

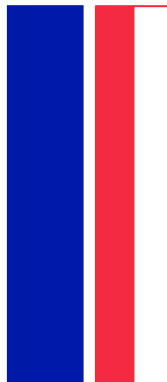
MASTER IN PHILOSOPHY, POLITICS AND ECONOMICS

EU Competitiveness and Capital Markets: A Case of Failing Forward?

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This dissertation was written as part of the Master's in Philosophy, Politics and Economics, under the supervision of Professor Mário Graça Moura.

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Declaration of Honour

I hereby declare that this dissertation is of my authorship and has not been used previously in another course, degree, curricular unit or subject, at this or any other institution. References to other authors (statements, ideas, thoughts) scrupulously respect the rules of attribution and are duly indicated in the text and bibliographical references, in accordance with the rules of referencing. I am aware that the practice of plagiarism and self-plagiarism is an academic offence.

I further declare that I have not used generative artificial intelligence tools (chatbots based on large language models) to carry out parts of this dissertation.

Porto, March 29, 2025

Miguel Fonseca Vigário Barbosa Cadilhe

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Abstract

The European Union (EU) represents a continuously evolving political project for social development and prosperity. It has achieved numerous ambitious and challenging feats of integration. Nevertheless, the European integration process is not always consistent and is often only partial. Constrained by divergent preferences among Member States, negotiations result in piecemeal agreements, undermining the pursuit of more comprehensive reforms.

The lack of structural reforms contributes decisively to institutional incompleteness, which is economically and politically detrimental and ultimately leads to future crises. Once a crisis occurs, political pressure builds up, increasing the political will to address institutional *failings*. However, even if some institutional changes do occur to mitigate the crisis in question, several degrees of institutional incompleteness remain. This, in turn, may lead to future crises, repeating the cycle. In this volatile, unstable process, European integration has nevertheless moved *forward*.

The process described above is identified in a theoretical framework, *Failing Forward*, which will be used in this dissertation to connect insufficient integration to Europe's gradual, structural loss of competitiveness. Competitiveness is a very wide-ranging concept, and this dissertation will focus on a particular policy area, to provide a more detailed analysis. Of the various domains to which the *Failing Forward* framework could be (and in fact has been) applied, this dissertation will scrutinise the Capital Markets Union (CMU), a policy area not yet examined by the framework, to date.

Key-words: European Union, CMU, Competitiveness, Institutions, Integration

Resumo

A União Europeia (UE) representa um projeto político em constante evolução para o desenvolvimento social e a prosperidade. A UE implementou diversas medidas ambiciosas e desafiantes em termos de integração. No entanto, o processo de integração europeia nem sempre é consistente e, frequentemente, é apenas parcial. Limitadas por preferências divergentes entre os Estados-Membros, as negociações resultam em acordos fragmentados, prejudicando a busca por reformas mais abrangedoras e profundas.

A falta de reformas estruturais contribui de forma decisiva para a incompletude institucional, o que é prejudicial do ponto de vista económico e político e, em última análise, leva a crises futuras. Quando ocorre uma crise, a pressão política aumenta, intensificando a vontade política de corrigir as falhas institucionais. Contudo, mesmo que algumas mudanças institucionais ocorram para mitigar a crise em questão, vários graus de incompletude institucional permanecem. Isto, por sua vez, pode levar a crises futuras, repetindo o ciclo. Neste processo volátil e instável, a integração europeia, no entanto, avança.

O processo descrito acima é identificado num quadro teórico, o "Failing Forward", que será utilizado nesta dissertação para estabelecer uma ligação entre uma integração incompleta e a perda gradual e estrutural de competitividade da Europa. Sendo a competitividade um conceito muito abrangente, esta dissertação irá focar-se numa área específica, para proporcionar uma análise mais detalhada. Dos diversos domínios a que o quadro "Failing Forward" poderia ser (e de facto tem sido) aplicado, esta dissertação irá analisar a União dos Mercados de Capitais (UMC), um tema que ainda não foi examinado pelo *Failing Forward* até à data.

Palavras-chave: União Europeia, UCM, Competitividade, Instituições, Integração

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List of abbreviations

CCP	CENTRAL COUNTERPARTY PLATFORM
CMU	CAPITAL MARKETS UNION
CSD	CENTRAL SECURITIES DEPOSITORY
EA	EURO AREA
ECB	EUROPEAN CENTRAL BANK
ECOFIN	ECONOMIC AND FINANCIAL AFFAIRS COUNCIL *
EIB	EUROPEAN INVESTMENT BANK
EMU	ECONOMIC AND MONETARY UNION
ESMA	EUROPEAN SECURITIES AND MARKETS AUTHORITY
EU	EUROPEAN UNION
GDP	GROSS DOMESTIC PRODUCT
GFCF.....	GROSS FIXED CAPITAL FORMATION
IIP	INTERNATIONAL INVESTMENT POSITION
NGEU	NEXTGENERATIONEU
PEPP	PAN-EUROPEAN PENSION PRODUCT
PPP	PURCHASING POWER PARITY
RTO	RESEARCH AND TECHNOLOGY ORGANISATION
R&D	RESEARCH AND DEVELOPMENT
R&I	RESEARCH AND INNOVATION
SIU	SAVINGS AND INVESTMENT UNION
SURE	SUPPORT TO MITIGATE UNEMPLOYMENT RISKS IN AN EMERGENCY

*Configuration of the Council of the European Union (also referred to as *The Council*), in which finance ministers of the various Member State convene.

Introduction

The European Union (EU), currently composed of 27 Member States, represents a continuously evolving political project for social development and prosperity. It has achieved numerous ambitious and challenging feats of integration, such as establishing the Single Market and the Monetary Union, while upholding fundamental values, including democracy, freedom, and the rule of law. Nevertheless, the European integration process is not always consistent and is often only partial. Constrained by divergent preferences among Member States, negotiations result in piecemeal agreements, undermining the pursuit of more comprehensive reforms.

The lack of structural reforms contributes decisively to institutional incompleteness, which is economically and politically detrimental and ultimately leads to future crises. Once a crisis occurs, political pressure builds up, increasing the political will to address institutional *failings*. However, even if some institutional changes do occur to mitigate the crisis in question, several degrees of institutional incompleteness remain, since reformist pressures tend to dissipate once the crisis is resolved. This, in turn, may lead to future crises, repeating the cycle. In this volatile, unstable process, European integration has nevertheless moved *forward*.

The process described above is identified in a theoretical framework, *Failing Forward*, which will be used in this dissertation to connect insufficient integration to Europe's gradual, structural loss of competitiveness. Competitiveness is a very wide-ranging concept, and this dissertation will focus on a particular policy area, to provide a more detailed analysis. Of the various domains to which the *Failing Forward* framework could be (and in fact has been) applied, this dissertation will scrutinise the Capital Markets Union, a policy area not yet examined by the framework, to date.

The initial chapter, *European Competitiveness and the Draghi Report*, provides the economic context for the prevailing theme of Europe's relative decline in competitiveness. Drawing upon the findings articulated in the Draghi report, the various dimensions of diminishing competitiveness within the EU are briefly overviewed. The topic of this dissertation is retrieved from this context: fragmented capital markets

impede the efficient channelling of private savings to productive investments, notably within technological sectors linked to breakthrough innovations. This phenomenon significantly contributes to the innovation gap faced by the EU in comparison to its primary global competitors.

The second chapter, *The Failing Forward Framework*, presents the methodology utilised in the present dissertation, introducing its three main theoretical pillars: *historical institutionalism*, which investigates the influence of institutions on economic performance and political development; *intergovernmentalism*, which examines how European integration advances based on the willful cooperation among Member States via intergovernmental negotiations; and *neofunctionalism*, which analyses how European integration evolves in response to functional pressures arising from previous integration. Special emphasis will be placed on historical institutionalism, as the associated concepts are not intuitive.

The third chapter, *The Case of the Capital Markets Union*, analyses the evolution of European financial institutions relevant to capital markets. It explains how these institutions have remained incomplete since the establishment of the Monetary Union, examines failed attempts to integrate capital markets, particularly the Capital Markets Union, and suggests how this incompleteness has led to a structural loss of competitiveness. This loss, coupled with external geopolitical tensions, places the European Union at a *critical juncture*, intensifying political pressure to address institutional shortcomings. The Commission's response, as expressed in official documents outlining strategies and proposals, is also analysed.

The fourth and final chapter, "Future Prospects," provides an overview of the argument presented and discusses the prospects for the EU's future integration, the implications of this integration process, and the potential to break out of the *Failing Forward* cycle.

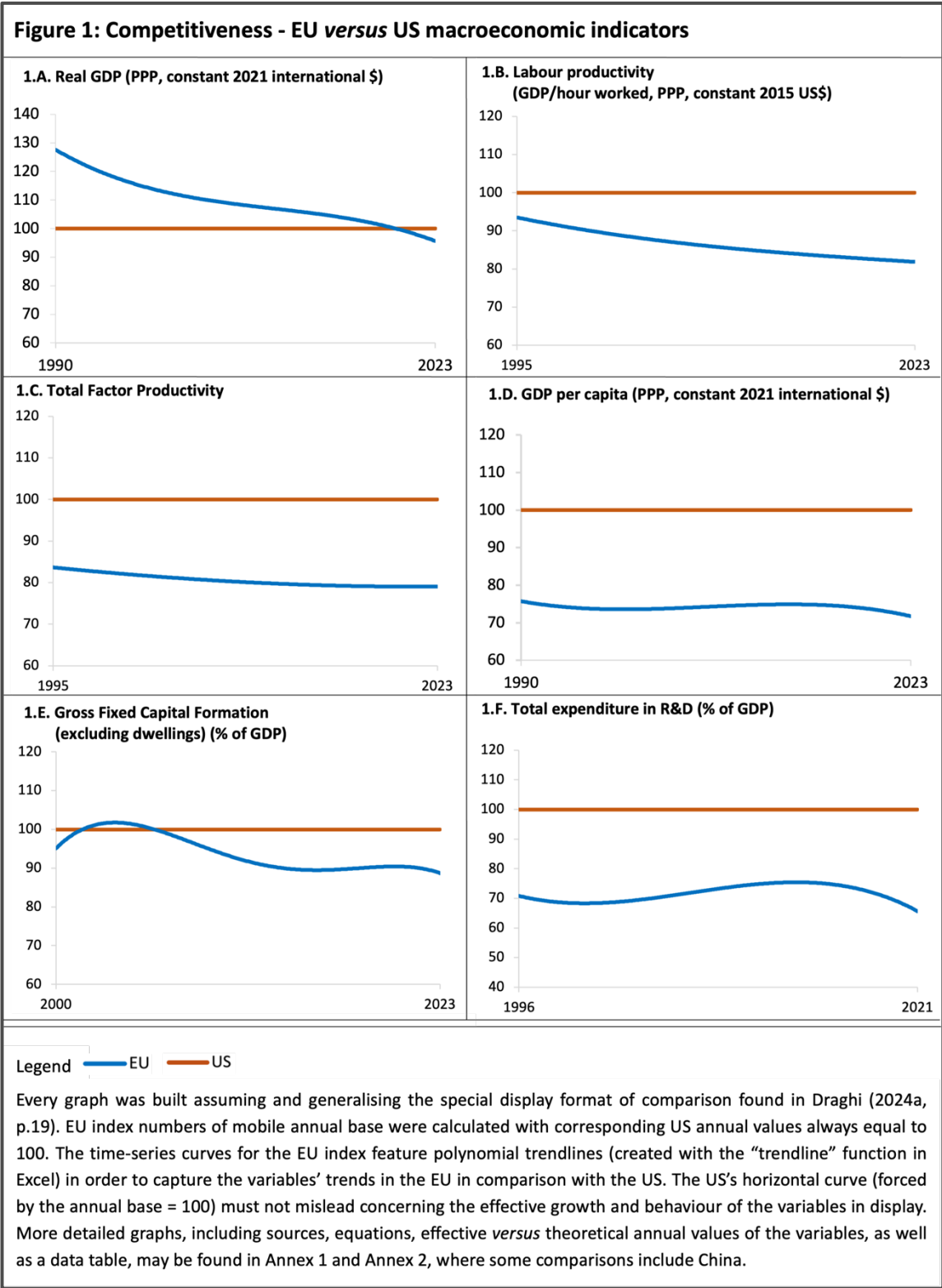
1. European Competitiveness and the Draghi Report

Since the Maastricht Treaty (1992), the European Union (EU) has achieved noteworthy milestones in integration, establishing the Single Market and the Economic and Monetary Union and reaching twenty-seven Member States, with other States expressing their aspirations to join. This progress has been accompanied by inclusive development, high levels of health and education, and the lowest levels of income inequality among its major competitors. The EU is also currently the second-largest economy by Gross Domestic Product (GDP), at current 2023 prices (Draghi, 2024a, p.7), and is the global leader in environmental standards. This period of more than three decades was characterised by favourable conditions for such progress, with prosperous world trade under multilateral rules, with stable geopolitics reducing risks, and with guaranteed United States-provided defence.

However, the global paradigm seems to be shifting. Geopolitical tensions have been escalating worldwide, undermining multilateral international trade and exposing the EU's external vulnerabilities. The reliability of the United States as Europe's benevolent defence provider and predictable trade partner may no longer be taken for granted.

This raises questions about the EU's resilience, as some of its structural inefficiencies and institutional incompleteness are becoming more evident. Certain aspects of the European economic model that were previously overlooked are now apparent. The most pressing economic issue is *competitiveness* in all its complexity, as evidenced by the macro-indicators selected and presented in Figure 1, which may be seen as *proxies* for measuring competitiveness. This set of curves comparing the EU and the US reveals an adverse long-term performance of the EU in important domains related to competitiveness. The relatively slow GDP and productivity growths (see Figures 1.A, 1.B, 1.C and 1.D), relative low investment and R&D expenditure ratios (see Figures 1.E and 1.F), together with the increase in public spending needs (for decarbonisation,

digitalization, and defence), the high debt-to-GDP ratios in many Member States¹, and an ageing population, may put the sustainability of the European project at risk.



¹ The EU’s debt-to-GDP ratio is 81,6%, while the Euro Area’s is 88,2% (Eurostat, 2025).

In late 2023, the President of the European Commission publicly revealed during her annual State of the Union address (von der Leyen, 2023) that the Commission had requested Mario Draghi, the former President of the European Central Bank, to prepare a report analysing the current state of the EU's competitiveness. This report, titled "The future of European competitiveness" (Draghi, 2024a, 2024b), was officially released a year later, in September 2024. Draghi conducted an extensive analysis covering nearly every aspect of the European Union, including industrial policy, the Single Market (Capital Markets), legislative and regulatory frameworks, governance, decision-making processes, and so forth, confirming unequivocally that, in fact, the EU is experiencing a gradual structural decline in competitiveness. Subsequently, in January 2025, during her speech presenting the Commission's Competitiveness Compass, President von der Leyen stated that "[the Draghi report] is exactly what we needed. It is a very clear-eyed assessment with a set of excellent recommendations" (von der Leyen, 2025).

1.1. What Competitiveness is

Competitiveness is not always a well-defined concept, with a consensual meaning - not even within economics. Broadly speaking, the features of a competitive economy are relatively straightforward: sustained long-term growth (effective GDP trends and potential GDP), high living standards, favourable terms of trade, a relevant global market share, and so on. Nevertheless, establishing a precise definition of competitiveness does present some difficulties, primarily due to its broad nature and to different measurement approaches. Linking competitiveness with productivity is certainly common. Michael Porter proposes such a link when he writes that "[t]he only meaningful concept of competitiveness at the national level is productivity" (Porter, 1990, p.76), or that "[p]roductivity and innovation - not low wages, low taxes, or a devalued currency - are the definition of competitiveness" (Porter, 2000, p.30). Robert Z. Lawrence, when interpreting competitiveness as a measure of performance between two countries, argues for a close link between competitiveness and living standards, through productivity and the capacity to engage in international markets:

How well is [one economy] performing compared to other economies? Note that this concept of competitiveness does not refer specifically to performance in trade. Although growth, inflation, unemployment, and income are all legitimate measures of performance, probably the most important indicator is living standards. ... A nation's living standards are primarily based on its productivity and on its ability to exchange its products for those of others in international markets. (Lawrence, 1993, pp.514-5)

Though not explicitly defined in the Draghi report, the overall methodology and approach to competitiveness, whilst taking various other aspects into account, seems to adhere to the emphasis on productivity, as encapsulated in this passage:

The core focus of a competitiveness agenda should be to raise productivity growth, which is the most important driver of long-term growth and leads to rising standards of living over time. Promoting competitiveness should not be seen in a narrow sense of a zero-sum game focused on conquering global market shares and raising trade surpluses. It should not lead to policies of defending "national champions" that can stifle competition and innovation, or using wage repression to lower relative costs. Competitiveness today is less about relative labour costs and more about knowledge and skills embodied in the labour force. (Draghi, 2024a, p.9)

1.2. Draghi's Main Areas for Action

Since competitiveness is such a wide-ranging concept, the present dissertation will not undertake an analysis of all its aspects, which would require considerable space. The scope of the current analysis will be clarified after an overview of the Draghi report, which identifies three main areas for action, which are partially interrelated.

The first of these areas, and the most important (Draghi, 2024a, p.2), is the widening innovation gap between Europe and its leading global competitors. The EU's industry is stagnant, mainly specialising in established technologies that offer limited innovation potential. For the last twenty years, the automotive industry has been the leading investor in EU research and development (R&D). In contrast, US automotive firms have

not ranked as the top R&D investors since the early 2000s; the current US leaders in R&D expenditure are all firms from the digital sector focusing on software. The absence of a robust digital technology sector has relevant consequences for EU's productivity, contributing almost entirely to the measured labour productivity gap between the EU and the US (Draghi, 2024a, p.20). As technological change accelerates, the EU risks falling behind unless it implements swift changes and harnesses its innovative potential (Draghi, 2024a, 2024b).

The second main area is a joint strategy for decarbonisation and competitiveness. The objectives of the green transition are admirable and ambitious; however, they must align with economic strategies to ensure that they do not undermine Europe's competitiveness and, consequently, its ability to maintain high living standards for its citizens. Currently, the EU faces energy prices that are 2-3 times higher than those in the US, primarily due to its ongoing reliance on fossil fuels and a lack of natural resources, combined with persistent inefficiencies in the European energy market, which prevent households and businesses from fully reaping the benefits of the green transition. Jointly with legislative pressures for decarbonisation, this results in higher short-term costs for European energy-intensive businesses compared to their main non-EU competitors. The EU is a global leader in clean technologies, holding the second-largest market for solar energy, wind energy, and electric vehicles (Draghi, 2024b, p.119). Yet only one-fifth of clean technologies are developed within Europe. China's "state-sponsored competition" (Draghi, 2024c, p.3) in this sector is becoming increasingly dominant due to a combination of innovation, subsidies, and scale, posing a threat to EU domestic green industries and jobs (Draghi, 2024a, 2024b).

The third main area is economic and military security, which must be strengthened. The EU is particularly susceptible to trade disruptions, given that, in 2023, international trade accounted for 22.4% of its GDP (compared to only 12.7% in the US)². Moreover, its reliance on limited external suppliers for digital technology and essential raw materials is increasingly recognised as a vulnerability, exposing the EU to possible "[sic] coercion"

² This value excludes intra-EU trade (Eurostat, 2024).

(Draghi, 2024a, p.50). Supply chains must be diversified and secured, and domestic industrial capacity requires strengthening in economically strategic sectors. Meanwhile, diversifying will entail more costs for the EU, as it means relying less on the cheapest suppliers. Specifically, defence capabilities must be improved through local production and development, as the EU is the world's second-largest military spender and yet nearly 80% of the EU's defence procurement was directed at non-EU suppliers in 2022 (Draghi, 2024a, p.3, p.56).

A special focus will be placed on the innovation gap, which Draghi considers of supreme importance and is most closely linked to productivity:

Research and innovation (R&I) are the main drivers of productivity and people's well-being. (Draghi, 2024b, p.228)

The digital technology sector, besides being the primary contributor to the labour productivity gap between the EU and the US, as previously noted, also accounts for more than two-thirds of the real GDP per capita (PPP) gap (Draghi, 2024a, p.8). This gap currently stands at approximately 30% (see Figure 1.D). While Figure 1.D seems to indicate that the economic growth gap is mostly stable, it is essential to recall that the EU's total real GDP (PPP) growth has been relatively slower, while population growth from 1990 to 2022 in the EU has been remarkably lower than in the US (7% and 34% accumulated, respectively). Specifically, during the same period, the working-age population in the EU has increased by a mere 2%, in stark contrast to the 32% growth observed in the US (OECD, 2025). Thus, to realign the trajectory of the European economy, it is imperative to increase productivity through innovation, addressing the factors that prevent the EU from establishing the necessary conditions for fostering innovative growth and the industrial dynamism required to develop new and advanced technologies (Draghi 2024a, 2024b).

1.3. Europe's Innovation Gap: What is Failing?

The cited report identifies several factors that contribute to the EU's sub-performance in innovation (Draghi, 2024b pp.234-44), of which three dimensions will be considered

here: the academic and research system, the single market, and investment intensity and its composition.

The EU holds a prominent position in global high-quality scientific publications, ranking second worldwide — trailing behind China and leading over the US. However, Europe has fewer universities at the top of global rankings than the US (and even the United Kingdom), which impacts on the innovation lifecycle:

Universities are one of the central actors in innovation ecosystems as they produce a highly-skilled workforce, generate breakthrough research, and help to turn fundamental research into practical innovation. (Draghi, 2024b, p.240)

The EU holds a weakening position in patents filed under the Patent Cooperation Treaty, ranking fourth globally after the US, China, and Japan. Moreover, only one-third of patents registered by European universities or research and technology organisations (RTOs) are commercially utilised. This highlights a weak connection between research and business, partly due to inadequate intellectual property rights systems that provide poor incentives for researchers (Draghi, 2024b, p.241). Additionally, the EU has relatively lower international (and even inter-regional) cooperation in R&I efforts due to a lack of collaboration networks and insufficient modern research and technology infrastructures. As a result, European innovation clusters are often underdeveloped, as prominent clusters are typically centred around world-leading universities and RTOs (Draghi, 2024a, 2024b).

The creation and growth of new innovative businesses are also hampered by substantial obstacles related to the fragmentation of the Single Market. On the one hand, the absence of a Capital Markets Union (CMU) leads to an inefficient allocation of savings towards productive investments and restricts venture capital investments. European companies are pushed to depend excessively on the risk-averse banking sector for their financing needs, considerably restricting innovation and high-risk ventures. On the other hand, companies—especially innovative ones—face complex and diverse regulatory and tax systems across Member States, which increase their compliance costs and hinder their ability to scale up. As a result, partly due to incompleteness, of which

fragmentation is one dimension, the EU presents relatively low growth potential, namely for tech-based companies. Although it generates roughly the same number of tech start-ups as the US, the EU currently has about eight times fewer active unicorns (start-ups valued at over 1 billion USD) (Draghi, 2024b, p.232). This occurrence can be partially attributed to numerous emerging and innovative businesses opting to relocate abroad, primarily to the US, where they benefit from a more advantageous financing environment and access to more integrated markets. The outcome is the lack of a robust digital and advanced technologies sector within the EU's stagnant industrial structure (Draghi, 2024a, 2024b).

The size and the composition of European investment also affect innovation. In the EU, total gross fixed capital formation (GFCF) as a percentage of GDP is comparable to that of the US. However, when considering *productive investment* (Draghi, 2024b, p. 280) — which excludes GFCF related to dwellings — a relative divergence becomes evident, with Europe lagging behind (see Figures 1.E and 3.E). From 2000 to 2010, the simple average of the effective productive investment gap of the EU compared to the US was -1,15 percentage points (p.p.), which widened by a factor of approximately nine to an average of -10,2 p.p. between 2011 and 2023, accounting for an accumulated gap of -132,7 p.p. in the respective rates of productive investment over 13 years (see Figure 3.E and Table 1).

Expenditure in R&D is particularly important for innovation, and the EU has struggled to match the US's expenditure rate, with an average annual effective gap of approximately -28,6 p.p. between 1996 and 2021 (see Figure 3.F). In 2021, the EU invested a smaller proportion of GDP in R&D than the US (2.24% vs. 3.5%), with private spending being the primary driver of this discrepancy: the US private sector (2.4%) allocates nearly twice the percentage of GDP towards R&D than the EU private sector does (1.3%), illustrating how European industry lacks R&I-intensive sectors and is overly focused on mature technologies (Draghi, 2024a, p. 24).

Public spending on R&D in the EU (0.74%) is on a par with the US (0.69%). However, European public spending is highly fragmented, with Member States accounting for nearly 93% of the total. This contrasts with the US, where the situation is inverted:

federal-level spending constitutes 94% of total public R&D spending³. Additionally, the EU's common budget programs for R&I are too small, unfocused, complex, and risk-averse (Draghi, 2024b, pp.235-7). This suggests that public spending in R&I in the EU fails to reach its potential, lacking scale and possibly leading to overlapping efforts. Projects of large scale linked to EU-wide priorities should be pursued at the EU-level, through effective Member State coordination and an enhanced EU budget (Draghi, 2024a, 2024b).

An extraordinary investment effort must be undertaken to strengthen competitiveness in the three highlighted areas of action, with the Draghi report estimating that “a minimum annual additional EUR 750 to 800 billion is needed” (Draghi, 2024b, p.281), which would represent an additional 4,4%-4,7% of EU GDP (see Figure 3.E). Notably, a substantial private R&D investment gap has been growing between the EU and the US, for which public investment has not compensated. While public funding will have a prominent role in funding those investment needs, completing and further integrating the Single Market should be a priority, especially where it might contribute to unlocking private investment:

The results show that to finance this volume of investment, we must make progress on Capital Markets Union, so that private savings can be channelled into investment across the whole EU. (Draghi, 2024c, p.9)

Therefore, the present dissertation will analyse the evolution of the EU's capital markets, their fragmentation, their lack of scale, depth and liquidity, their influence and contributions to the present circumstances, as well as their forthcoming role in revitalising European competitiveness, specifically in innovation. This analysis will employ a framework (termed *Failing Forward*) that combines an institutional perspective with theories of European integration.

³ See Draghi, 2024b, p.235 and Figure 9, p.236.

2. The Failing Forward Framework

Since the 1960s, European integration has emerged as a relevant area of academic study, resulting in various theories, such as intergovernmentalism, neofunctionalism and postfunctionalism, that seek to explain the dynamics of governance design and reform within the European Union. The conceptual framework developed by Erik Jones, R. Daniel Kelemen and Sophie Meunier (2016), termed *Failing Forward*, identifies a supposedly recurring European integration pattern. Institutional incompleteness is, or so they claim, at the core of this framework. In this context, "*Failing*" occurs when a specific policy (or institution) fails to achieve the objectives established at its inception, or when a policy (or institution) initially perceived as successful ultimately collapses; "*Forward*" occurs when the Union institutions (or policies) progress towards greater integration, which can be defined by an expansion of supranational competencies and responsibilities, or by heightened degrees of coordination among Member States, or by an improved EU effectiveness within its existing areas of jurisdiction, or some combination of the three (Jones *et al.*, 2021).

A brief description of the integration pattern, as the *Failing Forward* framework explains it, would be as follows (Jones *et al.*, 2016). Incomplete institutional structures create negative spillovers, often contributing to new crises (*Failing*). In response to these challenges, European leaders attempt to reform EU institutions. This is frequently constrained by diverse Member State preferences, resulting in "lowest common denominator" solutions. Although attempts at reform may mitigate a particular crisis, the incompleteness of the underlying institutional structure remains largely unaddressed. Thus, new or existing negative spillovers take effect, renewing the cycle. This ongoing dynamic ends up deepening European integration (*Forward*).⁴

⁴ While the pattern of integration of *Failing Forward* may be common, it should not be seen as the exclusive process of integration within the EU. Jones *et al.* (2021, p.1525) stress that they do not believe that the EU's progression towards further integration arises solely from failures and crises — the Monetary Union, for example. Yet this specific pattern merits careful consideration, as it presents substantial risks and challenges not only to the stability of the European project but to its political legitimacy.

The *Failing Forward* framework resorts to a historical institutionalist approach, emphasising the analysis of institutions and the process of path dependence. Despite their relevance within this framework, the original authors do not explicitly define these concepts. This suggests that the authors may have presumed that invoking the historical institutionalist approach, along with subsequent bibliographic references, would suffice to interpret the meaning of key concepts such as *institutions*, *critical junctures*, and *path dependence*. The current dissertation will dedicate some space to these concepts to prevent possible ambiguities in their interpretation and usage. A short review of some literature on institutions will be conducted, deliberately drawing on the methodology and bibliography of the *Failing Forward* articles by the original authors (Jones *et al.*, 2016, 2021). Subsequently, the remaining dimensions of the *Failing Forward* framework will be briefly explored.

Jones *et al.* reference several articles that use the concept of institutions, particularly within a historical institutionalist approach. One of them, by Paul Pierson (2000), is entitled "*Increasing returns, path dependence, and the study of politics*". In this work, the author examines the application of path dependence in the field of politics, citing Douglass C. North⁵ specifically in the context of institutional change, and regarding North's insights as especially pertinent for political science:

North rightly emphasises that institutional development is subject to increasing returns. Indeed, it is the role of path dependence in explaining patterns of institutional emergence, persistence, and change that may be of greatest significance for political scientists. (Pierson 2000, p.256)

Accordingly, it seems appropriate to assume that Pierson, as well as Jones *et al.*, adopt the definition of institutions elaborated by North:

⁵ Douglass C. North was awarded the Nobel Prize in Economics in 1993 "for having renewed research in economic history by applying economic theory and quantitative methods in order to explain economic and institutional change" (<https://www.nobelprize.org/prizes/economic-sciences/1993/press-release/>).

Institutions are the rules of the game in a society or, more fundamentally, are the humanly devised constraints that shape human interaction. (North, 1990, p.3)

In this sense, institutions provide order, reducing uncertainty by establishing boundaries and creating incentives for human action in political, social and economic spheres. Institutions range from the highest degree of formal rules, such as national constitutions and international treaties, to more informal norms, such as moral codes and social conventions (North, 1990).

Pierson also views public policies as institutions, considering they must be included in North's definition:

Policies, grounded in law and backed by the coercive power of the state, signal to actors what has to be done and what cannot be done, and they establish many of the rewards and penalties associated with particular activities. (Pierson, 2000, p. 259)

Like other formal institutions, public policies (especially major ones) define, on the one hand, objectives, procedures and means, instruments, resources, for political actors and, on the other hand, incentives and boundaries for non-political actors (Pierson, 1993).

An important aspect of this theoretical approach to institutional analysis is the distinction between *institutions* and *organisations*. While institutions represent the rules of the game, organisations represent the players in the game and consist of groups of political, social, and economic agents (North, 1990)⁶. The prevailing institutional structure influences the formation and functioning of organisations; simultaneously,

⁶ Although the distinction between organisations and institutions may seem misguided both in the common and the legal sense — what is considered an organisation here might be viewed as an institution by others — this theoretical abstraction serves to provide greater clarity to the analysis undertaken here.

existing organisations, or, more specifically, their "entrepreneurs"⁷, are the fundamental agents of institutional change.

Organizations and their entrepreneurs engage in purposive activity and in that role are the agents of, and shape the direction of, institutional change. (North, 1990, p. 73)

The merits, or lack thereof, of the distinction between institutions and organisations depend on the nature and focus of the study. What is considered an organisation in one analysis may be considered an institution in another analysis. Thus, Geoffrey M. Hodgson argues that this distinction must not be viewed as a fixed principle or definition but instead ought to be regarded as an abstraction:

There are multiple levels, in which organizations provide institutional rules for individuals, and possibly in turn these organizations can also be treated as actors within broader institutional frameworks. For example, the individual acts within the nation, but in turn the nation can sometimes be treated as an actor within an international framework of rules and institutions. (Hodgson, 2006, pp. 10-11)

Institutions evolve through *incremental change* — gradually, through negotiations and compromise — or *discontinuous change* — undergoing radical transformations due to, for instance, a lack of institutional flexibility. According to North (1990), history shows that institutional change is predominantly incremental. Historical periods that combine a set of circumstances that substantially intensify the probability and widen the range of institutional change, whether incremental or discontinuous, are termed *critical junctures*. As one of the original *Failing Forward* authors argues, *critical junctures* are relatively short periods, during which “agents face a broader than typical range of feasible options” and the “probability that agents' choices will affect the outcome of

⁷ Joseph Schumpeter's definition of entrepreneurial activity clearly encompasses those who innovate within an institutional structure and thereby change it, though often with unintended consequences. In his view and in simpler terms, “[the entrepreneurial function] is about getting things done” (Schumpeter, 1942/2008, p.132), whether in the economy or elsewhere.

interest must be high relative to that probability before and after the juncture” (Capoccia & Kelemen, 2011, p.348).

This notion illustrates how a path-dependent process of development is initiated, which is defined by previous decisions exerting influence on future outcomes, due to increasing returns:

Once a development path is set on a particular course, the network externalities, the learning process of organizations, and the historically derived subjective modeling of the issues reinforce the course. (North, 1990, p.99)

Decisions made in favour of a particular institutional structure generate positive feedback or increasing returns: as the institutional structure progresses along a specific trajectory, the relative benefits of reinforcing these choices grow, or, in other words, the relative costs of reversing them escalate (Pierson, 2000). Although such historical dependence wields considerable influence, it should not be viewed as a deterministic process. Political, economic, and social preferences can possess sufficient power to counteract path dependence, even though the past cannot be changed and certainly contributes to shaping the future:

The outcomes of the events during critical junctures are shaped by the weight of history, as existing economic and political institutions shape the balance of power and delineate what is politically feasible. The outcome, however, is not historically predetermined but contingent. (Acemoglu & Robinson, 2012, p.137)⁸

In addition to employing a historical institutionalist approach (which serves as the theoretical basis for the analysis of institutional failures and their implications), *Failing Forward* establishes a connection between two of the most prominent theories of European integration: intergovernmentalism and neofunctionalism. While these

⁸ Daron Acemoglu and James Robinson, together with Simon Johnson, were awarded in 2024 the Nobel Prize in Economics “for studies of how institutions are formed and affect prosperity” (<https://www.nobelprize.org/prizes/economic-sciences/2024/press-release/>).

theories are often regarded as opposing perspectives, the framework considers them complementary (Jones *et al.*, 2016).

Intergovernmentalism asserts that negotiations between governments of independent nation-states are the primary force behind European integration, both assuring and hindering its progress. Member States are represented in almost all stages of the EU decision-making process. However, due to diverging preferences and interests, negotiations regarding the deepening of European integration often result in *lowest common denominator* decisions. This culminates in piecemeal decisions while blocking comprehensive and arguably necessary reforms of the Union's institutional structure (Hooghe & Marks, 2019; Moravcsik, 1993).

Neofunctionalism explains how previous initiatives aimed at deepening integration within a specific institutional area generate *functional spillovers*. As disintegration typically involves high costs, these spillovers create pressures and incentives for further integration within multiple policy institutional areas, through increasing returns and positive feedback loops. Not all decision-makers fully anticipate these spillovers, which lessens the emphasis placed on national governments and highlights the role of "supranational activism" in generating additional pressures and incentives for further European integration (Hooghe & Marks, 2019).

Although these concise descriptions of both integration theories do not entirely encompass their theoretical intricacies or profound insights, they underscore the elements of their contributions that will be pivotal to the *Failing Forward* framework, specifically in applying historical institutionalist analysis to the EU: *intergovernmentalism* explains the incompleteness of the European institutional structure; *neofunctionalism* explains that integration increasingly deepens due to functional spillovers. In other words, "[i]ntergovernmentalism captures the dynamics at work in critical junctures, whereas neofunctionalism describes the mechanism linking one critical juncture to the next" (Jones *et al.*, 2016, p. 1013).

The general method for applying the *Failing Forward* framework consists of three main steps: i) a historical review of the relevant institutional structure preceding the crisis,

scrutinising its inadequacies and assessing how these weaknesses may have, through policy failures, either contributed to the crisis or failed to prevent it; ii) an analysis of the diverse preferences that underpin intergovernmental negotiations regarding crisis solutions; iii) and a discussion of how the solutions still comprehend incomplete reforms, which in turn may precipitate future policy failures, thereby causing new crises and renewing the *Failing Forward* cycle.

In the context of the EU, the *critical junctures* observed since the Maastricht Treaty (1992) have not been directly linked to a decline in European competitiveness. Still, the EU's diminishing competitiveness — though it has not produced a crisis in the traditional sense, characterised by acute eruption — has become increasingly perceptible since the turn of the century, posing a growing threat to the sustainability of the European project. In this regard, the decline in competitiveness represents a particular form of *critical juncture*, which might be described here as a *slow-burning crisis*. This prolonged and severe relative structural loss progressively builds pressure over time and, when accompanied by exogenous shocks that exacerbate the negative effects, could prove disastrous due to substantial policy lags (especially the decision, implementation, and effectiveness lags).

Given that the ongoing competitiveness-related *critical juncture* (slow-burning crisis) is still unfolding at the time of writing, the present dissertation shall not apply the *Failing Forward* framework solely in a retrospective analysis, as is often done⁹. Instead, the present application will be partly retrospective (historical review of past *failings* and their contribution to the *critical juncture*, as well as the evolution of the underlying political will until now), and partly in a forward-looking perspective (a discussion of the possibility of moving *forward* in capital markets' integration, as well as what kind of

⁹ In most applications of the *Failing Forward* framework, the analysis is made ex-post, once the *critical juncture*, or at least the first waves of negative shocks and most uncertainties have dissipated. This is the case for: Jones *et al.* (2016), applied to the 2010s eurozone crisis; Scipioni (2018), applied to the migration and asylum crisis of 2015; Howarth & Quaglia (2021), applied to the COVID-19 crisis of 2020; Dierx & Ilzkovitz (2021), applied to the evolution of competition policy in the EU in the past 60 years; among others.

integration might be expected). Thus, the steps of application are fulfilled, whether retrospectively or prospectively.

However, competitiveness is too broad a concept to be explored thoroughly within the confines of this dissertation. Thus, the analysis of the following chapters will focus on identifying the *Failing Forward* dynamics present in the European capital markets, revealing institutional incompleteness and the persistent failure to advance integration, suggesting how this has contributed to the current loss of competitiveness, and offering a brief outlook on the potential path of EU integration.

3. The Case of the Capital Markets Union

As previously stated, the Single Market is regarded as one of the most significant accomplishments of the European Union (EU), intending to promote unrestricted movement of goods, services, individuals, and capital. The evolving global landscape is marked by increasing geopolitical uncertainties and a decline in European competitiveness, as evidenced by the EU's diminishing share of the global Gross Domestic Product (GDP) over the past three decades (see Figures 1.A and 3.A). This decline can be attributed partly to a relative contracting and ageing population, coupled with low productivity growth rates (see Figures 1.B and 1.C). Although some progress has been made since Jacques Delors' Single Market initiative in 1985, there remain substantial obstacles that impede Europe's economic potential:

[T]he EU economy has been structurally under-performing for many years, partly due to problems with financial intermediation. (European Commission, 2025b, p.2)

Comprehensive integration of the financial system¹⁰ would enhance the supervision and regulation of financial market activities, while also giving households access to savings instruments with higher returns and allowing businesses to secure a broader range of more favourable financing options. This integration is a necessary condition for ensuring the free movement of capital within the Single Market, recognised as such since at least the 1970s¹¹ with the Werner Report (1970). The integration of European capital markets has featured in various early documents and initiatives like the 1992 Maastricht Treaty (European Union, 1992, Articles 73b and 73c) and more explicitly in the 1999 Financial Services Action Plan:

¹⁰ The Financial System can be considered the network of financial institutions (in North's sense: laws and regulations), supervisory and regulatory bodies (European Central Bank, European Supervisory Authorities, etc.), and participant organisations (stock exchanges, banks, insurers, venture capital societies and funds, investment funds, pension funds, etc.).

¹¹ "The suppression of the obstacles of various kinds and the harmonization of the financial structures should make it possible to arrive at a true common capital market by the progressive interpenetration of the national markets" (Werner, 1970, p.25).

[A]ny remaining capital market fragmentation should be eliminated, thereby reducing the cost of capital raised on EU markets. (European Commission, 1999, p.1)

Improved financial intermediation would enhance the channelling of savings towards productive investments, which is increasingly pressing given Europe's considerable financing needs in competitiveness (in the sense of innovation and productivity), defence, and the digital and green transitions, estimated by Draghi to require a minimum additional investment of €750 to €800 billion/year, overall, as previously mentioned (Draghi, 2024b, p.281-2). This amount is already underestimated, though, due to more recent tensions regarding rearmament: the Commission wants to mobilise up to €800 billion for defence alone over the next four years¹² (European Commission, 2025c, p.17).

This chapter will serve to describe the *Failing Forward* process in the integration of the capital markets, as well as interpret some of the implications of this dynamic. To this end, it will be divided into four sections.

The first one, *European capital markets: missed potential*, offers a brief overview of how the absence of comprehensive capital markets's integration has negatively impacted the EU's economic performance during the last thirty years, laying out the relevance of the failed Capital Markets Union (CMU) for the EU's structural loss of competitiveness.

The second, *Failing in the Capital Markets Union*, highlights the major failures of the CMU project, as well as identifying the factors that prevented further integration, resulting in incomplete institutional structures, as per the *Failing Forward* argument.

The third section, *EU in a critical juncture*, serves to clarify why the EU is entering a context of heightened political and economic pressures, conceptualised by the adopted framework as a *critical juncture*, brought on by both internal (structural loss of competitiveness) and external (geopolitical tensions) factors.

¹² This amounts to approximately €200 billion/year, a much greater value than the €50 billion/year allocated to defence by Draghi's estimations (Draghi, 2024b, p.282).

The fourth and final section, *Forward in the Capital Markets Union?*, analyses the EU's renewed political will (amidst a *critical juncture*) to implement the reforms for completing the CMU. This, in turn, may indicate further and more effective integration, aligning with the *Failing Forward* process of integration.

3.1. European Capital Markets: Missed Potential

As the Commission stated in Financial Services Action Plan back in 1999:

With the introduction of the euro, there is a unique window of opportunity to equip the EU with a modern financial apparatus in which the cost of capital and financial intermediation are kept to a minimum. (European Commission, 1999, p.1)

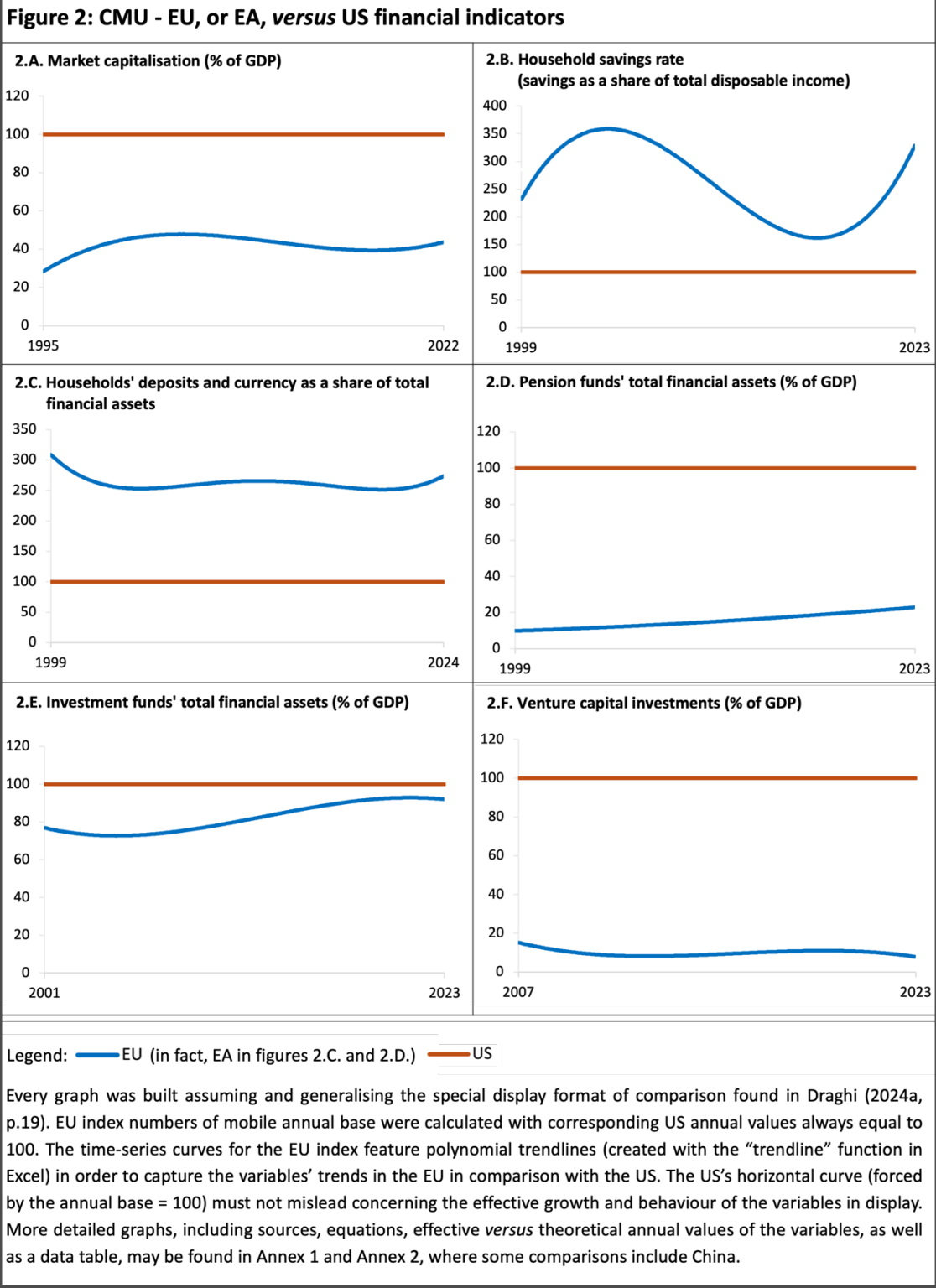
However, over the past thirty years, the Economic and Monetary Union's financial institutions have remained incomplete. Capital markets continue to be fragmented and relatively inefficient, as shown in Figure 2, which depicts the progress — or lack thereof — in this period through a selection of six financial indicators. These indicators offer a general insight into the development of capital markets and the efficiency of financial intermediation in Europe.

Starting with the EU's market capitalisation of listed domestic companies (as a share of GDP) presents an average gap of 58% to the US between 1995 and 2022¹³ (see Figure 2.A). This underscores the general underdevelopment of European capital markets, suggesting suboptimal financial intermediation, which in turn leads to insufficient levels of productive investment (Draghi, 2024b, p.281).

European capital markets seem to fail in attracting domestic private savings, especially from households. The savings rate (propensity to save) of European households was consistently higher than that of their US counterparts between 1999 and 2023 (see Figure 2.B). In fact, European households' savings rate remained relatively constant,

¹³ Average calculation based on Table 2, Annex II. Market Capitalisation is defined as the summation of the products of the number of shares listed in the market by their prices.

averaging 13%, compared to the US’s average of 6%¹⁴. Yet, European households hold a much larger share of deposits and cash in their financial assets compared to American



¹⁴ Averages calculation based on Table 2, Annex II.

households (liquidity preference¹⁵) (see Figure 2.C). This has two consequences: on the one hand, European households are receiving smaller returns on their savings, with EuroArea (EA) households' net wealth growing by 55% between 2009 and 2023, compared to 151% in the US¹⁶ (Draghi, 2024b, p.281). On the other hand, European private savings, though relatively larger, are not being adequately channelled to the real economy, especially in the more innovative sectors, which are more reliant on capital markets (Draghi, 2024b, p.281).

The underdevelopment of pension funds (second and third pillar) has a substantial effect. Their potential scale could contribute very strongly to the depth and liquidity of capital markets while guaranteeing higher returns on savings for European citizens. The total financial assets of European pension funds (as a share of GDP) currently represent approximately one-fifth of those in America, having shown very limited relative growth since 1999 (see Figure 2.D). The pension assets of the Netherlands, Denmark, and Sweden account for 62% of total EU pension assets despite representing less than 8% of the population. These countries present much more developed capital markets and a more effective channelling of household savings toward productive and innovative investments (Draghi, 2024b, p.293; World Bank, 2025).

This underdevelopment of pension funds stands in striking contrast to the relatively developed investment funds in the EU, whose total financial assets (as a share of GDP) were almost on par with those of the US in 2022 (see Figure 2.E) and have displayed a relevant catch-up since the turn of the century. If fully implemented (and if Europeans' preference for liquidity matched that of the US), the CMU could unlock substantial amounts of financing. In accordance with the ECB President's claim, an additional annual flow of €350 billion could be generated from household savings alone (Lagarde, 2024).

¹⁵ This may result from a risk-averse culture, probably reinforced by the fragmentation of capital markets. Europeans are less prone to allocating their savings to higher-risk, higher-return applications.

¹⁶ Again, this is not to say that fragmented capital markets are the only factor contributing to this discrepancy, as the stronger economic growth in the U.S. (see Figure 1.A) also impacts household wealth. However, it must surely have an effect due to European savings not being drawn to, and therefore not being applied in, market-based investments.

This underscores the considerable investment lost by the EU due to financial fragmentation.

At the same time, not represented in Figure 2, the International Investment Position¹⁷ (IIP) indicator shows that the EA is financing other economies more than it is being financed by other economies. In 2005, the EA had a net IIP of -\$996 billion, while the US had a net IIP of -\$1 858 billion, indicating that both economies were being net financed by external capital. By 2023, the EA's net IIP reached +\$646 billion, whereas the US's net IIP was -\$19 853 billion, signifying that the EA is no longer being financed by external capital (conversely, it is financing other economies), in stark contrast to the US. In essence, maintaining a positive net International Investment Position (where domestic capital invested abroad exceeds foreign investment received) is not inherently detrimental. It may even be positive. Nonetheless, it appears inconsistent with Europe's investment needs. Essentially, Europe acts as a "net exporter of capital" while failing to invest sufficiently within its own borders.

The relatively inefficient financial intermediation negatively impacts the business sector, as European companies are much more reliant on the banking sector for financing than their American counterparts, which also hampers innovation and growth. The incompleteness of EU capital markets' integration limits companies' access to alternative ways of financing, increasing their dependence on risk-averse and costly bank loans. This situation is particularly sensitive for young, innovative firms: their development and prospects face relatively high risks, they possess minimal tangible collateral, and they may take years to achieve sustainable cash flows and profitability (Draghi, 2024b, pp.285-6).

Many of these young innovative firms rely on venture capital funds for financing; however, in Europe, there are too few of these funds, and they lack the necessary scale. In terms of funds raised, venture capital amounted to \$130 billion and \$924 billion

¹⁷ This indicator shows an economy's financial statement, presenting residents' net stock of financial assets as a claim on non-residents and of financial liabilities to non-residents, which reflects the cumulative result of capital flows into and out of an economy.

between 2013 and 2023 in the EU and US, respectively (Arnold, Claveres, & Frie, 2024, p.27). In terms of investments (as a share of GDP), venture capital in the EU has remained persistently lower than in the US, currently representing less than one-tenth of that in the US (see Figure 2.F). As a result, many European companies seek funding from non-European capital markets or are acquired by foreign investors, with non-European investors accounting for over 60% of total buyers of European companies (Draghi, 2024b, p.243).

Europe lacks an environment to fully scale innovative and high-growth companies. (European Commission, 2025b, p.9)

The fragmentation of the financial system has had clear consequences for the EU's economy, resulting in constrained movements of capital in the Single Market, a less dynamic economy with fewer innovative companies and sectors emerging, weak productivity growth leading to relatively poor economic growth (and vice versa), and lower wealth creation for its citizens. This constitutes a clear *failure* in addressing incomplete institutional arrangements, with equally clear long-term negative effects on the EU's competitiveness and sustainability:

The attempt to create the Capital Markets Union over the past decade has not been successful, among other causes, because it has been perceived as an end in itself. True integration of financial markets in Europe will not be realised until European citizens and policymakers recognize that such integration is not merely beneficial for finance itself, but is crucial for achieving overarching goals that are otherwise unattainable... (Letta, 2024, p.12)

3.2. Failing in the Capital Markets Union¹⁸

The Commission first presented a structured proposal for the Capital Markets Union in 2015, and its initial Action Plan comprised 33 actions aimed at creating a single capital market in the EU. These actions included: regulatory changes to promote venture capital funds and cross-border investment funds; reforms to insolvency regimes; harmonisation and simplification of proceedings to facilitate the listing of companies; the relaunch of securitisations; among others. In addition, the 2015 Action Plan included non-legislative recommendations for Member States, such as tax incentives for venture capital and the removal of national barriers to the cross-border movement of capital. In 2017, a mid-term review of the 2015 Action Plan introduced new priorities, such as strengthening the mandate of the European Supervisory Authorities¹⁹ and facilitating small and medium-sized enterprises' listings, among others. Also, previous commitments, particularly to the Pan-European Personal Pension Product (PEPP) as an instrument of household savings, were reaffirmed. A new CMU Action Plan was presented in 2020, adopting a more ambitious approach by making concrete proposals for harmonising insolvency regimes and presenting more thorough national recommendations regarding pension systems. It also proposed the creation of a centralised data portal for companies' and investment funds' financial disclosures, the European Single Access Point, and presented a concrete proposal for facilitating SME listings with the Listing Act. However, these action plans arrived too late (considering that the Financial Services

¹⁸ In this section and the subsequent one, considerable reliance is placed on the cited Draghi report (2024), the Letta report (2024), and the article from March 2025, "Capital markets union: a deep dive" by Alexia-Styliani Arampatzi, Rebecca Christie, Johanne Evrard, Laura Parisi, Clément Rouveyrol and Fons van Overbeek, published within the *Occasional Paper Series* of the European Central Bank. Together, this literature contains valuable information for compiling facts, useful for describing the *Failing Forward* integration process. It should be noted, however, that none of these documents utilise the *Failing Forward* framework. The *deep dive* article converged with the elaboration, in course, of the third chapter of the present dissertation.

¹⁹ There are three European Supervisory Authorities: the European Banking Authority (EBA), the European Insurance and Occupational Pensions Authority (EIOPA), and the European Securities and Markets Authority (ESMA).

Action Plan was presented 16 years before the first CMU Action Plan) and proved largely ineffective (Arampatzi *et al.*, 2025, pp.25-6).

Some initiatives have produced mixed results. This is the case of the EU's sustainable finance framework, which fosters the creation of portfolios that comprise environmental, social and governance related securities, but still represent a small share of Euro Area capital markets. The reviews of the European Venture Capital Fund Regulation envisioned economies of scale for such funds, but its effects have been limited due to more structural institutional inadequacies. The Listing Act reduces compliance costs, especially due to simpler prospectus rules, and is expected to save listed companies €100 million annually, but it is still to be fully implemented. The Faster and Safer Tax Relief of Excess Withholding Taxes Directive, despite being watered down during the legislative process and only applicable in 2030, represents a positive development in tax issues, as it facilitates cross-border investments by simplifying procedures. The PEPP intended to promote a third-pillar pension product, encouraging long-term savings and supporting the CMU project, but it is only available in four EU countries (Czech Republic, Croatia, Poland and Slovakia), with a limited adhesion of only 0,2% of those countries' labour force. Among others (Draghi, 2024b, 284; Arampatzi *et al.*, 2025, pp.27-30).

Integration of the capital markets has been slow and unsuccessful. The most impactful and challenging reforms have failed, boiled down by *lowest-common-denominator* agreements during intergovernmental negotiations:

Despite three CMU action plans, EU capital markets remain fragmented, and CMU's core goals remain unrealized. (Arampatzi *et al.*, 2025, p.27)

The rest of this section will highlight eight major failures in the integration of European capital markets²⁰.

²⁰ Much of what is presented here is relevant for many other aspects of the Economic and Monetary Union (EMU), as well.

3.2.1. Failing in Single Supervision

The European Securities and Markets Authority (ESMA) is responsible for coordinating national supervisory bodies, ensuring the presence of an EU perspective in the enforcement of market rules. It was initially proposed to transition progressively to a more centralised system, based on a single rulebook. However, little progress has been made towards a unified European supervisory structure, and, as a result, rules are different or applied differently among Member States, creating higher compliance costs and diminishing market confidence for cross-border investors. In contrast, the US has had a single supervisor (the well-known SEC, Securities and Exchange Commission) since the 1930s (Draghi, 2024b, p.292; Arampatzi *et al.*, 2025, pp.53-4).

Within the current EU financial supervisory architecture, national regulators and supervisors form the core of the entire ecosystem. This central position often leads to the protection of national interests, including financial centres through local supervisory measures and investor protection rules. (Letta, 2024, p.34)

Draghi suggests that the ESMA adopt a sort of governance inspired by the ECB's Governing Council (guaranteeing independence from national interests) and become the single supervisory body for all EU securities markets. Nevertheless, Draghi recommends a certain type of gradualism²¹, in the sense of responsibility sharing between EU-level and national-level regulators, to avoid fierce resistance. For that purpose, Draghi recommends that ESMA be given exclusive supervision over: multinational issuers above a certain size threshold; multiple-jurisdiction markets (such as Euronext); and Central Counterparty Platforms (Draghi, 2024b, pp.292-3).

3.2.2. Failing in Operational Infrastructures

In terms of key capital market infrastructures, the EU's trading and post-trading architecture remains fragmented among Member States. In the EU, there are 14 Central

²¹ The difference between gradual reforms, characterised by a constructive and clear strategy-based approach, on the one hand, and *lowest-common-denominator* reforms, characterised by an inability to reach consensus and resulting in the obstruction of more comprehensive action, on the other hand, ought to be apparent.

Counterparty Platforms (CCPs) and 32 Central Security Depositories (CSDs), which contrasts with the US market, overseen by a single CCP and a single CSD. These organisations are responsible for providing operational services for market activity and guaranteeing that trades are completed safely. Fragmentation leads to cross-border investments being more expensive and complex than domestic ones, reinforcing the home bias:

[T]he post-trade environment for clearing and settlement in Europe is far less unified than in the US ... As a result, cross-border transactions are more complex and costlier than domestic transactions, hindering multimarket trading. (Draghi, 2024b, 283)

In Europe, cross-CSD trading represents only 4% of the total volume traded in 2024. From company laws and securities laws to the legal definition of shareholders and bondholders, further integration of the trading and post-trading infrastructures is mainly hindered by divergent national legal frameworks (Draghi, 2024b, p.287; Arampatzi *et al.*, 2025, pp.48-9).

3.2.3. Failing in Taxation Regimes

Different taxation regimes (tax basis, rates, final withholding rates, incentives, procedures, etc.) across the Member States stand as strong barriers to the completion of the CMU, imposing high costs on cross-border investments and business scale-up. Moreover, “[t]he success of any long-term savings plan will depend on tax incentives given by Member States individually” (Letta, 2024, p.30). National competence prevails in taxation, which is directly linked to national budget policies. Hence, fiscal harmonisation has been very limited²². Legislative proposals in this matter require unanimity, resulting in efforts being stalled in the Council (mainly the ECOFIN). The Debt-Equity Bias Reduction Allowance (meant to balance the costs of debt and equity, encouraging equity financing) and the Common Consolidated Corporate Tax Base (meant to harmonise corporate tax bases among Member States, reducing compliance

²² An early discussion of the issue of corporate tax harmonisation may be found in the Rudding report (European Commission, 1990).

costs and disincentives for international expansion) are examples of such proposals which have been recently abandoned due to persistent barriers in the legislative and deliberative process. Non-legislative proposals to design and implement tax incentives for venture capital financing and review withholding tax procedures to avoid double taxation have also seen little progress (Draghi, 2024b, pp.283-4; Arampatzi *et al.*, 2025, p.28).

3.2.4. Failing in Corporate Regimes, including Insolvency

Creating a European Code of Business Law, allowing companies to opt for a 28th legal regime when operating in the Single Market, would vastly reduce their compliance costs and other barriers for cross-border activity (Letta, 2024, pp.108-9). These initiatives, however, have not seen much progress, despite being considered important by the EU at least since the early 2000s (European Commission, 2003). Different corporate laws among Member States create uncertainty, adversely impacting cross-border investments and business scale-up (Draghi, 2024b, p.293). More specifically, diverse insolvency procedures across Member States have received special attention. In 2019, insolvency procedures averaged two years to settle in the EU, more than double the time in the US (Filip, Momferatou & Rodriguez, 2025, p.6). Harmonisation of insolvency regimes has proven elusive, particularly as they fall under national jurisdiction. Consequently, initiatives in this policy area have not been very consequential, such as the 2015 Recast Insolvency Regulation, which clarified but did not contribute to the cross-border harmonisation of insolvency laws; the 2019 Preventive Restructuring Directive, which attempted further harmonisation but resulted in divergent national implementation; and the recent 2022 Insolvency Law Directive, which has yet to yield more harmonisation, leaving its future effects uncertain (Arampatzi *et al.*, 2025, p.29).

3.2.5. Failing in Pension Systems

In the EU, pension funds are underdeveloped. Most Member States rely primarily on a mandatory first pillar pay-as-you-go model for their pension systems, while few European countries have established multi-pillar systems. First-pillar models are inherently exposed to political and demographic risks, which might make pensioners'

future income uncertain. Pension systems with developed second and third-pillar pensions²³ are especially relevant for the CMU, as they contribute to the market's liquidity and depth, channelling private savings into innovative and productive investments, while also providing greater security and returns to pensions (Draghi, 2024b, p.285). Although the EU has issued many recommendations throughout the years, pension systems are of national competence, and little progress has been made (see Figure 2.D):

The EU must better channel [households'] savings to productive investments.

The easiest and most efficient way to do so is via long-term saving products (pensions). (Draghi, 2024b, p.293)

As previously mentioned, the PEPP was an EU-level initiative to create a third-pillar product, but the uptake was minimal (Arampatzi *et al.*, 2025, pp.30-1).

3.2.6. Failing in Securitisations

Securitisations, understood as the grouping of certain financial assets and subsequent sale through a special-purpose vehicle, may contribute to the development of the CMU, having been present in many reform proposals of the CMU Action Plans. A more robust securitisation market may not only contribute to capital market depth and liquidity but also permit greater bank and insurer balance sheet flexibility and better risk distribution throughout the financial sector. Thus, banks may be more prone to finance productive investments, further supporting diverse European priorities. However, securitisation markets are very underdeveloped in comparison to the US, as yearly issuances in the EU represented 0,3% of GDP, while representing 4% in the US. This is mostly due to stricter prudential regulations, such as transparency and disclosure rules, although Draghi emphasises that insufficient prudential banking regulation was one of the main causes of the 2007-2008 financial crisis (Draghi, 2024b, p.287; Arampatzi *et al.*, 2025, p.57).

²³ The second pillar, although still mandatory, is predominantly composed of market-based investment funds, and the third pillar consists of voluntary individual pension market-based investment schemes.

3.2.7. Failing to create a “Common Safe Asset”

A common European safe asset could have various benefits for implementing the CMU. It would contribute to developing the capital markets, providing more depth and liquidity, which in turn would further attract international investors. Moreover, a common safe asset would strengthen the role of the Euro as an international reserve currency, as well as providing European households, directly and indirectly, with an almost risk-free and highly liquid retail asset for their savings and investments (Draghi, 2024b, p.290). Presently, EU bonds — as part of the Support to mitigate Unemployment Risks in an Emergency (SURE, €98 billion) programme and of the NextGenerationEU (NGEU, up to €712 billion) programme — represent the closest the EU has ever come to creating a common safe asset. However, the issuance of these bonds under the NGEU programme, which accounts for the majority of EU bond issuance, is set to conclude in 2026. One of the strongest barriers to implementing a permanent issuance of EU debt is political in nature, regarding the consolidated public debt issuance (EU + Member States) and the possible crowding out effect (more public debt issued at EU level may lead to less public debt being issued at national level, and vice versa).

3.2.8. Failing in Risk Culture

European citizens exhibit a greater degree of risk aversion than their American counterparts, with higher levels of liquidity preference (see Figure 2.C), which entails greater reluctance to invest, directly and indirectly, in capital markets. Although investment funds are relatively strong in Europe, they have not been enough to compensate for pension funds’ underdevelopment. As previously indicated, this liquidity preference may arise from the relative unattractiveness of European capital markets, or/and it could stem from various behavioural and cultural factors, which probably make this *failing* the hardest one to modify. Being only indirectly influenced by institutions, it may take years to change an entrenched pattern of social behaviour. Regardless of the underlying factors, the EU seems to have failed to promote a higher risk propensity among its citizens (Bekhtiar, Fessler, & Lindner, 2019). This further obstructs the advancement and implementation of the Capital Markets Union, which both the supply and demand sides must support.

3.3. The European Union at a Critical Juncture

In short, many of the most structural reforms to complete the Capital Markets Union (CMU) and enhance financial integration have not been carried out, even though political actors acknowledge their necessity. This situation mostly stems from the complexity of the reforms combined with divergent national interests, leading to piecemeal agreements that fail to provide comprehensive integration to the European markets:

[The CMU project] fell short of translating into concrete and tangible results on the ground, mainly due to the absence of a strong political mobiliser going beyond the intrinsic financial markets dimension. (Letta, 2024, p.28)

Over the past two decades, various crises and geopolitical tensions have diverted political attention from the CMU, spanning from the national debt crisis to the COVID-19 pandemic, which has hindered comprehensive reforms and perpetuated incomplete institutional structures. Such a project demands strong and coordinated political will, which the EU has not been able to muster.

This paradigm is shifting. On the one hand, the cumulative impacts of these incomplete institutional arrangements are becoming more evident, as the EU's economic performance lags behind that of its leading global competitors (see Figure 1). Beyond concerns about competitiveness, this situation raises existential questions: an ageing population, coupled with limited fiscal capacity and low productivity growth, could jeopardise the EU's sustainability and its ambitious goals. On the other hand, heightened geopolitical tensions are exposing Europe's overreliance on external suppliers, potentially rendering the EU vulnerable to coercion.

The combination of such intense internal incompleteness with external tensions constitutes a *critical juncture*: it is becoming evident that the EU cannot rely on its existing financial structure to address the current global circumstances, and rising pressures compel European political leaders to collaborate more closely (Lagarde, 2023). Both EU (European Commission, 2025a, 2025b) and national political actors

(Eurogroup, 2024; European Council, 2025b) have come to recognise the CMU as a necessary and fundamental step.

In 2024, the cited reports (Draghi, 2024a, 2024b; Letta, 2024) emphasised the urgent need for combined efforts at the EU level and national level to unleash the EU's potential and offered clear policy recommendations, which have since been referenced by major EU bodies such as the European Council, the European Parliament, the Eurogroup, and the European Central Bank (European Commission, 2025b, p.3). Taken together, these reports and their reception reflect a strong consensus on the necessary policies, which has seemingly provided the Commission with a solid and widely endorsed basis to develop comprehensive proposals that Member States might now be more willing to back.

Enhancing financial integration within the Single Market is more than an objective in itself, it has become a prerequisite to achieve the broader goals of the EU. (Letta, 2024, p.28).

If one objects to building a true Single Market, to capital market integration, and objects to debt issuance, one objects to our EU objectives. (Draghi, 2024c, p.10)

3.4. Forward in the Capital Markets Union?

The EU has so far failed to complete the Capital Markets Union (CMU). Hindered by intergovernmental negotiations that generate mostly lowest-common-denominator reforms, it is clear that such prolonged institutional incompleteness constitutes a *failing* in financial integration. This has undoubtedly contributed to Europe's relative loss of competitiveness, which, together with external adverse circumstances, has led to the current *critical juncture*. The following question arises: will the EU be able to harness the current situation and implement the necessary reforms, thereby comprehensively advancing financial integration and fulfilling the *forward* phase of the *Failing Forward* cycle? Recent developments in the EU seem to point in that direction.

In late January 2025, the Commission published the Competitiveness Compass, a document laying out the general lines of its strategy for revamping European

competitiveness, primarily and openly based on the Draghi and Letta reports²⁴. In this document, clear commitments were made towards the Savings and Investments Union (SIU), which mostly prioritises the completion of the CMU, but also comprehends the completion of the Banking Union, with the objective of unlocking private capital to finance Europe's investment needs:

The EU must integrate and have deeper and more liquid capital markets as a necessary step to mobilise private sector resources and direct them towards future-oriented growth sectors. (European Commission, 2025a, p.20)

Less than two months later, the Commission presented its strategy for the implementation of the SIU, stating that:

The development of a Savings and Investments Union is a crucial priority as it aims to improve the way the EU financial system channels savings to productive investment, creating more and a wider range of financial opportunities for people and businesses, notably sustainable businesses. (European Commission, 2025b, p.1)

This document, which consists mostly of upcoming legislative proposals, outlines the SIU strategy in “four distinct but inter-related headings” (European Commission, 2025b, p.5).

The first heading (European Commission, 2025b, pp.5-8), *Citizens and Savings*, highlights the importance of attracting personal retail investments and better channelling private savings into productive investments across the European economy, especially those closely related to EU priorities. The development of pension systems is recognised as key to developing European capital markets and providing more stable prospects for citizens amidst current demographic trends. The proposed policies include recommendations of best practices for the development of national pension systems and strategies for boosting financial literacy. They also include EU-level initiatives such

²⁴ “[T]he Competitiveness Compass we agreed on today in the College is basically the translation of the Draghi report with inputs of the Letta report into a communication of the Commission.” (von der Leyen, 2025)

as the European blueprint for savings and investments accounts or products, as well as discussions with the European Investment Bank (EIB), the European Stability Mechanism and national promotional banks on how to increase retail investment opportunities that serve to fund EU priorities. A review of current European frameworks, such as Institutions for Occupational Retirement Provision and the PEPP, is also proposed.

Investments and Financing is the second heading (European Commission, 2025b, pp.8-12), which recognises the necessity of increasing capital markets' depth and liquidity, and underscores the role of capital markets in financing innovative young companies, together with its clear contribution to competitiveness:

The EU's economic competitiveness and security critically depend on the ability of innovative startups and scaleups to access capital ... This funding source is, however, too scarce and fragmented in the EU, especially compared to the corresponding markets in other jurisdictions. (Commission, SIU, 2025, p.9)

To this end, measures to develop a more favourable culture of risk-taking and support venture capital activity are discussed, such as streamlining and harmonising insolvency procedures, increasing exit options for investors (Listing Act), as well as collaborating with the EIB Group for creating support programmes for Venture and Growth Capital funds. The Commission also recognises the role of the EU budget in leveraging SIU objectives by crowding in private funds, especially for venture and growth capital, by de-risking investments. Tax systems are considered inadequate, as they incentivise debt over equity finance and disincentivise cross-border activity, underscoring the ineffectiveness of past harmonisation efforts. Proposals were announced to stimulate equity investments by insurers, pension funds and banks, in the form of reviews of legislative and regulatory frameworks. The Commission also intends to review past proposals and initiatives (such as European Venture Capital Fund Regulation), as well as announce future measures for simplifying the securitisation framework for insurers and banks, among others.

Efforts to reduce regulatory, supervisory and political fragmentation are presented in the third heading (European Commission, 2025b, pp.12-4), *Integration and Scale*, with

the objective of stimulating a market-driven consolidation. While recognising that Europe has a strong investment funds sector (see Figure 2.E), the Commission announces the intention to collaborate closely with Member States and European Supervisory Authorities, together with the launch of external studies, to identify barriers that have so far prevented the scaling-up of these organisations. Initiatives such as the 28th legal regime (previously mentioned in sub-section 3.2.4) and the European Innovation Act are intended to reduce fragmentation by “providing a single set of rules, including relevant aspects of corporate law, insolvency, labour and tax law” (European Commission, 2025b, p.13). The Commission also envisions the integration and harmonisation of trading and post-trading infrastructures, with the announcement of legislative proposals for removing cross-border barriers in the post-trading infrastructure, as well as legislative proposals to facilitate access to EU-authorized funds, among others.

The fourth and final heading (European Commission, 2025b, pp.14-6) is dedicated to the EU's supervisory architecture, *Efficient Supervision in the Single Market*, where the Commission shows its concern with supervisory harmonisation, guaranteeing that regulatory treatment will be independent of geographical location. It is noted that while a single supervisor is already largely established for the banking sector (in the Euro Area), capital markets are still too dependent on national authorities. The Commission clearly states that “a new balance between supervisory responsibility at EU and national levels” (European Commission, 2025b, p.15) is required and that the transfer of authority to the EU level in cross-border activity is appropriate. Future measures to this end are announced, such as proposals for strengthening the supervisory convergence tools, as well as the transfer of certain responsibilities to the EU level.

While many specific and technical details of the proposals remain to be revealed, these recent official communications from the Commission not only acknowledge the unfavourable situation within the EU, together with the past shortcomings of financial institutions, but also express a firm commitment to address these failures and pursue comprehensive reforms for completing the CMU:

The fast-changing geopolitical and geoeconomic context makes the Savings and Investments Union a vital project which requires urgent progress, commitment and political ownership at multiple levels. (European Commission, 2025b, p.17)

The document outlining the strategy for the SIU addresses every *failing* identified in section 3.2 of this dissertation (except for the common safe asset) and incorporates many of the policy recommendations from the Draghi and Letta reports, as does the Competitiveness Compass, which covers even more aspects of those reports.

In addition, even though the SIU document does not mention the development of a European common safe asset or the future issuance of EU bonds, efforts for defence rearmament have been advancing discussions. In fact, the European Council has recognised and supported the intention of the Commission to propose a new EU instrument for providing up to €150 billion²⁵ in defence-related loans to Member States through the EU budget (European Council, 2025a, p.3). This instrument, entitled Security Action for Europe (SAFE), was formally proposed in the Commission's *White Paper for European Defence – Readiness 2030* and is to be financed through capital markets, entailing a prolonged issuance of EU bonds (European Commission, 2025c, p.16).

In essence, European politics seems to be shifting towards a more solid consensus, supporting the further implementation of the CMU to advance integration through a *forward* momentum in this policy area. Both the Council, tending to reflect Member State preferences, and the Commission, tending to reflect the Union's broader goals, have manifested explicit commitments to the completion of the CMU:

Deep and liquid capital markets that can allocate capital efficiently and allow for cross-border private risk-sharing constitute, together with a well-functioning Banking Union, a key element for the resilience of our economic and monetary union. (Eurogroup, 2024)

²⁵ While this new instrument comprehends a relatively low volume of debt issuance (approximately 21% of the NGEU total volume), it may represent a positive signal for the future of EU debt issuance, in general.

I want to be very clear: We have a plan; we have a roadmap. We have the political will. Now, what really matters is speed and unity. Speed, because the world is not waiting for us. So it is high time that we accelerate. And unity is important to really implement this political will. (von der Leyen, 2025)

4. Prospects

Europe's loss of competitiveness encompasses various dimensions and policy areas, many of which could be subject to an application of the *Failing Forward* framework, if not competitiveness in general. However, the current dissertation focuses on the *Failing Forward* integration process in the European capital markets. Due to a lack of a political consensus, the incompleteness of the EMU's financial institutions (in North's sense) has been largely unaddressed (especially in capital markets), with intergovernmental negotiations yielding lowest-common-denominator reforms. The facts and analysis presented suggest that the relative underdevelopment of European capital markets has negatively impacted Europe's growth, fostering a less dynamic and innovative economy and contributing to a structural loss of competitiveness. This, combined with external geopolitical tensions, has created a *critical juncture*, which is probably pressuring European political leaders to take decisive action in addressing the institutional incompleteness that has prevailed thus far. The fact that the integration of capital markets seems to be advancing only due to sustainability-threatening pressures is characteristic of the *Failing Forward* dynamic.

However, although it is evident that the Capital Markets Union (CMU) has, to date, succumbed to the *Failing* side of the presented framework, it is still premature to determine if and what form of *Forward* will ultimately materialise. On the one hand, recent communications and publications from various EU organisations seem to signal a strong political consensus and commitment to completing the CMU, which might indicate a thorough approach to reforming these parts of the financial system. If financial institutions are comprehensively reformed, reducing the incompleteness as much as may be reasonably anticipated, then the EU might be able to prevent the renewal of the *Failing Forward* cycle in this policy area. On the other hand, if uncertainty persists regarding external geopolitical tensions, while partly contributing to the current revival of European political will, their long-term effects remain highly unpredictable. They may exceed a certain instability threshold that, amidst considerable policy lags, instead of fostering integration, hinders it. If the EU fails to move substantially *forward*

in integration, not only will there be a renewal of the *Failing Forward* cycle, but Europe's future may be put at grave risk, as Draghi wisely warns.

Circumstances are rapidly changing, and Europe must be decisive and effective in moving *forward*. The current *critical juncture*, in addition to representing dangers to the Union's future, also embodies a unique opportunity for comprehensive and structural reforms. The political will seems to be gathered, and the circumstances represent an undeniable call for action. This is the time for Europe to implement reforms that have so far proven elusive, while respecting the subsidiarity principle (European Union, 2012, Article 5 (3)), not disregarding the fact that sovereign states (each with its own history and culture) configure the Union. The EU must avoid repeating past *failings* and harness the current political consensus to ensure that intergovernmental negotiations do not serve as a barrier, but as a driving force of integration.

Europe faces a choice between paralysis, exit or integration. Exit has been tried and has not delivered what its proponents hoped for. Paralysis is becoming untenable as we slide towards greater anxiety and insecurity.

So, integration is our only hope left.

It is important that all of us understand that the size of the challenge we face far exceeds the size of our national economies. And we are facing a world where we risk losing not just peace, but also our freedom. (Draghi, 2024c, p.10)

Bibliography

- Acemoglu, D., & Robinson, J. A. (2012). *Why Nations Fail*. Crown Publishers.
- AMECO. (2024, November). *AMECO Online*. European Commission. Retrieved March 2025, from https://dashboard.tech.ec.europa.eu/qs_digit_dashboard_mt/public/sense/app/667e9fba-eea7-4d17-abf0-ef20f6994336/sheet/f38b3b42-402c-44a8-9264-9d422233add2/state/analysis/
- Arampatzi, A.-S., Christie, R., Evrard, J., Parisi, L., Rouveyrol, C., & Overbeek, F. (2025). *Capital markets union: a deep dive* (Occasional Paper No. 369). European Central Bank. <https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op369~246a103ed8.en.pdf>
- Arnold, N., Claveres, G., & Frie, J. (2024). *Stepping Up Venture Capital to Finance Innovation in Europe* (IMF Working Paper 24/146). International Monetary Fund. <https://www.imf.org/en/Publications/WP/Issues/2024/07/10/Stepping-Up-Venture-Capital-to-Finance-Innovation-in-Europe-551411>
- Bekhtiar, K., Fessler, P., & Lindner, P. (2019). *Risky assets in Europe and the US: risk vulnerability, risk aversion and economic environment* (Working Paper No. 2270). European Central Bank. <https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2270~9c72a27c18.en.pdf>
- Capoccia, G., & Kelemen, R. (2007). The Study of Critical Junctures: Theory, Narrative, and Counterfactuals in Historical Institutionalism. *World Politics*, 59(03), 341-369.
- Dierx, A., & Ilzkovitz, F. (2021). EU competition policy: an application of the failing forward framework. *Journal of European Public Policy*, 28(10), 1630-1649.
- Draghi, M. (2024a). *The future of European competitiveness: A competitiveness strategy for Europe (Part A)*. European Commission. https://commission.europa.eu/topics/eu-competitiveness/draghi-report_en
- Draghi, M. (2024b). *The future of European competitiveness: In-depth analysis and recommendations (Part B)*. European Commission. https://commission.europa.eu/topics/eu-competitiveness/draghi-report_en

Draghi, M. (2024c, September 17). *Address by Mr. Mario Draghi at the presentation of the report on the Future of European competitiveness in the European Parliament*. Strasbourg, France. https://commission.europa.eu/topics/eu-competitiveness/draghi-report_en

Eurogroup. (2024, March 11). *Statement of the Eurogroup in inclusive format on the future of Capital Markets Union*. <https://www.consilium.europa.eu/en/press/press-releases/2024/03/11/statement-of-the-eurogroup-in-inclusive-format-on-the-future-of-capital-markets-union/>

European Commission. (1990). *Report of the Committee of independent experts on company taxation*. <https://op.europa.eu/en/publication-detail/-/publication/0044caf0-58ff-4be6-bc06-be2af6610870>

European Commission. (1999). *Implementing the Framework for Financial Markets: Action Plan* (Communication from the Commission). <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:51999DC0232>

European Commission. (2003). *Modernising Company Law and Enhancing Corporate Governance in the European Union - A Plan to Move Forward* (Communication from the Commission). <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52003DC0284>

European Commission. (2023). *Monitoring the level of financial literacy in the EU*. <https://europa.eu/eurobarometer/surveys/detail/2953>

European Commission. (2025a). *A Competitiveness Compass for the EU* (Communication from the Commission). https://commission.europa.eu/topics/eu-competitiveness/competitiveness-compass_en

European Commission. (2025b). *Savings and Investment Union - A Strategy to Foster Citizen's Wealth and Economic Competitiveness in the EU* (Communication from the Commission). https://finance.ec.europa.eu/publications/commission-unveils-savings-and-investments-union-strategy-enhance-financial-opportunities-eu_en

European Commission. (2025c). *White Paper for European Defence - Readiness 2030*. https://defence-industry-space.ec.europa.eu/eu-defence-industry/introducing-white-paper-european-defence-and-rearm-europe-plan-readiness-2030_en

European Council. (2025a, March 6). *Special meeting of the European Council (6 March 2025) – Conclusions*. <https://www.consilium.europa.eu/en/press/press-releases/2025/03/06/special-european-council-6-march-2025/>

European Council. (2025b, March 20). *European Council conclusions on competitiveness, European defence and security and migration*. <https://www.consilium.europa.eu/en/press/press-releases/2025/03/20/european-council-conclusions-on-competitiveness-european-defence-and-security-and-migration/>

European Central Bank. (2025a). *ECB Data Portal*. Retrieved March 2025, from <https://data.ecb.europa.eu>

European Central Bank. (2025b). *ECB Glossary*. Retrieved March 2025, from <https://www.ecb.europa.eu/services/glossary/html/act4s.en.html>

European Union. (1992). *Treaty on European Union (Treaty of Maastricht)*. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A11992M%2FTXT>

European Union. (2012). *Consolidated Version of the Treaty on European Union*. https://eur-lex.europa.eu/resource.html?uri=cellar:2bf140bf-a3f8-4ab2-b506-fd71826e6da6.0023.02/DOC_1&format=PDF

Eurostat. (2024, July). *World trade in goods and services - an overview*. European Commission. Retrieved March 2025, from https://ec.europa.eu/eurostat/statistics-explained/index.php?title=World_trade_in_goods_and_services_-_an_overview

Eurostat. (2025a). *Eurostat database*. European Commission. Retrieved March 2025, from <https://ec.europa.eu/eurostat>

Eurostat. (2025b, January). *Government debt at 88.2% of GDP in euro area*. European Commission. Retrieved March 2025, from <https://ec.europa.eu/eurostat/en/web/products-euro-indicators/w/2-22012025-ap>

Federal Reserve Bank of St. Louis. (2025). *Federal Reserve Economic Data (FRED)*. Retrieved March 2025, from <https://fred.stlouisfed.org>

Filip, M.-D., Momferatou, D., & Rodriguez, S. P. (2025). European competitiveness: the role of institutions and the case for structural reforms. *ECB Economic Bulletin*, Issue 1/2025. European Central Bank.

Hodgson, G. M. (2006). What are Institutions? *Journal of Economic Issues*, 40(1), 1-25.

Howarth, D., & Quaglia, L. (2021). Failing forward in Economic and Monetary Union: explaining weak Eurozone financial support mechanisms. *Journal of European Public Policy*, 28(10), 1555-1572.

International Monetary Fund. (2024, April). *Regional economic outlook. Europe: soft landing in crosswinds for a lasting recovery*. <https://www.imf.org/en/Publications/REO/EU/Issues/2024/04/05/regional-economic-outlook-europe-april-2024>

Jones, E., Kelemen, R., & Meunier, S. (2016). Failing Forward? The Euro Crisis and the Incomplete Nature of European Integration. *Comparative Political Studies*, 49(7), 1010-1034.

Jones, E., Kelemen, R., & Meunier, S. (2021). Failing forward? Crises and patterns of European integration. *Journal of European Public Policy*, 28(10), 1519-1536.

Lagarde, C. (2023, November 17). *A Kantian shift for the capital markets union*. European Central Bank. <https://www.ecb.europa.eu/press/key/date/2023/html/ecb.sp231117~88389f194b.en.html>

Lagarde, C. (2024, November 22). *Follow the money: channelling savings into investment and innovation in Europe*. European Central Bank. <https://www.ecb.europa.eu/press/key/date/2024/html/ecb.sp241122~fb84170883.en.html>

Lawrence, R. Z. (1993). Competitiveness. In D. R. Henderson (Ed.), *The Fortune Encyclopedia of Economics* (pp.514-7). Warner Books.

Letta, E. (2024). *Much More Than a Market*. European Commission. <https://european-research-area.ec.europa.eu/documents/letta-report-much-more-market-april-2024>

North, D. C. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge University Press.

OECD. (2025). *Data Explorer*. Retrieved March 2025, from <https://data-explorer.oecd.org>

Pierson, P. (1993). When Effect Becomes Cause: Policy Feedback and Political Change. *World Politics*, 45(4), 595-628.

Pierson, P. (2000). Increasing Returns, Path Dependence, and the Study of Politics. *The American Political Science Review*, 94(2), 251-267.

Porter, M. E. (1990). The Competitive Advantage of Nations. *Harvard Business Review*, March-April issue, 73-91.

Porter, M. E. (2000). Location, Competition, and Economic Development: Local clusters in a Global Economy. *Economic Development Quarterly*, 14(1), 15-34.

Schumpeter, J. A. (2008). *Capitalism, socialism and Democracy*. Harper Perennial Modern Thought. (Original work published 1942)

Scipioni, M. (2018). Failing forward in EU migration policy? EU integration after the 2015 asylum and migration crisis. *Journal of European Public Policy*, 25(9), 1357-1375.

von der Leyen, U. (2023, September 13). *2023 State of the Union Address by President von der Leyen*. European Commission. https://ec.europa.eu/commission/presscorner/detail/en/speech_23_4426

von der Leyen, U. (2025, January 29). *Statement on the EU Competitiveness Compass*. European Commission. https://ec.europa.eu/commission/presscorner/detail/en/statement_25_364

Werner, P. (1970). *Report to the Council and the Commission on the realisation by stages of economic and monetary union in the Community*. European Commission. https://ec.europa.eu/economy_finance/publications/pages/publication6142_en.pdf

World Bank. (2025). *Data Bank*. Retrieved March 2025, from <https://databank.worldbank.org>

World Federation of Exchanges. (2025). *Statistics Portal*. Retrieved March 2025, from <https://statistics.world-exchanges.org>

Annexes

Common notes on Annexes I and II:

The search, selection and assembling of the 6+6 indicators and 24 graphs of Figures 1, 2, 3, and 4 was an important part of this dissertation.

Figures 3 and 4, presented in the following annexes, served as foundations for Figures 1 and 2.

The 12 graphs in Annexes I and II were created using Excel. Trendlines were calculated with the “trendline” function in Excel, which employs the ordinary least squares method, incorporating polynomial adjustments of 2nd, 3rd, or 4th orders. These trendlines, while useful for describing the past, as is done in chapters 1 and 3, should not be used to forecast the future. In the trendline equations, we have:

y = adjusted index number;

$x = t - (\text{first year of the series}) + 1$; with t representing the years in four digits.

All index numbers in the 12 graphs exclude inflation. The underlying variables are presented in constant prices, physical units, or as ratios of nominal values where inflation is mostly (if not entirely) neutralised.

The graphs must be interpreted considering the following:

- The utilisation of index numbers with sliding annual bases (US = 100) across all graphs ensures general coherence, as these graphs primarily seek to illustrate Europe’s standing in relation to its major global competitors, predominantly the United States. Nevertheless, index numbers mustn’t mislead the reader into interpreting the graphs as indicative of the actual development and growth of the depicted variables.
- Using ratios (in most cases, as a percentage of GDP) is fundamental to accounting for the relative dimensions. Nevertheless, converting these ratios into index numbers, thus applying two consecutive relativisations, requires further careful interpretation.

Annex I – Details of the Graphs in Chapter 1

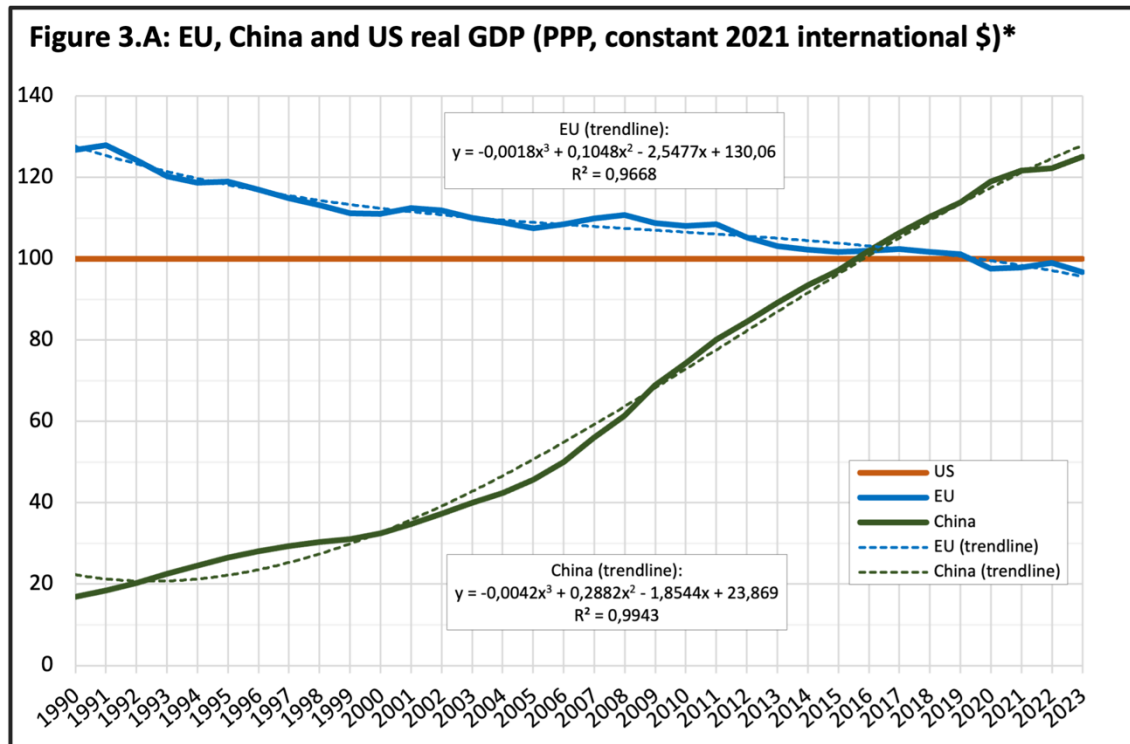


Figure 3.A reflects the phenomenon of the EU's relative loss of competitiveness, measured here by the absolute GDP proxy. Viewing things from this first wide-angle perspective, the EU's competitiveness has been gradually and continuously diminishing during this period, in long-trend adjusted terms, compared to the US and China.

In both cases of the EU and China, the 3rd-order polynomial trendlines fit accurately to the observed values of the index numbers.

*EU and China: both index numbers, mobile annual base $GDP_t^{US} = 100$; $t = 1990, \dots, 2023$.

Source: (World Bank, 2025); own calculations.

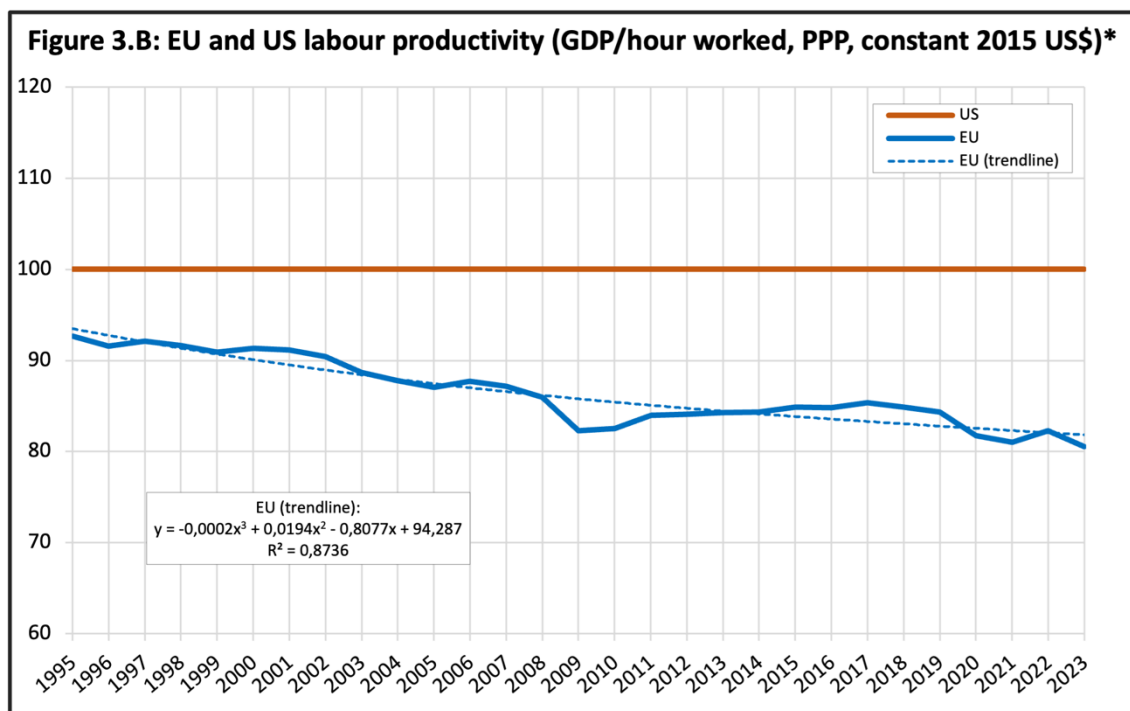


Figure 3.B reflects the phenomenon of the EU's relative loss of competitiveness, here measured by the Labour Productivity *proxy*. Viewing things from this second wide-angle perspective, the EU's competitiveness has been gradually and incessantly diminishing, in long-trend adjusted terms, compared to the US.

The 3rd-order polynomial trendline fits accurately to the observed values of the index numbers.

*EU index number, mobile annual base $LP_t^{US} = 100$; $t = 1995, \dots, 2023$; LP = Labour Productivity.

Source: (OECD, 2025); own calculations.

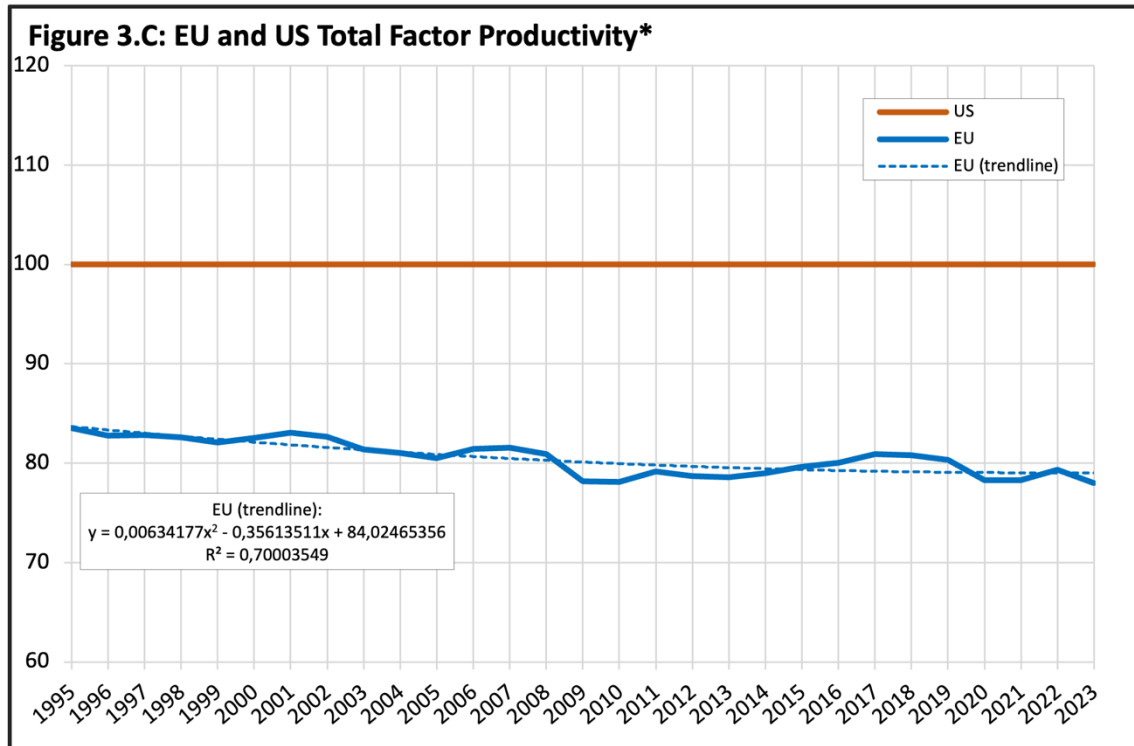


Figure 3.C reflects the phenomenon of the EU's relative loss of competitiveness, here measured by the Total Factor Productivity proxy. Viewing things from this third wide-angle perspective, the EU's competitiveness has been gradually, slowly, and incessantly diminishing in long-trend adjusted terms compared to the US.

The 2nd-order polynomial trendline fits the observed values of the index numbers.

*EU index number, be it IM_t , mobile annual base $TFP_t^{US} = 100$, $t = 1995, \dots, 2023$; Total Factor Productivity = TFP.

Due to a lack of data accessibility, two sources were combined to construct the index with a mobile annual base: (AMECO, 2024) for EU and US indexes, be it IF_t , fixed base 2015 = 100; (International Monetary Fund, 2024, p.17) for the information $TFP_{2023}^{EU} = 0,78 \cdot TFP_{2023}^{US}$; own calculations:

$$IM_t^{EU} = \frac{TFP_t^{EU}}{TFP_t^{US}} \leftrightarrow IM_t^{EU} = \frac{(IF_{23}^{US} * 0,78) * \left(\frac{IF_t^{EU}}{IF_{23}^{EU}} \right)}{IF_t^{US}} \leftrightarrow IM_t^{EU} = 0,796 * \left(\frac{IF_t^{EU}}{IF_t^{US}} \right).$$

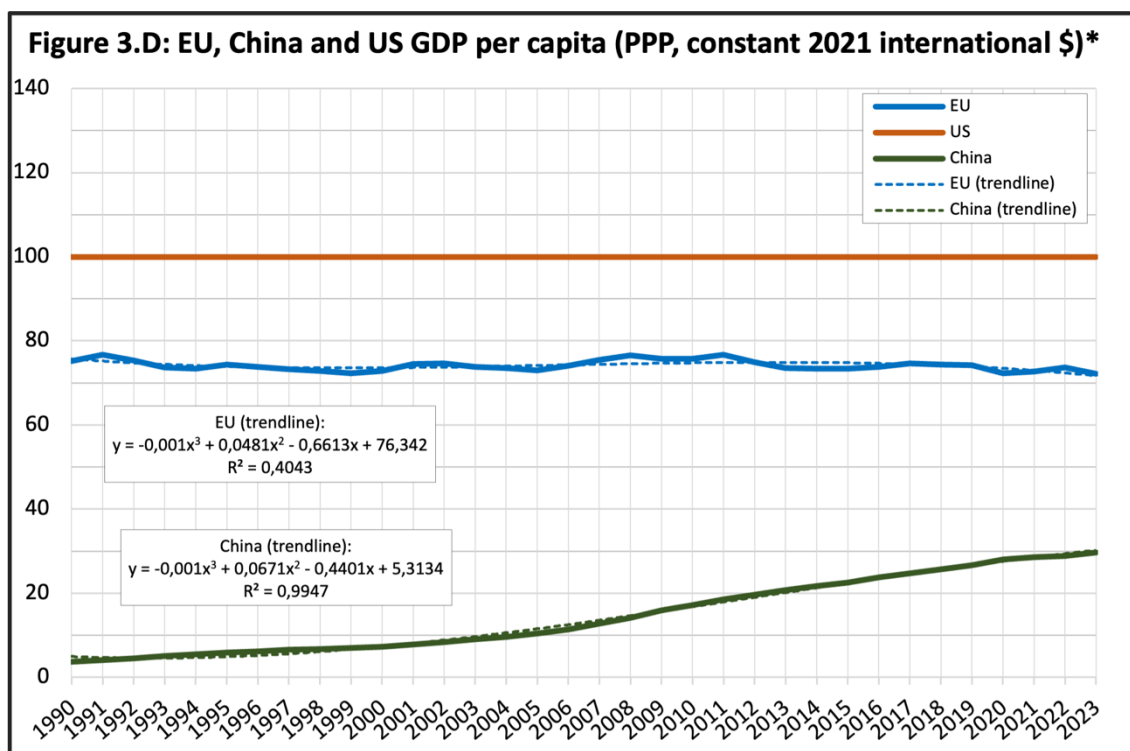


Figure 3.D reflects the EU's lack of relative gains in competitiveness, here measured by the per capita GDP proxy. Viewing things from this fourth wide-angle perspective, the EU's competitiveness has been gradually, slowly, and incessantly diminishing during this period, in long-trend adjusted terms, compared to the US.

The 3rd-order polynomial trendline fits the observed values of the EU index numbers, even though the almost horizontality in the EU case implies a modest 0,40 for R^2 .

The 3rd-order polynomial trendline accurately fits the observed values of China index numbers.

*EU and China: both as index numbers, mobile annual base $GDPpc_t^{US} = 100$; $t = 1990, \dots, 2023$; $GDPpc$ = GDP per capita.

Source: (World Bank, 2025); own calculations.

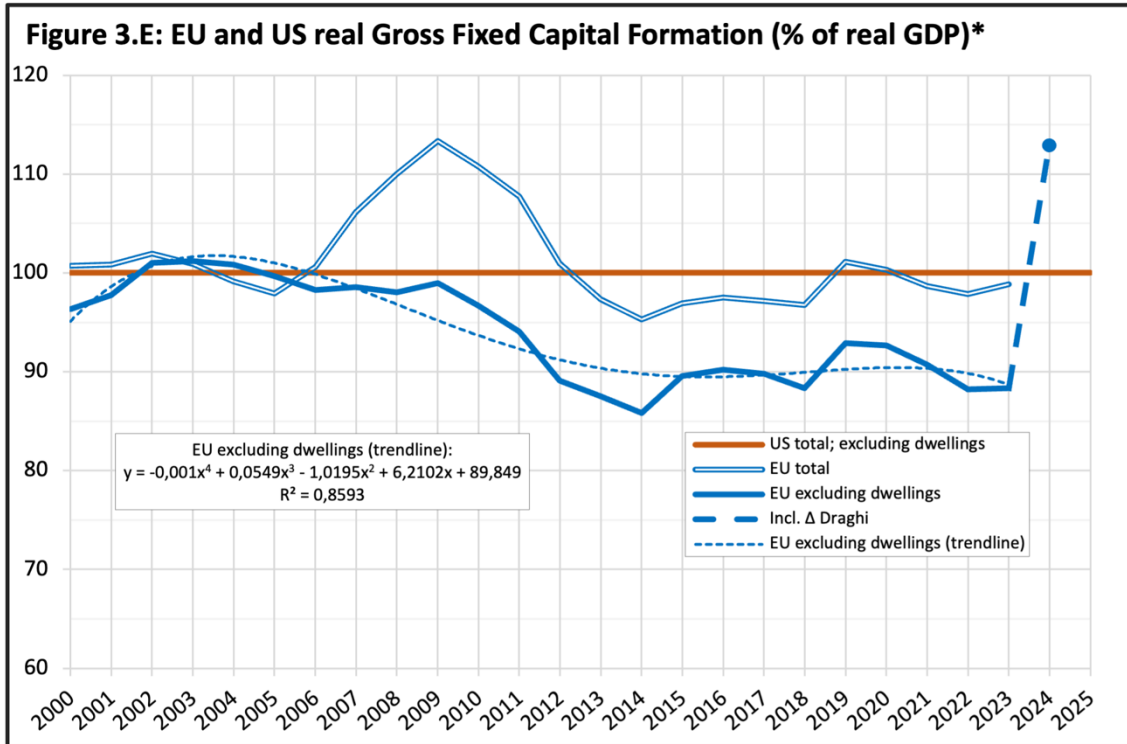


Figure 3.E reflects the phenomenon of the EU's relative loss of competitiveness, as measured by the total and productive investment rate *proxy*. Viewing things from this fifth wide-angle perspective, specifically focusing on productive investment (excluding dwellings), the EU's competitiveness declined from approximately 99,1% of the US, in 2001-2009, to about 90,3%, in 2012-2023.

The graph highlights the effect of Draghi's recommendation of additional investment (Δ Draghi) if it were implemented in 2024 (calculated based on the 2023 value and adding a 4,55 p.p. increase). *Ceteris paribus*, including such additional investment, the EU would represent approximately 113% of the US ("Incl. Δ Draghi").

The 4th-order polynomial trendline fits accurately to the observed values of the index numbers.

*EU index number, mobile annual base $\left(\frac{\text{GFCF}}{\text{GDP}}\right)_t^{\text{US}} = 100$; $t = 2000, \dots, 2024$; GFCF = Gross Fixed Capital Formation.

Source: (AMECO, 2024); own calculations.

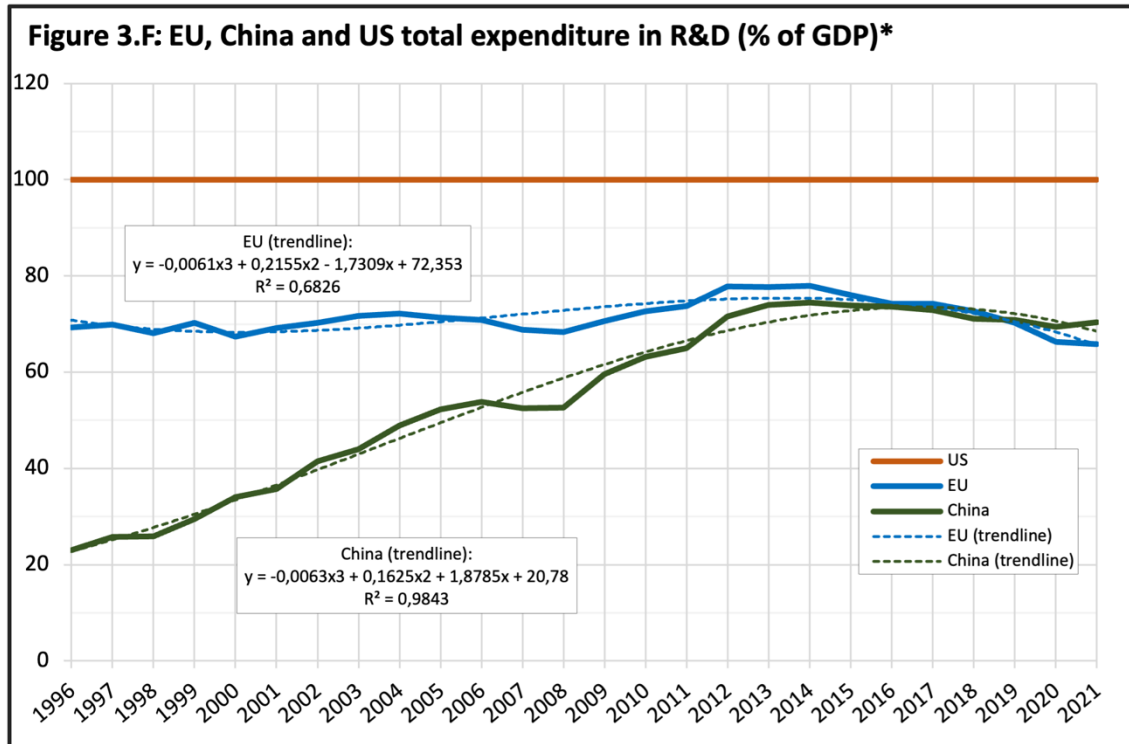


Figure 3.F reflects the phenomenon of the EU's relative loss of competitiveness, here measured by the ratio R&D expenditure/GDP *proxy*. Viewing things from this sixth wide-angle perspective, the EU's competitiveness has been diminishing.

The 3rd-order polynomial trendline fits the observed values of the EU index numbers.

The 3rd-order polynomial trendline accurately fits the observed values of the China index numbers.

*EU and China: both as index numbers, mobile annual base $\left(\frac{R\&D}{GDP}\right)_t^{US} = 100$; $t = 1996, \dots, 2023$; R&D = Research and Development.

Source: (World Bank, 2025); own calculations.

Table 1: Database for Figures 3.A - 3.F

	GDP, PPP, constant 2021 million international \$			GDP per hour worked, PPP, constant 2015 US\$		TFP, index number, fixed base (2015=100)	
	China	EU	US	EU	US	EU	US
1990	1 868 036,53	14 043 816,65	11 077 900,30				
1991	2 041 068,76	14 152 461,52	11 065 901,51				
1992	2 331 401,19	14 235 483,99	11 455 697,58				
1993	2 655 086,62	14 153 914,47	11 770 934,99				
1994	3 001 225,13	14 536 722,63	12 245 188,64				
1995	3 329 977,96	14 954 005,61	12 573 902,24	48,48	52,33	83,60	79,70
1996	3 660 396,91	15 259 955,27	13 048 286,99	49,13	53,63	84,40	81,20
1997	3 998 499,72	15 652 322,15	13 628 561,01	50,11	54,41	85,70	82,40
1998	4 312 220,08	16 111 249,46	14 239 547,57	50,98	55,63	87,00	83,90
1999	4 642 607,36	16 577 690,71	14 921 397,64	52,07	57,27	88,40	85,80
2000	5 036 769,06	17 229 758,06	15 529 830,42	53,76	58,85	90,70	87,50
2001	5 456 620,70	17 617 218,49	15 678 223,91	54,84	60,16	91,90	88,10
2002	5 955 008,29	17 837 270,11	15 944 823,85	55,92	61,83	92,80	89,40
2003	6 552 773,84	18 035 692,86	16 390 578,29	56,48	63,70	93,10	91,10
2004	7 215 496,57	18 538 258,57	17 021 250,32	57,39	65,37	94,40	92,80
2005	8 037 672,95	18 933 242,09	17 614 194,08	58,09	66,74	95,10	94,10
2006	9 060 141,77	19 639 224,13	18 104 668,29	59,09	67,35	96,60	94,50
2007	10 349 477,94	20 290 182,83	18 467 460,19	59,63	68,38	97,40	95,10
2008	11 348 272,83	20 467 696,56	18 488 436,87	59,47	69,18	96,70	95,20
2009	12 414 865,86	19 597 767,65	18 012 082,25	58,80	71,45	94,10	95,90
2010	13 735 294,98	19 991 939,91	18 497 542,56	60,48	73,30	96,20	98,10
2011	15 047 129,95	20 382 815,83	18 786 919,38	61,63	73,38	97,70	98,30
2012	16 230 396,60	20 229 606,93	19 216 973,27	61,95	73,67	97,50	98,70
2013	17 490 873,56	20 216 464,16	19 623 956,11	62,50	74,18	97,80	99,10
2014	18 789 704,49	20 561 713,20	20 119 229,41	62,95	74,62	98,60	99,40
2015	20 112 749,38	21 061 296,41	20 711 851,46	63,86	75,26	100,00	100,00
2016	21 490 223,76	21 483 007,24	21 088 693,55	64,09	75,55	100,60	100,10
2017	22 983 192,75	22 118 781,18	21 606 973,98	65,20	76,40	102,30	100,70
2018	24 534 506,28	22 619 053,16	22 247 945,96	65,68	77,39	103,10	101,60
2019	25 994 432,26	23 075 053,37	22 822 794,02	66,16	78,45	103,60	102,70
2020	26 576 353,59	21 781 284,05	22 329 130,34	67,03	82,03	102,10	103,90
2021	28 821 648,70	23 170 156,06	23 681 171,00	67,43	83,21	104,30	106,10
2022	29 672 080,42	24 011 394,55	24 276 130,90	67,74	82,33	105,40	105,80
2023	31 229 733,45	24 138 055,21	24 977 117,77	67,36	83,62	104,80	107,00
Source	(World Bank, 2025)			(OECD, 2025)		(AMECO, 2024)	

Table 1 (continued)

	GDP per capita, PPP, constant 2021 international \$			GFCF total, constant prices 2015, % of GDP		GFCF excluding dwellings, constant prices 2015 (% of GDP)		Total R&D expenditure (% of GDP)		
	China	EU	US	EU	US	EU	US	China	EU	US
1990	1 645,58	33 395,91	44 378,52							
1991	1 773,64	33 557,21	43 742,03							
1992	2 001,25	33 656,09	44 659,15							
1993	2 253,05	33 354,75	45 286,94							
1994	2 518,15	34 171,54	46 537,36							
1995	2 763,80	35 086,00	47 220,96							
1996	3 006,36	35 745,54	48 435,70					0,56	1,70	2,45
1997	3 250,61	36 609,54	49 984,27					0,64	1,73	2,48
1998	3 472,18	37 632,55	51 619,87					0,65	1,70	2,50
1999	3 705,98	38 658,32	53 474,05					0,75	1,79	2,54
2000	3 989,06	40 130,88	55 038,62	21,79	21,63	15,63	16,23	0,89	1,76	2,62
2001	4 290,30	40 979,19	55 017,30	21,51	21,32	15,56	15,92	0,94	1,82	2,64
2002	4 650,90	41 396,03	55 436,12	21,00	20,60	15,13	14,97	1,06	1,79	2,55
2003	5 085,98	41 708,07	56 498,21	21,08	20,89	15,09	14,92	1,12	1,83	2,55
2004	5 567,19	42 709,92	58 131,63	21,14	21,32	15,12	14,99	1,21	1,80	2,49
2005	6 165,18	43 465,55	59 604,75	21,40	21,85	15,29	15,34	1,31	1,78	2,50
2006	6 910,76	44 940,20	60 676,57	21,97	21,83	15,69	15,97	1,37	1,80	2,55
2007	7 853,10	46 274,11	61 306,60	22,59	21,27	16,36	16,60	1,37	1,80	2,62
2008	8 566,96	46 529,52	60 798,43	22,39	20,35	16,49	16,81	1,45	1,88	2,74
2009	9 325,65	44 446,59	58 714,97	20,71	18,27	15,27	15,43	1,66	1,97	2,79
2010	10 267,81	45 277,11	59 799,29	20,15	18,19	14,99	15,50	1,71	1,97	2,71
2011	11 187,17	46 244,00	60 294,98	20,18	18,73	15,14	16,09	1,78	2,02	2,74
2012	11 985,32	45 828,80	61 224,41	19,76	19,58	14,84	16,66	1,91	2,08	2,67
2013	12 830,37	45 688,27	62 089,35	19,38	19,91	14,61	16,69	2,00	2,10	2,70
2014	13 696,52	46 353,03	63 191,25	19,50	20,46	14,76	17,20	2,02	2,12	2,72
2015	14 575,93	47 376,62	64 575,41	20,02	20,65	15,35	17,15	2,06	2,12	2,79
2016	15 485,21	48 223,63	65 275,57	20,22	20,74	15,40	17,07	2,10	2,12	2,85
2017	16 461,07	49 573,92	66 458,02	20,46	21,07	15,56	17,33	2,12	2,15	2,90
2018	17 490,17	50 607,12	68 070,21	20,79	21,49	15,80	17,88	2,14	2,19	3,01
2019	18 465,30	51 587,05	69 511,76	21,80	21,56	16,80	18,08	2,24	2,23	3,17
2020	18 833,78	48 656,56	67 352,39	21,93	21,86	16,70	18,03	2,41	2,30	3,47
2021	20 406,73	51 885,39	71 318,31	21,45	21,73	16,08	17,72	2,43	2,27	3,46
2022	21 011,62	53 615,15	72 841,92	21,17	21,63	15,93	18,06			
2023	22 137,60	53 783,06	74 577,51	21,45	21,70	16,36	18,51			
Source	(World Bank, 2025)			(AMECO, 2024); own calculations				(World Bank, 2025)		

Annex II – Details of the Graphs in Chapter 3

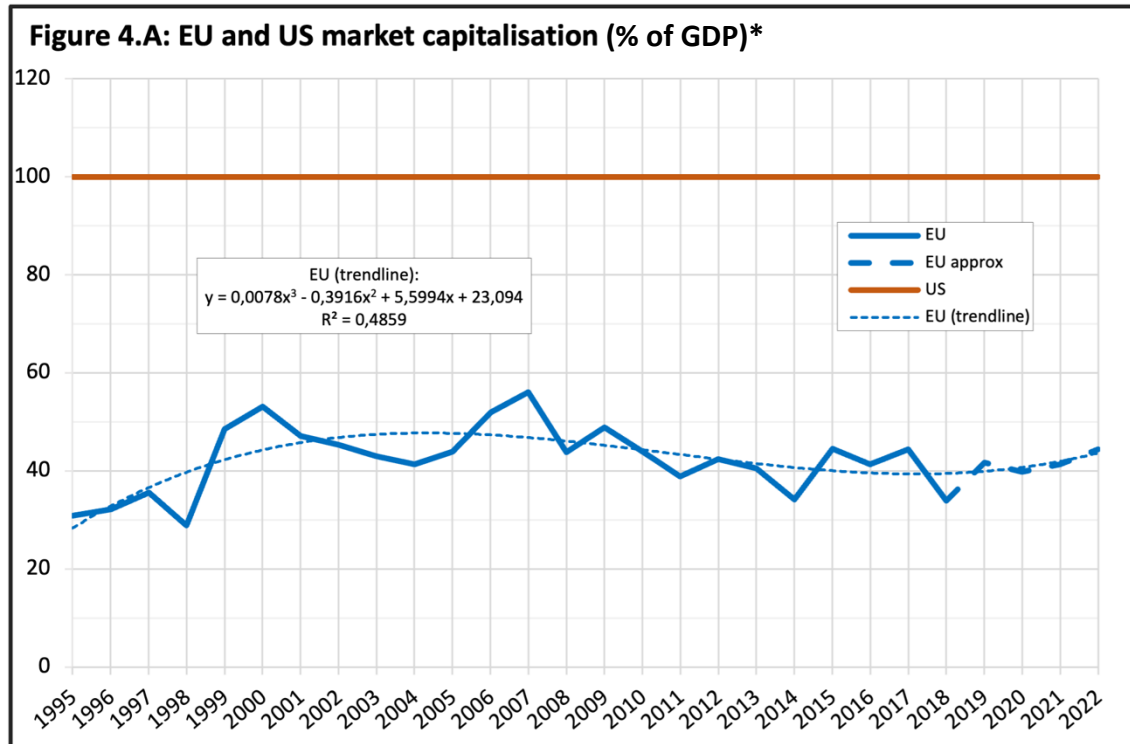


Figure 4.A highlights the relative underdevelopment and limited scale of capital markets in the EU, measured here by the total market capitalisation of domestic listed companies as a percentage of GDP.

The 3rd-order polynomial trendline fits the observed values of the index numbers, even though R^2 is only 0,49.

*EU index number, mobile annual base $\left(\frac{\text{MtCpt}}{\text{GDP}}\right)_t^{\text{US}} = 100$, $t = 1995, \dots, 2022$; MtCpt = Market Capitalisation.

Due to limited data access, two sources were used: (World Bank, 2025) for market capitalisation of domestic listed companies as a percentage of GDP for the EU and US, and nominal GDP for the EU, Norway, and Iceland; (World Federation of Exchanges, 2025) for total market capitalisation of major EU stock exchanges: Euronext (including Norway), Nasdaq Nordic and Baltics (including Iceland), BME Spanish Exchanges, and Warsaw Stock Exchange; own calculations: since the World Bank only aggregated EU values until 2018, EU values were derived from the World Federation of Exchanges data (2005-2022) and relativised by nominal GDP (EU + Norway + Iceland) from the World Bank. Deviations in EU market capitalisation data between the World Bank and World Federation values for 2005-2018 were calculated, and the average deviation was applied to the World Federation values for 2019-2022, providing an approximate value for the EU ("EU approx" in graph).

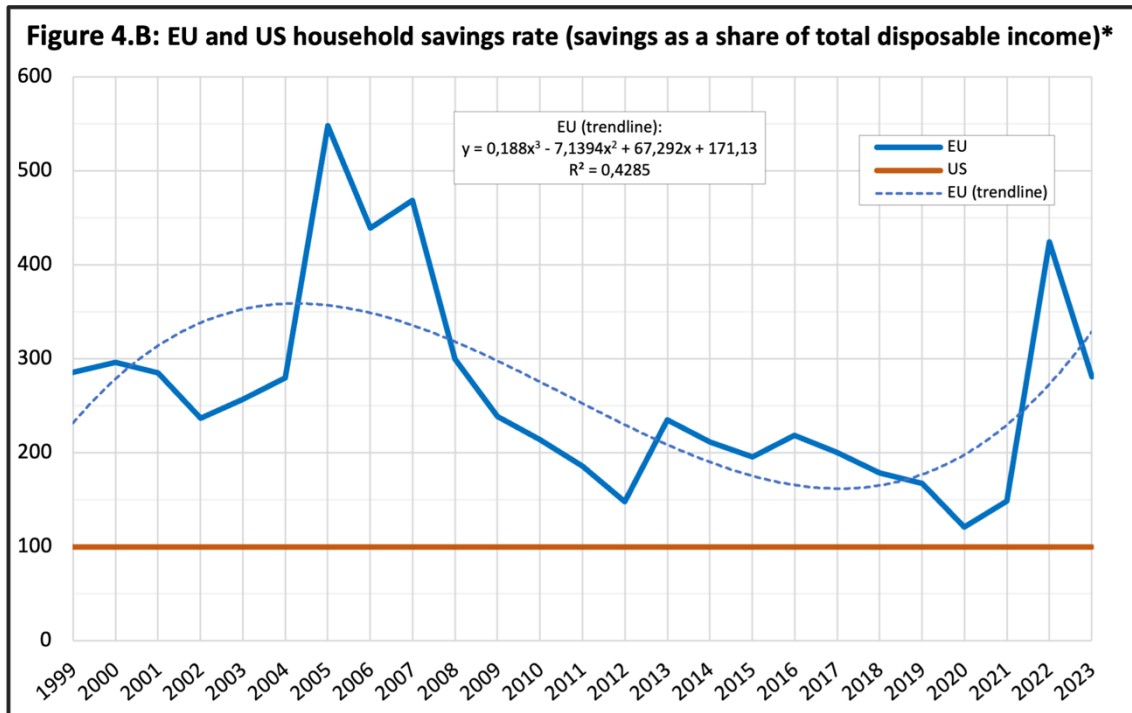


Figure 4.B reveals a much higher households' propensity to save in the EU than in the US, which should be a good indicator for the EU's capital markets, if the EU had an efficient financial intermediation.

Due to the strong variations, the 3rd-order polynomial trendline does not fit well with the observed values of the index numbers, with a R^2 of only 0,43. However, when looking at the long-term, the adjusted trendline is still useful.

*EU index number, mobile annual base $(Savings\ Rate)_t^{US} = 100$; $t = 1999, \dots, 2023$.

Sources: (Eurostat, 2025a); (Federal Reserve of St. Louis, 2025); own calculation.

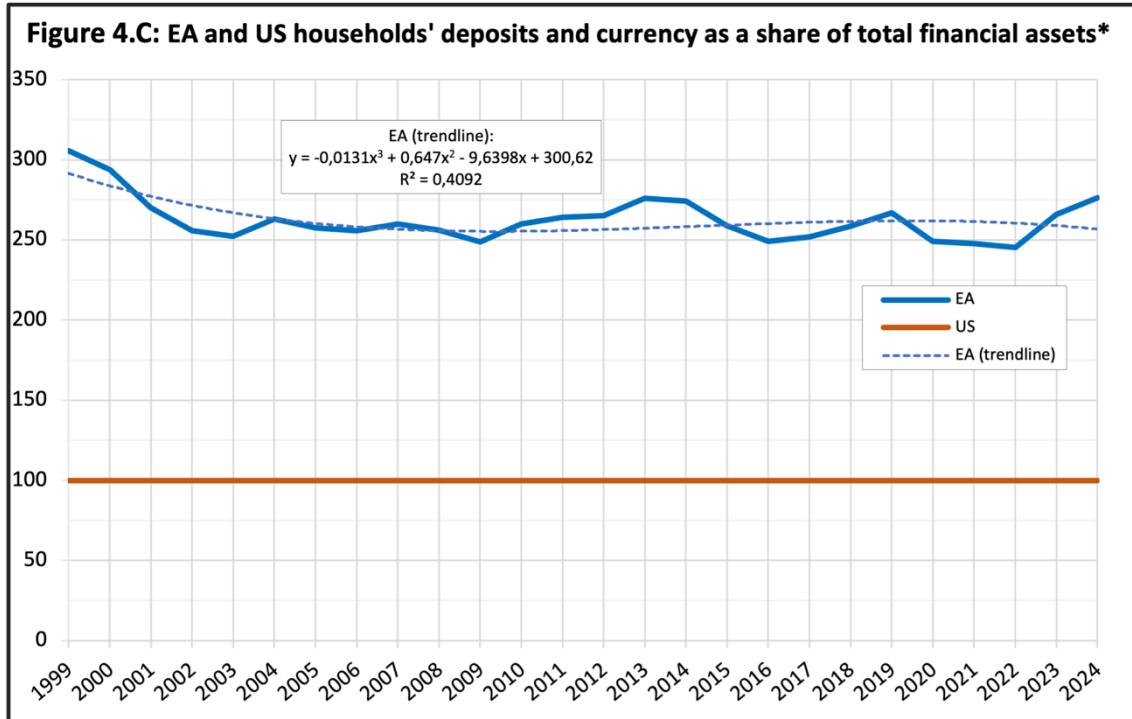


Figure 4.C reveals a much higher preference for liquidity among EA households than those in the US, which may reflect both the relative unattractiveness of European capital markets and a risk-averse culture in Europe.

The 3rd-order polynomial trendline fits the observed values of the index numbers, even though the almost horizontality in the EA case implies a R^2 of only 0,41.

*EU index number, mobile annual base $\left(\frac{D\&C}{TFA}\right)_t^{US} = 100$; $t = 1999, \dots, 2024$; D&C = Deposits and Currency; TFA = Total Financial Assets.

Sources: (European Central Bank, 2025a); (Federal Reserve Bank of St. Louis, 2025); own calculations: in this dataset, quarterly values were averaged to present annual values.

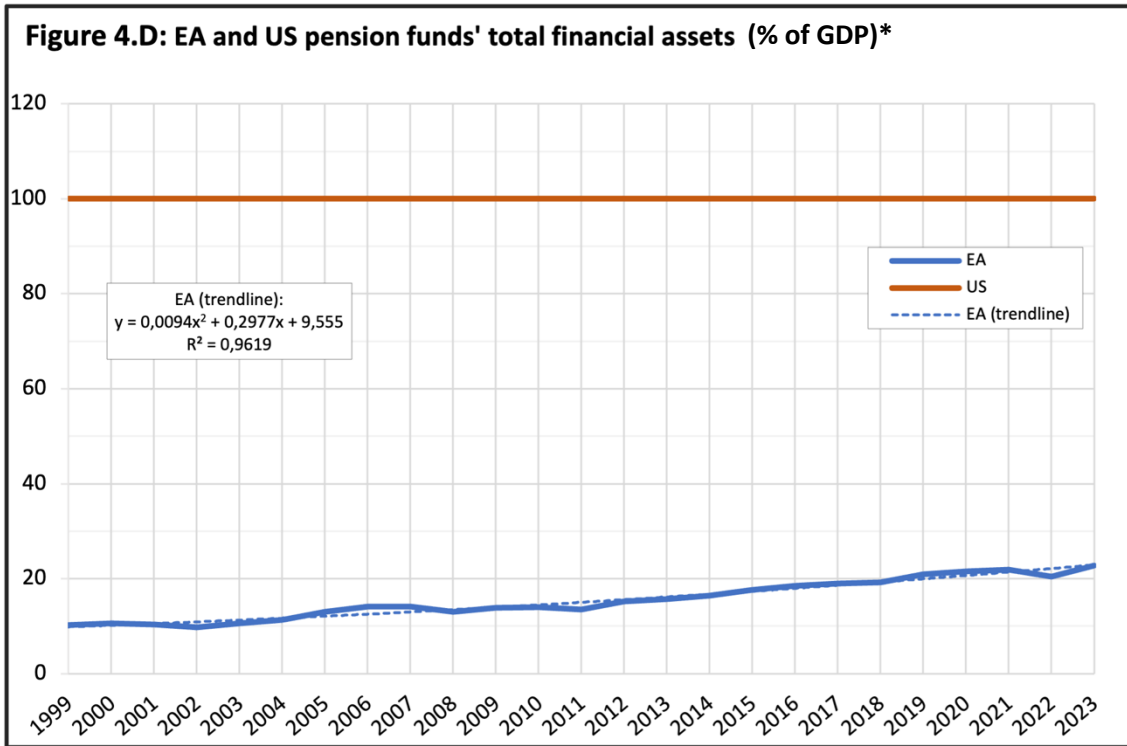


Figure 4.D reveals a severe weakness of pension systems as supporters of the capital markets in the EA, compared to the US.

The 2nd-order polynomial trendline fits accurately to the observed values of the index numbers.

*EU index number, mobile annual base $\left(\frac{\text{PFTFA}}{\text{GDP}}\right)_t^{\text{US}} = 100$; $t = 1999, \dots, 2023$; PFTFA = Pension Funds' Total Financial Assets.

Sources: (Eurostat, 2025a); (European Central Bank, 2025a); (Federal Reserve Bank of St. Louis, 2025); own calculations.

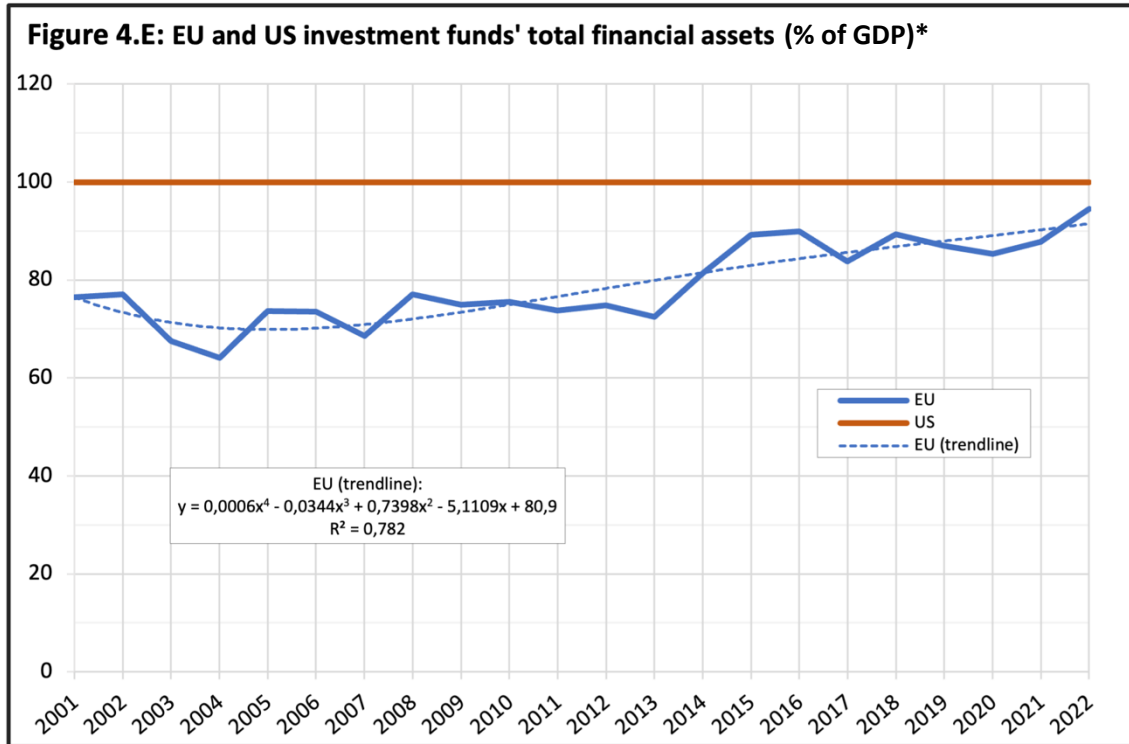


Figure 4.E reveals that the EU has a relatively strong investment funds sector, which is a natural supporter of the capital markets. This figure may be considered the exception amongst the selection of financial indicators, as it does not contribute to explaining the EU's capital markets' relative underdevelopment.

The 4th-order polynomial trendline fits the observed values of the index numbers.

*EU index number, mobile annual base $\left(\frac{\text{IFTFA}}{\text{GDP}}\right)_t^{\text{US}} = 100$; $t = 2001, \dots, 2023$; IFTFA = Investment Funds' Total Financial Assets.

Source: (Eurostat, 2025a); (Federal Reserve Bank of St. Louis, 2025); own calculations.

It should be noted that the Federal Reserve Bank of St. Louis does not include every type of real estate investment fund in its data for IFTFA, while Eurostat does. However, since the total of real estate investment funds' financial assets does not constitute a significant portion of the IFTFA (averaging 3,5% of the US's IFTFA during this period), this omission will not be corrected or adjusted in the data presented, to prevent any potential errors in consolidation.

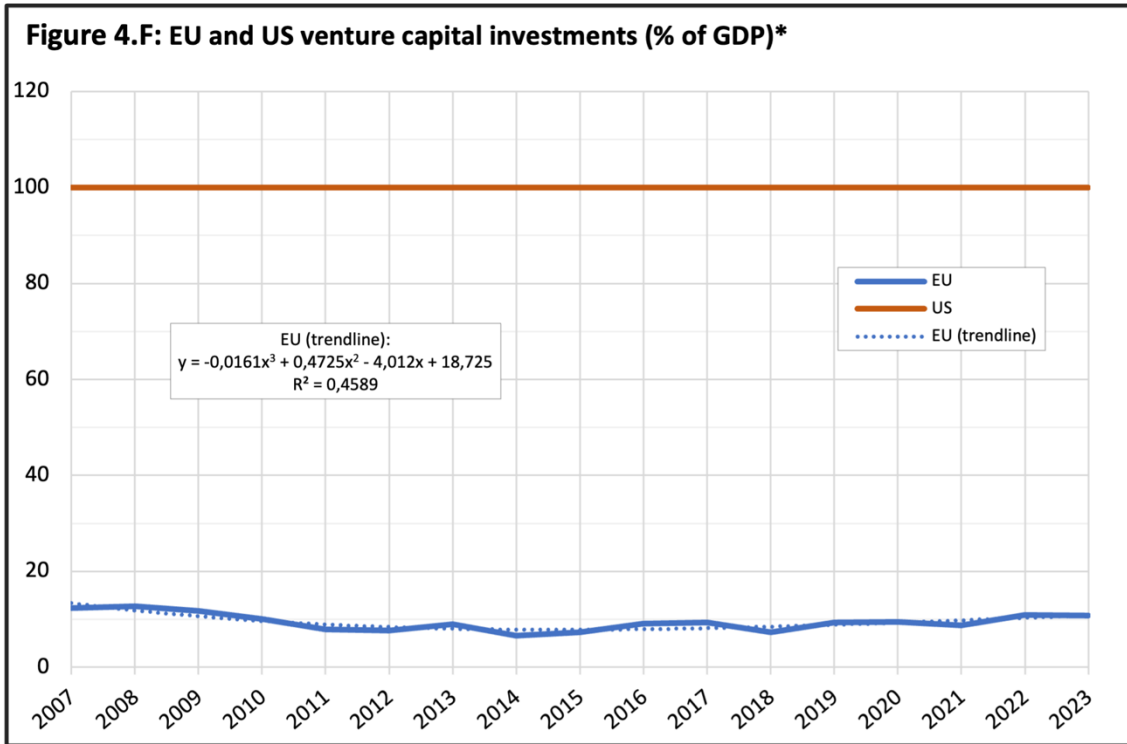


Figure 4.F reveals yet another fundamental weakness of the EU, with another very pronounced gap between the EU and the US, which also complements Figure 4.A.

The 3rd order polynomial trendline fits the observed values of the index numbers, although a near horizontality contributes to a R^2 of only 0,46.

*EU index number, mobile annual base $\left(\frac{VCI}{GDP}\right)_t^{US} = 100$; $t = 2007, \dots, 2023$; VCI = Venture Capital Investments.

Source: (OECD, 2025); own calculations: in the OECD dataset, values were not aggregated for the EU, so an aggregation was made by adding up the values of each Member State's VCI, and dividing by the total GDP of the EU. Due to lack of data, three countries were excluded from the aggregation: Croatia, Cyprus, and Malta.

Table 2: Database for Figures 4.A - 4.F

	Market Capitalisation			Household Savings rate	Household Personal Savings	Household Disposable Personal Income
	EU* (millions of US\$)	EU (% of GDP)	US (% of GDP)	EU (%)	US (millions of US\$)	US (millions of US\$)
1995		28,07	91,00			
1996		33,77	105,05			
1997		44,70	125,56			
1998		41,08	142,59			
1999		74,39	153,43	13,17	315 817,75	6 866 684,00
2000		78,27	147,38	12,72	316 820,75	7 384 967,50
2001		62,20	132,15	13,31	363 153,00	7 754 093,25
2002		45,80	101,15	13,21	451 598,50	8 097 873,50
2003		53,55	124,53	13,32	439 892,50	8 478 215,00
2004		55,29	133,61	13,00	417 050,00	8 967 129,50
2005	5 891 691,50	57,30	130,38	12,32	209 178,00	9 333 648,50
2006	8 132 999,42	73,64	141,64	12,18	275 950,00	9 945 033,50
2007	9 818 358,15	77,11	137,64	11,83	263 423,75	10 439 628,50
2008	4 890 881,54	34,37	78,47	12,38	451 473,25	10 918 179,25
2009	6 678 549,27	50,94	104,14	13,66	624 938,00	10 913 303,75
2010	6 890 308,11	50,46	114,85	12,66	671 424,75	11 319 007,50
2011	5 727 869,82	39,00	100,26	12,14	776 283,25	11 855 879,25
2012	6 592 756,12	48,70	114,85	11,61	976 526,25	12 408 280,75
2013	8 227 994,82	57,69	142,38	11,66	615 696,50	12 391 235,50
2014	7 515 251,03	50,98	149,54	11,57	711 996,00	12 998 394,25
2015	7 310 785,51	60,98	137,02	11,45	790 573,25	13 532 853,75
2016	7 378 092,86	60,10	145,45	11,72	746 197,00	13 928 898,00
2017	9 429 591,40	72,80	163,78	11,52	841 647,00	14 613 927,75
2018	7 809 364,14	50,03	147,34	11,49	996 656,50	15 454 040,00
2019	9 494 458,97		158,24	12,22	1 178 158,25	16 164 497,75
2020	10 907 262,48		194,67	18,26	2 659 009,25	17 374 804,75
2021	13 530 002,46		205,01	16,24	2 095 699,75	18 714 400,00
2022	10 747 064,47		154,95	12,73	566 096,00	18 844 012,25
2023	12 306 559,30			13,23	967 224,50	20 546 799,25
Source	(World Federation of Exchanges, 2025)	(World Bank, 2025)		(Eurostat, 2025)	(Federal Reserve Bank of St. Louis, 2025)	

*Euronext, Nasdaq Nordic and Baltics, BME Spanish Exchanges, and Warsaw Stock Exchange.

Table 2 (continued)

	Household Total Financial Assets		Household Total Currency and Deposits		Pension Funds Total Financial Assets	
	EU (millions of €)	US (millions of US\$)	EU (millions of €)	US (millions of US\$)	EU (million of €)	US (millions of US\$)
1995						
1996						
1997						
1998						
1999	12 694 082,25	32 730 263,75	3 854 305,44	3 250 350,00	621 008,28	8 728 446,00
2000	13 827 325,25	35 065 988,75	3 940 018,25	3 400 567,00	693 631,64	9 487 332,00
2001	13 764 651,00	34 065 777,00	4 081 666,25	3 742 987,25	682 927,97	9467245,00
2002	14 011 452,75	33 935 801,00	4 249 594,00	4 022 571,50	679 826,25	10 004 710,00
2003	14 432 867,50	35 753 295,50	4 458 170,38	4 379 749,75	726 989,66	9 993 691,00
2004	15 316 744,25	40 800 111,50	4 646 266,25	4 707 433,25	837 505,44	11 022 543,00
2005	16 565 080,00	44 505 621,75	4 885 214,75	5 098 754,25	1 014 270,10	11 873 984,00
2006	17 699 394,00	49 158 731,00	5 126 336,75	5 568 281,75	1 173 839,66	12 788 247,00
2007	18 761 490,00	53 392 224,00	5 460 170,75	5 980 151,50	1 255 484,54	13 583 496,00
2008	18 313 722,50	50 627 104,00	5 915 897,00	6 388 011,50	1 200 278,69	13 997 060,00
2009	18 287 157,50	48 204 320,00	6 225 732,75	6 592 242,50	1 210 156,22	13 417 364,00
2010	19 090 262,50	52 137 717,75	6 399 404,88	6 719 603,50	1 340 567,25	14 922 719,00
2011	19 421 300,00	55 549 176,25	6 587 529,38	7 136 823,00	1 394 190,57	16 201 381,00
2012	20 006 461,00	58 773 163,00	6 800 730,88	7 530 858,25	1 553 112,38	16 735 241,00
2013	20 657 816,50	64 347 821,75	7 004 837,63	7 904 623,75	1 662 643,50	17 771 468,00
2014	21 830 479,00	70 141 275,75	7 157 963,25	8 389 345,75	1 874 245,32	19 575 108,00
2015	22 935 213,00	72 597 816,50	7 356 520,50	8 992 752,75	2 089 780,75	20 293 389,00
2016	23 888 210,50	75 281 421,25	7 601 177,00	9 620 968,25	2 219 538,69	20 592 746,00
2017	25 037 727,00	80 803 371,00	7 880 064,63	10 094 751,50	2 375 415,13	21 631 894,00
2018	25 596 786,00	84 512 086,25	8 165 772,00	10 426 216,50	2 478 825,75	22 699 768,00
2019	27 064 697,50	90 701 755,50	8 578 439,25	10 764 108,00	2 761 400,13	23 356 357,00
2020	28 127 780,00	96 118 668,00	9 163 630,00	12 568 220,50	2 742 710,94	23 452 727,00
2021	30 492 074,50	113 913 641,50	9 761 897,50	14 716 093,25	3 060 271,44	26 273 818,00
2022	29 767 246,50	110 051 116,75	10 156 224,75	15 301 548,75	2 877 521,50	26 609 521,00
2023	30 947 729,00	114 646 260,25	10 261 214,25	14 302 805,50	3 018 322,38	25 129 655,00
Source	(ECB, 2025)	(Federal Reserve Bank of St. Louis, 2025)	(ECB, 2025)	(Federal Reserve Bank of St. Louis, 2025)	(ECB, 2025)	(Federal Reserve Bank of St. Louis, 2025)

Table 2 (continued)

	Non-MMF Investment Funds Total Financial Assets, % of GDP (MMF = Money Market Funds)	Non-MMF Investment Funds Total Financial Assets (MMF = Money Market Funds)	Venture Capital Investments	
	EU (%)	US (millions of US\$)	EU** (millions of US\$)	US (% of GDP)
1995				
1996				
1997				
1998				
1999				
2000				
2001	36,40	5 035 860,00		
2002	32,10	4 552 064,00		
2003	35,10	5 960 437,00		
2004	37,40	7 131 963,00		
2005	45,20	7 997 727,00		
2006	50,10	9 408 867,00		
2007	49,30	10 412 762,00	4 707,34	26,00
2008	36,20	6 940 513,00	5 064,87	25,00
2009	47,80	9 228 845,00	3 172,14	18,00
2010	54,10	10 771 749,00	2 952,90	20,00
2011	52,00	10 998 089,00	3 472,00	28,00
2012	60,00	13 037 857,00	2 732,74	24,00
2013	66,40	15 477 850,00	3 268,64	24,00
2014	77,20	16 708 992,00	3 350,26	32,00
2015	80,10	16 414 807,00	3 396,61	34,00
2016	84,10	17 580 825,00	4 170,44	33,00
2017	89,20	20 868 120,00	4 921,54	36,00
2018	85,30	19 726 402,00	6 596,01	57,00
2019	96,50	23 913 913,00	7 788,13	53,00
2020	106,20	26 573 282,00	8 712,40	60,00
2021	115,30	31 077 746,00	16 723,59	110,00
2022	92,40	25 432 602,00	13 320,72	72,00
2023	93,90	28 492 051,00	9 233,61	47,00
Source	(Eurostat, 2025)	(Federal Reserve Bank of St. Louis, 2025)	(OECD, 2025)	

**EU excluding Croatia, Cyprus and Malta

Table 2 (continued)

	GDP			
	EU* (millions of current US\$)	EU** (millions of US\$)	EA (millions of current €)	US (millions of current US\$)
1995				
1996				
1997				
1998				
1999			6 704 260,90	9 631 172,00
2000			7 060 575,20	10 250 952,00
2001			7 394 454,90	10 581 929,00
2002			7 648 498,40	10 929 108,00
2003			7 875 580,50	11 456 450,00
2004			8 213 927,10	12 217 196,00
2005	12 281 295,71		8 519 767,50	13 039 197,00
2006	13 132 857,75		8 981 264,90	13 815 583,00
2007	15 213 842,42	14 688 788,85	9 480 608,60	14 474 227,00
2008	16 848 141,42	16 255 461,43	9 720 374,10	14 769 862,00
2009	15 247 469,19	14 748 982,76	9 382 260,20	14 478 067,00
2010	15 088 247,60	14 549 246,06	9 646 053,00	15 048 971,00
2011	16 393 212,57	15 776 287,08	9 921 983,80	15 599 732,00
2012	15 261 508,78	14 641 457,49	9 952 625,90	16 253 970,00
2013	15 942 166,99	15 305 334,85	10 058 185,20	16 880 683,00
2014	16 284 417,04	15 670 145,51	10 299 260,00	17 608 138,00
2015	14 060 766,59	13 572 858,50	10 660 596,80	18 295 019,00
2016	14 382 020,66	13 904 882,72	10 953 618,40	18 804 913,00
2017	15 296 539,25	14 776 852,37	11 366 404,90	19 612 103,00
2018	16 557 537,26	15 988 578,53	11 743 817,00	20 656 516,00
2019	16 241 822,50	15 705 296,32	12 137 823,70	21 539 982,00
2020	15 893 963,38	15 405 780,41	11 615 213,50	21 354 105,00
2021	18 025 744,74	17 379 422,96	12 612 911,40	23 681 171,00
2022	17 617 829,17	16 874 583,13	13 725 060,70	26 006 893,00
2023	19 107 356,00	18 458 070,64	14 598 181,40	27 720 710,00
Source	(World Bank, 2025)	(OECD, 2025)	(Eurostat, 2025)	(Federal Reserve Bank of St. Louis, 2025)

*Euronext, Nasdaq Nordic and Baltics, BME Spanish Exchanges, and Warsaw Stock Exchange.

**EU excluding Croatia, Cyprus and Malta