KIEL INSTITUTE FOR THE WORLD ECONOMY

KIEL WORKING PAPER

Mild Deglobalization: Foreign Investment Screening and Cross-Border Investment

No. 2265 March 2024

Vera Z. Eichenauer and Feicheng Wang

Kiel Institute for the World Economy
ISSN 1862–1155

Leibniz Association

KIEL INSTITUTE FOR THE WORLD ECONOMY

ABSTRACT

MILD DEGLOBALIZATION: FOREIGN INVESTMENT SCREENING AND CROSS-BORDER INVESTMENT

Vera Z. Eichenauer and Feicheng Wang

Openness to foreign investments is associated with risks. To mitigate these risks, many high-income countries have strengthened the control of foreign investments over the last decade in an increasing number of sectors considered critical. Investment screening distorts the market for cross-border investments in controlled sectors, which might lead to unintended economic effects. This is the first cross-country panel study to examine the economic effects of investment screening mechanisms. We combine deal-level data on cross-border mergers and acquisitions (M&A) for the period 2007–2022 with information on sectoral investment screening. Using a staggered triple difference design, we estimate a reduction of 11.7 to 16.0 percent in the number of M&A in a newly screened sector. The effects are driven by minority acquisitions and deals involving a foreign government or state-owned enterprises or US firms as investors. There is no reduction in the number of deals within the EU/EFTA, most of which are not subject to screening. The findings call policymakers' attention to weighing the benefits of national security and the economic costs of introducing investment screening.

Keywords: foreign direct investments, national security, M&A, investment screening, global capital allocation, geoeconomic fragmentation, deglobalization

JEL classification: F21; F52; G34

Vera Z. Eichenauer
Kiel Institute Fellow
Kiel Institute for the World Economy
Kiellinie 66
D-24105 Kiel, Germany
Email:
vz.eichenauer@gmail.com
https://www.ifw-kiel.de/

Feicheng Wang
University of Groningen
PO Box 72
9700 AB Groningen
The Netherlands
Email:
f.wang@rug.nl
https://www.rug.nl/

Mild Deglobalization: Foreign Investment Screening and Cross-Border Investment *

Vera Z. Eichenauer† Feicheng Wang‡

February 2024

Abstract

Openness to foreign investments is associated with risks. To mitigate these risks, many high-income countries have strengthened the control of foreign investments over the last decade in an increasing number of sectors considered critical. Investment screening distorts the market for cross-border investments in controlled sectors, which might lead to unintended economic effects. This is the first cross-country panel study to examine the economic effects of investment screening mechanisms. We combine deal-level data on cross-border mergers and acquisitions (M&A) for the period 2007-2022 with information on sectoral investment screening. Using a staggered triple difference design, we estimate a reduction of 11.7 to 16.0 percent in the number of M&A in a newly screened sector. The effects are driven by minority acquisitions and deals involving a foreign government or state-owned enterprises or US firms as investors. There is no reduction in the number of deals within the EU/EFTA, most of which are not subject to screening. The findings call policymakers' attention to weighing the benefits of national security and the economic costs of introducing investment screening.

JEL Code: F21, F52, G34

Keywords: foreign direct investments, national security, M&A, investment screening, global capital allocation, geoeconomic fragmentation, deglobalization

*Equal authorship. We thank Felix Hugger and Samina Sultan for their support with the download and cleaning of cross-border M&A data used in this paper and Sarah Bauerle-Danzman and Sophie Meunier for generously sharing an early version of the PRISM data. We also thank Renaud Bourlès, Steve Monroe and seminar and workshop participants at the University of Groningen, University of Göttingen, the ZEW in Mannheim, the University of Mainz, the MYPEERs workshop in Wengen, the University of Bergen, the Research Workshop on the Nexus of Business and Government in the Global Economy in Singapore, the 13th ifo Conference on Macroeconomics and Survey Data in Munich, and the Nederlandse Economendag in the Hague for comments. Andrea Riccucci and Furkan Oguz provided excellent research assistance. All errors are ours.

†KOF Research Fellow, IfW Kiel Fellow, CESifo Fellow. Contact: vz.eichenauer@gmail.com.

‡University of Groningen. Contact: f.wang@rug.nl.

1 Introduction

Governments have been rethinking the costs and benefits of economic globalization. After decades of focusing on the positive effects of cross-border investments, governments around the world have started to pay closer attention to how this international economic interdependence affects their national security. Security concerns have led to a rise in screening of cross-border inward foreign investments, export controls and restrictions. These measures increase the risk of geoeconomic fragmentation and pose a threat to global economic growth (Aiyar et al., 2023). In the same way as liberalization led to globalization, new restrictions and regulations should reduce cross-border flows of capital and goods. While investment screening might be effective in curbing risks to national security, the understanding of its unintended economic effects is still very limited. In this paper, we examine whether screening affects the number and type of foreign mergers and acquisitions (M&A).[1] The vast majority of foreign investments are non-threatening and associated with economic benefits: Foreign direct investment (FDI) is associated with innovation, technology and know-how spillovers (Phillips and Zhdanov, 2013; Bena and Li, 2014; Stiebale, 2016), promotion of synergies (Wang and Xie, 2009; Sheen, 2014), improved access to foreign capital (Serdar Dinc and Erel, 2013), and productivity growth (Fons-Rosen et al., 2021). One widely discussed reason for the changed risk perception of foreign inward investments in industrialized countries is the sharp increase in Chinese investments in industrialized countries until 2016 (notably by Chinese State-Owned Enterprises, SOEs) coupled with a rising mistrust in the Chinese leadership (see e.g. Domínguez-Jiménez and Poitiers, 2020; Chan and Meunier, 2021; Silver et al., 2023; Bauerle Danzman and Meunier, 2023b).

Against that backdrop and instead of prohibiting foreign investments entirely, most advanced economies have adopted or tightened investment screening policies which require foreign investors to gain approval from national authorities for (partial) acquisitions of firms in security-sensitive sectors. National authorities are empowered to review, and if necessary, condition, prohibit, and unwind foreign acquisitions that may threaten national security or public order.

[1] We focus on M&A because greenfield and portfolio investments tend not to be screened for risks to national security. In the few countries that do, the screening of greenfield investments is limited to sensitive locations e.g. border proximity.

While a handful of countries have reviewed foreign investments for risks to national security for decades, the policy has spread to more countries and screening processes have been formalized since the mid-2010s, even among traditionally open high-income countries. Moreover, screening has become broader and tighter: many governments have repeatedly expanded the list of sectors considered security-sensitive or lowered the thresholds of acquired shares triggering investment screening.[2] The spread of investment screening across countries and sectors and the ever-low thresholds imply that an increasing share of global cross-border investment is screened. Estimates range from five percent for the United States (Bauerle Danzman, 2021) to up to 60 percent for OECD countries (Pohl and Rosselot, 2020). Business interests seem not to have been able to decisively influence the changed discourse about national security (Nibe, 2023).

Screening of foreign investments for risks to national security might provide security benefits not always known to the public.[3] In some countries or sectors, there may be other domestic motivations for investment screening, such as protecting industries at home. These are the intended effects. In this paper, we are interested in whether these regulations have unintended economic effects, namely a decrease in foreign investment. A reduction in the number of deals is expected and intended due to the prohibition and deterrence effects. But there are also worries about the increase in uncertainty and transaction costs for cross-border deal-making. These would be the unintended effects. We find that the reduction in the number of deals is large and probably larger than intentionally deterred and prohibited deals only. Our interpretation of this large reduction in M&A deals is that uncertainty and transaction costs are important drivers. However, we cannot empirically disentangle these different mechanisms.[4] Recently, central bankers voiced the concern that investment screening and other recent geopolitical policy responses of the EU might reduce the efficiency of global capital allocation (Ioannou et al., 2023). Even without any protectionist intentions, quasi-protectionist effects might manifest as a result of

[2] In a minority of countries, the threshold for screening includes absolute numbers, often with additional criteria Bauerle Danzman and Meunier (2023b).

[3] In the remainder of the paper, screening always refers to screening for risks to national security or public order unless noted otherwise. Investments might also be screened for economic policy reasons, especially in the past (Kudrle, 1993).

[4] The number of prohibited deals is publicly known only in a few countries. The number of deterred deals is unknown by definition as the counterfactual is not observable.

the increased transaction costs and uncertainty for foreign investors. The new regulations increase transaction costs and uncertainty for cross-border investments in screened sectors, including the large majority that do not pose any risks to national security. This begs the question: Do these regulations have a chilling effect on cross-border investments? Does the size of the effect suggest a deterrence effect as intended by regulators?

In this paper, we argue that investment screening has the potential to reduce cross-border M&A in screened sectors which would negatively affect the efficiency of global capital allocation. We provide the first quantitative estimate of the total effect of investment screening on the number of cross-border M&A deals.[5] Our empirical approach aims to estimate the total economic effect including intended deterrence effects and unintended reduction effects, thus going beyond the observable effect of screened, blocked, and mitigated investments.[6] The unintended economic effects arise from the fact that investment screening increases transaction costs and uncertainty . Specifically, we propose two direct and three indirect channels through which investment screening could decrease the number of cross-border M&A. The total effect estimated in our approach includes (i) the intended deterrence effect for security-threatening investments, (ii) the reduction in cross-border deals due to the prohibition of some M&A by government authorities, (iii) deals that are aborted during the screening process, e.g. due to discouragement of the authorities, and (iv) investments never undertaken because of increased uncertainty and legal costs implied by investment screening. As we explain below, there are good reasons and anecdotal evidence suggesting that the number of non-threatening M&A transactions never undertaken due to uncertainty and transaction costs is important. However, we cannot disentangle these channels empirically.

Based on these considerations, we expect that deals of all sizes are negatively affected by the uncertainty and transaction costs related to the adoption of investment screening. Similarly, we expect that M&A of investors from all countries with screening. It is possible that these

[5]In this paper, we use the term mergers and acquisitions (M&A) to refer to full as well as partial acquisitions, including those with acquired stakes below 50 percent.

[6]The publicly available data on screening outcomes is scattered, mostly due to limited reporting by national investment screening authorities, but also due to the reluctance of private companies to publicize their failure to pass the national security review (Westbrook, 2019; Bencivelli et al., 2023).

investments are diverted to investment locations with less uncertainty and regulatory burden. The size of the diversion effect, which we capture in the total effect, depends on the elasticity of substitution which is likely to correlate with investors' motivation. Financial investors seeking returns will readily invest elsewhere, while strategic investors, aiming to acquire particular patents, gain access to production facilities and know-how, or expand market access in the screening country, will encounter challenges in finding an alternative target firm. What are the national and global welfare effects of investment screening? On the one hand, a country with investment screening sees an average reduction in cross-border M&A while countries without investment screening might observe more foreign M&A because of deviated investment flows. On the other hand, the country with investment screening might be less likely to experience damage or threats to national security due to investment screening. The effect of investment screening on national and global welfare is thus ambiguous.

We estimate the average effect of adopting investment screening on the annual number of sectoral cross-border M&A by exploiting the staggered implementation of screening across countries and sectors within countries using a triple difference (DDD) design. Our sample covers 43 member states of the European Union (EU) and the Organisation for Economic Cooperation and Development (OECD) for the years 2007-2022. We hand-coded information about the implementation of investment screening at the sector level which is combined with data on cross-border M&A from Bureau van Dijk's Zephyr database at the NACE four-digit sector level (Bureau van Dijk, 2020).[7] To ensure relevant comparison groups, our main sample includes only deals in "security-sensitive" sectors, defined as those that are screened in at least one of the sample countries. We show that our results are robust to including all sectors, excluding countries that never had any screening during the sample period, and adjusting the sample period by e.g. dropping the years of the COVID-19 pandemic.

The identification of a causal effect of investment screening on cross-border M&A relies on

[7]Our data also includes information about announcement dates. However, the dates of announcement and entry into force are in the same year for most cases, making anticipation effects arising from the announcement of the policy very unlikely. We acknowledge preliminary access to yearly data on investment screening adoption by Bauerle Danzman and Meunier (2023a) which determined our choice of sectors. We generated a new dataset that includes information about the announcement, decision, and implementation dates in all EU and OECD countries, as their data does not include information on dates and non-OECD European countries.

the assumption that the timing of the adoption of investment screening policy is exogenous to decisions of foreign investors. We argue that national decisions to introduce or extend investment screening to more sectors are due to external factors such as the rapid growth in Chinese firm acquisitions in Western countries, a large public debate about these investments, and EU-level discussions about security-threatening investments.[8]

We address concerns about the endogeneity of adopting investment screening to foreign investments in several ways. First, the adoption of investment screening happens at the country level and is thus arguably exogenous to individual foreign investors. Second, we use high-dimensional fixed effects, namely country-year, sector-year, and country-sector fixed effects. In a DDD estimation framework, these fixed effects can effectively account for time-varying differences between countries and sectors such as variations in sector-specific investment climate across countries or country- and sector-specific business cycles. We thereby generate more comparable treatment and control groups. These fixed effects, however, do not absorb confounding factors at the country-sector-year level. For example, the acquisition of a large company in a sector, which is perceived as sensitive by public opinion or involves an investor from a source country considered a systemic rival by the government, could prompt a government to adopt investment screening.

To further account for those factors, we control for international trade, a critical correlate of foreign investments, and four pre-determined variables to absorb potential explanations for the introduction of investment screening. The pre-determined variables capture variations in the initial likelihood of having foreign investors, especially from China or the US, or receiving acquisitions by foreign governments or SOEs. These variables are then interacted with sample year dummies to allow for time-variant effects. Finally, we use an event study design to investigate

[8]The literature suggests that the rise of Chinese FDI increased government support for investment screening, especially in high-technology countries (Chan and Meunier, 2021; Eichenauer et al., 2021). A few high-profile acquisitions widely discussed in the media (Lenihan, 2018) and the Covid-19 crisis (Bauerle Danzman and Meunier, 2023a) created further momentum for investment screening which was already discussed in the mid-2000s with respect to sovereign wealth funds (Pohl and Rosselot, 2020). Many EU countries adopted or extended investment screening following the adoption of an EU-level framework regulation on investment screening in 2019 with entry into force in 2020 even though this regulation did not require the adoption of investment screening in all member states. As the international norm about sectoral openness to foreign investments shifted, this led to a cascading effect of adaption (Bourlès et al., 2022).

whether countries and sectors that introduced investment screening were systematically different from others before the introduction of screening but find no evidence for anticipation or selection effects conditional on fixed effects and control variables. These analyses provide support for a causal identification of the estimated effect of investment screening on foreign acquisitions.

Our baseline results suggest that the introduction of screening reduces the average number of cross-border investments by between 11.7 and 16.0 percent in the screened NACE four-digit sector, i.e., an average loss of 20 to 27 deals per country. In this paper, we do not examine each possible channel. Thus, these estimates measure the total effect attributed to the intended deterrence effect and prohibitions for national security and the unintended effects associated with increased uncertainty and transaction costs.

We find that the negative impact of adopting investment controls on M&A in the screened sector is realized immediately upon adoption but fades out after two years. We find no overshooting or catch-up effect in later years which suggests that some M&A deals are never realized. We find a reduction in cross-border M&A for partial acquisitions (with less than half of stakes acquired) whereas there is an increase in deals where investors acquire 50% or more of shares. As the financial value of deals correlates positively with the number of shares acquired, the average transaction value increases. These results combined suggest that higher transaction costs affect smaller deals over-proportionally.

We find that the reduction in cross-border M&A deals is not driven by a particular type of investor: the number of deals with and without a state-controlled entity as investor as well as investments from China and the United States fall after the adoption of investment screening. In contrast, investments between EU member states and members of the European Free Trade Association (EFTA) are not reduced by investment screening. This is in line with our expectations given that the majority of intra-EU/EFTA investments are not subject to screening for national security. This exemption aims to preserve the free flow of capital in the Common Market of the EU.[9] Policymakers have to weigh these (short-term) reductions in cross-border investments

[9]Capital shall not be restricted between member countries of the European Economic Area (EEA), which includes all EU members as well as Iceland, Liechtenstein, and Norway. Liechtenstein is not in our sample because it is neither a member of the EU nor the OECD (but results are robust to including it). Many EU and EEA countries also do not screen investments from Switzerland which is included in the EU/EFTA group because of its EFTA membership but neither

following the introduction of investment screening and the associated economic costs against the security benefits of screening.

In this paper, we provide the first estimate of the effects of investment screening on cross-border M&A based on multi-country-multi-sector panel data. Our findings in this paper thus contribute to the ongoing public debate on the consequences of investment screening for national security. This paper is most closely related to Eichenauer et al. (2023), who document a negative effect of investment screening on cross-border venture capital for European countries during 2007-2022. Based on a sample of 60 advanced and emerging countries for 1997–2016, Mistura and Roulet (2019) find that non-security related screening policies are likely to have deterred FDI. In contrast, Albori et al. (2021) do not find that screening, security-related or not, decreases FDI equity flows for 17 OECD countries and 23 sectors over 2012-2018. Examining the prohibition effect of a foreign acquisition in the US, Connell and Huang (2014) estimate an average of two percent abnormal returns for potential US-owned and domiciled competitors. For a French investment screening decree, Frattaroli (2020) estimates a negative impact on shareholder value. He speculates that the negative impact might be due to a decrease in the expected present value of the takeover premium included in the share prices of affected firms.

Our theoretical argument builds on a strand of literature that shows that policy uncertainty (and not just policy decisions *per se*) negatively affects a multitude of macro- and microeconomic outcomes.[10] Existing studies show that protectionist interventions into corporate transactions and related laws can substantially decrease the number of inbound cross-border M&A in a country (Serdar Dinc and Erel, 2013; Godsell et al., 2019). Bonaime et al. (2018) find that policy uncertainty decreases M&A activity one year ahead but no evidence for a catch-up effect, suggesting that deals

EEA nor EU membership. We include the UK in the group of EU/EFTA countries for sample consistency. Our main findings remain when we exclude the UK from the EU/EFTA sample for the years 2020-2022 concerning its withdrawal from the EU in January 2020. Note that screening investments in the most security-sensitive sectors such as defense is allowed even intra-EU/EFTA. The decision by the European Court of Justice on the Xella Magyarország case (C-106/22) clarifies that in all other cases, the EU FDI regimes need to respect the freedom of establishment. Consequently, we are re-assured not to find any effects of screening on the number of intra-European cross-border M&A (as shown in Table 7).

[10] Uncertainty affects trade and capital flows, influences the business cycle, and hampers economic recovery (Handley and Limão, 2017; Baker et al., 2016; Julio and Yook, 2016; Bloom et al., 2018). Policy uncertainty also influences a firm's stock price (Pastor and Veronesi, 2012), expenditures for capital (Gulen and Ion, 2016), research and development (Atanassov et al., 2019), as well as decisions to raise equity (Çolak et al., 2017) and hold cash (Julio and Yook, 2012).

are canceled rather than postponed. We contribute to the literature by studying the uncertainty related to new and rising hurdles to international capital flows instead of using direct measures of uncertainty. While we do not show direct evidence that uncertainty around investment screening leads to the reduction in cross-border M&A, we argue that uncertainty might be of primary importance in reducing cross-border M&A.

Numerous factors other than investment screening can affect the origin and number of cross-border M&A. Also using Zephyr data, Todtenhaupt et al. (2020) show that the corporate capital gains tax rate, corporate taxation, inflation, industry regulation, the legal and institutional quality, and distance influence the number of acquisitions by investors for a certain country. Compared to the vast majority of the M&A literature which focuses on large-scale investment deals, our sample includes investment deals ranging from full acquisition to equity participation of less than 10 percent. The heterogeneity analyses show that the sign of the effects differs by the type of investment which implies that including smaller acquisition deals is required for a complete picture.

Our paper also contributes to a rapidly growing body of literature exploring the economic consequences of protectionism and decoupling, motivated by rising concerns about national security. Recent papers have delved into the impact of the 2018 trade war (e.g. Amiti et al., 2019; Fajgelbaum et al., 2020), sanctions (Crozet et al., 2021), and technical barriers (Fontagné and Orefice, 2018) on international trade. Another strand of literature documents the detrimental effects of the British exit from the EU (Brexit) on UK firms, the labor market, immigration, FDI flows, and the welfare of UK citizens (e.g. Dhingra et al., 2017; Steinberg, 2019; McGrattan and Waddle, 2020; Graziano et al., 2021). Recently, contributions discuss and model the cost of deglobalization through fragmentation and decoupling in trade (Felbermayr et al., 2023; Blanga-Gubbay and Rubínová, 2023; Goldberg and Reed, 2023) and FDI (Witt et al., 2023; IMF, 2023). We address an underexplored facet of deglobalization by examining the unintended economic consequences of one of the recent policies motivated by national security concerns.

The remainder of the paper is structured as follows. In the next section, we describe the rise and working of investment screening policies and develop our theoretical arguments, which

motivate our empirical analyses. Section 3 presents the data on cross-border investments and investment screening policies. Section 4 discusses our empirical strategy and challenges to identification. Section 5 shows our results and robustness analyses. Section 6 concludes.

2 Background and theoretical considerations

2.1 Background

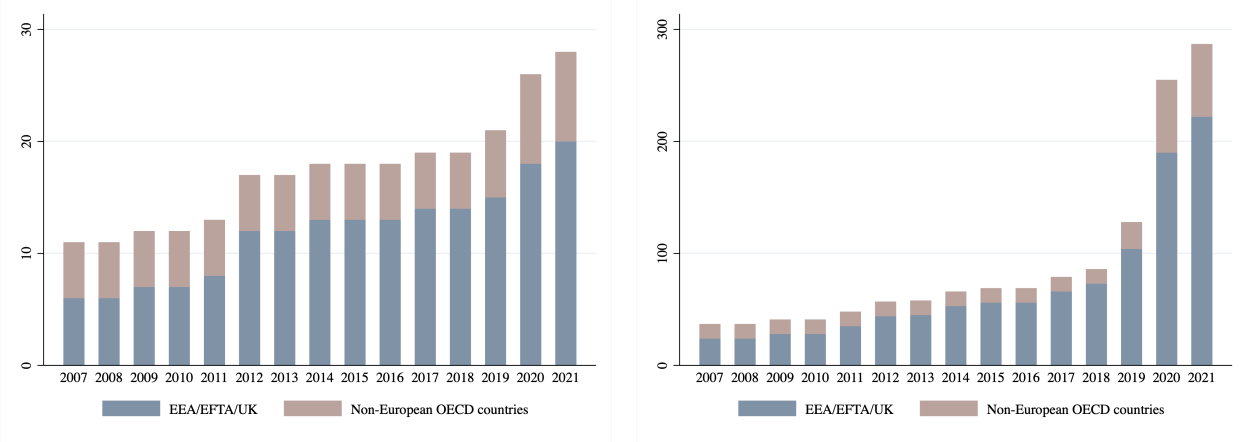
The policy of screening foreign acquisitions aims to limit foreign control of firms in security-sensitive industries (see, e.g. Graham and Krugman, 1995; Navaretti and Venables, 2020). In the past, investment screening was considered as a tool for economic and political balancing particularly within the same security community, such as in transactions between companies from two North Atlantic Treaty Organization (NATO) or EU member states (Lenihan, 2018). Recently, the increased scrutiny on Chinese investors signals the increasing reliance on national investment screening mechanisms in strategic geopolitical or geoeconomic competition (Roberts et al., 2019; Otero-Iglesias and Weissenegger, 2020).[11]

The reach of investment screening mechanisms expanded over the last decade. This is due to three developments: at the extensive margin, we observe an increasing number of states screening foreign investments, while at the intensive margin, more sectors, as well as smaller partial acquisitions, require screening. Figure 1a shows the increasing and accelerating trend of adopting investment screening which is driven by European countries. Figure 1b documents the trend of screening foreign investments in an increasing number of sectors.

At the end of the 20th century, investment screening mechanisms primarily targeted industries that were intimately tied to national defense, such as the development and production of military equipment (Anwar, 2012; Lenihan, 2018). Many countries now recognize new channels of risk transmission which go beyond traditional threats from foreign investments in military and infrastructure companies. New sectors and many more transactions are under scrutiny, including

[11] Chan and Meunier (2021) show that officials in countries with a higher technological level are more favorable towards an EU-wide investment screening framework. Countries with Chinese investments in high-technology sectors also tend to support the EU screening mechanism (Chan and Meunier, 2021) and are more likely to adopt an investment screening policy (Bauerle Danzman and Meunier, 2023a).

advanced, dual use, and network technology, sensitive (personal) data generation and holding, food security, and media assets (see Figure 3 and Table A.1 for a complete list). The EU proposed a framework for screening foreign investments in the EU in September 2017, which was officially approved in April 2019 and has been fully applied since October 2020. While the EU screening framework has established a guideline for member states to regulate foreign investment inflows, they have the authority to design their own screening policies. Nevertheless, Figure 1a shows a rapidly rising trend in the number of countries newly introduced investment screening, mainly among EU countries.



(a) Number of countries (b) Number of sectors

Figure 1: Investment screening adoption in an increasing number of countries and sectors

Notes: Figures show the number of countries (a) and sectors (b) implementing investment screening in 43 OECD and European countries for the years 2007-2022. The sample covers 35 broad sectors considered strategically important, as outlined in Table A.1. Figure (b) shows the number of country-sector combinations where investment screening is present out of 1,505 combinations. *Source:* Own data and representation.

Instead of prohibiting investments by certain types or origins of investors altogether, investment screening policies allow authorities to assess, investigate, authorise, condition, prohibit, or unwind foreign acquisitions (European Union, 2019) to mitigate threats to national security or public order.[12] In practice, screening is often a multi-agency process lasting a few weeks to several months.

The design of investment screening policies varies across countries (Pohl and Rosselot, 2020; Bauerle Danzman and Meunier, 2023a). Generally speaking, investment screening mechanisms

[12]Certain foreign investments into Canada have to pass the "net benefit" test while Australia can block foreign acquisitions deemed to be "against the national interest", a concept that includes national security considerations among other aspects (Pohl and Rosselot, 2020).

consist of a positive list of sectors for which the authorities have intervention competencies or pay particular attention. Some countries foresee the possibility of cross-sectoral screening, which allows for scrutinizing any FDI. Authorities tend to screen investments above a threshold of "control" or "influence" which has decreased over time in most countries. The United States reviews each transaction to determine if a foreign person could obtain control through governance rights (Bauerle Danzman and Meunier, 2023a). In many countries, the intervention threshold is based on acquiring a certain percentage, such as 10 percent, 25 percent or 50 percent, of the target company's shares (Kuc, 2019). Recently, Japan lowered the screening threshold from 10 percent to 1 percent of shares for publicly listed target companies. In a few countries, the intervention threshold may be defined using the absolute amount of investment, as in the UK where investments exceeding as little as 1 million pounds are covered (Kuc, 2019). The nationality of a foreign investor is another key determining factor for whether an investment is subject to screening (Pohl and Rosselot, 2020). In most EU and EFTA member states, the cross-sectoral screening mechanism only targets non-EU/EFTA investors, but most EU/EFTA governments retain the right to intervene even in intra-EU/EFTA transactions in particularly security-sensitive sectors, such as defense.

According to the limited available official information, the annual number of M&A transactions screened globally goes in the thousands.[13] For a set of EU member states alone, the European Commission (2021) reports that almost 1,800 investments were submitted for approval in 2020[14] whereof only 21 percent were formally screened. This implies that in 2020, the majority of cases submitted to EU authorities were not the ones targeted by the investment screening regulation. 79 percent of all submitted cases or more than 1400 deals[15] were submitted for approval by firms that were no threats to national security but *in dubio* about whether investment screening applied to their transaction and wanted to ensure legal compliance. These figures suggest a lack of targeting, which leaves (intended) discretionary power to national governments but also creates high legal

[13] Bencivelli et al. (2023) provide an overview of the official statistics related to screening.

[14] According to European Commission (2022), some EU member states did not report any cases while others also reported "consultations" on the eligibility of the cases. The latter are included in this number.

[15] This and the following absolute case numbers are own calculations based on the percentage shares and the total number of submitted cases provided in European Commission (2021).

uncertainty for firms, which has not yet been studied.

In comparison to the hundreds of non-threatening deals affected, consider the number of transactions receiving conditions: only two percent of the 21 percent formally screened cases, i.e. seven transactions, were prohibited. In addition, 12 percent or 45 investments were authorized with conditions and seven percent or 26 investments were aborted voluntarily. While the parties involved in the deals may abort an investment for many reasons, some share of the aborted deals is probably due to authorities signalling to parties that approval is unlikely or only under highly constraining conditions which can make the deal unattractive. Kuc (2019) puts a price label to the failed transactions. He reports that approximately US$150 billion (11.6 percent of total global foreign direct investment) failed in 2018 following government interventions at the end of investment screening processes.[16] In 2022, 1444 approval requests were made to reporting EU member states whereof roughly 55 percent of the cases were formally screened (European Commission, 2023). This marks a significant increase in the proportion of formally screened cases compared to 2020 and provides some indication about the size of the indirect effects. The total indirect financial impacts are possibly even greater than the dollar estimate in Kuc (2019).

2.2 Theoretical considerations

The rise and expansion of investment screening have introduced a new friction to cross-border investment flows, which we expect to have deglobalizing effects. We expect that investment screening regulations, motivated mainly by national security concerns and changed geopolitics, have unintended externalities on foreign investments, most of which are welcome and productivity-enhancing.

A rapidly growing strand of literature builds on the idea that policy uncertainty affects economic outcomes negatively. How could policy uncertainty impact investment? Market actors might be uncertain about (1) whether a given policy will change (as in Handley and Limão 2017), (2) how a new policy will affect their industry, or (3) the outcome of a political decision process in a policy field. The difference between the second and third types of uncertainty is that the former

[16] Annex I of Kuc (2019) lists all foreign takeovers over $50 million that were blocked or abandoned for national security reasons, 2016-September 2019 (cases for which information is publicly available).

will be largely resolved once the implementation details become available, such as the tax level. In contrast, the third type of uncertainty that firms face is about the outcome of a bureaucratic decision process, such as the approval of an M&A deal by the investment screening authority. Investments may be impacted by all these uncertainties, which are often not differentiated in the literature.

In the case of investment screening, the uncertainty about introduction will decrease over time but case-specific uncertainty will remain. European Commission (2021) reports that 80 percent of investment cases submitted to Member States did not require formal screening because of "evident lack of impact on security/public order or ineligible". There is also uncertainty about the outcome of the investment screening process. This is due to broad screening criteria which are often simply labelled as "national security", "national interest", or "public order" and evolving coverage related to the definitions of e.g., "critical" technologies, infrastructure, and sensitive data. Limited information about past screening outcomes in the public realm also contributes to this uncertainty (Westbrook, 2019).

Besides the increased uncertainty, investment screening affects across-border investments through two direct and two additional indirect channels. The first and foremost direct channel is prohibition. The number of blocked investments in the EU is in the low single-digit range (five in 2022 according to Bencivelli et al. (2023)).[17] Second, the investment screening authority might impose conditions which lead the acquiring or target company to abandon a deal. These conditions might lower the value of the deal directly by limiting certain business activities or indirectly by signaling the risk of government intervention and monitoring in the future, lowering the future reselling price.

The first indirect channel relates to the increase in transaction costs, namely the financial and time costs for regulatory compliance. Specialized outside or in-house counsel to navigate the procedures of investment screening policies is expensive, especially if multi-country approval is required.[18] The second indirect channel is related to deterrence. One intention of policymakers

[17] See Figure 5 in European Commission (2021) and Bencivelli et al. (2023).

[18] According to an impact assessment carried out in France in 2018, 90 percent of the acquirers use outside counsel with service fees estimated to be around 3.5 percent to 4 percent of the transaction value (French Government, 2018). In most countries, screening was taxpayer-funded during the sample period.

is that investment screenings signal to foreign acquirers with malicious intentions that they cannot acquire strategic companies. These channels likely matter to different extents for different investors.

Last but not least, we expect stronger effects in the short run. This is because policy-induced uncertainties as discussed above are diminishing over time with implementation details and application outcomes becoming clearer. Investors learn the procedures and risks and update their expectations. Indeed, a large majority of submitted deals were approved in the end. As mentioned earlier, 20 percent of deals were screened in 2020 by seven EU states, among which 91 percent were approved, whereas only two percent were prohibited and seven percent were aborted.

3 Data and measures

We have two main sources of data. We hand-coded data on screening mechanisms for foreign investments at the sectoral level for 43 OECD- and EU countries from 2007 to 2022. We combine this data on foreign investment screening with deal-level data on cross-border M&A aggregated to the country-sector level.

3.1 Measuring cross-border M&A

Our data source for cross-border M&A is the Bureau van Dijk's Zephyr database. The data contains information on worldwide investment deal transactions and has been widely used in the literature to study M&A (e.g. Serdar Dinc and Erel, 2013; Stiebale, 2016; Todtenhaupt et al., 2020; Todtenhaupt and Voget, 2021). The database provides detailed information for each deal, namely the type, status, size, announcement date, and completion date, etc. For each deal, information about the acquiring and target firms is available, including the name, country, industry, and pre-deal financial statement. Deals might have investors from multiple countries and/or target firms in one or several countries.[19]

[19]Usually, the target firms in different countries belong to the same mother company but because of local business registration, the M&A deal has to gain approval from the screening authority (and other authorities e.g. competition authority) in every country.

In this paper, we consider only cross-border M&A by excluding deals in which all investors and the target firm are from the same country. We use ultimate ownership to define the origin of the investor(s). Deals with at least one foreign acquirer, either a foreign national or a firm registered abroad, are classified as cross-border deals. Such investments might still have domestic investors. For example, many US target firms are acquired jointly by foreign and US investors. We constrain our sample to deals where the target firm is located in EU or OECD member states.[20] For deals with multiple target firms in different countries, we treat each acquirer–target pair as a separate transaction and consider only transactions with the target firm in EU or OECD countries. Our final analytical sample is aggregated to the sector-year level based on the country and sector of the target firm. We use information about the ownership and the country of the acquiring firm to investigate heterogeneous effects by distinguishing between investments by state-owned enterprises or investors from, for instance, autocratic countries, China, or the United States.

We define the sector of a deal based on the primary industry of the target firm as reported at the four-digit NACE (Rev.2) level.Our analytical sample is a panel of the number of cross-border M&A at the country-industry level for the years 2007 to 2022. We use data for the years 2002 to 2006 for pre-trend analysis.

Table 1 reports the number of cross-border M&A by country for the years 2007 to 2022.[21] Large economies including the United States, the United Kingdom, Germany, France, and Canada top the list with more than 10,000 cross-border deals in total. Smaller economies such as Iceland and Costa Rica had less than 150 deals during this period. Deals with investors from autocratic countries, China, Russia, and Arab countries, or by foreign governments or their entities make up less than ten percent of all deals. In comparison, the number of deals with US investors outside of the USA is relatively high, making up more than 30 percent in major European economies and 63.7 percent of cross-border M&A deals in Canada. In sum, the table shows that the large majority of deals were made between firms from OECD and EU countries.

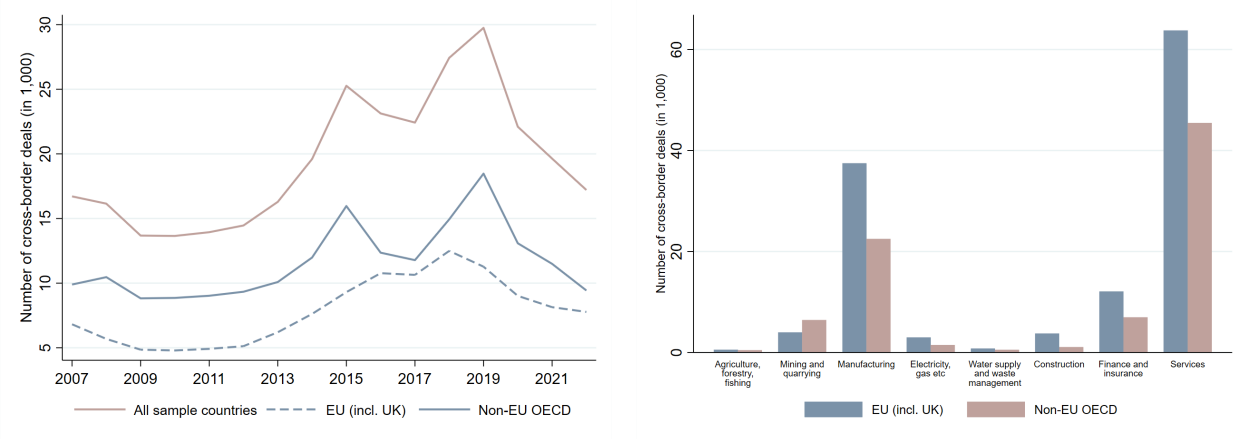
[20] Our sample includes 43 countries, including the 27 EU member states and 16 non-EU OECD countries (United Kingdom, Iceland, Norway, Switzerland, Australia, Canada, Chile, Colombia, Costa Rica, Israel, Japan, Mexico, New Zealand, South Korea, Turkey, and the United States).

[21] Note that during the same time period and for the sample countries, cross-border M&A accounted for an average share of 43.72 percent in total deal numbers and 61.44 percent in total investment values including domestic deals.

Table 1: Cross-border M&A in the EU and OECD countries

No.	Country	Total No.	No. of deals with participants from						EU (incl. UK)	OECD	ISM
			Autoc.	CHN	RUS	USA	Arab	Gov.			
1	United States	41651	3442	1832	304	10073	454	1268	0	1	1
2	United Kingdom	21844	1805	577	160	8446	340	890	1	1	1
3	Germany	18659	737	406	99	6310	81	849	1	1	1
4	France	12203	430	186	26	4551	87	405	1	1	1
5	Canada	10567	567	346	23	6727	64	166	0	1	1
6	Australia	9727	1554	762	11	3210	91	296	0	1	1
7	Netherlands	9650	403	114	84	3366	31	697	1	1	1
8	Italy	6692	318	166	32	1522	54	443	1	1	1
9	Spain	5795	252	85	17	1352	60	242	1	1	1
10	Sweden	5200	135	52	9	1161	30	199	1	1	1
11	Japan	4765	968	403	5	1946	8	76	0	1	1
12	Switzerland	4389	221	85	44	1517	37	453	1	1	0
13	Denmark	3227	74	40	6	796	14	50	1	1	1
14	Israel	3142	347	188	46	2009	10	53	0	1	0
15	Belgium	3037	89	42	10	614	10	161	1	1	0
16	Ireland	2942	81	18	10	1255	28	97	1	1	0
17	Poland	2774	81	25	10	252	10	41	1	1	1
18	Korea, Rep.	2726	731	410	4	994	20	101	0	1	1
19	Norway	2633	70	22	10	458	8	69	1	1	1
20	Finland	2583	115	52	28	580	11	152	1	1	1
21	Bulgaria	2029	142	18	69	114	22	34	1	0	0
22	New Zealand	2004	129	61	2	421	3	24	0	1	0
23	Czechia	1803	131	29	72	110	7	26	1	1	1
24	Austria	1472	84	23	24	189	15	73	1	1	1
25	Luxembourg	1425	107	41	19	324	14	51	1	1	0
26	Mexico	1411	59	28	1	637	9	34	0	1	1
27	Portugal	1259	63	22	3	189	7	85	1	1	1
28	Turkey	1202	263	12	18	200	95	60	0	1	0
29	Romania	1122	67	12	14	91	7	28	1	0	1
30	Cyprus	863	258	15	194	98	33	50	1	0	0
31	Chile	829	45	32	0	182	3	34	0	1	0
32	Colombia	754	32	11	1	205	6	17	0	1	0
33	Hungary	655	34	8	10	78	4	34	1	1	1
34	Estonia	606	34	7	22	79	2	19	1	1	1
35	Latvia	520	38	1	27	24	2	15	1	1	1
36	Lithuania	498	26	5	11	32	1	15	1	1	1
37	Greece	457	29	5	8	53	12	30	1	1	0
38	Slovakia	439	10	1	5	24	1	14	1	1	1
39	Croatia	372	31	9	8	32	1	16	1	0	0
40	Slovenia	317	20	2	5	20	1	11	1	1	1
41	Malta	215	29	7	3	31	8	8	1	0	1
42	Iceland	134	6	2	0	40	1	2	1	1	0
43	Costa Rica	118	1	1	0	36	0	3	0	1	0

Notes: The table shows the number of cross-border M&A in the EU and OECD countries between 2007 and 2022. Countries are ranked by the total number of cross-border M&A (column 3). Columns 4–9 report the number of cross-border M&A with at least one acquiring firm from autocratic countries, China, Russia, and Arab countries or one government-related enterprise including state-owned enterprises (SOE). Autocratic countries are defined as in Bjørnskov and Rode (2020). The last column indicates whether a country screened investments in at least one sector and year during 2007-2022. *Source:* Author calculation based on data from the Zephyr and own dataset on investment screening.



(a) Time trend (b) Sector distribution

Figure 2: Time trend in the number of cross-border M&A and sectoral distribution: 2007-2022

Notes: Figures show the time trend and the sectoral distribution of the number of cross-border M&A in 43 OECD and EU countries for the years 2007-2022. The service sector in Figure (b) includes all service industries except for financial services. *Source:* Author calculation based on the Zephyr data.

Figure 2a shows the time trend in the number of cross-border M&A worldwide and for European countries. Since the global financial crisis of 2007/08, cross-border M&A have grown from around 8,000 in 2009 to more than 20,000 in 2019 with a drastic fall after the outbreak of the COVID-19 pandemic. The time trend for European countries is broadly similar to the full sample but the number of cross-border M&A started to drop already in 2019. This might be due to the formal introduction of the investment screening regulation by the EU in 2019. Figure 2b shows that most cross-border M&A occur in the service and manufacturing sectors.

3.2 Data on investment screening

Our coding of investment screening was inspired by preliminary access to the PRISM data by Bauerle Danzman and Meunier (2023a) but we ended up generating our own dataset.[22] For our identification strategy, we coded details on the adoption of investment screening (the date of decision, official announcement, and implementation) and information on all EU and OECD members.[23] We relied on the list of sectors as identified by Bauerle Danzman and Meunier

[22]One author and a research assistant used country-specific information from relevant documents to code the dates of the announcement and entry into force of investment screening policies. The coding was verified by the other coauthor.

[23]The PRISM data set does not contain information on all these dates and does not cover non-OECD EU countries. We coded the dates with the goal of conducting subannual analysis and controlling for potential anticipation effects

(2023a).[24] A full list of the screened sectors, which are derived from sector specifications in legal texts, is shown in Table A.1 in the Appendix. The data on investment screening has 24,080 observations covering 35 investment screening sectors, 43 countries, and 16 years.

As we show in Figure 1, only 11 out of 43 sample countries screened foreign investments in 2007. This number increased to 31 countries in 2022 (see also Table 1). Similarly, the number of country-sectors with investment screening was 46 out of 1,505 in 2007. It increased to 396 in 2022. The rising trend in the number of countries and country-sectors can be observed in both EU member states and non-European OECD countries.

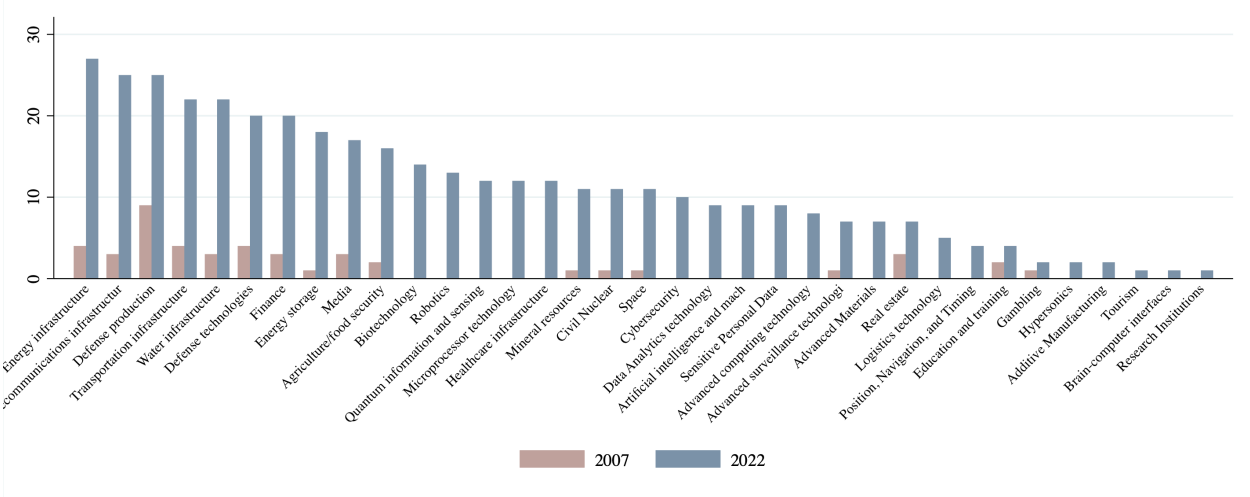


Figure 3: Sectoral coverage of investment screening

Notes: Figure shows the number of countries with an ISM by sector in 2007 and 2022. Sectors are ranked by the number of countries with investment screening in 2022. *Source:* Author calculation based on own dataset on investment screening.

Figure 3 shows the distribution of the number of countries with investment screening by sector for the years 2007 and 2022. Consistent with the patterns in Figure 1, the number of countries with investment screening increased in all sectors. Countries differ substantially in the sectors that they screen. Investments in infrastructure-related sectors (energy, telecommunications, transportation, water) are much more likely to be screened in a given country in 2022 compared to 2007, even though infrastructures were already among the target sectors in several countries in 2007. The

following the announcement of the investment screening policy. However, since the dates of announcement and entry into force are mostly close, any anticipation effects would be only minimal, if at all.

[24] We do not use the following three sectors in our data because they are too broad to be usefully matched to NACE sectors. They are controlled dual-use, critical supplies, and co-location (i.e. physical location of target firm or one of its plants close to national security operations or national border).

large majority of countries screen foreign investments in sectors closely linked to national security, such as defense production, defense technologies, and civil nuclear technology. In contrast, investments in tourism, brain-computer interfaces, and research institutions have been checked for risks to national security only recently and in a small number of countries.

3.3 Matching M&A and investment screening data

To analyze the impacts of investment screening on cross-border investments, we match our own coded investment screening mechanisms dataset to the M&A data. Before describing the matching process in more detail, we note that the process seems to have worked well. Based on our matched sample at the sector level, 275 non-EU deals were potentially subject to screening in Germany. According to the 2021 Annual Report on Investment Screening,[25] German authorities examined 306 national cases whereof 22 were by EU/EFTA investors, resulting in 284 national cases by non-EU/EFTA investors. This implies that our matching process captures the extent of screening very well and, as intended, reflects how companies understand the application of the regulation.[26]

Because of the different industry classifications in these two datasets, we manually match screened sectors in the ISM data to the four-digit NACE sectors based on the descriptions of sectors (Table A.1 of the Appendix).[27] A four-digit NACE sector in a country is subject to investment screening if the NACE code can be matched to an investment screening sector. In many cases, one investment screening sector matches several NACE codes. It is worthwhile mentioning that our data does not allow us to observe which deals were actually screened. Thus we cannot measure the direct effect of investment screening on screened deals. Defining treatment at the sector level essentially assumes that all firms in the matched sector are subject to screening. This assumption in our case is very reasonable because in many cases, authorities do not disclose eligibility details, which exposes all firms in a sector to screening (see also statistics in European Commission (2021) as discussed in Section 2).

[25] The report has been replaced by more recent reports but is available from the authors upon request.

[26] Note that most M&A transactions in Germany are based on voluntary notification. Companies seek to obtain a certificate of compliance and thus have regulatory certainty that the deal will not be screened later on.

[27] The cross-walk was separately coded by a research assistant and a co-author. Their coding was compared and double-checked by the other co-author.

Figure 4 shows the annual number of non-screened and screened deals based on the matched sample. While the total number of deals fluctuated over time and even decreased after 2019, the number of deals subject to screening shows a steadily increasing trend. The increasing number (and also share) of screened deals is due to a rising number of countries screening ever more sectors.

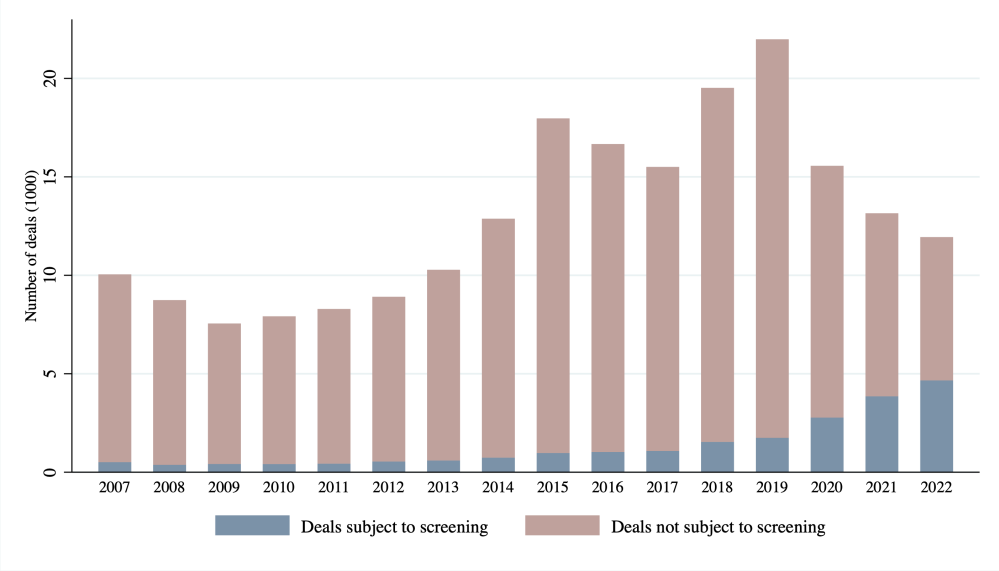


Figure 4: Number of deals subject to screening over time

Notes: Figure shows the number of deals subject to screening over time based on the matched sample. *Source:* Author calculation.

4 Empirical specification and identification strategy

To examine the effects of investment screening mechanisms (ISM) on cross-border M&A, we employ a staggered DDD approach at the country-sector-year level by exploiting variation in the implementation year of investment screening across sectors and countries. Essentially, we compare the number of cross-border M&A in a country with screening for a specific sector to country-sectors without ISM before and after the introduction of screening. Because of a high share of zeros, i.e. no deals in country-sector-years, we use Poisson Pseudo-Maximum Likelihood (PPML) to account for heteroskedasticity, which is widely used in the gravity literature and studies in other contexts when the dependent variable has a large share of zeros (e.g. Santos Silva and Tenreyro, 2006; Todtenhaupt et al., 2020).[28] The DDD specification takes the following form:

[28] Weidner and Zylkin (2021) prove the consistency of the three-way fixed effect estimator under Poisson.

$$N_{cst} = exp(\beta ISM_{cst} + \gamma \mathbf{X}_{cst} + \delta_{ct} + \phi_{st} + \theta_{cs}) \times \varepsilon_{cst} \quad (1)$$

where N_{cst} denotes the total number of cross-border M&A measured at the country c-sector s level in year t. In our baseline analysis, we use cross-border M&A with acquiring firms from all countries. In heterogeneity analyses, we utilize information about the source country of acquirers to explore heterogeneous effects. ISM_{cst} is a binary variable indicating the presence of investment screening policies for national security in country c in sector s in year t. This variable equals zero for the years before the introduction of the ISM for country-sectors with investment screening and turns one in the year when the policy entered into force. The variable value remains zero for all years for country-sectors without ISM. We mitigate omitted variable bias by including a set of control variables $\mathbf{X}_{cst}$ at the country-sector-year level as well as country-year fixed effects δ_{ct}, sector-year fixed effects ϕ_{st} and country-sector fixed effects θ_{cs}, which we will discuss below in details. Consequently, the identification of the impact of screening on cross-border M&A stems from variation in each country-sector pair over time. We cluster standard errors ε_{cst} at the four-digit NACE sector level to account for potential correlations between sectors over time.

The identification of a causal effect of investment screening on cross-border M&A relies on the exogenous implementation of the ISM. One major threat to this assumption is the non-random adoption of ISM across countries and sectors. Sectors with ISM are likely to be systematically different from other sectors. Also, not all countries in our sample introduced ISM and these countries are likely to be different from each other in other policies. Countries with ISM may, for instance, have more firms in critical sectors or have had more foreign acquisitions of strategic firms in the past and are therefore more concerned about national security. We note, however, that independent of the adoption determinants of ISM, an individual foreign investor is unlikely to cause the adoption of an ISM. In other words, the country-level adoption of investment screening can be considered exogenous to the individual firms engaging in M&A deals.

We address the above concerns in four steps. To ensure that we are comparing country-sector duplets that are similar except for having an ISM, we first constrain our sample to sectors which

were screened in at least one country during our sample period.[29] This excludes those sectors that are potentially very different as indicated by the fact that no country has (yet) had any security concerns. In a similar vein, countries that never screened foreign investments are potentially quite different from countries with an ISM.[30] As a robustness check, we further constrain our sample to those countries that screened foreign investments in at least one sector during our sample period.

Second, we include a set of strict fixed effects that are helpful in addressing these problems. Specifically, the inclusion of industry-year fixed effects accounts for time-variant and time-invariant characteristics at the industry level, ensuring that we are comparing cross-border M&A within the same industry. The country-year fixed effects capture all factors that explain variations in cross-border M&A at the country level over time, including factors at the country level that affect the introduction of investment screening. Finally, the country-sector fixed effects account for time-invariant differences across country-sectors, e.g. different sector sizes across countries or different degrees of sectoral openness to foreign investments because of sector-specific regulation, which could be important determinants of introducing investment screening. While these fixed effects are useful in absorbing confounding factors at respective levels, time-variant characteristics at the country-sector level that are correlated with the introduction of investment screening and foreign investment could still bias our results.

To further address those possibilities, we include a host of control variables in our regressions. Importantly, we capture initial differences in the exposure to different types of foreign investment which might affect the likelihood of adopting an ISM. We consider four pre-determined variables: the 2002-2006 country-sector average of total cross-border M&A, and respectively the number of M&A with Chinese, US, or foreign state-related entity as investors.[31] We hypothesize that concerns about national security were higher in sectors with more foreign investments, especially if they came from Chinese firms and foreign government entities. Such countries and sectors may thus be more likely to introduce investment screening (Eichenauer et al., 2021; Bauerle Danzman

[29] 200 out of 615 four-digit NACE (Rev.2) sectors were screened in at least one country and year during the sample period. Results are robust to this sample restriction: Table A.2 shows results based on the sample including all NACE sectors.

[30] 15 of the 43 sample countries did not screen any sector during the sample period.

[31] We transform these numbers using natural logarithm. To account for zero values, we add one before taking the logarithm.

and Meunier, 2023a). Controlling for this possibility reduces concerns about the endogeneity of treatment with investment screening. Note that country-sector fixed effects in our estimations can capture the differential exposure to foreign investment. To allow for possible time-variant effects, we interact those numbers with year dummies. Lastly, we control for international trade because of the close relationship between trade and FDI. Including the strict fixed effects and control variables and based on the restricted samples, we perform an event study type analysis to explicitly examine the parallel trend assumption of the difference-in-differences approach.

5 Empirical results

5.1 Baseline results

We present our baseline estimates in Table 2. Estimates in columns (1) and (2) are based on the full sample of 43 OECD and European countries while columns (3) to (4) focus on the sample of European countries. Columns (1) and (3) use the sample including all countries and columns (2) and (4) are based on the sample of countries that screened foreign investments in at least one sector during our sample period (the "screening countries"). All specifications include country-year, sector-year, and country-sector fixed effects, and the 2002-2006 average of the total number of cross-border (CB) M&A, cross-border M&A with Chinese, US, and foreign government participation interacted with year dummies.

Table 2 displays a negative and statistically significant coefficient estimate for the ISM indicator in all columns. This indicates that the number of sectoral cross-border M&A decreased following the introduction of investment screening. The introduction of an ISM reduced the number of cross-border M&A by 11.7 to 16.0 percent depending on the estimation sample. Benchmarking the size of the effect on the average number of deals across countries during our sample period, the estimated effect of an ISM is translated to a reduction of 20 to 27 deals. Could the size of the estimated effect simply reflect prohibition and deterrence effects? This question is important but difficult to answer because the number of deals that should be deterred for national security reasons is unknown. However, we know that the number of blocked deals is low, for instance, five

Table 2: Investment screening and cross-border M&A: Baseline results

Dep. var:	OECD and European countries		European countries	
No. of CB M&A	(1)	(2)	(3)	(4)
	All Countries	Screening Countries	All Countries	Screening Countries
ISM	-0.124**	-0.132**	-0.156***	-0.174***
	(0.056)	(0.056)	(0.059)	(0.059)
Trade (ln)	0.035	0.040	0.056*	0.056
	(0.022)	(0.031)	(0.032)	(0.054)
Initial CB M&A× year	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes
Country-sector FE	Yes	Yes	Yes	Yes
Observations	64,363	49,141	41,850	31,515

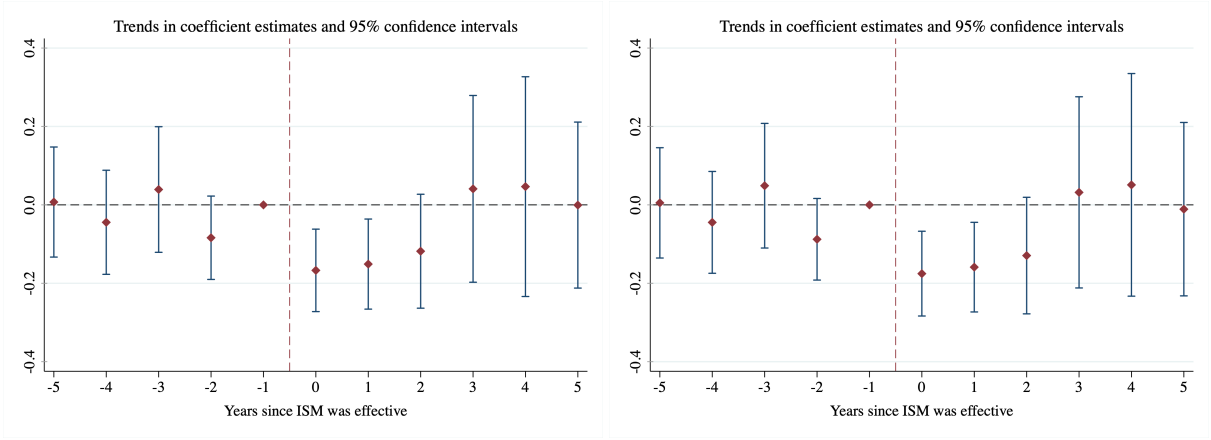
Notes: Table shows PPML estimates of Equation (1) based on data for the years 2007-2022. The outcome variable is the annual number of cross-border M&A at the country-sector-year level. Columns (1) and (3) are based on all four-digit NACE sectors where investment screening was implemented in at least one country. Columns (2) and (4) constrain the sample to countries where screening was implemented in at least one sector during our sample period. All regressions control for country-time, sector-time, and country-sector fixed effects, international trade (in logarithmic form), and the number of four different types of initial cross-border M&A, each of which is further interacted with year dummies: total number of cross-border M&A, and the number of M&A with Chinese, US, or government participation between 2002 and 2006. Robust standard errors clustered at the four-digit NACE sector level in parentheses. * p <0.1, ** p <0.05, *** p <0.01.

and four deals were blocked in the United Kingom and Italy respectively (annual data for either 2021 or 2022) (Bencivelli et al., 2023). It is thereby more likely that the negative effect is attributed to increased uncertainty and transaction costs following the introduction of investment screening.

The causal interpretation of these estimates depends on the exogeneity of treatment, meaning that countries and sectors introducing investment screening would have followed a parallel trend in the outcome variable as those without investment screening. Despite the inclusion of strict fixed effects and control variables in our regressions that help address possible endogeneity, we do not know yet whether countries and sectors with and without investment screening follow a parallel trend pre-treatment. To this end, we follow the literature and look for support of the parallel trend assumption in an event study, with the estimation specification as follows:

$$N_{cst} = exp[\sum_{m=-5}^{5} \beta_m ISM_{csm} + \gamma \mathbf{X}_{cst} + \delta_{ct} + \phi_{st} + \theta_{cs}] \times \varepsilon_{cst} \quad (2)$$

where ISM_{csm} is a dummy variable indicating m years before or after investment screening was introduced in sector s in country c. $ISM_{cs,-5}$ and $ISM_{cs,5}$ indicate five years or more before and after the introduction of investment screening. Following the literature, we use the year before the introduction of the ISM, $t-1$, as the reference period. The coefficient, β_m, estimates the average difference in the number of cross-border M&A in countries and sectors with ISM in year m relative to those without ISM in year m, compared to the difference between these countries and sectors in $t-1$. We estimate Equation (2) with the same set of control variables and fixed effects as in Equation (1). Figure 5 displays the coefficient plots for the event study and their 95% confidence interval for all OECD and European countries (left panel) and screening countries where at least one sector was screened during our sample period (right panel).



(a) All sample countries (b) Screening countries

Figure 5: Event study estimates: Investment screening and cross-border M&A

Notes: Event study coefficients and their corresponding 95 percent confidence intervals for triple difference PPML estimations of the number of cross-border M&A in country-sectors with and without ISM for the period 2007-2022 (estimation Equation (2)). The dashed line separates the years before and after treatment. Figure (a) is based on the sample of all OECD and European countries. Figure (b) is based on the screening countries where at least one sector was screened during the sample period. All regressions control for country-time, sector-time, and country-sector fixed effects, international trade (in logarithmic form), and the number of four different types of initial cross-border M&A, each of which is further interacted with year dummies: total number of cross-border M&A, and the number of M&A with Chinese, US, or government participation between 2002 and 2006. Standard errors are clustered at the four-digit NACE sector level.

Figure 5 shows that the difference between treatment and control groups is not statistically significant before the introduction of investment screening. The absence of a pre-trend suggests no

anticipation or selection effects conditional on the set of covariates, hence conditional exogeneity holds. In both panels, the estimated coefficients are negative and significant in the year of adoption (year 0) and in the first year after adoption (year 1) while turn insignificant thereafter. This indicates an immediate and short-run adverse effect of ISM on cross-border investments. One possible explanation for this short-lasting effect is that screening details become clearer for lawyers who are better able to advise clients, or investors learn how national authorities implement investment screening in practice, both of which reduce the uncertainty associated with the introduction. In addition, firms may have learnt that a vast majority of screened M&A are eventually approved (European Commission, 2021). An alternative explanation is due to imprecise estimates as the estimations for periods $t+3$ to $t+5$ rely on sectors that introduced investment screening in 2019 or earlier. We show in the robustness check section that the average effect of investment screening remains negative and significant if we constrain our sample to the years until 2019. The dynamic patterns shown in Figure 5 suggest that the sharp increase in policy uncertainties shortly after the introduction of investment screening is the primary mechanism through which it negatively affected foreign investment.

As another way to examine possible non-parallel pre-trends in the treatment and control groups, we perform a placebo test. In the absence of pre-trends, the introduction of ISM should not correlate with past investment deals. We define the dependent variable as the five-year lag (relative to the adoption of ISM) of the number of deals.[32] The estimation results are reported in Table A.3. Across all specifications, none of the estimated coefficients is significant. This suggests that there are no systematic pre-trends, reassuring us that our results are not confounded by pre-existing differences between treated sectors and countries conditional on initial conditions and fixed effects.

[32] Formally, we estimate

$$N_{cs(t-5)} = exp(\beta screening_{cst} + \gamma \mathbf{X}_{cst} + \delta_{ct} + \phi_{st} + \theta_{cs}) \times \varepsilon_{cst} \tag{3}$$

where $N_{cs(t-5)}$ measures the number of cross-border M&A in year $t-5$.

5.2 Robustness analyses

This subsection presents various robustness checks of the estimates concerning the treatment definition, alternative ways of counting cross-border deals, and the sample years. We also check the intensive versus extensive margin adjustments and the specification including linear time trends.

We start by redefining how we deal with M&A that have multiple affiliates domiciled in different countries. In our baseline analysis, we treated each acquirer-target pair as a separate transaction and thus counted the same deal separately for all countries with an affiliate. This is consistent with the fact that national screening authorities in all screening countries with a domiciled affiliate have the possibility to screen this transaction independently and come to a different result than authorities elsewhere. This approach thus ensures that we do not miss any deals and decisions. However, it potentially allows the same deal to be screened in one country but not in other countries, which would introduce measurement errors and bias our estimates. In the first robustness check, we thus exclude deals with multiple target firms from the sample and repeat the estimations in Table 2 with results reported in Table A.4 of the Appendix. The size of the estimated coefficients remains almost unchanged, suggesting that our baseline estimates are not driven by multi-country deals. This is not surprising given the small share of such deals in the sample.[33]

In the second robustness, we change the sample period for two reasons: first, potential COVID-19 effects on the M&A market might not be absorbed by the fixed effects, and second, treatment frequency is higher at the end of the sample period. Figure 1 above shows that most countries introduced ISM after the financial and Euro debt crises (2009-2010). The temporal distribution of treatment effects matters because the pre- and post-treatment length affect the weighting of treatment effects (de Chaisemartin and D'Haultfoeuille, 2022). Panel A of Table 3 uses the post-financial crisis period 2012-2022 and panel B the years 2017-2022 when the European Screening Regulation was discussed, decided, and entered into force. The European Commission (2019) defines rules for existing and new investment screening rules and procedures but does not require

[33]There are 6,880 or 2.25 percent deals where the target firms are located in different countries.

Table 3: Investment screening and cross-border M&A deals: Robustness to sample periods

Dep. var:	OECD and European countries		European countries	
No. of CB M&A	(1)	(2)	(3)	(4)
	All countries	Screening countries	All countries	Screening countries
Panel A: Sample 2012-2022 (after the financial crisis)				
ISM	-0.132**	-0.140***	-0.157***	-0.172***
	(0.053)	(0.052)	(0.056)	(0.055)
Observations	40,552	31,122	26,442	19,880
Panel B: Sample 2017-2022 (EU investment screening regulation)				
ISM	-0.121	-0.125*	-0.169**	-0.179**
	(0.074)	(0.073)	(0.084)	(0.082)
Observations	17,555	13,820	11,393	8,773
Panel C: Sample 2007-2019 (pre-COVID19)				
ISM	-0.172**	-0.184**	-0.219***	-0.243***
	(0.087)	(0.090)	(0.081)	(0.084)
Observations	50,522	38,863	32,923	24,931
Initial CB M&A× year	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes
Country-sector FE	Yes	Yes	Yes	Yes

Notes: Table shows PPML estimation results based on data of shorter periods: 2012-2022 in Panel A, 2017-2022 in Panel B, and 2007-2019 in Panel C. All regressions control for country-time, sector-time, and country-sector fixed effects, international trade (in logarithmic form), and the number of four different types of initial cross-border M&A, each of which is further interacted with year dummies: total number of cross-border M&A and the number of M&A with Chinese, US, or government participation between 2002 and 2006. Robust standard errors clustered at the four-digit NACE sector level in parentheses. * p <0.1, ** p <0.05, *** p <0.01.

member states to introduce investment screening. Nevertheless, it has raised political awareness for the new policy instrument (OECD, 2022). Panels A and B continue to show evidence that ISM has a negative effect on cross-border investments. By limiting the analysis to less than a third of the original sample, we lose statistical power due to substantially reduced inter-temporal variation. In panel C, we consider possible confounding effects of COVID-19 by focusing on the pre-COVID

period (2007-2019) and our main findings are re-confirmed.

As additional robustness checks, we confirm that our results are not driven by our coding of cross-sectoral investment screening. We code a country-sector as having screening only if the countries have a regulation that highlights particular sectors as critical. From a statistical point of view, this coding does not invalidate our identification strategy: any possible treatment effects of cross-sector screening that are common to all sectors are absorbed by the country-year fixed effects. One could imagine that the intensity of cross-sector screening may differ across "non-explicitly named" sectors. In that case, the estimated effects of our regression would suffer from omitted variable bias. The results in Table A.5 show negative and statistically significant coefficients of screening in all specifications for reduced samples. Specifically, in columns (1)-(2), we exclude countries that had cross-sector screening in earlier years and introduced sector-specific ISM in later years as well as countries that practised cross-sector screening during the full sample period. In columns (3)-(4), we exclude additional countries that started with sector-specific screening and then extended screening to all sectors. Coefficient estimates are slightly larger than the baseline results. Our main results are also robust when we code countries with cross-sector screening as screening all sectors. We thus conclude that the coding in the main specification together with the high-dimensional fixed effects captures potential country-level effects of cross-sector screening.

Finally, we confirm that our results are driven by the intensive rather than extensive margin adjustments in M&A (Table A.6) and that we do not capture a country linear time trend (Table A.7).

5.3 Heterogeneous effects

The heterogeneity analyses in this section allow us to understand the main drivers of our baseline results and hence shed light on the mechanisms through which investment screening reduces cross-border M&A. The detailed information on each M&A reported in the Zephyr data makes it possible to conduct various heterogeneity analyses, namely regarding the percentage of acquired shares and the origin and type of investors.

We first analyze whether the effect of ISM depends on the percentage of stakes that the investor seeks to acquire. Authorities screen acquisitions only above certain thresholds, often defined by

Table 4: Heterogeneity by type of acquisition: minority, majority and full acquisitions

Dep. var:	OECD and European countries				European countries			
No. of CB M&A	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Minor	Major	Full	Unknown	Minor	Major	Full	Unknown
ISM	-0.318***	0.173**	0.007	-0.006	-0.426***	0.279***	0.063	0.013
	(0.116)	(0.081)	(0.051)	(0.071)	(0.119)	(0.096)	(0.053)	(0.091)
For comparison: Coefficients from the interaction regression in Table A.8								
Diff. relative to minor		0.492***	0.325***	0.312**		0.705***	0.489***	0.439***
		(0.136)	(0.123)	(0.137)		(0.152)	(0.130)	(0.143)
Initial CB M&A× year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-sector FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	32,590	23,162	51,184	28,810	20,563	14,629	33,237	17,774

Notes: Table shows PPML estimation results of Equation (1) for different samples of M&A deals. Minor deals are the ones with below 50 percent acquired stakes, major deals are the ones with 50 percent (inclusive) to 100 percent acquired stakes, full deals are the ones with 100 percent acquired stakes, and unknown deals are those without information on the share of acquired stakes. All regressions control for country-time, sector-time, and country-sector fixed effects, international trade (in logarithmic form), and the number of four different types of initial cross-border M&A, each of which is further interacted with year dummies: total number of cross-border M&A and the number of M&A with Chinese, US, or government participation between 2002 and 2006. Robust standard errors clustered at the four-digit NACE sector level in parentheses. * p <0.1, ** p <0.05, *** p <0.01.

the percentage of shares acquired. The thresholds are often motivated by the influence or control that the investors would gain over the firm. As described above, threshold definitions differ across countries and sometimes additional criteria are used to determine whether a transaction is subject to screening. We expect that the direct effect of ISM is stronger for deals where a large percentage of shares is acquired as authorities may be more critical of a transaction where the majority shareholder changes. Investment screening may also raise uncertainties for deals in which a small percentage of shares are acquired. Note that a small percentage of acquired shares does not necessarily mean a small deal size in financial terms. However, our deal-level data shows that the average deal value for minority deals, major deals, and full acquisitions is 54,804.3 Euro, 226,004.9 Euro, and 239,598.8 Euro, respectively. In Table 4, we classify deals into four groups according

to the share of acquired stakes: minority deals with an acquired stake below 50 percent, majority deals with an acquired stake between and including 50 percent and 100 percent but not including the latter, deals with a full ownership change, and deals where the acquired stake is not available in the database.[34] Table 4 shows significant and negative effects of investment screening only for minority deals. For majority deals, our results show instead that ISM has a positive effect. These results suggest possible reallocation effects from minor to major deals due to investment screening. The estimated coefficients for full acquisitions and deals with unknown acquisition shares are not statistically significant. To test whether these differences are statistically different, we stack the different data sets and add an interaction as shown in the additional line of Table 4 as taken from Table A.8. The interactions show that, compared to minority deals, investment screening leads to significantly more majority and full acquisitions and deals with unknown acquisition shares.

These results suggest that majority deals are relatively immune to ISM whereas minority deals are much more sensitive to policy uncertainties and the costs of compliance. Given the positive correlation between financial deal value and the share of stakes acquired, we expect that the average size in financial value may have increased. We examine this hypothesis in Table 5 where we replace the outcome variable with the total value of all cross-border M&A measured in Euro at the country-industry level in Panel A and the average deal value in Panel B.[35] Both measures of investment size are calculated based on the Zephyr database and are at the four-digit NACE level. The results show that ISM had a significant positive effect on the average investment size, which is consistent with reallocation from smaller to larger cross-border investments. ISM did not affect the total investment size, suggesting that the positive effects on major deals and the negative effects on minor deals may have offset each other in terms of values.

These divergent effects by share of acquired stakes are probably unintended by policymakers. In terms of mechanisms, the divergence may stem from the fact that transaction costs are largely fixed and unrelated to the financial value of the deal and thus represent relatively more important costs for smaller investment deals. While we do not observe the number of prohibited or aborted

[34] In the deal-level data, the number of minor, major, full and unknown stake deals are 96822, 19259, 92354, and 98148 respectively.

[35] For deals with missing values, we manipulate their values by using the median value of all deals within two-digit NACE sector in that year following Todtenhaupt et al. (2020).

Table 5: Investment screening and cross-border M&A: Effects on deal values

	OECD and European countries		European countries	
	(1)	(2)	(3)	(4)
	All countries	Screening countries	All countries	Screening countries
Panel A: Dep. var: Total deal value				
ISM	0.080	0.097	0.147	0.199*
	(0.107)	(0.109)	(0.111)	(0.114)
Observations	18,138	15,257	11,765	9,278
Panel B: Dep. var: Average deal value				
ISM	0.328**	0.405***	0.484***	0.654***
	(0.150)	(0.148)	(0.159)	(0.158)
Observations	18,140	15,259	11,765	9,278
Initial CB M&A× year	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes
Country-sector FE	Yes	Yes	Yes	Yes

Notes: Table shows PPML estimation results based on data between 2007 and 2022. The outcome variable is the total value of cross-border investments at the country-sector-year level in Panel A and the average value per deal in Panel B. All regressions control for country-time, sector-time, and country-sector fixed effects, international trade (in logarithmic form), and the number of four different types of initial cross-border M&A, each of which is further interacted with year dummies: total number of cross-border M&A and the number of M&A with Chinese, US, or government participation between 2002 and 2006. Robust standard errors clustered at the four-digit NACE sector level in parentheses. * p <0.1, ** p <0.05, *** p <0.01.

deals due to investment screening, the unintended negative impact on deals with minority stakes, together with the positive impact on majority deals, suggests that increased uncertainty and transaction costs are relevant channels for explaining the average negative effect. The alternative mechanisms (and intended effects), prohibition and deterrence, should have homogeneous effects for deals of different sizes.

In Table A.9 in the Appendix, we replicate the estimations in Table 4 but classify deal size based on the finally acquired stake taking into account previously acquired shares. This arises from the possibility that authorities may screen a specific investment deal based on the cumulative number of acquired shares by the same investors. The results show consistent evidence that ISM mainly

reduced the number of small-scale deals.

Our second heterogeneity analysis regards the country of investor origin. We start by distinguishing between M&A investors by regime type. We classify an investor as autocratic if at least one acquiring firm is from an autocratic country and democratic otherwise.[36] The classification of regime type is based on Bjørnskov and Rode (2020). We find a negative and mostly significant effect of screening on investments from both democratic and autocratic countries in Panel A of Table 6. The table also shows that the estimated effect of ISM is not significantly different across regime types, as shown by the coefficient of *Coeff. diff.* which is estimated as the interaction effect from a stacked dataset (see Table A.10).

Recipient countries worry in particular about acquisitions by foreign governments or state-related actors because of the high likelihood that the ownership and corresponding influence will be (ab)used for politics. We utilize the information on the ultimate ownership of the acquiring firms and differentiate between deals with and without the participation of government institutions or state-owned enterprises (SOE). Investors owned directly by foreign governments or with close connections to them are often discussed as posing higher risks: they may be politicized or even used for economic coercion by the foreign state. The results in Panel B show that ISM has strongly reduced the number of deals with the participation of government institutions or SOEs. Nevertheless, we continue to also find a negative effect of ISM on private deals. The negative effect on deals involving foreign governments is probably an intended effect of investment screening. However, the strong negative impact on private deals is likely unintended. Note that some state-related investments from, for example, foreign pension funds, might be welcome. Our results also show no evidence that the effect of ISM significantly differs by type of investor. We obtain similar results when we define deals with government or SOE involvement based on the global ultimate ownership of the acquirer.

The rise of investment screening and the rise in Chinese investments are temporarily related. We thus analyze whether ISM decreased M&A deals with Chinese investors. Panel C shows negative effects of ISM on Chinese investments, although the coefficient loses statistical significance

[36] In our sample, 9107 or 7.6 percent deals have at least one acquiring firm from an autocratic country.

Table 6: Investment screening and cross-border M&A: Heterogeneity by investor type

Dep. var:	OECD and European countries		European countries	
No. of CB M&A	(1)	(2)	(3)	(4)
Panel A: Democracy	Autocratic	Democratic	Autocratic	Democratic
ISM	-0.123**	-0.180*	-0.160***	-0.095
	(0.057)	(0.102)	(0.060)	(0.124)
Coef. diff.		-0.057		0.065
		(0.108)		(0.133)
Observations	62,849	16,459	40,914	8,507
Panel B: Government	w/o government	w/ government	w/o government	w/ government
ISM	-0.114**	-0.302*	-0.140**	-0.391**
	(0.055)	(0.173)	(0.058)	(0.171)
Coef. diff.		-0.188		-0.251
		(0.163)		(0.154)
Observations	63,381	11,937	41,091	7,718
Panel C: China	w/o China	w/ China	w/o China	w/ China
ISM	-0.122**	-0.372**	-0.157***	-0.053
	(0.056)	(0.145)	(0.060)	(0.236)
Coef. diff.		-0.249*		0.104
		(0.148)		(0.247)
Observations	63,962	6,654	41,638	2,475
Panel D: USA	w/o USA	w/ USA	w/o USA	w/ USA
ISM	-0.083	-0.193**	-0.084	-0.284***
	(0.060)	(0.078)	(0.060)	(0.082)
Coef. diff.		-0.110		-0.199***
		(0.070)		(0.074)
Observations	58,344	27,947	40,444	16,092
Panel E: Tax haven	w/o tax haven	w/ tax haven	w/o tax haven	w/ tax haven
ISM	-0.107*	-0.191**	-0.151**	-0.151*
	(0.060)	(0.078)	(0.063)	(0.088)
Coef. diff.		-0.083		0.000
		(0.087)		(0.092)
Observations	61,258	29,587	39,690	18,938

Notes: Table shows PPML estimation results of Equation (1) by cross-border M&A type depending on the characteristics of acquiring firms. The outcome variable is the number of cross-border deals. Panel A distinguishes between investors by regime type in their country of origin (as defined by Bjørnskov and Rode (2020)). Panel B reports the results for deals with and without government or SOE among acquiring firms. Panels C and D distinguish between deals with and without acquiring firms from China or the US. Panel E reports results for deals that have at least one acquirer from a tax haven country and deals whose investors are from non-tax haven countries. The coefficient difference in column (2) indicates the difference between columns (2) and (1) estimated in a nested model based on a stacked dataset of two types of deals. Similarly, the coefficient difference in column (4) indicates the difference between columns (4) and (3). Results of the nested model are presented in Table A.8 and Table A.10. Columns (1) and (2) are for all sample countries and columns (3) and (4) are for European countries. All regressions control for country-time, sector-time, and country-sector fixed effects, international trade (in logarithmic form), and the number of four different types of initial cross-border M&A, each of which is further interacted with year dummies: total number of cross-border M&A and the number of M&A with Chinese, US, or government participation between 2002 and 2006. Robust standard errors clustered at the four-digit NACE sector level in parentheses. * p <0.1, ** p <0.05, *** p <0.01.

for the sample of European countries. As the negative effect of ISM remains significant for the sample of non-Chinese M&A, we conclude that the results are not driven by Chinese investments. The estimated interaction coefficient suggests that the reduction for Chinese investments is significantly larger in the sample of all countries (see also Table A.10), which is perhaps intended by the screening authorities. However, such an impact is not present in European countries. In Table A.11 in the Appendix, we test jointly whether deals involving foreign governments or investors from China or Russia are affected differently from other deals and we do not find statistically different effects.[37]

The US is both the largest recipient of cross-border M&A and the most important M&A investor abroad (see Table 1). In panel D of Table 6, we split the sample by US origin of investment and find that ISM significantly reduced the number of US deals. The adoption of ISM reduced the number of US cross-border M&A by 17.6 to 24.7 percent, corresponding to an average reduction of nine to 12 deals in countries implementing ISM. In contrast, the effect on deals without US investors is not significant. Based on the distribution of deals as shown in Table 1, a large share of the sample in columns (2) and (4) of Panel D is made up of European investors. As described above, foreign investors from member states of the EU/EFTA countries are treated differently by other EU/EFTA countries than other foreign investors (see footnote 9). In the sample of European recipients of US investment, we find that the reduction in the number of US investments is larger than for other deals. This could be due to the fact that many US investors are financial investors seeking returns rather than strategic assets. As argued above, the elasticity of financial investors is higher than that of strategic investors.

Our analyses use information on the ultimate ownership as available in the Zephyr data to define the origin of investors. However, the ultimate owners in many cases are investors residing in tax havens.[38] Tax havens might be used to avoid taxes but also to circumvent regulations such as investment screening. Screening authorities are worried about investors of concern concealing

[37] We do not report separate results for deals with and without Russian investors in Table 6 because the number of deals involving Russian investors is too small (see Table 1) such that our baseline estimation with the full set of fixed effects and control variables does not converge. In a relaxed specification without the initial number of cross-border M&A interacted with year dummies, we find that ISM has no significant negative impact on Russian investors while the negative effect of ISM persists for the sample without Russian investors.

[38] 17.0 percent deals have at least one acquirer whose ultimate owner is from a tax haven country.

their identity behind funds set up in tax havens. More generally, tax havens are special because the share of M&A from tax havens is much larger than their share in the world economy. This implies that our previous analyses based on origin-country might capture only a part of investments that actually originate from these countries. The results in panel E, however, show that our main results are not driven by investments from tax havens. ISM decreases investments from both tax havens and from other countries. There is no evidence suggesting that investment screening reduced M&A from tax havens by more than from other destinations.

In Table 7, we expect that investment screening has no effects on deals with investors solely from the EU/EFTA, which are largely exempted from screening. We define an intra-EU/EFTA deal in the same way as the investment authorities would do: all investors must be from EU/EFTA countries. The results confirm our hypothesis: ISM did not reduce the number of cross-border M&A within the EU/EFTA. In comparison, the introduction of investment screening significantly reduced the number of deals with participation by non-EU/EFTA investors. Unsurprisingly, this impact is stronger than the null effect for intra-EU/EFTA deals.

6 Concluding remarks

Economic and national security dominate the policy discussions in international fora. The liberal rules-based international order is on the defense line and a new wave of protectionist policies threatens globalization. There are signs of new investments fragmenting into geopolitically aligned blocks. These trends are policy-driven and motivated by economic and national security concerns. Politicians call for diversification of supply chains and increasing controls of international flows of capital and goods. Evidence on the (unintended) economic effects of these new policies starts to emerge. We contribute to this literature by estimating the effect of screening inward foreign investment on cross-border M&A.

We compile a new data set of the implementation of investment screening at the sector level in 43 OECD and European countries from 2007 to 2022 and match it to cross-border M&A data. Employing a staggered triple differences estimation approach where we include a host of high-dimensional fixed effects and control variables, we document that investment screening reduces

Table 7: Investment screening mechanisms and cross-border M&A: Deals within the EU/EFTA or with acquirers from non-EU/EFTA countries

Dep. var: No. of CB M&A	Estimations based on the European country sample	
	Deals within EU/EFTA	Deals with non-EU/EFTA participants
	(1)	(2)
ISM	-0.095	-0.225***
	(0.073)	(0.067)
Coef. diff.		-0.130*
		(0.070)
Initial CB M&A× year	Yes	Yes
Country-year FE	Yes	Yes
Sector-year FE	Yes	Yes
Country-sector FE	Yes	Yes
Observations	36,132	25,379

Notes: Table shows PPML estimation results based on data between 2007 and 2022. The outcome variable is the number of cross-border M&A with all investors from EU/EFTA countries (column 1) or at least one acquirer from non-EU/EFTA countries (column 2). The coefficient difference in column (2) indicates the difference between columns (2) and (1) estimated in a nested model based on a stacked dataset of two types of deals. Results of the nested model are presented in Table A.10. All regressions control for country-time, sector-time, and country-sector fixed effects, international trade (in logarithmic form), and the number of four different types of initial cross-border M&A, each of which is further interacted with year dummies: total number of cross-border M&A and the number of M&A with Chinese, US, or government participation between 2002 and 2006. Robust standard errors clustered at the sector level in parentheses. * p <0.1, ** p <0.05, *** p <0.01.

cross-border investments. Our estimates suggest that investment screening has reduced cross-border M&A by more than ten percent on average except for intra-European transactions. This implies an average reduction of 20 to 27 deals per country. While some of these deals are prohibited or deterred for national security reasons as intended, the size of the effect suggests that there are also some (un)intended effects. We describe several channels through which investment screening affects cross-border M&A: three direct ones related to prohibition, mitigation conditions, and compliance costs, and two indirect ones related to deterrence and uncertainty. In this paper, however, we cannot examine each channel. Hence our results should be interpreted as a total effect which includes different channels and potential diversion to other investment locations. While the reduction is significant only in the short term, we do not find any evidence that the foregone deals are delayed. This suggests that these deals are permanently lost.

In addition to the aggregate reduction in M&A deals, we investigate how investment screening reduces M&A deals from different types and origins of investors. We find that the number of acquisitions by Chinese and US investors drops as do the investments by government-related institutions and state-owned enterprises. As expected, intra-European deals are not affected by national investment screening policies because most of the intra-European investments are exempted from screening in line with the free circulation of capital in the European Common Market. We argued that transaction costs and uncertainty should affect lower-value deals more than big deals. In line with this argument, we find that investment screening reduced the number of deals in which a small share of stakes is acquired. In contrast, it increased the number of deals with 50 percent or more of acquired shares. The opposing impact of investment screening on small and large-scale deals result in an increase in the average monetary deal value.

How to interpret our findings from a welfare perspective? On the one hand, a decrease in foreign investments that would have hurt national security or public order indicates a successful policy. While these welfare benefits are unknown to the public and cannot be readily estimated, they would correspond to the amount of damage avoided due to screening and consist of the joint effect of deterrence, prohibition, and mitigating conditions for acquisitions. On the other hand, a decrease in foreign investments that do not pose risks to national security would generate a welfare loss for the host economy insofar as these investments would have had a positive economic impact on the host economy (Alfaro, 2017). In the case of diverted investments, other countries may experience a welfare gain from a country introducing investment screening.

In this paper, we are unable to provide a cost-benefit analysis for investment screening as the information on the mitigation of threats to national security is not discussed in the public realm. By providing estimates about the total size of the reduction in cross-border investments, our analysis seeks to enrich the debate on security-motivated economic policies and inform policymakers about the (un)intended economic effects. Policymakers should weigh the economic costs of screening against the security benefits. While acknowledging the authorities' need for discretion in assessing risks and intervention for national security reasons, investment screening regulations should specifically target critical sectors and investors of concern. This targeted approach would

decrease uncertainty and costs for foreign investors, thereby enhancing the attractiveness of cross-border investing.

References

Aiyar, S., J. Chen, C. Ebeke, C. H. Ebeke, R. Garcia-Saltos, T. Gudmundsson, A. Ilyina, A. Kangur, T. Kunaratskul, S. L. Rodriguez, et al. (2023). Geo-economic fragmentation and the future of multilateralism. IMF Staff Discussion Notes No. 2023/001, International Monetary Fund.

Albori, M., F. Corneli, V. Nispi Landi, and A. Schiavone (2021). The impact of restrictions on FDI. Bank of Italy Occasional Paper No. 656, Bank of Italy.

Alfaro, L. (2017). Gains from foreign direct investment: Macro and micro approaches. *The World Bank Economic Review 30*(Supplement_1), S2–S15.

Amiti, M., S. Redding, and D. Weinstein (2019). The impact of the 2018 tariffs on prices and welfare. *Journal of Economic Perspectives 33*(4), 187–210.

Anwar, S. T. (2012). FDI regimes, investment screening process, and institutional frameworks: China versus others in global business. *Journal of World Trade 46*(2).

Atanassov, J., B. Julio, and T. Leng (2019). The bright side of political uncertainty: The case of R&D. SSRN working paper No. 2648252.

Baker, S. R., N. Bloom, and S. J. Davis (2016). Measuring economic policy uncertainty. *The Quarterly Journal of Economics 131*(4), 1593–1636.

Bauerle Danzman, S. (2021). Investment screening in the shadow of weaponized interdependence. In D. W. Drezner, H. Farrell, and A. L. Newman (Eds.), *The uses and abuses of weaponized interdependence*, pp. 257–272. Brookings Institution Press.

Bauerle Danzman, S. and S. Meunier (2023a). Mapping the characteristics of foreign investment screening mechanisms: The new PRISM dataset. *International Studies Quarterly 67*(2), sqad026.

Bauerle Danzman, S. and S. Meunier (2023b). Naïve no more: Foreign direct investment screening in the European Union. *Global Policy 14*(S3), 40–53.

Bena, J. and K. Li (2014). Corporate innovations and mergers and acquisitions. *The Journal of Finance 69*(5), 1923–1960.

Bencivelli, L., V. Faubert, F. L. Gallo, and P. Négrin (2023). Who's afraid of foreign investment screening? Banque de France Working Paper No. 927, Banque de France.

Bjørnskov, C. and M. Rode (2020). Regime types and regime change: A new dataset on democracy, coups, and political institutions. *The Review of International Organizations 15*(2), 531–551.

Blanga-Gubbay, M. and S. Rubínová (2023). Is the global economy fragmenting? WTO Research and Analysis: Working Papers ERSD-2023-10, WTO.

Bloom, N., M. Floetotto, N. Jaimovich, I. Saporta-Eksten, and S. J. Terry (2018). Really uncertain business cycles. *Econometrica 86*(3), 1031–1065.

Bonaime, A., H. Gulen, and M. Ion (2018). Does policy uncertainty affect mergers and acquisitions? *Journal of Financial Economics 129*(3), 531–558.

Bourlès, R., M. T. Dorsch, and V. Z. Eichenauer (2022). The adoption and diffusion of international economic policy: The case of foreign investment screening. Technical report, Unpublished manuscript.

Bureau van Dijk (2020). Zephyr Database. Available at https://www.bvdinfo.com/en-us/our-products/data/greenfield-investment-and-ma/zephyr (accessed July 10, 2020).

Chan, Z. T. and S. Meunier (2021). Behind the screen: Understanding national support for a foreign investment screening mechanism in the European Union. *Review of International Organizations*, 1–29.

Çolak, G., A. Durnev, and Y. Qian (2017). Political uncertainty and IPO activity: Evidence from US gubernatorial elections. *Journal of Financial and Quantitative Analysis 52*(6), 2523–2564.

Connell, P. and T. Huang (2014). An empirical analysis of CFIUS: Examining foreign investment regulation in the United States. *The Yale Journal of International Law 39*, 131.

Crozet, M., J. Hinz, A. Stammann, and J. Wanner (2021). Worth the pain? Firms' exporting behaviour to countries under sanctions. *European Economic Review 134*(C), 103683.

de Chaisemartin, C. and X. D'Haultfoeuille (2022). Two-way fixed effects and differences-in-differences with heterogeneous treatment effects: A survey. *The Econometrics Journal 26*(3), C1–C30.

Dhingra, S., H. Huang, G. Ottaviano, J. P. Pessoa, T. Sampson, and J. van Reenen (2017). The costs and benefits of leaving the EU: Trade effects. *Economic Policy 32*(92), 651–705.

Domínguez-Jiménez, M. and N. Poitiers (2020). Europe's China problem: Investment screening and state aid. Bruegel. Available at https://www.bruegel.org/blog-post/europes-china-problem-investment-screening-and-state-aid (accessed June 5, 2023).

Eichenauer, V. Z., M. T. Dorsch, and F. Wang (2021). Investment screening mechanisms: The trend to control inward foreign investment. Technical report, CESIfo EconPol Policy Report 34.

Eichenauer, V. Z., S. Köppl, and M. Köppl-Turyna (2023). Investment screening and venture capital. Unpublished manuscript.

European Commission (2019). Regulation (EU) 2019/452 of the European parliament and of the council of 19 March 2019 establishing a framework for the screening of foreign direct investments into the Union. Available at https://eur-lex.europa.eu/eli/reg/2019/452/oj (Accessed August 31, 2021).

European Commission (2021). First annual report on the screening of foreign direct investments into the Union. Publications Office of the European Union, Available at https://data.europa.eu/doi/10.2781/000880 (Accessed January 8, 2024).

European Commission (2022). Second annual report on the screening of foreign direct investments into the Union. Publications Office of the European Union, Available at https://ec.europa.eu

/transparency/documents-register/api/files/COM(2022)433?ersIds=090166e5f0bc5f17 (Accessed January 8, 2024).

European Commission (2023). Third annual report on the screening of foreign direct investments into the Union. Publications Office of the European Union, Available at https://circabc.europa.eu/ui/group/be8b568f-73f3-409c-b4a4-30acfcec5283/library/dca97cba-7d18-49f0-ad89-90a958191d9b/details (Accessed January 8, 2024).

European Union (2019). Regulation (EU) 2019/452 of the European Parliament and of the Council of 19 March 2019 establishing a framework for the screening of foreign direct investments into the Union. Available at https://eur-lex.europa.eu/eli/reg/2019/452/oj (accessed July 11, 2020).

Fajgelbaum, P. D., P. Goldberg, P. J. Kennedy, and A. Khandelwal (2020). The return to protectionism. *The Quarterly Journal of Economics 135*(1), 1–55.

Felbermayr, G., H. Mahlkow, and A. Sandkamp (2023). Cutting through the value chain: The long-run effects of decoupling the east from the west. *Empirica 50*(1), 75–108.

Fons-Rosen, C., S. Kalemli-Ozcan, B. E. Sørensen, C. Villegas-Sanchez, and V. Volosovych (2021). Quantifying productivity gains from foreign investment. *Journal of International Economics 131*, 103456.

Fontagné, L. and G. Orefice (2018). Let's try next door: Technical barriers to trade and multi-destination firms. *European Economic Review 101*(C), 643–663.

Frattaroli, M. (2020). Does protectionist anti-takeover legislation lead to managerial entrenchment? *Journal of Financial Economics 136*(1), 106–136.

French Government (2018). Fiche d'impact generale. décret relatif aux investissements étrangers soumis á autorisation préalable. Available at https://www.legifrance.gouv.fr/contenu/Media/Files/autour-de-la-loi/legislatif-et-reglementaire/fiches-d-impact/fiches-d-impact-decrets/2018/fi_ecot1816712d_24_10_2018.pdf.pdf (Accessed August 31, 2021).

Godsell, D., U. Lel, and D. Miller (2019). Financial protectionism, M&A activity, and shareholder wealth. University of Illinois Working Paper.

Goldberg, P. K. and T. Reed (2023). Is the global economy deglobalizing? and if so, why? and what is next? NBER Working Paper No. 31115, National Bureau of Economic Research.

Graham, E. M. and P. Krugman (1995). *Foreign Direct Investment in the United States (3rd Edition)*. Peterson Institute for International Economics.

Graziano, A. G., K. Handley, and N. Limão (2021, 09). Brexit uncertainty and trade disintegration. *The Economic Journal 131*(635), 1150–1185.

Gulen, H. and M. Ion (2016). Policy uncertainty and corporate investment. *The Review of Financial Studies 29*(3), 523–564.

Handley, K. and N. Limão (2017). Policy uncertainty, trade, and welfare: Theory and evidence for China and the United States. *American Economic Review 107*(9), 2731–83.

IMF (2023). A rocky recovery. World Economic Outlook April 2023. International Monetary Fund. Available at https://www.imf.org/en/Publications/WEO/Issues/2023/04/11/world-economic-outlook-april-2023 (Accessed January 8, 2024).

Ioannou, D., J. J. Pérez, H. Geeroms, I. Vansteenkiste, P.-F. Weber, A. M. Almeida, I. Balteanu, I. Kataryniuk, M. G. Attinasi, K. Buysse, et al. (2023). The EU's open strategic autonomy from a central banking perspective. challenges to the monetary policy landscape from a changing geopolitical environment. European Central Bank Occasional Paper Series No. 311.

Julio, B. and Y. Yook (2012). Political uncertainty and corporate investment cycles. *The Journal of Finance 67*(1), 45–83.

Julio, B. and Y. Yook (2016). Policy uncertainty, irreversibility, and cross-border flows of capital. *Journal of International Economics 103*, 13–26.

Kuc, O. (2019). National security-related screening mechanisms for foreign investment: An analysis of recent policy developments. *UNCTAD Investment Policy Monitor*.

Kudrle, R. T. (1993). No entry: Sectoral controls on incoming direct investment in the developed countries. In L. Eden and E. H. Potter (Eds.), *Multinationals in the global political economy*, pp. 142–167. Springer.

Lenihan, A. T. (2018). *Balancing power without weapons: State intervention into cross-border mergers and acquisitions*. Cambridge University Press.

McGrattan, E. R. and A. Waddle (2020). The impact of Brexit on foreign investment and production. *American Economic Journal: Macroeconomics 12*(1), 76–103.

Mistura, F. and C. Roulet (2019). The determinants of foreign direct investment: Do statutory restrictions matter? OECD Working Papers on International Investment No. 2019/01.

Navaretti, G. B. and A. J. Venables (2020). *Multinational firms in the world economy*. Princeton University Press.

Nibe, A. V. (2023). Legitimisation of foreign direct investment screening among business actors: The Danish case. *Politics and Governance 11*(4), 140–153.

OECD (2022). Framework for screening foreign direct investment into the EU: Assessing effectiveness and efficiency. Available at https://www.oecd.org/investment/investment-policy/oecd-eu-fdi-screening-assessment.pdf.

Otero-Iglesias, M. and M. Weissenegger (2020). Motivations, security threats and geopolitical implications of Chinese investment in the EU energy sector: the case of CDP Reti. *European Journal of International Relations 26*(2), 594–620.

Pastor, L. and P. Veronesi (2012). Uncertainty about government policy and stock prices. *The Journal of Finance 67*(4), 1219–1264.

Phillips, G. M. and A. Zhdanov (2013). R&D and the incentives from merger and acquisition activity. *The Review of Financial Studies 26*(1), 34–78.

Pohl, J. and N. Rosselot (2020). Acquisition-and ownership-related policies to safeguard essential security interests–current and emerging trends, observed designs, and policy practice in 62

economies. Research note by the OECD Secretariat, available at https://www.oecd.org/investment/OECD-Acquisition-ownership-policies-security-May2020.pdf.

Roberts, A., H. Choer Moraes, and V. Ferguson (2019). Toward a geoeconomic order in international trade and investment. *Journal of International Economic Law 22*(4), 655–676.

Santos Silva, J. and S. Tenreyro (2006). The log of gravity. *The Review of Economics and Statistics 88*(4), 641–658.

Serdar Dinc, I. and I. Erel (2013). Economic nationalism in mergers and acquisitions. *The Journal of Finance 68*(6), 2471–2514.

Sheen, A. (2014). The real product market impact of mergers. *The Journal of Finance 69*(6), 2651–2688.

Silver, L., C. Huang, L. Clancy, and M. Fagan (2023). Americans are critical of China's global role – as well as its relationship with Russia. Available at https://www.pewresearch.org/global/2023/04/12/americans-are-critical-of-chinas-global-role-as-well-as-its-relationship-with-russia/ (Accessed January 1, 2024).

Steinberg, J. B. (2019). Brexit and the macroeconomic impact of trade policy uncertainty. *Journal of International Economics 117*(C), 175–195.

Stiebale, J. (2016). Cross-border M&As and innovative activity of acquiring and target firms. *Journal of International Economics 99*, 1–15.

Todtenhaupt, M. and J. Voget (2021). International taxation and productivity effects of M&As. *Journal of International Economics 131*(C), 103438.

Todtenhaupt, M., J. Voget, L. P. Feld, M. Ruf, and U. Schreiber (2020). Taxing away M&A: Capital gains taxation and acquisition activity. *European Economic Review 128*, 103505.

Wang, C. and F. Xie (2009). Corporate governance transfer and synergistic gains from mergers and acquisitions. *The Review of Financial Studies 22*(2), 829–858.

Weidner, M. and T. Zylkin (2021). Bias and consistency in three-way gravity models. *Journal of International Economics 132*, 103513.

Westbrook, A. D. (2019). Securing the nation or entrenching the board: The evolution of cfius review of corporate acquisitions. *Marquette Law Review 102*, 643.

Witt, M. A., A. Y. Lewin, P. P. Li, and A. Gaur (2023). Decoupling in international business: Evidence, drivers, impact, and implications for IB research. *Journal of World Business 58*(1), 101399.

Appendix: Additional Tables

Table A.1: List of investment screening sectors and corresponding NACE Rev.2 sectors

ISM sector	Description	NACE Rev.2 code
1	Defense Production	3030, 3040
2	Energy Infrastructure	3511, 3512, 3513, 3514, 3521, 3522, 3523, 1910, 1920, 0510, 0520, 0610, 0620, 0910, 4222
3	Water Infrastructure	4221, 4291, 3600, 3700, 4950
4	Transportation Infrastructure	4211, 4212, 4213, 4910 - 5320
5	Telecommunications Infrastructure	4222, 6110, 6120, 6130, 6190, 6399
6	Healthcare Infrastructure	8610, 8621, 8622, 8623, 8690, 8412
7	Education and Training	8510-8560, 8412
8	Agriculture/Food Security	0111-0170, 1011-1092, 7120
9	Finance	6411-6630
10	Media	5813, 5814, 6010, 6020, 6312, 6391, 1811
11	Research Institutions	7211, 7219, 7220
12	Sensitive Personal Data	6311, 6201-6209, 8291
13	Biotechnology	2110, 2120, 7211
14	Artificial Intelligence and Machine Learning	6201, 2899
15	Position, Navigation, and Timing Technology	2651, 2652, 6130
16	Microprocessor Technology	2611
17	Advanced Computing Technology	6201
18	Data Analytics Technology	6201, 6311
19	Quantum Information and Sensing Technology	7219, 6201, 2620
20	Logistics Technology	4910 - 5320, 2822
21	Additive Manufacturing	2841, 2849, 7490
22	Robotics	2822, 2899
23	Brain-computer Interfaces	2660, 6201, 7211, 7219, 7220
24	Hypersonics	3030, 3040
25	Advanced Materials	7211, 7219
26	Advanced Surveillance Technologies	6201, 8010, 8020
27	Cyber Security	6201
28	Defense Technologies	3030, 3040, 7219
29	Energy Storage	2720
30	Civil Nuclear	2446, 2530, 3311
31	Gambling	9200
32	Mineral Resources	0510, 0520, 0610, 0620, 0710, 0721, 0729, 0811, 0812, 0891, 0892, 0893, 0899
33	Tourism	5510, 5520, 5530, 5590, 7911, 7912, 7990
34	Space	3030, 3316, 5122
35	Real Estates	6810, 6820, 6831, 6832

Notes: Table shows the list of investment screening sectors and their corresponding NACE Rev.2 sectors.

Table A.2: Investment screening and cross-border M&A deals: Including all sectors

Dep. var: No. of CB M&A	OECD and European countries		European countries	
	(1)	(2)	(3)	(4)
	All Countries	Screening Countries	All Countries	Screening Countries
ISM	-0.117**	-0.132**	-0.143**	-0.174***
	(0.052)	(0.053)	(0.061)	(0.062)
Trade (ln)	0.034*	0.037	0.064*	0.069
	(0.020)	(0.024)	(0.035)	(0.047)
Initial CB M&A× year	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes
Country-sector FE	Yes	Yes	Yes	Yes
Observations	172,966	135,932	111,384	86,445

Notes: The table shows PPML estimation results of Equation (1) based on data for 2007-2022 including all four-digit NACE sectors. The outcome variable is the number of cross-border M&A. Columns (2) and (4) constrain the sample to countries where investment screening was implemented in at least one sector. All regressions control for country-time, sector-time, and country-sector fixed effects, international trade (in logarithmic form), and the number of four different types of initial cross-border M&A, each of which is further interacted with year dummies: total number of cross-border M&A and the number of M&A with Chinese, US, or government participation between 2002 and 2006. Robust standard errors clustered at the four-digit NACE sector level in parentheses. * p <0.1, ** p <0.05, *** p <0.01.

Table A.3: Placebo test with lagged number of cross-border M&A deals by 5 years as the dependent variable

Dep. var:	OECD and European countries		European countries	
No. of CB M&A lagged 5 years	(1)	(2)	(3)	(4)
	All countries	Screening countries	All countries	Screening countries
ISM	0.057	0.047	0.001	-0.016
	(0.053)	(0.051)	(0.065)	(0.064)
Initial CB M&A× year	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes
Country-sector FE	Yes	Yes	Yes	Yes
Observations	64,023	49,025	41,568	31,602

Notes: The table shows PPML estimation results of Equation (1) based on data between 2007 and 2022. The dependent variable is the number of cross-border M&A lagged by 5 years. All regressions control for country-time, sector-time, and country-sector fixed effects, international trade (in logarithmic form), and the number of four different types of initial cross-border M&A, each of which is further interacted with year dummies: total number of cross-border M&A and the number of M&A with Chinese, US, or government participation between 2002 and 2006. Robust standard errors clustered at the four-digit NACE sector level in parentheses. * p <0.1, ** p <0.05, *** p <0.01.

Table A.4: Investment screening and cross-border M&A deals with one target firm

Dep. var:	OECD and European countries		European countries	
No. of CB M&A	(1)	(2)	(3)	(4)
	All countries	Screening countries	All countries	Screening countries
ISM	-0.133**	-0.141**	-0.167***	-0.184***
	(0.058)	(0.059)	(0.063)	(0.063)
Initial CB M&A× year	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes
Country-sector FE	Yes	Yes	Yes	Yes
Observations	61,896	47,423	40,117	30,206

Notes: The table shows PPML estimation results of Equation (1) based on data for 2007-2022. The outcome variable is the number of cross-border M&A with only one target firm. The sample excludes M&A with multiple target firms from the sample. Columns (1) and (3) are based on all four-digit NACE sectors where investment screening was implemented in at least one country. Columns (2) and (4) further constrain the sample to countries where investment screening was implemented in at least one sector. All regressions control for country-time, sector-time, and country-sector fixed effects, international trade (in logarithmic form), and the number of four different types of initial cross-border M&A, each of which is further interacted with year dummies: total number of cross-border M&A and the number of M&A with Chinese, US, or government participation between 2002 and 2006. Robust standard errors clustered at the four-digit NACE sector level in parentheses. * p <0.1, ** p <0.05, *** p <0.01.

Table A.5: Investment screening and cross-border M&A: Excluding countries with cross-sector screening

Dep. var:	Drop cross-sector screening		Sector-specific screening only	
No. of CB M&A	(1)	(2)	(3)	(4)
	All countries	Screening countries	All countries	Screening countries
ISM	-0.149**	-0.162***	-0.166***	-0.184***
	(0.060)	(0.060)	(0.057)	(0.056)
Initial CB M&A× year	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes
Country-sector FE	Yes	Yes	Yes	Yes
Observations	55,807	40,615	51,133	35,966

Notes: Table shows PPML estimation results excluding countries with cross-sector screening. In columns (1)-(2), countries switching from cross-sector screening to sector-specific screening and those always with cross-sector screening are excluded. In columns (3)-(4), countries that extended sector-specific screening to cross-sector screening are also excluded. All regressions control for country-time, sector-time, and country-sector fixed effects, international trade (in logarithmic form), and the number of four different types of initial cross-border M&A, each of which is further interacted with year dummies: total number of cross-border M&A and the number of M&A with Chinese, US, or government participation between 2002 and 2006. Robust standard errors clustered at the four-digit NACE sector level in parentheses. * p <0.1, ** p <0.05, *** p <0.01.

Table A.6: Investment screening and cross-border M&A: Extensive and intensive margin effects

	OECD and European countries		European countries	
	(1)	(2)	(3)	(4)
	All countries	Screening countries	All countries	Screening countries
Panel A: Dep. var: Any deal (=1), OLS				
ISM	0.002	0.003	-0.001	-0.001
	(0.006)	(0.006)	(0.007)	(0.007)
Observations	137,600	99,200	90,772	67,691
Panel B: Dep. var: No. of CB M&A, PPML				
ISM	-0.113**	-0.122**	-0.145***	-0.162***
	(0.053)	(0.053)	(0.056)	(0.056)
Observations	21,546	17,880	14,560	11,437
Initial CB M&A× year	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes
Country-sector FE	Yes	Yes	Yes	Yes

Notes: Table shows estimation results based on data between 2007 and 2022. The outcome variable for panel A is a dummy variable indicating whether there was at least one deal in sector s country c in year t. The outcome variable for panel B is the number of deals. Panel A is estimated using a linear probability model based on the full sample. Panel B is estimated using a PPML model based on country-sector dyads having at least one deal throughout the sample period. All regressions control for country-time, sector-time, and country-sector fixed effects, international trade (in logarithmic form), and the number of four different types of initial cross-border M&A, each of which is further interacted with year dummies: total number of cross-border M&A and the number of M&A with Chinese, US, or government participation between 2002 and 2006. Robust standard errors clustered at the four-digit NACE sector level in parentheses. * p <0.1, ** p <0.05, *** p <0.01.

Table A.7: Investment screening and cross-border M&A: Controlling for linear time trends

Dep. var: No. of CB M&A	OECD and European countries		European countries	
	(1)	(2)	(3)	(4)
	All Countries	Screening Countries	All Countries	Screening Countries
ISM	-0.143***	-0.149***	-0.193***	-0.203***
	(0.053)	(0.052)	(0.064)	(0.062)
Initial CB M&A× year	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes
Country-sector FE	Yes	Yes	Yes	Yes
Observations	64,363	49,141	41,850	31,515

Notes: Table shows estimation results controlling for country-sector linear time trend. All regressions control for country-time, sector-time, and country-sector fixed effects, international trade (in logarithmic form), and the number of four different types of initial cross-border M&A, each of which is further interacted with year dummies: total number of cross-border M&A and the number of M&A with Chinese, US, or government participation between 2002 and 2006. Robust standard errors clustered at the four-digit NACE sector level in parentheses. * p <0.1, ** p <0.05, *** p <0.01.

Table A.8: Investment screening and cross-border M&A: Heterogeneity by acquisition size

Dep. var: No. of CB M&A	OECD and European countries	European countries
	(1)	(2)
ISM (ref. group: minority share)	-0.318***	-0.426***
	(0.116)	(0.118)
ISM× Majority share (=1)	0.492***	0.705***
	(0.136)	(0.152)
ISM× Full aquisition (=1)	0.325***	0.489***
	(0.123)	(0.130)
ISM× Unknown share (=1)	0.312**	0.439***
	(0.137)	(0.143)
Initial CB M&A× year	Yes	Yes
Country-year FE	Yes	Yes
Sector-year FE	Yes	Yes
Country-sector FE	Yes	Yes
Observations	135,746	86,203

Notes: The table shows PPML estimation results based on a stacked dataset including four types of cross-border M&A deals by number of acquired shares using data between 2007 and 2022. Majority share, full acquisition, and unknown share are dummy variables indicating the deal type with a majority share, full acquisition, and unknown share, respectively. All regressions control for country-time, sector-time, and country-sector fixed effects, international trade (in logarithmic form), and the number of four different types of initial cross-border M&A, each of which is further interacted with year dummies: total number of cross-border M&A and the number of M&A with Chinese, US, or government participation between 2002 and 2006. Robust standard errors clustered at the four-digit NACE sector level in parentheses. * p <0.1, ** p <0.05, *** p <0.01.

Table A.9: Investment screening and cross-border M&A: Heterogeneity by share of cumulatively acquired stakes

Dep. var:	OECD and European countries				European countries			
No. of CB M&A	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Minor	Major	Full	Unknown	Minor	Major	Full	Unknown
ISM	-0.151*	0.110	-0.003	0.084	-0.236***	0.169**	0.040	-0.077
	(0.083)	(0.072)	(0.047)	(0.187)	(0.088)	(0.080)	(0.050)	(0.224)
Initial CB M&A × year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-sector FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	35,766	28,706	53,811	8,639	21,931	18,899	35,135	3,959

Notes: Table shows PPML estimation results based on data between 2007 and 2022. Outcome variable is the number of cross-border M&A categorised by the size of cumulatively acquired stakes, including previously acquired stakes. All regressions control for country-time, sector-time, and country-sector fixed effects, international trade (in logarithmic form), and the number of four different types of initial cross-border M&A, each of which is further interacted with year dummies: total number of cross-border M&A and the number of M&A with Chinese, US, or government participation between 2002 and 2006. Robust standard errors clustered at the sector level are in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A.10: Investment screening and cross-border M&A: Heterogeneity by acquirer type

Dep. var: No. of CB M&A	OECD and European countries	European countries
	(1)	(2)
Panel A: Investors from autocratic countries		
ISM (ref. group: Autocratic)	-0.123**	-0.160***
	(0.057)	(0.060)
ISM× Democratic (=1)	-0.057	0.065
	(0.108)	(0.133)
Panel B: Foreign government among investors		
ISM (ref. group: No foreign government)	-0.114**	-0.140**
	(0.055)	(0.058)
ISM× Foreign government (=1)	-0.188	-0.251
	(0.163)	(0.154)
Panel C: Investors from China		
ISM (ref. group: No China)	-0.122**	-0.157***
	(0.056)	(0.060)
ISM× China (=1)	-0.249*	0.104
	(0.148)	(0.247)
Panel D: Investors from the US		
ISM (ref. group: No US)	-0.083	-0.084
	(0.060)	(0.060)
ISM× US (=1)	-0.110	-0.199***
	(0.070)	(0.074)
Panel E: Investors from tax haven countries		
ISM (ref. group: No tax haven)	-0.107*	-0.151**
	(0.060)	(0.063)
ISM× Tax haven (=1)	-0.083	0.000
	(0.087)	(0.092)
Panel F: Investments within the EU/EFTA		
ISM (ref. group: Within EU/EFTA)		-0.095
		(0.073)
ISM× Non-EU/EFTA (=1)		-0.130*
		(0.070)
Initial CB M&A× year	Yes	Yes
Country-year FE	Yes	Yes
Sector-year FE	Yes	Yes
Country-sector FE	Yes	Yes

Notes: The table shows PPML estimation results based on a stacked dataset including two types of cross-border M&A deals by acquirer type using data between 2007 and 2022. All regressions control for country-time, sector-time, and country-sector fixed effects, international trade (in logarithmic form), and the number of four different types of initial cross-border M&A, each of which is further interacted with year dummies: total number of cross-border M&A and the number of M&A with Chinese, US, or government participation between 2002 and 2006. Robust standard errors clustered at the four-digit NACE sector level in parentheses. * p <0.1, ** p <0.05, *** p <0.01.

Table A.11: Investment screening and cross-border M&A: Heterogeneity by acquirer type

Dep. var: No. of CB M&A	OECD and European countries	European countries
	(1)	(2)
ISM (ref. group: no China/Russia/Foreign gov.)	-0.112**	-0.139**
	(0.055)	(0.058)
ISM× China/Russia/Foreign gov. (=1)	-0.136	-0.174
	(0.124)	(0.135)
Initial CB M&A× year	Yes	Yes
Country-year FE	Yes	Yes
Sector-year FE	Yes	Yes
Country-sector FE	Yes	Yes
Observations	80,731	51,388

Notes: The table shows PPML estimation results based on a stacked dataset including two types of cross-border M&A deals by acquirer type using data between 2007 and 2022. China/Russia/Foreign gov. (=1) indicates a deal involving foreign governments or investors from China or Russia. All regressions control for country-time, sector-time, and country-sector fixed effects, international trade (in logarithmic form), and the number of four different types of initial cross-border M&A, each of which is further interacted with year dummies: total number of cross-border M&A and the number of M&A with Chinese, US, or government participation between 2002 and 2006. Robust standard errors clustered at the four-digit NACE sector level in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.