Bančni vestnik

THE JOURNAL FOR MONEY AND BANKING

LJUBLJANA, VOLUME 74, No. 5, MAY 2025

SPECIAL ISSUE
KEY CHALLENGES IN A CHANGING GEOPOLITICAL AND ECONOMIC ENVIRONMENT AND THE ROLE OF THE FINANCIAL SECTOR IN FINDING COMPETITIVE ADVANTAGES

KAZALO

Bančni vestnik

REVIJA ZA DENARNIŠTVO IN BANČNIŠTVO
THE JOURNAL FOR MONEY AND BANKING

ISSN 0005-4631

ZBS | Združenje bank Slovenije

Uredništvo in uprava Bančnega vestnika pri Združenju bank Slovenije / *The Bank Association of Slovenia,* Šubičeva 2, p.p. 261, 1001 Ljubljana, Slovenija, Telefon / *Phone*: +386 (0) 1 24 29 705, Telefax / *Fax*: +386 (0) 1 24 29 713, E-mail: bancni.vestnik@zbs-giz.si, www.zbs-giz.si, TRR / *Bank account*: SI56 0201 7001 4356 205.

Quō vadis Europae

*Miha Bobič**

In the light of the current turmoil sparked by the latest custom tariffs threats and almost looming trade war, it seems the vision on the future of European competitiveness, the so-called Draghi Report, is something quite far from us and out of date. Still, the report has actually rubbed salt into the wounds of the »old continent« since the latest developments clearly show that we Europeans play second fiddle in the world orchestra. Despite remoteness, Draghi Report voices over mix of symptoms and root causes responsible for the current state of the EU's competitive position. Even by setting aside the rumours that with this report Draghi envisioned himself as a head of the EU Commission, and in this way bypassing voters will, those challenges do not origin from yesterday, actually Mario was part for the problem creation, and should you have any doubts about it, just check whose signature is on a 50-euro banknote. The message is painful: we became a history, an open-air museum.

In the main, Draghi critiques the European Union failing to meet industrial competitiveness resulting from a number of factors: the fragmented financial market, sluggish digital and green transition, the non-flexible labour market, too low productivity, insufficient investments in research and development, excessive regulation, (over)reliance on foreign energy and raw materials.

The most critical consequence of the fragmented financial market is in the area of financing risky ventures into high-tech start-ups. This is vital for technology revitalisation in big corporations, which are normally reluctant to get out of their "comfort zone".

Interesting is that Europe lags behind on digital green transformation. The digital transformation, in particular, is a sore spot as explained later on. The design of green transition, the EU's flagship, had a flaw on the drawing board already. Instead of looking at the whole picture to see where implementing the necessary measures would be relatively easy and economical, such as the decarbonisation of buildings that account for around 60 per cent of the problem, EU thanks to lobbies and the regulator's misunderstanding choose transport- and electricity-related emissions are on top the list, although they account for 10 to 15 per cent of the problem, and solutions are expensive and take time. As a result, instead of following the path: energy efficiency, reusing waste energy and converting to new energy sources, we in the EU, we started to replace sources of energy and in the process, the biggest energy guzzlers – buildings – were not improved even a bit, and to add additional irony, buildings could use waste heat from manufacturing facilities and offer flexibility to electricity grids.

Seen from the angle of the Economy's technological leadership, Europe used to be a leading technology force in building construction and automotive industry in the world market. The consequence of green transitions is reliance on imported energy (and subsequent exodus of chemicals industry prompted by

* Dr. Miha Bobič, Head of Balancing and control, Danfoss

soaring energy prices) coupled with the ill-prepared automotive segment for electrification, resulting in a heavy blow to the continent's competitive edge. Worse even is final implementation, which just results in over-bureaucracy – taxonomy being prime example.
This is how Europe has managed to transform a good idea into a complete disaster in the segments in which it had its flagships. Its non-functioning single market is also seen in its non-flexible labour market. Declining industry start to mind its own existence not investments in the future. When a company starts tightening the purse strings, professional education and investments in research and development are the first victims to fall. Adding to this high tax burden for maintaining non-deserved social security and too expensive and poorly operational public service, it is clear what follows. Vulnerable, small and medium-sized enterprises – the very pillars of the European economy – would fade and disappear.
However, Europe's woes do not end here. In addition to current arms race due to thread from Russia, the old continent has two more worries: competition of the United States of America in the field of digital transition, and of China when it comes to industrial products and investment. Practically all tools for digital transition including hardware come from the States, which means that we have no control over our own data and, consequently, we are completely unprepared for the age of artificial intelligence (AI). To make things worse, the European Union 'has shot itself in the foot' by adopting the General Data Protection Regulation (GDPR), that practically supressed the emergency of high-tech companies as shown by the activity in that field in Europe, meaning after GDPR release number of high-tech companies plunged by 60 per cent. And all in the name of privacy and security protection that, honestly, speaking, GDPR has been unable to protect. On the other hand, there is unfair Chinese competition supported by the state direct financial aid to its automotive industry in fight with its European rivals, while at home in China, regulators are choking European competition through the social scoring system (people are afraid to buy non-chinese products).
Why is the EU not implementing its own "medicine" to imports from China such as, CO2 footprint vouchers for transport by sea, taxes for end of lifetime vehicles imposed on the distributors of Chinese cars and similar measures, and soon the prices of Chinese cars would be levelled with those of European manufacturers.
We, economic actors from Europe's manufacturing industries united in Orgalim organisation, have responded to Draghi's report by publishing the Helsinki Declaration adopted by the Orgalim Council in October 2024 calling on political leaders to take action for a radical competitiveness push built on the EU's Single Market, by continuing green transition, however in the right direction, and carrying out structural reforms (such as reviewing project funding, dismantling unnecessary regulatory hurdles, incentivising investment in research and development, etc). Instead, we have been given a new opportunity in defence industry....

UDK 339.9:338.1:502.131.1

Green transition and competitiveness in the light of global changes

*Bojan Ivanc**

In my contribution I focus on the competitiveness of the EU-27 economy vs its main economic rivals: the US and China. The period I am looking at more closely is 2019-2024, which takes into account two shocks that contributed to changing economic dynamics: the COVID-19 pandemics in 2020-2021 and the energy crisis in 2022-2023. The particular aspect of competitiveness I am focusing my research on is the manufacturing sector, which is truly global, especially in industries where the production costs of goods differ a lot across different countries, largely for non-perishable goods and where the costs of transportation offer an easy access to foreign markets.

JEL O44, O51, O52, O53, E31, E52

The size of the EU-27 economy in terms of GDP is about EUR 17.9 bn, with 449 m population and EUR 40 thousand GDP per capita in current prices. Over the past five years, the EU-27's GDP growth rate was rather disappointing, as real GDP rose by 1.1% annually. This translates into 5.4% larger economy since 2019. The US economy grew on average in the same period by around 2.4% (12.5% larger since 2019), whereas the Chinese economy grew by 4.8 % (26% larger since 2019). Small differences in growth profile grow over time what explains a very much different size of economy in a relatively short period of the past five years (Eurostat, Bureau of Economic Analysis, National Bureau of Statistics of China, 2025).

The main drag of slow growth of the EU-27's economies in this period was weak demand for European goods on international markets, which was due to falling competitiveness driven by Asian competitors, mostly by the Chinese ones. One of the main factors were relatively higher energy prices, as well as declining competitiveness in some sectors in which the European multinationals usually outperformed: automotive and machinery. Nevertheless, provided the general increase in prices of goods, which was led by rising prices of commodities in 2022 and 2023 a boost to the value of exports in all three largest world economies. Since 2019,

* Bojan Ivanc, CFA, CAIA, Chief Economist at Analytics, Chamber of Commerce and Industry of Slovenia, bojan.ivanc@gzs.si, GZS

the EU-27's exports rose on average by 3.9% annually (by EUR 452 bn to EUR 2,584 bn), those of the US by 5.4% annually (by EUR 438 bn to EUR 1,907 bn) and those of China by 8.8% annually (by EUR 893 bn to EUR 3,126 bn).

Since the real estate bubble burst in 2021, China's investment in property development has been halved while China has ramped up investment in priority manufacturing sectors, even as domestic demand for much of this output remains low (Hoyle and Jain-Chandra, 2024). Chinese firms are increasingly trying to escape saturated and unprofitable home markets by going global, often with state support. The crackdown on China's real estate sector has therefore coincided with a large increase in China's trade surplus. Since 2019, Chinese real estate prices have dropped by 13%, whereas they dropped by 15% since its peak in 2021. China's manufacturing surplus is now at 10% of its GDP (Bradsher, 2025, BIS, 2025).

Rising share of Chinese exports of high value-added products at expense of the EU's

Unlike the first shock when China's exports were focused on textiles and consumer electronics, the new China shock now affects sectors that are the backbone of Europe's economy - vehicles, chemicals, machines and planes (Tordoir and Setser, 2025). China's share in exports of goods rose from 16.6% in 2019 to 18.1% (2023, last available data), rising by 1.5 p.p. in this period, which is a considered a high rise in such a short period of 5 years. EU's share remained unchanged between 2019 and 2024 at 15.8%, but the US share rose by 0.7 p.p. to 11.6% in 2024. Machinery and transport equipment are the most important category within the SITC classification measured by value and dynamics shows that the EU-27's share fell by 0.3 p.p. since 2019 (to 6.2%), the US share remained unchanged (3.5%), whereas the Chinese share rose by 0.7 p.p. from 7.9% to 8.6%. Measured by the trade balance, the EU-27's surplus in machinery and equipment fell by 11% in 2024/2019, whereas in other manufactured goods the surplus (EUR 12 bn in 2019) turned to deficit (-11 EUR bn in 2024).

As a result of the combination of the energy price shock of 2022 and China's growing competition, industrial production is declining in the EU-27 – whilst China's industrial production has increased over the past years. Under President Biden, the US demand provided an important offset for European firms losing ground in China and elsewhere, as well as weak demand at home. In 2024, China was the third largest partner for the EU's exports of goods (8.3%) and the largest partner for the EU imports of goods (21.3%).

Industrial production data and value added differ

The UNIDO's data on manufacturing production, measured by value added from national accounts, in constant USD, shows, that in the EU-27 it rose by 4.5% since 2019 (in Slovenia by 5.8%), in the US by 6.9% and in China by 26.5%. In the same period, Chinese population shrank by 0.3%, whereas in the EU-27 it rose by 0.6% and in the US by 2.3%. This clearly shows the growing importance of foreign markets for the Chinese economy.

The data on industrial production in manufacturing differs a bit from the national accounts data for the same period, which can be explained by the difference between gross value added and production data in the manufacturing sector. The first one is better suited to measuring the competitiveness of the economy than the latter, although in same cases, physical production trends remain important (view of dependency, defence view). This data shows that industrial production on China rose by 30% since 2019, outperforming the national accounts data by 3.5 p.p. In the US the reverse happened, as industrial production was flat in this period, but gross value added in manufacturing rose by 6.9%. The same can be concluded for the EU-27 as industrial production rose by 1%, but its gross value-added

Table 1: Share of national exports in world exports (%) by SITC06, latest year (2024, 2023)

TIME	EU27	USA	China
Total - all products	**15,8**	**11,6**	**18,1**
Food, drinks and tobacco	1,3	0,8	0,4
Raw materials	0,4	0,5	0,1
Mineral fuels, lubricants and related materials	0,8	1,8	0,3
Chemicals and related products, n.e.s.	3,4	1,7	1,4
Other manufactured goods	3,4	1,9	6,8
Machinery and transport equipment	6,2	3,5	8,6
Commodities and transactions not classified elsewhere in the SITC	0,3	1,3	0,4

Source: Eurostat

rose more, by 4.5%. The differences across these three economies can be attributed to the fact that the economies of the EU-27 and of the US focused more on higher value-added products, whereas China's economy was more focused on lower value-added. However, there is a large discrepancy between the individual EU-27 countries performance. In four largest ones, industrial production in manufacturing declined from around 1% (Spain) to 10% (Germany). Even within developing CEE, differences were large as Polish industrial production rose by 23.5%, whereas that in Chechia, Slovakia and Hungary were within +/- 2% range. In Slovenia, however, industrial production was higher by 6.7% since 2019. Apart from Poland, other EU-27 countries with large increase in industrial production in manufacturing were Ireland (+56.8%), Denmark (+44.2%), Lithuania (+30.1%) and Greece (+21.5%).

Pharmaceuticals as the core sector of growth of the EU-27

An in-depth view of the sector dynamics of industrial production of the EU-27 reveals even more heterogeneity across sectors. Production of pharmaceuticals rose by 63%, other manufacturing goods by 25% of electronic and optical products by 16% and of tobacco products by 14%. Industrial production in repair and installation of machinery rose by 7% and by 5% in the other transport equipment. On the other hand, high declines of above 20% were recorded in the production of wearing apparel (-27%), printing industry (-24%) and leather industry (-22%). Declines in production between 10% and 15% took place in six industries: textiles (-15%), chemicals (-13%), motor-vehicles, trailers and semi-trailers (-13%), basic metals (-12%), other non-metallic mineral products (-11%) and furniture (-11%).

Nine sectors of strong Chinese outperformance

A comparison of industrial production trends across the EU-27, the US and China shows very interesting findings. Production of wearing apparel dropped across all three economies, as the production shifted to countries with lower labour costs as Vietnam, Bangladesh and India. In textiles, Chinese production rose only slightly, by 4%, whereas a double-digit drop was recorded in the US and the EU-27. China outperformed the EU-27 and the US in 9 sectors. These are electrical equipment, motor vehicles and trailers

Table 2: Industrial production in manufacturing, 2024/2019, in real terms (constant prices)

2024/2019	EU-27	USA	China
Total manufacturing	**1,0%**	**0,1%**	**30,3%**
Food products	3,1%	0,9%	12,5%
Beverages	-1,1%	7,9%	20,3%
Tobacco products	13,7%	-23,9%	17,2%
Textiles	-14,6%	-17,4%	3,9%
Wearing apparel	-27,4%	-29,9%	-9,6%
Leather and related products	-21,8%	12,0%	-9,1%
Wood products, excluding furniture	-8,3%	-1,3%	6,4%
Paper and paper products	-5,7%	-12,3%	19,3%
Printing and reproduction of recorded media	-23,6%	-10,1%	8,9%
Coke and refined petroleum products	-5,9%	-6,4%	8,4%
Chemicals and chemical products	-13,2%	8,5%	40,8%
Pharmaceuticals,medicinal chemicals, etc.	63,0%	19,5%	24,5%
Rubber and plastics products	-7,5%	0,0%	19,6%
Other non-metallic mineral products	-10,7%	0,1%	8,6%
Basic metals	-12,2%	-4,1%	27,1%
Fabricated metal products, except machinery	-5,9%	-3,5%	33,0%
Computer, electronic and optical products	16,2%	11,9%	52,6%
Electrical equipment	2,6%	4,9%	67,5%
Machinery and equipment n.e.c.	-2,8%	-2,8%	26,3%
Motor vehicles, trailers and semi-trailers	-12,6%	2,8%	43,5%
Other transport equipment	4,5%	-5,5%	30,6%
Furniture	-10,8%	-19,0%	-5,0%
Other manufacturing	24,8%	5,6%	3,2%

Source: UNIDO, Eurostat

chemicals, basic metals, metal products, computer, electronic and optical products, machinery and equipment, other transport equipment and rubber and plastics products (UNIDO, statistical database, 2025).

Most of progress in critical technologies is in China

The future trend of competitiveness is likely to track the country's progress in critical technologies. The Australian Strategic Policy Institute (ASPI) is a large data-driven project that now covers 64 critical technologies spanning defence, space, energy, the environment, artificial intelligence, biotechnology, robotics, cyber, computing, advanced materials and key quantum technology areas. It provides a leading indicator of a country's research performance, strategic intent and potential future science and technology capability. Their research reveals that China has built the foundations to position itself as the world's leading science and technology superpower, by establishing a lead in high-impact research across the majority of critical and emerging technology domains (ASPI, 2025).

China's global lead extends to 37 out of 44 technologies that ASPI is now tracking, covering a range of crucial technology fields spanning defence, space, robotics, energy, the environment, biotechnology, artificial intelligence (AI), advanced materials and key quantum technology areas. The Critical Technology Tracker shows that, for some technologies, all of the world's top 10 leading research institutions are based in China and are collectively generating nine times more high-impact research papers than the second-ranked country (most often the US). Notably, the Chinese Academy of Sciences ranks highly (and often first or second) across many of the 44 technologies included in the Critical Technology Tracker. China's efforts are being bolstered through talent and knowledge import: one-fifth of its high-impact papers are being authored by researchers with postgraduate training in a Five-Eyes country. China's lead is the product of deliberate design and long-term policy planning.

A key area in which China excels is defence and space-related technologies. China's leading research position means that it has set itself up to excel not just in current technological development in almost all sectors, but in future technologies that don't yet exist. In the more immediate term, that lead - coupled with successful strategies for translating research breakthroughs to commercial systems and products that are fed into an efficient manufacturing base - could allow China to gain a stranglehold on the global supply of certain critical technologies.

Energy prices also explain the pattern of production shift

Prices of natural gas in Europe rose by 137% in 2024/2019, in Asia by 26%, whereas in the US they fell by 12%. Compared to the US, natural gas prices were 5-times higher in Europe in 2024 and 6 times higher in Asia. Before 2020 the prices in Europe were higher than in US by a small margin, whereas they were half of those in Asia; now they are trailing the price trends in Asia, which is a consequence of higher reliance on LNG which is more expensive than pipeline gas due to technological transformation of this fuel and all the middlemen involved in this process. One should also not forget that the main energy source of Asian economies remains coal and use of it in production still does not translate into much higher productions costs compared to situation in the EU (ETS system[1]). However, also Asia is making progress on green transition. In China, eight sub-national ETSs have been implemented since 2013, leading to the launch of China's National ETS in 2021, the world's largest national ETS by emissions coverage (Asia Society Policy Institute, 2025). Comparison of electricity prices is more difficult across these three jurisdictions as there is lack of international benchmarks and regional supply mix is very diverse within these three, but it is estimated that they should generally trail the prices of natural gas.

Labour shortages likely to persist even when demand recovers

The main obstacles to economic activity according to EU BCS[2] in past 5 years shows that shortages of material and equipment were the dominating concern of European manufacturing companies during the pandemic, but they seem to have significantly decreased and effective coping strategies been adopted. A lack of demand is the most frequent obstacle to economic activity at the current juncture. Shortage of labour is on a persistent upward-trend since 2014 and close to historical highs in 2024. The recent decline of labour shortages in manufacturing can be mostly traced to weak demand. A closer look at the sub-sectors with the highest scores indicates that particularly pressing labour shortages are in employment activities (provide temporary work for manufacturing sector) and in services which are vital for the manufacturing sector in Europe: building & landscape activities, land transport, computer programming, architecture & engineering.

[1] Emissions Trading System

[2] Joint Harmonised EU Programme of Business and Consumer Surveys' (EU BCS) interrogates every month some 120,000 company managers from all across the EU about various aspects of their business (trend in production, employment, etc.), including the factors limiting their production/business.

Table 3: Natural Gas Prices in EUR/MWh, 2019-2024

	2019	2020	2021	2022	2023	2024
EU-27	14,6	9,6	47,1	132,1	41,4	34,6
USA	7,8	6,0	11,1	20,8	8,0	6,9
Japan LNG (Asian benchmakr)	32,2	25,1	31,2	60,1	45,4	40,5

Source: World Bank, Eurostat

At present, around 36% of manufacturing companies report to be unconstrained by obstacles. When not considering the pandemic-induced turmoil in 2020-22, the current score is exceptionally low compared to the last twenty years and its descent seems to have started in 2017 already.

Supply-chain bottlenecks reduced the production numbers in 2022 and 2023

Supply-chain bottlenecks were prevalent in 2022/2023 by 37% of manufacturing companies in the EU-27. These were related to access to commodities and raw materials (steel, copper, fossil fuels, lithium, etc.), many of which are essential for the green and digital transitions. About a third of the EU importers (34%) also highlight disruptions of logistics and transport as major obstacles to the functioning of their business activities. Access to semiconductors and microchips (23%), as well as other components, semi-finished products, and equipment (27%) was a less frequent challenge raised by firms. In terms of response strategies that were adopted to deal with supply chain distress, the most popular were to increase inventory (31%), diversify suppliers (24%) and invest in digital tracking (20%). The reduction of imports and import substitution, by contrast, were less frequently applied by 10% and 14% of companies respectively. A likely reason is that some products are indispensable for the production process, but, at the same time, simply cannot be sourced from within the EU (European Commission, 2024).

Investments in clean tech increases reliance on China

Data on global manufacturing capacity (BloombergNEF, 2025) shows that China dominates clean-technology supply chains, which is above 80% in solar modules, solar cells, solar wafer & ingot, polysilicon, battery cell, battery cathode, battery anode, battery electrode, battery separator, cobalt sulphate and nickel sulphate. In lithium, wind turbine nacelle and hydrogen electrolyser it is above 70%. Therefore, investments in green transition also increase imports of these products from China as it is usually the most cost effective due to its large size of production that also meets its highly ambitious needs in domestic market.

Rare metals supply does not come from Europe

In addition to domination in clean tech technologies, China is dominant in rare metals due to its huge processing capacities of various commodities. In 2023, China accounted for two-thirds of global rare earth metals production. The US accounts for 12% of production, Australia for 4.8% and EU-27 countries have negligible shares, less than 0.1%. This implies that costs of production in manufacturing are low in China, especially for capital intensive processes and ones that demand a big network of suppliers of different commodities and its derivatives. This explains that various global multinationals increased their production in China as the cost advantages are enormous. In addition to that, Chinese market is far ahead of the EU-27 and the US in terms of EV adoption and clean tech investments.

Conclusion

GDP of the EU-27 economy stood at EUR 17.9 billion in 2024 and has enjoyed sluggish growth over the past five years, expanding by only 5.4% since 2019, compared to 12.5% for the US and 26% for China. Weak international demand for European goods, declining competitiveness, and high energy costs have hampered growth, particularly in key sectors such as automotive and machinery. In contrast, China has aggressively expanded its global market presence, especially in high-value-added exports, surpassing the EU in several key industrial sectors.
China's real estate market downturn since 2021 has led to a shift in investment toward manufacturing, driving a sharp increase in its trade surplus. While the EU-27's export share remained stagnant, China's share grew significantly, particularly in machinery and transport equipment.
Industrial production in the EU has declined in several sectors, except pharmaceuticals, which grew by 63%. Meanwhile, China has gained a competitive edge in critical and emerging technologies, strengthening its position as a global tech leader.
Energy costs in the EU have surged, further eroding competitiveness. Persistent labour shortages and supply-chain disruptions have also constrained production. Additionally, the EU's transition to clean energy has increased reliance on China, which dominates global supply chains for green technologies and rare metals.

References

Asia Society Policy Institute (2025), January 2025

BIS (Bank for International Settlements), Real Residential Property Prices for China [QCNR628BIS], retrieved from FRED, Federal Reserve Bank of St. Louis (March 30, 2025)

BloombergNEF, Energy Transition Investment Trends 2025, January 30, 2025

Bradsher, K. (2025), China's $1 Trillion Trade Surplus, Article, New York Times, 14 March 2025

Bureau of Economic Analysis (2025), U.S. Department of Commerce, accessed on 30 March 2025

European Commission (2024), Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, Obstacles to Economic Activity in the EU – a survey-based analysis

Eurostat database portal (2025), accessed on 30 March 2025

Gaida et. al., ASPIs Critical Technology Tracker, Policy Brief, Report No. 69/2023

Jain-Chandra S. and Hoyle H., China's Real Estate Sector: Managing the Medium-Term Slowdown, IMF, February 2024

National Bureau of Statistics of China (2025), accessed 30 March 2025

Tordoir S., Setser B. (2025), How German Industry can survive the second China shock, Policy Brief, 16 January 2025

UNIDO Statistics (2025), World Manufacturing Production, Quarterly Report, Q4 2024

UNIDO Statistical Portal (2025), Indices of Industrial Production (IIP), National Accounts Database, accessed on 30 March 2024

UDK 004.8:336.71:502.131.1

Environmental, social, and governance risk evaluation AI solution and the impact on banking sector

*Timotej Jagrič and Aljaž Skaza**

The role of environmental, social, and governance (ESG) factors in the banking sector is increasing. This is due to the impact of environmental, social, and governance performance and risks on a bank portfolio, and consequently bank performance and exposure to risk, and the evolving regulation. The results of existing research suggest an existence of relationship between environmental, social, and governance performance and bank performance, which is in some cases conditional and requires further research. In this context, we propose a novel artificial intelligence solution for evaluating environmental, social, and governance risks of companies. The experimental results from ongoing research demonstrate the efficacy of the proposed solution, which is particularly relevant for the banking sector as it enables dynamic and timely evaluation of companies' environmental, social, and governance risks.

JEL G21, G32, O44

1 Introduction

Banks have been at the forefront of the creation and evolution of environmental, social, and governance practices (ESG). Some of the world's largest banks endorsed the report titled "Who Cares Wins" published under the guidance of the UN Global Compact, which advocated the integration of environmental, social, and governance issues in investment processes and coined the term practices ESG. Key convictions in the report are that management of these issues is an important part in overall management quality. It adds value through risk management, anticipation of regulatory action, assessment of new markets, and the impact on brand reputation. Moreover, it contributes to the sustainable development of the societies in which companies operate (The Global Compact, 2005).

In the two decades since the report's publication, the development of ESG has undergone a rapid development, with numerous financial institutions, companies, regulators and other stakeholders adopting ESG ideas and practices. Nevertheless, the adoption process has not been without its

* Full prof. ddr. Timotej Jagrič, CQRM, Head of the Institute of Finance and Artificial Intelligence, Faculty of Economics and Business, University of Maribor, timotej.jagric@um.si

Aljaž Skaza, MEkon., Analyst Model Expert, Credit Risk – Retail, NLB d.d., aljaz.skaza@nlb.si, PhD student, Institute of Finance and Artificial Intelligence, Faculty of Economics and Business, University of Maribor, aljaz.skaza@student.um.si

The views and opinions expressed in this article are those of the authors and do not necessarily reflect those of NLB d.d. or University of Maribor. Any remaining errors are the sole responsibility of the authors.

challenges, and many still remain. This can be attributed to the lack clarity with regard to the scope. Pollman (2022) explains, that the scope of ESG has been set very broadly to allow for broad support, but this comes at the cost of a lack of a fixed definition of the purpose of ESG and the fundamental problem it addresses. As a result, ESG is used in the context of investment analysis, risk management, corporate responsibility and ideological preferences. In terms of investing. Starks (2023) distinguishes between two groups of investors based on their motivation, which is either value or values. To narrow the understanding and argumentation of the importance of ESG, we follow the argument of Edmans (2023) that ESG factors are extremely important and at the same time nothing special in comparison to other intangible assets (e.g. management quality, corporate culture and innovation capability) in creating long-term financial and social value. This understanding captures both motivations and the understanding of how ESG contributes to the business.

In the context of employing ESG principles within the banking sector, two fundamental aspects deserve particular attention. The first aspect to be considered is that of the practices of the banking institutions themselves. These practices may be influenced by the impact of ESG factors on performance (Friede et al., 2015) and by regulation. The latter is impacting banks through the required reporting practices which in the case of Europe means adopting Non-Financial Reporting Directive (NFRD) and the Corporate Sustainability Reporting Directive (CSRD) from the European regulator. Additionally, there are international demands from the International Financial Reporting Standards (IFRS) Foundation, through its International Sustainability Standards Board (ISSB), in scope of IFRS S1: General Requirements for Disclosure of Sustainability-related Financial Information and IFRS S2: Climate-related Disclosures. In addition to the abovementioned, regulatory authorities have voiced expectations and demands with regard to the management of ESG risks (European Banking Authority, 2025).

The second aspect is the portfolio of banking institutions. This refers to the companies that banks finance and invest in. A considerable body of literature has emerged on the subject of the impact of ESG factors and performance on financial performance, risks and related topics. While the results are not yet entirely conclusive, as positive results are sometimes conditioned by the characteristics of the company, the majority are at least neutral (Friede et al., 2015). We can also relate this to the intangible assets argument as Jagrič and Skaza (2024) conclude that the selection of ESG performance measure is an important component. Furthermore, the elements of ESG may not be direct drivers of financial performance but they impact company image, revenue, and costs. The results demonstrate that the impact may not differ greatly from that of some financial measures. This argument is understandable in the sense that ESG elements represent only a part of the whole scope of risk management, and they can indirectly affect other risks.

It is important for banks to be able to evaluate companies' ESG performance in order to effectively manage the risks arising from their portfolio. One of the main sources of data are company ESG reports, which are increasingly being published as integrated reports that combine financial and non-financial reporting. Other types of data are acquired from external sources such as news, regulators and data acquired by ESG data vendors and rating providers. Some of these providers collect additional data through surveys and engagement with companies. Banks can also collect additional data from the companies they finance. ESG reports represent a unique and significant data source as is not only captures numerical values and straightforward statements (e.g. "company has human rights protection statement – yes/no"). It also captures corporate communication and the manner in which companies present themselves, including their attitude and sentiment towards ESG topics.

ESG reports are a valuable source of data, yet they are subject to a number of issues. These issues stem from discussed differences in understanding, which consequently lead to discrepancies in company reports. The present body of research examines the issues quite closely. Kotsantonis and Serafeim (2019) found that the main problems are the quality and differences in measurements, and how data is handled when it is missing or plentiful. While the research shows that reported data is getting better, it also suggests ways to make it even better. A review of a very limited sample of ESG reports still leads to the conclusion that there are many differences. Consequently, regulatory reporting directives such as the CSRD, in conjunction with other standardized reporting frameworks, are instrumental in enhancing the quality of reported data. The quality of the data is also of significant importance, as it serves as one of the main data sources for the calculation of ESG scores. As a result, data quality issues carry over into the calculation of ESG scores, where they combine with ESG score methodology issues to create ESG score divergence.

This paper discusses how environmental, social, and governance performance is related to company performance and risk, based on the evaluation of ESG performance. The greater availability of ESG reports, coupled with the advancement of artificial intelligence in the domain of text analysis, has led to the possibility of producing evaluation of ESG performance based on ESG reports. We discuss how reports can be processed to enable companies to be evaluated on the issues that are relevant to a particular bank. The results of the ongoing research experiments show that it is possible to use artificial intelligence methods to evaluate the ESG performance of companies. This has direct practical implications for banking institutions, as they are able to utilise ESG reports as a source of data for evaluating corporate performance in a highly flexible manner.

2 ESG performance and its outcomes

There is no simple answer to the question of the relationship between ESG performance and outcomes, such as a company's financial performance, company risks or portfolio performance. This is not intended as an argument that is intended to refute ESG, but rather a question regarding the manner in which ESG is both applied and viewed. Starks (2023) discusses ESG in context of investment returns, and how expectations may differ based on value vs values. Firstly, she highlights the differences between value vs values. Investors who prioritise value incorporate ESG in the context of returns and risk management (Starks, 2023), which is also a focal point of the majority of ESG ratings services and questions of materialization of risks. Investors focused on values, on the other hand, take an approach based on negative screening and the consequences of business operations. Secondly, she draws attention to the differences between the objectives and approaches of investment funds on one level and the lack of differentiation between these different types of funds in empirical studies, which complicates the assessment of effects on investment decisions and society (Starks, 2023). The scope of the debate on this topic is much wider, with some critics pointing to shortcomings of ESG in its current forms. It is important to note that this does not limit its application, provided that there is a basic understanding of the differences, as these have important implications for decision-making processes and consequent outcomes. Moreover, it is important to note that value and values motivations are not necessarily entirely mutually exclusive; however, they require different approaches to achieve the desired results.

While the arguments discussed are based on investment practice, the ideas are directly applicable to banking practice. In terms of value, the application to banking operations is very clear, even if we focus solely on the question of risk management, which is one of the core elements of providing stability. This is in alignment with expectations and guidelines from the regulator on how to address this scope of risks (European Banking Authority, 2025). In addition, banking institutions have the option to act in accordance with values by implementing a negative screening process for companies when it comes to financing and investment, if this is aligned with their values and objectives. The following section presents an overview of the results of a number of selected existing studies in the context of ESG performance in general and in the banking sector in particular.

The relationship between company ESG performance and financial performance is a subject which has been extensively explored in the existing literature. Due to the extensive number of studies meta-analysis of large sample of studies provides the best overview of the relationship. Understanding of specifics can then be reinforced through analysis of selected studies.

In view of the substantial number of studies, the metanalysis of a large body of research provides the optimum overview of the relationship. Friede et al. (2015) conducted a meta-analysis of over 2,200 empirical studies, which showed non-negative results in 90% of cases, with over 2,100 of these showing positive results. These results were found across a variety of approaches, regions, and asset classes. The exception are the portfolio-related studies, for which they argue that the reason is the overlap in the factors, the mixture of different funds and the fact that only the management fees are included. The proportion of positive results is higher in North America, Europe, Australia and Asia, where there are also more studies. In terms of individual factors, environmental and governance studies show a slightly more positive relationship than social studies. A smaller subsample of approximately 150 studies has been found to demonstrate a neutral or mixed relationship. However, these results are overlaid by various systematic and idiosyncratic risks in portfolios.

In a similar vein, Whelan et al. (2021) conducted a comprehensive review of over 1000 studies from 2015 to 2020, dividing them into two categories based on the focus of corporate financial performance (metrics such as return on equity (ROE), return on assets (ROA), and stock price) and investment performance (metrics like alpha and Sharpe ratio). For the financial performance group, 58% were positive, 13% neutral, 21% mixed and 8% negative. In contrast, the investment performance group was 33% positive, 26% neutral, 28% mixed and 14% negative. They discuss similar issues to those mentioned above, namely (1) inconsistencies in terminology and nomenclature, (2) failure to distinguish between material and immaterial ESG issues and ESG leaders vs improvers, (3) complication of results due to lack of ESG data standardisation, and (4) numerous approaches (e.g. ESG integration, ESG momentum, decarbonizing, negative screening) which are merged together despite having different risk-reward implications. In addition, they draw six conclusions: (1) the impact of ESG on financial performance becomes more significant over time, (2) ESG integration as an investment strategy appears to outperform negative screening approaches, (3) ESG investing appears to provide downside protection, especially during social or economic crises, (4) sustainability initiatives appear to drive financial performance through mediating factors such as risk management and innovation, (5) managing for a low-carbon future improves financial performance, and (6) disclosure alone does not drive financial performance.

Looking at the specifics, we focus on the implications for the banking sector. Galletta and Mazzù (2022) conducted an examination of the relationship between banking institutions' ESG controversies and risk, measured using Risk Weighted Assets (RWA) and Z-Score metrics. The results of the study indicated a negative relationship between ESG controversies scores and asset risk, and a positive relationship with overall risk. These results suggest that banking institutions involved in fewer controversies demonstrate increased stability. Galletta et al. (2023) analysed the relationship between ESG scores and banks' operational risk using a global sample of banks. The results show a negative relationship, implying that higher ESG scores result in lower operational risk, which allows for reduced capital absorption related to operational risk. Liu and Xie (2024) analysed the impact of ESG performance on liquidity risk for Chinese listed commercial banks. The findings indicate that ESG factors can contribute to the mitigation of liquidity risk by decreasing the proportion of non-performing loans and enhancing overall financial performance. Furthermore, ESG can assist in bolstering risk resistance and liquidity management levels. Additionally, banks with better ESG performance show greater stability and resilience, with governance being the driving factor. Izcan and Bektas (2022) analyse the relationship between ESG scores and firm-specific risk of for euro area banks. The results show that the relationship between ESG and idiosyncratic risk varies across risk levels and is stronger for riskier banks. For medium and high-risk banks, the relationship is negative. The findings suggest that ESG contributes to stability as risk level increases. The analysis of individual dimensions showed a strong negative relationship for governance and environment. The authors of the study conclude that stakeholders are placing greater emphasis on governance quality, which is indicative of management quality and environmental issues, as a result of an increased focus on environmental concerns. No significant relationship is identified for the social dimension. B tae, Dragomir & Feleag (2021) analysed the relationship between ESG and financial performance for 39 European banks. The results are mixed, with emissions and waste reduction having a positive effect on profitability, while corporate governance quality has a negative effect. Additionally, lagged emissions and waste reduction have a positive effect on market performance, while lagged product responsibility has a negative effect on banks' financial performance. CSR strategy and governance quality have a negative impact on market performance. Similarly mixed results are found by Menicucci and Paolucci (2022) for the Italian banking sector. The results show that ESG policies have negative impact on operational and financial performance, leading the authors to conclude that Italian banks and investors disregard or not fully embrace sustainability procedures. Individual measures showed a relationship with a significant positive impact of emissions and waste reduction on operational and financial performance, while similarly social aspects with better product responsibility decrease accounting performance. Miralles-Quirós et al. (2019) analysed the impact of ESG performance shareholder value creation for a sample of 166 banks from 31 countries. Positive and significant impact is found for environmental and governance factors, while the impact for social factor is negative and significant.

Di Tommaso and Thornton (2020) analysed how ESG scores affect bank risk taking and value for 81 banks from 19 European countries. There are a number of findings that: (1) high ESG scores are associated with a modest reduction in risk-rating regardless of whether they are high or low risk takers, (2) risk-taking is partly mitigated by smaller, more independent and more gender diverse boards (3), high ESG scores are associated with a modest reduction in the value of banks, (4) despite the overall impact of ESG has negative impact on value, there is a positive relationship between ESG scores and value through the mitigating effect of risk taking. Based on this, they conclude that there is a trade-off between reducing bank risk taking and a more stable financial system and bank value.

In summary, ESG performance is undoubtedly a factor of companies' performance and risks. Despite a substantial body of literature, due to the numerous differences in many aspects, it is not possible to draw definitive conclusions. In the case of the general relationship, as well as in the case of banking, it is possible to note that the impact is, in some cases, conditional. Specifically in the banking sector, some studies indicate a trade-off between value and risk. However, it is crucial to acknowledge that existing research has examined the direct relationship between ESG performance and financial performance. In contrast, Whelan et al. (2021) have highlighted that sustainability can drive financial performance through mediating factors such as risk management. This direction has not been extensively explored, with the exception of Tommaso and Thornton (2020), who have arrived at a similar conclusion.

3 ESG reports

The quality of ESG data has been an important issue. As ESG reports are one of the main sources of data, this affects the ability of stakeholders such as banks to evaluate companies' ESG performance. Kotsantonis & Serafeim (2019) identified four main problems of ESG reports, namely: (1) differences in measurement (e.g., 50 large Fortune 500 companies use 20 different measures of employee health and safety), (2) lack of transparency in benchmarking (both universal and peer group differences), (3) varied approaches to handling missing values, and (4) disagreement arising from increased data disclosure, which creates opportunities for different interpretations and methods. Moreover, the credibility of data sources represents a primary concern for investors and corporations (Brock et al., 2023). Research findings indicate a substantial increase in the number of companies utilising reporting standards (KPMG, 2022; Rouen et al., 2022), resulting in enhanced information availability (Rouen et al., 2022; Darnall et al., 2022). Furthermore, they identify methods of enhancing the data, including audits (Del Giudice and Rigamonti, 2022) and guidelines that prioritise content over process (Darnall et al., 2022).

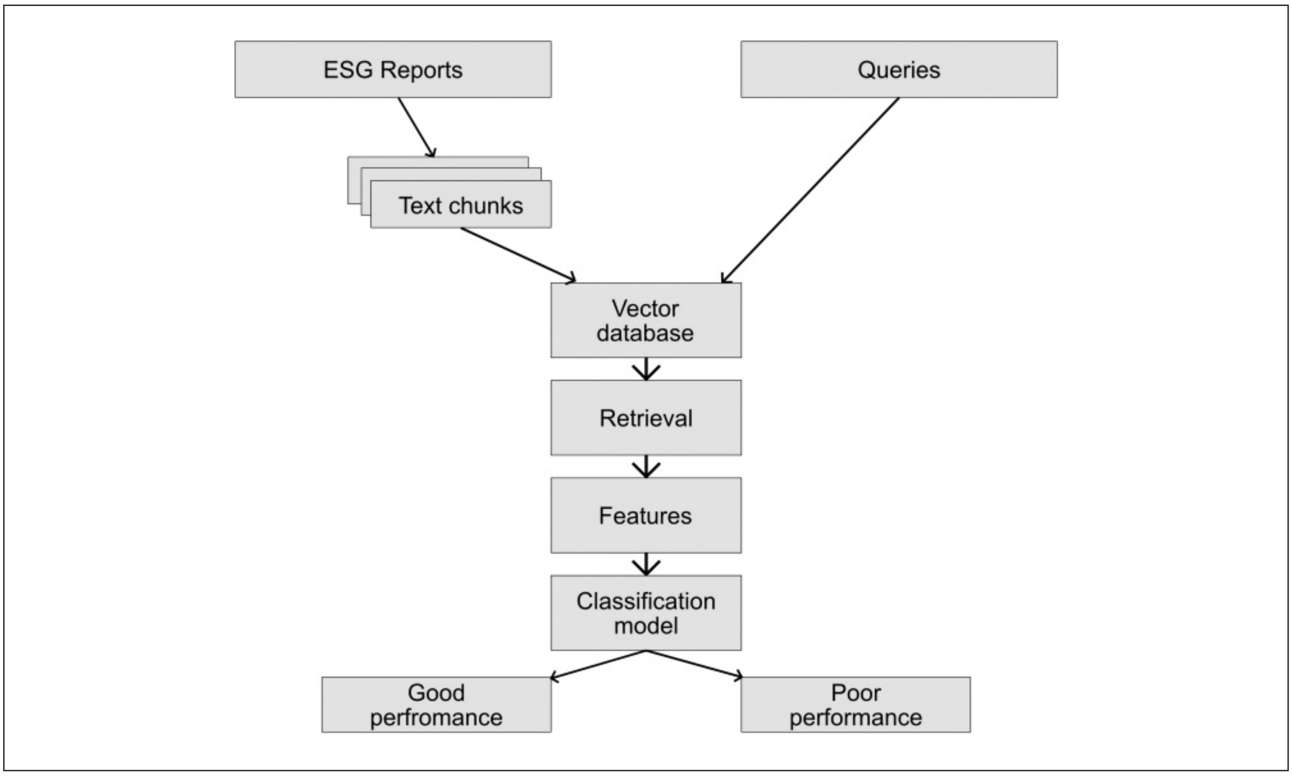
Another significant step pertains to standards. Historically, sustainability reporting standards were not mandatory, with the most prevalent being GRI and SASB Standards. However, there has been a shift towards regulatory standards, issued by national regulators, stock exchanges, or as part of international regulations, such as IFRS. Furthermore, in light of the observed discrepancies, a number of initiatives have been undertaken to facilitate the alignment of the CSRD with the GRI (European Commission, 2019), as well as the alignment of international standards with the European Sustainability Reporting Standards (ESRS) and the ISSB (EFRAG and IFRS, 2024).

4 Evaluation of ESG performance with artificial intelligence

Artificial intelligence has significantly improved on the tasks on natural language processing. The advancement can be primarily attributed to the development and refinement of large language models (LLMs). These models utilise transformers, a neural network architecture that is particularly effective for text analysis due to its capacity to capture contextual information. This architecture serves as the foundation for the most advanced LLMs, including ChatGPT, Llama, Mistral and DeepSeek. Recent advancements in the field have rendered it feasible to process extensive documents, such as ESG reports, which would have been unfeasible a year ago. Despite this, it is important to note that the application of most advanced models is not necessarily a possible or the right solution. This is attributable to the computational complexity intrinsic to transformers, which renders them challenging to train and fine-tune when dealing with very long contexts. Moreover, an analysis of the reports indicates that not all the information is necessarily relevant for the evaluation process, particularly in cases where the focus is on selected aspects of ESG performance. This approach provides a straightforward and adaptable solution to the evaluation of ESG performance.

Drawing upon the observations and experiments that have been conducted, we propose a model that preprocesses the ESG reports. This is done in order to reduce the computational complexity by decreasing the context length and enable a more targeted evaluation of the ESG performance. The initial phase of the process entails the importation of PDF reports, which are then transformed into a basic data structure. This structure integrates the textual content of the reports with unique identifiers specific to a company's ESG report. The subsequent steps represent the concepts of Retrieval-Augmented Generation (RAG). This involves the division of reports into text chunks of a length that considers tokenisation of the employed large language model. In the subsequent step, the encoder large language model is utilised to capture the context of the text and transform it into numerical representations, which are necessary for the implementation of the following methods. These chunks are then stored in a vector database, facilitating the efficient retrieval of relevant text chunks. The process of database retrieval is facilitated by the implementation of queries, which are designed to extract content relevant to the evaluation of the ESG performance of companies. The text chunks retrieved, which are associated with unique identifiers and selected topics, are then transformed into features for utilisation in a classification process. The classification target can be any existing ESG or any other internal ESG measure employed by the banking sector.

Proposed model structure



5 Experimental Results and discussion

The proposed model is part of an ongoing study on a large and diverse sample of companies' ESG reports. Preliminary results are showing great promise as the model is able to capture the differences between good and poor ESG performance of companies. Overall accuracy and recall for both good and poor performers is approximately 70%.

The performance of the model is of significant importance, as it facilitates a relatively straightforward and computationally efficient evaluation of companies' ESG performance. Furthermore, as the model does not utilise the entirety of the report, it enables the user to refine the content to focus on the pertinent aspects.

The results hold significant implications for the evaluation of ESG risk and performance in banking institutions. The model's simplicity facilitates straightforward implementation and adaptability. This is of particular relevance as ESG trends evolve towards the integration of ESG components into routine business practices.

6 Conclusion

Concepts pertaining to environmental, social, and governance factors have been a part of the banking sector for a considerable period. As practices evolve, there are still some questions that need to be resolved in order to utilise the full potential of both aspects of value creation and risk management. In the context of banking, there are two levels of application: one action of the bank and one portfolio of the bank.

In the absence of a consolidated definition of ESG, it is imperative to establish a clear understanding of the concept, as well as to comprehend the distinction between value and values. These two motivations require different courses of action. In the field of performance, existing literature generally points to a positive or at least neutral impact, though this is somewhat dependent on various criteria, including economic conditions and the timeline in question. Analogous findings emerge in the context of the banking sector. A general conclusion can be drawn that various ESG factors may assist with risk mitigation, yet they simultaneously present trade-offs with regard to bank value. It is important to note that mitigation through channels like risk is not yet well studied and it could lead to positive impact on value.

In the context of a discussion concerning bank financing and investments, the evaluation of company performance assumes a significant role. ESG reports are regarded as a primary source of data, though their content has historically been deficient in terms of clarity and scrutiny. Although there are still some issues with data quality, these are improving as a result of the frameworks established by the regulators.

The improved quality of the data thus provides a foundation for the application of artificial intelligence, with the advancement in large language models enabling the analysis of complex texts, such as ESG reports. In consideration of the advances achieved thus far, a model is hereby proposed. This model utilises artificial intelligence to ESG performance of companies, as reflected in ESG reports. The model is being developed as part of ongoing research. It is based on the principle of dividing the text into smaller units, which can then utilise large language models to retrieve relevant information on the selected topics. This information can then be used in a classification task to provide a single score of ESG performance for a company. The experimental results obtained thus far are extremely encouraging, with approximately 70% accuracy. They hold significant implications for the practice, as the application will facilitate rapid, uncomplicated and adaptable performance evaluation for banking institutions with respect to selection and portfolio monitoring.

Literature

B tae, O. M., Dragomir, V. D., and Feleag , L. (2021) 'The relationship between environmental, social, and financial performance in the banking sector: A European study', *Journal of Cleaner Production*, 290, 125791. https://doi.org/10.1016/j.jclepro.2021.125791.

Brock, E.K., Nelson, J. and Brackley. A. (2023) *Rate the Raters 2023: ESG Ratings at a Crossroads*. Available at: https://www.erm.com/globalassets/sustainability.com/thinking/pdfs/2023/rate-the-raters-report-april-2023.pdf.

Darnall, N., Ji, H., Iwata, K. & Arimura, T. H. (2022) 'Do ESG reporting guidelines and verifications enhance firms' information disclosure?', *Corporate Social Responsibility and Environmental Management*, 29(5), 1214–1230. https://doi.org/10.1002/csr.2265.

Del Giudice, A. & Rigamonti, S. (2020) 'Does Audit Improve the Quality of ESG Scores? Evidence from Corporate Misconduct', *Sustainability*, *12*(14), 5670. https://doi.org/10.3390/su12145670

Di Tommaso, C. and Thornton, J. (2020) 'Do ESG scores effect bank risk taking and value? Evidence from European banks', *Corporate Social Responsibility and Environmental Management*, 27(5), 2286–2298. https://doi.org/10.1002/csr.1964.

Edmans, A. (2023) 'The end of ESG', *Financial Management*, *52*(1), 3–17. https://doi.org/10.1111/fima.12413.

European Banking Authority (2025) *Final Report: Guidelines on the management of environmental, social and governance (ESG) risks*. Available at: https://www.eba.europa.eu/sites/default/files/2025-01/fb22982a-d69d-42cc-9d62-1023497ad58a/Final Guidelines on the management of ESG risks.pdf.

European Commission (2019) *Communication from the Commission – Guidelines on non-financial reporting: Supplement on reporting climate-related information*. Available at: EUR-Lex.https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019XC0620(01)

EFRAG and IFRS (2024) *ESRS-ISSB Standards: Interoperability Guidance*. Available at: https://www.efrag.org/Assets/Download?assetUrl=/sites/webpublishing/SiteAssets/ESRS-ISSB+Standards+Interoperability+Guidance.pdf

Friede, G., Busch, T. and Bassen, A. (2015) 'ESG and financial performance: aggregated evidence from more than 2000 empirical studies', *Journal of Sustainable Finance & Investment*, *5*(4), pp. 210–233. Available at: https://doi.org/10.1080/20430795.2015.1118917.

Galletta, S., Goodell, J.W., Mazzù, S. and Paltrinieri, A. (2023) 'Bank reputation and operational risk: The impact of ESG," *Finance Research Letters*, 51, p. 103494. Available at: https://doi.org/10.1016/j.frl.2022.103494.

Galletta, S. and Mazzù, S. (2022) 'ESG controversies and bank risk taking', *Business Strategy and the Environment*, 32(1), pp. 274–288. Available at: https://doi.org/10.1002/bse.3129.

Izcan, D. & Bektas, E. (2022) 'The Relationship between ESG Scores and Firm-Specific Risk of Eurozone Banks', *Sustainability*, *14*(14), 8619. https://doi.org/10.3390/su14148619

Jagrič, T. and Skaza (2024) 'Does Strong ESG Performance Create Company Value for Investors? Evidence from Publicly Traded Companies' in the Conference Proceeding Book: VIII. International Applied Social Sciences Congress (C-iasoS 2024). ISBN: 978-625-94328-3-0.

Kotsantonis, S. and Serafeim, G. (2019) 'Four Things No One Will Tell You About ESG Data', *Journal of Applied Corporate Finance*, 31(2), pp. 50–58. Available at: https://doi.org/10.1111/jacf.12346.

KPMG (2022) *Big shifts, small steps: Survey of Sustainability Reporting 2022*. Available at: https://assets.kpmg.com/content/dam/kpmg/se/pdf/komm/2022/Global-Survey-of-Sustainability-Reporting-2022.pdf.

Liu, J. and Xie, J. (2024) 'The Effect of ESG Performance on Bank Liquidity Risk', *Sustainability*, *16*(12), 4927. https://doi.org/10.3390/su16124927.

Menicucci, E. & Paolucci, G. (2022) 'ESG dimensions and bank performance: an empirical investigation in Italy' *Corporate Governance: The International Journal of Business in Society*, *23*(3), 563–586. https://doi.org/10.1108/cg-03-2022-0094

Miralles-Quirós, M. M., Miralles-Quirós, J. L. & Redondo Hernández, J. (2019) 'ESG Performance and Shareholder Value Creation in the Banking Industry: International Differences', *Sustainability*, *11*(5), 1404. https://doi.org/10.3390/su11051404.

Pollman, E. (2024) 'The making and meaning of ESG', Harv. Bus. L. Rev. 14, 403.

Rouen, E., Sachdeva, K. and Yoon, A. (2022) 'The Evolution of ESG Reports and the Role of Voluntary Standards', *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.4227934.

Starks, L.T., (2023) 'Presidential Address: Sustainable Finance and ESG Issues—ValueversusValues', *The Journal of Finance 78*, 1837–1872. Available at: https://doi.org/10.1111/jofi.13255.

The Global Compact (2005). *Who Cares wins*. Available: https://documents1.worldbank.org/curated/pt/280911488968799581/pdf/113237-WP-WhoCaresWins-2004.pdf.

Whelan, T. et al. (2021) 'ESG and financial performance: Uncovering the relationship by aggregating evidence from 1,000 plus studies published between 2015-2020', *New York: NYU STERN Center for sustainable business*, pp. 520–536.

UDK 327:339.9:061.1EU

The European Union in the new geopolitical reality of the world

*Mojmir Mrak**

The main objective of the paper is to provide an analysis of what increased geopolitical risks and changing global economic governance mean for the EU. The paper focuses on economic issues, which in the changed geopolitical reality are increasingly intertwined with issues in many other areas. The first part of the text is aimed at presenting the changes in global economic governance that are taking place at an accelerated pace and the trends that can realistically be expected in this area in the next decade. In the second part, the paper focuses on what these changes at the global level mean for the EU.

JEL F01, F02, F4

I. Introduction

The world is rapidly changing from a unipolar to a multipolar structure, and this process is accompanied by increasing tensions among the main political and economic centres of power. Although the factors behind this change are highly diverse, such as rapid technological change based on Information and Communications Technology (ICT) technologies, and deceleration of globalisation as the dominant driving force of world economic development in the decades following World War II, the key among them is the process of changing global economic governance. This is in the process of transforming from a "rule-based system" into a "transaction-based system", and the process has intensified significantly over the first months of Donald Trump's second presidency.

The main objective of the paper is to provide an analysis of what increased geopolitical risks and changing global economic governance mean for the EU. The paper focuses on economic issues, which in the changed geopolitical reality are increasingly intertwined with issues in many other areas. In addition to Introduction and Conclusions, the paper consists of two chapters. The second chapter is aimed at presenting the changes in global economic governance that aretaking place at an accelerated pace and the trends that can realistically be expected in this area in the next decade.

* Mojmir Mrak, professor at the School of Economics and Business, University of Ljubljana

The main purpose of *the third chapter* is to provide an analysis of what these changes at the global level mean for the EU.

II. Major changes in global economic system in the last a decade or two and what to expect in the next decade

After decades long period of a global economic governance system established after the World War II and based on rather well-established rules, the world has been increasing transforming into a governance system that is predominantly based on transactions between "big players". What are the key differences between these two systems?

The "rules-based system" was basically unipolar with the dominant role of the US in the military, political and economic fields. International organisations in which Western countries under the leadership of the US had a strong decision-making and management role instrumental for smooth operation of the global economic system. It was precisely international economic organisations, such as the International Monetary Fund, the World Bank and the World Trade Organization, that were the main promoters of economic liberalisation and economic globalisation. During that period, the global political agenda was strongly focused on economic topics. And last but not least, this was a period in which one of the key goals of the Western world was to integrate China into the world economy. China's accession to the World Trade Organization in 2001 was of crucial importance within this process.

The "transaction-based system" that is rapidly getting its importance on the global scene is fundamentally different. It is a world that is multipolar and therefore with multiple centres of economic and political power. The role of international economic organisations has been eroded and even marginalised while protectionism and cooperation with politically "compatible" countries is getting importance. This is a system in which the economy is increasingly becoming an instrument for achieving strategic goals of the state. As for China's role in the world, this is a system in which the former goal of how to integrate China into the world economy has been replaced by the orientation of other major economies, especially the US and the EU, of how to protect themselves from it.

The consequences of establishing a "transaction-based system" in conjunction with increasing geopolitical risks are multifaceted. Some of these consequences are the disruption of supply chains and the fragmentation of foreign direct investment (both of which limit the advantages offered by specialisation and efficient resource allocation), the establishment of price/inflation differentials between individual economic blocs, the threat to food security, especially in the countries of the global South, and the consequent risk of a resurgence of poverty.

In the context of global changes, companies and policymakers are looking for ways to organise their processes in a way that makes them less exposed to geopolitical risks. The answer lies primarily in finding ways how to shorten supply chains. This is, of course, associated with reallocation of production capacities and often also with significant changes of foreign direct investment flows. All of this takes place in various forms, such as reshoring (moving production back to home countries), nearshoring (moving production to locations closer to home countries), and friendshoring (moving production to politically compatible countries). None of the three was important only a decade ago.

And where we may expect that global economic governance will go in the future? I am close to Alexander Stubb's assessment who in 2023 said that the new world order – which will be largely shaped within this this decade – will be determined by relations within the following triangle of states (Stubb, 2023) : (i) *the "West"* – the USA, the EU and some other industrialised countries, a total of about 50 countries (the common goal is to preserve Western-style democracies and the existing liberal order), (ii) *the "East"* – China, Russia, Iran and about 20 other countries (the goal is to create new rules of the world order and institutions based on traditional state power), and (iii) *the "South"* – led by India, South Africa, Nigeria and Brazil and comprising more than 100 countries in Asia, Africa and Latin America (this group has, at least for now, primarily an economic agenda). The first months of Donald Trump's second presidency has clearly demonstrated that the "West" is not any more a consolidated group under the US leadership. Trump's international policy de-facto leads toward fragmentation of this group. How far this fragmentation of the "West" will go is difficult to say at this point.

In recent years, the geopolitical competition between the "West" and the "East" for strengthening positions and dominance in the global "South" has been intensifying. The Ukrainian war has further strengthened the "division" of the world into two blocs: one led by the USA and the other led by China. The US, as the leader of that part of the "West" that would be ready to accept new Trump's conditions (with respect to trade, financial and security issues) in exchange for US security umbrella, has strategically focused on strengthening its strategic independence and thus reducing its dependence on China. On the other hand, China is actively positioning itself as the leader of the

"East" (China's growing role in the Near and Middle East; China succeeded in proposing to expand the membership of the BRICS countries; in bilateral relations between China and Russia, the latter is increasingly being pushed into the role of a "junior" partner due to its involvement in Ukraine).

The economic consequences of the "division" into two large global economic blocs are numerous and some of them are the following: *First,* the growing role of the Chinese currency RMB as a payment currency. China is already the main trading partner of more than 80 countries, and also the main foreign investor in many of them. *Second,* China has become the largest creditor of many developing countries and a key player in the restructuring of these countries' debts. The country has become a competitor to the International Monetary Fund in the balance of payments financing of debtor countries. *Third,* the role of $ as the global reserve currency is relatively stable on a short-run, but not on medium- and long-term. For a currency to become a global reserve currency, the country issuing this currency must meet two conditions; its economy must be large on a global scale, and the currency must be fully convertible. While China undoubtedly meets the first of these two conditions, it does not meet the second one. *Fourth*, instead of a single global payment system (SWIFT), several parallel payment systems are being rapidly established. China has been very active within this area, especially after the beginning of Ukraine war followed by the sanctions of the West against Russia.

III. The EU under pressure to transition from old to new economic governance

Throughout the history of European economic integration, two basic visions have intertwined in the process. One is the vision of a "Fortress Europe", according to which the EU is to be highly autonomous, with its economy based on trade protection and the protection of its domestic industrial sector. The other is the vision of an "Atlantic Europe", which is strongly linked to and dependent on the US in both economic and security terms, and with which it shares liberal democratic values.

Under the influence of the "rules-based system" and, in particular, the accelerated globalisation that took place in the world in the last decades of the 20th century, the vision of an "Atlantic Europe" gained a dominant position in the processes of European economic integration. The "rules-based system" was a perfect fit for the EU for at least two important reasons. *First,* the EU is an association of sovereign states that has established a rules-based structure for its internal governance. And *second,* the EU is made up of small states (even the larger members are relatively small in global terms), for which this type of economic governance system is highly appropriate.

It is particularly worth emphasizing that the transformation towards a "transaction-based system" in the context of increasing geopolitical risks poses a more serious threat to the EU than to the US and China as it two main global competitors. Why? *First,* the EU is significantly more open in terms of foreign trade (measured as shares of exports/imports in GDP) than the US or China. While the EU's openness in terms of foreign trade has increased over the past decade, this has not happened for the other two economic superpowers. *Second,* the EU is also more open in terms of outward and inward foreign direct investment (measured as a share of GDP) than the US and China. *Third,* the EU has been eliminating trade restrictions more comprehensively than the US and China over the past two decades. And *fourth,* the EU has had for decades, unlike the US and China, a very rigorous competition and state aid policy (both of which were based for providing a framework for a "level playing field" in the common European market) and, at the same time, a complete absence of industrial policy.

The transition to a multipolar world and global economic governance based on a "transaction-based system" poses major challenges for the EU, not only because of its structural characteristics, as discussed above, but also because of its institutional specificities. The EU is rather slow in its adaptation to tectonic global changes. The EU is namely willing to make major and politically difficult structural changes only under strong external pressure. Effective responses of the EU to the euro crisis a decade ago as well as to the Covid crisis five years ago clearly confirm this pattern.

How will the EU position itself in the new geopolitical world depends on its effectiveness (or lack thereof) in addressing the key challenges it faces? And this will become clear very soon. In the next medium-term period, i.e. during the term of this European Commission (it started its term in December 2024), it will become clear whether the EU will sit "at the table" of global players (if it responds effectively to the challenges) or will end up "on the table" (if it responds ineffectively) as their prey.

The three main areas of challenge facing the EU are, in my opinion, the following: (i) security and migration, (ii) climate change and the transition to a carbon-free society, and (iii) international competitiveness. In the changed geopolitical circumstances, all three groups of challenges are significantly interconnected and intertwined. A brief insight into each of the three challenges is given below, with the economic challenges being analysed in some more detail, given the main focus of the paper.

Security and migration; In the past decades, the EU has benefited from the US security guarantee (through NATO) and as a result has allocated significantly less resources to defence than would otherwise be necessary. With a very rough beginning of the Trump 2 presidential term it is more than obvious that the EU is facing the end of the US "security umbrella", at least in the form we have known it in recent decades. This of course means that the EU will have to significantly increase its own defence capabilities – additional pressure on capacity building, personnel and finances In the last decade, migration flows to the EU have been mainly caused by wars in the vicinity of the continent (the "Arab Spring", wars in Syria, Ukraine, Gaza). Although these events were not caused by EU Member States, the EU itself has been the main destination of migration flows due to its geographical proximity to war zones. It is realistic to expect that increased migration flows towards the EU will continue and even intensify in the future for two reasons: (i) the continuation of geopolitical tensions in the east and south of the EU, and (ii) the negative consequences of global warming and the resulting increasing climate problems in nearby countries, especially those in North Africa.

Climate change and the transition to a carbon-free society; Climate change developments and transition to carbon-free economy poses challenges and consequences at various levels: (i) *on nature;* Increasing temperatures affect ecosystems, countries are faced with natural disasters, such as droughts, wildfires and decreasing availability of fresh water. Parts of the globe are exposed to increased frequency and intensity of floods, to rising sea levels threats they pose to coastal areas, and to reduction in biodiversity. (ii) economy; Developments in climate change have impacts on quality of infrastructure and buildings, they cause damage as a result of natural disasters, changed conditions for food production, and have strong impact on various sectors of economy, such as agriculture and tourism. (iii) *society as a whole*; Extreme weather events and changes in the environment affect human health, have impact on the economy and employment, require changes in education and other segments of the society.

International competitiveness; the EU is lagging behind its main economic rivals economically and this gap has been widening in recent years. Slow economic growth and low productivity compared to the US and China threaten the EU's goals of strengthening geopolitical power, social equality and decarbonisation. The reasons for poor competitiveness performance are numerous, from high dependence on imports of critical raw materials and expensive energy, especially since the outbreak of the war in Ukraine, over over-regulated product, service and labour markets and low investment in research and development, to extremely conservative competition and state aid policies, the primary purpose of which until recently was mainly to protect a level playing field in the internal market and less to protect the EU against competition from the US and China. The slowdown in economic growth and low productivity growth can also be attributed to the ageing of the population as well as to reduced appetite for structural reforms, which was very high in the years immediately following the financial crisis.

Key substantive guidelines for strengthening European competitiveness are fairly comprehensively covered in reports prepared and presented for various EU institutions last year by two former Italian prime ministers – Enrico Letta (Letta, 2024) and Mario Draghi (Draghi, 2024). One or the other report, and sometimes both, advocates the following: (i) deepening the internal market, in particular on the financial markets segment, (ii) changes in competition policy (especially in the area of mergers and acquisitions) and state aids aimed at creating conditions for economically more independent and resilient EU (industrial policy), (iii) changes in foreign economic policy aimed at more effective protection of strategic industries, and (iv) increased investment in research and development and, above all, better commercialisation of their results.

These substantive orientations have fairly high and broad support at a general level. To put it simply, it could be said that with respect to the content there is a fairly high level of consensus on "*what*" should be done in the EU to effectively address the problem of declining international competitiveness. On the other hand, however, there are strong disagreements on *"how"* to do it.

There are two key areas of disagreements, and it is worth underlining that they are both of a distinctly political character.

The first one is a conceptual "fiscal" inconsistency at the EU level where we have, on the one hand, new fiscal rules that have just been adopted and that require at least certain level of fiscal consolidation while, on the other hand, the EU needs large volume of public finance investments in the areas of competitiveness and security. One possible way to address the problem of "fiscal" inconsistency is to significantly increase the volume of public financing at the level of the EU as a whole. If there would be a political appetite among the member states for this kind of a decision, this could be implemented either by significantly increasing the EU budget, or by introducing a new fiscal instrument modelled on the one introduced at the outbreak of the Covid crisis. Of course, a combination of the two is possible as well. Whether a higher level of the EU fiscal integration is possible will become clear relatively quickly, as negotiations on the multi-annual financial framework of the EU for 2028-2034 period have practically already begun.

The second key political problem on the path to implementing the Draghi report is the existing institutional structure of the EU and its decision-making. It is a question of how to change the governance of the EU so that it can respond more effectively to the challenges of the changed geopolitical environment. The current structure of the Council, as the key institution in which the Member States are represented, is set up in a distinctly "silo" manner, which actually prevents the quality and effective treatment of horizontal issues, such as competitiveness. In contrast to the current situations where we have several configurations of the Council discussing various segments of the competitiveness subject, it would be necessary that deliberations on this subject are centralised. Without this institutional change, the EU should not be surprised in a couple of years that the results will not be much better than they were roughly two decades ago with respect to the Lisbon Strategy.

IV. Conclusions

Under the influence of geopolitical factors, a new structure of global economic governance is being established in the world, in which the cards will be shuffled differently than in previous decades. The wars in Ukraine and the Middle East, as well as the decisions of the US president Trump in the first few months of his second term, have accelerated these trends. Global changes represent not only a serious challenge but also an opportunity for the EU. If it wants to remain at the table of global players, it will have to seize its opportunities quickly, i.e. within the next few years, and effectively. If for whatever reason, the EU member states will not be able to address effectively the question of how to finance common development priorities, especially security and competitiveness, and the question of how to make the decision making more efficient, especially in the areas of foreign security policy and competitiveness, then we should not be surprised by the continued decline of the EU on the global scene.

References

Draghi, Mario. The future of European competitiveness, September 2024 (report prepared for the European Commission) (Draghi, 2024).

Letta, Enrico. Much more than a market. April 2024 (report prepared for the European Council) (Letta, 2024).

Stubb, Alexander. The west must learn from its mistakes if it wants to shape the new world order world order. Financial Times, 10 May 2023 (Stubb, 2023).

UDK 336.74:004:061.1EU

Digital euro: The future of money

*Marko Pahor**

The evolution of money, from barter to coins, paper money, and digital payments, reflects humanity's drive for efficient and secure transactions. Each innovation, from Lydian coins to modern digital wallets, has simplified and revolutionised trade, paving the way for the digital euro as the future of money. The ECB's 2024 study shows a shift from cash to digital payments in the euro area, with cash use dropping from almost three quarters in 2019 to just above half in 2024. Card payments rose from 25 to 39 percent. Despite this, two thirds of consumers still prefer cash, highlighting the need for a diverse payment landscape. Despite the rise of private money, public money remains crucial. Currently, the EU lacks electronic public money, making the digital euro essential. It promises financial inclusion, payment efficiency, and monetary sovereignty, reducing reliance on foreign providers and fostering innovation. Enhanced security, privacy and accessibility are key benefits, ensuring trust and interoperability. The digital euro project faces challenges such as developing secure infrastructure, building public trust, ensuring privacy, assessing economic impacts and achieving interoperability. Regulatory frameworks and stakeholder engagement are crucial. Financial intermediaries will facilitate transactions, provide support, ensure compliance, promote innovation and foster interopera-bility - and for that reason will play a vital role in the successful adoption of the digital euro.

JEL E42, E52, E58, G21

A short history of money and payments

But If we want to claim that the digital euro is the future of money, we need to start with the history of money, or better with the history of payments. The evolution of money (and payments) is driven by the desire to efficiently store value and create more efficient and secure ways of transacting, i.e. exchanging goods (or services) we have for the ones we want. Initially, the barter system was prevalent, where goods and services were exchanged directly. This system had limitations, particularly the need for a double coincidence of wants – both parties had to want what the other offered. Consequently people started using some standardised goods – commonly a precious metal, but also salt, seashells and others – as intermediary exchange goods. A first real revolution happened around 600 BCE, when the Lydians in modern-day Turkey revolutionised payments by introducing the first coins made of precious metals. These coins were standardised in weight and value, making transactions simpler and more reliable. The use of coins spread rapidly, becoming the dominant form of payment in many civilizations.[1]

The next big revolution was the development of paper money, which first appeared by the 10th century in China. Paper money was lighter and easier to transport than coins, facilitating trade over long distances. This innovation eventually

* Dr. Marko Pahor, Banka Slovenije

[1] BNP Paribas: 18 dates that made the history of payments, 2025

spread to Europe by the 17th century, where banks began issuing banknotes backed by deposits of precious metals. The advent of paper money saw, for the first time, a differentiation between the public and private money. Coins stamped with the portraits of the reigning monarch could be deemed public money, while at least at first, the banknotes, issued by the banks, were the first form of private money.

Public money refers to currency issued by a sovereign, government or central bank, such as coins and banknotes. It is considered legal tender and is backed by the government's authority and the whole economy of the monetary area. Private money, on the other hand, includes forms of currency issued by private entities, such as bank deposits, electronic money, tokenised deposits or stablecoins. Private money is not granted a legal tender status but is widely accepted for transactions. It is managed through private finance, which involves the financial activities of individuals, households, and businesses. The key difference lies in the issuer and the backing authority. Public money is backed by the government, ensuring its stability and acceptance, while private money relies on the trust and credibility of the issuing entity.[2]

After the industrial revolution changed the way we produced and consumed, a need for more efficient payments emerged. The 20th century saw the introduction of cheques, which allowed individuals to transfer money from their bank accounts by writing instructions to their banks. Cheques provided a secure and convenient way to make payments without carrying large amounts of cash. In 1950, Diners Club issued the first credit card, marking the beginning of a new era in payments. Credit cards allowed consumers to borrow money for purchases and pay it back later, often with interest. This innovation transformed consumer behaviour, enabling greater flexibility and convenience in spending.

The 1970s and 1980s brought significant advancements in electronic payment systems. Automated Teller Machines (ATMs) were introduced, allowing customers to withdraw cash and perform banking transactions without visiting a bank branch. Electronic Funds Transfer (EFT) systems enabled the direct transfer of money between bank accounts, further streamlining payments. The advent of the internet in the 1990s revolutionised payments once again. Online payment gateways like PayPal emerged, allowing users to make payments over the internet securely. E-commerce flourished as consumers could shop online and pay with a few clicks, leading to the growth of global marketplaces[3].

The 21st century brought mobile payments including digital wallets, such as Apple Pay and Google Wallet, store payment information securely on mobile devices, enabling contactless payments. The evolution of payments reflects the continuous drive for innovation and efficiency.

The payments landscape in the euro area in 2025

The European Central Bank's (ECB) "Study on the Payment Attitudes of Consumers in the Euro Area (SPACE) 2024" based on the results of the survey questionnarie provides a comprehensive analysis of how payment behaviours and preferences have evolved across the euro area in the recent years. In 2019, cash was the dominant payment method at points of sale (POS) in the euro area, accounting for 72 percent of all transactions. However, by 2024, this figure dropped to 52 percent, reflecting a significant shift towards digital payments. The use of cards and other electronic payment methods increased, with card payments rising from 25 percent in 2019 to 39 percent in 2024. This shift was driven by the growing acceptance of contactless payments and the increased use of mobile payment apps.

The European Central Bank's report on card schemes and processors[4] highlights the dominance of card payments in the EU, accounting for 70 billion transactions in 2023, which is 54 percent of all non-cash transactions. International card schemes made up 61 percent of euro area card payments in 2022, while national schemes accounted for 39 percent. The number of national card schemes has decreased, with only nine remaining active in the EU. Thirteen-euro area countries rely entirely on international card schemes. There is a high concentration in the card-processing market, with four major cross-border companies among 80 providers.

Visa and Mastercard had varying market shares across European countries in 2024, sometimes significantly higher than domestic payment cards. Visa was the largest card scheme in Ireland, with a market share of 90 percent. Mastercard, on the other hand, held market share of 87 percent in the Netherlands. On the other hand, some countries see a dominance of domestic schemes. In Germany, for example, the domestic card brand Girocard had a market share of 75 percent, whereas Visa and MasterCard each made up around 13 and 11 percent of the market. Italy, on the other hand, was more divided. Bancomat (Italian ATM) cards made up 45 percent of transactions, whereas MasterCard and Visa each held a market share of approximately 20 and 34 percent respectively. It is worth noting, however, that most Bancomat cards in Italy

[2] Tobias Adrian, Tommaso Mancini-Griffoli: Public and Private Money. IMF, 2021

[3] BNP Paribas: 18 dates that made the history of payments, 2025

[4] ECB: Report on card schemes and processors, 2024

are co-branded with one of the international schemes.[5]
The decline in national schemes and the presence of foreign shareholders in major processors highlight dependencies that could affect Europe's payment sovereignty.
The drawback of national schemes is that they don't work across borders, a severe impediment for the common market. While interlinking the national payment schemes is part of the Eurosystem's strategy of retail payments[6], this remains in the hands of private initiatives and doesn't address all market deficiencies.
While digital payments are on the rise, cash remains an important payment method, especially for small-value transactions and in rural areas. Despite the decline in cash usage, 62 percent of euro area consumers in 2024 still expressed a preference for keeping cash as a payment option, up from 60 percent in 2019.[7] This underscores the importance of maintaining a diverse payment landscape that includes both digital and traditional methods. Access to cash remains good throughout the euro area, though some countries report a slight increase in the difficulty to access cash.
In Slovenia, the trends mirror those of the broader euro area but with some notable differences. Slovenia was and remains above average in the preference for cash; in 2019, cash was used for 73 percent of POS transactions in Slovenia, same as the euro area average. By 2024, this had decreased to 64 percent, a much slower decline than seen in the euro area at large (52 percent). Card payments in Slovenia increased from 24 percent in 2019 to 29 percent in 2024, reflecting growing acceptance of electronic payment methods. The preference for cash in Slovenia remains strong, with 57 percent of consumers in 2024 indicating they want to keep cash as an option, compared to 44 percent in 2019.[8]
The Covid-19 pandemic accelerated the adoption of digital payments as consumers sought contactless and online payment options to reduce physical contact. This trend is evident in the increased use of mobile payment apps and online banking services across the euro area. Another key finding is the growing importance of instant payments. In 2024, 20 percent of the euro area consumers reported using instant payments, up from 10 percent in 2019. This increase is attributed to the enhanced convenience and speed of instant payments, which are becoming more widely available and accepted. Instant payment schemes suffer from the same problem as the national card schemes, i.e. they are mostly confined to national borders. Some private initiatives emerged and made significant progress[9], for example the EPI/Wero and more recently the EuroPA[10], which interlinked instant payment schemes in three countries.
The ECB's "Study on the Payment Attitudes of Consumers in the Euro Area" also highlights the challenges associated with the digitalisation of payments. Nearly 10 percent of respondents in 2024 reported needing assistance with digital payments, indicating a need for greater support and education to ensure inclusivity. This is particularly relevant for older adults and those with lower digital literacy.

The case for digital euro

The short history of money and payments shows us that throughout the history payments relied on sovereign money. Even as the emergence of private money dethroned sovereign money as the only payment solution, people still relied on public money for a large chunk of their everyday needs and a fall-back solution should the private money fail. At the moment, there is simply no electronic public, sovereign money available for payments in the European Union, which is, given the inevitable rise of e-commerce, for which physical cash is unsuitable, simply unacceptable. Not only we rely for our electronic payments on private money but this reliance is in almost two thirds of cases on providers outside the EU. The card schemes, which account for the vast majority of non-cash payments, are dominated by the global giants Visa and Mastercard. The fast-growing field of e-payments also relies on global players' solutions, including ApplePay, GooglePay, AliPay and others. The digital euro is the solution, since it's the first time a cash-like electronic payment option in public, sovereign money would be offered to European citizens.
Just as the introduction of Euro coins and banknotes in 2002 offered the EU citizens to pay throughout the monetary union in the same money, the introduction of the digital euro some decades later would mean the same for electronic payments. The fragmentation of the payments markets is a market failure and an important hurdle for the development of the European economy. The ECB identified this issue and addressed it in the retail payments strategy[11], the execution of the strategy is in the hands of private initiatives. Despite public incentives. the need for large investments and general lack of incentives (as a logical

[5] Raynor de Best: Visa, Mastercard share against domestic solutions in 14 countries in Europe 2024. Statista, 2024

[6] Our retail payments strategy, https://www.ecb.europa.eu/paym/integration/retail/retail_payments_strategy/html/index.en.html

[7] Study on the Payment Attitudes of Consumers in the Euro Area. ECB, 2025

[8] Share of respondents replying having cash as an option at POS with »very important« and »important« in the SPACE studies

[9] ECB welcomes the EPI's progress on building a European payment solution

[10] EuroPA launch cross-border instant payments in Southern Europe

[11] Our retail payments strategy, https://www.ecb.europa.eu/paym/integration/retail/retail_payments_strategy/html/index.en.html

consequence of payments market`s features) pushes these solutions further into the future. Digital euro is a public solution to the requirements for a unique solution for payments in the European Union, which would truly be European, would be the right answer to this market failure.

One of the primary objectives of the digital euro is financial inclusion. It aims to provide a secure and accessible form of money for all citizens, including those who may not have access to traditional banking services. This is particularly important for individuals in remote areas or those who are unbanked. By ensuring that everyone has access to central bank money, the digital euro promotes financial equality and reduces the gap between different socio-economic groups.[12]

Another key objective is payment efficiency. Digital transactions are faster than traditional methods, reducing the time required for payments and transfers. The digital euro aims to lower transaction costs, making payments more affordable for both consumers and businesses. In terms of monetary sovereignty, by issuing a digital currency, the ECB maintains control over the monetary system, reducing reliance on foreign digital payment solutions and protecting the strategic autonomy of European payments. The digital euro serves as a monetary anchor, ensuring that private money can always be converted into central bank money, thus maintaining trust in the euro.

Innovation is also a significant objective. The introduction of the digital euro is expected to foster innovation in the financial sector, encouraging the development of new payment technologies and services. By embracing digital currency, Europe can stay competitive in the global financial landscape, particularly as other large economies introduce their own central bank digital currencies.[13]

The benefits of the digital euro are manifold. It will be an electronic means of payments in retail payments, which will be made in public money, without any credit risk. Security is a top priority, with robust measures designed to protect against fraud and cyber threats. Enhanced security features will ensure the resilience of the digital currency against potential attacks. Privacy is another critical benefit, with mechanisms in place to protect personal data while complying with regulatory requirements. The digital euro will offer varying levels of privacy, balancing privacy with the need for regulatory oversight.

Accessibility is a key benefit, as the digital euro will be user-friendly and accessible to all citizens, regardless of their technological proficiency or access to banking services.

[12] ECB: The case for a digital euro: key objectives and design considerations. ECB, 2022

[13] Christine Lagarde and Fabio Panetta: Key objectives of the digital euro. ECB, 2022

It aims to be inclusive, providing a reliable payment option for everyone, including those who are currently underserved by traditional banking. Interoperability is also a significant benefit, as the digital euro will be compatible with existing payment systems and technologies, facilitating seamless integration. It will work alongside other forms of money, such as cash and commercial bank deposits, ensuring a smooth transition to digital payments.

The strategic impact of the digital euro includes economic efficiency, as streamlined payments will enhance the overall efficiency of the payment system. It will reduce the risk of market-abusive behaviour by ensuring a diverse and competitive payment ecosystem. Geopolitical stability is another impact, as the digital euro will protect the strategic autonomy of European payments, providing a fall-back solution in case of further geopolitical tensions. By maintaining a strong monetary anchor, the digital euro will support the international role of the euro.

Building public trust in the digital euro is critical, necessitating transparent communication and education about its benefits and security measures. The guaranteed convertibility of private money to public money will maintain trust in both private and public money. These objectives and benefits highlight the transformative potential of the digital euro in enhancing financial inclusion, payment efficiency, monetary sovereignty, and innovation, while ensuring security, privacy, accessibility, and interoperability.

Challenges and considerations

The introduction of the digital euro presents several challenges and considerations that need to be addressed to ensure its successful implementation and adoption. One of the primary challenges is the development of the necessary technical infrastructure. Creating a robust and secure digital currency requires significant investment in technology and cybersecurity. The infrastructure must be capable of handling large volumes of transactions efficiently and securely, while also being resilient to potential cyber-attacks. [14]

Another major consideration is public trust. Building trust in the digital euro is crucial for its widespread adoption. This involves transparent communication and education about its benefits and security measures. The ECB must ensure that citizens understand how the digital euro works, its advantages over traditional payment methods, and the measures in place to protect their personal data and financial information. Public trust is also linked to the perceived reliability of the digital euro. The guaranteed convertibility of

[14] ECB: The case for a digital euro: key objectives and design considerations. ECB, 2022

private money to public money will play a key role in maintaining trust in both private and public money.[15]
Privacy is a significant concern when it comes to digital payments and it tops the list of the desired features in surveys on digital euro. Thus the digital euro will balance between ensuring user privacy and complying with regulatory requirements. This involves implementing mechanisms to protect personal data while also allowing for necessary oversight to prevent illegal activities such as money laundering and fraud. The challenge lies in designing a system that offers a cash-like level of privacy without compromising security and regulatory compliance.[16]
Its economic impact is another important consideration. The introduction of the digital euro could have various effects on monetary policy implementation and financial stability. It is essential to assess these potential impacts and develop strategies to mitigate any negative consequences. For instance, the digital euro could affect the traditional banking system by reducing the demand for bank deposits, which could in turn impact banks' ability to lend. To address this issue the regulation proposal[17]envisage a system of holding limits for digital euro in the electronic wallets. The methodology for calibration of the holding limits is being finalised at the time of writing this paper; the actual size of the limits will be however determined at the time of the launch. The holding limits will balance between covering the needs of users and financial stability; the studies show that there is a wide enough range of limits that would ensure both.
Interoperability is also a key challenge. The digital euro will be compatible with existing payment infrastructure and technologies to facilitate seamless integration and to minimise the need for investments into systems and equipment. This requires collaboration with financial institutions, technology providers, and other stakeholders to develop standards and protocols that ensure interoperability. The goal is to create a digital currency that works alongside other forms of money, such as cash and commercial bank deposits, supporting a smooth transition to digital payments already taking place due to shifting preferences.
Regulatory framework is another critical consideration. Establishing a clear and comprehensive regulatory framework to govern the issuance and use of the digital euro is essential to ensure its stability and security. This involves defining the legal status of the digital euro, setting standards for its use, and developing mechanisms for oversight and enforcement.

The role of financial intermediaries

The role of banks and other intermediaries in the digital euro ecosystem is crucial for its successful implementation and operation. Intermediaries, banks and other payment service providers, will play a key role in distributing the digital euro to end users, just as they do today with the distribution of cash and ensuring them to keep the relationships with the end-users. They will be responsible for opening and managing digital euro accounts or wallets for users, ensuring that individuals and businesses can easily access and use the digital currency.[18]
One of the primary functions of intermediaries is the funding and defunding of users' holdings in digital euro. This means that users can either fund their digital euro accounts with cash or convert commercial bank money, such as bank deposits, into the digital euro. Intermediaries will facilitate these transactions, ensuring a seamless process for users. This role is essential for maintaining the liquidity and usability of the Digital euro, as it allows users to move funds between different forms of money easily.
Intermediaries will also be responsible for providing customer support and services related to the digital euro. This includes helping users with account setup, troubleshooting issues, and providing information about the features and benefits of the digital euro. By offering these services, intermediaries will help build trust and confidence in the new digital currency, encouraging its adoption among the general public. Another important role of intermediaries is ensuring compliance with regulatory requirements. They will need to implement measures to prevent money laundering, fraud, and other illegal activities. This involves conducting due diligence on users, monitoring transactions, and reporting suspicious activities to relevant authorities. By ensuring compliance, intermediaries will help maintain the integrity and security of the Digital euro system.
Intermediaries will also play an important role in promoting innovation and competition within the digital euro ecosystem. By developing new payment solutions and services that leverage the digital euro, intermediaries can enhance the overall efficiency and convenience of digital payments. This can lead to the creation of innovative products additionally to basic digital euro services, listed in the Proposal for a Regulation on the establishment of the digital euro, that meet the evolving needs of consumers and businesses, driving growth and development in the financial sector.[19]
Furthermore, intermediaries will be instrumental in fostering interoperability between the digital euro and existing pay-

[15] Markus BRUNNERMEIER, Jean-Pierre LANDAU: The digital euro: policy implications and perspectives. European Parliament 2022

[16] https://www.ecb.europa.eu/euro/digital_euro/faqs/html/ecb.faq_ digital_euro.en.html

[17] Proposal for a Regulation on a establishement of the digital euro, source: EUR-Lex - 52023PC0369 - EN - EUR-Lex

[18] Fabio Panetta: Building on our strengths: the role of the public and private sectors in the digital euro ecosystem. ECB, 2022

[19] Piero Cipollone: The role of the digital euro in digital payments and finance. ECB, 2025

ment systems. They will be important in efforts to ensure that the digital euro can be seamlessly integrated with other forms of money, such as cash and commercial bank deposits. This interoperability is crucial for providing users with a flexible and versatile payment solution that can be used in various contexts.

The collaboration between the public and private sectors is essential for building a robust digital euro ecosystem. The ECB will provide the underlying infrastructure and regulatory framework, while intermediaries will leverage their expertise in distributing payment products and interacting with end users. This synergy will ensure that the Digital euro is accessible, secure, and efficient, meeting the needs of all stakeholders.

The intermediaries would play a vital role in the digital euro ecosystem by facilitating transactions, providing customer support, ensuring regulatory compliance, promoting innovation, and fostering interoperability. Their involvement is crucial for the successful implementation and adoption of the digital euro, helping to create a secure, efficient, and inclusive digital payment solution. On the other hand, the digital euro also offers the intermediaries an opportunity to provide new innovative products and features on top of the basic digital euro services.

Conclusion

Gold and silver coins are the past, banknotes the present, and digital euro is the future of money. There are several market failures in the current payments landscape in the euro area and digital euro is aimed to address them.

The digital euro does not aim to initiate or speed-up the trend of decline of cash and digitalisation of payments, it follows the trend and offers the public the opportunity to use public, sovereign money for their payment needs and insures an adequate monetary anchor in the digital world. It addresses the fragmentation of the electronic payments solutions in the euro area, which private solutions are slow or incapable of addressing in an adequate matter.

Stakeholder engagement is crucial for the successful implementation of the digital euro. Collaboration with stakeholders, including financial institutions, technology providers, and the public, is necessary to gather insights, build consensus, and address concerns. Engaging with stakeholders helps ensure that the digital euro meets the needs of all parties involved and fosters a sense of ownership and support for the initiative.

Members of the Eurosystem, the ECB and the NCBs have neither the means nor the appetite to venture into retail banking by opening digital euro accounts for the population and business. This is and remains the domain of commercial banks and this makes them crucial for the distribution and functioning of the digital euro. In the view of this partnership, the digital euro aims to use as many existing solutions and standards as possible in order to minimise costsand provides a framework for innovations that can be harvested by the PSPs.

The digital euro also addresses the digital exclusion of vulnerable groups, which is enhanced by the complexities of many digital payment solutions available today. Being a one single solution for all payment needs, seamlessly adapting to different use cases, and with an array of access solutions and a support system it really wishes to leave no one behind.

At the time of this writing, the work on the digital euro project is progressing according to the adopted timeline, the public light of this future of money is however still some years away and contingent on the decisions of the Governing Council of the ECB and adoption of the required EU legislation. In the view of the changing payments landscape and general geopolitical trends it is our hope that this process will soon come to a positive conclusion, enabling the ECB to bring the EU citizens the future of money.

UDK 336.56(497.4+474.2):339.7:061.1EU

Strategic corporate sustainability in Central Eastern Europe: state- and company-level roadmaps

*Matej Draščck and Adrijana Rejc Buhovac**

The European Commission's NextGenerationEU initiative, a temporary recovery instrument of €800 billion, has significantly influenced economic recovery and sustainability efforts after the COVID-19 pandemic across EU Member States. While most Central and Eastern European (CEE) countries have primarily focused on infrastructure and green investments, Estonia and Slovenia have adopted a more holistic approach by supporting expert-driven corporate sustainability transformations of companies. This paper (1) examines how these two countries have utilised state agencies to support businesses in embedding sustainability into their strategic frameworks and operational processes, and (2) captures key challenges in corporate sustainability implementation. We suggest that inclusivity in strategy development and consistency in strategy implementation play a crucial role in effective corporate sustainability transformation.

JEL E02, E22, E62, F45, H87, O52

INTRODUCTION

In 2021, the European Commission launched the so-called NextGenerationEU temporary recovery instrument in the amount of €800 billion to support the economic recovery from the coronavirus pandemic and build a greener, more digital and more resilient future of EU Member States. The centrepiece of NextGenerationEU is the Recovery and Resilience Facility, an instrument that offers grants and loans to support reforms and investments in the EU Member States. Part of the funds are being provided to Member States in the form of grants, another part funds loans to individual Member States (NextGenerationEU–European Commission (europa.eu)). Member States' governments prepared their national Recovery and Resilience plans – the roadmaps to reforms and investments aimed to make EU economies greener, digital and more resilient–to get financial support under the Recovery and Resilience facility.

In most CEE countries, state contributory organizations (agencies) subordinated to respective Ministries were tasked to effectuate roadmaps to reforms. For example:

* Matej Draščck, PhD, is a Director of Finance in Hranilnica LON.
Adriana Rejc Buhovac, PhD, Full Professor, School of Economics and Business, University of Ljubljana.

- Croatia: Croatian Agency for SMEs, Innovations and Investments;
- Czech Republic: Business and Innovation Agency – API;
- Estonia: Joint institution of Enterprise Estonia and KredEx;
- Hungry: Hungarian Innovation Agency;
- Lithuania: Innovation Agency Lithuania;
- Latvia: Investment and Development Agency of Latvia;
- Poland: Polish Agency for Enterprise development, PARP; and
- Slovenia: Public Agency SPIRIT.

The bulk of initiatives run by these agencies have predominantly concentrated on singular investments in sustainable assets or infrastructure enhancements. However, a distinctive approach has been adopted by Estonia and Slovenia, countries that have leveraged the allocated funds to foster a sincere shift towards corporate sustainability by integrating expert support into the process of sustainability transformation in companies. This strategic orientation not only signified an investment in physical assets but also denoted a commitment to embedding sustainability into the long-term strategic frameworks of businesses within these two nations.

NOVEL STATE CONTRIBUTORY ORGANISATIONS' APPROACHES TO SUSTAINABILITY TRANSFORMATION

The Case of Estonia

In Estonia, in order for 'green' to become an integral part of the business, an industrial entrepreneur can use an external advisor to conduct a green audit. A roadmap is prepared that (1) assesses the green capacity of the company, (2) makes sense of the circular nature of the business, and (3) indicates bottlenecks, possible solutions, time horizon, estimated costs of solutions and impact on economic results. Development priorities for two years are set, which the company can begin to implement in the second stage of the grant. In addition to the roadmap, it is also possible to order environmental impact assessments of the company and its products, as well as the preparation and publication of respective declarations, from the advisor. The support allows, among other things, to develop new products/services, increase the lifespan of existing products/services, improve processes, make investments, and train the company's employees. The activities of the project must improve the company's readiness to adopt the principles of the circular economy and the transformation of existing practices into more sustainable ones. It is important that all activities support the reduction of the company's greenhouse gas emissions and resource consumption (Green support: support for changing the business model of a production company–Joint institution of Enterprise Estonia and KredEx. The investment is implemented via open calls to support the change of business models in manufacturing to ensure the compliance of Estonian products with environmental and climate objectives, including circular economy principles, and raise competitiveness of manufacturing companies.

The Case of Slovenia

In Slovenia, the history of state support of companies' sustainability transformation started in 2016. The first national pilot programme of the Public Agency SPIRIT Slovenia 'Establishing sustainability business strategies and business models in practice' took place between 2016 and 2017. Altogether, nine Slovenian companies (large ones and SMEs) participated in the programme and three sustainability transformation experts facilitated the process. In addition to nine sustainable business strategies and business models, the pilot programme resulted in a manual entitled 'Sustainable business strategies and sustainable business models in Slovenian practice' (Rejc Buhovac, Hren, Fink, & Savič, 2018). The manual defines key concepts, outlines the step-by-step sustainability business transformation process, underlines the role of leaders in sustainability transformation, as well as provides field evidence of sustainability business cases.

The subsequent programme 'Promoting sustainable business strategic transformation and developing new business models in Slovenian companies for easier integration into global value chains' took place in the period 2019–2022 with sixty SMEs successfully completing their sustainability transformation under the mentorship of six sustainability transformation expert. The programme was designed to help companies redesign their processes and products, as well as foster sustainable transformation of company leaders and employees. The process of developing a sustainable business strategy took from four to five months. During that time, strategic workshops were held weekly by experts with participants from leadership and operational levels. In addition to sustainable business strategies, sustainable business models were developed to effectuate the long-term commitments of companies towards reducing their negative impacts on the nature, people and the community. After successful development of sustainable business strategies, companies were entitled to a grant to finance the development or redesign sustainable products or technologies. SPIRIT Slovenia set up a webpage, called

'Single point for strategic, sustainable and circular transformation of the Slovenian economy' to share results and experiences of companies.

Currently, the third nation-wide programme is running in Slovenia, 'Supporting start-ups, micro, small and medium-sized enterprises in strategically sustainable and circular business transformation in 2022–2025'. Two types of companies are participating, SMEs (115 in total) and start-ups and micro companies (40 in total). Twenty-two consultants with expertise in sustainability transformation are facilitating the processes with hands-on workshops at company sites. The focus of this ongoing programme is to take lead in Slovenia's decarbonisation through the transition to a circular economy. Again, after successful development of sustainable and circular business strategies and business model, companies are entitled to a grant to finance the development of circular products or technologies.

Through such measures, Estonia and Slovenia exemplify a holistic approach to corporate sustainability aiming to integrate environmental and social considerations into the core of strategic planning and operational execution.

CHALLENGES OF CORPORATE SUSTAINABILITY IMPLEMENTATION IN CEE

The process of sustainable business transformation requires more effort than the process of developing a sustainable business strategy. Firstly, it requires a sincere commitment from the owners and top management to corporate sustainability which they can express through any form of binding communication, such as a charter, an official public statement, or similar. From there, the sustainability transformation generally proceeds in line with the following steps (see also Rejc Buhovac, Hren, Fink & Savič, 2018): (1) selection of members for the strategic team, (2) identification of owners' expectations and sustainable business opportunities/risks using a materiality matrix, (3) strategic analyses, including analysis of the results of the existing business strategy and business model, (4) determination of a sustainable vision, mission, and values, (5) development of a sustainable business strategy (with a strategy map and documentation of strategic activities), (6) definition of key performance indicators for strategic control and their target values along with the methodologies for measuring sustainability impacts, (7) a protocol for monitoring the implementation of the sustainable business strategy, and (8) a plan for internal and external communication of sustainability and business performance.

Drawing from the experiences gathered in over 100 strategy development projects in various industries, this section presents two critical findings in corporate sustainability implementation.

Leave no one out

In general, leading strategy execution is far more difficult than the strategy development. One of the reasons lies in the fact that every strategy is about adaptation and change even if the aim is to maintain the status quo. And change is rarely embraced per se. It is, therefore, no surprise that the list of key obstacles to the strategy-execution process starts with the 'Inability to manage change effectively or overcome internal resistance to change', and 'Trying to execute a strategy that conflicts with the existing power structure' (Hrebiniak, 2005; Hrebiniak, 2006).

Our field work in sustainable business strategy development and implementation yields a simple but important message: securing inclusive and participative role of employees in all stages of strategy *formulation* is critical for effective strategy *execution*. Strategy execution success is far more strongly impacted by the employees' decisive role in the strategy making process than, for example, a sustainability-based variable compensation (incentives) which a company may introduce as part of the implementation process. Participation of employees can take various forms, such as interviews, focus groups, workshops, or surveys. Moreover, we find actively disengaged individuals (experts or workers in non-leadership positions) strikingly influential. This category of employees is typically marked by some feelings of injustice and exclusion, but their attitude is, in fact, activist. Unlike the disengaged, they have strong opinions and interests, however, often directed against the choices made by others, particularly the strategic and operational goals in which they had no say. Whenever we succeeded in persuading the top management team to integrate actively disengaged employees in all stages of strategy development, we paved the way for a successful transformation from feeling unheard and excluded to becoming part of something big and important. In few cases, where we yielded to the beliefs of top management that the inclusion of actively disengaged people would only harm the flow and productivity of strategic workshops, we experienced severe sobering after the end of the process. This confirms former evidence that the perception of fairness in strategic decision-making processes significantly enhances voluntary cooperation among individuals, fostered by their sense of trust and commitment (Kim & Mauborgne, 1998). In contrast, perceptions of unfairness may lead to resistance, manifested through the withholding of ideas and lacklustre participation in the development and implementation of strategies.

Stick to the plan

The list of key obstacles to strategy implementation also includes the 'Lack of upper-management support of strategy execution'. Although it may seem that this refers to the top management broad support of strategic decisions—such as the commitment to plans of actions, the allocation of resources, etc. – in fact, it relates to strategic control. Whenever top managers adhered to the strategic plan with e.g. quarterly control of strategic activity implementation, the execution of strategy was superior. The message to the employees was that strategic priorities matter and are not changing. Employees tasked with strategy execution managed to maintain their focus and efforts on the agreed strategic direction. In the absence of frequent (and regular) strategic control, employees started to interpret that the agreed strategic activities were no longer relevant. They turned back to their old operational tasks. With no regular control, activities stall and, finally, yearly check-ups end in a strategy revision rather than celebrating successes.

Another unfavourable consequence of not sticking to the agreed plan is key employee attrition. The expectations of employees who participated in the process of sustainable transformation, shared their ideas in developing the sustainable business strategy, and developed a sense of ownership of the strategy are always high. If top management delays the implementation of strategic activities and fails to meet their expectations regarding the agreed changes, it significantly increases the likelihood of their turnover. In the worst scenario, the company response is 'It is okay because we did not want them anyway.'

CONCLUSION

Through the lens of government policies, most CEE countries have centred their sustainability efforts on infrastructure and green investments. Estonia and Slovenia, however, have adopted a more comprehensive approach by integrating experts in corporate sustainability transformations, demonstrating the potential of state-supported strategic frameworks to drive short-term and long-term environmental, social and economic benefits. The cases of Estonia and Slovenia illustrate that sustainability transformation requires more than just financial investments—it necessitates the engagement of businesses in structured programs, expert guidance, and an overarching commitment to long-term change. Estonia's model emphasises structured green audits and roadmaps for corporate sustainability, while Slovenia has implemented nation-wide programmes that support companies through mentorship, strategic workshops, and funding for sustainable innovations.

Two critical drivers of corporate sustainability implementation emerged from the field projects. The first one is the inclusion of employees in the process of strategy formulation in different forms (interviews, focus groups, workshops, surveys, etc.). Companies that involve disengaged employees early in the process can transform their hidden resistance into constructive engagement, thereby strengthening internal commitment to strategic initiatives. The second one is regular (i.e. quarterly) control or sticking to the plan by top managers in strategy execution. Periodic strategic oversight enhances strategy execution and ensures long-term commitment to agreed goals.

REFERENCES

Hrebiniak, L. G. (2005). Making strategy work: Leading effective execution and change. Upper Saddle River: Wharton School Publishing.

Hrebiniak, L. G. (2006). Obstacles to effective strategy implementation. *Organizational Dynamics 35*(1), 12–31.

Kim, W. C., & Mauborgne. R. (1998). Procedural justice, strategic decision making, and the knowledge economy. *Strategic Management Journal 19*(4), 323–338.

Rejc Buhovac, A., Hren, A., Fink, T., & Savič, N. (2018). *Trajnostne poslovne strategije in trajnostni poslovni modeli v slovenski praksi.* Ljubljana: SPIRIT Slovenija.

UDK 330.131.7:336.71

Compound and cascading risks as part of the stress test narrative

*Slaven Mićković**

The last decade has witnessed events whose effects have gone beyond the sum of their parts. In this context, it is important that scenario analysis goes beyond considering one type of shocks in isolation. Instead, it is necessary to consider the potential compounding and cascading risks arising from the interaction of hazards, which may be characterised by single extreme events or multiple coincident or sequential events affecting exposed systems. The ambition of the methodology briefly presented in this paper is to create scenarios that capture simultaneously number of risk factors like macroeconomic or financial factors, climate and/or energy factors. On the other hand, the methodology aims to bridge the gap between short- and long-term scenarios by preserving the important features of both worlds.

JEL E59, E61, G01, G21

1. INTRODUCTION

Systemic risks have been a key aspect in economics and finance for the past several decades. The preliminary approach to systemic risks can be traced back to the 1990s, when the banking systems were flourishing, and large markets were opening up[1]. The 2008 financial crisis that was primarily triggered by the collapse of Lehman Brothers, is largely cited as a classic example of the aftermath of unregulated systemic risk. While these discourses existed around financial aspects, in the early 21st century, researchers have suggested that systemic risk is also prevalent in other fields where the emerging complex risk patterns have opened up debates on systemic risk in fields outside economics and finance (mainly in relation to natural disaster and climate change risk management).

The last decade has seen a coincidence of extreme climate events with macroeconomic instability (including the COVID-19 pandemic and the war in Ukraine). In 2023, the world was confronted with unprecedented extreme temperatures and an El Niño phenomenon, which was expected to cause simultaneous floods and droughts around the world, affecting economic growth and global trade flows.

* Dr. Slaven Mićković; SM, Poslovno svetovanje, Slaven Mićković, s.p.

[1] George Kaufman defined systemic risks as 'the likelihood that cumulative losses will occur from an event that trigger a series of successive losses along a chain of institutions or markets'.

The World Economic Forum (2023)[2] and other authors have described this as a "polycrisis": "The risk of polycrisis – when different crises interact in such a way that the cumulative impact far exceeds the sum of the parts – is emerging because of simultaneous shocks, strongly correlated risks and declining resilience". In this context, it is important that scenario analysis goes beyond considering one type of shocks in isolation. Instead, it is necessary to consider the potential compounding and cascading risks arising from the interaction of hazards, which may be characterised by single extreme events or multiple coincident or sequential events affecting exposed systems or sectors.

In this context, systemic risk can be seen as the culmination of various risk patterns, including cascading and compound risks. It is not considered a risk in itself and generally remains unaddressed. However, when some of the characteristics of the system change, systemic risk has the potential to adversely impact the functioning of the overall system. Although stress testing, which has become the dominant tool for assessing banks' capital adequacy, has changed significantly in recent years, scenario building itself has not changed much since the the last major financial crisis. Heavily inspired by the recent crisis, scenario narratives, which articulate how the scenario captures the risks, still mostly take into account single hazard where financial hazards dominate. As a result, banks have become very well prepared for a narrow set of scenarios. The extension of the scope of threats or risks to the environment, energy, geopolitics and a wide range of technology-related events is among the aspects that require more attention, with an emphasis on the possibility of co-occurrence. This calls for a cross-disciplinary approach to events that would comprehensively cover the threat areas in reality facing companies (financial and non-financial) and banks. In this paper, we also use the term composite risks interchangeably for compound and cascading risks.

The ambition of the methodology briefly presented in this paper is to create scenarios that capture simultaneously number of risk factors like macroeconomic or financial factors, climate and/or energy factors. On the other hand, the methodology aims to bridge the gap between short- and long-term scenarios by preserving the important features of both worlds. Like risks, these types of scenarios are called compound and/or cascading scenarios. In such a way developed and refined scenarios can significantly span the space of plausible futures.

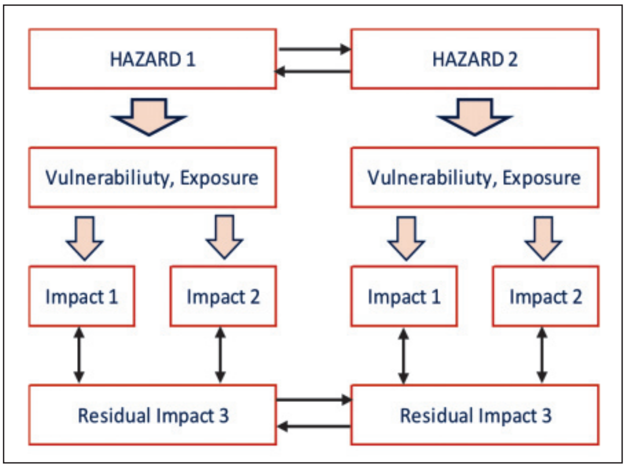
The following chapter proposes an operational definition and typology of compound and cascading risks. In the third chapter, we provide an operational framework for the design of narrative for composite and cascading scenarios. Chapter three also includes the example design of a baseline and an alternative composite scenario consisting of an economic and an environmental scenario. Fourth chapter provides the short description of the Minsky Moment, i.e. how to deal today with threats that materialise over time. Chapter fifth concludes the paper.

2. OPERATIONAL DEFINITION AND TYPOLOGY OF COMPOSITE RISKS

To integrate composite risks into financial risk management, the methodology proposes an operational definition and typology. The definition used as a starting point is that of the IPCC Sixth Assessment Report, based on Zscheischler et al.[3]: "a combination of multiple factors and/or hazards contributing to a societal and/or environmental risk". The proposed definition can be extended if we assume that the composite risks are a combination of any of the risks relevant to a particular stress test. So hazards from above definition may include at least one climate-related hazard in addition to hazards arising from other environmental, economic, social, geopolitical and technological systems. Compound risk arises from the interaction of Figure 1. Events compound and become risk multipliers hazards, which may be characterised by single extreme events or by multiple random or sequential events that interact with exposed systems or sectors.

In accordance with the above definition, compound events represent a combination of several factors and/or hazards contributing to different types of risks (environmental, credit, etc.).

Figure 1:



Source: Adopted from CDRI[4]

[2] https://www.weforum.org/podcasts/radio-davos/episodes/global-risks-report-davos2023/

[3] https://www.researchgate.net/publication/342186441_A_typology_of_compound_weather_and_climate_events

[4] The Coalition for Disaster Resilient Infrastructure

In accordance with the above definition, compound events represent a combination of several factors and/or hazards contributing to different types of risks (environmental, credit, etc.).

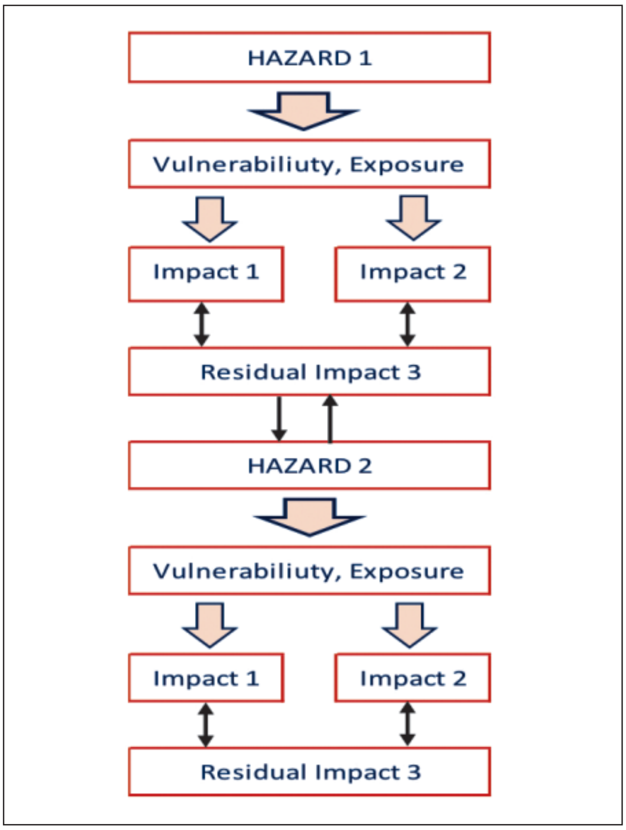
Zscheischler et al.[2] proposed the following typology of compound hazards:

1. Preconditioned: Pre-existing events refer to situations in which pre-existing conditions may exacerbate the impact of one or more hazards.
2. Multivariate: Multi-dimensional compound events are the result of a combination of several factors occurring simultaneously and/or occurring in the same geographical area.
3. Temporally compounding: Composite events are characterised by a sequence and/or recurrence of hazards in a specific geographical region and can be considered in different time frames.
4. Spatially compound: Events are characterised by the occurrence of several hazards simultaneously but in several different locations.

Examples for each type of composite events are given in the Table 1.

Cascading risk has been referred to as 'uncontrolled chain losses' in disaster risk management studies (Pescaroli and Alexander, 2018). When vulnerabilities overlap and interact, escalation points are created that can trigger secondary effects that are greater than or equal to the impact of the primary event. This allows the impacts of different events to penetrate across different sectors of the economy and sections of society. Thus, cascading effects are complex and multi-dimensional and evolve constantly over time. They are associated more with the magnitude of vulnerability than with that of hazards. The consequences of the 2011 Great East Japan Earthquake and Tsunami furthered the global community to consider realistically the problem of 'cascading disasters' . The disaster incident occurred as a direct result of an earthquake, resulting in an ensuing tsunami causing devastation to the coastal communities. This resulted in the radioactive contamination by the Fukushima nuclear reactors.

Figure 2: Events cascade and turn into risk multiplier



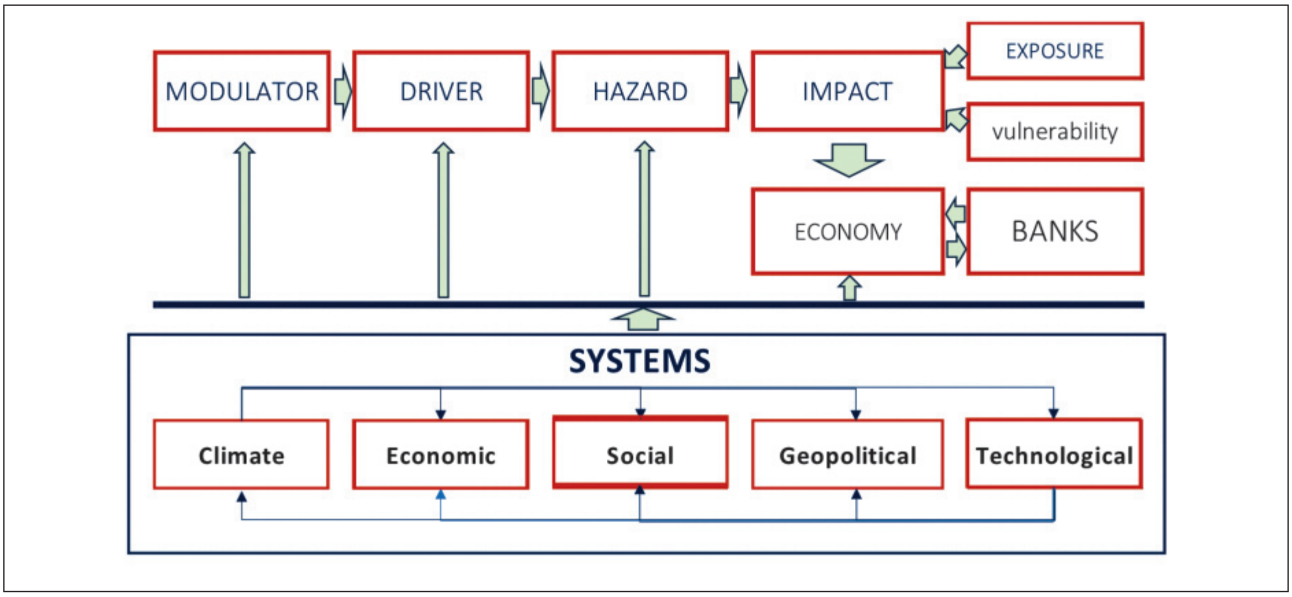
Source: Adopted from CDRI[4]

Table 1. Examples of compound events according to the proposed typology

Event	Precondition	Drivers	Hazards	Potential impacts
Preconditioned				
The cost of building JEK2 doubles	Insufficient fiscal space necessary borrowing	Building costs	Rising electricity prices	Productivity, Consumption
Heavy precipitation on saturated soil	Saturated soil	Heavy precipitation	Flood , landslide	Infrastructure
Multivariate				
Compaund Rising price of GHG emissions and cost of building JEK2		Building costs, price of GHG emissions	Rising electricity and fosil fuels prices	GDP growth
Compaund precipitation and wind extremes			Heavy precipitation, extreme wind	Infrastructure
Temporally compounding				
Temporary reduction in exports and increase in inflation		Lower export in Germany, An Imbalance in Supply and Demand		Consumption, GDP growth
Spatially compounding				
Spatially concurrent precipitation extremes/floods at regional scale		Percipitation	Flood	Crops, Infrastructure

Source: Adopted from Zscheischler et al[2]

Figure 3. Composite risks assessment framework



The framework of the assessment of composite risks includes (Figure 3):

- Economic, social, environmental or political impact (e.g. global logistical disruption and associated production delays, crop loss or infrastructure damage).
- Climate, economic or social hazards (risks) (e.g. heat waves, floods and landslides, labour market shortages, financial crisis).
- Climate, economic or social risk factors (macroeconomic environment, blockage of large-scale atmospheric circulation leading to drought and/or heat waves.
- Modulators influence the frequency, intensity and location of factors affecting the occurrence and intrusiveness (e.g. macroeconomic imbalances that existed before the adverse changes).
- Changes in different systems (economic, environmental, social, geopolitical and technological) affect modulators, physical factors and hazards.

Modulators, drivers, and hazards can be linked to different systems (economic, environmental, social, geopolitical and technological), and these systems also determine exposure and vulnerability. Interactions and feedback between these different systems can contribute to compounding effects.
In most cases, there is a non-linear correlation between the risk factor and the risk itself (linearly the risk factor and the risk may not be correlated at all):

$$risk = f_{non\_linear}(risk\_factor)$$

The same applies to the relationship between factors and modulators.

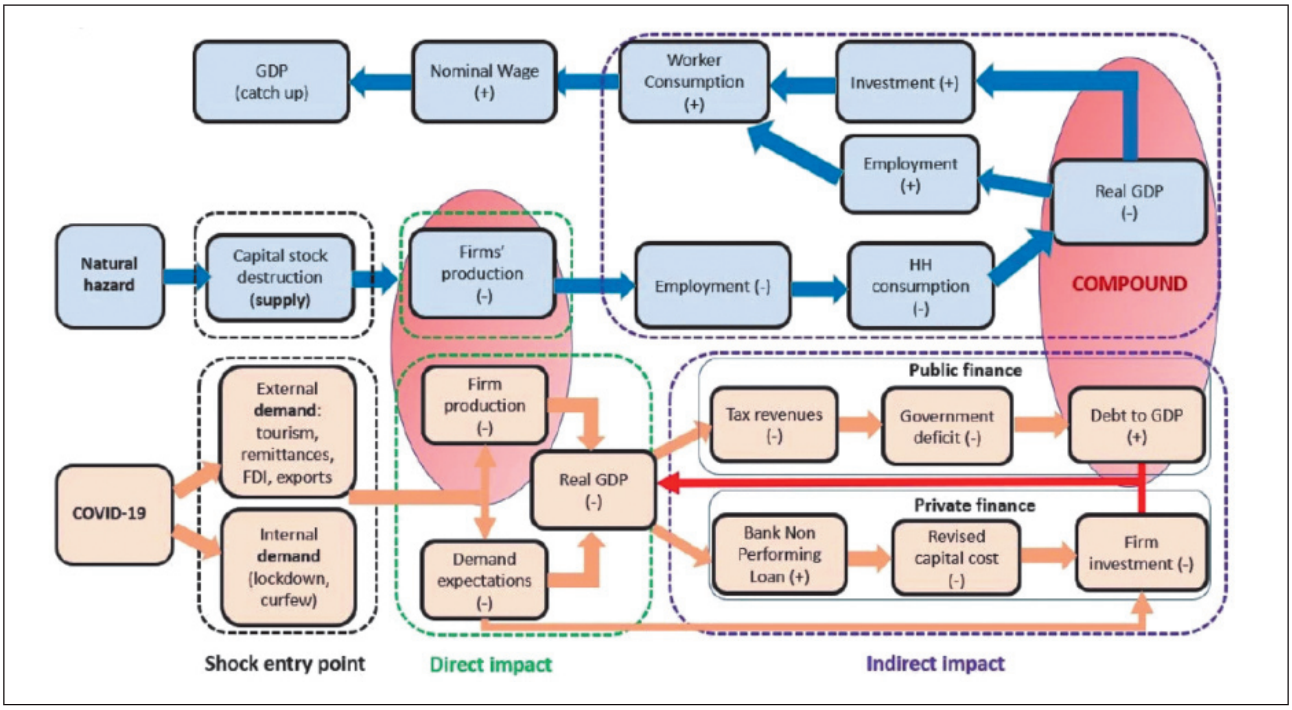
Good example of compound risk events is the simultaneous impact of the COVID-19 pandemic and climate change[5]. The Figure 4 shows the entry points of the COVID-19 shock and natural disasters (black dashed boxes) and the transmission channels to the main variables of the real economy and public and private finances. Direct impacts are indicated by the light green dotted box and indirect impacts by the purple dotted box. The red arrow shows the reinforcing feedback loop, while the red shaded areas indicate the compound effect.
The combined impact of a pandemic and extreme weather events is magnified in the economy and can increase economic losses (e.g. measured in GDP). The effects of compound events or risks can be greater than the sum of the individual effects. To measure the effects of composite risks, we use the composite risk multiplier, which is calculated as the ratio of the GDP loss in the composite risk scenario to the sum of the GDP losses in the individual pandemic and climate risk scenarios. When the composite risk multiplier is greater than 100, it means that there are non-linearities that make the triggered shock greater than the sum of the individual shocks.

3. BASIC FRAMEWORK FOR STRESS TESTING OF COMPOSITE RISKS

Until now, shocks have been dealt separately in the context of risk management. In addition, tools routinely used to assess and manage financial risks associated with natural

[5] The World Bank's Disaster Risk Financing and Insurance Program (DRFIP) has provided governments with risk analytics and advisory services to strengthen their financial resilience to disasters and climate shocks for over a decade. This is a critical part of a green, resilient and inclusive post-COVID recovery. The DRFIP partnered with Ca' Foscari University of Venice in a project to explore the impacts of compound shocks.

Figure 4: Compound risk transmission channels



Source: The World Bank

disasters, such as the Catastrophe Risk (Cat) Models used by the insurance industry, only include the first direct effects of shocks and certainly exclude the cascading and global nature of major catastrophes. Although many NGFS members and observers already include composite risks in their guidance and practice on stress testing and scenario analysis (in addition to climate), in order to address the above gap, it is necessary to bring together expertise and existing approaches from different fields of science, economic and financial modelling to create an integrated framework for the assessment of composite risks that is relevant to the financial industry.

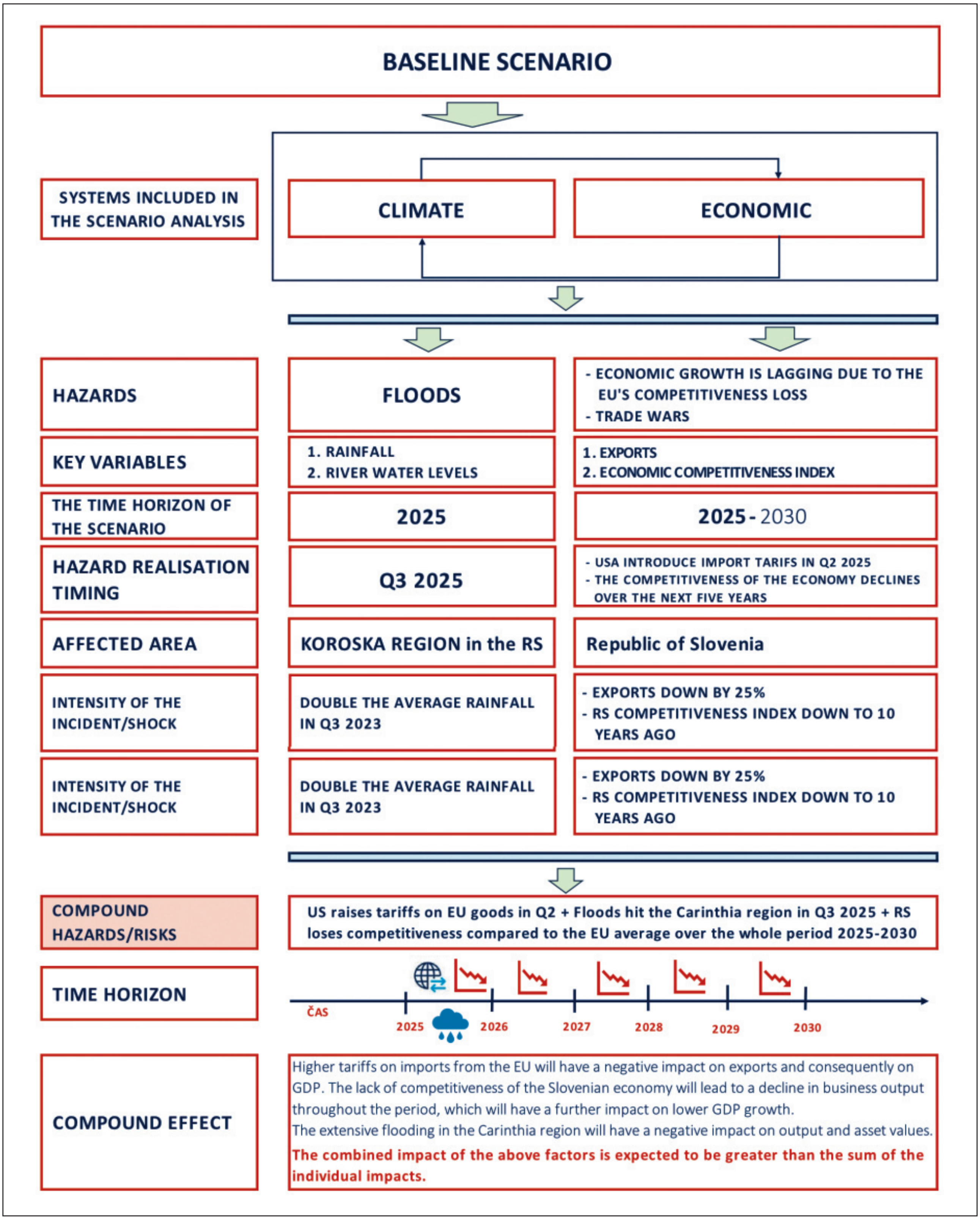
There are too many globally accepted risks to address them simultaneously in a stress test analysis. But in the face of this evolving reality, we need to rethink how we design stress scenarios that credibly and at the same time creatively test the vulnerabilities of financial and non-financial economic agents. Extreme events that are seemingly unrelated often occur together, with one cascading into the other. These are 'grey swans': too frequent and unlikely to be unpredictable 'black swans' but similarly having severe consequences. As the COVID-19 pandemic has shown, low probability but high impact can have widespread and unpredictable consequences for the economic and financial system.

Scenario analysis in the form of stress testing was used to great effect in the great financial crisis of 2008-09. Indeed, stress testing has become the dominant tool for assessing the capital adequacy of banks, both by risk managers and regulators. But even the most imaginative risk managers feel challenged to imagine a set of plausible but highly adverse scenarios with real events that continually surprise for the worse. The title of the speech by Fabio Panetta, member of the ECB Executive Board, perfectly reflects this mood: "Everything, everywhere, at once"[6].

Stress testing has changed significantly since the last major financial crisis: from stress with one or two risk factors to multi-dimensional scenarios with dozens of risk factors; from a single shock to evolving dynamic scenarios; from focusing only on losses to taking into account the dynamic evolution of the balance sheet and the income statement over the course of the scenario. However, scenario building itself has not changed much since the financial crisis, as it has largely been based on the severe recession and flight to quality scenario in financial markets, which was heavily inspired by the recent crisis. As a result, banks have become very well prepared for a narrow set of scenarios. The extension of the scope of threats or risks to the environment, geopolitics and a wide range of technology-related events is among the aspects that require more attention, with an emphasis on the possibility of co-occurrence. Europe's or Slovenia's reduced competitiveness, which slows down productivity and, consequently, economic growth, is certainly a risk factor that must be taken into account in the

[6] https://www.ecb.europa.eu/press/key/date/2023/html/ecb.sp230322_2~af38beedf3.en.html

Figure 5: Schematic illustration of the alternative compound scenario design



formulation of scenarios. This calls for a cross-disciplinary approach to events that would comprehensively cover the threat areas facing companies (financial and non-financial) and banks.

In the absence of a generally accepted framework for the integration of compound and cascading risks for stress testing, I propose below steps for the integration of composite risks in stress testing. These steps can be seen as initial recommendations for integrating composite risks into scenario analysis. Scenario building starts with a narrative of how the realisation of risks at the tail end of the distribution can impact financial vulnerabilities to severe but plausible damage to the bank. In modelling terms, this step involves selecting one or more shocks. The stress tests are based on at least two scenarios. These are a baseline scenario and at least one adverse scenario.

Step 1. Establishing a baseline scenario

1.1 Determine the time horizon that is the subject of the scenario analysis or stress test.
1.2 Select the environments or systems whose variables will be covered by the scenario.
1.3 Design of individual scenarios according to the selected systems (environmental, economic, etc.). The intensity of the events covered by the baseline scenario corresponds to the most probable development of the individual events.
1.4 Design a composite scenario by classifying the risks of all covered environments in time and space.

Step 2: Design of the alternative scenario

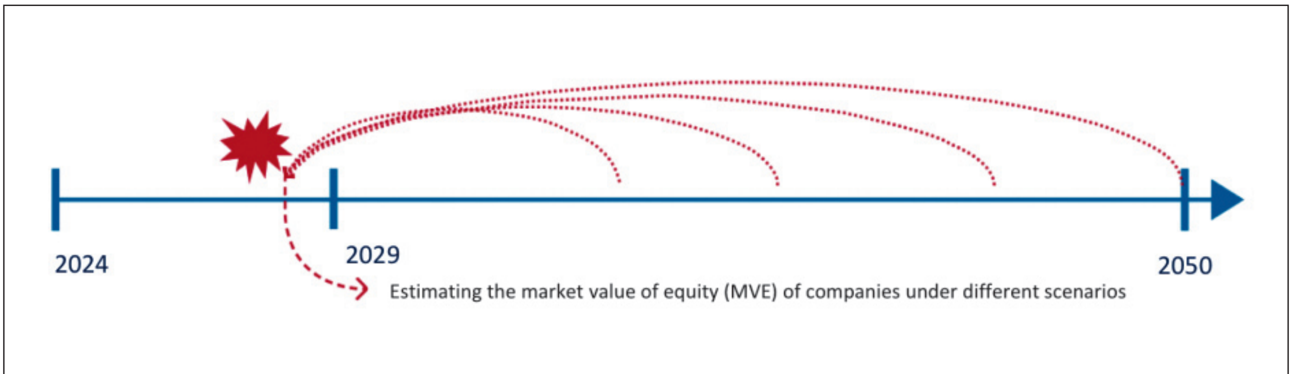
2.1 Determine the deviations of the values of the key variables from the values in the baseline scenario (determine the magnitude of the shocks).
2.2 Qualitative and quantitative analysis of the risk transmission channels of the selected environments/systems on factors and sectors of the real economy and the banking sector. Such an analysis of transmission channels is an essential step for a comprehensive understanding of where feedback between different types of shocks can lead to compounding and cascading effects that can cause severe economic disruption and macro-financial effects.
2.3 Comparing the results of the baseline and alternative scenarios.

Which composite shocks will be considered depends on the characteristics of the country whose banking system is the subject of the scenario analysis. Despite the wide range of composite shocks, the evidence confirms that only some of these composite shocks are likely to be financially relevant to countries' financial systems. The identification of the most relevant shocks for inclusion in the scenario analysis may be based on past analysis, the identification of climate-related economic vulnerabilities, expert consultation and analysis of future climate and economic projections. Figure 3 shows the development of an alternative (unfavourable) composite scenario from the environmental and economic unfavourable scenarios. The two scenarios combine economic and climate shocks of different intensities. The shocks are based on empirical observations and test different timing of the composite events. The two scenarios are designed to assess risks that could happen "tomorrow" as well as five or more years from now and are, therefore, very relevant for decision-makers now and for planning the Bank's long-term business strategy.
Composite risk represents a structural change in the economy and its implications cannot be simply deduced by the sum of individual risks. Measured with the composite risk multiplier, impact of compound economic and climate shocks is higher than the sum of the individual shocks.

4. THE MINSKY MOMENT, OR HOW TO DEAL TODAY WITH THREATS THAT MATERIALISE OVER TIME

A Minsky Moment is a sudden fall in asset prices after a long period of growth, triggered by debt or currency pressures. Adopting a long-term risk horizon is key to avoiding rapid asset price adjustments and the so-called "Minsky Moment" coined by Breeden and Hauser (2019) in this context. Although Hyman Minsky theorised about cyclical upswings and downswings with turning points occurring when speculative activity becomes extremely volatile, leading to rapid price deflation (Minsky, 988; 1992), it is im-

Figure 6. The logic of the "Minsky moment"



Source: Adopted from the Conceptual note on short-term climate scenarios, NGFS, October 2023 portant to note that these typically occur at blind spots in the regulatory framework where risks are not yet identified, fixed or mitigated. In the future, there could also be a "Minsky moment" due to climate risks, where assets that are directly or indirectly exposed to high levels of greenhouse gas emissions or assets with a high carbon content (e.g. assets in the fossil fuel industry or assets that are heavily dependent on fossil fuels) are suddenly revalued. A massive revaluation of such assets could have systemic effects.

The logic of the "Minsky Moment" can be extended by discounting the effects of all stress events (measured in monetary terms) that materialise over time (measured in years) to the current year when the stress test is conducted (Figure 4). The assumption of such discounting is that we have information today that, if realised in the future, would have a significant impact on the value of the asset.

5. Conclusion

This paper tries to introduce compound and cascading risks into the narrative of stress tests. To this end, it provides a definition of these risks and defines an appropriate framework for stress testing involving this type of risk. Economic and financial risks, climate change, environmental damage, and public health emergencies are all interconnected. Disregarding these interlinkages and their compounding effects limit effective policy making and financial risk management. Different manifestations of compound, cascading and systemic risks depict that the increasing and complex nature of risk is difficult to manage unless it is addressed in a systematic manner. Understanding of a system and various patterns of risk it is exposed to, requires for a holistic assessment of all different types of risk. Such a multi-hazards, multi-dimensional and multi-scalar assessment of risk is the precursor for strengthening the governance of compound, cascading and systemic risks. New evaluation metrics that are sensitive to compound and cascading events are needed.

Although there are still questions to be addressed, one conclusion is clear: including compound and cascading risks into realistic scenario test narrative could be a meaningful first step toward enhanced financial resilience.

References

Basel Committee on Banking Supervision (BCBS) (2021a), Climate-related risk drivers and their transmission channels, April.

EBA (2023), EU-wide Stress Testing, EBA

ECB (2022), 2022 Climate Risk Stress Test, ECB

Jan Bohinec, Jan Tršinar, Žiga Žerjav, Lucija Blažej, Tomaž Štokelj, Dejan Paravan Trajnostni prehod slovenskega elektroenergetskega sistema do 2050.   ELEKTROTEHNIŠKI VESTNIK 89(1-2): 7-20, 2022.

Miller H and Dikau S (2022) Preventing a 'climate Minsky moment': environmental financial risks and prudential exposure limits. London: Grantham Research Institute on Climate Change, London School of Economics and Political Science.

NGFS (2022) NGFS Climate Scenarios for Central Banks and Supervisors, NGFS

Nicola Ranger, Olivier Mahul and Irene Monasterolo, Managing the financial risks of climate change and pandemics: What we know (and don't know), OneEarth 4 (2021)

J. Zscheischler, S. Westra, B.J.J.M. van den Hurk, S.I. Seneviratne, P.J. Ward, A. Pitman, A. AghaKouchak, D.N. Bresch, M. Leonard, T. Wahl, X. Zhang, Future climate risk from compound events, Nat. Clim. Chang., 8 (2018), pp. 469-477

UDK 336.76(497.4)

The Ljubljana Stock Exchange's view: from a braking to an acceleration of the Slovenian capital market

*Marko Bombač**

The article discusses the evolution, decline and renewed momentumof the Slovenian capital market. It begins by highlighting the importance of a strong capital market for economic growth and competitiveness. It then reviews the rise and collapse of the market from 2007 onward, pointing to the financial crisis, correction of irrational exuberance, and a lack of robust policy support as key reasons for prolonged stagnation. The article outlines recent positive developments, such as government initiatives, introduction of new investment products, and strategic plans by the Ljubljana Stock Exchange, contributing to the revival of the Slovenian capital market. Overall, it presents a hopeful outlook for the future, emphasizing the need for cooperation and long-term reforms.

JEL G1, G01

1. Introduction: The capital market as the pillar of a competitive economy

A developed and well-functioning capital market is one of the key pillars of a modern, innovative, and resilient economy. On one hand, it enables companies to raise equity and debt financing and contributes to the efficient distribution of financial resources. On the other, it allows for higher savings through broader public participation, more stable and faster long-term economic growth, comparatively more globally competitive companies, and more effective risk distribution.

Retrospective: From peak to stagnation

There is a saying that history is the teacher of life. And those who do not know history are doomed to repeat it. To build the future, we must understand the past – the period from 2007 onward provides an important lesson and a starting point.

The year 2007 marked the peak of the Slovenian capital market, characterised by strong investment momentum, but also by euphoria and a lack of rationality. It was a time when amateurs lectured professionals. Everything — and more — was wagered. Pledging assets for stock investments was not unusual. Returns seemed virtually guaranteed, and in

* Marko Bombač, CFA, FRM, President of the Management Board, Ljubljana Stock Exchange

Chart 1 - Valuation of Slovenian, European and US equities

SBI TOP	P/E	Dividend Yield	P/B
Europe	13.2	2.99	2.29
USA	15.6	1.93	2.82
Slovenia	30.3	0.84	3.43

uch an environment, a bubble formed. This is illustrated by Chart 1, showing distinctly above-average valuations of Slovenian stocks compared to their European or American counterparts.

Then the inevitable happened – the bursting of the stock market bubble, which had a prolonged impact. Following the 2008 financial crisis and the European debt crisis, the domestic capital market entered a decade-and-a-half-long stagnation:

- Stock exchange turnover dropped significantly – from over €2 billion annually in 2007 to less than half a billion in 2012 – a decline of more than 75% in five years. Although market capitalisation began rising after 2012, turnover stagnated until 2024. The reason lies in the continuously negative trend in market capitalisation turnover ratio (a key indicator of market development).
- The number of stocks and investors dropped sharply, leading to reduced market activity and the exit of exchange members. In 2012 there were 25 members; today, the number is well below 10.

Key reasons for capital market stagnation

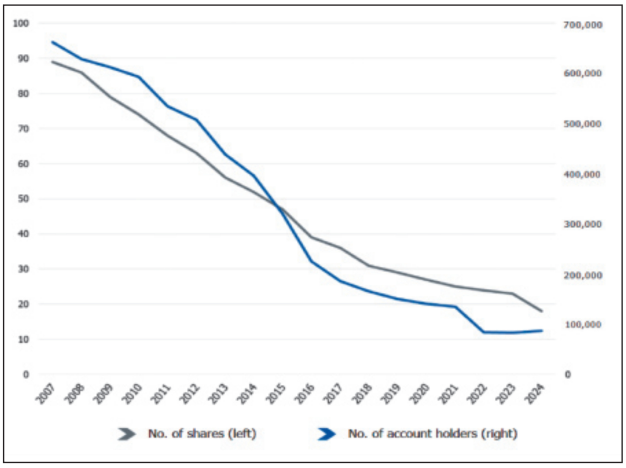
The 2008 financial crisis and the 2012 European debt crisis, which also manifested in a collapsed banking system, had multifaceted consequences for Slovenia's economy. First, excessively indebted and poorly managed listed companies failed—still remembered by many Slovenians. Second, to regain international investor trust, the government pledged to sell certain partially state-owned listed companies. The 2016 abolition of registry accounts further reduced the number of retail investors.

The gap caused by the departure of retail investors was hard to fill. Domestic institutional investment capacity is limited. Due to low free float and liquidity, Slovenia's capital market has limited appeal to foreign investors. Consequently, the lack of capital led to almost no new stock listings (Chart 4), making Slovenia stand out negatively even by international standards.

Chart 2 - Falling market capitalisation turnover ratio

Source: LJSE data

Chart 3 - Fall in the number of shares and account holders



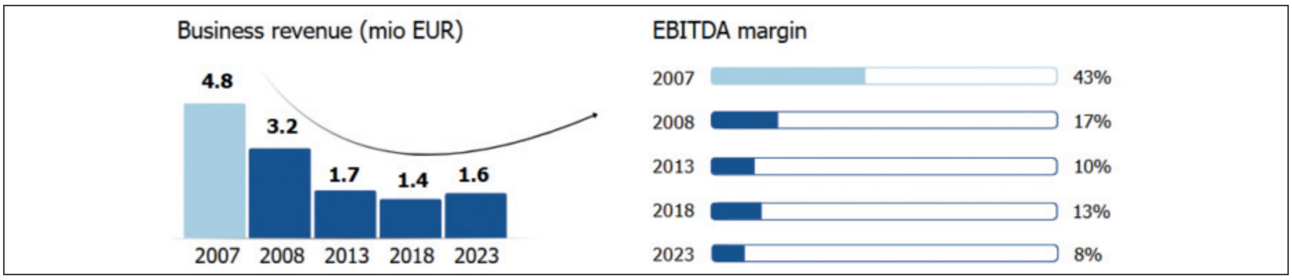
Source: LJSE data

Chart 4 - A regional comparison of the number of listings of new shares

STOCK MARKET	2020	2021	2022	2023	2024	TOTAL
Bulgaria	6	10	6	6	7	35
Croatia	4	4	2	0	0	10
Hungary	4	5	14	7	3	33
Poland	21	48	24	24	22	139
Romania	1	3	1	3	3	11
Slovenia	**0**	**0**	**1**	**0**	**1**	**2**

Source: LJSE data

Chart 5: LJSE Strategy



Source: LJSE data

To make matters worse, after the market crash, capital and the capital market were often blamed for the economic shock, creating a lasting negative perception. This resulted in the capital market being a low priority in economic policy. Little to no support was visible in high capital taxation. A 40% tax on capital gains from trading derivatives stands out as a rarity among developed economies.
Finally, Slovenian financial literacy remains low. Nearly €27 billion sits in bank accounts, €24 billion of which earns no interest.

Today: Positive developments

European context and the need for action

Europe today faces challenges to global competitiveness—from technological lag to insufficient capital financing for innovation. Mario Draghi's report stresses the EU's need to deepen capital markets to support innovation, digitisation, and decarbonisation. Slovenia cannot afford to fall behind. A key solution is a stronger role for the second and third pension pillars across the EU countries. To activate dormant savings sitting in banks, the report highlights Sweden's ISK accounts, which offer tax incentives and are used by 40% of Swedes.
Strengthening support for Slovenia's capital market
Like in Europe support for capital market development is also growing in Slovenia. The Ministry of Finance has prepared a capital market development strategy. In March 2025, the government issued its second retail bond, a safe instrument for first-time investors. A bill on individual investment accounts is also under consideration – these accounts are simple and tax-friendly.

The (non-)pension reform

A bitter note, at least based on current information, is the pension reform. Experts repeatedly stress the importance of the second and third pillars to activate dormant capital lying in non-interest-bearing bank accounts. The reform must increase mandatory saver participation; otherwise, the gap between Slovenia and the EU (already wide) will only grow. Pension fund assets in Slovenia account for about 5% of its GDP, while the EU average is 32%. Higher contributions to pension funds would increase savings and create a serious domestic institutional investor, boosting liquidity and providing stable long-term capital.

Ljubljana Stock Exchange Strategy to 2028

The Ljubljana Stock Exchange is also looking ahead, planning and executing activities that contribute to capital market development. Under its newly prepared strategy, the vision by 2028 is to at least double revenue growth (compared to 2018–2023) and strengthen its leading position in the Adriatic region. This will be achieved through five strategic goals:

1. Increase in turnover of capitalisation by 25% and net increase in the number of instruments by 15
2. Development of new products and services
3. Focused on stakeholders' satisfaction and trust
4. Improving business excellence
5. Focused on long-term profitability

The period from 2007 to 2023 saw a noticeable decline in revenues and EBITDA margins. The year 2023 marked the bottom by many measures. Last year, however, was much better and is seen as a turning point. With stakeholder cooperation and the implementation of this strategy, we believe the vision is achievable. Our goal is not just business growth but also the development of the Slovenian capital market, improved financial literacy, and long-term benefits for the economy, issuers, and investors. Achieving this strategy will require cooperation from all stakeholders.

Conclusion

The past 15 years have tested Slovenia's capital market. But the situation is gradually improving. Across the EU, the importance of developed capital markets for economic competitiveness is being emphasized. This rhetoric is now being matched with real support for developing Slovenia's capital market. The Ljubljana Stock Exchange also has a clear vision and goals. With all this in place, we look to the future of Slovenia's capital market with optimism.

UDK 339.5.012.435(73):061.1EU

The U.S. "Big Game", Global Reordering, and Implications for the EU

*Vasja Rant**

This article critically examines the fundamental shift in U.S. policies under Donald Trump's second presidential term. Drawing on the ideas articulated by the U.S. President's advisors, it analyses proposed U.S. interventions in the global economic, financial, and security order, with a particular focus on reciprocal tariffs, dollar hegemony, and conditionality-based alliances. The article highlights the inconsistencies and systemic risks of the administration's strategy, its implications for multilateralism, and its disruptive effects on global trade and financial stability. Against this backdrop, the article outlines potential strategic responses for the European Union, emphasising the need to strengthen technological, economic and financial sovereignty, build internal resilience, and pursue institutional reforms to safeguard the EU's capacity for strategic action in an increasingly adverse global environment.

JEL F02, F13, F32, F33, F50, H87

1. Introduction

Since the beginning of Donald Trump's second presidential term, relations between the United States and the European Union have been tense and unpredictable. U.S. economic and political decisions, including tariff policies and the war in Ukraine, appear reckless and keep changing on a daily basis, increasing uncertainty. This is reflected in the financial markets, where the volatility index in April reached its highest levels since the global financial crisis and the COVID pandemic. Although it seems that financial markets forced the U.S. President into a temporary pause of the announced tariff hikes, the sense that the relationship between the EU and the U.S. is undergoing a fundamental transformation persists.

This sense is reinforced by the behaviour of senior members of the new U.S. administration, who openly express contempt for the EU (Goldberg, 2025).[1] President Trump's statement that the European Union was created to "screw" the United States succinctly captures this sentiment. In an environment where emotions increasingly cloud judgment, where the U.S. is initiating a trade war against the EU as its largest trading partner, while simultaneously appeasing Russia, blaming Ukraine for the outbreak of the war, and even

* Vasja Rant, Associate Professor, School of Economics and Business, University of Ljubljana.

[1] A conversation transcript on Signal during the U.S. attack on the Houthis on March 14, 2025, published by The Atlantic journalist Jeff Goldberg, revealed an extraordinarily dismissive and offensive attitude toward the European Union by key members of the U.S. administration, including Vice President Vance, Secretary of Defense Hegseth, and then National Security Advisor Waltz. The scandal that followed became widely known as "Signalgate."

expressing territorial ambitions towards an EU member state (Denmark), it is crucial that the EU responds with a clear head, considering the long-term interests of the Union and its member states.

A basis for the EU's strategic reflection lies in understanding what the U.S. actually aims to achieve. Although the U.S. objectives are difficult to discern from the daily chaos, there is a certain purpose behind the turbulence. This purpose is highly problematic for the EU. According to the U.S. President's strategists,[2] the administration's "Big Game" is built on three interconnected pillars: economic, financial, and security (Miran, 2024). In each of the three areas, a fundamental intervention into the existing global order is envisaged. If fully implemented, this intervention could result in the most significant change in global governance since the end of World War II. The ultimate goal, discernible from the range of policy proposals, is to preserve the dominant role of the United States in the world across all three domains (economic, financial, and security), while shifting the burden of U.S. global leadership onto the rest of the world and constraining China as the primary U.S. systemic rival. If possible, this is to be achieved through cooperation with the rest of the world; if not, through coercion.

The aim of this article is to present and critically evaluate the conceptual plans of the Trump administration and, on that basis, to reflect on strategic responses of the EU. The article consists of six chapters, in addition to the Introduction. Chapters 2 through 4 summarise the main elements of the U.S. strategy in the economic, financial, and security domains, as articulated by the President's chief economic advisor, Stephen Miran. Chapter 5 offers a critical evaluation of these ideas. Chapter 6 examines the potential risks arising from disruptive U.S. policies, based on an analysis of global and EU economic and financial exposures. Chapter 7 concludes the article by focusing on directions for EU responses.

2. Economic ideas of the U.S. administration

In the economic domain, the United States is aiming to reorganise international trade relations and reindustrialise the U.S. economy. Protectionism through structurally higher tariffs is viewed by the President's economic advisors as a core strategic tool to achieve these goals.[3] Their reasoning is based on the hypothesis that the current international trading system is unfair to the U.S., as the overvaluation of the dollar allegedly leads to the substitution of domestic production with cheaper imports, thereby driving American deindustrialization. The fact that the U.S. has long experienced substantial current account (and within that, trade) deficits is well known. From a macroeconomic perspective, current account deficits reflect the gap between national savings and investments and must be financed through inflows of capital from abroad. A central issue in understanding the U.S. turn toward protectionism is whether capital inflows into the country are a consequence of its current account deficits or their underlying cause.

The conventional economic explanation, which views capital inflows as a *consequence* of the current account deficit, aligns with the well-documented attractiveness of investment opportunities in the U.S. and its chronically low savings rate, reflecting a consumer-driven economy and, in particular, persistent government deficits (Stiglitz, 2018). The alternative explanation, which views capital inflows as a *cause* of the current account deficit, is linked to the dominant role of the dollar in the international monetary system. Since the U.S. dollar is still by far the world's leading reserve currency, there is substantial global demand for safe dollar-denominated financial assets. This demand does not arise from the need to carry out international trade transactions but from the need for a global store of value (Bernanke, 2005). The U.S. Treasury securities play a key role as the "ultimate safe haven" in this system. According to this explanation, global demand for dollar reserve assets results in an overvalued dollar and persistent U.S. current account deficits.

Identifying which explanation of the relationship between the U.S. current account deficit and capital inflows is valid has significant implications for U.S. economic policy. If the first explanation holds (capital inflows are a *consequence* of the current account deficit), then closing the deficit would require changes to domestic U.S. policy, either by increasing savings, reducing investment, or a combination of both. If the second explanation holds (capital inflows are a *cause* of the current account deficit), then the rest of the world is effectively responsible for the U.S. external imbalance. Trump's economic advisors follow the logic of this second explanation and view the provision of the dollar's reserve currency role as an international public good, which, in their opinion, should be paid for by the users of that good (all other countries).

In addition to the overvalued dollar, they also identify unfair trade practices by other countries as a major contributor to the U.S. current account deficit (Pettis & Hogan, 2024). These range from higher tariff barriers to non-tariff restrictions, encompassing both foreign policies that can

[2] The U.S. President's two main economic strategists are Stephen Miran, who heads the President's Council of Economic Advisers, and Peter Navarro, who serves as Trump's advisor on economic and trade policy.

[3] In addition to the two stated objectives, the tariffs are also expected to provide the added benefit of boosting federal revenues, thereby creating a fiscal basis for tax cuts.

genuinely distort international terms of trade (e.g., export subsidies) as well as policies unrelated to trade distortion that are ideologically opposed by the U.S. administration (e.g., value-added taxes or regulations related to the green transition and digital services). All of this is used to justify protectionist trade measures aimed at safeguarding the U.S. economy.

3. Financial ideas of the U.S. administration

The economic pillar of the administration's conceptual framework is directly linked to the financial pillar through the issue of the U.S. dollar. Based on the reasoning of Stephen Miran, the United States could be pursuing three goals in the financial domain (Miran, 2024).

First, in the short term, a stronger dollar is seen as beneficial, as it would mitigate the inflationary effects of tariffs on American consumers. Such a policy, however, contradicts the very purpose of tariffs: a stronger dollar would encourage imports (despite tariffs) and discourage exports. It also amounts to a tacit admission that tariffs, in the absence of offsetting exchange rate adjustments, are inflationary.

Second, in the longer term, the U.S. aims to weaken the dollar to boost the international competitiveness of its economy. To achieve this goal, both unilateral and multilateral approaches have been floated by the administration's advisors. One possible unilateral measure is to limit capital inflows into the U.S. (and thereby reduce demand for dollars) through tools such as "user fees" or "custodial accounts" for foreign holders of dollar-denominated financial assets. This would effectively amount to imposing capital restrictions on foreign investors in U.S. markets.

The multilateral approach envisions an agreement between the U.S. and a "coalition of the willing," which has been dubbed the Mar-a-Largo agreement, modelled on the Plaza and Louvre accords of the 1980s.[4] This potential new agreement would include two elements. First, net sales of dollar reserve holdings by the participating countries would be used to depreciate the dollar. Second, short- and medium-term U.S. Treasury securities would be exchanged for ultra-long-term instruments, possibly 100-year bonds or even perpetuities. This proposed exchange, in combination with net sales of dollar reserve holdings, is intended to stabilise long-term yields. The idea of such bond maturity transformation is entirely new and was not part of previous agreements like Plaza or Louvre. If the exchange were forced and unfavourable to the creditors, it could be technically classified as a default under definitions used by major rating agencies and financial associations (e.g., ISDA), making the proposal highly controversial. Although it would reportedly apply only to official (not private) creditors, such a move would likely trigger significant market disruption, as it would undermine broader investor confidence. To make the exchange more palatable, the President's advisors have suggested offering participating creditors access to Federal Reserve liquidity lines. This would address the illiquidity of 100-year or perpetual bonds but would also leave the creditors fully dependent on the Fed's discretion. Of course, the key question in all of this remains unanswered: which countries would actually be willing to participate in such a deal?

Third, the U.S. seeks to maintain the dollar's dominant international role – something that President Trump has explicitly emphasised. He has even threatened punitive tariffs on countries that actively undermine the global status of the dollar (Williams, 2024). The reserve currency status provides the issuing country with exceptional benefits. In this respect, the United States is truly unique: it has long defied standard macroeconomic constraints. It has been able to finance fiscal deficits by "exporting" its Treasury securities abroad and collecting seigniorage in the process. The central role of the dollar has also given the U.S. a powerful tool of financial extraterritoriality, enabling it to project financial power alongside its military force in international conflicts. While the desire to preserve the dollar's global status is understandable, it is fundamentally at odds with other elements of the administration's agenda, which erode the trust of the U.S.'s economic and financial partners. Even Trump's own economic strategists acknowledge this contradiction. As a result, a more likely scenario is a gradual limitation of the dollar's central role to a bloc of countries that are economically and financially closely aligned with the United States.

The U.S. attempt to preserve global financial hegemony could also be channelled through support for private digital (crypto) currencies, even under a scenario of declining relative importance of the dollar. While no concrete proposals have emerged so far, the administration has signalled a general orientation toward building up strategic reserves of bitcoin and deregulating the crypto sector. Although the U.S. cannot directly control the issuance of private digital currencies, it could extend its influence indirectly, for example, by ensuring convertibility into U.S. dollars. Globally used private digital currencies that are dollar-pegged,

[4] The Plaza Accord (1985) was concluded between the United States, West Germany, Japan, France, and the United Kingdom with the goal of achieving a coordinated depreciation of the U.S. dollar. It is important to note that, in addition to foreign exchange market interventions, the Plaza Accord also envisioned domestic macroeconomic adjustments – namely, a more restrictive fiscal policy in the U.S. and more expansionary fiscal policies in Germany and Japan. Due to political constraints, however, not all of the agreed adjustments were implemented. The Louvre Accord (1987) followed the Plaza Accord and represented an effort by the same group of countries to stabilise exchange rates after the initial successful depreciation of the dollar.

especially stablecoins, could – when combined with U.S. digital service providers (Big Tech) – pose a challenge to the monetary sovereignty and payment systems of other countries. At the same time, deregulation of this sector could also introduce new risks to the financial system due to the high volatility of crypto markets. From this perspective, the development of central bank digital currencies (such as the digital euro) should be seen as an attempt to preserve monetary sovereignty (Cipollone, 2025).

4. Security ideas of the U.S. administration

The element binding together the economic and financial pillars of the Trump administration's "Big Game" is the American security (military) shield. According to the President's strategists, this shield represents the second key international public good – alongside the international role of the U.S. dollar – that the United States provides to its allies. Using a similar logic as with the dollar, they argue that users of this public good should pay for its provision (Miran, 2024). The Signalgate affair offered a revealing glimpse into how the U.S. administration envisions implementing this logic in practice.

The economic, financial, and security pillars of the "Big Game" are supposed to be held together by a system of conditionality based on threats and concessions, in line with the Art of the Deal doctrine.[5] From this perspective, the ideas presented so far in the economic and financial areas do not only represent strategic orientations of the United States but also tactical bargaining instruments. The aim is to redefine the U.S. system of alliances and draw a clear dividing line between "close supporters," "neutral states," and "opponents." At the opposite end of this dividing line stands China, which the U.S. perceives as its principal systemic rival and adversary.

In the new global order envisioned by the President's chief economic advisor, access to American consumers, dollar-denominated reserve assets, and the U.S. security shield would no longer be a right, but a privilege. Countries that align their strategies with U.S. economic, financial, and foreign policy interests could be "rewarded" with better access to the U.S. market (through lower tariffs), to dollar reserves (through reduced capital restrictions), and to the American security shield (through military alliances). In return, however, they would have to accept unfavourable deals (e.g., a Mar-a-Largo-type agreement). Countries wishing to retain a higher degree of autonomy without openly opposing U.S. interests would face greater restrictions and the threat of a withdrawal of the U.S. security guarantee. Countries acting in direct contradiction to U.S. interests, or actively supporting China's, would find themselves cast to the "other side," behind a tariff, financial and security wall.

5. Critical assessment of the U.S. strategy

Since the global financial crisis and the rise of populism (Brexit, Trump's first term), the world has been steadily drifting away from the uncritical support of globalization. The COVID crisis and the war in Ukraine have further accelerated the shift towards protectionism. They exposed vulnerabilities of global supply chains under the efficient global trading system and highlighted the need for strategic sovereignty in critical areas of supply chains and advanced technologies. Despite rising tensions, however, the world had remained globalised up until this year.

Trump's second presidential term marks a turning point, elevating protectionism to a whole new level. Historical comparisons suggest that full implementation of the announced reciprocal tariffs would push U.S. protectionism back more than a century, to levels not seen since the early 20th century. If sustained, this level of protection would most certainly trigger profound structural changes in international trade, even more so if the affected countries or regions (including the EU) respond with secondary tariffs of their own. But even if the U.S. stance softens, which now seems to be happening, the damage has already been done: trust has been broken, and structural shifts to a certain degree now seem inevitable. These changes are likely to reduce global prosperity and, against the backdrop of elevated global debt levels, may also result in macroeconomic and financial instability.

From an economic perspective, the path chosen by the U.S. is highly uncertain. It reflects a black-and-white view of the causes of America's structural challenges and reveals a deep misunderstanding of the functioning of the modern economy. It is also based on a unilateral logic of power, rejecting the established rules of the multilateral global governance system. As shown by Obstfeld (2025) in a highly useful analysis of myths and realities about U.S. international economic and financial relations, the truth in the debate over whether the U.S. is itself responsible for its problems, or whether others are to blame, lies in the grey areas. The global role of the U.S. dollar may indeed contribute to America's trade imbalances, lending some support to the capital-inflow induced explanation of its current account deficit. But as Obstfeld demonstrates, this effect fluctuates over time and does not eliminate the fact that the U.S. is also largely responsible for its own external imbalances through inappropriate domestic policies, particularly

[5] The Art of the Deal is Trump's 1987 book on the art of making deals, built around a set of aggressive, instinctive, and publicity focused negotiation tactics.

its chronic lack of fiscal discipline. Thus, the macroeconomic explanation of the current account deficit remains relevant for the U.S.

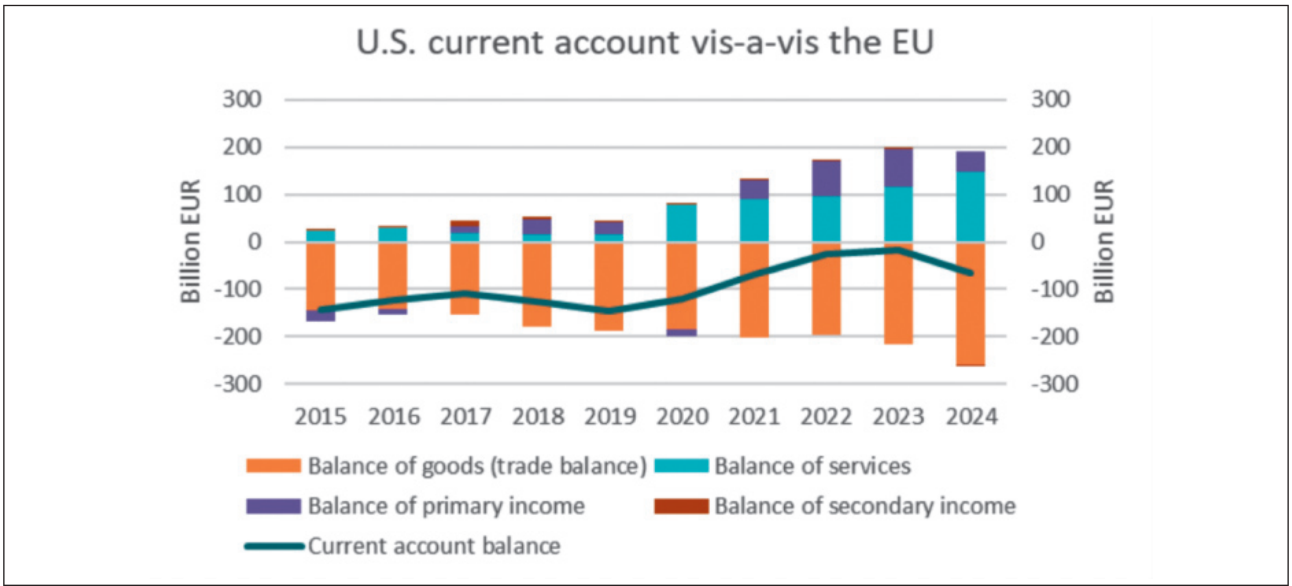
Trade wars involving high tariff rates against the entire world, and especially against China, underestimate the complexity of global value chains and, if sustained, risk causing severe disruption. A very illustrative example is the iPhone: according to 2025 data, Apple sources components for the iPhone from suppliers in more than 50 countries across six continents. Media estimates of the impact of reciprocal tariffs on the price of Apple phones range from price increases of 50-80% if existing value chains remain intact, to nearly 200% in the case of full repatriation of production to the United States, given much higher production costs. The reckless imposition of tariffs without regard for the complexity of value chains has already had a strong impact on financial markets, leading to a delay in tariff implementation for most countries, a reduction of prohibitive tariff rates on China, and the announcement of selective exemptions. These and future adjustments, which are almost certain to follow, will cause further distortions and inefficient capital allocation.

The U.S. trade strategy suffers from a fundamental flaw: it focuses solely on the flow of goods and completely ignores the balance of services, as well as primary and secondary income balances, which, together with the trade balance, determine the current account balance in the balance of payments. Surpluses in the services and income accounts serve as a significant counterweight to the U.S. trade deficit with the EU. As shown in Figure 1, the United States recorded a €258 billion trade deficit with the EU in 2024, but also a €148 billion surplus in services and a €43 billion surplus in primary and secondary incomes. By excluding services and income, the U.S. side deliberately overstates the extent of its external imbalances with the EU.

The differentiation of the announced reciprocal tariff rates by country is at odds with the existing multilateral system of the World Trade Organization, as it violates the fundamental principle of non-discrimination among countries, which underpins the multilateral trading framework. This principle has a clear economic rationale: it reduces the risk of trade deflection. Differentiated tariffs would instead incentivise such practices, since countries facing high U.S. tariff barriers would have an interest in redirecting their exports, in line with rules of origin (e.g., through a certain degree of processing), via countries subject to lower U.S. tariff rates.

The unjustified classification of value-added tax (VAT) and regulatory requirements related to the green transition and digital services as non-tariff barriers also violates another core principle of the World Trade Organization: the principle of national treatment, which ensures equal treatment of domestic and foreign companies. Both domestic and foreign firms operating in the EU single market are subject to the VAT. International tax principles designed to prevent double taxation stipulate that the VAT is applied in the country of import (for importers), while a zero rate is applied at export (for exporters). Accordingly, U.S. companies operating in the EU pay the VAT in the EU, while EU companies operating in the U.S. pay the sales tax in the United States (which does not have a VAT system). The same applies to regulatory frameworks: U.S. firms offering goods or services in the EU single market are subject to the

Figure 1: External imbalances between the United States and the EU



Source: Eurostat database.

same regulatory requirements as their EU-based competitors. U.S. efforts to portray the EU's tax and regulatory frameworks as non-tariff barriers are therefore highly problematic, as they amount to a direct interference with the sovereignty of EU member states and the Union as a whole. Debates about the appropriate structure of taxation and regulation are a fundamental part of democratic discourse within national and European institutions. Within these institutions, decisions can be made, if needed, to adapt existing arrangements in line with societal preferences and institutional mandates. External pressure to change such arrangements would risk subordinating sovereign decision-making to foreign interests.

The method used to calculate the reciprocal tariff rates by country is also fundamentally flawed and represents a textbook example of the Lucas critique (Lucas, 1976). Trump's economic advisors derived the tariff rates theoretically from the estimated import reduction needed to eliminate the bilateral trade deficit between the U.S. and each individual country, based on assumed price elasticities of import demand and the pass-through of tariffs into domestic prices. The parameter values used in the calculation were based on historical academic averages, without adjustment for specific countries or markets. In practice, this meant that the announced tariff rates were simply set at half the size of the bilateral U.S. trade deficit with each country, expressed as a percentage of imports, using data for the year 2024. This approach is problematic both because it applies uniform average parameters and because it relies on a single year of data, meaning that using data from any other year, or adjusting the parameters, would yield significantly different results. Moreover, the static nature of the calculation fails to account for the behavioural responses of firms, consumers, and countries to the imposition of tariffs. As a result, the estimated parameters can never be accurate, since they are based entirely on past behaviour.

From an economic perspective, the attempt to balance trade bilaterally with each country amounts to a new form of mercantilism that is fundamentally at odds with Ricardo's theory of comparative advantage, which underpins modern trade. Moreover, this partial approach entirely overlooks the macroeconomic nature of the current account deficit: bilateral trade deficits are part of a broader balance-of-payments imbalance between national savings (S) and investment (I). If the U.S. were to reduce its trade deficit with one country (e.g., China) by differentiating tariff rates across countries, its deficits with other countries would necessarily increase. And even if the overall deficit were to decline due to excessively high tariff rates on all countries, the likely reason would not be a revival of domestic U.S. industry and export competitiveness, but rather a drop in consumption and investment, since U.S. firms would be unable to fully replace imports and maintain competitiveness. In the extreme (hypothetical) case, the U.S. could close itself off entirely from the rest of the world, which would indeed eliminate its current account deficit. For countries operating under autarky, the identity $S = I$ always holds. The closest real-world example of such a system is North Korea. While such extreme scenarios are not likely, they demonstrate that wielding protectionism as a hammer can severely backfire.

A defining feature of U.S. policy making under the Trump Presidency is also a pronounced (almost daily) volatility in decision-making. While highly erratic behaviour was not fully anticipated by Trump's economic advisors, it appears to be inevitable due to transactional style and personal characteristics of the U.S. President. The day-to-day reversals in economic decisions, combined with security-related shocks (Ukraine, Greenland, Canada) and open political interference (Elon Musk's active campaigning in favour of Germany's AfD), significantly increase uncertainty and erode trust. They have also triggered economic nationalism and anti-American sentiment among some of the U.S.'s closest allies, particularly those most directly affected. This is becoming evident in shifting consumer behaviour: in the first quarter of 2025, Tesla vehicle sales in the EU fell by 37% compared to the same period in 2024, despite a 28% increase in overall electric vehicle sales across the EU (Parodi, 2025). Similarly, tourism data point to significant declines: in March 2025, international visitor numbers to the U.S. fell by 12% year-on-year, with an even steeper 17% drop among European visitors (Gabbatt, 2025).

The aggressive tariff policy has also unnerved investors in U.S. financial markets. The value of the dollar against the currencies of the United States' main trading partners, including the euro, has fallen notably since the beginning of Trump's second presidential term. While this aligns with the longer-term objectives of Trump's strategists, it runs counter to their short-term aim of preserving the dollar's value to offset the inflationary effects of tariffs. As a result, the Chair of the Federal Reserve, Jerome Powell, has already stated that the Fed may find itself in an unenviable position, forced to choose between its two core objectives: price stability and full employment. He indicated that full employment is not achievable in the long run under conditions of high inflation, implying a preference for price stability and higher interest rates. One important reason for the Fed's persistence with restrictive monetary policy, though one it likely prefers not to emphasise publicly, may also lie in the financial markets. The announcement of reciprocal tariffs caused significant tremors even in the once-untouchable market for U.S. Treasury securities. Against this backdrop, it is not hard to imagine how financial markets would react if the Trump administration were to announce the implementation of other financial elements of its "Big Game," such as the Mar-a-Largo accord or unilateral capital restrictions. For now, however, financial market reactions and expected disruptions in consumer goods supply appear to have tempered the administration's willingness to engage in further experimentation.

Finally, a full assessment of Trump's "Big Game" also requires an understanding of the domestic context within the United States. As reported in the media, a broad attempt to undermine institutional independence appears to be underway. This includes aggressive interference in the federal administration (through mass dismissals), efforts to bring independent regulatory agencies under political control (by requiring presidential approval of regulatory actions), attacks on universities (through restrictions of research funding and academic autonomy), attempts to silence unfavourable judges (through smear campaigns and threats of impeachment), pressure on law firms that had previously litigated against Trump (through threats of terminating business relationships), deportations of immigrants (potentially lacking due process protections), discrediting of critical journalists (as seen in the Signalgate affair), media attacks on the central bank (due to the Fed Chair's independent stance), and, finally, Trump's open flirtation with a third presidential term. All of this undermines the institutional foundations of the system of checks and balances on which the United States has built its soft power, competitive edge, and longstanding international reputation as a safe haven. As Nobel laureate Daron Acemoglu recently wrote in the Financial Times, it may be precisely the erosion of institutional foundations that have made the U.S. attractive and successful that paves the way for its decline (Acemoglu, 2025).

6. Vulnerabilities to U.S. economic and financial shocks

The potential for disruption stemming from a shift in the global economic and financial order that could be induced by aggressive U.S. policies is substantial. This is especially true for the European Union, given the depth of its economic ties with the United States.

On the economic side, the EU-U.S. economic relationship is the largest in the world. In 2024, Eurostat data shows that the combined value of imports and exports in goods and services between the EU and the U.S. amounted to €1.7 trillion or approximately 10% of EU GDP, with goods trade accounting for about 5% and services trade another 5% of EU GDP. This interdependence is especially pronounced in high-value-added export sectors such as pharmaceuticals, automobiles, and machinery. Any large-scale trade disruption due to U.S. tariff policies would ripple through EU industries and complex supply chains with material economic cost.

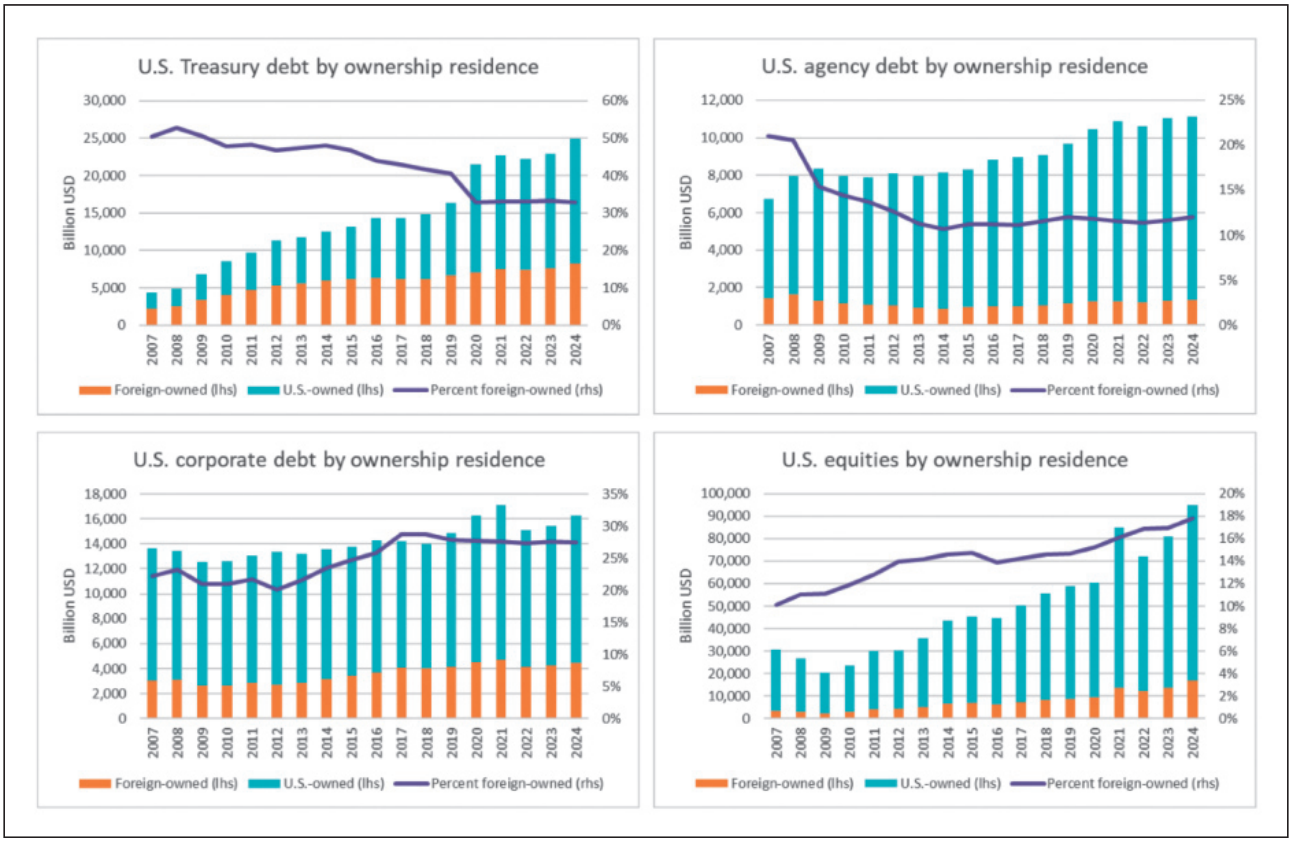
Yet the financial channel of exposure is even more consequential. Foreign investors are heavily invested in U.S. financial markets – not just in Treasury securities, but also in agency debt, corporate bonds, and equities. According to U.S. Treasury data, the total value of foreign holdings of U.S. securities reached a record $30.9 trillion in 2024, equivalent to 38% of world GDP excluding the United States.[6] As shown in Figure 1, this includes U.S. Treasury debt ($8.2 trillion), agency debt ($1.3 trillion), corporate bonds ($4.5 trillion), and equities ($16.9 trillion). Foreign holdings relative to total outstanding amounts in 2024 were the highest for U.S. Treasuries (33%), followed by corporate debt (27%), equities (18%), and agency debt (12%).

The EU's relative exposure is even more pronounced. In 2024, EU holdings of U.S. financial assets amounted to approximately $8.6 trillion, or 44% of EU GDP. These exposures are particularly concentrated in equities (25% of EU GDP or $4.8 trillion), but are also substantial in Treasury and corporate debt (9% and 10% of EU GDP, or $1.8 and $1.9 trillion, respectively). Corporate debt and equities are also the two segments where relative EU exposures (expressed as a share of GDP) exceed those of the rest of the world, whereas EU relative exposure to agency debt is comparatively lower. Within the euro area, the relative exposure is higher still, reaching 48% of euro area GDP, underlining the systemic importance of U.S. financial markets for the EU's financial system.

Figure 2 highlights the composition of foreign exposures to U.S. financial markets by asset class and investor type. The left panel shows that by 2024, two-thirds of foreign holdings were concentrated in U.S. equities. This share has steadily increased from less than half since the global financial crisis and partially reflects growing valuations of U.S. stock markets during this period. The share of Treasury debt in total foreign holdings has also risen over the years, reaching 14% in 2024, while the shares of corporate and agency debt have declined since 2009. The right panel reveals a marked shift in investor composition: the share of private investors has risen consistently since the global financial crisis, reaching 79% of total foreign holdings by

[6] According to the International Monetary Fund's World Economic Outlook, world GDP in 2024 was estimated at $110.5 trillion, with U.S. GDP at $29.2 trillion, EU GDP at $19.4 trillion and euro area GDP at $16.4 trillion.

Figure 2: Foreign holdings of U.S. securities

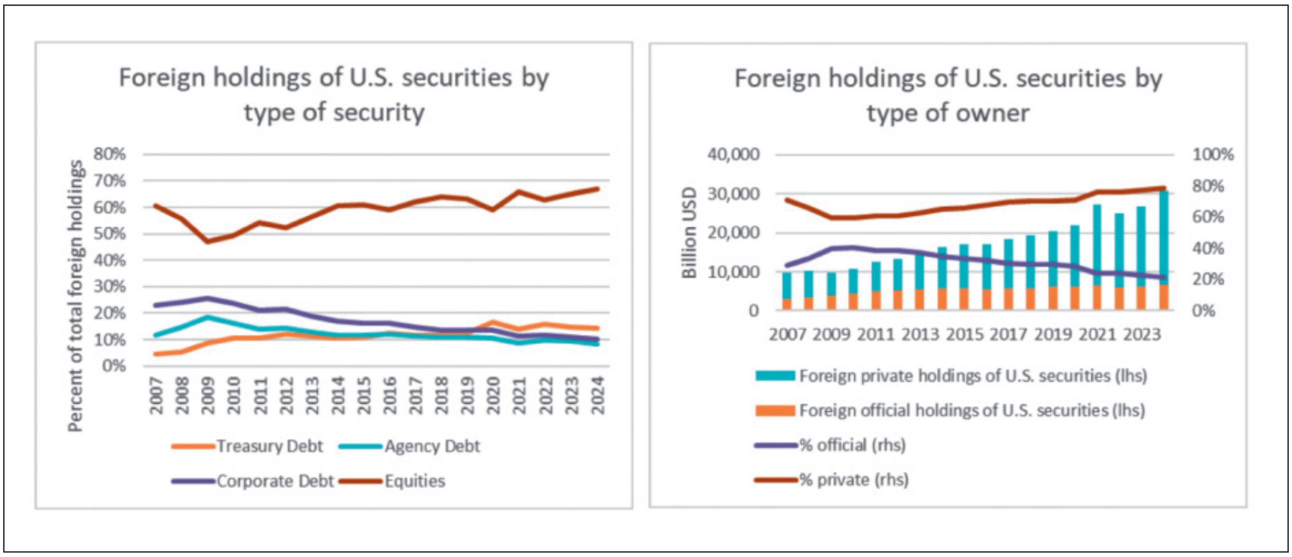


Source: Treasury International Capital (TIC) data.

2025. Growing reliance on equity markets and private capital could amplify global sensitivity to shifts in U.S. financial conditions.

Table 1 reports foreign holders of U.S. securities by the country of residence. In 2024, Japanese investors were the largest single holders of Treasury and agency debt, surpassing the holdings of Chinese investors. Collectively, however, investors from EU member states were the largest holders in each asset class, except agency debt, underscoring substantial EU vulnerabilities to abrupt changes in U.S. policy, especially those affecting the dollar's global role, market access, or liquidity conditions.

Figure 3: Composition of foreign holdings of U.S. securities by type of security and owner



Source: Treasury International Capital (TIC) data.

Table 1: Major foreign holders of U.S. securities as of June 30, 2024, in billions USD

U.S. Treasury debt		U.S.Agency debt	
Total foreign holders	8,211	Total foreign holders	1,337
Of which: top 5	3,352	Of which: top 5	875
1. Japan	1,09	1. Japan	242
2. China	780	2. China	234
3. United Kingdom	739	3. Taiwan	193
4. Canada	373	4. Canada	153
5. Luxembourg	369	5. Luxembourg	53
Of which: EU27	1,769	Of which: EU27	173
Of which: EA20	1,623	Of which: EA20	169
U.S. Corporate debt		**U.S. Equities**	
Total foreign holders	4,455	Total foreign holders	16,878
Of which: top 5	2,521	Of which: top 5	7,727
1. Luxembourg	674	1. Cayman Islands	1,854
2. Belgium	576	2. Canada	1,766
3. Cayman Islands	506	3. United Kingdom	1,743
4. United Kingdom	417	4. Luxembourg	1,233
5. Ireland	348	5. Ireland	1,131
Of which: EU27	1,92	Of which: EU27	4,756
Of which: EA20	1,886	Of which: EA20	4,11

Source: Treasury International Capital (TIC) data.

The analysis above shows that the power realignment pursued by the U.S. administration poses material economic and financial risks for the EU. At its most destabilising, it could trigger disruption across the European economy and financial system. These systemic vulnerabilities, when viewed in the context of the increasingly unilateral direction of U.S. policy and the EU's own internal structural shortcomings, underscore the need for a more assertive and coherent response by the Union.

7. Concluding remarks: implications for the EU

The developments since the beginning of Donald Trump's second presidential term point to a profound departure from the system of global governance as we have known it. The multilateral global order under the soft hegemony of the United States, which has shaped the world for 80 years since World War II, is coming to an end. It is being replaced by a system of hard hegemony of competing global powers, in which countries wishing to remain under the U.S. sphere of influence are expected to subordinate themselves to American interests. On the other side, China and Russia are expanding their own spheres of influence through economic, political, and military pressure.

In this new global landscape, the European Union will have to secure its place. If it does not want to submit to external dictates, it must, in in a world increasingly shaped by power, strengthen its autonomy in key areas of sovereignty. At the most basic level, this means ensuring physical security, as well as reliable and affordable access to food, energy, and critical raw materials. In the long term, however, technological sovereignty is paramount. Without it, the EU cannot hope to achieve its stated Treaty objective of a "highly competitive social market economy". The EU is increasingly falling behind both the U.S. and China in the development of key digital and green technologies. Closing this gap should build on the recommendations of the Draghi (2024) and Letta (2024) reports and encompass measures to support innovation, the development and commercialisation of European technologies, significantly scale up private and public investment in emerging technologies and related infrastructure, strengthen European value chains, fully leverage the single market, deepen EU capital markets, and reduce regulatory burdens. Only by boosting its innovation capacity and competitiveness can the EU maintain its economic weight and help shape the new global equilibrium.

In the current circumstances, the EU will also need to reconsider the appropriate macroeconomic policy stance. The U.S. President's protectionist trade policy is engendering a reduction in U.S. demand for EU products, which the EU can compensate for in two ways: by strengthening domestic demand and by reorienting toward non-U.S. markets. Both trends are already partly underway. On the domestic side, reformed EU fiscal rules have been recently relaxed for the purpose of security spending. This relaxation could serve a double purpose: stimulating demand while boosting competitiveness, particularly if spending is directed toward domestic innovation and industrial capacity for dual-use technologies and infrastructure. However, fiscal flexibility should be used with care, as not all member states enjoy the same level of fiscal space. On the external side, the EU is launching new initiatives to deepen economic cooperation with third countries and regional trade partnerships. At the same time, the EU should also seek to minimise the damage caused by the trade dispute with the U.S., provided that any compromise does not directly constrain the Union's crucial long-term development interests.

In addition to the macroeconomic dimension, the EU must also consider the shifting global financial equilibrium. The uncertainty generated by U.S. policy may undermine the foundations of the post-war international monetary system. In the less likely, but not impossible,[7] scenario of a U.S. withdrawal from key multilateral financial institutions such as the International Monetary Fund and the World Bank, the EU should be prepared to take on a more active role and prevent a vacuum that could otherwise be filled by other actors, primarily China. Should the role of the U.S. dollar decline, the EU should also aim to strengthen the international role of the euro through deeper capital market integration, a permanent common bond market building on the Next Generation EU experience, and completion of the digital euro project. The EU's deep reliance on U.S. capital markets makes the case for such efforts even more urgent. Such developments could enhance the Union's financial resilience and attract foreign capital to the EU, which would also support its long-term development goals.

A critical systemic prerequisite for achieving the strategic goals outlined above is a more effective EU institutional framework (Mrak & Avbelj, 2025). Without institutional reforms that enhance decision-making efficiency, the Union will struggle to respond in a timely and coordinated manner to the challenges of an increasingly unpredictable international environment. Broader use of qualified majority voting, particularly in the areas of foreign and security policy and competitiveness-related measures, could increase the Union's operational capacity. It is also important that the EU improves coordination of horizontal, strategic policy areas, such as competitiveness. A fragmented approach to such policies that stifles initiative across many different Council formations leads to suboptimal outcomes. The EU will also need to expand its fiscal capacity if it is to effectively support large common investments in security, infrastructure, and technological breakthroughs. Ultimately, only a more agile and capable institutional framework will enable the EU to safeguard its autonomy and exercise strategic agency in a rapidly evolving global order.

[7] In February 2025, President Trump issued an executive order mandating a comprehensive review of U.S. participation in all multilateral institutions. The deadline for this review is early August 2025.

References

Acemoglu, D. (2025, February 8). The real threat to American prosperity. Financial Times.

Bernanke, B. S. (2005). The global saving glut and the U.S. current account deficit. Board of Governors of the Federal Reserve System.

Cipollone, P. (2025, May 15). Harnessing the digital future of payments: Europe's path to sovereignty and innovation [Speech]. European Central Bank.

Draghi, M. (2024). The future of European competitiveness. Part A: A competitiveness strategy for Europe. European Commission.

Gabbatt, A. (2025, April 26). US to miss out on billions as Trump's policies deter overseas tourists. The Guardian.

Goldberg, J. (2025, March 24). The Trump administration accidentally texted me its war plans. The Atlantic.

Letta, E. (2024). Much more than a market. European Commission.

Lucas Jr, R. E. (1976). Econometric policy evaluation: A critique. Carnegie-Rochester Conference Series on Public Policy, 1, 19–46. North-Holland.

Miran, S. (2024). A user's guide to restructuring the global trading system. Hudson Bay Capital Management.

Mrak, M., & Avbelj, M. (2025, May 17). 2025, leto preloma globalne ureditve sveta. Delo, Sobotna priloga.

Obstfeld, M. (2025). The U.S. trade deficit: Myths and realities. Brookings Papers on Economic Activity, Spring 2025. Brookings Institution.

Parodi, A. (2025, May 2). Europeans continue to shun Tesla as April sales plunge. Reuters.

Pettis, M., & Hogan, E. (2024). Trade intervention for freer trade. Carnegie Endowment for International Peace.

Stiglitz, J. E. (2018, July 30). The US is at risk of losing a trade war with China. Project Syndicate.

Williams, A. (2024, November 30). Trump threatens Brics nations with 100% tariffs if they undermine dollar. Financial Times.

UDK 336.76:061.1EU

Advancing the EU's savings and investments union: Bridging capital markets and banking for enhanced competitiveness

*Eric Ducoulombier**

The establishment of a capital markets union (CMU) has been a pivotal endeavour of the European Union (EU) aimed at fostering deeper financial integration and strengthening economic resilience. This article examines the trajectory and outcomes of previous CMU action plans, insights from influential reports by Enrico Letta, Mario Draghi, and Christian Noyer, and articulates the EU Commission's novel savings and investments union (SIU) approach. The SIU seeks to combine national and EU measures, focusing on enhancing citizens' wealth, broadening avenues of investment, improving market integration and supervision, and enhancing competitiveness in the banking sector. Despite considerable challenges, these initiatives promise substantial economic benefits across the EU.

JEL E61, F36, G18, G24, G51, O16

Background

The EU's pursuit of a capital markets union (CMU) represents its commitment to creating a more integrated and dynamic financial system that can support economic growth and job creation. In spite of progress achieved over the last decade, EU capital markets remain fragmented, and not sufficiently efficient in linking together demand and supply of capital. This fragmentation limits investment opportunities and return that households could get on their savings, also increasing the cost of capital for EU companies compared to what a unified market could deliver. Several factors contribute to this, among which: limited capital market liquidity, cost of public listing, undeveloped private markets, limited risk propension and financial literacy of EU households, complicated and costly tax procedures for cross-border investments, risk aversion and lack of scale of EU institutional investors.

As a consequence, the funding of EU companies has mainly depended on the banking sector[1], particularly for small and medium enterprises (SMEs). The 2007-2009 Great Financial crisis, followed by the euro area sovereign crises in 2011

* Eric Ducoulombier, Head of Unit for FISMA B3 – Retail Financial Services, Acting Director Directorate-General Financial Stability, Financial Services and Capital Markets Union, European Commission

[1] According to AFME, at the end of the first half of 2024, only 14% of the financing of EU non-financial corporate came from capital markets, compared to 34% in US and in UK. Source: AFME (2024). Capital Markets Union: Key Performance Indicators – Seventh Edition

and 2014, triggered a credit crunch that affected EU companies more severely and for longer than those in the countries with larger and more efficient capital markets[2].
Companies looking for risk capital to finance their ventures in innovative fields with high potential struggle to find EU sources of funding, particularly in the growth stage. As a result, companies that aim to grow often sell to large multinationals or opt for listing in deeper and more liquid markets outside the EU, eventually moving activities, and jobs elsewhere. According to an analysis by the European Investment Bank (EIB)[3], around 40% of EU companies with a market valuation between USD 500 million and USD 10 billion chose an extra-EU market for their IPOs.
The lack of risk capital stifles investments and productivity, leading to lower economic growth, loss of competitiveness in open markets, with consequent lower job creation and lower salaries. Moreover, it may expose the EU to greater dependency from third countries, for example for technology, advanced services and products, which can increase EU vulnerability to geopolitical tensions.
In a vicious cycle, expected lower returns from EU equities may discourage EU retail investors (as well as foreign investors) from investing in EU assets. Consequently, those investors ultimately look at overseas investment alternatives or simply prefer keeping their financial wealth stored in low yielding but safer bank deposits (and to a much lesser extent in government bonds). At the end of 2023, 31% of European households' financial wealth was held in the form of bank-deposits or currency, totalling EUR 11.7 trillion[4]. In the US, only 12% of total financial wealth was held in this form[5].
At the same time, investments from institutional investors, like EU supplementary pension funds, are not sufficient to fill the funding gap. At the end of 2023, data from EIOPA[6] indicate that EU occupational pension funds invested around 30% of their total assets in equity, of which only 3.6% in private equity. In comparison, US pension funds invested around 60% in equity and mutual funds[7], of which 14% in private equity[8].
As a result, the European Union has a very large banking sector (bank assets are 300% of GDP compared to 85% in the United States), but small capital markets (listed equity is 68% of GDP in the EU versus 170% in the United States), and few hedge funds and private equity funds[9]. It is well known that banks are relatively less suited to financing startups and invest in risk capital, due to their business models, which rely on collateral and regular cashflow, as well as high capital requirements that reduce the return on equity for such investments.
Initiated through the CMU action plan in 2015 and further expanded with a new CMU action plan in 2020, several initiatives sought to address long-standing issues of market fragmentation, to give EU companies more diversified sources of funding, and to offer EU citizens broader investment opportunities to increase and preserve their financial wealth.

The 2015 CMU Action Plan

The 2015 CMU Action Plan set forth an ambitious programme to integrate capital markets by targeting specific barriers such as the lack of access to venture capital, non-harmonised rules for financial services, and inefficiencies in cross-border securities trading. Noteworthy actions of this plan included: the amendment of European venture capital and social entrepreneurship funds (EuVECA and EuSEF) to improve equity capital-raising by innovative startups; the review of the Prospectus Regulation to make it easier and cheaper for companies to access public markets; the introduction of harmonised rules to give entrepreneurs a second chance and easier to access preventive restructuring; the removal of the preferential tax treatment of debt over equity (as part of the Common Consolidated Corporate Tax Base or CCCTB proposal)); the relaunch of the securitisation market; as well as the introduction of the pan-European personal pension product (PEPP). Many of these initiatives made their way to legislative adoption, while others did not (e.g. debt-equity bias), and, among the former ones, some were less successful to achieve their expected outcome (e.g. STS securitisations and PEPP).
Overall, lingering regulatory disparities and divergent policy interests among EU countries meant that full integration remained elusive. These challenges necessitated the evolution of policy objectives, leading to the more comprehensive 2020 CMU action plan.

The 2020 CMU Action Plan

This plan not only sought continuity of initial goals but also responded to emergent challenges such as economic disruptions caused by Brexit and the COVID-19 pandemic.

2 European Investment Bank (2014). Unlocking lending in Europe, Box 1: The impacts on investment of banking and sovereign debt crises in bank-based and market-based economies.

3 European Investment Bank (2024). The scale-up gap: Financial market constraints holding back innovative firms in the European Union.

4 ESTAT. Financial balance sheets, Households and non-profit institutions serving households.

5 OECD Data Explorer. Financial indicators dashboard: Households and NPISH.

6 EIOPA IORP statistics.

7 OECD Global Pension Statistics 2024.

8 American Investment Council (2024). 2024 Public Pension Study.

9 Bhatia, M.A.V., Mitra, M.S., Weber, A., Aiyar, M.S., de Almeida, L.A., Cuervo, C., Santos, M.A.O. and Gudmundsson, T. (2019). "A capital market union for Europe". International Monetary Fund.

The plan focused on raising the efficiency of financial services, fostering innovation, and catalysing investment towards digital and green transformations.

Several of these Commission initiatives have already been translated into EU legislation, some of which are expected to make significant contribution towards the CMU. The FASTER Directive, which seeks to make withholding tax procedures in the EU more efficient and secure for investors, financial intermediaries and national tax administrations, has been a significant step forward to facilitate investors' refund and make cross-border investments less cumbersome. Its implementation by Member States is envisaged by January 2030.

Another successful action has been the establishment of a consolidated tape, a consolidated data reporting system designed to provide real-time data on trades and quotes across various trading venues and across asset classes (shares, bonds and derivatives). An EU consolidated tape aims to increase transparency, reduce informational asymmetries, and foster a more integrated trading environment within the EU capital markets.

Other measures like the Growth prospectus and the European Single Access Point (ESAP) can give SMEs more opportunities to access capital markets using simplified procedures, and facilitate investors' access to EU companies information, including on sustainability aspects.

Despite this progress, some measures outlined in the 2020 plan are still under discussion by the co-legislators, for example as regards insolvency rules, which lead to very different outcomes for creditors and borrowers across Member States and can hinder cross-border investments and risk sharing.

Recent contributions to the debate on future of EU Capital Markets Union

In 2024, Enrico Letta[10], Christian Noyer[11], and Mario Draghi[12] provided important contributions to the debate over the way forward for the EU capital markets and EU competitiveness.

All those reports emphasise the urgency to act and to move forward with the CMU, along with targeted measures in the banking sector, particularly on securitisation. Greater participation of retail and institutional investors in capital markets, and integration of market infrastructures, supported by harmonised supervision, are seen as crucial. The Draghi report, in particular, estimates that the EU needs to invest additional Euro 800 billion a year until 2030 to boost digital technologies, defence and security, innovation, as well as for the energy transition.

The table below, which summarises the main recommendations made by the three authors in key areas, illustrates the substantial convergence of their policy perspectives.

Building on progress made with the Capital Markets Union and the Banking Union, and driven by political support in the European Council conclusions, European Parliament report, European Central Bank and Eurogroup statements , the EU Commission President Von der Leyen announced in her Political Guidelines[13] the concept of a "Savings and Investments Union" to *help leverage the enormous wealth of private savings in Europe to invest in innovation and the clean and digital transitions the main are outlined in the Savings*.

2025 Savings and Investments Union Strategy

Against this background, the Commission has launched a new and ambitious strategy, outlined in the Communication "Savings and Investments Union: A Strategy to Foster Citizens' Wealth and Economic Competitiveness in the EU"[14] published on 19 March 2025.

The strategy comes against a backdrop of persistent financial market fragmentation and an EU economy trapped in a low-growth cycle, partly due to problems with financial intermediation. There is broad acknowledgement that the staggering amount of investments needed to spur innovation and competitiveness, support the net-zero transition and ensure defence and security, cannot be met by already stretched public resources alone. The Savings and Investments Union will be crucial to improve how the EU financial system channels savings into productive investments, provide more investment opportunities for citizens and easier access to capital for businesses.

Objectives

The primary objectives of the SIU strategy are to create an efficient single market in financial services and enhance savings and investment opportunities within the EU. The strategy aims to:

[10] Enrico Letta, Much more than a market, April 2024, https://www.consilium.europa.eu/media/ny3j24sm/much-more-than-a-market-report-by-enrico-letta.pdf

[11] Christian Noyer, Developing European Capital Markets to Finance the Future: Proposals for a Savings and Investments Union, https://www.tresor.economie.gouv.fr/Articles/e3283a8f-69de-46c2-9b8a-4b8836394798/files/6b8593b5-ca31-45a3-b61c-11c95cf0fc4b

[12] Mario Draghi, The future of European competitiveness, https://commission.europa.eu/topics/eu-competitiveness/draghi-report_en

[13] Ursula von der Leyen, EUROPE'S CHOICE: POLITICAL GUIDELINES FOR THE NEXT EUROPEAN COMMISSION 2024–2029. https://commission.europa.eu/document/download/e6cd4328-673c-4e7a-8683-f63ffb2cf648_en

[14] https://finance.ec.europa.eu/document/download/13085856-09c8-4040-918e-890a1ed7dbf2_en?filename=250319-communication-savings-investmlents-union_en.pdf

Table 1 Main recommendations from Letta, Draghi, and Noyer reports

Suggested areas of intervention	Letta	Draghi	Noyer
Market Infrastructures	- Greater coordination and potentially common regime for post-trading infrastructures, aiming for economies of scale, simplicity, and lower costs. - Single EU entry point to public capital markets for SMEs, with simplified listing requirements and by pooling together relevant EU markets.	- Foster centralisation in clearing and settlement with the creation of a single central counterparty platform (CCP) and a single central securities depository (CSD). - Gradual consolidation, starting with the largest CCPs and CSDs.	- Focus on transition to ESMA supervision for systemically important CCPs and CSDs. - Reduce fragmentation of settlement systems by addressing the multiplicity of CSDs.
Cross-border investments	- Reduce barriers in cross-border investing and capital raising by harmonising rules and practices related to withholding and transaction taxes, shareholder rights, and market insolvency procedures.	- Harmonise Insolvency Frameworks - Remove taxation barriers that impede cross-border investments.	- Simplify withholding tax procedures these procedures to make cross-border investment more straightforward and less costly. - More harmonised or standardised approach to insolvency procedures to provide greater certainty and predictability for investors and creditors operating across different jurisdictions.
Supervision	- More comprehensive and integrated supervision of financial markets, similar to the banking sector, with key role for ESMA in case of the largest and cross-border entities.	- Transition ESMA into the single regulator for EU securities markets by modifying its governance and decision-making processes.	- Move towards integrated supervision for capital market activities, with supervision of systemically important CCPs and CSDs to European level. - Increase the powers of ESMA to provide more coherent implementation of rules across the EU.
Retail Savings and Investments	- Channel retail savings into the European real economy by enhancing the European Long-Term Investment Fund (ELTIF), as access to alternative funds such as private equity and debt. - Promote financial literacy	- Encourage retail investments by offering second pillar pension schemes to increase the flow of funds into capital markets. - Provide incentives for retail investors to participate in long-term investment products.	- Develop long-term savings products predominantly invested in Europe, with favourable tax treatment. - Encourage the role of employers in auto-enrolment and co-investments in these savings products.
Small and Medium Enterprises (SMEs)	- Provide SMEs direct access to non-professional investors. - Facilitate SMEs' transition to major public market segments by modifying regulatory frameworks and streamlining listing processes suitable for their size and structure. - Promote the public-private partnership (PPP) instrument to attract capital from pension funds and insurance companies, especially for funding green infrastructure projects.	- Increase incentives and support for angel investors and seed capital investment. - Increase the budget of the European Investment Fund, ensuring it better supports SMEs by offering a larger pool of risk capital. - Adjustments in policies such as Solvency II are proposed to make it easier for institutional investors to engage with innovative sectors and support SMEs that are working in crucial and emerging fields. - Reduce administrative burdens and simplifying access to EU funding for SMEs through harmonised reporting templates and centralised, multilingual interfaces.	- Develop EU capital markets to increase and facilitate access to capital. - Introduce tax incentives for investments in EU companies.
Securitisation	- Simplify and harmonise existing securitisation framework to make it more attractive and user-friendly. - Ensure that the regulatory requirements are balanced, promoting securitisation's benefits while adequately addressing risks to financial stability.	- Review and potentially reduce the capital charges associated with certain securitised assets. - Simplify and enhance the securitisation process, reducing complexities, and making it more accessible and less risk-intensive.	- Create a European securitisation platform to foster a reference securitisation market for standardisation, massification, and transparency. - Simplify transparency rules to facilitate issuance and acquisition of securitised assets and adjust the banking prudential framework to better suit the needs of the EU market.

1. Provide retail savers with more opportunities invest, if they wish to do so, in capital-market instruments, thereby increasing the scale and depth of EU capital markets and delivering higher expected long-term income for retail savers.
2. Foster a financing ecosystem conducive to more significant investment in equities, both listed and unlisted, and infrastructures, thereby facilitating access to capital markets for all companies, and in particular SMEs and innovative companies with high-growth potential, including via public-private co-investments.
3. Remove national and cross-border barriers to facilitate capital market integration and scaling up, both in trade and post-trade financial market infrastructures.
4. Achieve more efficient and harmonised supervision of capital markets to ensure consistent regulatory environments across the EU, including by transferring certain supervisory tasks to the EU level, for example in case of new or emerging sectors or large cross-border activities.
5. Strengthen the competitiveness and integration of the EU banking sector, which is vital for providing credit and enabling deeper capital markets.

The SIU represents a shift in the Commission strategy to harmonise financial markets across the EU. The Commission intends to pursue a hybrid approach that combines action at the level of the Member States, for example in financial literacy, taxation and pensions, with EU-wide policy frameworks to reduce financial fragmentation. Where existing national measures have proved successful, the Commission will leverage on those experiences to share and promote best practices.
This comprehensive strategy outlines its objectives across four key workstreams, each designed to address specific market inefficiencies and promote a more integrated financial environment:
Citizens and Savings. A primary goal of the SIU is to empower citizens through enhanced financial literacy, thus enabling better decision-making regarding personal finances. In this area, the Commission will put forward a financial literacy strategy. Moreover, retail investments can be facilitated via savings and investments accounts that, in addition to possible tax incentives, allow savers to access a broad range of financial products to meet their needs, and offer an alternative to low-yielding bank deposits. Another key measure the Commission will focus on, is the further development of complementary pension sector. On the one hand more efficiency, larger scale, and asset-class diversification can help deliver higher retirement income; on the other hand, the development of the sector can channel a greater share of investments towards financing EU priorities.
Investments and Financing. The Commission has identified the need for a strong investment landscape that supports EU companies, including SMEs and innovative enterprises. Measures involve enhancing venture capital availability and reducing administrative burdens that stifle entrepreneurial initiatives, as well as enforcing EU law to remove barriers at both EU and national levels that hinder the financing ecosystem. The Commission plans to better align EU public funding instruments with the objectives of the SIU, including leveraging the EU budget to de-risk and leverage national, private, and institutional financing through mechanisms like the new Competitiveness Fund, InvestEU, and the European Innovation Council. Other measures will aim to simplify the securitisation framework and adapt relevant capital requirements to reflect the actual risk for banks and insurers; and to explore how encouraging equity investments by institutional investors by specifying eligibility criteria for favourable prudential treatment and providing guidance under legislative programmes. Finally, a 28th legal regime could play an important role in providing a single set of rules, including for corporate law, insolvency, labour and tax law.
Integration and Scale. The SIU aims to remove barriers to cross-border activity and optimise integration and operational efficiency for trading and post-trading infrastructures, and for asset managers. In the first case, the strategy is facilitating market-driven integration to reduce costs, and to increase speed and liquidity of EU capital markets and transactions. In the case of asset management, the strategy intends to remove national barriers that hinder the passporting granted under EU law, ensuring more efficient access and servicing of clients across borders.
Efficient Supervision in the Single Market. More efficient and harmonised supervision is vital for integrated market operations. The SIU aims to strengthen supervisory convergence tools, including making full use of existing powers of the European Supervisory Authorities, and minimising the divergence in how rules are applied across different Member States. The strategy also involves transferring certain supervisory tasks to the EU level, which would help streamline processes and reduce duplication of efforts across national authorities.

Competitiveness and integration of the banking sector

These four workstreams are complemented by ongoing and strengthened efforts to complete the Banking Union and create a more integrated banking sector, which is crucial for the success of the Savings and Investments Union. The emphasis on capital markets is, by no means, meant to overshadow the key role that the banking sector plays in the EU financial system. In addition to the provision of credit, saving, and payments services, banks are key actors in capital markets, as they exert different functions as investors, issuers, intermediaries, advisors, and last but least, as distributors of retail investment products and providers of access to capital markets for retail investors. In this area, the Commission will support the co-legislators in the discussion on the crisis management of mid-sized banks and will pursue a way forward on the European Deposit Insurance Scheme. Moreover, it will make an assessment of the EU single market for banking, including an evaluation of the competitiveness of the sector.

Conclusions

The SIU represents a pivotal advancement in the EU's journey towards realising a fully integrated and dynamic financial ecosystem. By focusing on a strategic mix of national initiatives and EU-driven policies, the SIU aims to overcome enduring challenges stemming from the complexity of reconciling national interests with EU-wide objectives. Despite the challenges, the opportunities are numerous, supported by strong political momentum. Fully integrated financial markets could act as a powerful driver of economic growth, innovation, and competitiveness, thereby advancing the EU's broader strategic priorities.

References

- Arampatzi et al. (2025). Capital markets union: a deep dive. Five measures to foster a single market for capita. European Central Bank Occasional Papers.
- Arnold et al. (2024). Stepping Up Venture Capital to Finance Innovation in Europe. International Monetary Fund.
- Bhatia et al. (2019). A Capital Market Union for Europe. IMF Staff Discussion Note.
- Draghi, M. (2024). Enhancing the EU's Financial Resilience: Policy Recommendations for the Capital Markets Union and Banking Union.
- European Central Bank (2024). Statement by the ECB Governing Council on advancing the Capital Markets Union.
- European Commission, COM(2020) 590 final, (2020). A Capital Markets Union for people and businesses – new action plan.
- European Commission, COM(2015) 468 final, (2020). Action Plan on Building a Capital Markets Union.
- European Commission, COM(2025) 30 final (2025). A Competitiveness Compass for the EU.
- European Commission, COM(2025) 124 final, (2025). A Strategy to Foster Citizens' Wealth and Economic Competitiveness in the EU
- Letta, E. (2024). Report on the Future of the Single Market: Policy Recommendations for Capital Markets and Financial Integration.
- Noyer, C. (2024), Developing European Capital Markets to Finance the Future: Proposals for a Savings and Investments Union.

ZBS Združenje bank Slovenije
The Bank Association of Slovenia

Banking Conference
NAVIGATING TO FUTURE

Wednesday, 11 June, 2025

Brdo pri Kranju, Auditorium Splendens

08.30 – 09.00	Registration
09.00 – 09.05	Welcome address **Stanislava Zadravec Caprirolo**, **M. I. A.**, Conference moderator, Managing Director, The Bank Association of Slovenia
09.05 – 09.15	Address by the Chairman of the Supervisory Board of Bank Association of Slovenia **Blaž Brodnjak**, **MBA**, CEO, Nova Ljubljanska banka d.d.
09.15 – 09.30	Address by Acting Governor of Banka Slovenije **Dr. Primož Dolenc,** Acting Governor, Banka Slovenije
	Keynote speakers of EU navigation
09.30 – 09.50	Investing in more sustainable and secure Europe **Kyriacos Kakouris,** ViCe-President of the EIB
09.50 – 10.10	Measures to Promote Investment and Competitiveness of the Slovenian Economy **Matevž Frangež,** State Secretary, MInistry of the Economy, Tourism and Sport
10.10 – 10.30	From Crisis to Competitiveness: Economic Foundations for Europe's Geopolitical Role **Dr. Jerneja Jug Jerše,** Head, European Commission Representation in Slovenia
10.30 – 11.00	A holistic look at the EU financial sector policy **Nicolas Veron,** Senior fellow, Bruegel and Peterson Institute for International Economics
11.00 – 11.30	Break
	Global Uncertainties and the Slovenian Economy
11.30 – 12.00	Trade Wars and Slovenia's Vulnerability **Prof. Dr. Mojmir Mrak**, Jean Monet Chair, University of Ljubljana, School of Economics and business
12.00 – 13.15	Panel Discussion: Navigating the Slovenian Economy into the Future Chair: **Stanislava Zadravec Caprirolo**, **M. I. A.**, Managing Director, The Bank Association of Slovenia Panel lists: **Blaž Brodnjak**, **MBA**, CEO, Nova Ljubljanska banka d.d. **Danijel Lamperger,** Director, Chamber of Craft and Small Business of Slovenia **Vesna Nahtigal,** General manager, Chamber of Commerce and Industry of Slovenia **Anita Stojčevska, MSc,** Vice-president and member of the Management Board, OTP banka d.d. **Sonja Šmuc, MSc,** Deputy President for Strategic Projects, DEWESoft d.o.o. **Marjan Trobiš,** President, Association of Employers of Slovenia
13.15 – 14.20	Lunch
	Challenges and Perspectives of Slovenia
14.20 – 15.00	Development Perspectives of Slovenia: Pathways to a High Quality of Life **Dr. Peter Wostner,** Secretary, Institute of Macroeconomic Analysis and Development
15.00 – 15.40	Key Challenges of the Slovenian Industry in Domestic and Export Markets **Bojan Ivanc,** Chief Economist, Chamber of Commerce and Industry of Slovenia
15.40	Concluding remarks **Stanislava Zadravec Caprirolo**, **M. I. A.**, Managing Director, The Bank Association of Slovenia

We will be happy to provide you with any further information regarding the organisation of the conference at **ic@zbs-giz.si**.
Further information is also available at **www.zbs-giz.si**.