Visnyk

National Bank of Ukraine

From Seizure to Spreads. How News About russian Assets Moves European Sovereign Yields

Occasional Paper

2025/09

Iana Okhrimenko

Visnyk of the National Bank of Ukraine
Research Paper Series
ISSN 2414-987X

The *Visnyk of the National Bank of Ukraine* is the flagship research publication of the National Bank of Ukraine. Its mission is to disseminate high-quality economic and financial research to the academic community, policymakers, and the broader public. The series strengthens the NBU's dialogue with scholars and practitioners by providing timely, authoritative analysis that advances economic thought and supports the formulation of effective monetary and financial sector policies in Ukraine and beyond.

Established in 1995 and reformed in 2015 as a peer-reviewed journal, the *Visnyk* has, since 2025, operated as a research paper series, publishing both *Working Papers* and *Occasional Papers*. This transformation reflects the NBU's commitment to faster, more flexible, and policy-relevant research dissemination, meeting the growing demand for timely analysis during periods of economic change and geopolitical uncertainty.

Address:
National Bank of Ukraine
9 Instytutska Street
01601, Kyiv, Ukraine
https://bank.gov.ua/

Available at https://doi.org/10.26531/vnbu2025.op09.

FROM SEIZURE TO SPREADS. HOW NEWS ABOUT RUSSIAN ASSETS MOVES EUROPEAN SOVEREIGN YIELDS

Iana Okhrimenko [a]

[a] Centre for Economic Strategy

E-mail: iana.okhrimenko@ces.org.ua

Abstract

This paper explores how European sovereign bond yields have responded to policy news about russian state assets (their immobilization and subsequent decisions about their use). The results obtained are used to analyze the potential reactions by EU markets if full confiscation of these assets is pursued. We assemble a dated news sample validated with investor attention and estimate announcement effects on 2-, 10-, and 30-year bond yields (country-specific systemic risk proxy) using multi-window event studies, two-way bootstrap confidence bands, and a placebo (Monte-Carlo) design that draws pseudo-events from non-event periods. To assess the persistence of the shock, we extend inference to 60 trading days (with principal component analysis used to extract a common EU factor and a Bayesian-inspired bootstrap). There are three key results. First, markets did react to the news about asset usage, but effects were modest and faded within days to weeks; immobilization triggered a relatively modest response. Second, yield shocks from news about the use of russian assets were broadly comparable to routine policy or news on credit risk downgrades – well below past EU crisis episodes. Third, on the disaggregated country-level, 10-year yields increased consistently in response to the usage news shock, although the magnitudes of these increases varied.

JEL Codes G14, G12, H63

Keywords sovereign bond yields, policy news, russian state assets, Bayesian bootstrap, event study

1. INTRODUCTION

Approximately €300 billion in russian assets are held in the EU[1], of which about €210–€230 billion are immobilized central-bank reserves. Against a global estimated total of about €260–€330 billion, this means the EU holds around three-quarters to four-fifths of russia's frozen assets. The profits ("extraordinary revenues") generated by these assets are already an important wartime funding source for Ukraine.

But even with this support, Ukraine's fiscal outlook remains tight. Proceeds from the extraordinary revenue accruing from immobilized russian assets (ERA) are a help, but budget needs are still significant. If the transfer of the frozen principal were legally authorized, it could materially strengthen Ukraine's budget and help close financing gaps.

However, outright confiscation is argued to carry systemic risk costs for the EU. Opponents of confiscation argue that it would escalate legal uncertainty for financial market infrastructures, create a precedent of risk to property rights, and thus cause higher sovereign funding premiums (since investors are likely to demand compensation for rule-of-law or policy risk). In addition to legal and precedent risks, markets may price a perceived retaliation risk (e.g.,

[1] Based on JRC-ECFIN Finflows database. The latest data available is from 2018. However, the value of Russian assets in the EU recorded in the database aligns with the figure frequently cited in official EU communications (approximately €300 billion). Despite being slightly outdated, the JRC-ECFIN Finflows database remains the most reliable source for information on the stock of foreign assets in the EU based on their geographical origin.

countersanctions, seizures of EU assets in russia, energy or commodity restrictions, or cyber or legal harassment). However, there is no close historical analogue: outright confiscation of central-bank reserves has not previously been implemented against a G20 economy with russia's systemic relevance. As a result, any estimated retaliation premium reflects ex-ante perceptions rather than observed past episodes.[2]

The main objective of this research is to examine the actual magnitude of perceived financial risks associated with the potential confiscation of russian assets. To do this, we examine how EU sovereign bond yields reacted to announcements about the immobilization of russian assets and their future usage. Past reactions can serve as an empirical guide to the plausibility and scale of bond-market stresses that could be anticipated in reaction to more far-reaching steps.

The key premise is straightforward: if asset-related announcements materially raise term premiums today, then a future move toward full confiscation could plausibly be transmitted to EU funding conditions. Conversely, if past shocks were relatively modest and short-lived, the systemic-risk tail from confiscation may be more limited than headline debates suggest.

In this paper, sovereign bond yields are used as a timely, market-based proxy for country-specific systemic risk, as they directly determine the cost of servicing public debt. These yields also incorporate investors' perceptions of legal and property-rights risks, including the possibility of expropriation and confiscation.

Methodologically, the paper combines two key elements. First, we perform a multi-window event study around the dates of major news about immobilization and usage of russian assets in the EU for 2-, 10-, and 30-year EU sovereign bond yields. Second, we extend the analysis to the medium run with a prior principal-component (PCA) filter (to separate a common EU factor) and a Bayesian-inspired Dirichlet-bootstrap window. For each post-event day, we form posterior-like means and credible intervals across events, and then select the longest run of days when intervals exclude zero (i.e., when announcements cause a credible effect). Such a two-pillar design lets us quantify both the peak and the persistence of policy-relevant yield moves. Finally, we compare the estimated effects with past shocks (such as ratings downgrades and news shocks during the sovereign-debt crisis). This allows the identification of the relative magnitude of the yield shocks triggered by news about the immobilization of russian assets and their usage.

2. CONFISCATING RUSSIAN ASSETS: POSSIBLE IMPLICATIONS FOR SYSTEMIC RISKS AND BORROWING CONDITIONS

A dominant theme of the debates on the possible confiscation of russian assets is to weigh the immediate benefits for Ukraine against long-term systemic risks.

Véron (2023) argues that the European Union should not confiscate russia's immobilized central-bank reserves. Confiscation would likely be viewed as unlawful beyond the G7, undermine the EU's claim to uphold a rules-based international financial order, and incentivize some countries to cut their euro reserves. The key claim is that none of these costs would meaningfully weaken russia beyond what immobilization already achieves.

Kolyandr (2024) contends that the risks of confiscation (including market instability, legal challenges, higher borrowing costs, and loss of leverage in negotiations) outweigh any short-term gains. Instead, this paper advocates the use of interest or profits from the assets as a compromise that preserves both financial stability and Western bargaining power.

Butler (2024) similarly warns against underestimating retaliation risks, noting that russia could seize Western assets in response, potentially forcing EU bailouts of major firms like Euroclear. It also highlights that barring national courts from hearing-related cases would erode trust in the legal system. Still, the author suggests that if necessity eventually outweighs risks, confiscation could resurface as a viable option.

Minesso et al. (2024) analyze the global macroeconomic and financial consequences of sanctions on central bank assets, drawing on a new dataset of 117 cases from 1914 to 2024. They show that the freeze of russia's central bank reserves is unprecedented in scale and without historical precedent for the seizure of a country's sovereign assets by non-belligerent states to fund a third country's reconstruction during wartime. Using a three-country

[2] Related actions have occurred (asset freezes of Iraq (1990s), Libya (2011), parts of Iran/Venezuela, and Afghanistan (2021)) but these were narrower in scope, often temporary or litigated case-by-case, and involved much smaller economies; hence, they provide limited guidance to the systemic consequences of EU confiscation against russia.

DSGE model, the authors demonstrate that while sanctions depress the sanctioned economy, seizures can also generate financing costs for the sanctioning countries. Simulations suggest that confiscating russia's reserves could increase U.S. government bond yields by about 60 bps, with the resulting rise in debt-servicing costs outweighing the seized assets within a few years.

Hilgenstock et al. (2025) state that any jump in yields from confiscating russian assets would mostly come from politically driven selling, with the biggest exposure in EU countries that have high debt and many foreign holders, especially France and Belgium. A roughly 50-bp rise in yields would add about $95.5 billion to G7 interest costs in a year (around $12.5 billion for Germany, France, and Italy), which is notable but manageable. Central-bank tools like the ECB's Transmission Protection Instrument could step in to curb disorderly spread widening. The brief also notes a possible offset: if confiscated funds replace some budget support, governments may issue less debt, easing upward pressure on yields. The authors argue that recent moves in core markets have been driven more by fiscal outlooks and rate cycles than by the confiscation debate itself. That tension – separating the signal from asset-use news from the background hum of fiscal and rate cycles – is exactly what this study sets out to examine and measure.

3. POLITICAL TURMOIL, SYSTEMIC RISK, AND BOND YIELDS' RESPONSE

Political turmoil and rule-of-law risks are systematically priced into sovereign debt markets: crises and expropriation events raise borrowing costs, weaken sovereign credit ratings, and spill over into corporate financing. This provides the foundation for this paper's core premise: news on the immobilization or prospective use of russian assets may translate into higher bond yields. To place such reactions in context, we review the reported responses of EU sovereign yields to various shocks. Routine political news and CRA downgrades typically move yields by up to 20 bps, whereas systemic crises and debt restructurings have produced much larger jumps of 50–200 bps.

3.1. Rule of Law, Systemic Risks, and Borrowing Costs

Political risk is systematically priced into sovereign debt. Using 109 cross-border crises between 1988 and 2007 in 34 debtor countries, Huang et al. (2014) show that international political crises raise government bond yields (with those with lower maturities being more sensitive). Overall, investors demand a political-risk premium when the global political uncertainty spikes. Sonenshine and Kumari (2022) show that political risks cause a larger effect on government bond spreads (calculated as the difference between the bond yield and a risk-free rate) in countries of high financial risk. Out of several political sub-factors, only investment risk causes a statistically significant negative effect on bond spreads.

The expropriation literature provides the closest analogue to the russian assets question. Biglaiser et al. (2025) show that foreign-asset expropriations lower sovereign bond ratings in developing countries, with rule-of-law deterioration and FDI contractions mediating the effect.

3.2. Benchmarking Yield Reactions in the EU: from Rating Downgrades to Systemic Crises

The literature on European sovereign bond markets demonstrates that yield reactions to political and financial shocks vary widely both in magnitude and persistence. Credit rating agency (CRA) announcements are among the most studied triggers: Afonso et al. (2012) show that negative CRA news increased 10-year EU sovereign yields by 8–12 basis points (bps) in two-day windows, with effects persisting up to 45–60 bps for several months. Baum et al. (2016) similarly document significant, though more modest, increases in Spain (~2.5 bps), Italy (~1 bp), and France (~0.8 bps), noting that country-specific repricing remains after systematic Eurozone risk is accounted for. Arezki et al. (2011) further emphasize spillovers, estimating that downgrades lifted CDS spreads by 17 bps in downgraded countries and by around 5 bps in peers with high exposure.

Beyond ratings, news shocks also matter. Beetsma et al. (2013) find that country-specific bad news raised sovereign spreads by 1–2 bps on average, with larger effects (up to 12 bps) when banking linkages were strong. These findings underline the role of cross-border contagion in amplifying national shocks. In contrast, crisis restructuring events have had far larger effects: Zettelmeyer et al. (2013) report that the 2012 Greek debt restructuring produced yield jumps of 50–200 bps – an order of magnitude greater than typical news shocks.

Broader episodes of financial stress have also been associated with substantial market movements. Beber et al. (2009) show that during events such as the Iraq war, euro-area bond spreads widened by 60–90 bps as investors engaged in flight-to-quality and flight-to-liquidity behavior. These findings highlight how systemic shocks differ markedly from routine announcements in both scale and investor response.

Handler and Jankowitsch (2025) show a classic “political-uncertainty premium” that builds before set-piece political events and then unwinds once information arrives. In Italian BTPs, prices drift down by roughly 0.5–1.2% over the pre-event window and rebound by about 0.3–0.4% around the event, with further mean reversion over the following weeks, indicating that the shock is largely transitory rather than a step-change in risk pricing.

Taken together, the literature suggests that while credit ratings downgrades and political news can trigger measurable but relatively contained adjustments in yields (typically up to 20 bps), systemic crises and restructurings generate much more severe repricing, often exceeding 50 bps. This heterogeneity in market responses provides an essential benchmark for assessing the significance of shocks related to russian asset immobilization and usage.

4. METHODOLOGY

We quantify the impact of news about the immobilization and use of russian assets in the short run using a standard event-study design centered on pre-specified event dates τ_e. This approach follows the established literature on financial markets, where event studies are widely used to isolate the incremental effect of announcements from broader macro-financial dynamics (Beber et al., 2009; Beetsma et al., 2013; Zettelmeyer et al., 2013). In practice, this method compares cumulative yield changes in narrow windows around events with a typical distribution of daily changes outside of those windows, thereby attributing deviations to the news itself rather than to background noise (Miller, 2023). By aligning multiple events and averaging across them, the design strengthens inference and reduces the risk that observed movements reflect unrelated shocks.

Market responses of sovereign bond yields are analyzed separately for bonds with 2-year, 10-year, and 30-year maturities. This allows us to observe whether short-, medium-, and long-term borrowing costs reacted differently to the announcements. Unlike yield-curve models that impose smoothness or common factors across maturities, our approach does not constrain how yields at different horizons move relative to one another. A similar strategy was applied in studies rating shocks and restructuring events (Beber et al., 2009).

Event dates reflect the most important announcements regarding the immobilization and subsequent use of russian assets. We analyze immobilization- and usage-related news separately for robustness, in line with best practice in distinguishing heterogeneous event types in financial market event studies. Google Trends metrics are used to retain only events that provoked investors’ interest. Additional validation of the event selection comes from placebo tests (i.e., comparing the actual cumulative changes around the events with the changes around randomly chosen dates).

We strive to assess both the short-run and the medium-run effects of news announcements. As for short-run effects, we are primarily interested in calculating the accurate magnitude of news-related shocks. We perform an event study with a two-way bootstrap (for countries and for events): this approach helps to design reliable confidence intervals that take into account country heterogeneity, at the same time providing easy-to-interpret confidence intervals. We use a constant-mean model, which is a common practice for short event windows. The event study is performed under 3-, 5-, and 11-day event-width specifications. Spreads between 10-year and 2-year yields, as well as between 30-year and 10-year yields, are analyzed to assess changes in the shape of the yield curve more accurately.

The key objective of the medium-run analysis is to detect the extent to which yield shocks are persistent. The event study design was extended to a window of ±60 trading days around each event. Over two months, market yields are driven by broader forces (such as ECB policy shifts or macro releases). Without controlling for these, there is a risk of attributing general European or global shocks to russia-asset announcements. Therefore, we use principal component analysis (PCA) to extract the common EU factor first. However, if russian asset announcements generated a genuine Europe-wide response, that response would load heavily on the first principal component. Subtracting it would leave only cross-country differentials, underestimating the aggregate, persistent effect. Therefore, we also run a constant-mean model for the sake of robustness. For medium-run analysis, our focus is on persistence and cumulative effects. Therefore, we switch to a two-way (nested) Bayesian Dirichlet bootstrap (Rubin, 1981), which provides smoother posterior estimates without excessive variability and, therefore, more reliable credible intervals for the medium-run horizon. The procedure we adopted evaluates each post-event day to determine whether the estimated daily yield change is credibly different from zero. Consecutive days meeting this criterion are treated as a continuous reaction period. The "last day" corresponds to the end of this reaction, and the cumulative yield change up to that point is considered as the overall magnitude of the shock.

Because only a limited number of high-salience announcements on russian assets exist, the event sample is necessarily small. This constrains statistical power, particularly for detecting very small effects or for identifying heterogeneous responses across maturities and countries. To mitigate this limitation, the study relies on multi-window event designs, a two-way clustered bootstrap, and placebo tests that benchmark observed effects against the empirical distribution of normal yield fluctuations. These procedures increase inferential reliability by exploiting cross-country variation, reducing the influence of idiosyncratic shocks, and ensuring that detected effects exceed typical noise levels. Nonetheless, the estimates should be interpreted as upper-bound reactions under the available information set, reflecting both the small number of events and the deliberately conservative aggregation strategy.

To avoid underestimating the potential risks associated with russian asset confiscation, the empirical strategy is designed to err on the side of caution: Wherever parameter choices are required, specifications are selected so that they may generate impact estimates that are conservatively large, but never artificially muted. This deliberate approach ensures that potential systemic risks are not understated, while transparently acknowledging that the estimates represent an upper-bound rather than a lower-bound measure of market impact.

4.1. Events

The sample of events covers key milestones related to the immobilization of EU-held russian assets as a response to the full-scale rssian invasion (see Table 1). After closer inspection, two distinct types of events were identified: (i) immobilization of assets (i.e., freezing, with no intention of further use or confiscation announced), and (ii) usage of russian assets (i.e., allocation of extraordinary revenues or even potential confiscation). This distinction allows potentially heterogeneous market responses to be captured, as immobilization may be perceived as a temporary legal constraint, whereas usage implies a precedent-setting shift with broader political implications.

The event set was constructed using a cross-validation approach that combined forward and backward searches. Because Google Trends data for the keywords russian asset(s) are only available at weekly frequency, events were identified at the week level rather than by individual days. In the forward search, known EU-related announcements on russian asset immobilization or confiscation were matched

Table 1. The List of Dates Related to Immobilization and Usage of russian Assets

Date	Google Trends popularity index for russian asset(s) term (0-100) in a respective week	Event	Event classification
2022-02-26	100	The European Commission and leaders from France, Germany, Italy, the United Kingdom, Canada, and the United States issued a joint statement condemning Russia's invasion of Ukraine and committing, among other measures, to removing selected Russian banks from the SWIFT international payments system	Immobilization
2022-03-17	24	Enforcing sanctions against listed Russian and Belarussian oligarchs: Commission's "Freeze and Seize" Task Force steps up work with international partners	Immobilization
2023-12-18	12	EU adopts 12th package of sanctions against Russia | Reuters	Immobilization
2024-05-21	11	EU reaches historic decision to use revenues generated by Russian assets to support Ukraine	Usage
2024-06-14	25	G7 countries agree to boost support for Ukraine with frozen Russian assets	Usage
2025-03-03	47	UK-France tensions over plan to seize $350bn Russia assets for US arms | Ukraine | The Guardian	Usage
2025-08-13	55	Third transfer of €1.6 billion proceeds from immobilized Russian Central Bank assets made available in support of Ukraine - EU Reporter	Usage

with weeks of unusually high search intensity.[3] In the backward search, weeks with elevated search intensity were traced back to corresponding real-world events. Only those dates that were validated by both procedures were retained (see Table 1), ensuring that the final sample captures episodes of verifiable developments that also attracted general investors' attention.

The selection of events follows this paper's broader strategy of avoiding understated risk: we initially compiled all official announcements by EU institutions and the G7 concerning russian assets, and then focused on those developments that were both objectively identifiable and accompanied by elevated public attention. Google Trends serves here as an empirical indicator of when items of news plausibly entered investors' information sets, yielding an event set that reflects the conditions under which the markets were most likely to react, therefore providing an upper-bound estimate of potential yield effects. Robustness checks using the full set of official announcements and other lower-salience events produce markedly weaker and often insignificant reactions, reinforcing the rationale for isolating high-salience dates as the most informative for assessing market risk.

To address the risk that yield movements around russian-asset events coincide with monetary-policy news, we matched all events in Table 1 to the official ECB Governing Council calendar of monetary-policy decisions and accompanying monetary-policy statements (2022–2025).[4] Only one event in our sample (2023-12-18, immobilization) falls within the (–5; +5) window of such an announcement. Excluding this event leaves the results effectively unchanged, indicating that our findings are not driven by overlapping ECB monetary-policy communications. Fiscal announcements, which vary widely in timing and format across countries, cannot be systematically tracked in a comparable way for a multi-country daily-yield panel; however, the bootstrapped inference framework mitigates the influence of such unsynchronized, country-specific shocks, further reducing the risk of confounding.

4.2. Bond Yields

The research focuses on the yields of 2-, 10-, and 30-year government bonds (see a full list in Table 2), which represent the short, long, and ultra-long segments of the yield curve.

- The **2-year yield (2Y)** primarily reflects expectations of the policy rate over the next several quarters and is therefore most sensitive to short-horizon monetary-policy news.
- The **10-year yield (10Y)** is the benchmark long-run rate used for discounting medium- to long-dated cash flows, and embeds both expected future short rates and an intermediate term premium.
- The **30-year yield (30Y)** sits at the ultra-long end of the curve, where pricing is dominated by term/safety premiums, duration-supply considerations, and balance-sheet demand from insurers and pension funds.

The analysis is restricted to sovereign government bonds issued by the EU member states (see Table 2). These securities provide a direct and liquid measure of country risk premiums and best capture systemic effects of sanctions and potential asset confiscation. In contrast, supranational EU bonds (e.g., NextGenerationEU or SURE) and sovereign Eurobonds placed on international markets embed joint guarantees, international issuance conditions, or very long maturities, which could distort the interpretation of yield responses. Moreover, EU-level legal and precedent risk is transmitted to member-state yields via the factor of the common euro-area, so focusing on national benchmarks should already capture a substantial proportion of the supranational component of risk.

For each bond of country c of maturity $m \in \{2, 10, 30\}$ observed on trading days t, $y_{c,m,t}$ denotes the closing yield (in percent). The variable under investigation is the change in daily yield measured in percentage points (pp). The standard event-study variable – abnormal yield change ($A_{c,m,t}$) – is therefore defined as the "raw" change, corresponding to the constant-mean model with zero drift [see eq. (1)].

$$A_{c,m,t} \equiv \Delta y_{c,m,t} \equiv y_{c,m,t} - y_{c,m,t-1} \quad (1)$$

[3] We applied a rule of thumb of selecting observations with a Google Trends popularity index greater than 10.
[4] ECB: All news & publications

Table 2. The List of Bonds Analyzed in the Study by Country and Maturity

Country	2Y	10Y	30Y
Austria	X	X	X
Belgium	X	X	X
Czechia		X	
Germany	X	X	X
Denmark	X	X	
Spain	X	X	X
Finland	X	X	
France	X	X	X
Greece		X	X
Hungary		X	
Ireland		X	X
Italy	X	X	X
Lithuania		X	
Netherlands	X	X	X
Poland	X	X	
Portugal	X	X	X
Romania		X	
Sweden	X	X	
Slovenia		X	
Slovakia		X	X

Note: sovereign benchmark yields are reported in the currency of issuance of each country's on-the-run government bonds. Euro area (EMU) countries issue benchmarks in euros (EUR); non-euro countries issue bonds in their domestic currency (e.g., CZK, PLN, HUF, RON, SEK, DKK). Data were collected from open sources, including Investing.com, and Stooq.com.

Such a specification is appropriate for tight event windows because, in sovereign bond markets, the unconditional mean of daily yield changes over non-event periods is empirically close to zero, while most of the variation arises from shocks rather than drift. Prior work shows that constant-mean models perform comparably to market-model alternatives over brief horizons because expected daily changes are negligible relative to news-driven volatility (Brown and Warner, 1985; MacKinlay, 1997).

The spread between the 10Y and 2Y yields represents the gap between long and short maturities and summarizes the shape of that segment. The spread between the 30Y and 10Y yield plays the same role for the long-to-ultra-long segment. Taken together, these two spreads describe the local shape of borrowing costs at intermediate and very long horizons, and help distinguish horizon-specific repricing from shifts that move all maturities by similar amounts:

$$\Delta S_{c,t}^{(10-2)} \equiv \Delta y_{c,10,t} - \Delta y_{c,2,t} \quad (2)$$

$$\Delta S_{c,t}^{(30-10)} \equiv \Delta y_{c,30,t} - \Delta y_{c,10,t} \quad (3)$$

Applied to announcements on russian-asset immobilization and usage, positive cumulative changes in the $S_{c,t}^{(10-2)}$ and $S_{c,t}^{(30-10)}$ would indicate that longer-maturity yields moved more than shorter maturities over the window. This pattern would indicate that additional compensation was required to hold long-dated debt, i.e., an increase in long-term premiums. Such an outcome is consistent with legal-precedent, property-rights, and potential-retaliation risks being priced in by investors. In practical terms, long-maturity borrowing costs would increase relative to the short end under such a scenario.

4.3. Assessing Short-Run Effects

Daily sovereign bond yields were harmonized across all countries and maturities aligned in a common trading-day calendar. The main variable is the daily yield change, which captures the abnormal yield change under a constant-mean with a zero-drift benchmark (as described in Section 2.2, eq. (1)).

For each event date, we design symmetric windows $W = \{-w, \dots, w\}$ (specifically, for $(-1, +1)$, $(-2, +2)$, and $(-5, +5)$ trading days). If an event does not fall on a trading day, it is snapped to the nearest trading day within ±3 days (to account for announcements that are released during weekends).

Within each window W, the country-event cumulative abnormal change for country c and maturity m is the running sum of daily changes from the left boundary up to relative day t:

$$CAC_{c,m}(t|e) = \sum_{s=-w}^{t} \Delta y_{c,m,\tau_e+s} \;\; t \in W,$$
$$CAC_{c,m}(-w|e) = 0 \quad (4)$$

and normalized at the left boundary so cumulative change is zero on the first day of the window. The window total equals the endpoint of this path (corresponding to the last day).

In the next step, cumulative yield changes obtained from the eq. (4) are averaged across countries (countries are assigned a uniform weight):

$$\overline{CAC}_m^{(e)}(t) = \frac{1}{|C_e(t)|} \sum_{c \in C_e(t)} CAC_{c,m}(t|e) \quad (5)$$

where $C_e(t)$ is the set of countries observed for event e at day t.

Finally, we report the cross-country means obtained from eq. (5) averaged across events:

$$\overline{CAC}_m(t) = \frac{1}{|\varepsilon(t)|} \sum_{e \in \varepsilon(t)} \overline{CAC}_m^{(e)}(t) \quad (6)$$

where $\varepsilon(t)$ is the set of events with observations at day t.

In addition to the 2Y, 10Y, and 30Y yields, we apply the same procedure to the term-structure spreads defined in eqs. (2) and (3) (10Y–2Y and 30Y–10Y) to capture changes in the yield curve's shape.

For a disaggregated (single-country) analysis, we skip cross-country averaging: for each country we plot its own cumulative path and take the window-end value as that country's event response, requiring a complete window. Uncertainty is quantified by resampling events for that country (event-level bootstrap) to show country-specific confidence bands.

To obtain reliable confidence intervals, we perform bootstrapping – a nonparametric resampling method that approximates the sampling distribution of a statistic by repeatedly drawing (with replacement) from the observed data and recomputing the statistic. Countries that experience the same event tend to co-move, so observations might not be independent within an event. Therefore, to account for the two-level structure of the data (i.e., multiple countries and multiple events in the sample), we implement a two-way clustered bootstrap (resampling events and, within each event, resampling countries with replacement), following the nested/clustered bootstrap approaches of Davidson and MacKinnon (2000) and Cameron et al., (2008). We use 1,000 bootstrap draws to form 95% confidence intervals.

We validate the results with a placebo design (inspired by Eggers et al., 2024) that mirrors the event-study setup across the (–5,+5), (–2,+2), and (–1,+1) windows, and two modes ("full" for the entire symmetric window; "post" for the post-event segment only). Pseudo-event dates are drawn from non-event periods with a ±15-day exclusion buffer around all true events (and between pseudo-events), then snapped to the nearest trading day within ±3 days and kept only if the entire window fits inside the sample. Then, for each maturity and event set, the procedure described in eqs. (4)-(6) is repeated. Two-sided Monte-Carlo p-values compare the observed statistic to its placebo distribution, while 95% confidence intervals for the observed statistic are obtained from a two-way bootstrap that resamples events and, within each event, countries. This combination tests whether the measured effects are unusually large relative to typical fluctuations on randomly chosen dates.

The results (Appendix A, Table 8)) show that yields move unusually around the actual announcement dates, not on randomly chosen days. However, this only applies to the (-2; +2) and (-5; +5) windows; therefore, in the further analysis, the results for the (-1; +1) windows are mostly ignored. Significance concentrates in post-event segments rather than full symmetric windows, which supports the claim about the causal links between announcements and yields' changes. Overall, placebo test results indicate that chosen dates are informative and that the main results are not artifacts of date selection.

4.4. Assessing Medium-Run Effects

To assess persistence beyond short announcement windows, the event study is extended to a medium-run horizon ($W = \{-60, \dots, 60\}$). Over longer windows the zero-drift assumption becomes less credible, as monetary policy moves, fiscal news, and other forces can shift yields. Ignoring such confounders risks attributing broad European or global shocks to russian assets announcements. Conversely, if EU markets react largely in sync, pre-filtering poses the risk of under-estimating the shock induced by the news on russian assets. For robustness, we therefore estimate two medium-run specifications: (i) the baseline model of eqs. (4)-(6) extended to a 60-day window, and (ii) a version applied to yields purged of the common EU component using principal-components analysis (PCA).

Before aggregating across events, a pre-event PCA (principal component analysis) filter is applied to remove the common cross-country yield component (the "common EU factor"). Specifically, over $t \in [-60, -6]$, a country-by-day matrix of daily yield changes is constructed. A rank-1 PCA is then estimated, and the fitted factor is subtracted so that only the residuals enter the event-time analysis.

The medium-run analysis aims to measure the persistence of the shocks. To reduce small-sample volatility in path estimates, we adopt a two-way

Bayesian (Dirichlet) bootstrap, which reweights both countries within each event and the events themselves using Dirichlet draws, which typically yields smoother, more stable CAC trajectories than resampling with replacement. Accordingly, medium-run confidence bands are computed from these Dirichlet-weighted replicates. Within each event-day (t), country weights $w_{c|e}^{(b)} \sim Dirichlet(1)$ are drawn (once per event and held fixed across t within draw b) and used to form a country-weighted event mean. Cross-event aggregation then uses event weights $w^{(b)} \sim Dirichlet(1)$. For draws $b = 1, \dots, D$ (with $D = 4000$) and weights $w^{(b)} \sim Dirichlet(1, \dots, 1)$, the draw-specific cross-event mean for each post-event day $t \in [0, T]$ is

$$\overline{\Delta y}_{e,m,t}^{(b)} = \sum_{c \in C_e(t)} w_{c|e}^{(b)} \, \Delta y_{c,m,t}, \quad \mu_{m,t}^{(b)} = \sum_{e \in E(t)} w_e^{(b)} \, \overline{\Delta y}_{e,m,t}^{(b)} \quad (7)$$

Weights are renormalized over the countries/events actually observed at day t, i.e., over $C_e(t)$ and $E(t)$.

A data-driven window is selected on $t \in [0, T]$ using a credible-interval rule: a day t was retained if its 95% credible interval (from the empirical distribution of posterior day-t effect) excluded zero. Among all retained days, the longest contiguous run length of at least one day[5] ($Min\ run = 1$) is taken as the window $[t_{min}, t_{max}]$. If no such run exists, the maturity-event set is classified as having no robust medium-run effect.

Within any selected window, a CAC path is reported by summing the posterior mean effects across retained days. Let the retained days be $t_1 < t_2 < \dots < t_r = t_{max}$. By convention,

$$\hat{\mu}_{m,t} = \mathrm{E}_b\left[\mu_{m,t}^{(b)}\right], \quad CAC_m(t_j) = \sum_{q=2}^{j} \hat{\mu}_{m,t_q} \ (j = 1, \dots, r), \quad CAC_m(t_1) = 0 \ (8)$$

and 95% bands for $CAC_m(t_j)$ are obtained from $CAC_m^{(b)}(t_j) = \sum_{q=2}^{j} \mu_{m,t_q}^{(b)}$ by taking the 2.5th and 97.5th percentiles across draws $b = 1, \dots, D$.

5. RESULTS AND DISCUSSION

Figure 1 shows 2Y, 10Y, and 30Y German Bund[6] yields, the euro area's benchmark securities. Following russia's invasion in February 2022, yields rose sharply from previously negative or near-zero levels. The 2Y yield turned positive for the first time in years, reflecting both elevated short-term risk and expectations of aggressive ECB tightening. Longer maturities increased more gradually, embedding higher inflation expectations and fiscal risk premiums.

The entire yield curve shifted upward and remained elevated through 2025, with short-term yields displaying greater volatility and long-term yields indicating persistent uncertainty. Notably, periods of yield curve inversion emerged, with 2Y yields exceeding those on 10Y and 30Y Bunds. Such inversions signaled acute market stress: They reflected heightened near-term risk perceptions and monetary tightening, coupled with expectations of weaker long-term growth and subdued inflation. This pattern highlights the strained conditions under which EU sovereign bonds were priced during the post-invasion inflation shock.

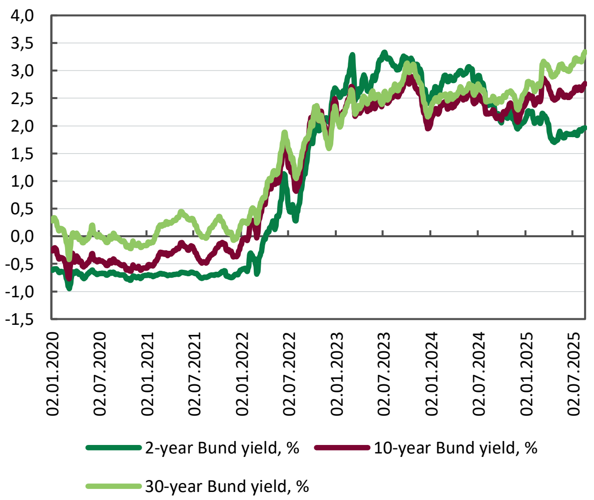

Figure 1. Yields on German Sovereign Bonds by Maturity (2Y, 10Y, and 30Y Bunds), 2020-2025 (5-Day Centered Moving Average)

[5] This choice avoids discarding isolated but meaningful late-arriving effects that could be missed by a longer run requirement. A more conservative specification would raise min_run (e.g., ≥3) to favour persistence over sensitivity, at the risk of overlooking such postponed responses.
[6] Bunds are the most liquid and transparent sovereign instruments, widely used as a proxy for EU-wide systemic risk. Tracking these returns therefore helps capture how markets priced geopolitical shocks, sanctions, and asset-confiscation debates.

Growing yields can be attributed to the higher perceived risks due to russian asset immobilization to a minor extent only. Financial markets were already characterized by heightened uncertainty following russia's invasion, which triggered broad risk repricing across global assets. At the same time, the invasion amplified inflationary pressures through energy and commodity shocks, prompting a monetary tightening cycle by the ECB. In this context, an event study design is particularly useful, as it focuses on narrow windows around specific announcements, disentangling the incremental effects of asset-related news from the broader macro-financial environment.

5.1. Short-Run Effects

Immobilization news (see Table 3) caused no precisely estimated upward effect on the bond yields. In contrast, usage announcements (Table 4) had broader and more persistent effects. In the (–2,+2) window, 10Y yields rise steadily from day +2 onward, peaking around day +4 at ≍ +0.161 pp (95% CI [0.10; 0.23]); this is the maximum reliable increase in the sample. Day +3 and day +5 are also significantly positive (≍ +0.152 pp, 95% CI [0.08; 0.23] and +0.131 pp, 95% CI [0.05; 0.22], respectively). 2Y yields move up by day +2 (≍ +0.063 pp, 95% CI [0.04; 0.11]). 30Y reactions are mixed and less precisely estimated, with most CIs including zero.

In other words, usage news pushes the medium-term curve upward for several days, suggesting markets view it as a persistent legal risk rather than a temporary shock. The maturity profile concentrates the signal in the "belly" of the curve: the short end reacts modestly and briefly, the 10Y segment bears the clearest adjustment, and the ultra-long end shows little systematic follow-through.

The reaction of spreads to immobilization news (Table 5) lacks any consistent pattern, and there are few precisely estimated positive or negative reactions. However, within (-5; +5) days window, following the usage announcements (Table 6) 10Y-2Y spreads increase between days 2 and 5. The maximum increase – 0.10 pp (95% CI [0.05; 0.16]) – occurs on the day 4. Interpreted jointly with the level results, this points to a temporary increase in medium-horizon term premiums.

Table 3. Event Study Results (Cumulative Yield Changes – Mean and 95% CI Bounds in Brackets, in pp) for 2Y-, 10Y-, and 30Y-Maturity Bonds Across Event Windows (–5; +5), (–2; +2), and (–1; +1), Based on News About the Immobilization of russian Assets

Day	2Y (-1; +1)	10Y (-1; +1)	30Y (-1; +1)	2Y (-2; +2)	10Y (-2; +2)	30Y (-2; +2)	2Y (-5; +5)	10Y (-5; +5)	30Y (-5; +5)
-5							0.000 [0.00; 0.00]	0.000 [0.00; 0.00]	0.000 [0.00; 0.00]
-4							-0.043 [-0.14; 0.02]	-0.022 [-0.08; 0.01]	-0.022 [-0.08; 0.04]
-3							-0.021 [-0.16; 0.06]	0.010 [-0.09; 0.09]	0.005 [-0.13; 0.09]
-2				0.000 [0.00; 0.00]	0.000 [0.00; 0.00]	0.000 [0.00; 0.00]	-0.068 [-0.26; 0.07]	-0.055 [-0.27; 0.06]	-0.009 [-0.15; 0.07]
-1	0.000 [0.00; 0.00]	0.000 [0.00; 0.00]	0.000 [0.00; 0.00]	-0.009 [-0.05; 0.04]	-0.017 [-0.09; 0.03]	-0.041 [-0.11; 0.02]	-0.087 [-0.31; 0.05]	-0.061 [-0.33; 0.09]	-0.049 [-0.25; 0.08]
0	0.026 [0.00; 0.05]	-0.018 [-0.07; 0.03]	0.022 [-0.02; 0.05]	0.017 [-0.01; 0.05]	-0.035 [-0.06; -0.01]	-0.019 [-0.05; 0.00]	-0.060 [-0.27; 0.07]	-0.067 [-0.26; 0.05]	-0.016 [-0.19; 0.08]
1	-0.025 [-0.05; 0.00]	-0.044 [-0.07; -0.02]	-0.022 [-0.03; -0.01]	-0.034 [-0.09; 0.02]	-0.062 [-0.12; -0.02]	-0.062 [-0.13; -0.01]	-0.117 [-0.33; 0.01]	-0.111 [-0.37; 0.04]	-0.069 [-0.26; 0.06]
2				-0.088 [-0.24; 0.07]	0.017 [-0.17; 0.18]	-0.113 [-0.23; 0.08]	-0.168 [-0.37; 0.04]	-0.021 [-0.39; 0.24]	-0.119 [-0.31; 0.14]
3							-0.109 [-0.36; 0.11]	0.039 [-0.32; 0.29]	-0.076 [-0.30; 0.16]
4							-0.115 [-0.37; 0.09]	0.090 [-0.21; 0.32]	-0.062 [-0.26; 0.14]
5							-0.129 [-0.41; 0.15]	0.102 [-0.24; 0.32]	-0.076 [-0.27; 0.17]

Table 4. Event Study Results (Cumulative Yield Changes – Mean and 95% CI Bounds in Brackets, in pp) for 2Y-, 10Y-, and 30Y-Maturity Bonds Across Event Windows (–5; +5), (–2; +2), and (–1; +1), Based on News About the Usage of russian Assets

Day	2Y (-1; +1)	10Y (-1; +1)	30Y (-1; +1)	2Y (-2; +2)	10Y (-2; +2)	30Y (-2; +2)	2Y (-5; +5)	10Y (-5; +5)	30Y (-5; +5)
-5							0.000 [0.00; 0.00]	0.000 [0.00; 0.00]	0.000 [0.00; 0.00]
-4							0.019 [-0.01; 0.07]	0.010 [-0.02; 0.06]	-0.014 [-0.08; 0.07]
-3							0.032 [-0.01; 0.08]	0.018 [-0.02; 0.05]	-0.005 [-0.08; 0.08]
-2				0.000 [0.00; 0.00]	0.000 [0.00; 0.00]	0.000 [0.00; 0.00]	-0.014 [-0.05; 0.02]	-0.005 [-0.05; 0.03]	-0.011 [-0.05; 0.03]
-1	0.000 [0.00; 0.00]	0.000 [0.00; 0.00]	0.000 [0.00; 0.00]	0.003 [-0.02; 0.03]	0.011 [0.00; 0.03]	0.018 [-0.01; 0.05]	0.012 [-0.03; 0.06]	0.019 [-0.04; 0.06]	0.007 [-0.05; 0.08]
0	-0.012 [-0.05; 0.03]	-0.005 [-0.04; 0.04]	-0.014 [-0.07; 0.06]	-0.008 [-0.07; 0.05]	0.004 [-0.03; 0.04]	0.004 [-0.05; 0.06]	0.015 [-0.01; 0.05]	0.024 [0.00; 0.05]	-0.007 [-0.05; 0.04]
1	0.008 [-0.02; 0.05]	0.004 [-0.03; 0.04]	0.012 [-0.04; 0.08]	0.011 [-0.04; 0.08]	0.014 [-0.01; 0.04]	0.029 [-0.03; 0.09]	0.037 [-0.01; 0.09]	0.042 [0.01; 0.09]	0.018 [-0.03; 0.07]
2				0.051 [-0.03; 0.14]	0.090 [-0.02; 0.21]	0.103 [-0.03; 0.25]	0.063 [0.04; 0.11]	0.127 [0.10; 0.17]	0.092 [-0.03; 0.22]
3							0.067 [0.01; 0.12]	0.152 [0.08; 0.23]	0.110 [-0.02; 0.25]
4							0.063 [0.02; 0.11]	0.161 [0.10; 0.23]	0.105 [-0.03; 0.24]
5							0.043 [-0.01; 0.09]	0.131 [0.05; 0.22]	0.110 [-0.01; 0.25]

Table 5. Event Study Results (Cumulative Spreads Changes – Mean and 95% CI Bounds in Brackets, in pp) for 10Y-2Y and 30Y-10Y Spreads Across Event Windows (–5; +5), (–2; +2), and (–1; +1), Based on News About the Immobilization of russian Assets

Day	10Y-2Y (-1; +1)	30Y-10Y (-1; +1)	10Y-2Y (-2; +2)	30Y-10Y (-2; +2)	10Y-2Y (-5; +5)	30Y-10Y (-5; +5)
-5					0.000 [0.00; 0.00]	0.000 [0.00; 0.00]
-4					-0.002 [-0.02; 0.02]	-0.014 [-0.02; 0.00]
-3					0.004 [-0.02; 0.04]	-0.009 [-0.02; 0.00]
-2			0.000 [0.00; 0.00]	0.000 [0.00; 0.00]	-0.028 [-0.10; 0.04]	-0.003 [-0.04; 0.03]
-1	0.000 [0.00; 0.00]	0.000 [0.00; 0.00]	-0.026 [-0.04; -0.01]	0.002 [-0.02; 0.03]	-0.051 [-0.13; 0.03]	-0.001 [-0.02; 0.01]
0	-0.002 [-0.02; 0.01]	-0.006 [-0.02; 0.01]	-0.028 [-0.05; -0.01]	-0.004 [-0.03; 0.02]	-0.037 [-0.09; 0.02]	-0.006 [-0.03; 0.02]
1	-0.018 [-0.04; 0.01]	0.019 [-0.01; 0.06]	-0.044 [-0.08; -0.01]	0.021 [-0.02; 0.09]	-0.070 [-0.17; 0.03]	0.019 [-0.01; 0.05]
2			-0.048 [-0.09; 0.01]	0.019 [-0.02; 0.07]	-0.075 [-0.17; 0.05]	0.017 [0.00; 0.04]
3					-0.067 [-0.17; 0.04]	0.003 [-0.03; 0.03]
4					-0.023 [-0.08; 0.05]	0.012 [-0.03; 0.05]
5					-0.001 [-0.04; 0.05]	0.018 [-0.03; 0.07]

Table 6. Event Study Results (Cumulative Spreads Changes – Mean and 95% CI Bounds in Brackets, in pp) for 10Y-2Y and 30Y-10Y Spreads Across Event Windows (–5; +5), (–2; +2), and (–1; +1), Based on News About the Usage of russian Assets

Day	10Y-2Y (-1; +1)	30Y-10Y (-1; +1)	10Y-2Y (-2; +2)	30Y-10Y (-2; +2)	10Y-2Y (-5; +5)	30Y-10Y (-5; +5)
-5					0.000 [0.00; 0.00]	0.000 [0.00; 0.00]
-4					-0.012 [-0.02; 0.00]	-0.007 [-0.01; 0.00]
-3					-0.016 [-0.03; 0.00]	0.009 [0.00; 0.02]
-2			0.000 [0.00; 0.00]	0.000 [0.00; 0.00]	0.007 [-0.02; 0.06]	0.012 [0.00; 0.03]
-1	0.000 [0.00; 0.00]	0.000 [0.00; 0.00]	0.009 [-0.01; 0.03]	0.006 [0.00; 0.02]	0.007 [-0.03; 0.04]	0.017 [0.01; 0.03]
0	0.000 [-0.02; 0.02]	0.004 [-0.01; 0.02]	0.009 [-0.03; 0.03]	0.009 [0.00; 0.02]	0.009 [-0.01; 0.03]	0.021 [0.01; 0.04]
1	-0.004 [-0.05; 0.04]	0.006 [-0.01; 0.03]	0.004 [-0.06; 0.05]	0.011 [-0.01; 0.03]	0.007 [-0.01; 0.03]	0.023 [0.00; 0.05]
2			0.047 [-0.02; 0.11]	-0.009 [-0.03; 0.02]	0.072 [0.06; 0.10]	0.003 [-0.02; 0.03]
3					0.087 [0.01; 0.17]	0.007 [-0.02; 0.04]
4					0.101 [0.05; 0.16]	0.014 [-0.01; 0.05]
5					0.091 [0.00; 0.18]	0.017 [-0.02; 0.05]

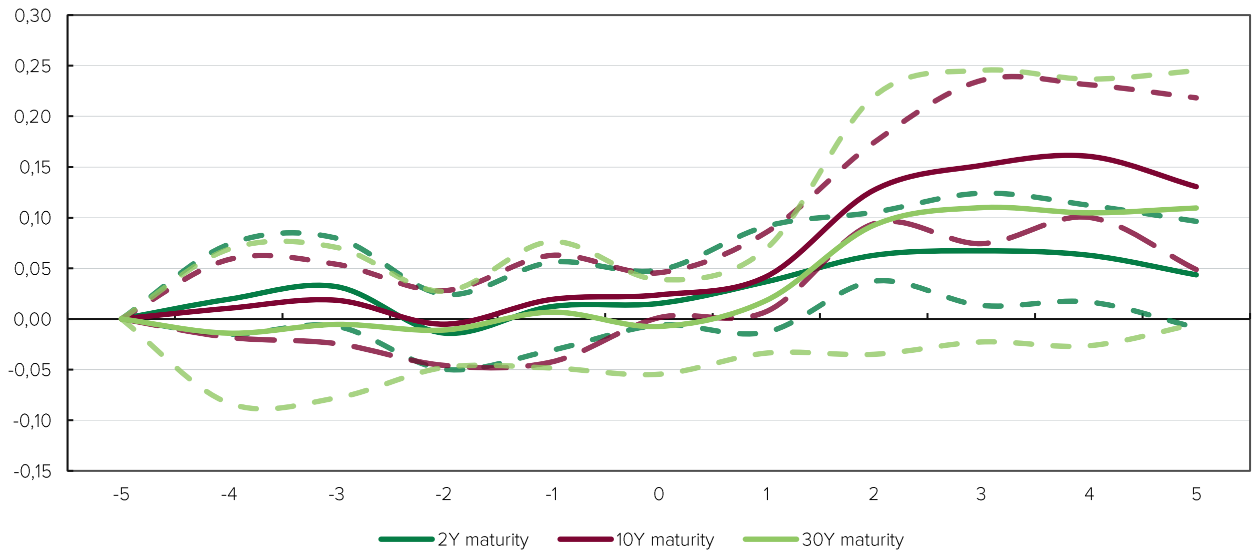

Figure 2. Cumulative Changes (in pp) of EU Sovereign Yields (2Y/10Y/30Y) for a (–5, +5) Window Around News on russian Assets use; 95% CI Obtained from the Clustered Bootstrapping Shown as Dashed Lines

Note: the responses to usage-related events are selected for visualization because they generate the clearest and strongest market signal in our tests; the impact is most pronounced within a (-5; +5) trading days window.

The reaction of spreads to immobilization news (Table 5) lacks any consistent pattern, and there are few precisely estimated positive or negative reactions. However, within (-5; +5) days window, following the usage announcements (Table 6) 10Y-2Y spreads increase between days 2 and 5. The maximum increase – 0.10 pp (95% CI [0.05; 0.16]) – occurs on the day 4. Interpreted jointly with the level results, this points to a temporary increase in medium-horizon term premiums.

In practical terms, there are two points that matter for policymakers: First, announcements about using the frozen-asset proceeds tend to lift medium-term borrowing costs for several days, so clear advance guidance on the legal design and rollout can help smooth the market reaction between days +2 and +5. Second, because 10Y yields rise most consistently and both 2Y and 30Y shifts are small but highly uncertain, debt managers should lean toward issuing short-to-intermediate maturities in the immediate aftermath of such news, while postponing 10Y and ultra-long issuance until markets stabilize.

Because usage shocks produce larger and more widespread medium-term moves than immobilization (see Appendix A, Table 9), we focus the single-country analysis on usage news only within a (-5; +5) window, since it produces the most pronounced results (Appendix A, Table 10).

For 2Y bonds, reactions are modest. The largest day-3 effects are in Austria (≈ 0.145 pp (95% CI [0.06; 0.23])) and Portugal (≈ 0.143 pp (95% CI [0.06; 0.23])). Other countries show weaker responses.

Usage news produces a broad 10Y repricing from day +2 onward. By day +5, statistically credible increases (95% CIs entirely above zero) are observed for Austria (≈ 0.182 pp, 95% CI [0.07; 0.29]), Belgium (≈ 0.205 pp, 95% CI [0.09; 0.32]), Denmark (≈ 0.168 pp, 95% CI [0.04; 0.29]), Finland (≈ 0.193 pp, 95% CI [0.08; 0.30]), France (≈ 0.210 pp, 95% CI [0.10; 0.32]), Germany (≈ 0.212 pp, 95% CI [0.07; 0.36]), Ireland (≈ 0.192 pp, 95% CI [0.08; 0.30]), Italy (≈ 0.210 pp, 95% CI [0.08; 0.34]), Netherlands (≈ 0.197 pp, 95% CI [0.08; 0.31]), Portugal (≈ 0.214 pp, 95% CI [0.07; 0.36]), Sweden (H 0.148 ππ, 95% XI [0.04; 0.25]), Slovenia (≈ 0.199 pp, 95% CI [0.03; 0.37]) and Slovakia (≈ 0.175 pp, 95% CI [0.07; 0.28]). Czechia and Poland have smaller day-5 estimates with intervals that include zero.

For 30Y bonds, movements are modest and often imprecise. Still, several countries show day +5 increases with CIs entirely above zero; most clearly France (≈ 0.148 pp, 95% CI [0.05; 0.26]), followed by Italy (≈ 0.122 pp, 95% CI [0.01; 0.27]), Portugal (≈ 0.119 pp, 95% CI [0.01; 0.24]), Greece (≈ 0.116 pp, 95% CI [0.01; 0.24]) and Austria (≈ 0.111 pp, 95% CI [0.00; 0.24]).

5.2. Medium-Run Effects

Extending the horizon to 60 trading days with the Bayesian-window design points to there being small, short-lived medium-run effects that depend on the phase of the asset policy (see Table 7). We take the constant-mean event study as our baseline, as it measures the total market response (including common components of repricing) following the announcements. As a robustness check, we re-estimate after PCA prior filtering – these estimates isolate idiosyncratic issuer moves. The fact that the PCA-filtered medium-run effects fade over time reflects the removal of the common EU yield factor, leaving only small issuer-specific movements that naturally dissipate as markets absorb the information; this pattern is consistent with rapid market adaptation rather than model overfitting. Importantly, because most of the reaction operates through the common EU factor, the associated risk is shared across the EU members rather than being concentrated in the jurisdictions where the assets are held (e.g., Belgium). Furthermore, over longer horizons, part of the observed medium-run drift in the constant-mean specification reflects major monetary-policy shifts in the euro area, which are filtered out by the PCA approach. This reinforces the interpretation that the fading PCA effects capture market normalization rather than modelling artefacts.

Under the constant-mean specification, immobilization news is associated with small upward drifts across the curve – about +0.033 pp on 2Y by day 13 (95% CrI [−0.015; 0.080]), +0.053 pp on 10Y by day 36 (95% CrI [0.036; 0.078]), and +0.132 pp on 30Y by day 13 (95% CrI [0.048; 0.196]). Usage news shows a mixed pattern: −0.058 pp on 2Y by day 19 (95% CrI [−0.082; −0.037]), a brief +0.076 pp uptick on 10Y by day 2 (95% CrI [0.008; 0.158]), and +0.074 pp on 30Y by day 2 (95% CrI [0.005; 0.160]).

With prior PCA filtering, immobilization effects remain but appear shorter-lived at the long end: +0.031 pp on 2Y by day 13 (95% CrI [−0.014; 0.076]), +0.036 pp on 10Y by day 42 (95% CrI [0.003; 0.107]), and no credibly positive/negative impact on 30Y. For usage events, 2Y and 10Y collapse to zero, and 30Y shows no credibly positive/negative impact.

Under the PCA filter, medium-run effects largely attenuate toward zero across maturities, indicating that markets treated both immobilization and usage announcements primarily as EU-wide, macro-style shocks rather than issuer-specific risks. Overall, medium-run reactions mirror the short-run evidence: announcements increase bond yields, but magnitudes are modest and do not accumulate over the two-month window.

6. CONCLUSIONS AND POLICY IMPLICATIONS

European sovereign yields do react to announcements on russian assets, but the scale is moderate. At the aggregate level, usage news produces a coordinated rise in 10Y yields that builds between days +2 and +4 and remains elevated through about day +5. The peak single-day effect stays below 30 bps. 2Y moves are small and short-lived, and 30Y changes are generally modest with wide intervals. Immobilization news, by contrast, elicits only limited short-run movements at the aggregate level, with many estimates close to zero.

In our estimates, 10-year yields rise between day +2 and day +5 after usage-related announcements, with a peak increase of about 16 bp (±6 bp) on day +4. This provides a practical benchmark for translating temporary risk premiums into fiscal terms. For context, Hilgenstock et al. (2025) show that a 50 bp parallel shift would raise G7 interest costs by roughly US $95 billion in the first year, with around US $12.5 billion borne by Germany, France, and Italy. To gauge the fiscal relevance of the much smaller and short-lived reactions observed here, we apply the estimated yield increase only to the portion of public debt that is typically rolled over each year (let's assume, around 10-15% of GDP). Scaling the 10–23 bp movements to that refinancing volume implies an impact of roughly 0.01–0.03% of GDP. These are modest amounts when set against the €230 billion in immobilized russian central-bank reserves (and far smaller than the economic and security costs of delaying support for Ukraine). Moreover, this burden can be reduced if debt-management offices adjust issuance calendars to avoid the first days following major announcements, when yield reactions are strongest (as discussed further).

Country-level results refine this picture. Usage announcements prompt a continental rise in 10Y yields, with many countries showing day +5 increases whose confidence intervals lie entirely above zero. By contrast, 2Y moves are small and often statistically indistinguishable from zero by day +5. At the ultra-long end, only a few issuers (most notably France, Belgium, Portugal, Italy, and Greece) register clear day +5 increases, and these are noticeably smaller than at 10Y. Taken together, the repricing is concentrated in the belly of the curve, indicating a temporary lift in medium-term premiums rather than a broad shift of the whole curve.

Benchmarked against well-studied European shocks, these effects are comparable to typical CRA-downgrade announcements and far below crisis-episode repricing. Extending the horizon to 60 trading days with the PCA-filtering and Bayesian-inspired window design shows brief runs of significance that fade rather than cumulate, indicating virtually no medium-run persistence.

Because the estimated yield responses are temporary and modest, policy design should focus on managing expectations rather than offsetting large market moves. Clear sequencing and advance communication can substantially limit uncertainty premiums: the European Commission, Council and EEAS should pre-announce the legal path, timelines, and governance of proceeds, and maintain a single EU/G7 line. National debt-management offices can minimize issuance-cost drift by avoiding large 10Y (and, to a smaller extent, 2Y) placements within two weeks after major usage announcements, when yield reactions are meaningful. Central banks can help anchor expectations by restating the separation of monetary policy from fiscal and legal steps and, around key announcement days, signaling that market-functioning backstops are available if needed. As most of the reaction is absorbed through the common EU yield factor rather than country-specific components, monitoring a small set of more sensitive sovereigns is sufficient to contain short-lived volatility and keep funding conditions orderly as usage policy advances.

Table 7. Bayesian Window (CrI Rule): Medium-Run Cumulative Abnormal Changes in Sovereign Yields by Maturity and Event Set (Dirichlet Bootstrap, 95% CrI)

Event set	Maturity	The Last Day of a Marginal One-Day Credibly Positive/Negative Impact		Cumulative Yield on the Last Day of a Credibly Positive/Negative Impact	
		Constant-Mean Model	Prior PCA Filtering	Constant-Mean Model	Prior PCA Filtering
Immobilization	2Y	13	13	0.033 [-0.015; 0.080]	0.031 [-0.014; 0.076]
Immobilization	10Y	36	42	0.053 [0.036; 0.078]	0.036 [0.003; 0.107]
Immobilization	30Y	13	No credibly positive/negative impact	0.132 [0.048; 0.196]	No credibly positive/negative impact
Usage	2Y	19	15	-0.058 [-0.082; -0.037]	0.000 [0.000; 0.000]
Usage	10Y	2	15	0.076 [0.008; 0.158]	0.000 [0.000; 0.000]
Usage	30Y	2	No credibly positive/negative impact	0.074 [0.005; 0.160]	No credibly positive/negative impact

REFERENCES

Afonso, A., Furceri, D., Gomes, P. (2012). Sovereign credit ratings and financial markets linkages: Application to European data. Journal of International Money and Finance, 31(3), pp.606–638. https://doi.org/10.1016/j.jimonfin.2012.01.016

Arezki, R., Candelon, B., Sy, A. N. R. (2011). Sovereign rating news and financial markets spillovers: Evidence from the European debt crisis. IMF Working Paper, 11/68. https://doi.org/10.5089/9781455227112.001

Baum, C. F., Schäfer, D., Stephan, A. (2016). Credit rating agency downgrades and the Eurozone sovereign debt crises. Journal of Financial Stability, 24, 117–131. https://doi.org/10.1016/j.jfs.2016.05.001

Beber, A., Brandt, M. W., Kavajecz, K. A. (2009). Flight-to-quality or flight-to-liquidity? Review of Financial Studies, 22(3), 925–957. https://doi.org/10.1093/rfs/hhm088

Beetsma, R., Giuliodori, M., de Jong, F., Widijanto, D. (2013). Spread the news: The impact of news on the European sovereign bond markets during the crisis. Journal of International Money and Finance, 34, 83–101. https://doi.org/10.1016/j.jimonfin.2012.11.005

Biglaiser, G., Lee, H., Yoo, S. H. (2025). Foreign asset expropriation and sovereign bond ratings in the developing world. Business and Politics, 1–23. https://doi.org/10.1017/bap.2024.42

Brown, S. J., Warner, J. B. (1985). Using daily stock returns: The case of event studies. Journal of Financial Economics, 14(1), 3–31. https://doi.org/10.1016/0304-405X(85)90042-X

Butler, C. (2024). Confiscating sanctioned Russian state assets should be the last resort. Chatham House – Expert Comment, 1 May. https://www.chathamhouse.org/2024/05/confiscating-sanctioned-russian-state-assets-should-be-last-resort

Cameron, A. C., Gelbach, J. B., Miller, D. L. (2008). Bootstrap-based improvements for inference with clustered errors. Review of Economics and Statistics, 90(3), 414–427. https://www.jstor.org/stable/40043157

Davidson, R., MacKinnon, J. G. (2000). Bootstrap tests: How many bootstraps? Econometric Reviews, 19(1), 55–68. https://doi.org/10.1080/07474930008800459

Eggers, A. C., Tuñón, G., Dafoe, A. (2024). Placebo tests for causal inference. American Journal of Political Science, 68(3), 1106–1121. https://doi.org/10.1111/ajps.12818

Handler, L., Jankowitsch, R. (2025). Political uncertainty and sovereign bond markets. Financial Markets and Portfolio Management, 39, 47–97. https://doi.org/10.1007/s11408-024-00461-6

Hilgenstock, B., Risinger, L., Vlasyuk, A., Ribakova, E. (2025). Implications of the Confiscation of Russian Sovereign Assets: An Analysis of the Key Economic and Financial Stability-Related Concerns. Kyiv: KSE Institute. https://kse.ua/wp-content/uploads/2025/04/Asset_Confiscation_EconFin_Concerns_KSEInstitute.pdf

Huang, T., Wu, F., Yu, J., Zhang, B. (2014). International political risk and government bond pricing. Journal of Banking & Finance, 48, 439–455. https://doi.org/10.1016/j.jbankfin.2014.08.003

Kolari, J. P., Pynnonen, S. (2011). Nonparametric rank tests for event studies. Journal of Empirical Finance, 18(5), 953-971. https://doi.org/10.1016/j.jempfin.2011.08.003

Kolyandr, A. (2024). Russia's frozen assets present a policy dilemma. Carnegie Endowment for International Peace – Carnegie Politika, 5 February. https://carnegieendowment.org/russia-eurasia/politika/2024/01/russias-frozen-assets-present-a-policy-dilemma?lang=en

MacKinlay, A. C., (1997). Event studies in economics and finance. Journal of Economic Literature, 35(1), 13–39. https://www.jstor.org/stable/2729691

Miller, D. L. (2023). An introductory guide to event study models. Journal of Economic Perspectives, 37(2), 203–230. https://doi.org/10.1257/jep.37.2.203

Minesso, M., F., Krahnke, T., Mehl, A., Vansteenkiste, I. (2024). Seizing central bank assets? Paper presented at research seminars at the European Central Bank, the International Monetary Fund and the Università Cattolica del Sacro Cuore, 21 November. https://www.riksbank.se/globalassets/media/konferenser/2024/monetary-and-financial-history-lessons-for-the-21st-century-21-22-november-2024/session-5-p2-seizing-central-bank-assets.pdf

Rubin, D. B. (1981). The Bayesian bootstrap. The Annals of Statistics, 9(1), 130–134.
https://doi.org/10.1214/aos/1176345338

Sonenshine, R., Kumari, S. (2022). The differential impact of political risk factors on emerging market bond spreads and credit rating outlooks. Journal of Economics and Business, 120, 106066.
https://doi.org/10.1016/j.jeconbus.2022.106066

Véron, N. (2023). The European Union should do better than confiscate Russia's reserve money. Bruegel Analysis, 20 December. https://www.bruegel.org/analysis/european-union-should-do-better-confiscate-russias-reserve-money

Zettelmeyer, J., Trebesch, C., Gulati, M., Monacelli, T., Whelan, K. (2013). The Greek debt restructuring: an autopsy. Economic Policy, 28(75), 513–563. http://www.jstor.org/stable/24029554

APPENDIX A. TABLES

Table 8. Placebo-Based Validation of Observed Yield Reactions to Announcements (Statistically Significant Results at the 10% Level Only)

Maturity	Set of Events	Window	Window mode	Statistic	Number of Events	Value of Statistics	Lower 95% CI	Higher 95% CI	P-value (two-sided)
10Y	Immobilization	(-5,5)	full	median	3	0.22	-0.24	0.32	0.023
10Y	Immobilization	(-5,5)	post	median	3	0.21	0.02	0.3	0.004
10Y	Usage	(-2,2)	full	median	4	0.07	0.01	0.17	0.094
10Y	Usage	(-2,2)	post	median	4	0.08	0.03	0.15	0.015
2Y	Immobilization	(-2,2)	post	median	3	-0.09	-0.24	0.03	0.038
2Y	Immobilization	(-5,5)	post	median	3	-0.15	-0.21	0.13	0.029
2Y	Usage	(-2,2)	post	median	4	0.07	0.03	0.11	0.04
30Y	Immobilization	(-2,2)	full	median	3	-0.19	-0.23	0.08	0.003
30Y	Immobilization	(-2,2)	post	median	3	-0.13	-0.23	0.08	0.003
30Y	Immobilization	(-5,5)	full	median	3	-0.14	-0.27	0.17	0.096
30Y	Usage	(-2,2)	full	median	4	0.09	-0.02	0.22	0.047
30Y	Usage	(-2,2)	post	median	4	0.09	0.02	0.18	0.005

Note: The statistic is a summary of cumulative yield changes, computed by averaging across countries within each event and then across events in the set. Medians are compared following the premise about generally non-normal distributions of the high-frequency financial data (Kolari and Pynnonen, 2011). “Full” covers the entire symmetric window; “post” cumulates only the post-event segment. Confidence intervals use a two-way bootstrap that resamples events and countries. Two-sided p-values come from a placebo (Monte Carlo permutation) test that re-estimates the study on pseudo-event dates drawn from non-event periods with exclusion buffers, indicating whether observed effects are unusually large relative to typical fluctuations.

Table 9. Event Study Results (Cumulative Yield Changes – Mean and 95% CI Bounds in Brackets, in pp) for 2Y-, 10Y-, and 30Y-Maturity Bonds Across (–5; +5) Event Windows Based on News About the Immobilization of russian Assets (Disaggregated by Country)

2Y Maturity

Day	AT	BE	DE	DK	ES	FI	FR	HR	IT	NL	PL	PT	SE
-5	0	0	0	0	0	0	0	0	0	0	0	0	0
-4	-0.016 [-0.04; 0.02]	-0.102 [-0.32; 0.03]	-0.002 [-0.02; 0.01]	0.065 [0.04; 0.09]	0.010 [-0.01; 0.03]	-0.015 [-0.04; 0.01]	0.016 [0.01; 0.03]	-0.101 [-0.23; 0.03]	-0.004 [-0.04; 0.03]	-0.007 [-0.03; 0.02]	-0.023 [-0.07; 0.03]	-0.010 [-0.01; -0.01]	0.027 [0.01; 0.04]
-3	-0.007 [-0.03; 0.01]	-0.089 [-0.37; 0.05]	0.061 [0.05; 0.07]	0.072 [0.01; 0.14]	0.057 [0.05; 0.07]	0.041 [0.03; 0.05]	0.052 [0.04; 0.07]	-0.028 [-0.12; 0.06]	0.013 [-0.02; 0.05]	0.053 [0.04; 0.06]	0.053 [-0.07; 0.19]	0.019 [0.01; 0.02]	0.101 [0.05; 0.15]
-2	-0.055 [-0.13; 0.02]	-0.145 [-0.49; 0.07]	0.037 [-0.03; 0.10]	0.019 [-0.03; 0.07]	0.041 [-0.02; 0.10]	0.026 [-0.04; 0.09]	0.040 [-0.01; 0.09]	-0.019 [-0.12; 0.08]	-0.002 [-0.09; 0.08]	0.037 [-0.02; 0.10]	0.003 [-0.17; 0.10]	0.009 [-0.03; 0.05]	0.096 [0.06; 0.13]
-1	-0.087 [-0.24; 0.00]	-0.158 [-0.55; 0.06]	0.049	0.053 [0.00; 0.10]	0.020 [0.00; 0.05]	0.066 [0.06; 0.07]	0.054 [0.04; 0.07]	-0.017 [-0.12; 0.09]	-0.076 [-0.10; -0.05]	0.048 [0.03; 0.06]	0.021 [-0.20; 0.35]	-0.004 [-0.02; 0.02]	0.094 [0.00; 0.18]
0	-0.064 [-0.16; 0.00]	-0.137 [-0.50; 0.05]	0.075 [0.05; 0.10]	0.103 [0.09; 0.12]	0.045 [0.00; 0.09]	0.052 [0.03; 0.08]	0.059	0.005 [-0.07; 0.08]	-0.046 [-0.09; -0.01]	0.072 [0.06; 0.08]	0.022 [-0.17; 0.34]	-0.009 [-0.04; 0.02]	0.105 [0.00; 0.21]
1	-0.124 [-0.26; -0.05]	-0.203 [-0.55; 0.02]	-0.001 [-0.03; 0.03]	0.014 [0.01; 0.02]	-0.006 [-0.02; 0.01]	0.007 [-0.04; 0.06]	-0.021 [-0.08; 0.04]	-0.056 [-0.19; 0.08]	-0.110 [-0.12; -0.10]	-0.001 [-0.06; 0.06]	0.046 [-0.20; 0.44]	-0.054 [-0.09; -0.02]	0.062 [-0.07; 0.19]
2	-0.182 [-0.31; -0.02]	-0.277 [-0.60; 0.08]	-0.073 [-0.25; 0.11]	-0.048 [-0.15; 0.05]	-0.080 [-0.20; 0.04]	-0.066 [-0.22; 0.09]	-0.110 [-0.31; 0.09]	-0.047 [-0.19; 0.10]	-0.226 [-0.38; -0.07]	-0.099 [-0.32; 0.12]	0.071 [-0.21; 0.33]	-0.100 [-0.22; 0.02]	0.023 [-0.18; 0.22]
3	-0.137 [-0.36; 0.02]	-0.214 [-0.61; 0.12]	-0.005 [-0.16; 0.15]	0.031 [-0.04; 0.10]	0.004 [-0.06; 0.07]	0.089 [-0.03; 0.21]	-0.012 [-0.15; 0.13]	0.008 [-0.06; 0.08]	-0.120 [-0.22; -0.02]	0.016 [-0.14; 0.17]	0.160 [-0.15; 0.40]	-0.053 [-0.16; 0.05]	0.059 [-0.18; 0.30]
4	-0.156 [-0.34; -0.03]	-0.227 [-0.64; 0.13]	0.003 [-0.14; 0.15]	0.014 [-0.05; 0.08]	-0.012 [-0.08; 0.06]	0.050 [-0.04; 0.14]	-0.023 [-0.17; 0.12]	0.021 [-0.03; 0.07]	-0.123 [-0.20; -0.05]	-0.008 [-0.16; 0.15]	0.163 [-0.15; 0.46]	-0.044 [-0.13; 0.04]	0.095 [-0.10; 0.30]
5	-0.204 [-0.42; -0.01]	-0.240 [-0.65; 0.17]	-0.060 [-0.31; 0.18]	0.007 [-0.17; 0.19]	-0.036 [-0.16; 0.09]	0.063 [-0.04; 0.17]	-0.040 [-0.26; 0.18]	0.037 [-0.02; 0.09]	-0.125 [-0.25; 0.00]	-0.026 [-0.26; 0.20]	0.301 [-0.21; 0.69]	-0.084 [-0.23; 0.06]	0.102 [-0.17; 0.37]

Note: Confidence intervals are omitted for a country/day when (i) the event-bootstrap band collapses (upper–lower < 0.001 percentage points) or (ii) fewer than two events contribute observations within the (–5, +5) window. In these cases, the uncertainty is not estimable, but the point estimate (mean) is still reported. Suppression affects only CI display (to avoid degenerate/rounding artefacts), not the means used for comparisons, so the qualitative results and the cross-country ranking by mean effects are unchanged. Maturity-level findings (2Y/10Y/30Y) are computed from the full underlying sample and therefore are not affected by these CI omissions.

Table 9 (continued). Event Study Results (Cumulative Yield Changes – Mean and 95% CI Bounds in Brackets, in pp) for 2Y-, 10Y-, and 30Y-Maturity Bonds Across (–5; +5) Event Windows Based on News About the Immobilization of russian Assets (Disaggregated by Country)

10Y Maturity

Day	AT	BE	CZ	DE	DK	ES	FI	FR	GR	HR
-5	0	0	0	0	0	0	0	0	0	0
-4	0.003	0.001	0.032	-0.027	0.022	-0.02	0.014	-0.006	0.028	0.028 [0.01; 0.04]
-3	0.103	0.074	0.192	0.097	0.108	0.079	0.114	0.096	0.14	0.015 [0.00; 0.03]
-2	0.051	0.073	0.096	0.056	0.057	0.04	0.036	0.059	0.097	0.015 [-0.03; 0.06]
-1	0.105	0.088	-0.027	0.121	0.125	0.063	0.076	0.101	0.102	0.028 [-0.03; 0.09]
0	0.093	0.079	-0.119	0.109	0.117	0.058	0.036	0.09	0.083	-0.005 [-0.03; 0.02]
1	0.065	0.051	-0.14	0.102	0.079	0.041	0.024	0.072	0.082	0.046 [0.02; 0.07]
2	0.142	0.122	-0.074	0.198	0.155	0.112	0.134	0.151	0.129	0.103 [-0.04; 0.24]
3	0.198	0.173	0.04	0.231	0.22	0.153	0.172	0.215	0.187	0.113 [-0.06; 0.29]
4	0.145	0.17	0.267	0.196	0.194	0.11	0.141	0.185	0.183	0.133 [-0.05; 0.32]
5	0.187	0.18	0.376	0.261	0.242	0.135	0.166	0.226	0.251	0.140 [-0.04; 0.32]

Note: Confidence intervals are omitted for a country/day when (i) the event-bootstrap band collapses (upper–lower < 0.001 percentage points) or (ii) fewer than two events contribute observations within the (–5, +5) window. In these cases, the uncertainty is not estimable, but the point estimate (mean) is still reported. Suppression affects only CI display (to avoid degenerate/rounding artefacts), not the means used for comparisons, so the qualitative results and the cross-country ranking by mean effects are unchanged. Maturity-level findings (2Y/10Y/30Y) are computed from the full underlying sample and therefore are not affected by these CI omissions.

Table 9 (continued). Event Study Results (Cumulative Yield Changes – Mean and 95% CI Bounds in Brackets, in pp) for 2Y-, 10Y-, and 30Y-Maturity Bonds Across (–5; +5) Event Windows Based on News About the Immobilization of russian Assets (Disaggregated by Country)

10Y Maturity (continued)

Day	IE	IT	NL	PL	PT	RO	SE	SI	SK
-5	0	0	0	0	0	0	0	0	0
-4	-0.047	-0.05	0.001	-0.065 [-0.08; -0.05]	-0.014	-0.09	0.011	0.192	-0.02
-3	0.051	0.046	0.1	-0.003 [-0.09; 0.08]	0.077	-0.145	0.118	0.256	0.098
-2	0.013	-0.011	0.055	-0.166 [-0.27; -0.07]	0.029	-0.24	0.1	0.335	0.051
-1	0.032	-0.017	0.107	-0.293 [-0.33; -0.26]	0.059	-0.275	0.181	0.34	0.201
0	0.034	-0.009	0.1	-0.262 [-0.27; -0.26]	0.062	-0.49	0.192	0.345	0.198
1	0.016	-0.034	0.07	-0.328 [-0.37; -0.29]	0.036	-0.615	0.172	0.293	0.16
2	0.134	0.055	0.143	-0.235 [-0.39; -0.08]	0.105	-0.605	0.233	0.278	0.282
3	0.132	0.117	0.213	-0.135 [-0.32; 0.05]	0.156	-0.455	0.365	0.281	0.352
4	0.121	0.08	0.184	-0.020 [-0.21; 0.16]	0.124	-0.375	0.396	0.254	0.555
5	0.174	0.134	0.225	0.070 [-0.24; 0.38]	0.152	-0.185	0.476	0.266	0.6

Note: Confidence intervals are omitted for a country/day when (i) the event-bootstrap band collapses (upper–lower < 0.001 percentage points) or (ii) fewer than two events contribute observations within the (–5, +5) window. In these cases, the uncertainty is not estimable, but the point estimate (mean) is still reported. Suppression affects only CI display (to avoid degenerate/rounding artefacts), not the means used for comparisons, so the qualitative results and the cross-country ranking by mean effects are unchanged. Maturity-level findings (2Y/10Y/30Y) are computed from the full underlying sample and therefore are not affected by these CI omissions.

Table 9 (continued). Event Study Results (Cumulative Yield Changes – Mean and 95% CI Bounds in Brackets, in pp) for 2Y-, 10Y-, and 30Y-Maturity Bonds Across (–5; +5) Event Windows Based on News About the Immobilization of russian Assets (Disaggregated by Country)

30Y Maturity

Day	AT	BE	DE	ES	FR	GR	IE	IT	NL	PT	SK
-5	0	0	0	0	0	0	0	0	0	0	0
-4	-0.055 [-0.07; -0.03]	-0.058	-0.006	-0.067	-0.044	0.049	-0.037 [-0.10; 0.04]	-0.088	-0.048 [-0.08; -0.02]	-0.029	-0.039 [-0.06; -0.02]
-3	-0.019 [-0.12; 0.08]	0.077	0.115	0.037	0.076	0.238	-0.030 [-0.19; 0.06]	-0.005	0.000 [-0.12; 0.12]	0.056	-0.001 [-0.10; 0.09]
-2	-0.050 [-0.15; 0.05]	0.058	0.082	0.014	0.067	0.217	-0.038 [-0.21; 0.06]	-0.029	-0.021 [-0.15; 0.11]	0.028	0.002 [-0.10; 0.10]
-1	-0.080 [-0.25; 0.09]	0.082	0.136	0.032	0.086	0.224	-0.077 [-0.31; 0.06]	-0.042	-0.055 [-0.25; 0.14]	0.052	-0.044 [-0.22; 0.13]
0	-0.081 [-0.19; 0.03]	0.052	0.126	0.013	0.064	0.217	-0.044 [-0.26; 0.08]	-0.043	-0.033 [-0.18; 0.11]	0.033	-0.020 [-0.15; 0.11]
1	-0.127 [-0.26; 0.01]	0.044	0.112	0.001	0.058	0.225	-0.096 [-0.35; 0.05]	-0.065	-0.082 [-0.26; 0.10]	0.024	-0.053 [-0.21; 0.10]
2	-0.098 [-0.30; 0.10]	0.139	0.202	0.088	0.152	0.271	-0.142 [-0.40; 0.16]	0.015	-0.059 [-0.31; 0.19]	0.089	-0.020 [-0.26; 0.22]
3	-0.087 [-0.30; 0.13]	0.153	0.225	0.069	0.175	0.326	-0.097 [-0.38; 0.17]	0.02	-0.054 [-0.31; 0.21]	0.103	0.000 [-0.24; 0.24]
4	-0.084 [-0.26; 0.09]	0.151	0.187	0.033	0.156	0.319	-0.085 [-0.31; 0.14]	-0.016	-0.055 [-0.28; 0.17]	0.064	0.134 [-0.21; 0.47]
5	-0.087 [-0.27; 0.10]	0.176	0.211	0.061	0.178	0.414	-0.103 [-0.35; 0.18]	0.02	-0.042 [-0.28; 0.19]	0.092	0.123 [-0.20; 0.45]

Note: Confidence intervals are omitted for a country/day when (i) the event-bootstrap band collapses (upper–lower < 0.001 percentage points) or (ii) fewer than two events contribute observations within the (–5, +5) window. In these cases, the uncertainty is not estimable, but the point estimate (mean) is still reported. Suppression affects only CI display (to avoid degenerate/rounding artefacts), not the means used for comparisons, so the qualitative results and the cross-country ranking by mean effects are unchanged. Maturity-level findings (2Y/10Y/30Y) are computed from the full underlying sample and therefore are not affected by these CI omissions.

Table 10. Event Study Results (Cumulative Yield Changes – Mean and 95% CI Bounds in Brackets, in pp) for 2Y-, 10Y-, and 30Y-Maturity Bonds Across (–5; +5) Event Windows Based on News About the Usage of russian Assets (Disaggregated by Country)

2Y Maturity

Day	AT	BE	DE	DK	ES	FI	FR	HR	IT	NL	PL	PT	SE
-5	0	0	0	0	0	0	0	0	0	0	0	0	0
-4	-0.012 [-0.01; -0.01]	-0.021 [-0.03; -0.02]	-0.001 [-0.02; 0.02]	-0.013 [-0.02; -0.01]	-0.008 [-0.04; 0.02]	0.003 [-0.01; 0.02]	-0.010 [-0.02; 0.00]	-0.010 [-0.02; 0.00]	-0.009 [-0.03; 0.01]	0.008 [-0.02; 0.04]	0.003 [-0.06; 0.07]	-0.017 [-0.03; 0.00]	-0.012 [-0.02; -0.01]
-3	0.032 [0.02; 0.04]	0.007 [-0.01; 0.02]	0.018 [-0.02; 0.05]	0.003 [-0.02; 0.03]	-0.002 [-0.06; 0.05]	0.021 [-0.01; 0.06]	0.006 [-0.02; 0.03]	-0.002 [-0.01; 0.00]	0.011 [-0.04; 0.07]	0.014 [-0.02; 0.05]	0.023 [-0.03; 0.08]	-0.006 [-0.05; 0.03]	-0.009 [-0.03; 0.01]
-2	0.026 [-0.02; 0.07]	0.007 [-0.03; 0.04]	0.007 [-0.05; 0.07]	0.007 [-0.03; 0.04]	0.023 [-0.01; 0.06]	0.016 [-0.03; 0.06]	0.002 [-0.05; 0.05]	-0.016 [-0.04; 0.01]	0.010 [-0.05; 0.06]	0.003 [-0.05; 0.06]	-0.036 [-0.07; 0.00]	0.010 [-0.05; 0.07]	-0.022 [-0.05; 0.01]
-1	-0.006 [-0.04; 0.03]	0.008 [-0.01; 0.03]	0.003 [-0.06; 0.07]	0.017 [-0.02; 0.06]	0.012 [-0.01; 0.04]	0.023 [-0.04; 0.09]	-0.007 [-0.06; 0.05]	0.000 [-0.01; 0.01]	-0.002 [-0.07; 0.06]	-0.002 [-0.06; 0.05]	0.015 [-0.02; 0.05]	-0.007 [-0.06; 0.05]	-0.019 [-0.04; 0.00]
0	0.003 [-0.01; 0.01]	0.018 [0.00; 0.03]	0.005 [-0.02; 0.03]	0.017 [0.02; 0.02]	0.004 [-0.01; 0.02]	0.000 [-0.01; 0.01]	-0.004 [-0.02; 0.01]	-0.001 [-0.01; 0.01]	0.011 [-0.04; 0.06]	0.004 [-0.01; 0.02]	0.011 [-0.05; 0.07]	-0.003 [-0.01; 0.01]	-0.032 [-0.03; -0.03]
1	-0.016 [-0.04; 0.01]	0.007 [0.01; 0.01]	-0.004 [-0.05; 0.04]	0.003 [-0.02; 0.03]	0.010 [0.00; 0.02]	0.010 [-0.03; 0.05]	-0.013 [-0.06; 0.03]	-0.010 [-0.03; 0.01]	-0.013 [-0.08; 0.05]	0.011 [-0.04; 0.06]	0.019 [-0.05; 0.09]	-0.011 [-0.06; 0.04]	-0.023 [-0.03; -0.02]
2	0.087 [0.03; 0.14]	0.093 [0.04; 0.15]	0.117 [0.07; 0.16]	0.052 [0.05; 0.05]	0.133 [0.05; 0.21]	0.115 [0.08; 0.15]	0.096 [0.07; 0.12]	-0.001 [-0.02; 0.01]	0.119 [0.10; 0.13]	0.109 [0.06; 0.15]	0.023 [-0.05; 0.08]	0.127 [0.06; 0.19]	0.013 [-0.02; 0.05]
3	0.145 [0.06; 0.23]	0.081 [0.03; 0.13]	0.109 [0.06; 0.16]	0.088 [0.05; 0.13]	0.118 [0.03; 0.21]	0.094 [0.08; 0.10]	0.082 [0.05; 0.12]	0.000 [-0.02; 0.02]	0.107 [0.06; 0.15]	0.098 [0.05; 0.15]	0.035 [-0.03; 0.10]	0.143 [0.06; 0.23]	0.074 [-0.01; 0.16]
4	0.097 [0.02; 0.17]	0.078 [0.02; 0.13]	0.107 [0.06; 0.16]	0.066 [0.05; 0.09]	0.112 [0.03; 0.19]	0.102 [0.06; 0.15]	0.077 [0.04; 0.12]	-0.002 [-0.02; 0.02]	0.091 [0.06; 0.13]	0.095 [0.04; 0.15]	0.031 [-0.02; 0.08]	0.113 [0.05; 0.18]	0.066 [-0.01; 0.14]
5	0.067 [-0.01; 0.15]	0.050 [-0.01; 0.11]	0.080 [0.03; 0.13]	0.054 [0.02; 0.09]	0.081 [0.00; 0.16]	0.066 [0.01; 0.12]	0.054 [0.01; 0.09]	-0.001 [-0.02; 0.02]	0.069 [0.04; 0.09]	0.068 [0.01; 0.12]	0.047 [0.00; 0.08]	0.089 [0.02; 0.15]	0.060 [-0.02; 0.14]

Note: Confidence intervals are omitted for a country/day when (i) the event-bootstrap band collapses (upper–lower < 0.001 percentage points) or (ii) fewer than two events contribute observations within the (–5, +5) window. In these cases, the uncertainty is not estimable, but the point estimate (mean) is still reported. Suppression affects only CI display (to avoid degenerate/rounding artefacts), not the means used for comparisons, so the qualitative results and the cross-country ranking by mean effects are unchanged. Maturity-level findings (2Y/10Y/30Y) are computed from the full underlying sample and therefore are not affected by these CI omissions.

Table 10 (continued). Event Study Results (Cumulative Yield Changes – Mean and 95% CI Bounds in Brackets, in pp) for 2Y-, 10Y-, and 30Y-Maturity Bonds Across (–5; +5) Event Windows Based on News About the Usage of russian Assets (Disaggregated by Country)

10Y Maturity

Day	AT	BE	CZ	DE	DK	ES	FI	FR	GR
-5	0	0	0	0	0	0	0	0	0
-4	-0.023 [-0.02; -0.02]	-0.022 [-0.03; -0.02]	0.006 [-0.01; 0.02]	-0.019 [-0.02; -0.02]	-0.003 [0.00; 0.00]	-0.028 [-0.03; -0.03]	-0.025 [-0.03; -0.02]	-0.021 [-0.03; -0.01]	0
-3	-0.010 [-0.06; 0.04]	-0.014 [-0.06; 0.04]	-0.004 [-0.05; 0.04]	-0.002 [-0.04; 0.04]	0.015 [-0.01; 0.04]	-0.019 [-0.07; 0.03]	-0.004 [-0.06; 0.05]	-0.018 [-0.07; 0.04]	0.037
-2	-0.014 [-0.07; 0.04]	-0.017 [-0.08; 0.04]	-0.028 [-0.08; 0.03]	-0.008 [-0.06; 0.05]	0.010 [-0.03; 0.05]	-0.018 [-0.07; 0.03]	-0.017 [-0.07; 0.04]	-0.020 [-0.08; 0.04]	0.053
-1	0.009 [-0.07; 0.09]	0.006 [-0.07; 0.09]	-0.027 [-0.09; 0.03]	0.014 [-0.07; 0.10]	0.024 [-0.05; 0.10]	0.005 [-0.06; 0.07]	0.013 [-0.08; 0.10]	0.008 [-0.08; 0.10]	0.097
0	0.014 [0.01; 0.02]	0.005 [0.00; 0.01]	-0.013 [-0.04; 0.01]	0.021 [0.01; 0.03]	0.036 [0.02; 0.05]	-0.002 [0.00; 0.00]	0.008 [-0.01; 0.02]	0.008 [-0.01; 0.02]	0.008
1	0.029 [0.00; 0.05]	0.036 [0.01; 0.06]	-0.017 [-0.04; 0.00]	0.040 [0.02; 0.06]	0.040 [0.04; 0.04]	0.027 [0.02; 0.04]	0.025 [-0.01; 0.06]	0.035 [0.01; 0.06]	0.032
2	0.200 [0.14; 0.27]	0.208 [0.15; 0.27]	0.012	0.227 [0.14; 0.31]	0.209 [0.11; 0.31]	0.204 [0.12; 0.29]	0.210 [0.15; 0.27]	0.213 [0.16; 0.27]	0.137
3	0.202 [0.11; 0.29]	0.227 [0.13; 0.33]	0.096 [0.03; 0.16]	0.236 [0.12; 0.36]	0.236 [0.10; 0.37]	0.220 [0.10; 0.34]	0.217 [0.13; 0.31]	0.227 [0.14; 0.32]	0.112
4	0.196 [0.10; 0.30]	0.225 [0.12; 0.33]	0.133 [0.02; 0.24]	0.231 [0.10; 0.36]	0.198 [0.08; 0.31]	0.217 [0.09; 0.34]	0.210 [0.10; 0.32]	0.226 [0.12; 0.33]	0.099
5	0.182 [0.07; 0.29]	0.205 [0.09; 0.32]	0.089 [-0.02; 0.20]	0.212 [0.07; 0.36]	0.168 [0.04; 0.29]	0.197 [0.07; 0.33]	0.193 [0.08; 0.30]	0.210 [0.10; 0.32]	0.069

Note: Confidence intervals are omitted for a country/day when (i) the event-bootstrap band collapses (upper–lower < 0.001 percentage points) or (ii) fewer than two events contribute observations within the (–5, +5) window. In these cases, the uncertainty is not estimable, but the point estimate (mean) is still reported. Suppression affects only CI display (to avoid degenerate/rounding artefacts), not the means used for comparisons, so the qualitative results and the cross-country ranking by mean effects are unchanged. Maturity-level findings (2Y/10Y/30Y) are computed from the full underlying sample and therefore are not affected by these CI omissions.

Table 10 (continued). Event Study Results (Cumulative Yield Changes – Mean and 95% CI Bounds in Brackets, in pp) for 2Y-, 10Y-, and 30Y-Maturity Bonds Across (–5; +5) Event Windows Based on News About the Usage of russian Assets (Disaggregated by Country)

10Y Maturity (continued)

Day	HR	HU	IE	IT	LT	NL	PL	PT	RO	SE	SI	SK
-5	0	0	0	0	0	0	0	0	0	0	0	0
-4	-0.001	-0.01	-0.018 [-0.04; 0.00]	-0.024 [-0.02; -0.02]	-0.002	-0.026 [-0.03; -0.02]	-0.014 [-0.07; 0.05]	-0.022 [-0.02; -0.02]	0	-0.008 [-0.01; -0.01]	-0.014 [-0.02; -0.01]	-0.015 [-0.03; 0.00]
-3	-0.001	-0.025	-0.006 [-0.08; 0.06]	-0.017 [-0.07; 0.03]	-0.008	-0.009 [-0.06; 0.04]	-0.023 [-0.09; 0.05]	-0.016 [-0.06; 0.03]	-0.04	-0.003 [-0.03; 0.03]	-0.003 [-0.04; 0.03]	-0.010 [-0.05; 0.03]
-2	-0.001	-0.05	-0.016 [-0.09; 0.06]	-0.014 [-0.07; 0.04]	-0.014	-0.013 [-0.07; 0.05]	-0.034 [-0.07; 0.01]	-0.013 [-0.06; 0.04]	-0.19	-0.016 [-0.05; 0.02]	-0.005 [-0.04; 0.03]	-0.005 [-0.05; 0.04]
-1	-0.001	-0.055	-0.002 [-0.11; 0.11]	0.006 [-0.07; 0.08]	-0.015	0.011 [-0.07; 0.10]	-0.027 [-0.09; 0.04]	-0.003 [-0.08; 0.07]	-0.18	-0.007 [-0.07; 0.05]	0.012 [-0.06; 0.08]	-0.020 [-0.09; 0.05]
0	-0.001	0.055	0.008 [-0.03; 0.04]	-0.004 [-0.01; 0.00]	0.004	0.017 [0.00; 0.03]	-0.012 [-0.07; 0.05]	0.006 [0.00; 0.01]	-0.15	0.004 [0.00; 0.01]	0.023 [0.01; 0.04]	0.000 [-0.01; 0.01]
1	-0.001	0.005	0.032 [-0.01; 0.07]	0.028 [0.01; 0.04]	0.001	0.033 [0.00; 0.07]	-0.006 [-0.08; 0.07]	0.024 [0.01; 0.04]	-0.13	0.003 [-0.02; 0.03]	0.027 [0.03; 0.03]	0.000 [-0.05; 0.05]
2	-0.001	0.1	0.221 [0.15; 0.29]	0.216 [0.14; 0.29]	0.144	0.215 [0.15; 0.28]	0.031 [-0.04; 0.10]	0.203 [0.11; 0.30]	-0.04	0.110 [0.07; 0.15]	0.208 [0.12; 0.30]	0.145 [0.12; 0.17]
3	-0.002	0.255	0.214 [0.12; 0.30]	0.234 [0.12; 0.35]	0.299	0.218 [0.12; 0.31]	0.073 [-0.01; 0.15]	0.252 [0.11; 0.39]	0.04	0.172 [0.06; 0.29]	0.242 [0.07; 0.41]	0.205 [0.10; 0.31]
4	-0.002	0.215	0.216 [0.11; 0.32]	0.229 [0.11; 0.35]	0.29	0.212 [0.11; 0.31]	0.089 [-0.01; 0.16]	0.228 [0.10; 0.36]	-0.02	0.156 [0.06; 0.25]	0.217 [0.06; 0.38]	0.180 [0.09; 0.27]
5	-0.002	0.225	0.192 [0.08; 0.30]	0.210 [0.08; 0.34]	0.269	0.197 [0.08; 0.31]	0.049 [-0.07; 0.14]	0.214 [0.07; 0.36]	-0.04	0.148 [0.04; 0.25]	0.199 [0.03; 0.37]	0.175 [0.07; 0.28]

Note: Confidence intervals are omitted for a country/day when (i) the event-bootstrap band collapses (upper–lower < 0.001 percentage points) or (ii) fewer than two events contribute observations within the (–5, +5) window. In these cases, the uncertainty is not estimable, but the point estimate (mean) is still reported. Suppression affects only CI display (to avoid degenerate/rounding artefacts), not the means used for comparisons, so the qualitative results and the cross-country ranking by mean effects are unchanged. Maturity-level findings (2Y/10Y/30Y) are computed from the full underlying sample and therefore are not affected by these CI omissions.

Table 10 (continued). Event Study Results (Cumulative Yield Changes – Mean and 95% CI Bounds in Brackets, in pp) for 2Y-, 10Y-, and 30Y-Maturity Bonds Across (–5; +5) Event Windows Based on News About the Usage of russian Assets (Disaggregated by Country)

30Y Maturity

Day	AT	BE	DE	ES	FR	GR	IE	IT	NL	PT	SK
-5	0	0	0	0	0	0	0	0	0	0	0
-4	-0.014 [-0.07; 0.05]	-0.007 [-0.07; 0.07]	-0.024 [-0.09; 0.05]	-0.018 [-0.10; 0.08]	-0.009 [-0.09; 0.09]	-0.010 [-0.07; 0.07]	-0.019 [-0.10; 0.09]	-0.021 [-0.11; 0.08]	-0.009 [-0.06; 0.04]	-0.017 [-0.09; 0.05]	-0.006 [-0.07; 0.07]
-3	-0.001 [-0.06; 0.07]	0.014 [-0.06; 0.11]	-0.012 [-0.07; 0.04]	-0.015 [-0.09; 0.06]	0.005 [-0.08; 0.09]	0.009 [-0.07; 0.09]	-0.008 [-0.10; 0.08]	-0.011 [-0.10; 0.07]	-0.009 [-0.06; 0.04]	-0.015 [-0.09; 0.06]	-0.018 [-0.08; 0.05]
-2	0.002 [-0.02; 0.03]	-0.004 [-0.03; 0.03]	-0.016 [-0.05; 0.03]	-0.017 [-0.06; 0.02]	0.004 [-0.05; 0.06]	-0.011 [-0.04; 0.03]	-0.029 [-0.08; 0.02]	-0.024 [-0.06; 0.01]	-0.006 [-0.03; 0.03]	-0.010 [-0.05; 0.03]	-0.009 [-0.05; 0.04]
-1	0.018 [-0.03; 0.08]	0.019 [-0.03; 0.09]	-0.005 [-0.07; 0.08]	0.008 [-0.05; 0.06]	0.034 [-0.04; 0.11]	0.008 [-0.06; 0.09]	-0.005 [-0.08; 0.08]	-0.004 [-0.06; 0.06]	0.010 [-0.05; 0.09]	0.015 [-0.05; 0.08]	-0.024 [-0.08; 0.04]
0	-0.005 [-0.09; 0.07]	0.001 [-0.07; 0.06]	-0.037 [-0.15; 0.05]	-0.009 [-0.05; 0.02]	0.016 [-0.03; 0.05]	0.006 [-0.03; 0.04]	-0.019 [-0.07; 0.03]	-0.012 [-0.05; 0.02]	-0.017 [-0.12; 0.07]	0.008 [-0.02; 0.03]	-0.014 [-0.05; 0.01]
1	0.016 [-0.05; 0.07]	0.012 [-0.04; 0.06]	0.004 [-0.09; 0.09]	0.027 [-0.02; 0.08]	0.053 [0.00; 0.09]	0.028 [0.00; 0.06]	0.018 [-0.03; 0.06]	0.020 [-0.03; 0.07]	0.001 [-0.09; 0.08]	0.031 [-0.02; 0.07]	-0.008 [-0.08; 0.06]
2	0.109 [-0.01; 0.23]	0.098 [-0.05; 0.23]	0.088 [-0.09; 0.25]	0.096 [-0.03; 0.22]	0.123 [0.02; 0.22]	0.096 [-0.01; 0.20]	0.086 [-0.06; 0.21]	0.091 [-0.04; 0.22]	0.088 [-0.06; 0.23]	0.101 [-0.01; 0.22]	0.039 [-0.08; 0.18]
3	0.131 [-0.01; 0.28]	0.121 [-0.05; 0.28]	0.086 [-0.09; 0.25]	0.097 [-0.02; 0.22]	0.126 [0.03; 0.22]	0.122 [0.02; 0.23]	0.090 [-0.04; 0.21]	0.100 [-0.02; 0.22]	0.121 [-0.05; 0.30]	0.122 [-0.01; 0.28]	0.094 [-0.03; 0.25]
4	0.118 [-0.01; 0.25]	0.110 [-0.03; 0.25]	0.094 [-0.07; 0.27]	0.097 [-0.03; 0.24]	0.132 [0.01; 0.25]	0.111 [0.02; 0.21]	0.107 [-0.02; 0.23]	0.102 [-0.03; 0.24]	0.107 [-0.05; 0.26]	0.110 [-0.02; 0.26]	0.065 [-0.05; 0.23]
5	0.111 [0.00; 0.24]	0.119 [0.01; 0.24]	0.098 [-0.07; 0.28]	0.109 [0.00; 0.25]	0.148 [0.05; 0.26]	0.116 [0.01; 0.24]	0.093 [-0.03; 0.22]	0.122 [0.01; 0.27]	0.100 [-0.04; 0.25]	0.119 [0.01; 0.28]	0.070 [-0.04; 0.23]

Note: Confidence intervals are omitted for a country/day when (i) the event-bootstrap band collapses (upper–lower < 0.001 percentage points) or (ii) fewer than two events contribute observations within the (–5, +5) window. In these cases, the uncertainty is not estimable, but the point estimate (mean) is still reported. Suppression affects only CI display (to avoid degenerate/rounding artefacts), not the means used for comparisons, so the qualitative results and the cross-country ranking by mean effects are unchanged. Maturity-level findings (2Y/10Y/30Y) are computed from the full underlying sample and therefore are not affected by these CI omissions.