liquidity

BV Composite Daily B/O Spread: GILT 10-Yr Benchmark<sup>5</sup>



1. – 3. Sources: J.P. Morgan Research

4. Sources: Tradeweb

5. Sources: MTS



## Questions

---

- ▶ What are the potential sources of further financial stress?
- ▶ Will Central Banks be proactive or reactive in addressing financial market stress? What pre-emptive action can Central Banks take?
- ▶ Will liquidity improve as volatility decreases, or is the market permanently scarred?
- ▶ Is the uneven distribution of liquidity within individual bond curves a function of policy normalisation?
- ▶ What can European Sovereign borrowers do to help ensure market functioning?

# Disclaimer

**FOR INSTITUTIONAL & PROFESSIONAL CLIENTS ONLY – This material is from a Sales and Trading department and is not a product of the Research Department.**

This material has been prepared by personnel in the Sales and Trading Departments of one or more affiliates of JPMorgan Chase & Co. (together, “J.P. Morgan”) and not by J.P. Morgan’s Research Department and therefore, has not been prepared in accordance with legal requirements to promote the independence of research, including but not limited to, the prohibition on the dealing ahead of the dissemination of investment research. It is not a research report and is not intended as such. It is for distribution to institutional and professional clients only and is not intended for retail customer use.

It is provided on a confidential basis and may not be reproduced, redistributed or disseminated, in whole or in part, without the prior written consent of J.P. Morgan. Any unauthorized use is strictly prohibited.

Unless otherwise specifically stated, any views or opinions expressed herein are solely those of the individual author and/or the specific Sales and Trading area from which it originates and may differ from the views or opinions expressed by other areas of J.P. Morgan, including the Research Department.

This material is provided for information purposes only and does not bind J.P. Morgan in any way. It is not intended as a recommendation (except to the extent it is an “investment recommendation” under MAR (as defined below)) or an offer or solicitation (except to the extent covered by CFTC Rules (as defined below)) for the purchase or sale of any security or financial instrument, or to enter into a transaction involving any financial instrument or trading strategy, or as an official confirmation or official valuation of any transaction mentioned herein. Any pricing information provided is indicative only and does not reflect a level where J.P. Morgan is prepared to execute a trade. J.P. Morgan is not an advisor. Nothing in this material should be construed as investment, tax, legal, accounting, regulatory or other advice (including within the meaning of Section 15B of the Securities Exchange Act of 1934) or as creating a fiduciary relationship.

**MAR Disclosure:** Where this material is an “investment recommendation” as that term is defined in Article 3(1)(35) of the EU and UK Market Abuse Regulation (“MAR”), distribution of this material is subject to the relevant provisions of MAR. For more information, please consult: [www.jpmm.com/#mardisclosures](http://www.jpmm.com/#mardisclosures).

**Research Disclosure:** This material is not, and is not intended to be, a “research report”, “investment research” or “independent research” as may be defined in applicable laws and regulations worldwide. However, it may constitute “research” as defined in Recital 28 of the Commission Delegated Directive (EU) 2017/593 and in the Financial Conduct Authority’s Handbook.

**Derivatives Disclosure:** Where distribution of this material is subject to the rules of the U.S. Commodity Futures Trading Commission (“CFTC”), it is a “solicitation” of derivatives business generally only as that term is used within CFTC Rule 1.71 and 23.605 promulgated under the U.S. Commodity Exchange Act (the “CFTC Rules”).

**Options Disclosure:** Structured securities, options, futures and other derivatives are complex instruments and may involve a high degree of risk. Before entering into any such transactions, please ensure that you have read and understood the Options Clearing Corporation’s Characteristics and Risks of Standardized Options, also known as the options disclosure document (ODD) available at: <http://www.theocc.com/about/publications/character-risks.jsp>.

**Analytics Disclosure:** Past or simulated past performance is not indicative of future results. Any modelling scenario analysis or other forward-looking information herein is intended to illustrate hypothetical results based on certain assumptions, information and/or financial data (not all of which will be specified herein). J.P. Morgan does not guarantee expressly or impliedly the accuracy or completeness of any information and/or financial data used herein. Further, the information and/or financial data used by JPM may not be representative of all information and/or financial data available to J.P. Morgan. The information and/or financial data available herein may change at any time without notice to you. Actual events or conditions may differ materially from those assumed; therefore, actual results are not guaranteed and J.P. Morgan disclaims any responsibility or liability whatsoever for the quality, accuracy or completeness of the information herein, and for any reliance on, or use of this material in any way. The actual results you see will be based on a number of assumption not all of which will be explicitly disclosed to you.

# Disclaimer

**Exchange Traded Fund (“ETF”) Disclosure:** Each U.S. registered ETF has filed a registration statement (including a prospectus) with the U.S. Securities and Exchange Commission. Each non-U.S. ETF will have its own offering documents as required by applicable law. No offer or sale of the ETFs described may be made except pursuant to the prospectus or offering documents, as applicable. The ETF’s prospectus and/or offering documents are available through the ETF issuer’s website; you should read these carefully before deciding to invest. Transactions involving securities, financial instruments and strategies mentioned herein may not be suitable for all investors. You are solely responsible for deciding whether any investment or transaction is suitable for you based upon your investment goals, financial situation and tolerance for risk. If you deem it necessary, you must seek independent professional advice to ascertain the investment, legal, tax, accounting, regulatory or other consequences before investing or transacting.

Past or simulated past performance (including back-testing) is not indicative of future results. The investments discussed may fluctuate in price or value. Changes in rates of exchange may have an adverse effect on the value of investments. Any modelling, scenario analysis or other forward-looking information herein (such as projected cashflows, yields or returns) is intended to illustrate hypothetical results based on certain assumptions (not all of which will be specified herein). Actual events or conditions may differ materially from those assumed; therefore, actual results are not guaranteed.

All market prices, data and other information (including that which may be derived from third party sources believed to be reliable) are not warranted as to completeness or accuracy and are subject to change without notice. J.P. Morgan disclaims any responsibility or liability to the fullest extent permitted by applicable law, whether in contract, tort (including, without limitation, negligence), equity or otherwise, for any loss or damage arising from any reliance on or the use of this material in any way. The information contained herein is as of the date and time referenced only, and J.P. Morgan does not undertake any obligation to update such information.

J.P. Morgan may have positions (long or short), effect transactions or make markets in securities or financial instruments mentioned herein (or related instruments), or provide advice or loans to, or participate in the underwriting or restructuring of the obligations of, the legal entities mentioned herein. The Sales and Trading personnel who prepared this material may be compensated in part based on trading activity. Moreover, Sales and Trading personnel may have acted on the basis of this material either on behalf of J.P. Morgan or, where permitted, in their personal accounts. As such, this material should not be relied upon as either objective or independent from the interests of J.P. Morgan and its associated personnel, which interests may conflict with your interests.

Securities, financial instruments or strategies mentioned herein may not be available in all jurisdictions or to all clients. Clients should contact their salespersons at, and execute transactions through, a J.P. Morgan entity appropriately licensed in the client’s home jurisdiction unless governing law permits otherwise.

Product names, company names and logos mentioned herein are trademarks or registered trademarks of their respective owners.

For important disclosures in respect of wholesale fixed income, currency, commodities and equities products, please see: <https://www.jpmorgan.com/disclosures/ficcequities>. Electronic trading with J.P. Morgan is subject to our standard [electronic trading terms of service](#).

© 2022 JPMorgan Chase & Co. All rights reserved. J.P. Morgan is a marketing name for investment banking businesses of JPMorgan Chase & Co. and its subsidiaries and affiliates worldwide. Bank products and services, including certain lending, derivative and other commercial banking activities, are offered by JPMorgan Chase Bank N.A. (JPMCB), including through its authorized branches and other global affiliates registered with local authorities as appropriate. Securities products and services, including execution services, are offered in the United States and in other jurisdictions worldwide by J.P. Morgan Securities LLC (JPMS LLC), in EMEA by J.P. Morgan Securities plc (JPMS plc), J.P. Morgan SE (JPM SE) and by other appropriately licensed global affiliates. JPMCB, JPMS LLC, JPMS plc and JPM SE are principal subsidiaries of JPMorgan Chase & Co. For information on which legal entities offer investment banking products and services in each jurisdiction, please consult: [www.jpmorgan.com/ib-legal-entities](http://www.jpmorgan.com/ib-legal-entities). For important disclosures in respect of securities transactions, please consult: [www.jpmorgan.com/securities-transactions](http://www.jpmorgan.com/securities-transactions) and in respect of over-the-counter equity derivatives transactions, please consult: [www.jpmorgan.com/otc-equity-derivative-transactions](http://www.jpmorgan.com/otc-equity-derivative-transactions).



# Disclaimer

J.P. Morgan SE is authorised as a credit institution by the German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht - "BaFin"), Marie-Curie-Straße 24-28, 60439 Frankfurt am Main, and is jointly supervised by the BaFin, the German Central Bank ("Bundesbank"), Taunusanlage 5, 60329 Frankfurt am Main, and the European Central Bank ("ECB"), Sonnemannstraße 20, 60314 Frankfurt am Main.