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EU INTEGRATION AND BANK LENDING: EVIDENCE FROM MEMBER STATES AND SELECTED WESTERN BALKAN COUNTRIES

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Abstract

This paper examines the associations between EU integration events and bank lending growth across EU member states and selected Western Balkan candidate countries, using a harmonised bank-level panel from 31 countries over 2000–2023 (5,269 baseline observations). Five milestones — Candidate status, Negotiations, Membership, Monetary Union, and Banking Union — are analysed individually, as Widening and Deepening groups, and in aggregate, across the event-year, three-year and five-year post-event windows. Aggregate and Deepening events are significantly and positively associated with gross-loan growth over the three- and five-year windows, while Membership and Monetary Union show the most robust positive associations. An exploratory interaction analysis, which does not identify mechanisms, finds conditional associations more pronounced at the country level than the bank level. New member states show significantly stronger positive lending associations than Western Balkan candidates, whereas new and old members are largely indistinguishable, differing only for Deepening events at the event-year window.

Keywords: EU integration; bank lending; EU enlargement; Western Balkans; CEE banking systems

JEL Classification: F36; G21; G28

Data availability: Bank-level financial statement data were sourced from FitchConnect (proprietary database). Macroeconomic, monetary, and institutional data were sourced from the World Bank, IMF, Heritage Foundation, ECB, and individual central banks (publicly available). EU integration event coding is available from the corresponding author upon reasonable request.

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1. Introduction

European integration has been one of the most consequential institutional transformations of the past three decades, reshaping financial systems and fundamentally altering banking conditions.

In the late 1980s and 1990s, EU-15 countries experienced large surges in banking sector assets, driven by deregulation, the establishment of a single banking programme, and progressive financial market integration (Goddard et al. 2007). The 2004 enlargement fostered the transformation of Central and Eastern European (CEE) banking systems, generating notable lending growth through capital account liberalisation and substantial foreign bank entry, led mainly by Western European banking groups (Herrmann and Mihaljek 2013; Fischer 2008). Western Balkan candidate countries also experienced banking system development, including improvements in financial stability and regulatory convergence towards EU standards, though the pace and depth of financial integration has remained materially below that of CEE economies (Kubiszewska 2019; Mišćević and Mrak 2017; European Commission 2023). Parallel deepening efforts (including the Maastricht-driven EMU, Single Market financial reforms, crisis-era supervisory architecture, the Banking Union, and others) have been significantly associated with lower risk premia, expanded cross-border funding, strengthened institutional frameworks, and broader financial integration.

Despite a significant body of theoretical and empirical work, analysing the association of EU integration with lending dynamics remains complex, largely due to considerable heterogeneity across countries and integration stages. Although individual country studies have been examined, the literature lacks a systematic, cross-country, bank-level analysis of how different stages of EU widening and deepening are associated with bank lending across multiple enlargement rounds. Moreover, existing studies do not offer consistent multi-stage coding of EU integration events, nor do they systematically distinguish between different event and post-event temporal windows.

Following these gaps, this paper analyses how EU integration events are associated with bank lending behaviour and examines the conditional associations linking these events to lending. The study pursues three objectives: (1) to examine the relationship between EU integration events and lending growth; (2) to explore heterogeneity across widening versus deepening dimensions, country groups, and temporal windows; and (3) to examine the country- and bank-level conditional associations between integration and lending.

This study advances the literature by analysing EU member states and selected Western Balkan candidate countries in a single harmonised bank-level panel. Including the candidates is central to the design, not merely a matter of coverage: the Western Balkans are the EU's only active enlargement frontier, and their banking systems — already largely owned by EU banking groups and progressively aligning with the acquis — are integrating without yet having attained membership. Analysing members and candidates jointly makes it possible to compare, within one framework, the different integration stages and to examine how the association between integration and lending differs across the integration path. The study further employs integration events at three granularity levels rather than a single membership dummy, distinguishes the event-year, three-year and five-year post-event windows, and models conditional associations through event interactions with country- and bank-level variables.

The theoretical foundation draws on two complementary streams: theories and empirical studies of European financial integration, and the broader literature on bank lending behaviour and its country- and bank-level determinants.

The empirical results broadly support the hypotheses, with important nuances. EU integration events are significantly and positively associated with bank lending growth over the three- and five-year post-event windows, with Membership and Monetary Union showing the most robust positive associations. The conditional associations are more pronounced at the country level than at the bank level: GDP growth, inflation and cross-border capital flows for aggregate and Deepening events, and GDP growth and inflation for Membership; bank-level interactions are not robustly significant. Country-group heterogeneity is asymmetric: new

member states show significantly stronger positive lending associations than Western Balkan candidates over the three- and five-year post-event windows, while new and old members are largely indistinguishable — differing only for Deepening events at the event-year window — consistent with, though not proof of, convergence.

The remainder of the paper is structured as follows. Section 2 reviews the relevant literature and sets out the hypotheses. Section 3 describes the methodology and data. Section 4 reports the empirical results, and Section 5 concludes.

2. Literature review

2.1. EU Integration and Lending Behaviour

A substantial body of literature examines how EU integration shapes financial sector development, banking system structure, and credit supply across member and candidate countries, consistently finding significant associations between integration milestones and lending growth.

Theoretical and empirical studies consistently find significant positive associations between EU integration and lending growth. In the five largest EU-15 economies, banking assets rose from 175% to 285% of GDP between 1985 and 2004 (Goddard et al. 2007). In CEE new member states, EU integration — together with economic growth and macroeconomic stabilisation — drove lending surges prior to and after accession (Pochea and Nițoi 2021), with nominal loan growth exceeding 40% per year between 1999 and 2007. Western Balkan candidate countries also experienced notable banking development, driven by institutional reforms associated with the accession process (Kubiszewska 2019; European Commission 2023). Monetary Union participation contributed to lending booms in euro area member countries (Brzoza-Brzezina 2005; Altavilla et al. 2021), with financial integration indicators rising steadily between 1995 and 2007 before reversing at the onset of the subprime crisis (Hoffmann, Kremer, and Zaharia 2019). Financial integration is also found to be positively associated with GDP per capita growth, underscoring the broader macroeconomic significance of EMU membership (Hoffmann, Kremer, and Zaharia 2019).

Theory and empirical studies recognise three distinct channels through which EU integration is associated with bank lending. The **funding and capital-flow channel** operates through expanded cross-border banking, lower funding costs via parent-subsidiary links and wholesale interbank lending, and relaxed credit supply constraints (Barrell and Nahhas 2020). Cross-border loans to CEE countries increased roughly thirteenfold between 1990 and 2008, with CEE's share rising from 14% to 39% of total cross-border lending to emerging markets (Herrmann and Mihaljek 2013), driven primarily by Austrian, German, Italian, and Dutch banking groups (Tang 2019; Puhr, Schwaiger, and Sigmund 2009), with foreign ownership in CEE banking sectors exceeding 80% by end-2008 (De Haas and van Lelyveld 2014; Allen et al. 2017; BIS 2009). Heterogeneity is nonetheless evident: the sovereign debt crisis reversed these trends (Barrell and Nahhas 2020), with liquidity shocks transmitted through cross-border wholesale lending (Gabrieli and Labonne 2018) and high financial integration increasing crisis transmission risk (Fischer 2008). The **regulatory and supervisory harmonisation channel** operates through alignment of rules and supranational oversight — via the Maastricht convergence criteria, EMU institutional architecture, and Banking Union/SSM participation — altering risk-taking incentives, balance-sheet constraints, and shock transmission (De Grauwe 2020; Mongelli 2002). Pre-accession fiscal and monetary discipline compresses sovereign risk premia and reduces banking system uncertainty. Institutional quality — a core Copenhagen criterion — is crucial for lending: strong rule of law enhances a country's ability to attract financial investment (Wójcik, Knight, and Pažitka 2018), lower corruption correlates with greater bank stability (Toader et al. 2017), and stronger governance encourages credit expansion (Kubiszewska 2019). The Banking Union and SSM (2014) introduced convergent prudential standards and reduced regulatory fragmentation (Hoffmann, Kremer, and Zaharia 2019; Avignone et al. 2021). The **expectations and credibility channel** operates through integration milestones signalling credible commitment

to fiscal discipline, price stability, and institutional quality, compressing sovereign risk premia and lowering borrowing costs (De Grauwe 2020; Lane 2006). EMU membership eliminated exchange rate risk, stimulating cross-border lending and financial integration (Fratzscher 2001), while for accession countries the anticipation of membership attracts capital inflows ahead of formal accession (European Commission 2023).

Despite this literature, **few studies systematically measure and compare the distinct associations of different EU integration events with bank lending across the full set of participating countries**—both full members and candidates—**at various accession stages and different temporal profiles**. Accordingly, we hypothesise the following:

H1 (Baseline effect): EU integration events are associated with changes in bank lending growth.

H2 (Event-type heterogeneity): Effects differ across event types—widening vs deepening, and across individual milestones.

H3 (Temporal profile): Effects differ across the 1-, 3- and 5-year windows.

H4 (Conditional associations): Integration events are conditionally associated with lending through macro and bank-level channels.

H5 (Country-group heterogeneity): Effects differ between new members vs Western Balkan candidates and new vs old members.

These hypotheses allow us to assess not only whether EU integration matters for lending, but how the associations differ by event type, timing, channels, and country context.

2.2. Theory and Determinants of Lending

Analysis of the EU integration impact on lending behaviour must account for the broader determinants of credit supply and the theoretical frameworks that explain them (Leroy 2014). Bank lending theory centres on the bank lending channel (Bernanke and Blinder 1988), through which monetary policy transmits to credit supply: banks ease standards in expansions and tighten them in recessions (Figueroa and Leukhina 2015). The collateral channel amplifies credit cycles through asset-price dynamics (Kiyotaki and Moore 1997; Jiménez et al. 2020; Beutler and Grobéty 2019), with Basel III raising capital and liquidity requirements in response to crisis-era frictions (BIS 2011). Competition shapes credit expansion: effective competition enhances monetary policy transmission, while higher market power attenuates it (Leroy 2014; Le, Nguyen, and Schinckus 2022; Fungáčová, Solanko, and Weill 2014). Asymmetric information causes banks to ration credit in non-price-clearing equilibria, where raising rates or collateral requirements exacerbates adverse selection and moral hazard (Stiglitz and Weiss 1981). Lending activity adapts dynamically to its economic environment (Diamond, Hu, and Rajan 2022), and findings diverge across contexts and methodologies (Roulet 2018; Košak et al. 2015; Borio and Gambacorta 2017; Laidroo 2014; Laidroo and Männasoo 2014).

Country-level controls in lending studies reflect the macroeconomic, policy, and institutional environment. GDP growth is the primary pro-cyclical driver (Dell'Ariccia et al. 2016; Levine 2005; Hofmann 2001; Borio, Furfine, and Lowe 2001; Calza, Manrique, and Sousa 2003; Brzoza-Brzezina 2005; Mendoza and Terrones 2012; Laidroo 2014). Inflation has a mixed association: it correlates with credit surges at higher levels (Brzoza-Brzezina 2005; Calza, Manrique, and Sousa 2003; Schildbach, Schattenberg, and Schneider 2022) but may weaken credit through margin compression when prolonged (Borio and Gambacorta 2017; Mendoza and Terrones 2012; Ananou et al. 2021). Monetary policy rates affect bank funding costs and lending, with effects varying by country and bank vulnerability (Laidroo 2014; Martins, Batista, and Ferreira-Lopes 2019; Altavilla et al. 2021; Afonso and Sousa-Leite 2020; Kapounek, Kučerová, and Fidrmuc 2017; Fungáčová, Solanko, and Weill 2014). Cross-border financial flows shape domestic credit supply and risk transmission (Cerutti, Hale, and Minoiu 2014). Institutional quality — encompassing rule of law, property rights, and governance — underpins investor confidence and stable credit expansion (Beck, Demirgüç-Kunt, and Levine 2003; Mendoza and Terrones 2012; Wójcik, Knight, and Pažitka 2018; Kubiszewska 2019; Nizam et al. 2019). Bank-level controls capture how balance-sheet health

mediates lending responses: high NPL ratios constrain credit supply (Bending et al. 2014; Accornero et al. 2017; Balgova, Nies, and Plekhanov 2016; Kostis 2020; Laidroo and Männasoo 2014); capital buffers support resilience but interact non-linearly with liquidity (Kim and Sohn 2017; Brei and Schclarek 2015; Bedayo, Estrada, and Saurina 2020; Kapounek, Kučerová, and Fidrmuc 2017; BIS 2011; Roulet 2018; Ananou et al. 2021); and profitability enables expansion but with ambiguous effects under compressed margins (Roulet 2018; Borio and Gambacorta 2017; Al-Sharkas and Al-Sharkas 2022; Kim and Sohn 2017; Zandi et al. 2019).

3. Methodology and data

3.1. Methodology

3.1.1. Empirical Framework: Codification of EU Integration Events

A critical distinction in the literature concerns the dual dimensions of EU integration: **widening** and **deepening (Sekulić 2020)**.

Widening refers to the enlargement of the EU (Sekulić 2020) through the structured process governed by the Treaty on European Union (TEU) and the Treaty on the Functioning of the European Union (TFEU), fundamentally on the basis of the 1993 Copenhagen criteria (European Council 1993).

In practice, **enlargement (accession) can be viewed as comprising three distinct integration events** / milestones that each candidate country must pass through: candidate status, opening of negotiations and acquiring of full membership.

While **candidate** status signals future compliance, the **negotiation** stage makes implementation a binding requirement through detailed benchmarks across six thematic clusters (Fundamentals; Internal Market; Competitiveness and Inclusive Growth; Green Agenda; Resources and Cohesion; External Relations). The Fundamentals cluster is opened first and closed last in the Western Balkans framework, underscoring its central role in rule-of-law and financial-sector reforms. Progress across these clusters is expected to strengthen regulatory quality, deepen financial markets, and enhance corporate governance, showing an even stronger association with lending behaviour through improved funding conditions, increased cross-border activity, and higher-quality credit growth (Campos, Coricelli, and Moretti 2019; Dąbrowski and Myachenkova 2018; Herrmann and Mihaljek 2013; De Haas and van Lelyveld 2014).

The final widening milestone is full EU **membership**, granted once all Copenhagen criteria are met. The empirical literature documents significant lending growth, cross-border capital flow expansion, and institutional development associated with EU membership (see Section 2.1). Consensus requirements across benchmarks have given the integration process different characteristics across enlargement rounds: the CEE enlargement was shaped by political and geostrategic considerations, while Western Balkan candidate countries have faced a fundamentals-first approach and growing enlargement fatigue, making their accession road more protracted (Mišćević and Mrak 2017).

In contrast to widening, deepening encompasses efforts to establish closer cooperation among existing members through shared rules, institutions, and transfer of sovereignty (Patel 2019; Sekulić 2020). Key deepening milestones with direct implications for bank lending include: the 1992 Maastricht Treaty, which launched the EMU roadmap and stipulated convergence criteria requiring price stability, sound public finances, exchange rate stability, and legal convergence — lowering risk premia, expanding cross-border funding, and accelerating bank lending in converging economies (Baldwin and Wyplosz 2022; European Council 1992; Commission of the European Communities 1990; Lane 2006; Schmitz and von Hagen 2011; Brzoza-Brzezina 2005; Goddard et al. 2007); the 1999–2005 Financial Services Action Plan, Lamfalussy process, TARGET/TARGET2, and MiFID I, which harmonised financial regulation and intensified cross-border integration (European Commission 1999; European Commission 2002; ECB 2001; ECB 2011; Lamfalussy Group 2001; Casey and Lannoo 2006); and the creation of the European Supervisory Authorities and Basel 2.5 framework (2008–2012), which strengthened prudential standards and reduced supervisory fragmentation (European Commission 2009; BIS 2011). The Banking Union (2012–2016), centred on the

SSM, is considered the most important post-EMU deepening initiative: it weakened the bank–sovereign doom loop, centralised ECB supervision, facilitated credit supply normalisation, reduced home bias in sovereign exposures, and supported cross-border interbank market re-integration (Xafa 2015; Hoffmann, Kremer, and Zaharia 2019; Avignone et al. 2021; European Commission 2012; ECB 2014; Altunbas et al. 2022).

Empirical research on widening-deepening interplay finds that enlargement can facilitate deepening by increasing functional pressures for reform, particularly when new entrants are economically strong (Berglöf et al. 2008; Kelemen, Menon, and Slapin 2014), though weaker or less-aligned entrants may substitute for rather than complement deepening efforts (Berglöf et al. 2008).

Table 1. EU integration events by year of occurrence

Country	Widening: Candidate	Widening: Negotiations	Widening: Membership	Deepening: Monetary Union	Deepening: Banking Union
ALBANIA	2014	2022			
AUSTRIA				1999	2014
BELGIUM				1999	2014
BULGARIA		2000	2007		2020
CROATIA	2004	2005	2013	2023	2020
CYPRUS		1998	2004	2008	2014
CZECH REPUBLIC		1998	2004		
DENMARK					
ESTONIA		1998	2004	2011	2014
FINLAND				1999	2014
FRANCE				1999	2014
GERMANY				1999	2014
GREECE				2001	2014
HUNGARY		1998	2004		
IRELAND				1999	2014
ITALY				1999	2014
LATVIA		2000	2004	2014	2014
LITHUANIA		2000	2004	2015	2015
LUXEMBOURG				1999	2014
MALTA		2000	2004	2008	2014
MONTENEGRO	2010	2012			
NETHERLANDS				1999	2014
NORTH MACEDONIA	2005	2022			
POLAND		1998	2004		
PORTUGAL				1999	2014
ROMANIA		2000	2007		
SERBIA	2012	2014			
SLOVAKIA		2000	2004	2009	2014
SLOVENIA		1998	2004	2007	2014
SPAIN				1999	2014
SWEDEN					

Source: authors' compilation based on European Commission and European Council enlargement records and ECB documentation. Each entry is the calendar year in which the country reached the respective milestone; blank cells denote milestones not (yet) attained during the sample period.

Taken together, EU integration operates through a sequence of distinct milestones. In the widening dimension, Candidate status, Negotiations, and Membership constitute clear sequential milestones linked to the progressive fulfilment of the Copenhagen criteria and TEU provisions; pre-candidate stages are excluded from the coding framework as they lack full comparability across enlargement rounds. In the deepening dimension, Monetary Union membership and Banking Union participation stand out as the two pivotal milestones with the most far-reaching effects on bank lending and financial integration — clearly dated, comparable across countries, and analytically distinct from other deepening reforms that are either pan-EU in scope (limiting cross-sectional variation) or too overlapping and granular for clean event identification.

On this basis, we operationalise the research on the impact of EU integration on bank lending through five discrete EU integration events—Candidate, Negotiations, Membership, Monetary Union, and Banking Union—dated for each country according to when the respective status is attained. These five events can be grouped into Widening and Deepening integration events and, in a broader sense, synthesised and treated jointly as EU integration events shaping the banking environment.

Given that the dataset spans 2000–2023, the comprehensive list of EU integration events occurring after 2000, by country and event type, is presented in Table 1 and serves as the coding map for the dataset. The full event coding, with the exact dates and their official sources, is provided in the master event-coding sheet in Appendix 8.

The EU integration events are represented in the regression models by dummy variables. Each dummy marks a specific integration event and is measured over three post-event windows — the event-year, three-year, and five-year windows (see Table 2). The study separates EU integration events into (a) widening versus deepening and (b) individual events, to examine how different types of integration are associated with bank lending. The three windows are nested: the event-year window covers the year of the event; the three-year window the event year and the following two years; and the five-year window the event year and the following four years. Each window coefficient therefore captures the average association over the corresponding post-event period. Comparable multi-year event windows are common in the enlargement and financial-integration literature (Campos, Coricelli, and Moretti 2019; Herrmann and Mihaljek 2013). Because the window boundaries are necessarily somewhat arbitrary, the sensitivity of the results to this choice is assessed by re-estimating selected specifications with a permanent post-event step indicator and one-year lead indicator, explained below.

Table 2. Definition of the EU integration dummy variables

EU integration event(s)	Time horizon: 1 year	Time horizon: 3 years	Time horizon: 5 years
All EU Events (widening & deepening)	EUEvent1	EUEvent3	EUEvent5
Widening EU Events (Candidate, Negotiations, Membership)	EUEventW1	EUEventW3	EUEventW5
Deepening EU Events (Monetary Union, Banking Union)	EUEventD1	EUEventD3	EUEventD5
Candidate status	EUCandidate1	EUCandidate3	EUCandidate5
Opening of negotiations	EUNegotiations1	EUNegotiations3	EUNegotiations5
Full membership	EUMembership1	EUMembership3	EUMembership5
Joining Monetary Union	EUMonetaryUnion1	EUMonetaryUnion3	EUMonetaryUnion5
Joining Banking Union	EUBankingUnion1	EUBankingUnion3	EUBankingUnion5

Each dummy equals one for the country-years falling within the stated horizon (1, 3 or 5 years) after the event and zero otherwise.

Table 2 explains individual EU integration events dummy variables, for the purpose of setting coding rules in the dataset. As presented, the regression models consider EU integration events on three levels of granularity: **first:** all integration events represented jointly by a single dummy variable; **second:** different dummy variables for the Widening and Deepening groups of EU integration events and **third:** separate dummy variables for each individual EU integration event (Candidate, Negotiation, Membership, Monetary Union and Banking Union). Also, the EU integration events are coded applying three temporal profiles (horizons) – 1-, 3- and 5-year post-event windows.

Using Tables 1 and 2 as a reference, EU integration events are coded in the dataset as follows:

- The event year is coded 1 for the country where the event occurs.
- For the 1-year horizon, only the event year is coded 1, all other years are coded 0.
- For the 3-year horizon, the event year and the two subsequent years are coded 1 – all other years are coded 0.
- For the 5-year horizon, the event year and the four subsequent years are coded 1 – all other years are coded 0.
- Events are not lagged; the association is modelled as contemporaneous with, and persisting after, the formal milestone rather than as a delayed response. Because the first date at which markets could anticipate an event is difficult to define consistently — political signals and expectations may emerge well before the formal milestone — we retain the formal milestone as the baseline and probe timing through two alternative specifications for selected integration events. The first uses a post-event step indicator, coded one from the formal event year onwards, i.e. a permanent shift rather than a fixed post-event window. The second adds a one-year lead — an indicator equal to one in the year immediately preceding the formal milestone — included jointly with the original one-year event dummy; this distinguishes any pre-event anticipation association from the association with the formal event itself and indicates whether controlling for anticipation materially changes the baseline coefficient.
- In the case of interaction terms with lagged bank-level controls, the EU event dummy variable is measured in year t, while the corresponding bank-level control variables are measured in year t−1 (as will be presented in the next chapter, the bank-level variables are lagged for one year).

3.1.2. Regression Specifications

To address the research questions, **three** regression models are employed, grounded in the specifications established in the literature (Borio and Gambacorta 2017; Košak et al. 2015; Laidroo 2014; Le, Nguyen, and Schinckus 2022; Micco and Panizza 2006; Brei, Gambacorta, and von Peter 2013). These models share a common framework: utilising bank-level credit growth as the dependent variable, regressed on a set of country-specific and bank-specific determinants.

To identify the channels through which EU integration events are associated with lending, EU integration dummy variables are interacted with country- and bank-level controls. Similar interaction-based approaches are used in the literature, for example Mendoza and Terrones (2012) on credit booms, Micco and Panizza (2006) on ownership effects in lending, and Brei, Gambacorta, and von Peter (2013) on differences in rescued banks before and during crises.

The ***first regression specification*** analyses the association of the EU integration events with lending behaviour alongside other vectors of country-specific and bank-specific determinants. **This specification tests H1, H2 and H3**. It is expected to establish significant relationship between EU integration and lending behaviour, while also confirming the heterogeneity across individual EU integration events and temporal horizons – with the significance, magnitude, and sign of coefficients expected to differ across event types and windows.

$$LG_{bjt} = \alpha + \sum_{e} \beta_e Event_{e,jt} + \sum_{k} \gamma_k BankVar_{k,bjt-1} + \sum_{m} \delta_m MacroVar_{m,jt} + \mu_b + \tau_t \quad (1)$$

- LG_{bjt} – Gross-loan growth of bank b in country j at time t
- $BankVar_{k,bjt\text{-}1}$ – k-th bank-level control of bank b in country j (NPL ratio, capital ratio, liquidity, ROAE, etc.), lagged one year $t-1$.
- $MacroVar_{k,jt}$ – m-th country-level control (GDP growth, inflation, policy rate, cross-border financial flows, institutional environment etc.).
- $Event_{e,jt}$ – dummy for e-th integration event or milestone in country j at time t (Candidate status, opening of Negotiations, acquiring of EU Membership, membership in Monetary Union, membership in Banking Union) with window $w \in \{1,3,5\}$
- μ_b – bank fixed effects
- τ_t – year fixed effects
- $\mathcal{E}_{bjt}$ – error term

The second regression specification examines how the association between EU integration events and lending growth varies with country- and bank-level conditions. It retains the EU integration events found to be statistically significant in equation (1) and interacts them with country- and bank-level variables to examine these conditional associations. This specification is exploratory and relates to H4; it is expected to show that the association between EU integration events and lending growth differs across country- and bank-level characteristics, without identifying a transmission mechanism.

$$LG_{bjt} = \alpha + \sum_e \beta_e Event_{e,jt} + \sum_k \gamma_k BankVar_{k,bjt-1} + \sum_m \delta_m MacroVar_{m,jt} + \sum_{e,k} \rho_{ek}\left(Event_{e,jt} \times BankVar_{k,bjt-1}\right) + \sum_{e,m} \varphi_{em}\left(Event_{e,jt} \times MacroVar_{m,jt}\right) + \mu_b + \tau_t + \varepsilon_{bjt} \quad (2)$$

- ρ_{ek} is the regression coefficient on the interaction term between integration event/milestone e and bank variable k, $Event_{e,jt} \times BankVar_{k,bjt\text{-}1}$. It captures whether the marginal effect of event e on lending growth varies with the bank characteristic k, i.e., whether integration event is associated with lending through a bank-level channel.
- φ_{em} is the regression coefficient on the interaction term between integration event/milestone e and macro variable m, $Event_{e,jt} \times MacroVar_{m,jt}$. It captures whether the marginal effect of event e on lending growth varies with the macro characteristic m, i.e., whether integration event is associated with lending through a country-level channel.

The ***third regression specification*** has the objective to capture country-group heterogeneity among old-EU members, new EU members (with enlargement in 2004, 2007 and 2013) and WB candidate countries, **testing the H5**. This specification is expected to identify systematic differences in integration effects across these groups.

$$LG_{bjt} = \alpha + \sum_e \beta_e Event_{e,jt} + \sum_{e,l} \eta_{el}\left(Event_{e,jt} \times Group_{l,j}\right) + \sum_k \gamma_k BankVar_{k,bjt-1} + \sum_m \delta_m MacroVar_{m,jt} + \mu_b + \tau_t + \varepsilon_{bjt} \quad (3)$$

- $Group_{l,j}$ – binary indicator equal to 1 if country j belongs to country group l (e.g. recently joined EU member states vs. Western Balkan candidate countries), and 0 otherwise. Recently joined EU member states can serve as the omitted reference (baseline) group.
- η_{el} – coefficient on the interaction term between integration event e and country group l, $Event_{e,jt} \times Group_{l,j}$. It captures the difference in the effect of integration event e on bank lending growth in country group l relative to the reference (baseline) group. A statistically significant η_{el} indicates that the impact of the integration event differs systematically between the baseline group and the respective comparison group.

To address potential endogeneity, the bank-level controls enter with a one-year lag while the country-level controls are kept contemporaneous in the baseline specification (Borio and Gambacorta 2017; Košak et al. 2015; Laidroo 2014; Le, Nguyen, and Schinckus 2022; Brei, Gambacorta, and von Peter 2013). Bank and year fixed effects are included to absorb unobserved time-invariant heterogeneity across banks and common annual shocks, consistent with the non-random sample

structure (Ferri, Kalmi, and Kerola 2014; Roulet 2018); the year fixed effects in particular absorb EU-wide annual shocks that are not specific to any country's integration status. A Hausman test supports the fixed-effects over the random-effects specification. Standard errors are clustered by bank to accommodate the groupwise heteroscedasticity and within-bank serial correlation indicated by the modified Wald and Wooldridge tests, respectively. The associations are further probed through four robustness re-estimations of Model 1 — using contemporaneous bank controls (Micco and Panizza 2006; Ferri, Kalmi, and Kerola 2014), adding a crisis-period control and its interactions with the integration events, excluding the NPL ratio and using country-clustered standard error — reported in Appendix 4. To guard against false positives arising from the large number of event coefficients, a Benjamini–Hochberg correction is applied to the twenty-four principal Model 1 event coefficients (Appendix 5), and the coefficients that survive this adjustment are re-examined in a two-step system-GMM specification that explicitly addresses dynamic endogeneity (Appendix 6). Remaining endogeneity from omitted variables, reverse causality, and measurement error cannot be fully ruled out, and the results should therefore be interpreted as associations rather than causal estimates.

3.2. Variables and Sample

This research utilises unbalanced panel data derived from the financial statements of banks across 27 EU member states and four Western Balkan candidate countries: Albania, Montenegro, North Macedonia, and Serbia. The primary data source is the FitchConnect database, which provides comprehensive unconsolidated annual financial statement data for banks categorised as Universal Commercial Banks over a 23-year period from 2000 to 2023. Unconsolidated statements are used thereby avoiding the double-counting and cross-border attribution problems that arise when a parent bank's consolidated accounts aggregate subsidiaries located in several jurisdictions (Laidroo 2014). Because the analysis links lending growth to country-level EU integration events, entity-level unconsolidated data provide the appropriate unit of observation for attributing credit dynamics to the country whose integration status changes. The initial unbalanced panel comprises 14,859 bank-year observations for 1,522 banks across all countries. Of these, 1,167 banks operate in the old EU member states (EU-15), 291 in the post-2004 new member states, and 64 in the Western Balkan candidate countries (Appendix 1).

Macroeconomic, monetary, and institutional country-level variables are sourced from the World Bank, IMF, Heritage Foundation, ECB, and individual central banks. EU integration event variables are coded as described in Section 3.1.

Dependent variable. The annual growth rate of gross loans is used as the dependent variable (Borio and Gambacorta 2017; Košak et al. 2015; Laidroo 2014; Le, Nguyen, and Schinckus 2022; Micco and Panizza 2006; Brei, Gambacorta, and von Peter 2013). Years without baseline data are excluded, and the initial year of each bank's time series is dropped where the baseline value is zero to avoid misrepresenting actual lending changes; the same principle applies to discontinued data series (Micco and Panizza 2006). Growth rates rather than levels are used to mitigate spurious correlations arising from bank size differences (Kim and Sohn 2017).

Country-level control variables. Real GDP Growth captures the well-established pro-cyclical relationship with lending (Kim and Sohn 2017; Roulet 2018; Thornton and di Tommaso 2021; De Haas and van Lelyveld 2006). Inflation, proxied by the CPI (IMF), is expected to be positively associated with lending, though ambiguous in prolonged low-inflation environments (Laidroo and Männasoo 2014; Borio and Gambacorta 2017). Monetary Policy, measured by changes in conventional policy rates, is expected to have a positive relationship with lending, moderated in prolonged low-rate contexts (Kim and Sohn 2017; Borio and Gambacorta 2017). Financial Account Growth (NFAGrowth), sourced from the IMF Balance of Payments, captures cross-border financial flows. The Institutional Environment is measured by the Economic Freedom Composite Index (Kapounek, Kučerová, and Fidrmuc 2017).

Table 3. Variable definitions and sources (annual frequency, 2000–2023)

Variable	Description	Source
Dependent variable		
Gross Loans Growth	Percentage change of the Gross Loans balance on an annual basis	FitchConnect
Country-level variables		
GDP	Annual growth of real GDP	World Bank Group
Inflation	Consumer Price Index – change of prices relative to the base period	World Bank Group
Monetary Policy	Percentage change of the central-bank base rate for each country on an annual basis	ECB / national central banks
Cross-border Financial Flows	Financial Account growth – percentage change of the Financial Account balance on an annual basis	IMF
Institutional Environment	Index of Economic Freedom – measures the impact of liberty and free markets (Rule of Law, Government Size, Regulatory Efficiency, Open Markets)	The Heritage Foundation
Bank-level variables		
NPL Ratio	NPL / Gross Loans	FitchConnect
Equity Ratio	Equity / Total Assets	FitchConnect
Liquidity Ratio	Liquid Assets / Total Assets	FitchConnect
ROAE Ratio	Net Earnings / Average Total Equity	FitchConnect

Bank-level control variables. Portfolio Quality is measured by the NPL ratio, expected to negatively affect lending growth (Bending et al. 2014). Capitalisation, measured by the equity-to-total-assets ratio, is expected to positively affect lending (Ayadi et al. 2021). Liquidity, proxied by the liquid-assets-to-total-assets ratio, is also expected to be positively associated with lending (Altavilla et al. 2021). Profitability, measured by ROAE, is expected to be positively associated with lending, as more profitable banks have greater capacity and incentive to expand credit (Roulet 2018). Bank size is excluded due to high correlation with the capitalisation variable.

Sample construction. The sample follows standard methodological practice (Laidroo 2014; Micco and Panizza 2006; Roulet 2018; Laidroo and Männasoo 2014; Kim and Sohn 2017; Košak et al. 2015; Ferri, Kalmi, and Kerola 2014). An unbalanced panel is used to avoid survivorship bias (Laidroo 2014). Observations with missing data are removed, given the growth rate specification requires consecutive annual observations (Micco and Panizza 2006). Observations with gross loan growth exceeding 500% or total asset growth exceeding 200% are excluded as likely reflecting mergers or other non-recurring structural events (Laidroo 2014). The dependent variable is winsorised at the 5th–95th percentile range and explanatory variables at the 1st–99th percentile to mitigate outlier influence (Kim and Sohn 2017; Laidroo 2014). Only annual observations with 12-month periods ending 31 December are included (Laidroo 2014). Only unconsolidated financial statements are used to prevent double-counting, with IFRS-based reports preferred over local GAAP for cross-country consistency (Košak et al. 2015; Laidroo 2014). The final regression sample comprises 5,269 bank-year observations, with NPL data availability as the binding constraint on sample coverage. Because NPL reporting is the binding constraint, the estimation sample is considerably smaller than the initial panel, which raises the possibility of sample-selection bias if the banks lacking NPL data differ systematically from those retained.

The unbalanced-panel design, together with

Table 4. Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Dependent variable					
Growth of Gross Loans	14,859	8.171	20.063	-87.51	197.31
Country-level variables					
Real GDP Growth	14,574	1.928	2.807	-8.205	9.403
Inflation – CPI	14,571	0.025	0.022	-0.006	0.139
Monetary Policy	14,722	1.396	1.94	-0.5	9.5
Financial Account Growth	14,631	-0.887	9.027	-90.324	11.973
Institutional Environment	14,573	67.349	5.925	50.6	80.6
Bank-level variables					
NPL Ratio	6,870	8.49	9.809	0	65.75
Equity Ratio	14,559	12.48	11.997	0.77	86.02
Liquid Ratio	14,550	26.891	21.723	0.15	92.95
ROAE Ratio	14,453	6.346	12.963	-72.73	56.96

All country-level and bank-level variables are winsorised at the 1st and 99th percentiles. Inflation is expressed as a decimal (e.g. 0.025 = 2.5%). The Institutional Environment index is the Heritage Foundation Index of Economic Freedom, scored from 0 to 100. The NPL-ratio observation count reflects data availability in FitchConnect and determines the final regression sample of 5,269 observations. Thousands are separated by a comma and decimals by a point.

bank and year fixed effects, absorbs part of this heterogeneity, and re-estimating the baseline without the NPL control (which restores the majority of the excluded observations) offers a direct check on whether NPL-driven attrition drives the findings; this selection issue is revisited in the robustness discussion and among the limitations.

The correlation matrix (Appendix 2) confirms the absence of severe multicollinearity. The strongest inter-regressor correlation is between Inflation and Monetary Policy (0.529), reflecting the standard macroeconomic relationship whereby higher inflation tends to coincide with higher policy rates, which warrants monitoring but does not preclude simultaneous inclusion. Except for the moderate ROAE–NPL correlation (−0.325), all other bank-level inter-correlations are weak, confirming regressors capture largely distinct dimensions of bank balance-sheet health.

4. Results

The results from **Model 1** largely support H1, H2 and H3. Aggregate EU integration events support the baseline hypothesis (H1), showing a significant positive association with bank lending growth that is most pronounced over the three-year window and weakens over the five-year window. The associations also vary meaningfully by event type, supporting the event-type heterogeneity hypothesis (H2): Deepening events show significant positive associations over the three- and five-year windows, whereas the Widening aggregate is not statistically significant, indicating heterogeneity among the individual widening events it combines. Among the individual milestones, Monetary Union shows a strong positive association in the one- and three-year windows, Membership a positive association over the three- and five-year windows, and Candidate status a significant negative association over the five-year window, while Negotiations shows a weak positive association only at the five-year window and Banking Union shows no robust associations. The associations are not uniform across temporal windows — several coefficients are insignificant in the event-year window but become significant over the three- and/or five-year windows — confirming the temporal-profile hypothesis (H3).

Country-level controls are robust across all

Table 5. Results of the Model 1 regressions

W/D = Widening and Deepening; Single = individual EU integration events.

Growth of Gross Loans	All events 1y	All events 3y	All events 5y	W/D 1y	W/D 3y	W/D 5y	Single 1y	Single 3y	Single 5y
Real GDP Growth	0.717***	0.704***	0.705***	0.719***	0.704***	0.699***	0.711***	0.697***	0.695***
	(0.073)	(0.073)	(0.074)	(0.073)	(0.073)	(0.074)	(0.073)	(0.072)	(0.074)
Inflation – CPI	-31.193**	-27.362*	-29.255*	-31.218**	-29.387*	-29.777*	-33.280**	-25.693	-29.303*
	(15.265)	(15.391)	(15.326)	(15.324)	(15.225)	(15.161)	(15.359)	(15.899)	(15.310)
Monetary Policy	0.449**	0.424**	0.456**	0.461**	0.437**	0.436**	0.474**	0.380*	0.435**
	(0.199)	(0.199)	(0.200)	(0.199)	(0.199)	(0.200)	(0.202)	(0.206)	(0.201)
Net Financial Account	-0.037***	-0.038***	-0.033**	-0.037***	-0.038***	-0.032**	-0.037***	-0.041***	-0.032**
Growth	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.014)
Institutional	-0.562***	-0.532***	-0.524***	-0.565***	-0.539***	-0.501***	-0.567***	-0.565***	-0.515***
Environment	(0.123)	(0.124)	(0.128)	(0.123)	(0.125)	(0.134)	(0.123)	(0.125)	(0.130)
L. NPL Ratio	-0.325***	-0.332***	-0.330***	-0.324***	-0.331***	-0.331***	-0.320***	-0.320***	-0.327***
	(0.049)	(0.049)	(0.049)	(0.049)	(0.049)	(0.049)	(0.049)	(0.048)	(0.048)
L. Equity Ratio	0.226**	0.229**	0.226**	0.226**	0.228**	0.226**	0.228**	0.232**	0.235**
	(0.094)	(0.093)	(0.093)	(0.094)	(0.093)	(0.093)	(0.094)	(0.094)	(0.093)
L. Liquidity Ratio	0.179***	0.179***	0.178***	0.178***	0.178***	0.177***	0.175***	0.171***	0.177***
	(0.031)	(0.031)	(0.030)	(0.031)	(0.031)	(0.030)	(0.030)	(0.031)	(0.031)
L. ROAE	0.115***	0.113***	0.112***	0.115***	0.113***	0.110***	0.113***	0.110***	0.106***
	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)
All EU integration	1.005	1.518***	1.003*						
events event	(0.729)	(0.536)	(0.535)						
Widening event				0.119	1.569	1.862			
				(1.387)	(1.061)	(1.134)			
Deepening event				1.333	1.338**	0.920*			
				(0.866)	(0.583)	(0.555)			
Candidate							-2.421	-1.238	-3.301**
							(2.965)	(1.644)	(1.533)
Negotiations							1.020	2.001	2.113*
							(2.089)	(1.586)	(1.241)
Membership							0.941	3.100*	4.318***
							(2.447)	(1.666)	(1.387)
Monetary Union							10.534***	4.013***	1.142
							(3.908)	(1.432)	(1.007)
Banking Union							-0.333	0.471	0.863
							(0.865)	(0.608)	(0.644)
Constant	38.245***	35.994***	35.521***	38.403***	36.537***	33.971***	38.652***	38.251***	34.740***
	(8.517)	(8.613)	(8.866)	(8.519)	(8.632)	(9.233)	(8.517)	(8.640)	(8.954)
Observations	5,269	5,269	5,269	5,269	5,269	5,269	5,269	5,269	5,269
R-squared	0.096	0.097	0.097	0.096	0.097	0.097	0.099	0.100	0.101
F-test	24.69	25.05	25.43	22.47	22.83	23.63	19.24	19.16	20.14
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**** p<0.01, ** p<0.05, * p<0.10; standard errors clustered by bank in parentheses.*

Dependent variable: growth of gross loans; sample 2000–2023 (N = 5,269 bank-year observations). Bank and year fixed effects; one-period-lagged bank controls. Source: authors' estimations.

specifications. Real GDP growth is positive and highly significant (p < 0.01), consistent with the pro-cyclical relationship documented in the literature (Dell'Ariccia et al. 2016; Laidroo 2014; Kim and Sohn 2017). The monetary policy rate is positive and significant, likely reflecting non-euro-area environments where higher rates coincide with stronger activity (Borio and Gambacorta 2017; Fungáčová, Solanko, and Weill 2014). Inflation is negative and significant, consistent with margin-compression arguments (Borio and Gambacorta 2017) and with the association between price stability and lending. Financial-account growth is negative and statistically significant, consistent with an inverse association between cross-border capital inflows and domestic loan growth. The institutional-environment index is negative and highly significant (p < 0.01); because the specification includes bank fixed effects, this coefficient does not capture persistent differences between the mature EU-15 systems and the converging CEE and WB systems, which are absorbed by the fixed effects. It should instead be read as a within-country association — years in which a country's Economic Freedom index is higher tend to coincide with slower gross-loan growth in this sample — which may be consistent with institutional-tightening or consolidation phases accompanying, rather than accelerating, credit expansion (Wójcik, Knight, and Pažitka 2018; Kubiszewska 2019). The coefficient is thus an associative within-country control and is not evidence that stronger institutions reduce lending. Bank-level controls are equally robust: the NPL ratio is negative (p < 0.01; Bending et al. 2014; Accornero et al. 2017); the equity and liquidity ratios are positive and significant (Kim and Sohn 2017; Brei and Schclarek 2015; Ananou et al. 2021); and ROAE is positive (p < 0.01; Roulet 2018; Al-Sharkas and Al-Sharkas 2022). The within-R^2 ranges from 0.096 to 0.101, consistent with the heterogeneity of pooling 31 banking systems over 23 years.

To assess robustness, we re-estimated Model 1 under four variants: contemporaneous rather than lagged bank controls, a crisis-period control and its interactions, exclusion of the NPL ratio (the main source of missing observations, which enlarges the sample), and country-clustered standard errors (Appendix 4). Under the first three variants the results are largely stable: the positive associations of aggregate events (three-year), Membership (three- and five-year) and Monetary Union (one-year), together with the negative Candidate (five-year) association, remain significant throughout; the positive Negotiations (five-year) association holds under the contemporaneous and crisis specifications but not when the NPL control is omitted. Country-level clustering, which is more conservative because the integration events vary at the country–year level, leaves the aggregate (three- and five-year), Deepening (three- and five-year) and Candidate (five-year) associations significant, weakens Monetary Union (one- and three-year) to the 10% level, and renders Membership (three- and five-year) and Negotiations (five-year) individually insignificant. Overall, three associations — aggregate events (three-year), Candidate (five-year) and Monetary Union (one-year) — remain significant across all four robustness variants. Applying the Benjamini–Hochberg procedure to the 24 principal event coefficients, four survive at a 5% false-discovery rate: aggregate events (three-year), Membership (five-year) and Monetary Union (one- and three-year) (Appendix 5); the rest are interpreted as suggestive. In a two-step system-GMM applied to these four, only one-year Monetary Union remains significant (Appendix 6); the others keep positive signs but lose significance. It thus provides the strongest robustness evidence, though qualified by borderline AR(2) and Hansen diagnostics ($p \approx 0.08$). Finally, results are robust to alternative event specifications (Appendix 7): permanent post-event step indicators (Membership, Monetary Union) and one-year pre-event lead indicators (Candidate, Negotiations) are all insignificant, confirming that the associations are concentrated in the finite post-event windows and showing no evidence of anticipatory lending.

Model 2 is an exploratory extension that asks whether the association between each integration event and gross-loan growth *varies* with country- and bank-level conditions. Each specification interacts one of the events that were significant in Model 1 (Appendix 3) with the full set of nine controls, so the coefficients on the interaction

terms describe *conditional associations* — how the event–lending association differs across country-years with different macro-financial and balance-sheet characteristics — rather than transmission mechanisms or mediation.

For the **aggregate specifications** (Table 6), the positive association between EU integration events and lending growth is stronger in more expansionary macro-financial conditions. Over the three-year post-event window it is more pronounced in country-years with higher GDP growth ($p<0.10$), inflation ($p<0.01$) and bank liquidity ($p<0.01$); over the five-year window the pattern strengthens, with positive, highly significant interactions for GDP growth, inflation and cross-border flows (all $p<0.01$) and a positive liquidity interaction ($p<0.05$) — consistent with the association being amplified during high-growth, higher-inflation episodes and where external funding is more abundant. The **Deepening specifications** show a distinct profile: the positive association is stronger where the policy rate ($p<0.05$ at both windows) and institutional environment ($p<0.10$) are higher, and, over the five-year window, where cross-border flows are higher ($p<0.01$). With no significant bank-level interactions, the Deepening association is conditioned by the country's monetary and institutional setting rather than by individual banks' balance sheets.

Among the **individual milestones** (Table

Table 6: Results of the Model 2 regressions – Part 1

EU Event: statistically significant EU integration events in Model 1 (Table 5).

Growth of Gross Loans	EUEvent3	EUEvent5	EUEventD3	EUEventD5
Real GDP Growth	0.646***	0.603***	0.709***	0.702***
	(0.076)	(0.079)	(0.076)	(0.077)
Inflation - CPI	-37.081**	-44.195***	-38.504**	-30.129*
	(16.489)	(16.681)	(16.389)	(16.617)
Monetary Policy	0.402*	0.480**	0.490**	0.400*
	(0.214)	(0.222)	(0.206)	(0.205)
Net Financial Account Growth	-0.038***	-0.066***	-0.043***	-0.071***
	(0.014)	(0.020)	(0.014)	(0.020)
Institutional Environment	-0.509***	-0.517***	-0.645***	-0.677***
	(0.134)	(0.148)	(0.125)	(0.128)
L. NPL Ratio	-0.344***	-0.307***	-0.331***	-0.303***
	(0.054)	(0.056)	(0.052)	(0.056)
L. Equity Ratio	0.220**	0.209**	0.205**	0.182**
	(0.093)	(0.098)	(0.090)	(0.091)
L. Liquidity Ratio	0.153***	0.138***	0.160***	0.153***
	(0.032)	(0.034)	(0.031)	(0.033)
L. ROAE Ratio	0.087***	0.087**	0.103***	0.103***
	(0.032)	(0.034)	(0.031)	(0.033)
EU Integration Event	-19.783**	-19.538**	-21.529**	-20.511**
	(9.486)	(9.692)	(10.174)	(10.150)
GDP x EU Event	0.410*	0.556***	-0.357	-0.075
	(0.215)	(0.200)	(0.279)	(0.237)
Inflation x EU Event	102.362***	96.848***	20.695	-12.294
	(33.827)	(28.910)	(50.777)	(44.658)

Growth of Gross Loans	EUEvent3	EUEvent5	EUEventD3	EUEventD5
NFA Growth x EU Event	-0.022	0.076***	-0.076	0.081***
	(0.109)	(0.028)	(0.125)	(0.028)
Monetary Policy x EU Event	0.109	-0.122	2.363**	1.456**
	(0.308)	(0.303)	(0.928)	(0.715)
Inst. Env. x EU Event	0.241	0.244	0.289*	0.283*
	(0.148)	(0.149)	(0.159)	(0.158)
L. NPL x EU Event	0.084	-0.016	0.101	-0.014
	(0.058)	(0.067)	(0.074)	(0.075)
L. Equity x EU Event	0.013	0.037	0.125	0.162
	(0.090)	(0.093)	(0.111)	(0.113)
L. Liquidity x EU Event	0.087***	0.084**	0.056	0.066
	(0.033)	(0.038)	(0.038)	(0.042)
L. ROAE x EU Event	0.074	0.029	0.033	0.021
	(0.046)	(0.045)	(0.048)	(0.046)
Constant	35.761***	36.526***	44.505***	46.584***
	(9.155)	(10.064)	(8.624)	(8.790)
Observations	5,269	5,269	5,269	5,269
R-squared	0.107	0.110	0.103	0.104
F-test	17.81	19.25	16.50	16.97
Prob > F	0.000	0.000	0.000	0.000

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

7), Monetary Union — the most robust event in Model 1 — shows a comparatively clean profile: over the event-year window its positive association is somewhat stronger for better-capitalised and more liquid banks (equity and liquidity interactions, $p<0.10$), while over the three-year window no interaction is individually significant. Membership is again patterned by the macro environment, with its positive association stronger in higher-growth ($p<0.10$ at three years, $p<0.01$ at five) and higher-inflation (five-year, $p<0.01$) country-years; the only significant bank-level term is a positive NPL interaction at three years ($p<0.10$). The negative Candidate association is more pronounced where cross-border flows are higher ($p<0.01$). Negotiations and three-year Monetary Union show no significant interactions. Overall, Model 2 supports partially H4: the event–lending associations are predominantly conditional on country-level conditions — GDP growth, inflation, cross-border flows, the policy rate and the institutional environment — with bank-level interactions at most secondary. These are exploratory conditional associations, not identified mechanisms.

Reading across both sets of **Model 3** results, the evidence on country-group heterogeneity is nuanced and asymmetric. Appendix 9 reports the results of Model 3, which examines whether the association of EU integration events with bank lending growth differs systematically between new member states and Western Balkan candidate countries. The specification follows Equation (3), augmenting the baseline controls with an integration event dummy and its interaction with a new member (CEE) group indicator, with Western Balkan countries serving as the baseline reference group. A positive and significant interaction coefficient (CEEvsWB) indicates that the association between the integration event and lending growth is stronger — or less negative — in CEE relative to WB countries. The results provide support for H5, with statistically significant heterogeneity emerging primarily at the three- and five-year post-event windows and for the Widening and aggregate event categories (Appendix 9).

H5 is supported most clearly for aggregate

Table 7. Results of the Model 2 regressions – Part 2

EU Event: statistically significant EU integration events in Model 1 (Table 5).

Growth of Gross Loans	EUCandidate5	EUNegotiations5	EUMembership3	EUMembership5	EUMonetaryU1	EUMonetaryU3
Real GDP Growth	0.720***	0.679***	0.684***	0.647***	0.693***	0.693***
	(0.074)	(0.074)	(0.075)	(0.074)	(0.073)	(0.075)
Inflation - CPI	-35.991**	-36.188**	-32.284**	-39.524**	-34.906**	-37.137**
	(15.591)	(16.278)	(15.885)	(15.529)	(15.539)	(15.576)
Monetary Policy	0.502**	0.485**	0.405*	0.415*	0.469**	0.464**
	(0.203)	(0.203)	(0.212)	(0.214)	(0.202)	(0.199)
Net Financial Account Growth	-0.036***	-0.037***	-0.035***	-0.034***	-0.037***	-0.041***
	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
Institutional Environment	-0.582***	-0.546***	-0.548***	-0.481***	-0.548***	-0.583***
	(0.129)	(0.134)	(0.125)	(0.130)	(0.123)	(0.124)
L. NPL Ratio	-0.319***	-0.321***	-0.337***	-0.336***	-0.316***	-0.319***
	(0.049)	(0.050)	(0.050)	(0.049)	(0.048)	(0.049)
L. Equity Ratio	0.229**	0.230**	0.230**	0.233**	0.222**	0.219**
	(0.094)	(0.096)	(0.094)	(0.095)	(0.093)	(0.094)
L. Liquidity Ratio	0.180***	0.170***	0.178***	0.178***	0.175***	0.176***
	(0.031)	(0.031)	(0.031)	(0.031)	(0.031)	(0.031)
L. ROAE Ratio	0.114***	0.112***	0.109***	0.111***	0.116***	0.112***
	(0.027)	(0.027)	(0.028)	(0.028)	(0.027)	(0.027)
EU Integration Event	18.426	-13.046	-42.654	-19.606	-308.382	-37.778
	(33.723)	(23.321)	(46.037)	(33.578)	(325.450)	(35.096)
GDP x EU Event	-0.470	0.556	0.756*	1.369***	19.536	0.251
	(0.692)	(0.381)	(0.427)	(0.401)	(13.179)	(0.604)
Inflation x EU Event	103.964	41.543	95.888	143.121***		193.814
	(110.177)	(60.819)	(72.133)	(49.000)		(134.550)
NFA Growth x EU Event	-0.843***	0.321	0.344	0.165	10.772	-0.125
	(0.210)	(0.504)	(0.529)	(0.547)	(8.093)	(0.570)
Monetary Policy x EU Event	-0.795	-0.152	0.259	0.390	0.594	1.975
	(1.036)	(0.613)	(0.578)	(0.515)	(3.790)	(3.475)
Inst. Env. x EU Event	-0.305	0.163	0.630	0.242	3.312	0.514
	(0.522)	(0.372)	(0.707)	(0.512)	(3.813)	(0.514)
L. NPL x EU Event	-0.022	0.011	0.209*	0.079	-0.642	0.122
	(0.131)	(0.151)	(0.113)	(0.172)	(0.508)	(0.256)
L. Equity x EU Event	-0.074	-0.131	-0.173	-0.103	0.744*	0.003
	(0.136)	(0.158)	(0.278)	(0.225)	(0.443)	(0.231)
L. Liquidity x EU Event	-0.052	0.108	-0.029	0.003	0.315*	-0.076
	(0.150)	(0.098)	(0.115)	(0.102)	(0.185)	(0.148)
L. ROAE x EU Event		0.012	0.091	-0.091	-0.247	0.082
		(0.130)	(0.104)	(0.103)	(0.454)	(0.173)
Constant	39.647***	37.489***	37.576***	33.228***	37.473***	39.846***
	(8.848)	(9.240)	(8.605)	(8.962)	(8.508)	(8.560)
Observations	5,269	5,269	5,269	5,269	5,269	5,269
R-squared	0.098	0.098	0.100	0.106	0.103	0.102
F-test	17.87	14.33	16.16	17.17	26.93	16.29
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

events and Widening, where the CEE-versus-WB interaction is positive and significant over the three- and five-year post-event windows, most robustly for Widening at five years. For Candidate status and Negotiations, it is significant only in the event-year window and negative, pointing to a weaker initial association for CEE that does not persist. On balance, CEE countries show stronger and more sustained positive lending associations than WB candidates over the medium and longer windows, consistent with deeper institutional transformation and completed accession (Mišćević and Mrak 2017; Campos, Coricelli, and Moretti 2019; Herrmann and Mihaljek 2013; European Commission 2023; Dąbrowski and Myachenkova 2018).

Appendix 10 compares new and old member states (EU-15 baseline, CEEvsEU15 interaction). Only the Deepening one-year interaction is significant (+4.47, $p<0.10$); none of the other interactions is significant. This contrasts with the new members–WB heterogeneity: new and old member countries are largely indistinguishable, the sole exception being a stronger new members association for aggregate events at five years. Since a non-significant interaction is absence of evidence rather than evidence of equivalence, this pattern is read as consistent with — not proof of — post-accession convergence. Together, the Model 3 results give partial support for H5: heterogeneity between less and more advanced stages (CEE vs. WB), but largely not between full members (CEE vs. EU-15).

5. Conclusion

The results broadly support all five hypotheses, with important nuances. **H1 is largely supported:** A number of analysed EU integration events show significant associations with the lending growth. **H2 is confirmed:** significant heterogeneity exists across event types — the Widening aggregate is not statistically significant, whereas Deepening shows positive associations over the three- and five-year windows; Membership and Monetary Union show the most robust positive associations; Negotiations shows only a weak positive association over the five-year window; Candidate status shows a significant negative association over the five-year post-event window; and Banking Union shows no significant association. **H3 is confirmed:** the associations are consistently non-uniform across the event-year, three-year and five-year post-event windows, with several coefficients insignificant in the event-year window but significant over the three- and/or five-year windows. **H4 is partially supported:** the conditional associations are concentrated in country-level interactions — GDP growth and inflation for the aggregate and Membership specifications, and the policy rate, cross-border flows and the institutional environment for Deepening — while bank-level interactions are, with isolated exceptions, not statistically significant. **H5 is partially supported:** new member states show significantly stronger positive lending associations than Western Balkan candidates, concentrated in the Widening and aggregate categories over the three- and five-year windows, while new and old EU member states are largely statistically indistinguishable — the exception being a stronger new members association for Deepening events at the event-year window.

Limitations. Several limitations remain despite the robustness analysis. First, the design is associational: although the two-step system-GMM estimation and the Benjamini–Hochberg correction reduce concerns about endogeneity and multiple testing, they do not eliminate them — and the single association that survives the dynamic-panel check, Monetary Union in the one-year post-event window, rests on AR(2) and Hansen diagnostics that are only borderline — so all results should be read as associations rather than causal effects. Second, the integration milestones are discrete points within longer, overlapping reform processes, and the three- and five-year coefficients are average associations over the respective post-event windows rather than effects occurring in a specific year. Third, because different milestones are observed for partly different groups of countries, comparisons of coefficients across event types reflect both the event and the composition of the countries experiencing it. Fourth, while a one-year pre-event lead shows no evidence of anticipatory lending, the date from which markets first anticipate an event is difficult to define, so anticipation over longer horizons cannot be fully excluded.

Fifth, the sample covers only four selected Balkan countries (Albania, Montenegro, North Macedonia and Serbia) and relies on unconsolidated annual bank statements; broadening country coverage as banking data become available would strengthen generalisability.

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Appendix 1. Number of banks and observations per country

Country	Banks	Observations
ALBANIA	12	155
AUSTRIA	112	1.150
BELGIUM	45	381
BULGARIA	19	259
CROATIA	39	516
CYPRUS	14	113
CZECH REPUBLIC	23	298
DENMARK	61	617
ESTONIA	5	63
FINLAND	17	94
FRANCE	212	2.031
GERMANY	202	2.087
GREECE	17	162
HUNGARY	31	280
IRELAND	29	239
ITALY	185	1.637
LATVIA	20	253
LITHUANIA	8	103
LUXEMBOURG	110	887
MALTA	14	140
MONTENEGRO	10	124
NETHERLANDS	30	142
NORTH MACEDONIA	9	136
POLAND	61	585
PORTUGAL	37	410
ROMANIA	25	328
SERBIA	33	386
SLOVAKIA	13	161
SLOVENIA	19	218
SPAIN	88	661
SWEDEN	22	243
TOTAL:	**1.522**	**14.859**
Summary by groups of countries		
Old Europe (EU before 2004 enlargement)	1.167	10.741
New EU members (2004, 2007 and 2013)	291	3.317
WB candidate countries	64	801
TOTAL:	**1.522**	**14.859**

Source: authors' compilation from FitchConnect. Thousands separated by a point.

Appendix 2. Correlation matrix of the regression variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) Growth of Gross Loans	1.000									
(2) Real GDP Growth	0.129	1.000								
(3) Inflation (CPI)	0.100	0.195	1.000							
(4) Monetary Policy	0.131	0.060	0.529	1.000						
(5) NFA Growth	−0.023	0.012	0.025	0.041	1.000					
(6) Institutional Environment	−0.034	0.136	0.099	−0.240	0.033	1.000				
(7) NPL Ratio	−0.238	−0.045	−0.102	−0.016	0.068	−0.134	1.000			
(8) Equity Ratio	−0.051	0.019	0.031	0.036	0.014	−0.013	0.110	1.000		
(9) Liquidity Ratio	−0.033	0.055	0.034	0.019	−0.036	0.064	0.028	0.055	1.000	
(10) ROAE	0.168	0.144	0.108	0.075	−0.031	0.044	−0.325	−0.062	0.022	1.000

Dependent variable: growth of gross loans. Variables (2)–(10) as defined in Table 3. Strongest inter-regressor correlation: Inflation × Monetary Policy (0.529). Source: authors' calculations.

Appendix 3. EU integration events significant in Model 1 and used as factors in Model 2

EU integration events used as factors in Model 2	Model 1 results	
	Direction	Level of significance
EUEvent3	Positive	p<0.01
EUEvent5	Positive	p<0.10
EUEventD3	Positive	p<0.05
EUEventD5	Positive	p<0.10
EUCandidate5	Negative	p<0.05
EUNegotiations5	Positive	p<0.10
EUMembership3	Positive	p<0.10
EUMembership5	Positive	p<0.01
EUMonetaryU1	Positive	p<0.01
EUMonetaryU3	Positive	p<0.01

Source: authors' estimations. Significance from the Model 1 event coefficients (Table 5). All ten events are carried into Model 2 (Tables 6 and 7).

Appendix 4. Robustness of the Model 1 event estimates across alternative specifications

EU integration event	Benchmark (N=5,269)	Contemporaneous (N=6,902)	Crisis/COVID – event (N=5,269)	Crisis/COVID – ×Crisis	NPL-omitted (N=12,088)	Country-clustered (N=5,269)
All EU events 1y	1.005	0.379	1.029	-1.743	0.954	1.005
	(0.729)	(0.737)	(0.734)	(6.041)	(0.604)	(0.834)
All EU events 3y	1.518***	1.487***	1.556***	-0.659	0.817*	1.518***
	(0.536)	(0.570)	(0.553)	(1.961)	(0.429)	(0.523)
All EU events 5y	1.003*	1.045*	1.107**	-1.111	0.501	1.003*
	(0.535)	(0.550)	(0.542)	(1.481)	(0.402)	(0.567)
Widening 1y	0.119	-0.346	0.363	-21.666***	1.376	0.119
	(1.387)	(1.592)	(1.385)	(1.444)	(1.171)	(1.713)
Widening 3y	1.569	2.658**	1.579	0.491	3.054***	1.569
	(1.061)	(1.157)	(1.061)	(1.757)	(1.056)	(1.467)
Widening 5y	1.862	3.773***	2.176*	-1.165	3.747***	1.862
	(1.134)	(1.170)	(1.203)	(1.825)	(1.054)	(2.155)
Deepening 1y	1.333	0.536	1.108	3.695	0.885	1.333
	(0.866)	(0.784)	(0.861)	(5.116)	(0.686)	(0.951)
Deepening 3y	1.338**	0.882	1.374**	-0.474	0.084	1.338***
	(0.583)	(0.568)	(0.610)	(2.223)	(0.426)	(0.395)
Deepening 5y	0.920*	0.126	0.993*	-1.064	-0.278	0.920**
	(0.555)	(0.531)	(0.574)	(1.888)	(0.386)	(0.339)
Candidate 1y	-2.421	-1.754	-1.419	-19.961***	0.947	-2.421
	(2.965)	(2.379)	(2.938)	(2.976)	(1.867)	(2.072)
Candidate 3y	-1.238	-1.368	-0.915	-19.975***	-0.789	-1.238
	(1.644)	(1.651)	(1.647)	(1.787)	(1.600)	(1.574)
Candidate 5y	-3.301**	-3.801**	-2.685*	-3.459	-3.684**	-3.301***
	(1.533)	(1.526)	(1.598)	(4.998)	(1.525)	(0.779)
Negotiations 1y	1.020	-3.153	0.999		-0.525	1.020
	(2.089)	(2.344)	(2.090)		(1.602)	(3.226)
Negotiations 3y	2.001	0.560	1.890		1.293	2.001
	(1.586)	(1.597)	(1.580)	-4.670	(1.414)	(2.074)
Negotiations 5y	2.113*	2.649*	2.588*		2.553**	2.113
	(1.241)	(1.351)	(1.324)	(3.964)	(1.209)	(1.830)
Membership 1y	0.941	3.879	0.936		2.763	0.941
	(2.447)	(2.805)	(2.449)	-1.865	(1.902)	(2.018)
Membership 3y	3.100*	6.089***	3.357*		6.017***	3.100
	(1.666)	(1.451)	(1.870)	(3.707)	(1.349)	(1.868)
Membership 5y	4.318***	6.814***	3.791**	0.717	7.032***	4.318
	(1.387)	(1.229)	(1.813)	(2.609)	(1.228)	(2.566)
Monetary Union 1y	10.534***	10.546***	11.409**	-5.452	10.378***	10.534*
	(3.908)	(3.218)	(4.442)	(4.888)	(2.865)	(5.966)
Monetary Union 3y	4.013***	4.414***	4.795***	-3.377	1.450	4.013*
	(1.432)	(1.130)	(1.736)	(2.890)	(0.898)	(2.004)
Monetary Union 5y	1.142	2.896***	1.381	-1.686	0.071	1.142
	(1.007)	(0.903)	(1.112)	(2.093)	(0.674)	(1.034)
Banking Union 1y	-0.333	-1.033	-0.640	5.151	-0.297	-0.333
	(0.865)	(0.766)	(0.842)	(6.673)	(0.702)	(1.245)
Banking Union 3y	0.471	-0.327	0.402	0.003	-0.386	0.471
	(0.608)	(0.619)	(0.614)	(4.182)	(0.484)	(0.676)
Banking Union 5y	0.863	-0.882	0.861	0.454	-0.451	0.863
	(0.644)	(0.602)	(0.647)	(4.136)	(0.488)	(0.620)

**** p<0.01, ** p<0.05, * p<0.10; SE in parentheses. Each cell is the event coefficient from a separate regression on the common sample. Benchmark = main Model 1. Contemporaneous = contemporaneous bank controls. Crisis/COVID = benchmark plus a crisis dummy (GFC 2008–2011, COVID 2020–2021) and its event interactions. NPL-omitted = benchmark dropping the NPL control. Full specifications in Appendices 4a–4c. Source: authors' estimations. Country-clustered = Model 1 re-estimated with standard errors clustered by country (31 clusters), the level at which the integration events vary.*

Appendix 4a. Robustness – contemporaneous bank controls

Growth of Gross Loans	All EU integration events			Widening & Deepening			Individual events		
	1y	3y	5y	1y	3y	5y	1y	3y	5y
Real GDP Growth	0.552***	0.532***	0.531***	0.553***	0.536***	0.535***	0.548***	0.524***	0.531***
	(0.063)	(0.063)	(0.063)	(0.063)	(0.062)	(0.062)	(0.063)	(0.062)	(0.061)
Inflation – CPI	-8.121	-6.669	-6.978	-7.922	-7.962	-8.066	-7.788	-4.529	-8.909
	(9.685)	(9.733)	(9.654)	(9.768)	(9.529)	(9.265)	(9.918)	(10.065)	(9.326)
Monetary Policy	0.597***	0.588***	0.604***	0.601***	0.580***	0.526***	0.582***	0.468***	0.454***
	(0.140)	(0.139)	(0.140)	(0.140)	(0.139)	(0.140)	(0.140)	(0.143)	(0.140)
Net Financial Account Growth	-0.050***	-0.051***	-0.048***	-0.050***	-0.050***	-0.047***	-0.049***	-0.050***	-0.039***
	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)
Institutional Environment	-0.921***	-0.875***	-0.877***	-0.925***	-0.868***	-0.816***	-0.946***	-0.902***	-0.859***
	(0.117)	(0.120)	(0.122)	(0.118)	(0.122)	(0.127)	(0.117)	(0.120)	(0.122)
NPL Ratio	-0.447***	-0.450***	-0.449***	-0.447***	-0.450***	-0.448***	-0.446***	-0.436***	-0.429***
	(0.042)	(0.043)	(0.043)	(0.042)	(0.043)	(0.042)	(0.042)	(0.042)	(0.042)
Equity Ratio	-0.159***	-0.156**	-0.159***	-0.159***	-0.154**	-0.153**	-0.155***	-0.155**	-0.149**
	(0.060)	(0.060)	(0.060)	(0.060)	(0.061)	(0.060)	(0.060)	(0.060)	(0.060)
Liquidity Ratio	-0.084***	-0.083***	-0.083***	-0.083***	-0.086***	-0.086***	-0.085***	-0.090***	-0.091***
	(0.027)	(0.027)	(0.027)	(0.027)	(0.028)	(0.027)	(0.027)	(0.028)	(0.028)
ROAE	0.010**	0.010**	0.010**	0.010**	0.010**	0.010**	0.010**	0.010**	0.010**
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
All EU events event	0.379	1.487***	1.045*						
	(0.737)	(0.570)	(0.550)						
Widening event				-0.346	2.658**	3.773***			
				(1.592)	(1.157)	(1.170)			
Deepening event				0.536	0.882	0.126			
				(0.784)	(0.568)	(0.531)			
Candidate event							-1.754	-1.368	-3.801**
							(2.379)	(1.651)	(1.526)
Negotiations event							-3.153	0.560	2.649*
							(2.344)	(1.597)	(1.351)
Membership event							3.879	6.089***	6.814***
							(2.805)	(1.451)	(1.229)
Monetary Union event							10.546***	4.414***	2.896***
							(3.218)	(1.130)	(0.903)
Banking Union event							-1.033	-0.327	-0.882
							(0.766)	(0.619)	(0.602)
Constant	74.385***	71.064***	71.181***	74.645***	70.693***	67.194***	76.051***	72.933***	70.007***
	(8.062)	(8.228)	(8.377)	(8.074)	(8.374)	(8.742)	(8.044)	(8.227)	(8.343)
Observations	6902	6902	6902	6902	6902	6902	6902	6902	6902
R-squared	0.111	0.113	0.112	0.111	0.113	0.115	0.115	0.118	0.123
F-test	28.97	29.03	28.99	26.30	26.80	28.29	23.42	24.74	28.58
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**** p<0.01, ** p<0.05, * p<0.10; SE in parentheses. Bank fixed effects; SE clustered by bank. Bank controls enter contemporaneously. Source: authors' estimations.*

Appendix 4b. Robustness – crisis / COVID controls and interactions

Growth of Gross Loans	All EU integration events			Widening & Deepening			Individual events		
	1y	3y	5y	1y	3y	5y	1y	3y	5y
Real GDP Growth	0.718***	0.701***	0.696***	0.726***	0.705***	0.688***	0.722***	0.687***	0.686***
	(0.073)	(0.074)	(0.074)	(0.073)	(0.073)	(0.073)	(0.074)	(0.073)	(0.074)
Inflation – CPI	-31.236**	-27.294*	-29.019*	-31.877**	-29.441*	-28.977*	-34.034**	-25.323	-30.573**
	(15.260)	(15.406)	(15.380)	(15.312)	(15.313)	(15.283)	(15.348)	(16.031)	(15.453)
Monetary Policy	0.450**	0.424**	0.466**	0.464**	0.432**	0.433**	0.480**	0.370*	0.477**
	(0.199)	(0.199)	(0.199)	(0.199)	(0.200)	(0.200)	(0.203)	(0.209)	(0.200)
Net Financial Account Growth	-0.037***	-0.038***	-0.033**	-0.037***	-0.038***	-0.032**	-0.037***	-0.042***	-0.031**
	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.014)
Institutional Environment	-0.562***	-0.531***	-0.529***	-0.570***	-0.531***	-0.498***	-0.576***	-0.567***	-0.525***
	(0.123)	(0.124)	(0.129)	(0.123)	(0.130)	(0.135)	(0.123)	(0.126)	(0.131)
L. NPL Ratio									
L. Equity Ratio									
L. Liquidity Ratio									
L. ROAE									
All EU events event	1.029	1.556***	1.107**						
	(0.734)	(0.553)	(0.542)						
× Crisis	-1.743	-0.659	-1.111						
	(6.041)	(1.961)	(1.481)						
Widening event				0.363	1.579	2.176*			
				(1.385)	(1.061)	(1.203)			
× Crisis				-21.666***	0.491	-1.165			
				(1.444)	(1.757)	(1.825)			
Deepening event				1.108	1.374**	0.993*			
				(0.861)	(0.610)	(0.574)			
× Crisis				3.695	-0.474	-1.064			
				(5.116)	(2.223)	(1.888)			
Candidate event							-1.419	-0.915	-2.685*
							(2.938)	(1.647)	(1.598)
× Crisis							-19.961***	-19.975***	-3.459
							(2.976)	(1.787)	(4.998)
Negotiations event							0.999	1.890	2.588*
							(2.090)	(1.580)	(1.324)
× Crisis									-4.670
									(3.964)
Membership event							0.936	3.357*	3.791**
							(2.449)	(1.870)	(1.813)
× Crisis								-1.865	0.717
								(3.707)	(2.609)
Monetary Union event							11.409**	4.795***	1.381
							(4.442)	(1.736)	(1.112)
× Crisis							-5.452	-3.377	-1.686
							(4.888)	(2.890)	(2.093)

Growth of Gross Loans	All EU integration events			Widening & Deepening			Individual events		
Banking Union event							-0.640	0.402	0.861
							(0.842)	(0.614)	(0.647)
× Crisis							5.151	0.003	0.454
							(6.673)	(4.182)	(4.136)
Constant	38.226***	35.958***	35.883***	38.768***	36.024***	33.854***	39.308***	38.492***	35.552***
	(8.518)	(8.610)	(8.942)	(8.510)	(8.933)	(9.288)	(8.512)	(8.667)	(8.981)
Observations	5269	5269	5269	5269	5269	5269	5269	5269	5269
R-squared	0.096	0.097	0.097	0.097	0.097	0.098	0.100	0.100	0.102
F-test	22.58	22.78	23.22	n/a	20.18	20.22	n/a	n/a	15.89
Prob > F	0.000	0.000	0.000	n/a	0.000	0.000	n/a	n/a	0.000

**** p<0.01, ** p<0.05, * p<0.10; SE in parentheses. Bank fixed effects; SE clustered by bank; N = 5,269. Each event is interacted with a crisis dummy (GFC 2008–2011, COVID 2020–2021); × Crisis rows report the interaction.*

Source: authors' estimations.

Appendix 4c. Robustness – NPL control omitted

Growth of Gross Loans	All EU integration events			Widening & Deepening			Individual events		
	1y	3y	5y	1y	3y	5y	1y	3y	5y
Real GDP Growth	0.631***	0.622***	0.623***	0.633***	0.620***	0.617***	0.629***	0.611***	0.606***
	(0.052)	(0.052)	(0.052)	(0.052)	(0.051)	(0.051)	(0.052)	(0.050)	(0.050)
Inflation – CPI	12.373	13.131	12.903	12.256	12.050	11.691	12.184	13.866	10.882
	(10.092)	(10.189)	(10.147)	(10.087)	(10.020)	(9.816)	(10.129)	(10.281)	(9.974)
Monetary Policy	0.676***	0.677***	0.677***	0.675***	0.657***	0.592***	0.656***	0.594***	0.562***
	(0.137)	(0.137)	(0.137)	(0.136)	(0.136)	(0.136)	(0.137)	(0.139)	(0.136)
Net Financial Account Growth	-0.060***	-0.060***	-0.059***	-0.060***	-0.058***	-0.057***	-0.059***	-0.058***	-0.055***
	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)
Institutional Environment	-0.538***	-0.523***	-0.524***	-0.538***	-0.504***	-0.473***	-0.548***	-0.517***	-0.493***
	(0.087)	(0.088)	(0.089)	(0.087)	(0.089)	(0.092)	(0.087)	(0.089)	(0.091)
L. Equity Ratio	0.069*	0.069*	0.069*	0.069*	0.069*	0.070*	0.070*	0.074*	0.079**
	(0.039)	(0.039)	(0.039)	(0.039)	(0.039)	(0.039)	(0.039)	(0.039)	(0.039)
L. Liquidity Ratio	0.166***	0.166***	0.166***	0.166***	0.164***	0.162***	0.163***	0.163***	0.165***
	(0.022)	(0.022)	(0.022)	(0.022)	(0.022)	(0.022)	(0.022)	(0.022)	(0.022)
L. ROAE	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
All EU events event	0.954	0.817*	0.501						
	(0.604)	(0.429)	(0.402)						
Widening event				1.376	3.054***	3.747***			
				(1.171)	(1.056)	(1.054)			
Deepening event				0.885	0.084	-0.278			
				(0.686)	(0.426)	(0.386)			
Candidate event							0.947	-0.789	-3.684**
							(1.867)	(1.600)	(1.525)
Negotiations event							-0.525	1.293	2.553**
							(1.602)	(1.414)	(1.209)
Membership event							2.763	6.017***	7.032***
							(1.902)	(1.349)	(1.228)
Monetary Union event							10.378***	1.450	0.071
							(2.865)	(0.898)	(0.674)
Banking Union event							-0.297	-0.386	-0.451
							(0.702)	(0.484)	(0.488)
Constant	35.772***	34.610***	34.713***	35.770***	33.468***	31.433***	36.581***	34.317***	32.682***
	(6.045)	(6.164)	(6.215)	(6.048)	(6.178)	(6.374)	(6.021)	(6.167)	(6.303)
Observations	12088	12088	12088	12088	12088	12088	12088	12088	12088
R-squared	0.058	0.058	0.058	0.058	0.059	0.060	0.059	0.061	0.065
F-test	38.10	38.14	38.08	34.33	35.00	35.89	29.83	28.40	30.46
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**** p<0.01, ** p<0.05, * p<0.10; SE in parentheses. Bank fixed effects; SE clustered by bank. NPL control omitted (enlarges the sample). Source: authors' estimations.*

Appendix 4d. Robustness – standard errors clustered by country (full specification)

Growth of Gross Loans	All EU integration events			Widening & Deepening			Individual events		
	1y	3y	5y	1y	3y	5y	1y	3y	5y
Real GDP Growth	0.717***	0.704***	0.705***	0.719***	0.704***	0.699***	0.711***	0.697***	0.695***
	(0.077)	(0.076)	(0.080)	(0.078)	(0.075)	(0.081)	(0.081)	(0.076)	(0.085)
Inflation – CPI	-31.193	-27.362	-29.255	-31.218	-29.387	-29.777	-33.280	-25.693	-29.303
	(20.799)	(21.106)	(20.433)	(21.022)	(20.270)	(19.180)	(21.261)	(21.331)	(21.490)
Monetary Policy	0.449*	0.424*	0.456*	0.461*	0.437*	0.436*	0.474*	0.380	0.435*
	(0.229)	(0.226)	(0.233)	(0.228)	(0.227)	(0.218)	(0.239)	(0.239)	(0.254)
Net Financial Account Growth	-0.037**	-0.038**	-0.033	-0.037**	-0.038**	-0.032	-0.037**	-0.041***	-0.032
	(0.016)	(0.016)	(0.020)	(0.017)	(0.015)	(0.020)	(0.016)	(0.014)	(0.022)
Institutional Environment	-0.562***	-0.532***	-0.524***	-0.565***	-0.539***	-0.501***	-0.567***	-0.565***	-0.515***
	(0.121)	(0.120)	(0.125)	(0.123)	(0.126)	(0.151)	(0.127)	(0.129)	(0.165)
L. NPL Ratio	-0.325***	-0.332***	-0.330***	-0.324***	-0.331***	-0.331***	-0.320***	-0.320***	-0.327***
	(0.040)	(0.040)	(0.041)	(0.040)	(0.040)	(0.041)	(0.039)	(0.040)	(0.037)
L. Equity Ratio	0.226***	0.229***	0.226***	0.226***	0.228***	0.226***	0.228***	0.232***	0.235***
	(0.053)	(0.053)	(0.054)	(0.053)	(0.053)	(0.054)	(0.053)	(0.052)	(0.051)
L. Liquidity Ratio	0.179***	0.179***	0.178***	0.178***	0.178***	0.177***	0.175***	0.171***	0.177***
	(0.037)	(0.037)	(0.038)	(0.037)	(0.037)	(0.038)	(0.036)	(0.037)	(0.039)
L. ROAE	0.115***	0.113***	0.112***	0.115***	0.113***	0.110***	0.113***	0.110***	0.106***
	(0.024)	(0.024)	(0.024)	(0.024)	(0.024)	(0.024)	(0.024)	(0.024)	(0.023)
All EU integration events event	1.005	1.518***	1.003*						
	(0.834)	(0.523)	(0.567)						
Widening event				0.119	1.569	1.862			
				(1.713)	(1.467)	(2.155)			
Deepening event				1.333	1.338***	0.920**			
				(0.951)	(0.395)	(0.339)			
Candidate							-2.421	-1.238	-3.301***
							(2.072)	(1.574)	(0.779)
Negotiations							1.020	2.001	2.113
							(3.226)	(2.074)	(1.830)
Membership							0.941	3.100	4.318
							(2.018)	(1.868)	(2.566)
Monetary Union							10.534*	4.013*	1.142
							(5.966)	(2.004)	(1.034)
Banking Union							-0.333	0.471	0.863
							(1.245)	(0.676)	(0.620)
Constant	38.245***	35.994***	35.521***	38.403***	36.537***	33.971***	38.652***	38.251***	34.740***
	(8.407)	(8.343)	(8.598)	(8.489)	(8.637)	(10.098)	(8.673)	(8.668)	(10.661)
Observations	5269	5269	5269	5269	5269	5269	5269	5269	5269
R-squared	0.096	0.097	0.097	0.096	0.097	0.097	0.099	0.100	0.101
F-test	48.72	52.27	49.83	47.59	51.55	48.28	43.17	37.76	45.33
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**** p<0.01, ** p<0.05, * p<0.10; standard errors clustered by country (31 clusters) in parentheses. Dependent variable: growth of gross loans; sample 2000–2023 (N = 5,269). Bank and year fixed effects; one-period-lagged bank controls. Coefficients are identical to the benchmark Model 1 (Table 5); only the standard errors and significance differ. Source: authors' estimations.*

Appendix 5. Benjamini–Hochberg (FDR) correction of the Model 1 event coefficients

Family: all 24 principal event dummies from Table 5 (All events ×3, Widening & Deepening ×6, Individual events ×15). Raw p-values from the reported specification (bank FE, SE clustered by bank). BH q = adjusted p-value controlling the false discovery rate.

Rank	Event (horizon)	Granularity	Coefficient	Raw p-value	Raw sig.	BH q-value	Survives FDR 5%
1	Membership 5y	Individual events	4.304	0.002	***	0.04	Yes
2	All EU events 3y	All events	1.518	0.005	***	0.04	Yes
3	Monetary Union 3y	Individual events	4.009	0.005	***	0.04	Yes
4	Monetary Union 1y	Individual events	10.534	0.007	***	0.042	Yes
5	Deepening 3y	Widening & Deepening	1.337	0.022	**	0.106	
6	Candidate 5y	Individual events	-3.275	0.032	**	0.128	
7	All EU events 5y	All events	1.003	0.061	*	0.192	
8	Membership 3y	Individual events	3.086	0.064	*	0.192	
9	Negotiations 5y	Individual events	2.026	0.097	*	0.22	
10	Deepening 5y	Widening & Deepening	0.92	0.098	*	0.22	
11	Widening 5y	Widening & Deepening	1.862	0.101	ns	0.22	
12	Deepening 1y	Widening & Deepening	1.333	0.124	ns	0.248	
13	Widening 3y	Widening & Deepening	1.521	0.146	ns	0.27	
14	All EU events 1y	All events	1.005	0.168	ns	0.288	
15	Banking Union 5y	Individual events	0.864	0.18	ns	0.288	
16	Negotiations 3y	Individual events	1.885	0.23	ns	0.345	
17	Monetary Union 5y	Individual events	1.139	0.259	ns	0.366	
18	Candidate 1y	Individual events	-2.421	0.414	ns	0.552	
19	Banking Union 3y	Individual events	0.471	0.439	ns	0.554	
20	Candidate 3y	Individual events	-1.213	0.462	ns	0.554	
21	Negotiations 1y	Individual events	1.02	0.626	ns	0.715	
22	Banking Union 1y	Individual events	-0.333	0.7	ns	0.731	
23	Membership 1y	Individual events	0.941	0.701	ns	0.731	
24	Widening 1y	Widening & Deepening	0.119	0.932	ns	0.932	

**** p<0.01, ** p<0.05, * p<0.10. Of the 24 coefficients, 10 are significant at conventional levels but only the four shaded rows survive FDR control at 5%; none survive additionally at 10% (next q = 0.106). q-values computed from 3-decimal p-values; recompute from full precision in Stata for the final version.*

Reporting sentence: "Applying the Benjamini–Hochberg procedure to the 24 principal Model 1 event coefficients and controlling the false discovery rate at 5%, four findings remain significant – Monetary Union (1- and 3-year), aggregate EU events (3-year), and Membership (5-year). The remaining conventionally significant coefficients do not survive the correction and are interpreted as suggestive."

Appendix 6. Dynamic panel (two-step system-GMM) robustness check for the FDR-surviving Model 1 events

	Two-step system GMM (Windmeijer-corrected SE)			
Growth of Gross Loans	All EU events (3y)	Membership (5y)	Monetary Union (1y)	Monetary Union (3y)
L. Growth of Gross Loans	**0.606****	**0.608****	**0.609****	**0.611****
	(0.245)	(0.250)	(0.245)	(0.246)
EU integration event	**0.476**	**0.080**	**11.921****	**1.394**
	(0.854)	(1.385)	(4.682)	(2.011)
Real GDP Growth	0.045	0.047	0.037	0.037
	(0.229)	(0.225)	(0.229)	(0.230)
Inflation (CPI)	8.923	9.148	5.621	8.447
	(25.766)	(25.720)	(25.922)	(25.726)
Monetary Policy	0.388	0.391	0.404	0.399
	(0.402)	(0.396)	(0.401)	(0.403)
Net Financial Account Growth	-0.026	-0.027	-0.028	-0.027
	(0.023)	(0.023)	(0.023)	(0.023)
Institutional Environment	-0.058	-0.062	-0.060	-0.063
	(0.065)	(0.063)	(0.062)	(0.062)
L. NPL Ratio	-0.268**	-0.268**	-0.257**	-0.263**
	(0.127)	(0.127)	(0.128)	(0.127)
L. Equity Ratio	-0.145	-0.149	-0.132	-0.138
	(0.470)	(0.471)	(0.471)	(0.473)
L. Liquidity Ratio	0.156	0.152	0.151	0.154
	(0.142)	(0.142)	(0.144)	(0.143)
L. ROAE	-0.072	-0.071	-0.081	-0.075
	(0.207)	(0.210)	(0.207)	(0.208)
Constant	6.963	7.657	6.943	7.479
	(8.536)	(8.336)	(8.432)	(8.429)
Year dummies	Yes	Yes	Yes	Yes
Diagnostics				
Observations	5269	5269	5269	5269
Number of banks	718	718	718	718
Number of instruments	41	41	41	41
AR(1) test (p-value)	0.000	0.000	0.000	0.000
AR(2) test (p-value)	0.077	0.078	0.085	0.077
Hansen J (p-value)	0.082	0.082	0.083	0.084
Sargan (p-value)	0.001	0.001	0.001	0.001
Diff-in-Hansen, level instr. (p-value)	0.234	0.231	0.228	0.239

*Notes: *** p<0.01, ** p<0.05, * p<0.10. Standard errors in parentheses. Each column is a separate two-step system-GMM estimation (xtabond2) of the dynamic loan-growth equation, testing one FDR-surviving Model 1 event. The lagged dependent variable (lagged loan growth) is treated as endogenous and the lagged bank controls as predetermined; both are instrumented GMM-style (collapsed, lag limits 2–3), while the event dummy, macro controls and year dummies enter as standard (IV-style) instruments. AR(1)/AR(2) are the Arellano-Bond tests for serial correlation in the first-differenced residuals (AR(1) expected significant, AR(2) expected insignificant). Hansen J is the robust over-identification test; the difference-in-Hansen tests the exogeneity of the extra level instruments. Only Monetary Union (1-year) retains statistical significance under the dynamic specification.*

Appendix 7. Alternative event specifications – post-event step and one-year pre-event (lead) indicators

Growth of Gross Loans	Membership (step)	Monetary Union (step)	Candidate (pre-event lead)	Negotiations (pre-event lead)
Real GDP Growth	0.713***	0.722***	0.716***	0.718***
	(0.073)	(0.072)	(0.073)	(0.073)
Inflation – CPI	-28.364*	-32.453**	-31.654**	-30.723**
	(15.395)	(15.061)	(15.314)	(15.508)
Monetary Policy	0.360*	0.469**	0.457**	0.443**
	(0.203)	(0.195)	(0.200)	(0.201)
Net Financial Account Growth	-0.035***	-0.037***	-0.036***	-0.036***
	(0.013)	(0.013)	(0.013)	(0.013)
Institutional Environment	-0.524***	-0.590***	-0.573***	-0.577***
	(0.123)	(0.120)	(0.122)	(0.123)
L. NPL Ratio	-0.324***	-0.325***	-0.321***	-0.323***
	(0.049)	(0.048)	(0.049)	(0.049)
L. Equity Ratio	0.224**	0.223**	0.226**	0.224**
	(0.093)	(0.094)	(0.093)	(0.093)
L. Liquidity Ratio	0.171***	0.178***	0.179***	0.178***
	(0.031)	(0.030)	(0.030)	(0.030)
L. ROAE	0.113***	0.113***	0.115***	0.114***
	(0.027)	(0.027)	(0.027)	(0.027)
Alternative event indicator	-2.853	2.071	-2.481	-0.775
	(1.808)	(4.107)	(2.262)	(1.678)
Constant	38.558***	39.180***	39.030***	39.283***
	(8.399)	(8.394)	(8.459)	(8.505)
Observations	5269	5269	5269	5269
R-squared	0.096	0.096	0.096	0.096
F-test	25.10	25.68	24.88	24.79
Prob > F	0.000	0.000	0.000	0.000

**** p<0.01, ** p<0.05, * p<0.10; standard errors in parentheses. Dependent variable: growth of gross loans; sample 2000–2023 (N = 5,269 bank-year observations). Bank fixed effects and one-period-lagged bank controls; standard errors clustered by bank. The "alternative event indicator" row reports, for the Membership and Monetary Union columns, a post-event step dummy equal to one from the formal event year onwards; and for the Candidate and Negotiations columns, a one-year pre-event (lead) dummy equal to one in the year immediately preceding the formal milestone. None is statistically significant. Source: authors' estimations.*

Appendix 8. Master event-coding sheet (EU integration events, dates, annual codes and sources)

Baseline rule: the formal, legally or operationally effective milestone is used for every country and event category. Annual code = calendar year containing the exact date. Political-decision (anticipation) dates are recorded in Notes only and are never mixed into the baseline variable.

Country	Event category	Dimension	Exact date	Annual code	Operational definition	Primary source	Source URL	Notes / corrections
Croatia	Candidate status	Widening	European Council, 17–18 June 2004	2004	Date on which candidate status was formally granted by the Council or European Council.	European Parliament, "The Enlargement of the Union" (EU Fact Sheets); European Council / Council conclusions	https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union	
North Macedonia	Candidate status	Widening	European Council, 15–16 December 2005	2005	Date on which candidate status was formally granted by the Council or European Council.	European Parliament, "The Enlargement of the Union" (EU Fact Sheets); European Council / Council conclusions	https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union	
Montenegro	Candidate status	Widening	European Council, 16–17 December 2010	2010	Date on which candidate status was formally granted by the Council or European Council.	European Parliament, "The Enlargement of the Union" (EU Fact Sheets); European Council / Council conclusions	https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union	
Serbia	Candidate status	Widening	European Council, 1 March 2012	2012	Date on which candidate status was formally granted by the Council or European Council.	European Parliament, "The Enlargement of the Union" (EU Fact Sheets); European Council / Council conclusions	https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union	
Albania	Candidate status	Widening	European Council, 26–27 June 2014 (Council, 24 June 2014)	2014	Date on which candidate status was formally granted by the Council or European Council.	European Parliament, "The Enlargement of the Union" (EU Fact Sheets); European Council / Council conclusions	https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union	
Cyprus	Opening of accession negotiations	Widening	First bilateral IGCs, 31 March 1998	1998	Date of the first intergovernmental accession conference (IGC), when negotiations formally commence.	European Parliament, "The Enlargement of the Union" (EU Fact Sheets); European Council / Council conclusions	https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union	Corrected 1997→1998 (formal-IGC rule). Political decision: European Council, 12–13 Dec 1997.

Country	Event category	Dimension	Exact date	Annual code	Operational definition	Primary source	Source URL	Notes / corrections
Czech Republic	Opening of accession negotiations	Widening	First bilateral IGCs, 31 March 1998	1998	Date of the first intergovernmental accession conference (IGC), when negotiations formally commence.	European Parliament, "The Enlargement of the Union" (EU Fact Sheets); European Council / Council conclusions	https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union	Already 1998. Political decision: European Council, 12–13 Dec 1997.
Estonia	Opening of accession negotiations	Widening	First bilateral IGCs, 31 March 1998	1998	Date of the first intergovernmental accession conference (IGC), when negotiations formally commence.	European Parliament, "The Enlargement of the Union" (EU Fact Sheets); European Council / Council conclusions	https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union	Corrected 1999→1998 (formal-IGC rule). Political decision: European Council, 12–13 Dec 1997.
Hungary	Opening of accession negotiations	Widening	First bilateral IGCs, 31 March 1998	1998	Date of the first intergovernmental accession conference (IGC), when negotiations formally commence.	European Parliament, "The Enlargement of the Union" (EU Fact Sheets); European Council / Council conclusions	https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union	Already 1998. Political decision: European Council, 12–13 Dec 1997.
Poland	Opening of accession negotiations	Widening	First bilateral IGCs, 31 March 1998	1998	Date of the first intergovernmental accession conference (IGC), when negotiations formally commence.	European Parliament, "The Enlargement of the Union" (EU Fact Sheets); European Council / Council conclusions	https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union	Already 1998. Political decision: European Council, 12–13 Dec 1997.
Slovenia	Opening of accession negotiations	Widening	First bilateral IGCs, 31 March 1998	1998	Date of the first intergovernmental accession conference (IGC), when negotiations formally commence.	European Parliament, "The Enlargement of the Union" (EU Fact Sheets); European Council / Council conclusions	https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union	Already 1998. Political decision: European Council, 12–13 Dec 1997.
Bulgaria	Opening of accession negotiations	Widening	First IGCs, 15 February 2000	2000	Date of the first intergovernmental accession conference (IGC), when negotiations formally commence.	European Parliament, "The Enlargement of the Union" (EU Fact Sheets); European Council / Council conclusions	https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union	Corrected 1999→2000 (formal-IGC rule). Political decision: European Council, 10–11 Dec 1999.
Latvia	Opening of accession negotiations	Widening	First IGCs, 15 February 2000	2000	Date of the first intergovernmental accession conference (IGC), when negotiations formally commence.	European Parliament, "The Enlargement of the Union" (EU Fact Sheets); European Council / Council conclusions	https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union	Corrected 1999→2000 (formal-IGC rule). Political decision: European Council, 10–11 Dec 1999.
Lithuania	Opening of accession negotiations	Widening	First IGCs, 15 February 2000	2000	Date of the first intergovernmental accession conference (IGC), when negotiations formally commence.	European Parliament, "The Enlargement of the Union" (EU Fact Sheets); European Council / Council conclusions	https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union	Corrected 1999→2000 (formal-IGC rule). Political decision: European Council, 10–11 Dec 1999.

Country	Event category	Dimension	Exact date	Annual code	Operational definition	Primary source	Source URL	Notes / corrections
Malta	Opening of accession negotiations	Widening	First IGCs, 15 February 2000	2000	Date of the first intergovernmental accession conference (IGC), when negotiations formally commence.	European Parliament, "The Enlargement of the Union" (EU Fact Sheets); European Council / Council conclusions	https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union	Already 2000. Political decision: European Council, 10–11 Dec 1999.
Romania	Opening of accession negotiations	Widening	First IGCs, 15 February 2000	2000	Date of the first intergovernmental accession conference (IGC), when negotiations formally commence.	European Parliament, "The Enlargement of the Union" (EU Fact Sheets); European Council / Council conclusions	https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union	Corrected 1999→2000 (formal-IGC rule). Political decision: European Council, 10–11 Dec 1999.
Slovakia	Opening of accession negotiations	Widening	First IGCs, 15 February 2000	2000	Date of the first intergovernmental accession conference (IGC), when negotiations formally commence.	European Parliament, "The Enlargement of the Union" (EU Fact Sheets); European Council / Council conclusions	https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union	Corrected 1999→2000 (formal-IGC rule). Political decision: European Council, 10–11 Dec 1999.
Croatia	Opening of accession negotiations	Widening	First IGC, 3 October 2005	2005	Date of the first intergovernmental accession conference (IGC), when negotiations formally commence.	European Parliament, "The Enlargement of the Union" (EU Fact Sheets); European Council / Council conclusions	https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union	Consistent with formal-IGC rule. Conditional decision: European Council, 16–17 Dec 2004.
Montenegro	Opening of accession negotiations	Widening	First IGC, 29 June 2012	2012	Date of the first intergovernmental accession conference (IGC), when negotiations formally commence.	European Parliament, "The Enlargement of the Union" (EU Fact Sheets); European Council / Council conclusions	https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union	Consistent. Council decision 26 Jun 2012; endorsement 28–29 Jun 2012.
Serbia	Opening of accession negotiations	Widening	First IGC, 21 January 2014	2014	Date of the first intergovernmental accession conference (IGC), when negotiations formally commence.	European Parliament, "The Enlargement of the Union" (EU Fact Sheets); European Council / Council conclusions	https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union	Consistent. Political decision: European Council, 28 Jun 2013.
Albania	Opening of accession negotiations	Widening	First IGC, 19 July 2022	2022	Date of the first intergovernmental accession conference (IGC), when negotiations formally commence.	European Parliament, "The Enlargement of the Union" (EU Fact Sheets); European Council / Council conclusions	https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union	Consistent. Council decision 25 Mar 2020; endorsement 26 Mar 2020.
North Macedonia	Opening of accession negotiations	Widening	First IGC, 19 July 2022	2022	Date of the first intergovernmental accession conference (IGC), when negotiations formally commence.	European Parliament, "The Enlargement of the Union" (EU Fact Sheets); European Council / Council conclusions	https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union	Consistent. Council decision 25 Mar 2020; endorsement 26 Mar 2020.

Country	Event category	Dimension	Exact date	Annual code	Operational definition	Primary source	Source URL	Notes / corrections
Cyprus	EU membership	Widening	1 May 2004	2004	Effective date of accession under the accession treaty.	European Union, "EU enlargement" (accession treaties); Council enlargement chronology	https://european-union.europa.eu/principles-countries-history/eu-enlargement_en	2004 enlargement.
Czech Republic	EU membership	Widening	1 May 2004	2004	Effective date of accession under the accession treaty.	European Union, "EU enlargement" (accession treaties); Council enlargement chronology	https://european-union.europa.eu/principles-countries-history/eu-enlargement_en	2004 enlargement.
Estonia	EU membership	Widening	1 May 2004	2004	Effective date of accession under the accession treaty.	European Union, "EU enlargement" (accession treaties); Council enlargement chronology	https://european-union.europa.eu/principles-countries-history/eu-enlargement_en	2004 enlargement.
Hungary	EU membership	Widening	1 May 2004	2004	Effective date of accession under the accession treaty.	European Union, "EU enlargement" (accession treaties); Council enlargement chronology	https://european-union.europa.eu/principles-countries-history/eu-enlargement_en	2004 enlargement.
Latvia	EU membership	Widening	1 May 2004	2004	Effective date of accession under the accession treaty.	European Union, "EU enlargement" (accession treaties); Council enlargement chronology	https://european-union.europa.eu/principles-countries-history/eu-enlargement_en	2004 enlargement.
Lithuania	EU membership	Widening	1 May 2004	2004	Effective date of accession under the accession treaty.	European Union, "EU enlargement" (accession treaties); Council enlargement chronology	https://european-union.europa.eu/principles-countries-history/eu-enlargement_en	2004 enlargement.
Malta	EU membership	Widening	1 May 2004	2004	Effective date of accession under the accession treaty.	European Union, "EU enlargement" (accession treaties); Council enlargement chronology	https://european-union.europa.eu/principles-countries-history/eu-enlargement_en	2004 enlargement.
Poland	EU membership	Widening	1 May 2004	2004	Effective date of accession under the accession treaty.	European Union, "EU enlargement" (accession treaties); Council enlargement chronology	https://european-union.europa.eu/principles-countries-history/eu-enlargement_en	2004 enlargement.
Slovakia	EU membership	Widening	1 May 2004	2004	Effective date of accession under the accession treaty.	European Union, "EU enlargement" (accession treaties); Council enlargement chronology	https://european-union.europa.eu/principles-countries-history/eu-enlargement_en	2004 enlargement.
Slovenia	EU membership	Widening	1 May 2004	2004	Effective date of accession under the accession treaty.	European Union, "EU enlargement" (accession treaties); Council enlargement chronology	https://european-union.europa.eu/principles-countries-history/eu-enlargement_en	2004 enlargement.

Country	Event category	Dimension	Exact date	Annual code	Operational definition	Primary source	Source URL	Notes / corrections
Bulgaria	EU membership	Widening	1 January 2007	2007	Effective date of accession under the accession treaty.	European Union, "EU enlargement" (accession treaties); Council enlargement chronology	https://european-union.europa.eu/principles-countries-history/eu-enlargement_en	2007 enlargement.
Romania	EU membership	Widening	1 January 2007	2007	Effective date of accession under the accession treaty.	European Union, "EU enlargement" (accession treaties); Council enlargement chronology	https://european-union.europa.eu/principles-countries-history/eu-enlargement_en	2007 enlargement.
Croatia	EU membership	Widening	1 July 2013	2013	Effective date of accession under the accession treaty.	European Union, "EU enlargement" (accession treaties); Council enlargement chronology	https://european-union.europa.eu/principles-countries-history/eu-enlargement_en	2013 enlargement.
Austria	Monetary Union	Deepening	1 January 1999	1999	Effective date of euro-area membership and euro adoption.	Council of the EU, "Timeline: joining the euro area"; ECB euro-adoption dates	https://www.consilium.europa.eu/en/policies/join-the-euro-area/timeline-joining-the-euro-area/	Corrected 2000→1999.
Belgium	Monetary Union	Deepening	1 January 1999	1999	Effective date of euro-area membership and euro adoption.	Council of the EU, "Timeline: joining the euro area"; ECB euro-adoption dates	https://www.consilium.europa.eu/en/policies/join-the-euro-area/timeline-joining-the-euro-area/	First-wave euro area (effective 1 Jan 1999).
Finland	Monetary Union	Deepening	1 January 1999	1999	Effective date of euro-area membership and euro adoption.	Council of the EU, "Timeline: joining the euro area"; ECB euro-adoption dates	https://www.consilium.europa.eu/en/policies/join-the-euro-area/timeline-joining-the-euro-area/	Corrected 2002→1999 (2002 = euro cash introduction, not MU entry).
France	Monetary Union	Deepening	1 January 1999	1999	Effective date of euro-area membership and euro adoption.	Council of the EU, "Timeline: joining the euro area"; ECB euro-adoption dates	https://www.consilium.europa.eu/en/policies/join-the-euro-area/timeline-joining-the-euro-area/	Corrected 2002→1999 (2002 = euro cash introduction, not MU entry).
Germany	Monetary Union	Deepening	1 January 1999	1999	Effective date of euro-area membership and euro adoption.	Council of the EU, "Timeline: joining the euro area"; ECB euro-adoption dates	https://www.consilium.europa.eu/en/policies/join-the-euro-area/timeline-joining-the-euro-area/	First-wave euro area (effective 1 Jan 1999).
Ireland	Monetary Union	Deepening	1 January 1999	1999	Effective date of euro-area membership and euro adoption.	Council of the EU, "Timeline: joining the euro area"; ECB euro-adoption dates	https://www.consilium.europa.eu/en/policies/join-the-euro-area/timeline-joining-the-euro-area/	Corrected 2002→1999 (2002 = euro cash introduction, not MU entry).
Italy	Monetary Union	Deepening	1 January 1999	1999	Effective date of euro-area membership and euro adoption.	Council of the EU, "Timeline: joining the euro area"; ECB euro-adoption dates	https://www.consilium.europa.eu/en/policies/join-the-euro-area/timeline-joining-the-euro-area/	First-wave euro area (effective 1 Jan 1999).

Country	Event category	Dimension	Exact date	Annual code	Operational definition	Primary source	Source URL	Notes / corrections
Luxembourg	Monetary Union	Deepening	1 January 1999	1999	Effective date of euro-area membership and euro adoption.	Council of the EU, "Timeline: joining the euro area"; ECB euro-adoption dates	https://www.consilium.europa.eu/en/policies/join-the-euro-area/timeline-joining-the-euro-area/	First-wave euro area (effective 1 Jan 1999).
Netherlands	Monetary Union	Deepening	1 January 1999	1999	Effective date of euro-area membership and euro adoption.	Council of the EU, "Timeline: joining the euro area"; ECB euro-adoption dates	https://www.consilium.europa.eu/en/policies/join-the-euro-area/timeline-joining-the-euro-area/	First-wave euro area (effective 1 Jan 1999).
Portugal	Monetary Union	Deepening	1 January 1999	1999	Effective date of euro-area membership and euro adoption.	Council of the EU, "Timeline: joining the euro area"; ECB euro-adoption dates	https://www.consilium.europa.eu/en/policies/join-the-euro-area/timeline-joining-the-euro-area/	First-wave euro area (effective 1 Jan 1999).
Spain	Monetary Union	Deepening	1 January 1999	1999	Effective date of euro-area membership and euro adoption.	Council of the EU, "Timeline: joining the euro area"; ECB euro-adoption dates	https://www.consilium.europa.eu/en/policies/join-the-euro-area/timeline-joining-the-euro-area/	First-wave euro area (effective 1 Jan 1999).
Greece	Monetary Union	Deepening	1 January 2001	2001	Effective date of euro-area membership and euro adoption.	Council of the EU, "Timeline: joining the euro area"; ECB euro-adoption dates	https://www.consilium.europa.eu/en/policies/join-the-euro-area/timeline-joining-the-euro-area/	
Slovenia	Monetary Union	Deepening	1 January 2007	2007	Effective date of euro-area membership and euro adoption.	Council of the EU, "Timeline: joining the euro area"; ECB euro-adoption dates	https://www.consilium.europa.eu/en/policies/join-the-euro-area/timeline-joining-the-euro-area/	
Cyprus	Monetary Union	Deepening	1 January 2008	2008	Effective date of euro-area membership and euro adoption.	Council of the EU, "Timeline: joining the euro area"; ECB euro-adoption dates	https://www.consilium.europa.eu/en/policies/join-the-euro-area/timeline-joining-the-euro-area/	Corrected 2009→2008.
Malta	Monetary Union	Deepening	1 January 2008	2008	Effective date of euro-area membership and euro adoption.	Council of the EU, "Timeline: joining the euro area"; ECB euro-adoption dates	https://www.consilium.europa.eu/en/policies/join-the-euro-area/timeline-joining-the-euro-area/	
Slovakia	Monetary Union	Deepening	1 January 2009	2009	Effective date of euro-area membership and euro adoption.	Council of the EU, "Timeline: joining the euro area"; ECB euro-adoption dates	https://www.consilium.europa.eu/en/policies/join-the-euro-area/timeline-joining-the-euro-area/	
Estonia	Monetary Union	Deepening	1 January 2011	2011	Effective date of euro-area membership and euro adoption.	Council of the EU, "Timeline: joining the euro area"; ECB euro-adoption dates	https://www.consilium.europa.eu/en/policies/join-the-euro-area/timeline-joining-the-euro-area/	

Country	Event category	Dimension	Exact date	Annual code	Operational definition	Primary source	Source URL	Notes / corrections
Latvia	Monetary Union	Deepening	1 January 2014	2014	Effective date of euro-area membership and euro adoption.	Council of the EU, "Timeline: joining the euro area"; ECB euro-adoption dates	https://www.consilium.europa.eu/en/policies/join-the-euro-area/timeline-joining-the-euro-area/	Corrected 2013→2014 (2013 = EU decision approving adoption; euro-area membership effective 2014).
Lithuania	Monetary Union	Deepening	1 January 2015	2015	Effective date of euro-area membership and euro adoption.	Council of the EU, "Timeline: joining the euro area"; ECB euro-adoption dates	https://www.consilium.europa.eu/en/policies/join-the-euro-area/timeline-joining-the-euro-area/	
Austria	Banking Union / SSM	Deepening	4 November 2014	2014	Date on which the ECB assumed supervisory responsibility, including participation through close cooperation.	ECB Banking Supervision, "Milestones" (Single Supervisory Mechanism)	https://www.bankingsupervision.europa.eu/about/thessm/milestones/html/index.en.html	Euro-area participant at SSM launch (ECB assumed supervisory responsibility).
Belgium	Banking Union / SSM	Deepening	4 November 2014	2014	Date on which the ECB assumed supervisory responsibility, including participation through close cooperation.	ECB Banking Supervision, "Milestones" (Single Supervisory Mechanism)	https://www.bankingsupervision.europa.eu/about/thessm/milestones/html/index.en.html	Euro-area participant at SSM launch (ECB assumed supervisory responsibility).
Cyprus	Banking Union / SSM	Deepening	4 November 2014	2014	Date on which the ECB assumed supervisory responsibility, including participation through close cooperation.	ECB Banking Supervision, "Milestones" (Single Supervisory Mechanism)	https://www.bankingsupervision.europa.eu/about/thessm/milestones/html/index.en.html	Euro-area participant at SSM launch (ECB assumed supervisory responsibility).
Estonia	Banking Union / SSM	Deepening	4 November 2014	2014	Date on which the ECB assumed supervisory responsibility, including participation through close cooperation.	ECB Banking Supervision, "Milestones" (Single Supervisory Mechanism)	https://www.bankingsupervision.europa.eu/about/thessm/milestones/html/index.en.html	Euro-area participant at SSM launch (ECB assumed supervisory responsibility).
Finland	Banking Union / SSM	Deepening	4 November 2014	2014	Date on which the ECB assumed supervisory responsibility, including participation through close cooperation.	ECB Banking Supervision, "Milestones" (Single Supervisory Mechanism)	https://www.bankingsupervision.europa.eu/about/thessm/milestones/html/index.en.html	Euro-area participant at SSM launch (ECB assumed supervisory responsibility).
France	Banking Union / SSM	Deepening	4 November 2014	2014	Date on which the ECB assumed supervisory responsibility, including participation through close cooperation.	ECB Banking Supervision, "Milestones" (Single Supervisory Mechanism)	https://www.bankingsupervision.europa.eu/about/thessm/milestones/html/index.en.html	Euro-area participant at SSM launch (ECB assumed supervisory responsibility).

Country	Event category	Dimension	Exact date	Annual code	Operational definition	Primary source	Source URL	Notes / corrections
Germany	Banking Union / SSM	Deepening	4 November 2014	2014	Date on which the ECB assumed supervisory responsibility, including participation through close cooperation.	ECB Banking Supervision, "Milestones" (Single Supervisory Mechanism)	https://www.bankingsupervision.europa.eu/about/thessm/milestones/html/index.en.html	Euro-area participant at SSM launch (ECB assumed supervisory responsibility).
Greece	Banking Union / SSM	Deepening	4 November 2014	2014	Date on which the ECB assumed supervisory responsibility, including participation through close cooperation.	ECB Banking Supervision, "Milestones" (Single Supervisory Mechanism)	https://www.bankingsupervision.europa.eu/about/thessm/milestones/html/index.en.html	Euro-area participant at SSM launch (ECB assumed supervisory responsibility).
Ireland	Banking Union / SSM	Deepening	4 November 2014	2014	Date on which the ECB assumed supervisory responsibility, including participation through close cooperation.	ECB Banking Supervision, "Milestones" (Single Supervisory Mechanism)	https://www.bankingsupervision.europa.eu/about/thessm/milestones/html/index.en.html	Euro-area participant at SSM launch (ECB assumed supervisory responsibility).
Italy	Banking Union / SSM	Deepening	4 November 2014	2014	Date on which the ECB assumed supervisory responsibility, including participation through close cooperation.	ECB Banking Supervision, "Milestones" (Single Supervisory Mechanism)	https://www.bankingsupervision.europa.eu/about/thessm/milestones/html/index.en.html	Euro-area participant at SSM launch (ECB assumed supervisory responsibility).
Latvia	Banking Union / SSM	Deepening	4 November 2014	2014	Date on which the ECB assumed supervisory responsibility, including participation through close cooperation.	ECB Banking Supervision, "Milestones" (Single Supervisory Mechanism)	https://www.bankingsupervision.europa.eu/about/thessm/milestones/html/index.en.html	Euro-area participant at SSM launch (ECB assumed supervisory responsibility).
Luxembourg	Banking Union / SSM	Deepening	4 November 2014	2014	Date on which the ECB assumed supervisory responsibility, including participation through close cooperation.	ECB Banking Supervision, "Milestones" (Single Supervisory Mechanism)	https://www.bankingsupervision.europa.eu/about/thessm/milestones/html/index.en.html	Euro-area participant at SSM launch (ECB assumed supervisory responsibility).
Malta	Banking Union / SSM	Deepening	4 November 2014	2014	Date on which the ECB assumed supervisory responsibility, including participation through close cooperation.	ECB Banking Supervision, "Milestones" (Single Supervisory Mechanism)	https://www.bankingsupervision.europa.eu/about/thessm/milestones/html/index.en.html	Euro-area participant at SSM launch (ECB assumed supervisory responsibility).
Netherlands	Banking Union / SSM	Deepening	4 November 2014	2014	Date on which the ECB assumed supervisory responsibility, including participation through close cooperation.	ECB Banking Supervision, "Milestones" (Single Supervisory Mechanism)	https://www.bankingsupervision.europa.eu/about/thessm/milestones/html/index.en.html	Euro-area participant at SSM launch (ECB assumed supervisory responsibility).

Country	Event category	Dimension	Exact date	Annual code	Operational definition	Primary source	Source URL	Notes / corrections
Portugal	Banking Union / SSM	Deepening	4 November 2014	2014	Date on which the ECB assumed supervisory responsibility, including participation through close cooperation.	ECB Banking Supervision, "Milestones" (Single Supervisory Mechanism)	https://www.bankingsupervision.europa.eu/about/thessm/milestones/html/index.en.html	Euro-area participant at SSM launch (ECB assumed supervisory responsibility).
Slovakia	Banking Union / SSM	Deepening	4 November 2014	2014	Date on which the ECB assumed supervisory responsibility, including participation through close cooperation.	ECB Banking Supervision, "Milestones" (Single Supervisory Mechanism)	https://www.bankingsupervision.europa.eu/about/thessm/milestones/html/index.en.html	Euro-area participant at SSM launch (ECB assumed supervisory responsibility).
Slovenia	Banking Union / SSM	Deepening	4 November 2014	2014	Date on which the ECB assumed supervisory responsibility, including participation through close cooperation.	ECB Banking Supervision, "Milestones" (Single Supervisory Mechanism)	https://www.bankingsupervision.europa.eu/about/thessm/milestones/html/index.en.html	Euro-area participant at SSM launch (ECB assumed supervisory responsibility).
Spain	Banking Union / SSM	Deepening	4 November 2014	2014	Date on which the ECB assumed supervisory responsibility, including participation through close cooperation.	ECB Banking Supervision, "Milestones" (Single Supervisory Mechanism)	https://www.bankingsupervision.europa.eu/about/thessm/milestones/html/index.en.html	Euro-area participant at SSM launch (ECB assumed supervisory responsibility).
Lithuania	Banking Union / SSM	Deepening	1 January 2015	2015	Date on which the ECB assumed supervisory responsibility, including participation through close cooperation.	ECB Banking Supervision, "Milestones" (Single Supervisory Mechanism)	https://www.bankingsupervision.europa.eu/about/thessm/milestones/html/index.en.html	Joined the SSM upon euro adoption.
Bulgaria	Banking Union / SSM	Deepening	1 October 2020	2020	Date on which the ECB assumed supervisory responsibility, including participation through close cooperation.	ECB, "ECB establishes close cooperation with Bulgaria's central bank" (10 July 2020)	https://www.bankingsupervision.europa.eu/press/pr/date/2020/html/ssm.pr200710~ae2abe1f23.en.html	ADDED – event was missing from the original Table 1. Close cooperation; ECB direct supervision began 1 Oct 2020.
Croatia	Banking Union / SSM	Deepening	1 October 2020	2020	Date on which the ECB assumed supervisory responsibility, including participation through close cooperation.	ECB, "ECB establishes close cooperation with Croatia's central bank" (10 July 2020)	https://www.bankingsupervision.europa.eu/press/pr/date/2020/html/ssm.pr200710_1~ead3942902.en.html	ADDED – event was missing from the original Table 1. Close cooperation from 1 Oct 2020. Full SSM membership on 2023 euro adoption is NOT a second event.

Total records: 75 (Candidate status 5 · Opening of negotiations 17 · EU membership 13 · Monetary Union 19 · Banking Union/SSM 21).

Appendix 8 (continued). Event-coding rules, sources and corrections log

Unified baseline coding rule (per event category)	
Candidate status	Date candidate status was formally granted by the Council or European Council.
Opening of accession negotiations	Date of the first intergovernmental accession conference (IGC), when negotiations formally commence – not an earlier political decision to open them.
EU membership	Effective date of accession under the accession treaty.
Monetary Union	Effective date of euro-area membership and euro adoption – not the earlier approval decision and not the later introduction of euro cash.
Banking Union / SSM	Date the ECB assumed supervisory responsibility, including participation through close cooperation.
Annual coding	Use the calendar year containing the exact date, but retain the exact date, definition and source so the dataset stays transparent and auditable.

Official sources	
EU enlargement (candidate status, negotiations, membership)	https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union
EU enlargement / accession treaties	https://european-union.europa.eu/principles-countries-history/eu-enlargement_en
Council of the EU – timeline: joining the euro area	https://www.consilium.europa.eu/en/policies/join-the-euro-area/timeline-joining-the-euro-area/
ECB Banking Supervision – SSM milestones (4 Nov 2014 launch; Bulgaria & Croatia 1 Oct 2020)	https://www.bankingsupervision.europa.eu/about/thessm/milestones/html/index.en.html
ECB – close cooperation with Bulgaria's central bank (10 Jul 2020)	https://www.bankingsupervision.europa.eu/press/pr/date/2020/html/ssm.pr200710~ae2abe1f23.en.html
ECB – close cooperation with Croatia's central bank (10 Jul 2020)	https://www.bankingsupervision.europa.eu/press/pr/date/2020/html/ssm.pr200710_1~ead3942902.en.html

Appendix 9. Results of the Model 3 regressions – differences between CEE and Western Balkan countries

Growth of Gross Loans	All EU integration events			Widening EU integration events			Individual – Candidate			Individual – Negotiations		
	1y	3y	5y	1y	3y	5y	1y	3y	5y	1y	3y	5y
Real GDP Growth	0.663***	0.638***	0.637***	0.663***	0.632***	0.622***	0.658***	0.660***	0.661***	0.665***	0.648***	0.654***
	(0.095)	(0.095)	(0.094)	(0.095)	(0.093)	(0.091)	(0.095)	(0.096)	(0.096)	(0.095)	(0.095)	(0.095)
Inflation – CPI	-18.798	-16.643	-17.228	-19.008	-16.286	-15.715	-17.812	-17.544	-19.900	-18.412	-17.833	-18.512
	(17.172)	(17.625)	(17.641)	(17.218)	(17.586)	(17.384)	(17.273)	(17.484)	(17.627)	(17.307)	(17.314)	(17.125)
Monetary Policy	0.486**	0.524**	0.492**	0.498**	0.496**	0.367	0.479**	0.471**	0.524**	0.474**	0.511**	0.499**
	(0.222)	(0.223)	(0.221)	(0.220)	(0.222)	(0.222)	(0.225)	(0.230)	(0.222)	(0.222)	(0.222)	(0.216)
Net Financial Account Growth	-0.544***	-0.536***	-0.550***	-0.544***	-0.521***	-0.516***	-0.546***	-0.548***	-0.543***	-0.545***	-0.535***	-0.555***
	(0.163)	(0.163)	(0.164)	(0.164)	(0.161)	(0.163)	(0.163)	(0.163)	(0.163)	(0.163)	(0.163)	(0.163)
Institutional Environment	-0.615***	-0.578***	-0.556***	-0.627***	-0.588***	-0.504***	-0.644***	-0.655***	-0.675***	-0.648***	-0.623***	-0.647***
	(0.162)	(0.168)	(0.177)	(0.162)	(0.166)	(0.181)	(0.162)	(0.168)	(0.170)	(0.161)	(0.168)	(0.164)
L. NPL Ratio	-0.215***	-0.206**	-0.204**	-0.212***	-0.203**	-0.200**	-0.211**	-0.212**	-0.208**	-0.214***	-0.205**	-0.206**
	(0.081)	(0.082)	(0.080)	(0.081)	(0.081)	(0.079)	(0.081)	(0.081)	(0.081)	(0.081)	(0.080)	(0.080)
L. Equity Ratio	0.235	0.238	0.258	0.226	0.234	0.270	0.210	0.212	0.218	0.222	0.214	0.223
	(0.168)	(0.172)	(0.174)	(0.169)	(0.171)	(0.175)	(0.170)	(0.169)	(0.166)	(0.168)	(0.168)	(0.168)
L. Liquidity Ratio	0.198***	0.188***	0.188***	0.198***	0.184***	0.181***	0.199***	0.197***	0.195***	0.198***	0.189***	0.193***
	(0.051)	(0.051)	(0.051)	(0.051)	(0.051)	(0.051)	(0.051)	(0.051)	(0.051)	(0.050)	(0.051)	(0.052)
L. ROAE	0.142***	0.135***	0.131***	0.141***	0.135***	0.128***	0.143***	0.143***	0.141***	0.143***	0.140***	0.143***
	(0.046)	(0.046)	(0.046)	(0.046)	(0.046)	(0.046)	(0.046)	(0.045)	(0.045)	(0.046)	(0.046)	(0.046)
EU integration event	3.940**	-2.063	-2.875*									
	(1.635)	(1.516)	(1.678)									
× CEE vs WB	-2.140	3.983**	4.861**									
	(2.311)	(1.745)	(1.894)									
Widening event				2.041	-3.144**	-3.778**						
				(1.590)	(1.404)	(1.487)						
× CEE vs WB				-2.420	5.581***	7.532***						
				(2.678)	(1.860)	(1.964)						
Candidate event							2.121	-0.638	-3.135			
							(3.351)	(2.040)	(1.899)			

× CEE vs WB							-12.087* (6.467)	-3.422 (4.324)	-1.049 (3.691)			
Negotiations event										1.901 (2.052)	-2.842* (1.515)	-2.539* (1.513)
× CEE vs WB										-9.510* (5.172)	3.681 (3.247)	2.085 (2.508)
Constant	41.793*** (11.712)	39.295*** (12.228)	37.605*** (12.935)	42.756*** (11.678)	40.261*** (11.972)	34.373*** (13.027)	44.066*** (11.658)	44.881*** (12.061)	46.270*** (12.127)	44.247*** (11.620)	42.807*** (12.054)	44.318*** (11.716)
Observations	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014
R-squared	0.141	0.141	0.143	0.139	0.142	0.148	0.140	0.140	0.142	0.140	0.140	0.140
F-test	12.09	13.30	13.16	12.12	12.78	12.94	12.14	12.23	12.93	12.16	12.37	12.38
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**** p<0.01, ** p<0.05, * p<0.10. Standard errors in parentheses. Dependent variable: growth of gross loans; sample 2000–2023 (N = 2,014 bank-year observations, CEE and Western Balkan countries). Each column is a separate regression at the stated horizon; the event dummy and its interaction with the group indicator (× CEE vs WB) appear only in their own column block. Bank fixed effects and one-period-lagged bank controls; standard errors clustered by bank. Source: authors' estimations.*

Appendix 10. Results of the Model 3 regressions – differences between CEE and EU-15 countries

Growth of Gross Loans	All EU integration events			Deepening EU integration events			Individual – Monetary Union			Individual – Banking Union		
	1y	3y	5y	1y	3y	5y	1y	3y	5y	1y	3y	5y
Real GDP Growth	0.707***	0.682***	0.680***	0.720***	0.704***	0.704***	0.708***	0.707***	0.720***	0.714***	0.713***	0.704***
	(0.075)	(0.075)	(0.076)	(0.075)	(0.076)	(0.076)	(0.075)	(0.076)	(0.075)	(0.075)	(0.076)	(0.077)
Inflation – CPI	-28.364*	-19.412	-22.231	-28.114*	-27.702*	-28.776*	-30.033*	-25.684	-26.823	-27.974*	-27.547	-27.956*
	(16.797)	(17.525)	(17.063)	(16.761)	(16.709)	(16.803)	(16.837)	(16.847)	(17.166)	(16.920)	(16.875)	(16.842)
Monetary Policy	0.483**	0.430**	0.456**	0.497**	0.518**	0.554***	0.510**	0.472**	0.496**	0.481**	0.493**	0.540**
	(0.210)	(0.212)	(0.214)	(0.210)	(0.212)	(0.212)	(0.210)	(0.210)	(0.209)	(0.211)	(0.210)	(0.211)
Net Financial Account Growth	-0.029**	-0.030**	-0.024*	-0.030**	-0.031**	-0.026*	-0.030**	-0.033**	-0.027*	-0.029**	-0.029**	-0.031**
	(0.014)	(0.014)	(0.014)	(0.014)	(0.013)	(0.014)	(0.014)	(0.014)	(0.015)	(0.014)	(0.014)	(0.013)
Institutional Environment	-0.459***	-0.402***	-0.350***	-0.480***	-0.465***	-0.467***	-0.472***	-0.495***	-0.504***	-0.477***	-0.461***	-0.456***
	(0.129)	(0.128)	(0.131)	(0.127)	(0.126)	(0.127)	(0.127)	(0.126)	(0.126)	(0.126)	(0.126)	(0.126)
L. NPL Ratio	-0.349***	-0.354***	-0.353***	-0.348***	-0.353***	-0.352***	-0.345***	-0.337***	-0.341***	-0.347***	-0.352***	-0.357***
	(0.047)	(0.046)	(0.047)	(0.047)	(0.047)	(0.047)	(0.046)	(0.046)	(0.046)	(0.047)	(0.047)	(0.047)
L. Equity Ratio	0.235**	0.241***	0.241**	0.236**	0.237**	0.235**	0.237**	0.238**	0.237**	0.234**	0.237**	0.236**
	(0.093)	(0.092)	(0.093)	(0.093)	(0.092)	(0.092)	(0.093)	(0.093)	(0.093)	(0.093)	(0.092)	(0.092)
L. Liquidity Ratio	0.155***	0.153***	0.151***	0.155***	0.157***	0.157***	0.152***	0.150***	0.154***	0.157***	0.159***	0.160***
	(0.031)	(0.030)	(0.030)	(0.030)	(0.031)	(0.031)	(0.030)	(0.030)	(0.031)	(0.031)	(0.031)	(0.031)
L. ROAE	0.097***	0.094***	0.089***	0.098***	0.098***	0.097***	0.097***	0.095***	0.096***	0.098***	0.099***	0.098***
	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)
EU integration event	0.241	1.481**	1.208*									
	(0.801)	(0.649)	(0.647)									
× CEE vs EU-15	2.720	1.980	2.037									
	(1.865)	(1.261)	(1.262)									
Deepening event				0.239	1.413**	1.139*						
				(0.801)	(0.649)	(0.647)						
× CEE vs EU-15				4.474*	0.197	0.170						
				(2.375)	(1.426)	(1.349)						

Growth of Gross Loans	All EU integration events			Deepening EU integration events			Individual – Monetary Union			Individual – Banking Union		
	1y	3y	5y	1y	3y	5y	1y	3y	5y	1y	3y	5y
Monetary Union event							10.495***	3.224*	0.812			
							(3.723)	(1.852)	(1.155)			
× CEE vs EU-15								1.932	1.822			
								(2.919)	(2.279)			
Banking Union event										0.233	1.060	1.182
										(0.801)	(0.675)	(0.731)
× CEE vs EU-15										-0.157	-1.245	-0.706
										(2.565)	(1.569)	(1.565)
Constant	31.822***	27.663***	24.048***	33.142***	31.996***	32.026***	32.730***	34.089***	34.611***	32.999***	31.827***	31.364***
	(8.780)	(8.742)	(9.002)	(8.659)	(8.606)	(8.629)	(8.662)	(8.590)	(8.581)	(8.586)	(8.568)	(8.580)
Observations	4832	4832	4832	4832	4832	4832	4832	4832	4832	4832	4832	4832
R-squared	0.089	0.092	0.092	0.090	0.090	0.090	0.092	0.092	0.089	0.088	0.089	0.089
F-test	22.01	23.32	23.25	22.59	22.24	22.15	25.38	22.84	21.93	22.00	21.87	22.10
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**** p<0.01, ** p<0.05, * p<0.10. Standard errors in parentheses. Dependent variable: growth of gross loans; sample 2000–2023 (N = 4,832 bank-year observations, CEE and EU-15 countries). Each column is a separate regression at the stated horizon; the event dummy and its interaction with the group indicator (× CEE vs EU-15) appear only in their own column block. Bank fixed effects and one-period-lagged bank controls; standard errors clustered by bank. Source: authors' estimations.*