

Who's afraid of investment screening mechanisms?

The rise of foreign investment screening in advanced economies*

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Abstract

In recent years, most advanced economies have adopted or tightened their existing foreign investment screening mechanisms (ISMs), which empower national authorities to restrict foreign takeovers in strategic sectors. In 2019, the EU adopted the first known regional cooperation framework on inward investment screening. Against this backdrop, we document the main features of FDI screening regimes in the EU and other major advanced economies. We fill a gap in the literature by developing a synthetic indicator suitable for cross-country comparisons. We document the heterogeneity of national designs and the lack of legislative convergence within the EU. At a time of increased geopolitical tensions, we show how country-specific macroeconomic characteristics (such as China exposure and technological specialization) and geopolitical factors shape the restrictiveness of national ISMs. We also investigate the impact of ISMs on attractiveness. We build a comprehensive database mapping the outcome of screening decisions and provide a tentative assessment of the impact of screening on transactions.

JEL Classification: F21, F23, F52, F55

Keywords: FDI, investment screening mechanisms, geo-economic fragmentation, national security

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1 Introduction

After decades of increasing global economic integration, characterized by the expansion of cross-border lending and trade, geopolitical tensions and a growing debate about the merits of globalization have led to a surge in restrictions to trade and capital flows. Import restrictions and export controls based on national security concerns are on the rise, increasing the risk of geo-economic fragmentation (Aiyar et al., 2023) in a renewed form of "weaponized interdependence" (Farrell and Newman, 2019). Surveys such as Kearney's 2023 FDI Confidence Index¹ suggest that investors are increasingly concerned by geopolitical tensions and anticipate a change in the nature of globalization, with a shift toward regionalization.

Against this backdrop, most advanced economies have adopted or tightened their existing investment screening mechanisms (ISMs), which empower national authorities to review, and potentially condition or prohibit, transactions that may threaten domestic interests, including national security and public order.² A number of advanced economies, which have traditionally been open to foreign investments, implemented stricter scrutiny of foreign transactions from the late 2010s onward (e.g. the U.S. with the Foreign Investment Risk Review Modernization Act of 2018). In parallel to these national developments, the EU adopted in 2019 a common FDI cooperation screening framework, which is the first known regional cooperation framework. As a result, 60% of global FDI-inflows went into countries that apply cross-sectoral FDI screening in the late 2010s, i.e. twice the share of global FDI inflows that were potentially subject to security-motivated screening in the 1990s (OECD, 2020).³

In this paper, we analyze whether ISM mechanisms can reconcile openness to growth-fostering inward FDI with a desire to ensure enhanced scrutiny of potentially hostile foreign takeovers. In particular, we assess the restrictiveness of national ISMs and analyze the impact of screening on attractiveness and investment. While a number of other economic regulatory tools address national-security concerns (export controls, economic sanctions...), we focus on inward foreign

¹ The FDI Confidence Index, first released in 1998, is an annual indicator developed by A.T. Kearney, a worldwide management consulting company.

² "Screening" and "screening mechanisms" hereinafter refer to procedures for assessing, investigating, authorizing, conditioning, prohibiting or unwinding FDI on grounds of national security or public order. In most national laws, the definitions of "security" and "public order" are deliberately quite vague, leaving governments broad scope for assessing national security risks that change over time.

³ This estimate relies on a sample of 62 economies. It only encompasses mechanisms that apply across sectors.

investment screening.⁴ These mechanisms can block pending transactions and unwind closed deals, and as such, are among the most disruptive national security-related regulations for firms (Eichensehr and Hwang, 2022).

We make several contributions to the related literature. First, we document recent trends in inward FDI into the EU. Using a database curated by Bureau Van Dijk, we shed light on M&As activity in the EU by industry and country of origin. We pay particular attention to investments originating from the BRICS, with a focus on China and Russia. Second, we build a synthetic index mapping the main features of FDI screening regimes in major advanced economies (EU countries, the US, the UK, Australia, Canada, Norway and Japan). To the best of our knowledge, such an index is currently lacking. Although one of the four dimension of the OECD's FDI regulatory restrictiveness index focuses on screening and approval requirements, it carves out screening mechanisms applied for national security reasons (Kalinova et al., 2010), which are at the core of contemporary investment screening mechanisms. More recently, Bauerle Danzman and Meunier (2023) have developed the Politics and Regulation of Investment Screening Mechanisms dataset (PRISM hereinafter) that documents how certain features of investment screening mechanisms have evolved over time. However, it focuses on qualitative coding and does not provide a synthetic quantitative index. Building both on the methodology of the OECD's RRI and on the scope of the PRISM database, we provide a synthetic index measuring the restrictiveness of foreign investment screening laws on national interest and national security grounds. We illustrate the heterogeneous situation prevailing in the EU despite the adoption of a cooperation framework in 2019. We compare the index with other measures of FDI restrictiveness and show how it complements the existing literature. Third, we explore whether the restrictiveness of national ISMs correlates with country-specific characteristics. We focus on three factors that may result in more restrictive regimes: *i*) exposure to China, *ii*) natural resources and technological specialization and *iii*) geopolitical factors.

Fourth, we assess the impact of ISMs on investment trends. We analyse whether stricter national regulations result in a higher number of transactions being either blocked or authorized under conditions. We build a comprehensive database on the outcome of screening decisions and

⁴ Outbound investment screening regimes are far less common than inward investment screening regimes. At the time of writing, the Biden administration had issued an Executive Order establishing an Outbound Investment Program to prohibit certain outbound US investments to China in several technology sectors. As regards other OECD countries, only Korea and Japan review outbound investment. Both regimes only cover a narrowly-defined list of industries or technologies.

document which target sectors and investors are most impacted by ISMs.

The remainder of the paper is organised as follows. In Section 2, we review the relevant literature and describe the expansion of FDI screening regimes. Section 3 documents recent trends in inward FDI into the EU. In Section 4, we shed light on the recent expansion of ISMs in the EU. In section 5, we develop a synthetic index on FDI screening regimes suitable for cross-country comparisons. Lastly, section 6 provides an assessment of the impact of ISMs on investment.

2 Historical perspective and literature review on ISMs

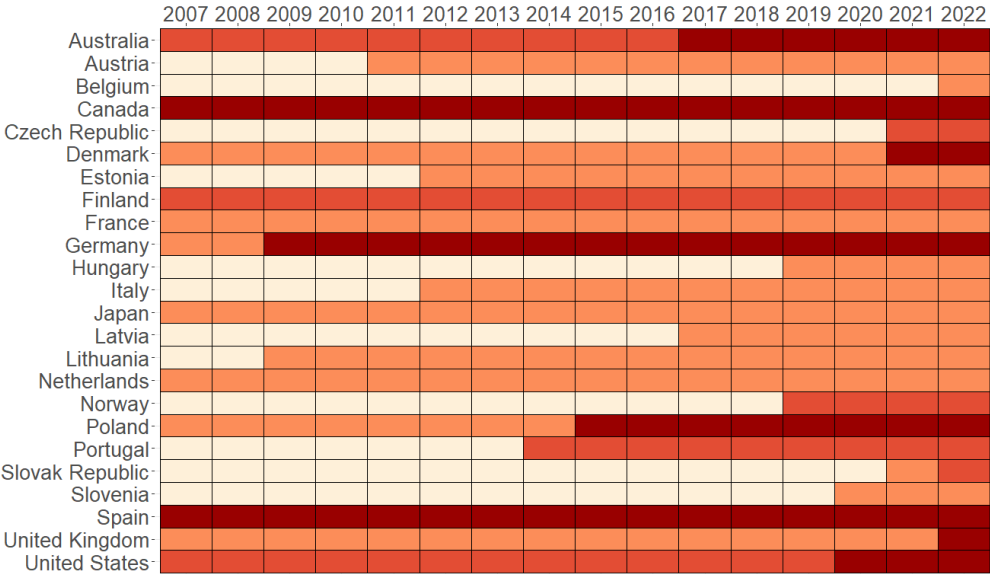
The current global rise of investment screenings illustrates a paradigm shift away from decades of global economic integration. From the 1970s onward, most economies opened up to FDI in order to benefit from foreign knowledge, access to finance and technological spillovers (Kobrin, 2015). While foreign investment provides significant benefits, most advanced economies have recognised the need to mitigate the risk where individual transactions may be contrary to national interest. The concept of “net economic benefit” aimed to ensure that inward investments benefited the host economy (Pandya, 2016). Since 1975, the USA and Australia have had a legislative framework in place to review foreign investment on a case-by-case basis. Other major advanced economies subsequently adopted such regimes (e.g. Canada in 1985, France and Germany in the early 2000s). Overall, investment screening coexisted alongside an otherwise liberal investment regime. For instance, early adopters of ISMs, such as the USA and Canada, were also advocates of financial openness (Bauerle Danzman and Meunier, 2023).

In the aftermath of the Global Financial Crisis, the focus of ISMs shifted from net economic benefits to greater concerns for national security. Perceived national security risks from foreign investment have increased on the back of rapid technological progresses and changes in the international security environment. Although most national ISMs do not overtly single out any particular country, recent literature has focused on ISMs as a response to the rise of Chinese outward investment (Bauerle Danzman and Meunier, 2023). The outbreak of the Covid-19 pandemic also strengthened governments’ commitment to prevent the sell-off of strategic domestic assets (Evenett, 2021). Hence, in 2020, Australia, Canada and a number of European countries imposed stricter restrictions on FDI to protect distressed national assets from opportunistic

takeovers by foreigners. In the EU, Spain, Italy, France and Germany had been the first to respond by amending their FDI regimes (e.g. by expanding the scope of sectors subject to review or lowering the thresholds of acquisition triggering a review). More recently, Russia's invasion of Ukraine highlighted that a wide range of industries play a critical role in safeguarding national security, resulting in increased scrutiny of investments connected to Russia and Belarus.

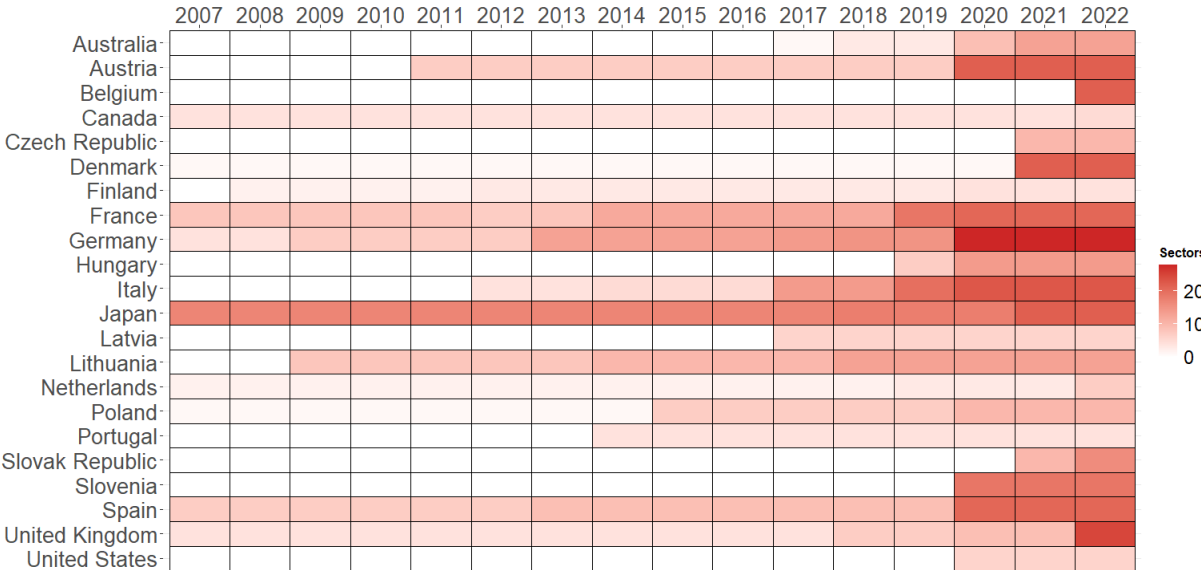
At the same time, the notion of national security enlarged beyond the defense industry to assets previously not deemed strategic.⁵ The scope of most FDI regimes now encompasses transactions relating to critical infrastructure (whether physical or virtual, including data processing and storage and financial infrastructure), communication networks, advanced technologies (AI, robotics, bio-technologies...). At the time of writing, more than half of the OECD's 37 members had put in place cross-sectoral screening mechanisms (where the government can review investments in any sector), compared to less than a third a decade earlier (OECD, 2020). Figure 1 shows that an increasing number of countries have shifted from sectoral mechanisms (where the government has review authority over a list of sectors, in orange) to a cross-sectoral (red) or mixed mechanism (dark red), where the government can review investments in any sector and subject a specific list of sectors to stricter review requirements. Countries that continue to screen transactions only in specific sectors have expanded the number of sectors subject to review over time, from 4 on average in 2007 to 10 in 2021 (Danzman and Meunier, 2021). Figure 2 shows the ever-increasing number of sectors covered by sector-specific ISMs.

⁵ However, only a handful of advanced economies (e.g. Australia, France and Canada) have opted for a wider public interest test for government intervention in foreign investment. In most jurisdictions, the focus remains on "national security", albeit broadly interpreted and not clearly defined in legislation (Roberts, 2022).



Note: The coverage of ISMs has shifted from sectoral mechanisms (orange) to cross-sectoral (red) or mixed mechanisms (dark red). Yellow tiles indicate a lack of ISM. The darker the tile, the larger the coverage.
 Source: PRISM database; © 2021, last update March 2023; Sarah Bauerle and Sophie Meunier.

Fig. 1: Expanding coverage of national ISMs



Note: The number of sectors covered in a sector-specific mechanism ranges from 0 (white) to 28 (dark red). Null values may reflect two different situations. On the one hand, Italy adopted a sectoral ISM in 2012 and hence, had no screening in place from 2007 to 2011. On the other hand, Australia (in 2017) and the USA (in 2020) moved from a cross-sectoral mechanism (where the government can review investments in any sector) to a mixed mechanism (where the government can *i*) review investments in any sector and *ii*) subject a list of sectors to stricter review requirements).
 Source: PRISM database; © 2021, last update March 2023; Sarah Bauerle and Sophie Meunier.

Fig. 2: Expanding number of sectors screened over time

Although recent literature discusses the potential economic consequences of geoeconomic fragmentation on trade and capital flows, the literature on ISMs is still in its infancy. One strand of the international economics literature analyses the effect of restrictions on capital on FDI flows. For instance, Binici et al. (2010) show that capital controls impact both the volume and composition of capital flows. Most of the existing literature uses the RRI as indicator of FDI restrictions (Albori et al. 2021; Eichenauer and Wang 2022). However, the RRI carves out restrictions based on national security grounds (see Appendix A for further details), and is hence not suitable for tracking the ever-increasing scope of ISMs (Chan and Meunier, 2022). Recent political economy literature focuses on countries' decisions to adopt a national ISM and proposes explanations for the adoption of such mechanisms (Chan and Meunier 2022; Danzman and Meunier 2021; Eichenauer et al. 2021). Overall, the scarcity of the literature reflects the lack of a comprehensive database on ISMs (Rebucci and Ma, 2019). We contribute to filling this gap by providing an index suitable for comparing the main features of national ISMs.

3 Foreign Direct Investments into the EU since the early 2000s

3.1 Data and definitions

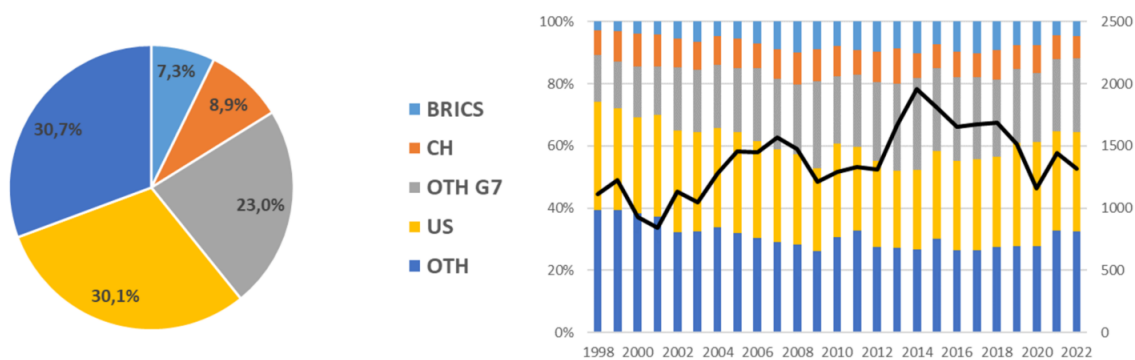
In this section, we document the trends in inbound investments that led to the recent expansion of ISMs in advanced economies. To map the Merger and acquisitions (M&As) activity in the EU, we use data retrieved from Zephyr.⁶ Using micro data allows us to explore in depth the targets and origins of investments and to disentangle cross-border investment operations (where a foreign investor acquires the property of an asset it did not control before the investment) from those stemming from intra-corporate restructuring, which often lead to a change in the assets' ownership structure. We focus on brownfield investments, which correspond to the acquisition of equity stakes in existing companies (see Appendix B for further details).⁷

⁶ Zephyr is a database curated by Bureau Van Dijk listing all major operations involving limited liability companies.

⁷ We use as origin the country of the Global Ultimate Owner (GUO). However, the GUO is not always identified. In those cases, we use the country of the parent company (as displayed by the information provider) and we consider cross-border any acquisition where the acquirer GUO country is a non-EU member country and the target country is an EU member.

3.2 Advanced economies dominate Foreign Direct Investments into the EU

Over the period 2000-2021, close to 30% of M&As operations destined to EU countries came from the US, by far the single largest foreign investor in the EU. A similar share originated from other non-EU G7 countries (the UK, Canada and Japan, Figure 3).⁸ While the share of the US has remained broadly stable over time, other G7 countries have reduced progressively their exposure through time.⁹ The share of the BRICS countries remains quite low. Over the last two decades, the number of operations coming from investors headquartered in those countries has increased visibly from a low base, reaching almost 10% in 2014 and 2017 before shrinking thereafter.



Note: "Other G7": Canada, the UK and Japan; BRICS: Brazil, Russia, India, China and South Africa; OTH: all other countries except the US, Switzerland and those included in "Other G7" and BRICS. The shares on the left-hand side panel are computed over the 1998-2022 period.

Sources: BvD Zephyr and authors' calculations.

Fig. 3: Origin of the cross-border M&As in the EU (number of transactions and share of all transactions)

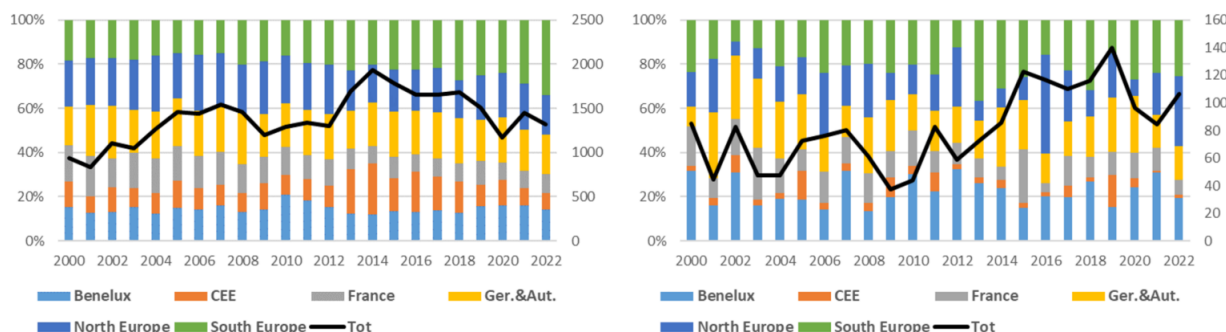
The breakdown by region of destination of non-EU investments into the EU is represented in Figure 4, together with the evolution of the number and amount of operations.¹⁰ Before Brexit, the UK used to be the destination of one-third of the total number of cross-border investments from outside the EU. Besides the UK, an increasing share of cross-border investments has targeted South European countries. Central and Eastern European countries have experienced a boom in the number of M&As received in 2013-2015, even though the aggregate value remains extremely

⁸ Operations coming from Switzerland are disproportionately high considering the size of the economy and may include round tripping of capitals and other forms of triangular operations. Switzerland is also the location many corporations have chosen for their headquarters.

⁹ This may result from a combination of factors, including Brexit and the uncertainty surrounding the application of investment protection mechanisms within the free trade deals TTIP and CETA.

¹⁰ Aggregate deal values can display substantial jumps in certain years owing to a single large operation; as a result, the chart reporting deal values depicts a less clear-cut trend than that representing the number of transactions.

low.¹¹ The proportion of investments targeted to Austria, Germany and France has shrunk over time, owing to the increased interest of non-EU investors toward peripheral countries.



Note: CEE: Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovak Republic and Slovenia; Ger. & Aut.: Germany and Austria; North Europe: Denmark, Estonia, Finland, Ireland, Latvia, Lithuania and Sweden; South Europe: Croatia, Cyprus, Greece, Italy, Malta, Portugal and Spain.

Sources: BvD Zephyr and authors' calculations.

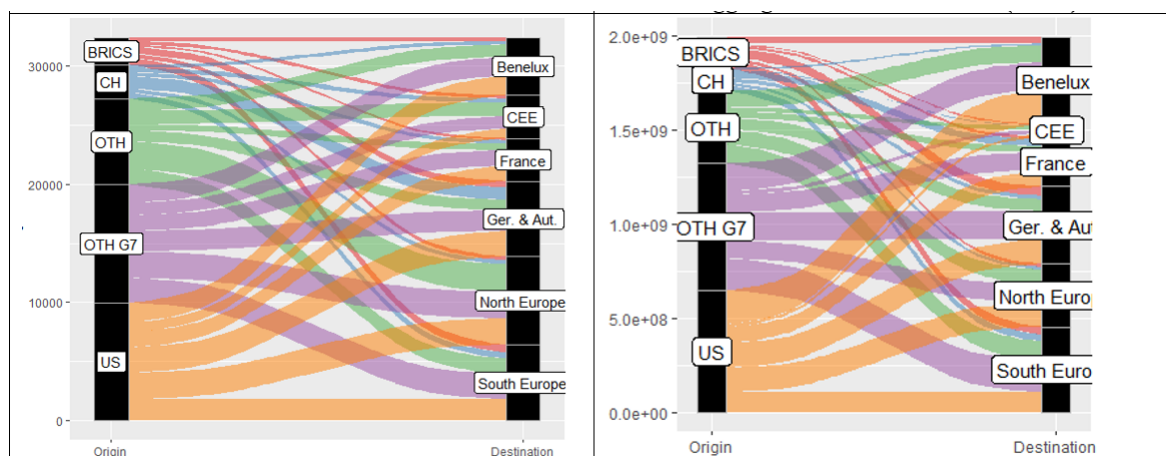
Fig. 4: Distribution of M&As by region of destination, number of operations (left-hand side, percentage shares and number of transactions) and value (right-hand side, percentage shares and billions of euro)

In terms of who invests where (Figure 5), the US and other G7 countries tend to distribute uniformly their operations (either in number or in deal value) across EU macro regions. BRICS countries focus more on Germany and Southern Europe, especially in aggregate value terms. Switzerland (as origin) and Benelux countries (as target) are over-represented in value terms, as many firms tend to settle their headquarters in these two countries for fiscal reasons. Central and Eastern European countries remain at the margin of the foreign investment flow. The recent Chinese push linked to the Belt and Road Initiative (launched in 2013) and the Cooperation between China and Central and Eastern European Countries did not change significantly this situation.¹² Manufacture plays a prominent role in this trend as Germany and Italy are two manufacturing powerhouses in the EU, owning forefront technologies.

Manufacturing attracts the bulk of foreign investments, followed by ICT and financial services, whether we consider the number of operations or their value (Figure 6).

¹¹ However, the deal value of these operations are not reported in a relatively high number of occasions.

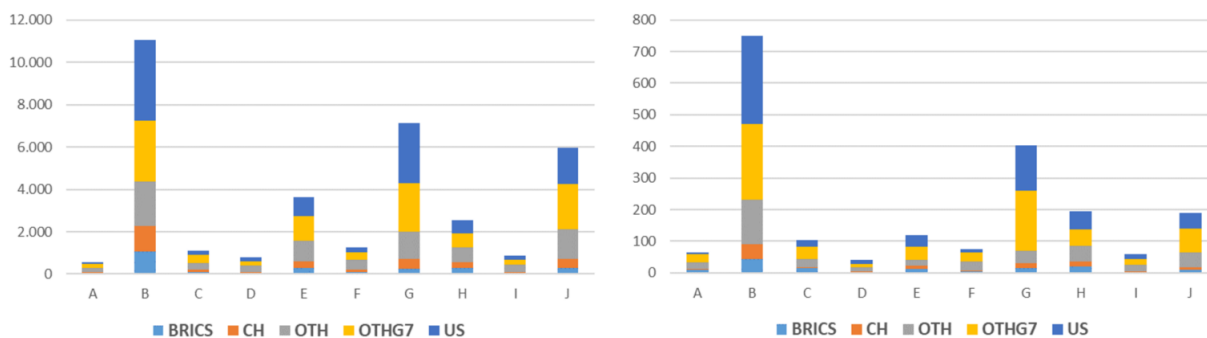
¹² The Cooperation between China and Central and Eastern European Countries, formerly known as 17+1 from 2019 to 2021, is a diplomatic initiative promoted and led by China (+1) and founded in 2012 in Budapest. It involves both Eastern European EU members and candidate countries. The framework has sparked fierce debate in the EU about the relations with China and the role of the EU members adhering to the initiative in shaping such relations. After more than 10 years of regular summits, several participants have expressed disappointment as regards the results (especially in terms of investments attracted). Several EU member countries have stepped out of the format in 2022 or announced their intention to do so.



Note: Other G7: Canada, Great Britain and Japan; BRICS: Brazil, Russia, India, China and South Africa; OTH: all other countries except the US, Switzerland, and those included in Other G7 and BRICS. Benelux: Belgium, the Netherlands and Luxembourg; CEE: Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovak Republic and Slovenia; Ger. & Aut.: Germany and Austria; North Europe: Denmark, Estonia, Finland, Ireland, Latvia, Lithuania and Sweden; South Europe: Croatia, Cyprus, Greece, Italy, Malta, Portugal and Spain. Frequency are computed over the period 1998-2021.

Sources: BvD Zephyr and authors' calculations.

Fig. 5: Flows of inbound M&As operations by region of origin and region and sector of destination; number of operations (left, units) and aggregate value (right, euro)



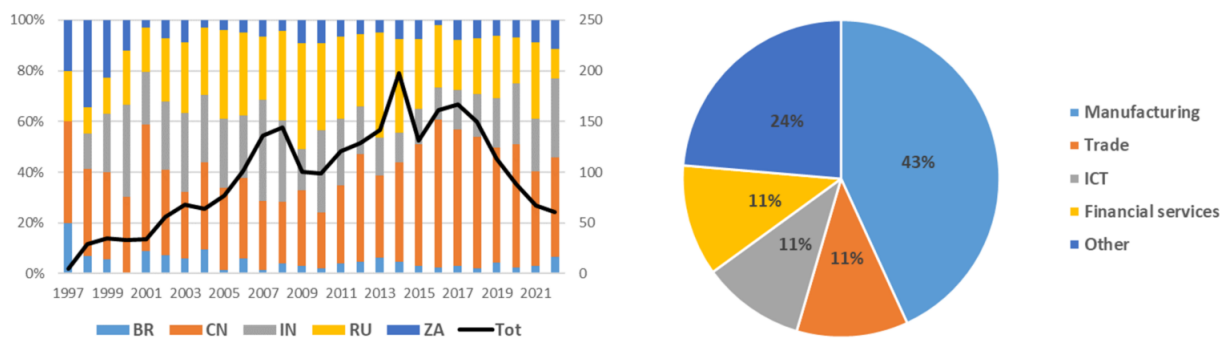
Note: A: agriculture, mining and quarrying; B: manufacturing; C: energy and utilities; D: construction; E: wholesale and retail trade; F: transport; G: IT and publishing; H: financial services; I: real estate; J: other services. Frequency are computed over the period 1998-2022.

Sources: BvD Zephyr and authors' calculations.

Fig. 6: Distribution of inbound M&As by sector of destination; number of deals (left-hand side) and aggregate deal value (right-hand side, billion of euro)

3.3 Investments from China have peaked in 2016

Although most national ISMs do not overtly single out any particular country, a number of jurisdictions have shaped their own perception of risks to national security on the increasing presence of Chinese investment. Throughout the early 2010s, an increasing number of foreign investments in the EU originated from BRICS countries, driven predominantly by Chinese operations. This



Note: Shares in the right panel are computed over the period 1998-2022.

Sources: BvD Zephyr and authors' calculations.

Fig. 7: Distribution by origin of the investor (left, shares and numbers) and sector of destination (right, shares) of BRICS M&As in the EU

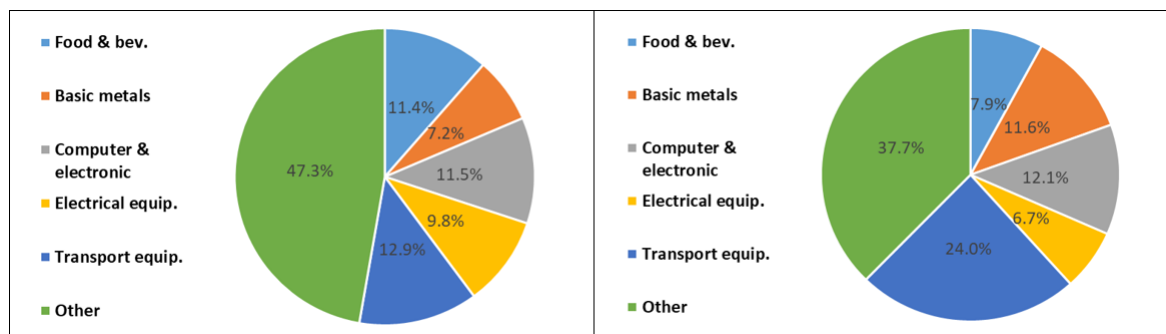
is notably linked to the Chinese government's will to push Chinese corporations, especially those who are state-owned, to "go global", paired with a considerable amount of liquidity stemming from persistent current account surpluses (Molnar et al., 2021). The strategy responded to the goals of diversifying geographic risk, acquiring new technologies and enhancing diplomatic ties with receiving economies. The subsequent sharp decline in the total number of BRICS investments is almost entirely driven by the decline of Chinese investors, following the tightening in capital controls in 2017 (Figure 7).¹³

In addition, when it comes to sectors, BRICS countries focus on manufacturing. On average over the 1998-2022 period, manufacturing represents 44% of all BRICS operations in EU countries as opposed to only 32% for non-BRICS. Yet, at the same time, the share of the total value of investments spent by BRICS countries on manufacturing is much smaller than that of the rest of the world. Hence, the average deal value is significantly smaller for BRICS than for non-BRICS.

Unpacking manufacturing, the 4 most invested subcategories (Food & Beverages, Computer, electronics and optics, electrical equipment and transport equipment) account for more than half of total investments (Figure 7). When focusing on BRICS investors, basic metals gain traction but, more importantly, the share of transport equipment doubles compared to the rest of the world. This fact is largely due to the attention paid by Chinese investors to transport

¹³ The capital controls movement was triggered in 2017 by a buying spree which dramatically increased outflows, thus pressuring the exchange rate and forcing the People's Bank of China to intervene on the foreign exchange markets

equipment, especially in the period 2014-2019. Many of these acquisitions regard the aerospace and automotive sectors.



Note: shares are computed on the period 1998-2023.

Sources: BvD Zephyr and authors' calculations.

Fig. 8: Distribution of M&As in manufacturing across subcategories (shares); all investors (left), BRICS investors (right)

3.4 Investments from Russia remain limited

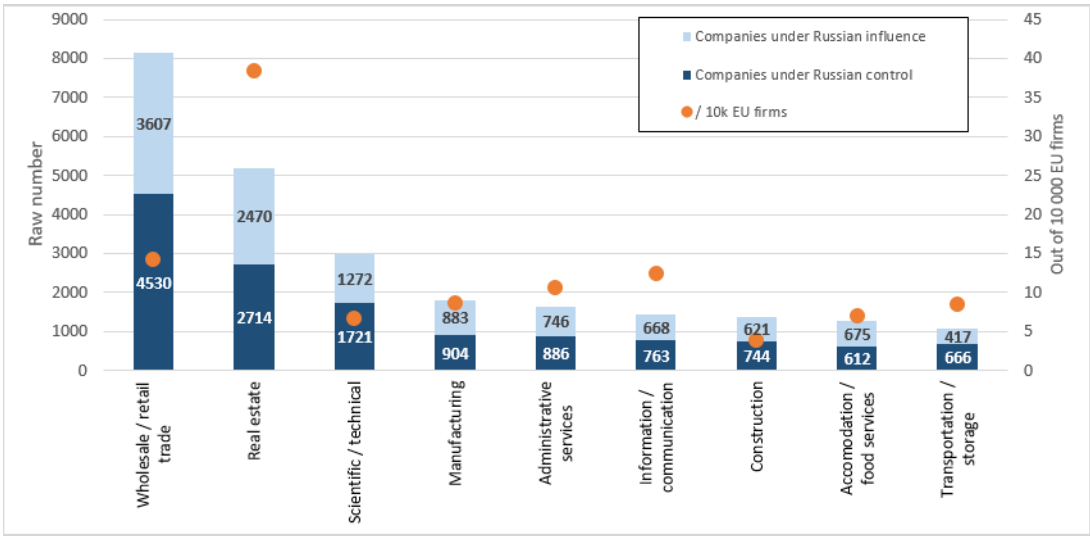
Heightened geopolitical tensions on the back of Russia's invasion of Crimea (2014) and Ukraine (2022) called for greater vigilance towards Russian direct investment within the EU.¹⁴

Russian investments in EU firms remain however limited, according to data from Bureau van Dijk. In 2021, Russia accounted for merely 1.3% of the number of acquisitions performed by foreign investors in existing EU companies and for 2.1% of greenfield investments (Commission, 2022c). Based on the number of transactions completed between 2015 and 2021, Russia was the 11th foreign investor in the EU, accounting for 0.9% of the number of investments and 0.7% of the value of investments from all non-EU jurisdictions (Commission, 2022c). Although Russian investments appear relatively limited, Russian individuals or entities had controlling and non-controlling stakes in 28,000 companies in the EU, which corresponds to 0.1% of the number of EU companies in 2020 (Commission, 2022b).¹⁵ The top EU countries by number of Russian-controlled companies are the Czech Republic (with 25% of the total number of EU companies controlled by Russia), Latvia, Germany, Cyprus and Bulgaria (Figure 10). In 2020 and 2021, sectors in which Russian investors had the largest presence were "wholesale", "real estate" and

¹⁴ In 2022, the European Commission has called upon Member States to use their existing screening mechanisms to assess threats related to such investments, and urged those that do not have such a mechanism to set up one. See Section 4 for further details.

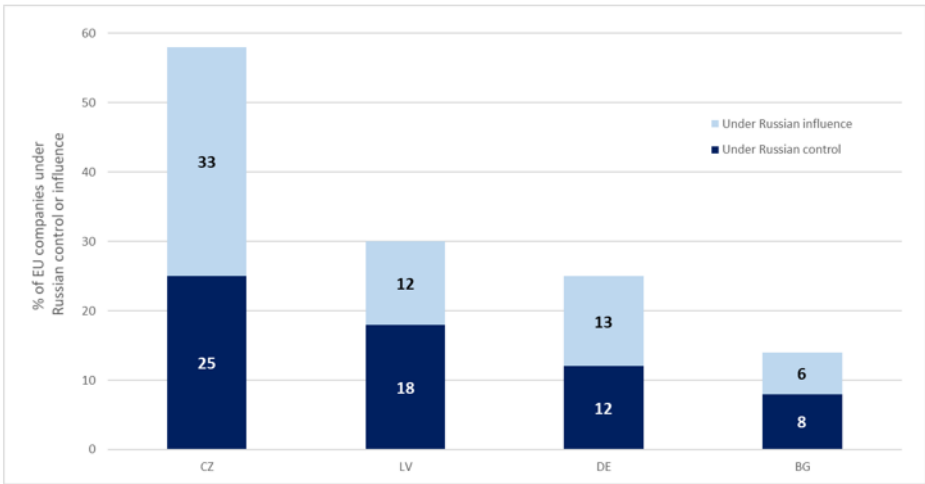
¹⁵ In 58% of the EU companies under Russian control or influence, assets are held by a natural person, in 10% by a company and in 1% by a public authority. The Russian government controls assets mainly in Cyprus (34% of the cases), Ireland (16%) and the Netherlands (Figure ??).

"professional scientific and technical activities" (Figure 9).



Note: all sectors considered, the number of companies under Russian control or influence amounted to 28,334 companies in 2020, including 15,576 companies under control and 12,758 under influence. For example, for real estate, 5,184 EU firms were either under Russian influence or control (left-hand scale). Hence, out of 10,000 EU firms, 38 firms were either under Russian influence or control in real estate (right-hand scale). Sources: European Commission and authors' calculations.

Fig. 9: EU firms under Russian influence or control per sector



Sources: European Commission and authors' calculations.

Fig. 10: The top 4 EU countries by number of Russian-controlled and Russian influenced companies

4 Cooperation on investment screening in the EU

4.1 A change of perception on ISMs in the EU

The rising influence of foreign investors, notably driven by China, progressively changed the perception of advanced countries about globalization and economic interdependence. In the EU in particular, after the transfer of competences of FDI policy - as part of commercial policy with the Lisbon treaty (2009) - there has been a long-standing political struggle on how to best benefit from FDI. For a long time, defining the criteria to assess the potential destabilizing effects of FDI was controversial, especially when China turned out to be a prominent investor in the EU after the early 2000s (Chan and Meunier, 2022). Until recently, investment screening was seen both by Member States and European institutions as a barrier to international capital flows and an obstacle to economic opportunities. Yet, progressively, potential national security threats posed by FDI were increasingly considered over the past decade (see section 2). As Covid-19 hit the EU economy, this changing perception among Member States culminated in the introduction in 2019 of EU Regulation 2019/452.

The EU Regulation lays out the cornerstones of a regional ISM mechanism. It aims to strike a balance between the need to keep the EU open to foreign investors and to protect Member States' essential interests, while reflecting national governments' different sensitivities. Overall, looking at the diversity of ISMs mechanisms in advanced countries, the EU mechanism is a unique example of regional cooperation on FDI and a striking illustration of the EU's renewed willingness to better protect its interests, as exemplified by the EU's open strategic autonomy agenda.¹⁶

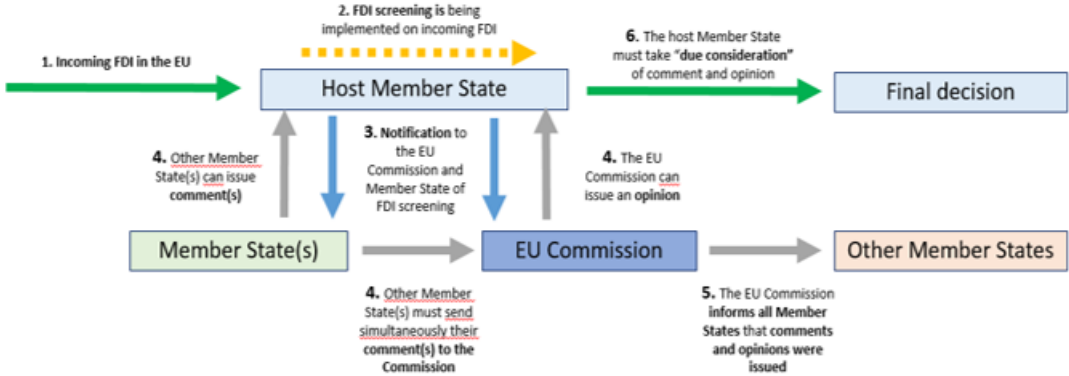
4.2 The EU FDI screening mechanism

4.2.1 The founding principles

The 2019 EU screening mechanism is primarily a coordination and cooperation framework between the Member States and the Commission. Such mechanism relies on information exchange to raise mutual concerns about transactions that “may threaten security or public order”, regarding investments in critical technologies and infrastructures. By implementing such EU Reg-

¹⁶ In its 2021 Trade Policy Review, the European Commission defines strategic autonomy as *“the EU's ability to make its own choices and shape the world around it through leadership and engagement, reflecting its strategic interests and values”*.

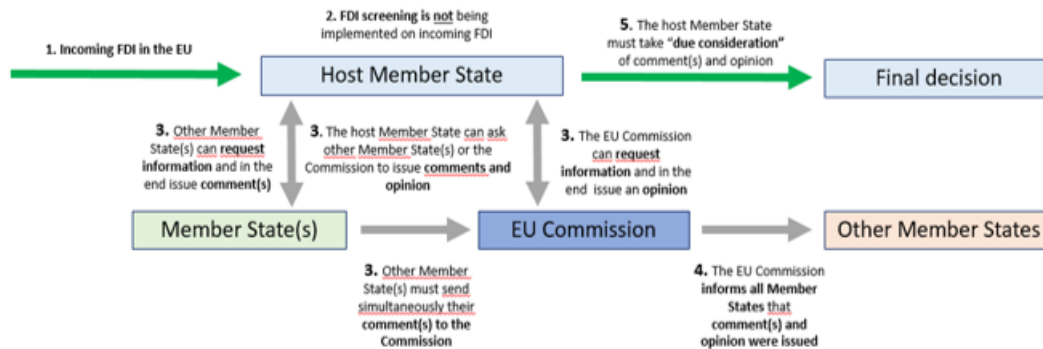
ulation, the Commission also intends to foster legislative convergence within the EU. In its first assessment reports, the Commission argues that this new mechanism allows the EU to remain “very open to FDI, intervening only in a very small proportion of cases to address deals likely to affect security or public order” (Commission, 2021). The founding principles of the EU FDI screening mechanism are laid out by the Regulation. Article 6 defines the cooperation process when FDI are undergoing screening within the host Member State and Article 7 defines the cooperation process when FDI are not undergoing screening within the host Member State. If a Member State decides to screen an incoming FDI on its territory, it must inform both the Commission and the other Member States of its decision. The host Member State must take “due consideration” of comments and opinion that other Member States or the Commission may have issued. Under the cooperation agreement, the host Member State remains the final decision-maker (Figure 11 on article 6), and does not have to formally justify its final decisions to either the Commission or other Member States. Hence, accountability is not at the core of the Regulation (OECD, 2022).



Source: authors.

Fig. 11: The EU FDI Screening mechanism - article 6

Symmetrically, when either a Member State or the Commission estimates that an incoming FDI in another Member State - which has not been screened - is likely to be a threat, it can issue comments or opinion to the host Member State, which gives the EU mechanism an extraterritorial dimension (Figure 12 on article 7). In practice however, the notification process under article 7 is currently underused (OECD, 2022).



Source: authors.

Fig. 12: The EU FDI Screening mechanism - article 7

4.2.2 Scope of the EU cooperation framework

To assess the sensitiveness of certain investments, the EU Regulation indicates a large set of multidimensional criteria aimed at protecting the EU's interests. In determining whether a FDI is likely to affect security or public order, Member States and the Commission may consider potential effects on critical infrastructures, critical technologies, supply of critical inputs, access to sensitive information, freedom and pluralism of the media. Furthermore, Member States may also consider the profile of the investor, in particular whether the investor is directly or indirectly controlled by a foreign government.

Although EU Regulation 2019/452 does not explicitly target specific nationalities,¹⁷ some of its provisions overlap with the characteristics of Chinese investment in Europe in the late 2010s (Merics, 2019).¹⁸ Hence, the EU FDI screening framework might significantly impact Chinese FDI into the EU. According to 2018 data on acquisitions, a large share of Chinese M&A transactions - 83% - could actually fall under the scope of the EU Regulation on ISMs (Merics, 2019).

¹⁷ However, in 2022, the European Commission explicitly called for greater vigilance toward Russian and Belarusian investments in a dedicated guidance (Commission, 2022a). This is the first time that the European Commission has singled out two countries when it comes to FDI. The Guidance gives therefore the possibility to discriminate on the ground of investors' nationality, thus assuming a geopolitical content.

¹⁸ According to Merics (2019), a large share of Chinese investments was targeted at European technology and innovation assets in the years preceding the adoption of EU Regulation 2019/452. In addition, about 60% of Chinese FDI in the EU originated from state-owned or sovereign entities in China over the past two decades.

4.2.3 An incomplete mechanism

The EU FDI cooperation framework still calls for further improvements. The OECD recently outlined the main weaknesses that weigh on the mechanism's effectiveness in achieving greater collective security (OECD, 2022).

Firstly, the absence of investment screening mechanisms in some Member States inevitably hinders the whole cooperation and coordination framework at the EU level. This is particularly true for those countries that act as entry point for foreign capital in the EU, such as Cyprus, Ireland and Luxembourg. The absence of ISM, indeed, hampers the government's ability to gather information on FDI planned or completed and to share them with other member states, and thus to evaluate and mitigate the risks stemming from FDI.

Secondly, the limitations of scopes or different definitions of Member States' domestic screening framework stall legislative convergence regarding FDI screening. The sectoral scope of Member States screening mechanisms varies considerably from country to country. In addition, the majority of national mechanisms are limited to M&A transactions and do not cover greenfield investments despite their increase in some countries. For example, in China, in 2022, driven by electric vehicle battery factories, greenfield investment overtook M&As for the first time since 2008 (Merics, 2023).¹⁹

Thirdly, the fading of political impetus on investment screening coupled with inadequate resources and poor governance practices can undermine the progresses at the EU level. Within the EU, some Member States remain reluctant about the need to adopt an ISM or improve the existing ones through a coordination framework with other members owing to the fear of deteriorating the country's attractiveness.

A first review of the EU mechanism is planned for October 2023, 3 years after its implementation

5 Comparing national investment screening mechanisms

5.1 A synthetic index for comparing national ISMs

5.1.1 Existing databases and lack of a quantitative index on ISMs

Despite the expansion and tightening of FDI screening regimes worldwide, we are unaware of the existence of any indicator suitable for cross-country comparisons. Most sources on newly

¹⁹ While the EU Regulation covers both M&A and greenfield investments, national screening laws are often limited to M&As.

implemented FDI-related regulations are in narrative form (e.g. the UNCTAD’s investment policy monitor, the OECD’s Freedom of Investment Roundtable or the IMF Annual Report on Exchange Arrangements and Exchange Restrictions). Similarly, law firms specialising in representing clients through the ISM review process also document major changes to ISMs in narrative form.

Although the OECD aggregates several coded dimensions into an index to gauge restrictions to foreign investments (see Appendix A for further details on the RRI), including “screening and approval requirements”, it carves out screening mechanisms applied for national security reasons (Kalinova et al., 2010), which are at the core of contemporary investment screening mechanisms. Other indexes on capital controls developed in the literature (Chinn and Ito 2008; Fernández et al. 2016) also exclude restrictions imposed for security reasons.

More recently, Bauerle Danzman and Meunier (2023) built the first comprehensive database on investment screening regulation in 38 OECD countries.²⁰ However, it focuses on qualitative coding and does not provide a synthetic quantitative index.

5.1.2 Motivation and purpose of the index

To fill the data gap, we built a synthetic index suitable for cross-country comparisons. Our objective is twofold. First, we aim to compare the main features of national ISMs and analyse potential legislative convergence within the EU. Second, we seek to gauge the restrictiveness of national ISMs and their potential impact on investment. For example, a lack of transparency or predictability, extensive call-in powers or the possibility to unwind a transaction for a considerable period of time after its completion might increase legal uncertainty, and therefore have a deterrent effect on investors.

5.1.3 Methodology

Building on the methodology of the OECD’s RRI and on the scope of the PRISM database (Bauerle Danzman and Meunier, 2023), we provide a synthetic index measuring the restrictiveness of foreign investment screening laws motivated by the need to protect national core interests.

²⁰ The PRISM database maps the evolution over time (from 2007 to 2022) of the main features of national ISMs (scope, thresholds triggering a review, treatment of foreign government owned entities, net benefit tests, transactions subject to pre-notification or authorization, government power to monitor and enforce the rules and institutional setup).

To do so, we built a comprehensive database on ISMs.²¹ The database reflects legislation in force the first half of 2023 and covers advanced economies, i.e. EU countries²² and other major advanced economies (the USA, the UK, Canada, Australia, Norway and Japan).²³

We focus on five broad features of national ISMs:

- identity of the investor subject to review and territorial scope of the ISM (origin of investors subject to review, special treatment for specific investors based on citizenship or residency, enhanced scrutiny for investors controlled by foreign governments, extraterritorial extent of the national legislation, international cooperation on FDI screening);
- sectoral scope of the ISM (cross-sectoral *vs* sector specific screening, sectors and business activities subject to review, coverage of greenfield investments);
- transactions subject to review (monetary or market share-based thresholds triggering a review);
- screening procedure (ex-ante notification *vs* ex-post screening, mandatory *vs* voluntary notification, investigation powers of the competent authorities, length of the review process, existence of a fast-track procedure...);
- enforcement of the mechanisms (invalidity of legal transactions completed without having first obtained the competent authority's approval, mitigation measures to address the authorities' objections to a transaction, sanctions for non-compliance, right of appeal...).

Further details on the measures scored are provided in Appendix D.

5.1.4 Caveats

Several caveats should be borne in mind. First, screening criteria do not systematically determine ex-ante the restrictiveness of national ISMs. The identification of potentially threatening

²¹ We used publicly available documents on investment screening laws supplemented with other sources, including reports from the OECD, the European Commission and legal counsels. In particular, questions frequently asked by investors (as reflected in national authorities' or legal counsels' guidance for investors) provide insights into the factors to be considered when planing a transaction and the features of national ISMs most likely to impact investors.

²² At the time of writing, some EU countries did not have an ISM in place, but had initiated a consultative or legislative process expected to result in the adoption of a new mechanism (Cyprus, Croatia, Estonia, Greece, Ireland, Luxembourg and Sweden) or amendments to an existing one (the Netherlands and Romania). Bulgaria was the only EU country without an existing ISM or legislative initiative under way.

²³ These countries belong to the OECD, and as such, are committed to pursuing liberal economic policies and having transparent investment-related regulations.

transactions relies on combinations of several criteria and parameters (e.g. nationality-related criteria, sector-specific parameters, investor-specific thresholds and potential exemptions to all or part of the screening rules). The interplay of these criteria and parameters, and the values set for them, result in a large variety of designs. Such variety contributes to challenges in comparing different mechanisms and their breadth of application (Pohl and Rosselot, 2020). To address this caveat, we analyse thoroughly the main features of national regimes. We paid particular attentions to exemptions and modulating criteria when designing the index.

Second, although the degree of restrictiveness of screening regimes can vary greatly depending on how rules are implemented, actual enforcement of national investment screening regimes is not factored in. Just like the OECD's RRI, the ISM index does not take into account perceptions of the investment climate or implementations issues, which are difficult to assess. Similarly, the degree of transparency or discretion of national authorities in granting approvals is not factored in. In most jurisdictions, publicly available information is limited regarding the outcome of national security reviews and the reasons for these decisions. To address this second caveat, we check whether the ISM synthetic index, which maps restrictiveness ex-ante based on national legislation, correlates with the restrictiveness of national schemes as reflected by (ex-post) implementation practices (see Section 6 for further details on enforcement practices).

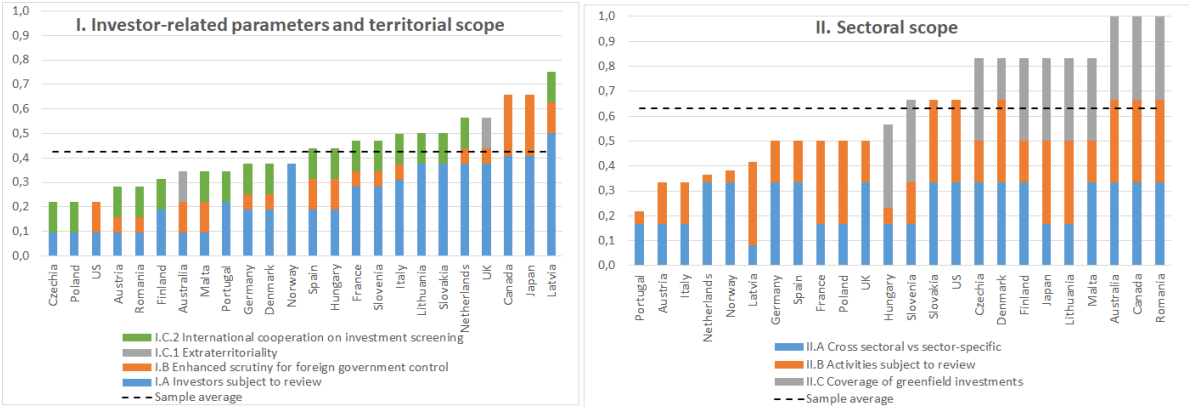
5.2 Results: main features and relative restrictiveness of national ISMs

5.2.1 Identity of the investor and territorial scope of the ISM

Most jurisdictions subject FDI to different levels of scrutiny depending on the identity of the investor, as a means of balancing the need to attract growth-enhancing investment with a desire to protect national interest. Most mechanisms use nationality or residency as a trigger criterion in the selection of potentially threatening transactions. Some jurisdictions achieve further differentiation by subjecting specific nationalities to exemptions or, on the contrary, to enhanced scrutiny. In a number of countries, exemptions apply to partners in regional integration agreements (such as the EU or the EEA), trade agreements (WTO) or military alliances (NATO, Five Eyes). In other jurisdictions, provisions apply both to foreign and domestic acquirers without discrimination.

Investors’ links to foreign governments (or foreign public entities) that could plan operations for strategic reasons entail specific risks for national security interests. In a number of countries, links to foreign governments is merely one of the factors to be considered in the risk assessment. In other jurisdictions, enhanced scrutiny applies to foreign investments by state-owned enterprises (SOEs) or private investors assessed as being closely tied to foreign governments. For instance, SOEs may comply with extended disclosure obligations, be subject to lower screening thresholds or require prior governmental consent for their investments.

Restrictions are relatively limited in Czechia and Poland (Figure 13, left panel). Exemptions apply to a wide range of countries (EU countries for Czechia, and EU, EEA and OECD investors for Poland). By contrast, screening regimes are much stricter in Canada and Japan and include all foreign investors. These countries also subject SOEs to enhanced scrutiny, resulting in stricter screening regimes. Few national regimes have an extraterritorial dimension, the UK being a notable exception. Also, following the adoption of EU Regulation 2019/452, international cooperation on investment screening is a common feature in the EU.



Note: The index ranges from 0 (relatively open ISM) to 1 (relatively restrictive ISM).

Fig. 13: ISM restrictiveness index- I. Investor-related parameters and II. Scope of the ISM

5.2.2 Sectoral scope and coverage of greenfield investments

Most jurisdictions apply sector-related criteria to determine whether a planned transaction might threaten national security or national interests. While initial national security-related concerns over FDI narrowly focused on foreign influence in defense contracts, the current scope of most

ISMs encompasses a large range of areas (e.g. critical infrastructure, advanced technologies and sensitive personal data). Initially, most countries operated based on detailed lists of sectors, companies or individualised assets (the least restrictive approach), which provide more predictability to investors. As risk perception evolved, sector-specific lists gave way to cross-sectoral review mechanisms of enterprises in any sector or to a blend of cross-sectoral and sector-specific mechanisms (Pohl and Rosselot, 2020). As a result, most countries have implemented all-embracing cross-sectoral screening with broadly defined review criteria that focus on specific risks rather than industries.

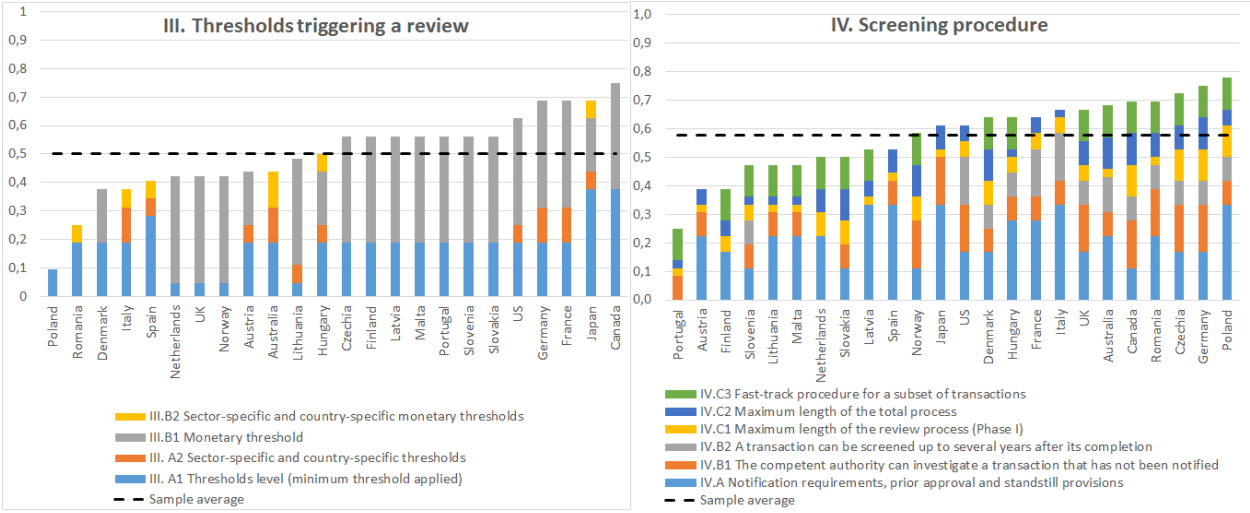
The sectoral scope is relatively narrow in the Netherlands and in Portugal (Figure 13, right-hand-side panel), where screening exclusively applies to, respectively, the electricity, gas and telecommunications sectors and the energy, transport and telecommunication sectors. The sectoral scope is much broader in Canada, Australia and Romania. These countries also screen the establishment of new businesses (greenfield investments), resulting in stricter regimes.

5.2.3 Transactions subject to review and minimum thresholds triggering a review

Screening is usually triggered either by the size of an equity stake or the share of voting rights in the target enterprise that the investor would hold as a result of a transaction. How restrictive are these parameters depends on the value of the thresholds applied (the lower the threshold, the stricter the ISM), in conjunction with exemptions for a subset of investors or transactions.

Shareholding and monetary thresholds are relatively less restrictive in Poland, Romania and, to a lesser extent, Denmark and Italy (Figure 14, left-hand side). Poland applies relatively high shareholding trigger thresholds, in conjunction with a monetary threshold which filters out transactions in small target companies. Although trigger thresholds are closer to the median of the sample in Denmark, Italy and Romania, both Romania and Italy apply minimum monetary thresholds, while the Danish screening regime does not apply to greenfield investments below a certain monetary threshold. At the other range of the sample, screening regimes are relatively stricter in Canada, and, to a lesser extent, in Japan, Germany and France. In Canada, all investments, including minority investments (regardless of value) are subject to the national security review process, resulting in the highest score. The lowest shareholding threshold is registered in Japan, where it was lowered in 2020 from 10% to 1% for foreign investment in

Japanese listed companies active in sectors relevant to national security, and where monetary thresholds only apply to a subset of transactions (loans).



Note: the index ranges from 0 (relatively open ISM) to 1 (relatively restrictive ISM).

Fig. 14: ISM restrictiveness index - III. Thresholds triggering a review and IV. Screening procedure

5.2.4 Screening procedure

Depending on the ISM, notification can be either mandatory, combined with a set of penalties for non-compliance, or voluntary. In both cases, the relevant authority have powers to "call in" for review transactions that fall within the scope of the ISM (e.g. transactions that meet the prescribed trigger thresholds). In a few jurisdictions, national authorities also have the discretion to review transactions that do not meet the prescribed thresholds. Lastly, short and transparent timelines reduce uncertainty by offering investors a quick decision on the acceptability of their projects.

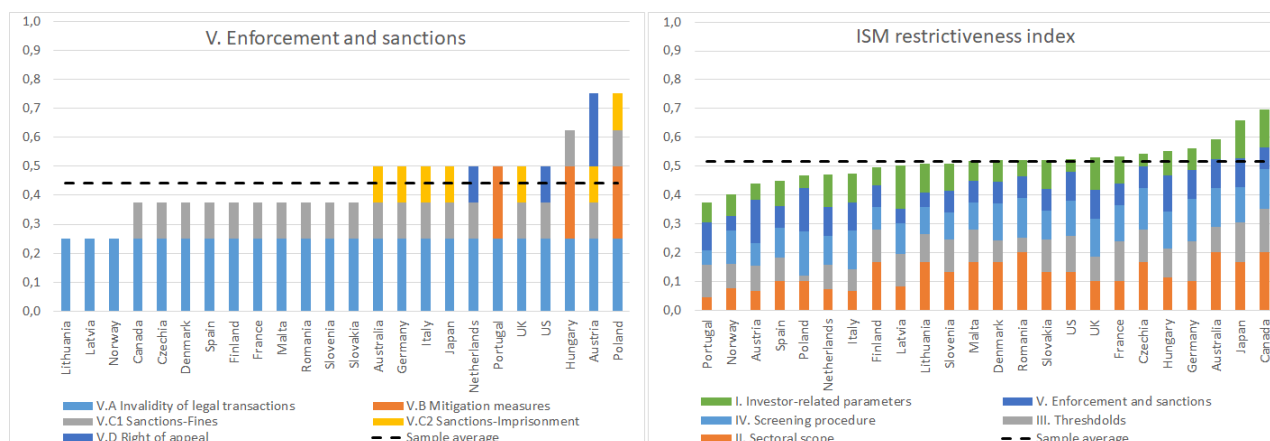
The screening procedure is relatively less restrictive in Portugal, where the mechanism does not impose a mandatory notification procedure (Figure 14, right panel). By contrast, the screening process is stricter in Poland and Germany. In both countries, the review is relatively lengthy and national authorities can investigate a transaction that has not been notified for a significant period of time (up to five years) after its completion.

5.2.5 Enforcement and sanctions

In cases of non-compliance with notification requirements and approval procedures, national authorities have a range of enforcement powers, including the power to invalidate a transaction or to impose criminal sanctions.

All ISMs in our sample allow the relevant authorities to order a divestment or declare an investment null and void (Figure 15, left panel). Sanctions include monetary fines²⁴ and criminal sanctions for individuals, including imprisonment (e.g. in Germany, the UK or Australia). In most countries, approval might be granted on certain conditions (mitigation measures). Only a few countries on the right-hand side of the sample exclude the possibility of such arrangements, resulting in stricter screening regimes. Most countries allow investors the right to seek recourse against screening decisions. In a few cases, a subset of transactions or specific decisions are not subject to appeal.²⁵

Overall, enforcement powers and sanctions are limited in Lithuania, Latvia and Norway. At the other range of the sample, screening regimes are stricter in Hungary, Poland and Austria, owing to the impossibility to address the authorities' objections to a transaction by providing remedies or to limited appeal rights.



Note: the index ranges from 0 (relatively open ISM) to 1 (relatively restrictive ISM).

Fig. 15: ISM restrictiveness index - V. Enforcement and sanctions and Total index

²⁴ Fines may be up to the value of the transaction, as seen in the USA, or calculated as a percentage of worldwide turnover, as seen in the UK.

²⁵ For example, in the USA, CFIUS actions and decisions are subject to judicial review, whereas the decisions of the President to suspend or prohibit any covered transaction may only be challenged on constitutional grounds.

5.2.6 ISM restrictiveness index

The most robust mechanisms are found in Australia, Japan and Canada, which have been filtering investments for a long time. EU countries do not systematically have the strictest regimes, suggesting that they remain relatively competitive compared to other advanced economies. While the EU regulation aims to foster convergence in national screening regimes, the index outlines the heterogeneity of national designs. Few restrictions apply in Portugal, Austria and the Netherlands (Figure 15, right-hand side), whereas screening regimes are stricter and have been amended more recently in France and Germany. The latter two countries already had screening regimes in place in the early 2000s and were the earliest proponents of the EU framework for screening inward investment (Chan and Meunier, 2022).

5.3 Comparing the ISM index with existing indicators of FDI restrictiveness

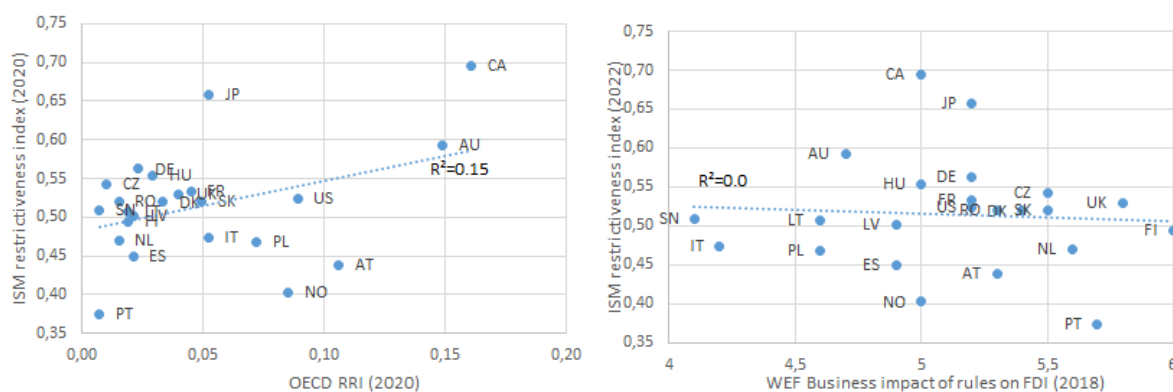
We document how the ISM index correlates with existing measures of FDI restrictiveness and competitiveness, such as the OECD's RRI, the index developed by Fernández et al. (2016) and the World Economic Forum's Global Competitiveness Index.

Figure 16 shows the lack of correlation between the ISM restrictiveness index and the RRI, which carves out restrictions on FDI on national security grounds.²⁶ As a robustness check, we investigate potential correlations with other indices and find similar results. Neither Fernández et al. (2016)'s index on controls on FDI inflows (which excludes restrictions based on security grounds) nor the World Economic Forum (WEF) index ("Business impact of rules on FDI") correlate with the ISM restrictiveness index (see Figure 16). Hence, investment screening can coexist alongside an otherwise liberal investment regime.

Overall, the ISM restrictiveness index usefully complements existing indicators, which focus on distinct mechanisms for controlling inward investment and exclude screening on national interest

²⁶ A linear regression confirms the lack of statistically significant relation between the two indexes. However, the ranking of the ISM index is consistent with that of the RRI for both ends of the distribution. Canada and Portugal get, respectively, the highest and lowest scores with both indexes. Testing potential correlations between the ISM index and the "screening and approval" dimension of the RRI is not practicable since most countries (especially EU countries) do not apply "screening and approval" restrictions as defined by the RRI. The few countries applying such restrictions are also those reaching the highest scores according to the ISM restrictiveness index (Australia, Canada and Japan).

or national security grounds.



Note: both RRI and ISM indexes range from 0 (relatively open regime) to 1 (relatively restrictive), whereas the WEF index ranges from 1 (extremely restrictive) to 7 (not restrictive at all).

The correlation sign is in line with expectations. The correlation between the ISM restrictiveness index and the RRI is positive: in both cases, the higher the index, the stricter the regime. By contrast, the correlation between the WEF and the ISM index is slightly negative: the lower the WEF index, the more restrictive the regime.

Sources: OECD, WEF and author's calculations.

Fig. 16: RRI, WEF and ISM restrictiveness indexes

5.4 Determinants of the restrictiveness of national ISMs

We explore whether the restrictiveness of national ISMs correlates with country-specific macroeconomic characteristics. We consider three potential explanatory factors. First, recent literature has focused on ISMs as a response to the rise of Chinese outward investment. Hence, we check whether the restrictiveness of national ISMs correlates with variables reflecting commercial links and exposure to Chinese investors. Second, we focus on natural resources and technological specialization. Technology transfer associated with foreign acquisitions might be a greater concern in economies with a larger share of R&D in sectors related to critical technology. Resource-rich countries might also be more prone to scrutinize foreign takeovers in the mining industry.²⁷ Third, geopolitical factors might be another driver of FDI screening. We check whether the restrictiveness of national ISMs correlates with geopolitical distance from either the U.S., China or Russia, based on voting patterns at the United Nations General Assembly.²⁸ We also test sentiment towards the Belt and Road Initiative as a proxy for geopolitical distance from China.²⁹

²⁷ For instance, both Australia and Canada, whose ISM are among the most restrictive, receive large FDI inflows in the mining and quarrying sectors.

²⁸ We use several measures of geopolitical alignment between countries: the "ideal point distance" proposed by Bailey et al. (2017) and the *S* score proposed by Signorino and Ritter (1999).

²⁹ To measure sentiment towards the Belt and Road Initiative (BRI), Garcia-Herrero and Schindowski (2023) extract data from the Global Database of Events, Language, and Tone (GDELT), a platform covering TV broadcast, print and online news in over 100 languages across the world. The authors cover the period between January

For each of the factors listed above, we test a range of indicators to ensure robustness (see Figure 17). Overall, correlations coefficients are low, suggesting that there is no single factor explaining the restrictiveness of national ISMs, but rather a range of idiosyncratic characteristics. The highest correlations are found for indicators of China exposure, R&D in critical technologies and public sentiment towards the Belt and Road Initiative.

1st, 2017 to October 5th, 2022. A positive sentiment means that the public media in the country favours the BRI, whereas a negative tone indicates a negative sentiment towards the BRI. The higher the tone, the more supportive is the country towards the BRI.

	correlation coefficient
China exposure	
share of CN FDI in total FDI inward flows (2019, OECD)	0,38
share of CN value added embodied in final domestic demand (2018, OECD)	0,56
share of CN imports in total imports of goods (2020, OECD)	0,52
share of foreign firms under CN control (2021, Eurostat*)	0,38
share of CN in inward MNEs production value (2019, OECD)	0,28
share of CN in inward MNEs value added at factor cost (2019, OECD)	0,25
share of CN in inward MNEs gross investment in tangible goods (2019, OECD)	0,19
share of MNEs persons employed in CN out of total persons employed in MNEs (2014-2016 average, OECD)	0,20
Natural resources and technological specialization	
material import dependency (2018, Eurostat*, **)	0,30
FDI inward openness (inward assets+liabilities flows, % GDP, average 2014-2021, OECD)	0,28
R&D defence budget (% of total R&D budget, 2015-2021 average, OECD)	0,09
export market share - aerospace (2016-2020 average, OECD)	0,16
export market share - computer, electronic and optical industry (2016-2020 average, OECD)	0,26
export market share - pharmaceutical (2016-2020 average, OECD)	0,12
share of mining in total production (2019, OECD)	0,05
share of manufacturing in total production (2019, OECD)	0,32
R&D - number of patents in critical technologies	
number of IP5 patents (2019, OECD)	0,42
number of IP5 patents per capita (2019, OECD)	0,40
number of IP5 patents - medical technology (2019, OECD)	0,34
number of IP5 patents per capita - medical technology (2019, OECD)	0,32
number of IP5 patents - nanotechnology (2019, OECD)	0,26
number of IP5 patents per capita - nanotechnology (2019, OECD)	0,44
number of IP5 patents - biotechnology (2019, OECD)	0,22
number of IP5 patents per capita - biotechnology (2019, OECD)	0,28
number of IP5 patents - AI (2019, OECD)	0,35
number of IP5 patents per capita - AI (2019, OECD)	0,47
number of IP5 patents - ICT (2019, OECD)	0,39
number of IP5 patents per capita - ICT (2019, OECD)	0,41
number of IP5 patents - Pharmaceuticals (2019, OECD)	0,17
number of IP5 patents per capita - Pharmaceuticals (2019, OECD)	0,21
Geopolitical distance	
geopolitical distance from China (E. Voeten UN votes data, ideal point distance all votes, 2009-2021)	0,32
geopolitical distance from Russia (E. Voeten UN votes data, ideal point distance all votes, 2009-2021)	0,29
sentiment towards the Belt and Road Initiative (Garcia-Herrero and Schindowski, 2017-2022)	-0,49

Note: green (respectively, red) bars show a positive (respectively, negative) correlation. The sample includes 24 advanced economies.

* Only includes the 19 EU countries of our sample.

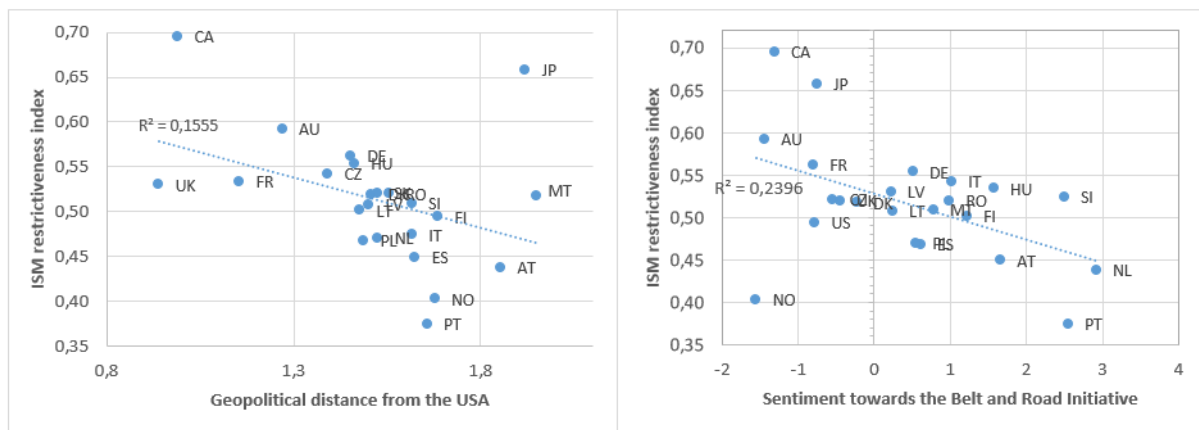
** material import dependency represents the share of physical imports in the direct material input (which comprises domestic extraction and physical imports) of a given economy.

Fig. 17: Correlation coefficients between the ISM restrictiveness index and country-specific characteristics

Linear regressions suggest a statistically significant positive relationship between the ISM restrictiveness index and the share of Chinese value added embodied in final domestic demand (Figure 19, left-hand side). The relationship between the ISM restrictiveness index and the number of patents per capita is also significant (Figure 19, right-hand side). Finally, we find a statistically significant negative relationship between the ISM restrictiveness index and sentiment toward the Belt and Road Initiative (BRI). Negative sentiment towards the BRI is associated with stricter

ISMs (Figure 18, right-hand side). However, results should be interpreted with caution due to small sample size.

Our results concur with literature. Bauerle Danzman and Meunier (2023) show that countries with more FDI stock from China are more likely to impose new screening regulations, while Eichenauer et al. (2021) find that countries with higher levels of technological development and with a stricter regulatory environment for foreign investment are more likely to introduce investment screening. Similarly, Chan and Meunier (2022) conclude that countries with higher technological levels were more supportive of FDI screening due to concerns over technological transfer, based on interviews with high-level EU and country officials involved in the negotiation process of the EU FDI screening framework.

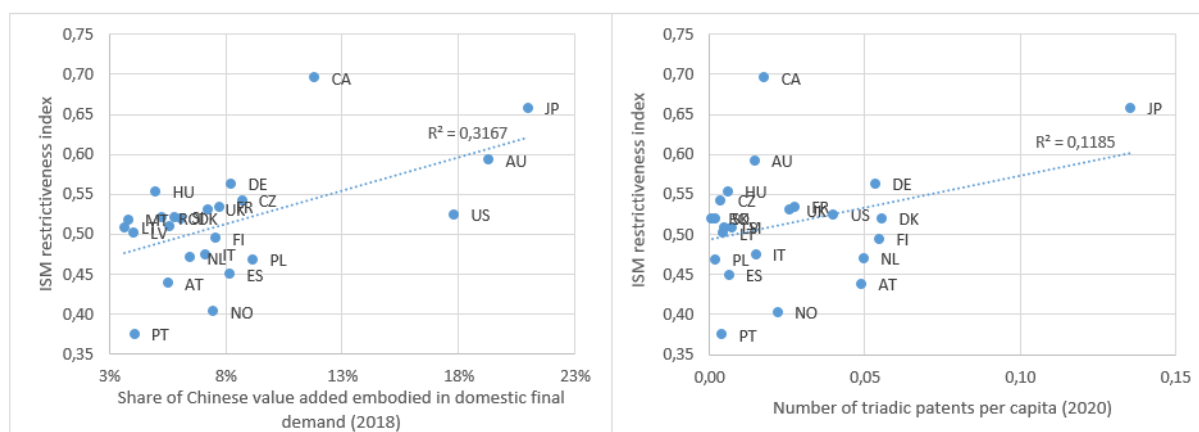


Note: the left-hand side chart depicts the relationship between the ISM restrictiveness index and geopolitical distance from the US. We use the 'ideal point distance' (IPD) proposed by Bailey et al. (2017), which is based on voting patterns at the United Nations General Assembly (2016-2021 average). The higher the IPD, the greater the geopolitical distance. The ISM restrictiveness index ranges from 0 (relatively open regime) to 1 (relatively restrictive). Hence, a negative correlation suggests that countries aligned to the US implement relatively stricter screening regimes (left-hand side).

The right-hand side chart shows the relationship between the ISM restrictiveness index and sentiment towards the Belt and Road Initiative (Garcia-Herrero and Schindowski, 2023). A positive sentiment means that public media in the country favours the Belt and Road Initiative BRI, whereas a negative tone indicates a negative sentiment. The correlation between the ISM restrictiveness index and sentiment towards the BRI is negative, suggesting that the most negative countries towards the BRI implement stricter ISMs (right-hand side).

Sources: Bailey et al. (2017), Garcia-Herrero and Schindowski (2023) and author's calculations.

Fig. 18: ISM restrictiveness index and geopolitical distance from the US (left-hand side) and from China (right-hand side)



Note: the left-hand-side figure depicts the relationship between the share of Chinese valued added embodied in domestic final demand (2018, last year available) and the ISM restrictiveness index (2022). The right-hand-side figure shows the number of triadic patents families per capita (2020) and the ISM restrictiveness index. The ISM index ranges from 0 (relatively open regime) to 1 (relatively restrictive). Sources: OECD and author's calculations.

Fig. 19: Left: share of Chinese valued added embodied in domestic final demand (2018) and ISM restrictiveness index. Right: number of triadic patents families per capita (2020) and ISM restrictiveness index

6 Assessing the impact of ISMs on investment decisions

6.1 Challenges in assessing the impact of ISMs on investment decisions

Screening regimes may affect the value of individual transactions and the volume of total FDI through several channels (Eichenauer and Wang, 2022). In particular, investors might purchase a lower stake to avoid triggering a review in jurisdictions where monetary or shareholding thresholds apply. ISMs may also have a deterrent effect. Projected acquisitions might be prohibited, abandoned or unwound by the regulator, resulting in acquisitions being suspended or diverted to other jurisdictions.³⁰

Determining whether the recent tightening of ISMs has affected foreign investment flows is challenging for a number of reasons. First, foreign investment screening, which has become widespread in advanced economies, is one of many factors that could influence FDI inflows. Indeed, there is no systematic correlation between the restrictiveness of national ISMs and attractiveness to foreign investors, as reflected by foreign investment inflows.³¹ Literature suggests

³⁰ Publicly available information on transactions provide anecdotal evidence of transactions being scaled down as a result of the ISM being in place.

³¹ Japan, one of the most restrictive countries, receives limited inflows. By contrast, Australia and Canada, which also have relatively stricter regimes, are attractive destinations for foreign investors. FDI inflows averaged nearly 3% of GDP between 2015 and 2021, i.e. above the OECD average. At the other end of the sample, Portugal, whose ISM is relatively less restrictive, also attracts large foreign investment inflows relative to the size

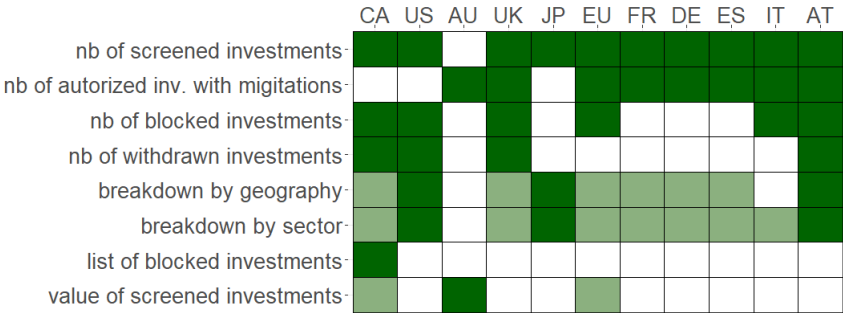
that the key determinant of FDI flows are sound macroeconomic conditions (investment returns, access to markets...), together with institutional factors (good governance, low sovereign risk and a stable legal system). Overall, the recent tightening of national ISMs has not coincided with investors' reappraisal of the most attractive destinations.³² A second challenge relates to the relative volatility of FDI inflows. Inflows can vary considerably from year to year depending on the timing of a small number of large transactions.³³ As such, a couple of years is too short a period on which to draw conclusions on the impact of policy changes. Lastly, FDI inflows is a net figure, which captures both incoming FDI and divestment of existing FDI. Hence, it is intricate to identify whether a change in inflows is driven by a reduction in the former or an increase in the latter. While foreign investment screening may affect incoming FDI, it is unlikely to impact FDI divestment.

To assess the impact of FDI screening on planned transactions, we focus on national governments' statistics on foreign investment applications and screened foreign investments, which reflects incoming FDI rather than net inflows. However, the lack of publicly available information contributes to challenges in assessing the impact of foreign investment screening. Statistics published by national authorities vary greatly depending on the reporting country (Figure 20). While most countries provide information on the number of screened and blocked investments, the financial value of blocked transactions is not publicly available. Similarly, the value of screened transaction is seldom published.

of its economy (3% of GDP on average between 2015 and 2021).

³² For instance, Kearney's FDI confidence index shows that from 2018 to 2022, the USA, Japan, Canada and Germany have remained the three most attractive destinations for global FDI, despite the tightening of their national ISMs observed over that period. Indeed, surveys such as Kearney's FDI Confidence Index show that when making investment decisions, investors prioritize market stability and the transparency of government regulations. In this respect, transparent foreign investment screening regulations might improve the perceived transparency of government regulations and hence, bolster the business climate. On the other hand, frequent regulatory changes on investment screening might increase uncertainty, and thus reduce M&A activity. For instance, Bonaime et al. (2018) estimate that political and regulatory uncertainty is negatively associated with M&A activity at the macro and firm levels.

³³ Covid-19 related disruptions had a major impact on FDI flows globally, contributing to challenges in assessing the impact of the tightening of ISMs over this period.



Note: The degree of transparency ranges from white (no information available from the national authorities) to light green (intermediate step with scarce information) and finally to dark green (complete information made available for users) for each identified criterion.

Sources: national and European Commission’s annual reports on foreign investment screening (2022); authors’ representation.

Fig. 20: Variations in the transparency of information published by national authorities and the European Commission

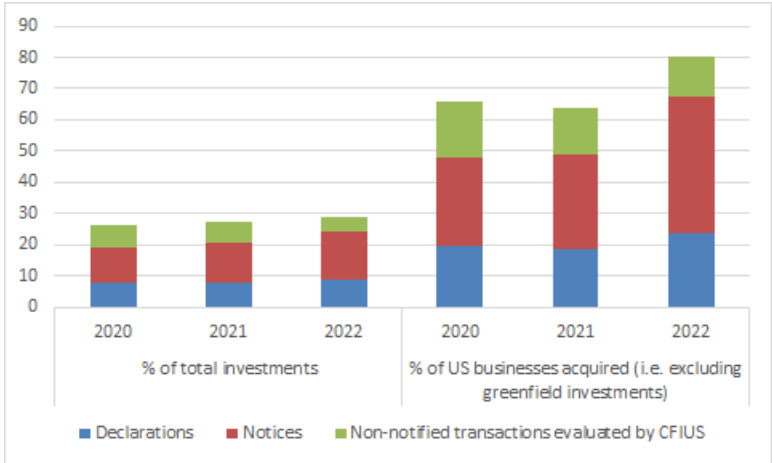
6.2 A large number of transactions is subject to review

In this section, we roughly estimate the impact of foreign investment screening on planned transactions by computing the share of screened investments over the total number of investments initiated in a given year. A caveat is that statistics on planned investments reflect intended rather than actual transactions. Hence, the perimeter of the numerator, which includes planned transactions, is not fully comparable with that of the denominator.³⁴

Owing to the broad scope of national ISMs, a large number of transactions is subject to review. Figure 21 shows that in the USA, covered transactions represent one-third of the total number of FDI initiated each year over the period 2020-2022. This share is even higher when excluding greenfield investments, which do not fall within the scope of the US regulation. In the EU, about 20% of transactions done by foreign investors were screened in 2021 under the EU cooperation framework (Commission, 2022c).³⁵

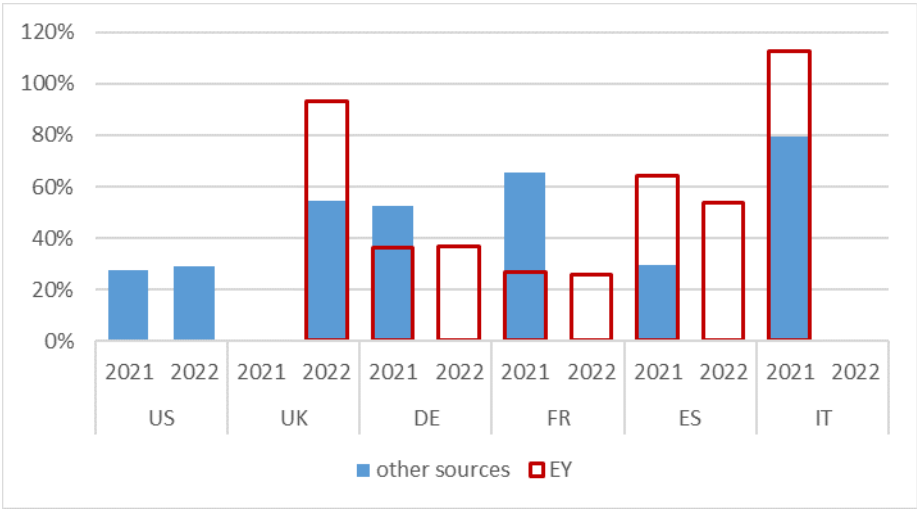
³⁴ Depending on data availability, the denominator may reflect either the number of investments initiated or the number of planned investments for a given year.

³⁵ In 2021, 13 Member States submitted a total of 414 notifications, pursuant to Article 6 of the FDI Screening Regulation, out of over 4,000 transactions (equity stakes and greenfield investments) done by foreign investors in the EU27 (i.e. around 10%). However, given that the five countries responsible for 85% of all notifications do not cover greenfield investment in their national laws, the share of screened investment might be closer to 20% (when considering only the number of foreign acquisitions, i.e. excluding greenfield investments from the denominator).



Note: any transaction can be notified to CFIUS by notice or declaration (i.e. an abbreviated notification), including certain transactions subject to mandatory filing requirements. CFIUS also has the authority to review pending or completed transactions even absent a voluntary filing ("non-notified" transactions).
 Sources: US Bureau of Economic Analysis (BEA), CFIUS and authors' calculations.

Fig. 21: Share of FDI transactions screened in the US (% of total investments and % of brownfield investments)



Note: owing to the lack of official data on the number of FDI transactions in Europe, we provide a range of estimates based on two proxies. First, blue bars depict the number of screened investments over the total number of FDI transactions initiated in a given year, as provided by: the Bureau of Economic Analysis (BEA) for the USA, the Department of International Trade (DIT) for the UK and estimations based on Bureau van Dijk's (BvD) data for EU countries. Second, red bars show the number of screened investments over the total number of planned investments, as measured by Ernst&Young's (EY) annual attractiveness surveys. However, whereas BvD database only considers extra-EU incoming direct investments, EY's European Investment Monitor database excludes M&A (but includes Europe incoming FDI). These different scopes partly explain the different estimations. Percentages may exceed 100% due to an under-estimation of the number of FDI transactions. In addition, screened transactions reflect intended rather than actual transactions.
 Sources: national and European Commission annual reports, US BEA, UK DIT, EY attractiveness surveys, authors' calculations.

Fig. 22: Share of FDI transactions screened by national ISMs (% of total transactions)

6.3 A number of transactions are withdrawn or accepted under conditions

Although a large number of transactions is subject to review, most cases are approved without conditions. Hence, in the vast majority of cases, FDI screening is just a matter of administrative scrutiny. Building on publicly available information for 2021 and 2022, Table 1 shows that transactions are seldom blocked. The share of blocked transactions is higher in Canada (when focusing on transactions screened under the national security review). Conditions and mitigation measures are also frequent. They represent close to 10% of all transactions in most countries and as much as 54% in France. A significant number of transactions are withdrawn during the review process. Such transactions are either definitively abandoned (for instance, when investors do not accept mitigation measures or when such measures cannot resolve the authorities' national security concerns) or withdrawn and re-filed. Overall, the significant share of transactions being blocked, mitigated or withdrawn suggests that screening has a non negligible impact on a number of transactions.

2021 or 2022*	US	EU	CA	AU	UK	FR	DE	ES	IT
Screened investments (SI) (nb)	524	414	24		766	124	306	55	233
SI authorized with conditions (nb)	52	104		39	14	67	14	6	22
SI authorized with conditions (%)	10%	23%			1.3%	54%	5%	11%	9%
Withdrawn SI (nb)	88	14	5						
Withdrawn SI (%)	17%	3%	23%						
Blocked SI (nb)	0	5	3		5	1**	2**		2
Blocked SI (%)	0%	1%	13%		0.7%	1%	1%		1%
<i>Inward flows of FDI (billion US\$)</i>	<i>405</i>	<i>168</i>	<i>66</i>	<i>25</i>	<i>-71</i>	<i>27</i>	<i>46</i>	<i>19</i>	<i>-9</i>

Note: * latest available data. **At least: information obtained from the media but not included in national ISM reports.

US: 524 screened investments refer to the total number of covered declarations, notices and non-notified transactions field in 2022 .

EU : 414 refers to the total number of notified transactions under art. VI of the EU regulation in phase 2, while 453 is the total number of transactions in phase 1 of the EU ISM (Commission, 2022c).

CA: domestic authorities launched 24 in-depth reviews for national security reasons in 2021-22. However, 826 foreign investments were screened for both economic and national security motives the same year . AU : the total number of screened investments for national security reason is not communicated. However, 39 transactions were approved with conditions and 67 without conditions during fiscal year 2021-2022. The number of withdrawn or blocked investments is not known. The total number of screened investments (for both national security and economic reasons) reached 6,651.

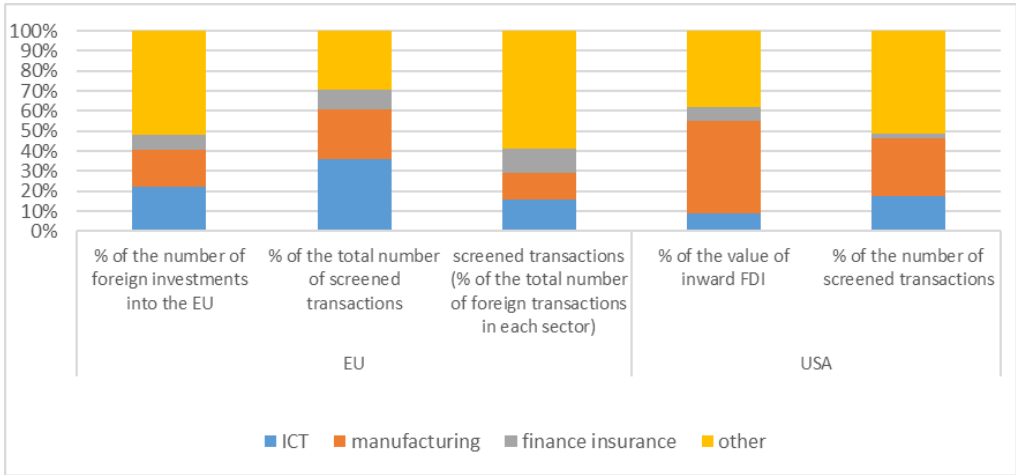
IT: Italy has screened 496 investments in 2021, but only 233 for security reasons under the scope of the "Golden Power" rule, .

Sources: national and regional ISM reports (see FIRB (2021) for Australia, ICA (2021) for Canada, ICA (2022) for France, ISGF (2022) for Germany, Relazione annuale (2021) for Italy, CIFRAS (2021) for Spain, NSIA (2023) for the UK and CFIUS (2021) for the US).

Tab. 1: Outcome of national security reviews

6.3.1 ICT and manufacturing are the sectors most screened, reflecting the focus of ISMs on critical infrastructure and technologies

Figure 23 shows that ICT, manufacturing and financial activities are particularly subject to screening in the EU and the USA, reflecting the focus of ISMs on critical technologies and infrastructure. In the EU, ICT and, to a lesser extent, manufacturing and financial services, are over-represented in the number of screened transactions. In 2021, transactions in ICT represented 22% of the number of foreign investment into the EU, but up to 36% of all screened transactions. To a lesser extent, manufacturing (which encompasses critical infrastructure and technologies like defence, aerospace, energy and semiconductor equipment) accounted for 25% of the number of screened transactions in the EU (vs 19% of the number of foreign investment into the EU).

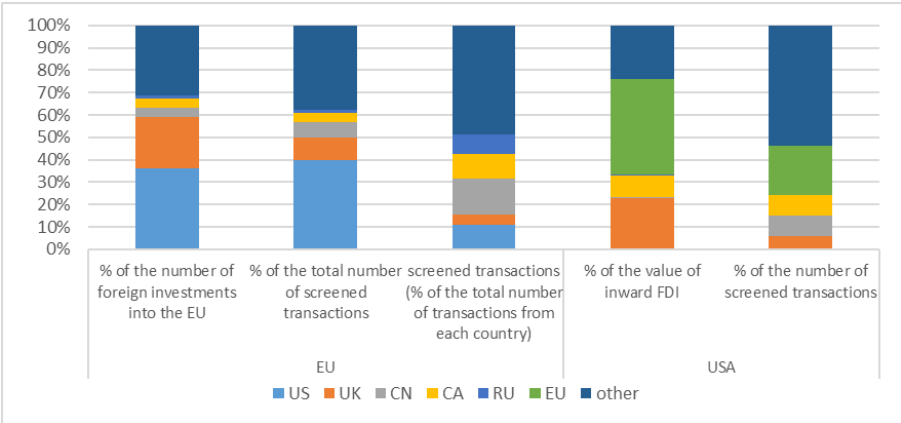


Notes: In the EU, ICTs represent 22% of all foreign transactions and 36% of screened transactions. Hence, 16% of ICT transactions are screened. For the USA, screened transactions include declarations and notices. Sources: Commission (2022b), CFIUS and authors' calculations.

Fig. 23: Screened transactions by business sectors in the USA and the EU (2021)

6.4 The origin of investors involved in screened transactions is broadly consistent with overall investment trends

Screening practices are broadly consistent with investments trends. Figure 24 shows that investments from the USA represent 40% of all transactions screened in the EU, in line with the share of US inward FDI into the EU. By contrast, China and Russia are slightly over-represented in the number of screened transactions.



Notes: China represented 4% of all foreign transactions in the EU in 2021 and 7% of the total number of screened transactions. 16% of Chinese transactions were screened. For the USA, the scope of screened transactions includes declarations and notices. Sources: Commission (2022b), CFIUS and authors’ calculations.

Fig. 24: Origin of investors involved in screened transactions in the USA and the EU in 2021

While China represented 4% of foreign investment into the EU in 2021, it accounted for close to 7% of all screened transactions. Overall, 16% of Chinese investments into the EU were screened in 2021 under the EU cooperation framework. Investments from China also made a large part of screened transactions in the US and the UK.³⁶ In Canada, Chinese and Russian investors were over-represented in the number of investments subject to extended review in 2021-22. Anecdotal evidence for Germany suggests that in-depth reviews of investments overwhelmingly involve Chinese investors (Merics, 2023). In most countries, investments involving Chinese investors make the bulk of blocked transactions. According to Roberts (2022), all four deals blocked by CFIUS under the Trump administration related to China.

Against this backdrop, Chinese investments into the EU have shifted towards greenfield investment since 2020 (Merics, 2023), which are typically subject to fewer screening measures by national governments.

³⁶ In the UK (in 2022), China represented 42% of call-in notices, i.e. where a scrutiny is deemed to be needed for national security, and 53% of final orders, where a decision has been taken for national security reasons.

EU cooperation mechanism				
Origin of investors	China	USA	UK	Canada
Share in EU transactions (%)	4	30	30	5
Share in screened transactions (%)	7	40	10	4
National mechanisms				
Origin of investors	China	USA	UK	Canada
Share in US transactions (%)	1		4	16
Share in US screened transactions (%)	9		6	9
Share in CA transactions (%)	2	38	5	
Share in CA screened transactions (%)	29	0	4	
Share in CA blocked transactions (%)	100	0	0	
Share in UK transactions (%)	2	77		
Share in UK blocked transactions (%)	53	20		
Share in DE transactions (%)	3	17	2	11
Share in DE screened transactions (%)	12	36	13	5
Share in ES transactions* (%)	3	5	4	0
Share in ES screened transactions (%)	3		4	

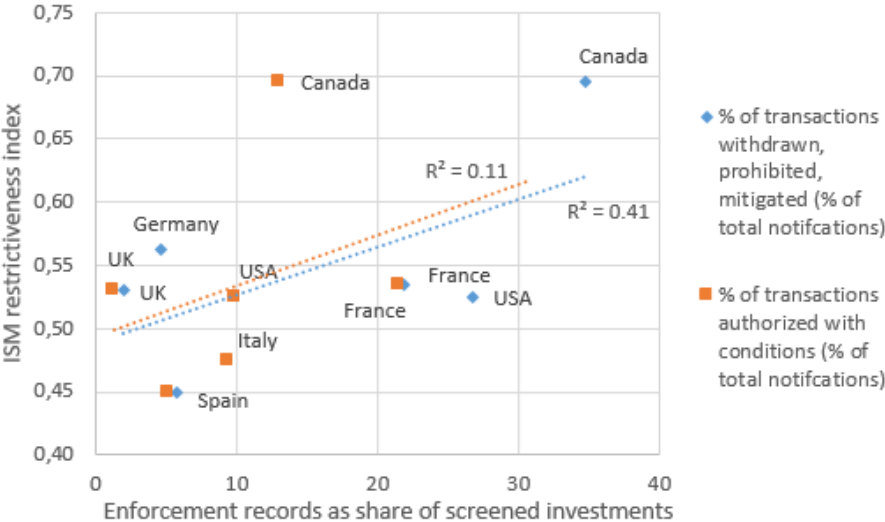
Notes: value of FDI transactions in 2019 (*2018 for Spain). Investments screened in 2021 or 2022 depending on data availability.

Sources: national and European Commission annual reports, Merics, BvD, OECD.

Tab. 2: Origin of investors involved in screened transactions

6.4.1 The ISM restrictiveness index is consistent with enforcement practices

The ISM ex-ante restrictiveness index is consistent with enforcement practices. The most restrictive countries are those displaying the highest percentage of transactions being either prohibited, withdrawn or authorized with conditions (Figure 25). Hence, the ISM restrictiveness index is a relatively good predictor of implementation practices, with stricter regimes resulting in a higher number of transactions being blocked.



Note: the ISM index ranges from 0 (relatively open regime) to 1 (relatively restrictive). Only a few countries are depicted owing to data availability issues.

Sources: national annual reports and authors' calculations.

Fig. 25: Transactions authorized with conditions (blue) and planned transactions withdrawn, prohibited or mitigated (orange)

7 Conclusion

In light of increasing trade and capital flow restrictions motivated by national security considerations, we analyze the rise of ISMs in advanced economies. We make several contributions to the literature. First, we provide a synthetic index measuring the restrictiveness of screening regimes in advanced economies. We fill a gap in the literature by providing a comprehensive and transparent tool suitable for cross-country comparisons. Indeed, the ISM restrictiveness index complements existing indicators of FDI regulatory restrictiveness, which currently carve out restrictions on national security grounds. The database is also useful for tracking the pace of convergence in national screening regimes in the EU, in light of the evaluation of the EU cooperation mechanism expected by the end of 2023.

Second, we analyze whether the ISM restrictiveness index correlates with country-specific characteristics. We show that countries highly exposed to investments from China tend to have more restrictive regimes. The restrictiveness of national ISMs also correlates with the share of patents per capita. Our findings suggest that technology transfer associated with foreign acquisitions might be a greater concern in economies with a larger share of R&D in sectors related to critical technology and hence, give rise to stricter ISMs. We also find that countries geo-politically aligned with the USA also tend to have stricter ISMs. Symmetrically, negative sentiment towards the Belt and Road Initiative correlates with more restrictive ISMs.

Third, we provide a tentative assessment of the impact of ISMs on investment decisions. Although a large number of transactions are subject to review, the number of transactions being effectively blocked or authorized under conditions is limited. However, the origin of the investor matters. Investments originating from China are over-represented in blocked transactions.

Fourth, we show that the ISM restrictiveness index is a relatively good predictor of implementation practices, with stricter regimes resulting in a higher number of transactions being blocked. Avenues for future research include testing the statistical significance of the ISM restrictiveness index to analyse the impact of FDI screening on individual transactions and aggregate FDI flows. Should outbound investment screening regimes become widespread, the scope of the index could also be extended to cover such mechanisms.

Appendix A FDI Regulatory Restrictiveness Index (RRI)

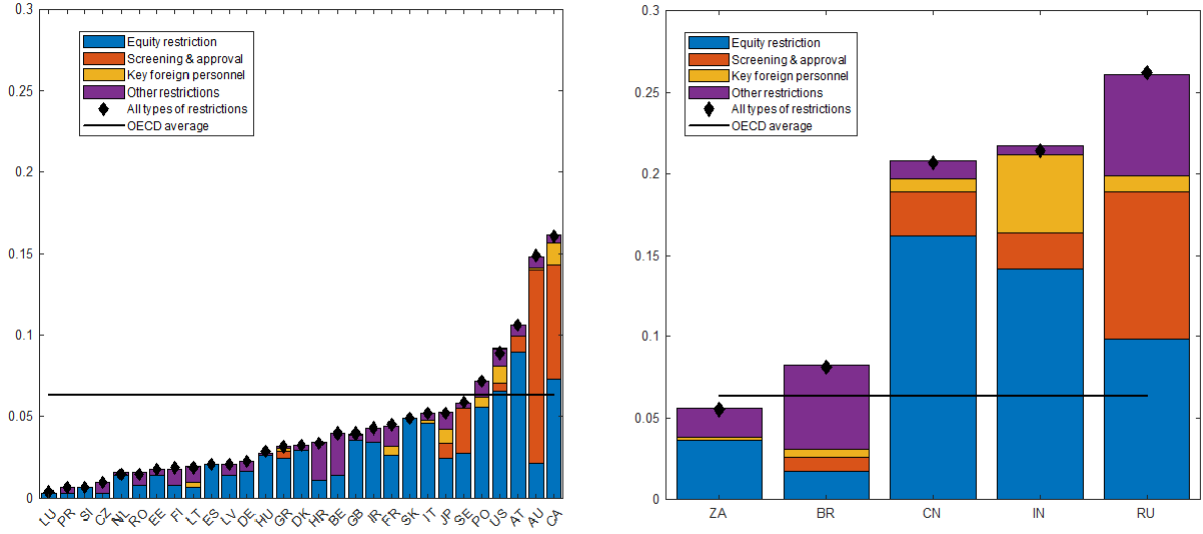
The OECD's FDI Regulatory Restrictiveness Index (RRI) measures statutory restrictions on FDI.³⁷ It focuses on four kinds of restrictions: *i*) foreign equity limitations; *ii*) discriminatory screening or approval mechanisms; *iii*) restrictions on the employment of foreigners as key personnel and *iv*) other operational restrictions, such as limits on purchase of land or on repatriation of profits and capital (Kalinova et al., 2010).

The RRI is computed as the sum of the four sub-indicators and ranges from 0 (no regulatory impediments to FDI) to 1, with higher values corresponding to tighter restrictions. The discriminatory nature of a measure is the central criterion to decide whether to score it (Kalinova et al., 2010). The RRI scores overt regulatory restrictions on FDI, ignoring other aspects of the regulatory framework, such as the nature of corporate governance, the extent of state ownership, as well as other institutional or informal restrictions. Actual enforcement of statutory restrictions, which is difficult to assess, is not factored in. Measures taken for reasons of public order and essential security interests are not scored.

According to the latest data available for 2020, restrictions are low in the EU by international standards (Figure A). The RRI ranges from close to zero in Luxembourg to 0.11 in Austria and is below the OECD average (0.06) in most EU countries. Overall, restrictions are lower in the EU than in the U.S., Canada and Australia. In the latter two countries, screening procedures make the bulk of the index, whereas they play a minor role in the EU. Emerging economies display much more restrictive regimes, with a RRI above 0.20 in China, India and Russia.³⁸

³⁷ The RRI covers 60 advanced and emerging economies in 22 economic sectors.

³⁸ Although India and China have liberalised their policies over the past two decades, especially in the secondary sector, barriers to investment remain stringent in the primary and tertiary sectors. By contrast, the RRI has risen in Russia, from 0.18 in 2017 to 0.26 in 2020, owing to increasing screening procedures.



Note: The index ranges from 0 (relatively open ISM) to 1 (relatively restrictive ISM).
Source: OECD.

Fig. A1: Regulatory restrictiveness index (2020)

Appendix B Recent trends in M&As: data and definitions

According to international standards, a *foreign direct investment (FDI)* is a category of cross-border investment in which an investor resident in a country establishes a lasting interest in and a significant degree of influence over an enterprise resident in another economy³⁹.

This definition leaves many elements unsettled and requires further refinements. In terms of capital transfer, the degree of influence on a certain asset can vary significantly according to the ownership structure of the asset itself.⁴⁰ For the sake of simplicity, we define a FDI operation as one leading the investor to hold more than 10% of the capital, which is a standard criterion in the economic literature.

FDI can be divided into greenfield investments (the settlement of a new production plant) and brownfield investments (the acquisition of an existing asset). As emphasized in Takayama (2023), the critical discriminating factor between the two classes of investments is the role of the physical capital as opposed to that of the intangible capital (know-how, reputation, customer base ...). Firms seeking to reduce production costs will be more prone to set up a new plant through a greenfield investments. Moving closer to the end market can also play a role. Conversely, brownfield investments are preferred by firms willing to take advantage of the targets' intangible assets, making advanced economies a privileged target.

In this paper, we focus primarily on brownfield investments (merger and acquisitions, M&As), which represent the lion's share of FDI in the EU.⁴¹ In addition, M&As micro data are more easily accessible. Furthermore, while a handful of national ISMs screen greenfield investments, most ISMs focus on the acquisition of existing assets.⁴²

³⁹ https://www.oecd-ilibrary.org/finance-and-investment/foreign-direct-investment-fdi/indicator-group/english_9a523b18-en

⁴⁰ Owning a "thin" share may turn into a significant influence if the asset's capital is spread among a vast number of shareholders, as it happens typically in public companies. In private companies, only shareholders controlling the majority of capital (alone or syndicated) can truly exert control over the corporate governance. Accounting for the effective influence of the relevant shareholder in the company can be extremely burdensome from a computational point of view and requires information on the ownership structure not easily available.

⁴¹ According to the European Commission, in 2017 the EU was destination of foreign brownfield investments for nearly 270 billion and about 82 billion euros in greenfield.

⁴² Unlike the acquisition of an existing asset, a greenfield investor would hardly bear the risk to deploy capital in an unfriendly jurisdiction, therefore making the case of greenfield screening more rare. In addition, it is fair to assume that recipient governments are less prone to screen greenfield investments, as they yield new jobs, technology and managerial competences.

Appendix C Foreign controlled EU enterprises (inward FATS)

C.1 Foreign Affiliates Statistics (FATS): methodology and definitions

Inward FATS measure the commercial presence through affiliates in foreign markets. Hence, "*inward statistics on foreign affiliates*" describe the activity of foreign affiliates resident in the compiling economy. In the framework of inward FATS, a "*foreign affiliate*" is an enterprise resident in the compiling country over which an institutional unit not resident in the compiling country has control. FATS data published by Eurostat are broken down by country of ultimate controlling institutional unit (UCI) of a foreign affiliate. The concept of "*control*" is defined as the ability to determine the general policy of an enterprise by choosing appropriate directors, if necessary. In this context, enterprise A is deemed to be controlled by an institutional unit B when B controls, whether directly or indirectly, more than half of the shareholders' voting power or more than half of the shares (FATS-R, Article 2).

C.2 EU firms under foreign control

We focus on Inward FATS to provide an overview of EU firms under foreign control.⁴³ In 2020, more than 250 thousands EU firms were under foreign controls. However, the large majority of these firms remain under European control, with intra-EU controlled firms amounting to 60% of the total number of EU firms under foreign control (figure C1). The USA and the United Kingdom control a relatively important number of EU firms under foreign control (respectively 8% and 7%). The influence of the USA is even larger when looking at the number of occupied persons in controlled firms.

⁴³ Owing to different perimeters and definitions, statistics from Bureau Von Dijk and Eurostat FATS differ.

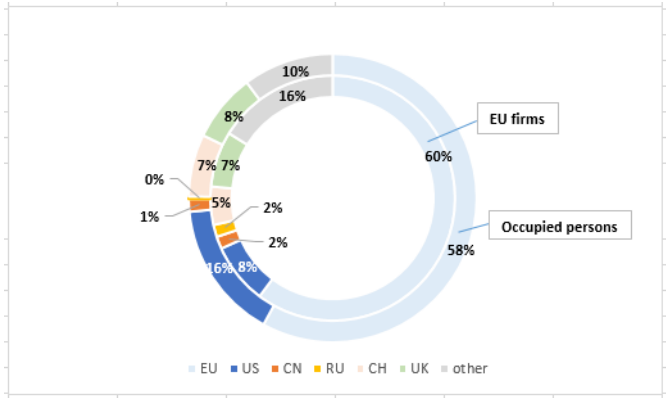


Fig. C1: Percentage of EU firms and occupied persons under foreign control in 2020

Source: Eurostat (inward FATS)

C.3 EU firms under Russian and Chinese control

Both Russia and China have a limited influence among European firms, each country accounting for 2% of the total number of EU firms under foreign control. In other words, the number of EU firms under Russian or Chinese is roughly equivalent to 1/4 of the number of EU companies controlled by the USA. Russian-controlled firms are concentrated in Eastern Europe, whereas Chinese-controlled firms are mainly located in Western Europe. This result is even more striking when considering the number of EU firms under extra-EU foreign control: in Latvia, Slovenia, Lithuania, Czechia or Bulgaria, Russia controls more than 10% of the total number of EU firms under extra-EU foreign control. In Latvia, almost 30% of all firms under foreign control are controlled by Russia (figure C2).

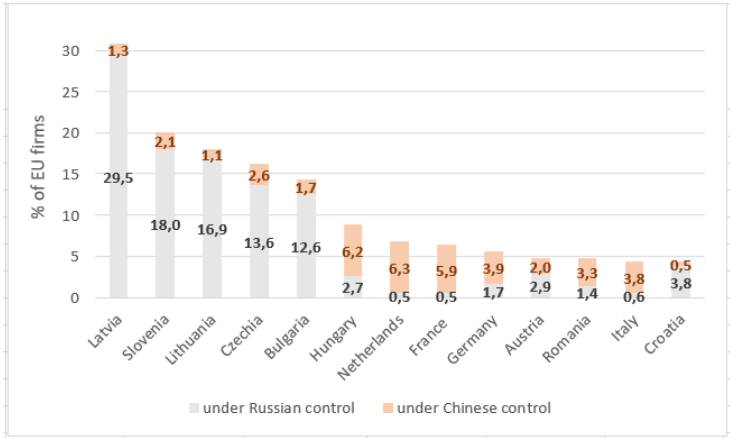


Fig. C2: Share of EU firms under Russian or Chinese controls out of the total number of EU firms under extra-UE foreign control

Source: Eurostat (inward FATS)

Appendix D Investment screening mechanism index

D.1 Overview

The synthetic index compares the restrictiveness of national ISMs on grounds of national security and national interest. Measures scored reflect the legislation in force in 2023, including temporary measures adopted in the wake of the Covid-19 pandemic. The index ranges from zero (relatively open ISM) to one (relatively restrictive ISM) and covers five dimensions: *i*) investor-related parameters and territorial scope of the ISM; *ii*) sectoral scope and coverage of greenfield investments; *iii*) transactions subject to review and thresholds triggering a review; *iv*) screening procedure; *v*) enforcement and sanctions for non-compliance.

D.2 Rules for scoring

The highest score for any dimension is capped at 1 (full restrictions on FDI on national security grounds) and the lowest is 0 (no restrictions on foreign investments). Scores are scaled down when restrictions only apply to a subset of investors or transactions. Each dimension consists of several items, the scores of which are averaged to obtain the dimension score.

For most items, the score is either 1 (existence of restrictions on national interests or national security grounds), 0.5 (restrictions apply to a subset of transactions or investors) or 0 (absence of restrictions). In other cases, scores range from 0 to 1 and reflect the empirical distribution of the sample, with 0.25, 0.5 and 0.75 corresponding to, respectively, the first quartile, the median and the third quartile of the distribution. For example, scores are tailor-made to reflect the quantiles of the distribution for items relating to the minimum thresholds triggering a review (see Table D3) or to the length of the review process (see Table D4). The country score is obtained by averaging the scores of all five dimensions.

D.3 Measures scored

D.3.1 Identity of the investor and territorial scope of the ISM

Most jurisdictions subject FDI to different levels of scrutiny depending on the identity of the investor. The first dimension of the index focuses on investor-related parameters and on the territorial scope of national ISMs (see Table D1 for further details on the scoring grid). It consists of three items: *a*) differentiation and exemptions based on the identity of the investor; *b*)

treatment of investors controlled by foreign governments; *c*) global outreach and extraterritorial application of national legislation.

Differentiation and exemptions based on the identity of the acquirer or owner: Most mechanisms use nationality or residency as a trigger criterion in the selection of potentially threatening transactions. Scores are scaled down when a subset of nationalities are exempted from the application of all or parts of the screening rules. Symmetrically, we assign higher scores to ISMs that subject specific nationalities to enhanced scrutiny. Scores are scaled down when national laws include the investor's nationality as a mere factor to be considered in the risk assessment without overtly discriminating against specific nationalities.

Foreign government control and SOEs: We assign higher scores to jurisdictions subjecting foreign investments by state-owned enterprises (SOEs) to enhanced scrutiny. Scores are scaled up when restrictions are overtly discriminatory for SOEs. Symmetrically, scores are scaled down when links to foreign governments or foreign public entities are a mere risk factor to be considered when assessing potential threats to national security.

Global outreach and extraterritorial application: We assign higher scores to ISMs with an extraterritorial dimension. International cooperation on foreign investment screening is also factored in. Scores are scaled up when ISMs allow operational collaboration on individual cases or exchange of intelligence on individual investors (e.g. EU cooperation mechanism). By contrast, broad and unspecific cooperation arrangements that do not involve intelligence sharing are not factored in.

I. Investor-related parameters and territorial scope of the ISM		
I.A	Definition of foreign investors	
	$0.75 \times A.1 + 0.25 \times A.2$	Up to 1
I.A.1	Origin of investors subject to review	
	Exemptions for a subset of nationalities	0.25
	Partial exemptions for a subset of nationalities	0.5
	All foreign investors	0.75
	Foreign investors and nationals for defence-related transactions	0.825
	Foreign and domestic investors for all transactions subject to review	1
I.A.2	Stricter rules for specific countries	
	Yes	0.25
	No	0
I.B	Foreign government control	
	$C.1 + C.2$	Up to 1
I.B.1	Enhanced scrutiny for foreign government control	
	Yes	0.5
	One of the factors to be considered in the risk assessment	0.25
	No	0
I.B.2	Stricter rules for specific foreign governments	
	Yes	0.5
	Greater vigilance recommended	0.25
	No	0
I.C	Extraterritoriality and regional cooperation on investment screening	
	$B.1 + B.2$	Up to 1
I.C.1	Extraterritorial application	
	Yes	0.5
	No	0
I.C.2	International cooperation on investment screening	
	Yes	0.5
	No	0
Total I	$0.5 \times A + 0.25 \times B + 0.25 \times C$	Up to 1

Tab. D1: Scoring grid- I. Territorial scope: investors subject to review, extraterritorial extent and regional cooperation on foreign investment screening

D.3.2 Sectoral scope and coverage of greenfield investments

The second dimension of the index focuses on the sectors to which FDI screening regulations apply. It consists of three main items (see Table D2): *a*) cross-sectoral *vs* sector-specific screening; *b*) activities subject to enhanced scrutiny; *c*) coverage of greenfield investments.

Cross-sectoral *vs* sector-specific screening: Entity-specific screening mechanisms, which are relatively less restrictive, score lowest. Such regimes only review planned foreign participation in or acquisitions of these individual domestic companies (mostly operating in sensitive sectors). We assign a 0.5, intermediate score, to sector-specific regimes, which enumerate sectors or activities that are considered sensitive to national interests. Cross-sectoral schemes and mixed regimes⁴⁴ are stricter: they provide governments with broad review authority over foreign investments.

II. Sectoral scope: sectors subject to review and coverage of greenfield investments		
II.A Cross-sectoral vs sector-specific screening		
	Detailed list of assets/companies	0.25
	Detailed list of sectors	0.5
	Cross-sectoral or mixed	1
II.B Activities subject to review		
	Below the list of 5 areas covered by the EU Regulation	0.25
	5 areas covered by the EU Regulation	0.5
	Beyond the list of 5 areas covered by the EU Regulation	1
II.C Coverage of greenfield investments		
	Yes	1
	Yes above a certain monetary threshold	0.5
	No	0
Total II	$0.33 \times A + 0.33 \times B + 0.33 \times C$	Up to 1

Tab. D2: Scoring grid- II. Sectoral scope of the ISM

⁴⁴ A couple of countries apply a blend of cross-sectoral and sector-specific FDI screening.

Sectors to which FDI regulations apply: Activities listed in the EU Regulation are used as a benchmark for scoring.⁴⁵ Hence, scores are higher (respectively, lower) when the sectoral scope of national ISMs is broader (respectively, narrower) than that of the EU Regulation.

Coverage of greenfield investments: In most jurisdictions, greenfield investments are not covered by national ISMs and require no filing.⁴⁶ We assign higher scores to mechanisms covering greenfield investments. Scores are scaled down when greenfield investments are only screened for a subset of sectors or above a certain monetary threshold.

D.3.3 Transactions subject to review and minimum thresholds triggering a review

We consider both financial and shareholding trigger thresholds.

Equity holdings or voting rights thresholds: Thresholds values range from 1% to 50% in our sample, with higher scores assigned to lower thresholds. When national legislation provide for multiple thresholds, we consider the lowest threshold. Some countries differentiate trigger thresholds according to asset-related (e.g. lower thresholds for sensitive sectors) or investor-related parameters (SOEs, acquirers from specific countries). Scores are scaled up when lower thresholds apply to a subset of investors or to transactions in sensitive activities.

Monetary thresholds: A few jurisdictions use monetary thresholds to filter out small transactions in absolute terms, possibly in conjunctions with other asset-or investor-related criteria. We assign lower scores to jurisdictions exempting small transactions from the application of the ISM.

⁴⁵ The EU Regulation list comprises: a) critical infrastructure, whether physical or virtual, including energy, transport, water, health, communications, media, data processing or storage, aerospace, defence, electoral or financial infrastructure, and sensitive facilities, as well as land and real estate crucial for the use of such infrastructure; b) critical technologies and dual use items, including artificial intelligence, robotics, semiconductors, cybersecurity, aerospace, defence, energy storage, quantum and nuclear technologies as well as nanotechnologies and biotechnologies; c) supply of critical inputs, including energy or raw materials, as well as food security; d) access to sensitive information, including personal data, or the ability to control such information; or e) the freedom and pluralism of the media.

⁴⁶ Greenfield investments aim to create a new company, as opposed to the acquisition of an existing company.

III. Thresholds: how large must the transaction be to trigger a review?		
III.A	Shareholding thresholds	
	$0.75 \times A.1 + 0.25 \times A.2$	Up to 1
III.A.1	Thresholds level	
	Above 25% or majority	0.125
	20%	0.25
	10%, acquisition of control or qualifying holding	0.50
	5% to 10%	0.75
	Below 5%	1.0
III.A.2	Sector-specific and country-specific thresholds	
	$A.2.1 + A.2.2$	Up to 1
III.A.2.1	Lower threshold for sensitive areas and/or listed companies	
	Yes	0.5
	No	0
III.A.2.2	Lower threshold for specific investors (e.g. foreign SOE)	
	Yes	0.5
	No	0
III.B	Monetary thresholds	
	$0.75 \times B.1 + 0.25 \times B.2$	Up to 1
III.B.1	Existence of a monetary threshold	
	Yes	0
	Yes for a subset of transactions	0.5
	No	1.0
III.B.2	Sector-specific and country-specific monetary thresholds	
	$B.2.1 + B.2.2$	Up to 1
III.B.2.1	Lower monetary thresholds for sensitive areas	
	Yes	0.5
	No	0
III.B.2.2	Lower monetary thresholds for specific investors	
	Yes	0.5
	No	0
Total III	$0.5 \times A + 0.5 \times B$	Up to 1

Tab. D3: Scoring grid- III. Thresholds triggering a review

D.3.4 Screening procedure

The fourth dimension of the index consists of three main items (see Table D4): *a*) notification requirements; *b*) ex-officio screening and national authorities' call-in powers; *c*) length of the review process.

Notification requirements: We focus on three features. First, we score whether the approval might be obtained prior to (relatively stricter ISM) or after closing (relatively less restrictive ISM) the planned investment. Second, we focus on the existence of standstill provisions. Submitting a notification may trigger a standstill obligation, pursuant to which the parties cannot implement the transaction pending clearance by the authorities. Scores are higher when filing or the review process have a suspensory effect on the closing of the transaction. Third, we score whether notification requirements are mandatory (relatively stricter ISM) or voluntary (relatively less restrictive ISM) for transactions raising national interest or national security concerns. Overall, scores are scaled down when filing requirements apply to a subset of transactions or investors.

Ex-officio screening: In most jurisdictions, national authorities have discretion to review transactions that fall under the scope of mandatory notification or mandatory pre-authorisation. Scores are scaled up when national authorities can also review transactions that do not fall under the scope of mandatory notification or pre-authorisation requirements (e.g. the authorities have discretion to review transactions that do not meet the prescribed thresholds). In a number of countries, national authorities can review transactions for a considerable period of time after their completion. The range of scores reflects the empirical distribution of the time limit set for reviewing a transaction in the sample.

Length of the review process: We assign lower scores to jurisdictions setting a relatively short timeline to conduct investment screening processes.⁴⁷ Indeed, short timelines reduce uncertainty by offering investors a quick decision on the acceptability or potentially necessary adjustments to their investment projects. We account for the fact that in some jurisdictions, the review process takes place in two phases (first, an initial assessment and second, in-depth examinations where conditions or opposition to the transaction are necessary). The range of scores reflects the

⁴⁷ Some jurisdictions express timelines in working days. For the sake of consistency, working days have been converted into calendar days by applying a factor of 7/5. All timelines are maxima according to the provisions of national legislation. Additional procedural steps are not factored in (e.g. additional time during which mitigation arrangements are negotiated).

IV. Screening procedure

IV.A	Mandatory pre-approval, notification requirements and standstill provisions	
	No	0
	Yes for a subset of transactions or investors	0.50
	Yes for all transactions raising national interest/national security concerns	1.0
IV.B	Ex-officio screening	$0.5 \times B.1 + 0.5 \times B.2$
		Up to 1
IV.B.1	Ex-officio screening powers	
	No	0
	Yes for transactions requiring a prior-authorisation	0.5
	Yes inc. for transactions that do not require a prior-authorisation	1
IV.B.2	A transaction can be screened up to several years after its completion	
	No	0
	Yes up to 5 years after its completion	0.5
	Yes up to 10 years after its completion	0.75
	Yes (no time limit)	1
III.C	Length of the review process	$0.33 \times C.1 + 0.33 \times C.2 + 0.33 \times C.3$
		Up to 1
IV.C.1	Maximum length of the standard procedure	
	Below 1 month	0.25
	From 30 to 45 working days	0.5
	From 2 to 3 months	0.75
	Above 6 months	1
IV.C.2	Maximum length of the procedure (inc. complex cases)	
	Below 2 months	0.25
	From 2 to 4 months	0.5
	From 4 to 6 months	0.75
	Above 6 months	1
IV.C.3	Existence of a fast-track or simplified procedure	
	Yes	0
	No	1
Total IV	$0.33 \times A + 0.33 \times B + 0.33 \times C$	Up to 1

Tab. D4: Scoring grid- IV. Screening procedure

empirical distribution of the sample, with 0.25, 0.5 and 0.75 corresponding to, respectively, the first quartile, the median and the third quartile of the distribution. We assign lower scores to

jurisdictions offering a fast-track procedure for unproblematic transactions.

D.3.5 Enforcement and sanctions

Depending on the design of national ISMs, national authorities may prohibit a transaction entirely or authorise it under certain conditions (mitigation measures).

Invalidity of legal transactions implemented without approval: In jurisdictions where completion of a transaction prior to clearance is prohibited, breach of this obligation results in the transaction being void (for example in the US, the UK and Australia). In some jurisdictions, if a transaction is completed without prior approval, and subsequently investigated under FDI rules, the relevant authorities may require the deal to be unwound. We assign higher scores to jurisdictions applying such provisions.

Authority to impose conditions on transactions and mitigation measures: To address identified national security risks, national authorities may negotiate or impose conditions or obligations to transaction parties. Such conditions aim at removing circumstances that trigger security concerns that would otherwise lead the authorities to deny authorisation. Some ISMs merely refer to their existence and possibility, whereas greater regulatory detail is provided in other countries (e.g. France, Norway and the USA). We assign higher scores to jurisdictions excluding the possibility of such arrangements. Indeed, in the absence of mitigation agreements, prospective investors cannot adjust their projects to avoid the upright rejection of the planned investment, resulting in stricter regimes.

Sanctions in case of non-compliance with the filing or pre-authorisation obligations: A number of jurisdictions introduce criminal liability for intentional or grossly negligent violations of the filing obligations. We assign higher scores to jurisdictions imposing monetary sanctions and criminal sanctions, such as imprisonment.

Right of appeal: While some countries grant access to administrative or judicial review in the case of a denial of the transaction, other jurisdictions exclude such possibility. We assign lower scores to jurisdictions granting investors the right to appeal against screening decisions. Scores are scaled up when the scope for appeal is relatively narrow (e.g. when the possibility of appeal is specified for a subset of transactions or decisions). We assign higher scores to countries that

categorically exclude final decisions taken by the authorities under acquisition- and ownership related mechanisms from judicial review.

V. Enforcement and sanctions		
V.A	Invalidity of legal transactions implemented without approval	
	Yes	1
	No	0
V.B	Mitigation measures to address the authorities' objections	
	Yes	0
	No	1
V.C	Sanctions in case of non-compliance	
	$0.5 \times C.1 + 0.5 \times C.2$	Up to 1
V.C.1	Fines	
	Yes	0.5
	No	0
V.C.2	Imprisonment	
	Yes	0.5
	No	0
V.D	Right of appeal	
	Yes	0
	Yes for a subset of transactions or decisions	0.5
	No	1
Total V	$0.25 \times A + 0.25 \times B + 0.25 \times C + 0.25 \times D$	Up to 1

Tab. D5: Scoring grid- V. Enforcement and sanctions

D.4 Robustness check: alternative weighting schemes

D.4.1 Aggregation method for each item

Results are sensitive to the weighting scheme. In most cases, equal weights are used when aggregating the various items of each dimension. In some instances, over-weighting specific items is warranted to better reflect the restrictiveness of national ISMs. For instance, over-weighting the items recording the existence of monetary and shareholding thresholds (Figure D1, right-hand side) results in a different ranking than the alternative (left-hand side), with Canada ranking highest, which is more consistent with the provisions of national legislation.

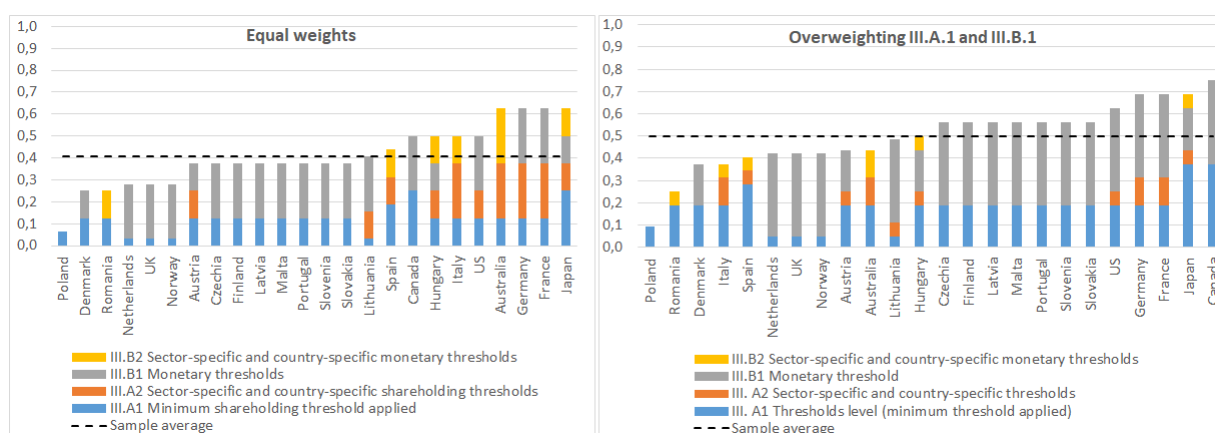
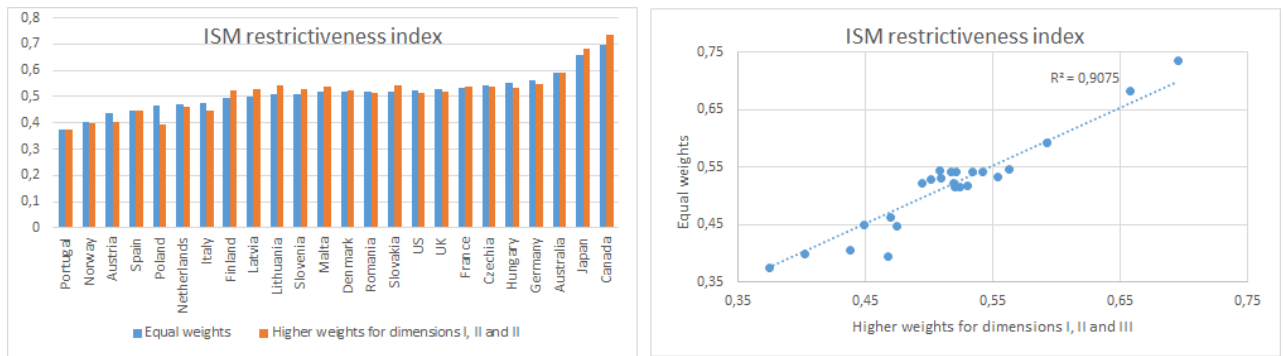


Fig. D1: Robustness check: using alternative weighting schemes for Dimension III (thresholds triggering a review)

D.4.2 Aggregating the five dimensions of the index into a single score

Using equal weights for each dimension has the advantage of being simple and consistent with other FDI restrictiveness indicators (e.g. the OECD's RRI). As a robustness check, alternative weighting schemes are provided below (Figure D2). Correlations are high for the indexes calculated using various weighting schemes, reflecting the fact that more restrictive countries are generally more restrictive across the board.



Note: The ISM restrictiveness index is computed as $\sum_{i=1}^{k=5} w_i Dimension_i$. When all weights are equal, $w_i = \frac{1}{5} \forall i$. The alternative weighting scheme corresponds to $w_1 = w_2 = w_3 = \frac{1}{4}$ and $w_4 = w_5 = \frac{1}{8}$.

Fig. D2: Robustness check: using alternative weighting schemes for aggregating the dimensions of the index

References

- Aiyar, M. S., Ilyina, M. A., Chen, M. J., Kangur, M. A., Trevino, M. J. P., Ebeke, M. C. H., Gudmundsson, T., Soderberg, G., Schulze, T., and Kunaratskul, T. (2023). Geo-Economic Fragmentation and the Future of Multilateralism. IMF Staff Discussion Notes 2023/001, International Monetary Fund.
- Albori, M., Corneli, F., Landi, V. N., and Schiavone, A. (2021). The impact of restrictions on FDI. *Questioni di Economia e Finanza (Occasional Papers)* 656, Bank of Italy, Economic Research and International Relations Area.
- Bailey, M. A., Strezhnev, A., and Voeten, E. (2017). Estimating dynamic state preferences from united nations voting data. *Journal of Conflict Resolution*, 61(2):430–456.
- Bauerle Danzman, S. and Meunier, S. (2023). Mapping the Characteristics of Foreign Investment Screening Mechanisms: The New PRISM Dataset. *International Studies Quarterly*, 67(2):sqad026.
- Binici, M., Hutchison, M., and Schindler, M. (2010). Controlling capital? legal restrictions and the asset composition of international financial flows. *Journal of International Money and Finance*, 29(4):666–684.
- Bonaime, A., Gulen, H., and Ion, M. (2018). Does policy uncertainty affect mergers and acquisitions? *Journal of Financial Economics*, 129(3):531–558.
- CFIUS (2021). Annual report to congress. Technical report, CFIUS.
- Chan, Z. T. and Meunier, S. (2022). Behind the screen: Understanding national support for a foreign investment screening mechanism in the European Union. *The Review of International Organizations*, 17(3):513–541.
- Chinn, M. D. and Ito, H. (2008). A new measure of financial openness. *Journal of comparative policy analysis*, 10(3):309–322.
- CIFRAS, R. (2021). 2021 in cifras. Technical report, Ministry of Finance.
- Commission, E. (2021). First Annual Report on the screening of foreign direct investments into the Union.

- Commission, E. (2022a). Guidance to the Member States concerning FDI from Russia and Belarus in view of the military aggression against Ukraine and the restrictive measures laid down in recent Council Regulations on sanctions.
- Commission, E. (2022b). Screening of FDI into the Union and its Member States. *Staff Working Document*.
- Commission, E. (2022c). Second Annual Report on the screening of foreign direct investments into the Union.
- Danzman, S. B. and Meunier, S. (2021). The big screen: Mapping the diffusion of foreign investment screening mechanisms. Technical report, SSRN.
- Eichenauer, V. Z., Dorsc, M., and Wang, F. (2021). Investment Screening Mechanisms: The Trend to Control Inward Foreign Investment. EconPol Policy Reports 34, ifo Institute - Leibniz Institute for Economic Research at the University of Munich.
- Eichenauer, V. Z. and Wang, F. (2022). Mild Deglobalization? The Effects of Screening Foreign INvestments on Mergers and Acquisitions. Technical report, Technical report.
- Eichensehr, K. and Hwang, C. (2022). National Security Creep in Corporate Transactions. Technical report, 123 Columbia Law Review.
- Evenett, S. J. (2021). What caused the resurgence in fdi screening. *SUERF Policy Note*, 240:1–20.
- Farrell, H. and Newman, A. L. (2019). Weaponized Interdependence: How Global Economic Networks Shape State Coercion. *International Security*, 44(1):42–79.
- Fernández, A., Klein, M. W., Rebucci, A., Schindler, M., and Uribe, M. (2016). Capital control measures: A new dataset. *IMF Economic Review*, 64:548–574.
- FIRB, R. (2021). FIRB Annual Report. Technical report, Ministry of Finance.
- Garcia-Herrero, A. and Schindowski, R. (2023). Global trends in countries' perceptions of the belt and road initiative. Technical report, Bruegel Working Paper.
- ICA, R. (2021). Investment Canada Act annual report. Technical report, Ministry of Finance.
- ICA, R. (2022). Le contrôle des investissements étrangers en France en 2021. Technical report, Ministry of Finance.

- ISGF, R. (2022). Investment screening in germany: Facts and figures. Technical report, Ministry of Finance.
- Kalinova, B., Palerm, A., and Thomsen, S. (2010). OECD's FDI Restrictiveness Index: 2010 Update. OECD Working Papers on International Investment 2010/3, OECD Publishing.
- Kobrin, S. (2015). The Determinants of Liberalization of FDI Policy in Developing Countries: A Cross-Sectional Analysis, 1992-2001. Technical report, Transnational Corporations, 14, 67-104.
- Merics (2019). Chinese fdi in europe: 2018 trends and impact of new screening policies. Technical report, MERICS Rhodium Group.
- Merics (2023). Ev battery investments cushion drop to decade low. Technical report, MERICS Rhodium Group.
- Molnar, M., Yan, T., and Li, Y. (2021). China's outward direct investment and its impact on the domestic economy. *Economics Department Working Papers*, (1685).
- NSIA, U. C. O. (2023). National security and investment act 2021 annual report 2022–2023.
- OECD (2020). Investment screening in times of covid-19 and beyond. Technical report, OECD.
- OECD (2022). Framework for screening foreign direct investment into the eu - assessing effectiveness and efficiency. Technical report, OECD.
- Pandya, S. S. (2016). Political economy of foreign direct investment: Globalized production in the twenty-first century. Technical Report 1, Annual Review of Political Science.
- Pohl, J. and Rosselot, N. (2020). Acquisition- and ownership-related policies to safeguard essential security interests – current and emerging trends, observed designs, and policy practice in 62 economies. Technical report, OECD.
- Rebucci, A. and Ma, C. (2019). Capital controls: A survey of the new literature. *National Bureau of Economic Research*.
- Relazione annuale, R. (2021). Relazione annuale sulla politica dell'informazione per la sicurezza. Technical report, Presidenza del Consiglio dei Ministeri.
- Roberts, V. (2022). Gcr foreign direct investment regulation guide. second edition. Technical report, Law Business Research Ltd.

Signorino, C. S. and Ritter, J. M. (1999). Tau-b or not tau-b: Measuring the similarity of foreign policy positions. *International Studies Quarterly*, 43(1).

Takayama, H. (2023). Greenfield or brownfield? fdi entry mode and intangible capital. *University of Albany at Suny, Working paper*.