



**BANCA D'ITALIA**  
EUROSISTEMA

## **A European productivity compact**

Speech by Fabio Panetta\*  
Governor of Banca d'Italia

20<sup>th</sup> Spain-Italy Dialogue Forum (AREL-CEOE-SBEES)  
Barcelona, 3 December 2024

### **Introduction**

I am delighted to take part in this edition of the Spain-Italy Dialogue Forum which, since 1999, has provided a great opportunity for our two countries to exchange ideas and experiences. Two countries united by the Mediterranean, a sea so enchantingly evoked by the voice of Joan Manuel Serrat.

The history of Italy is inextricably linked to that of Spain. The same is true of their economies. Our trade in goods and services totals over €73 billion: Spain is Italy's fourth largest trading partner, Italy is Spain's third. Spanish direct investment in Italy and Italian direct investment in Spain amount to €14 billion and €46 billion, respectively.

Together, our two countries make up a significant part of the euro area. They account for 25 per cent of GDP, 23 per cent of industrial output and 17 per cent of euro-area exports.

A staunch commitment to being part of the European endeavour has been a fundamental driver of economic development for both countries – for Italy, which has been a member since the beginning, and for Spain, which has been able to seize the opportunities offered by its more recent accession.

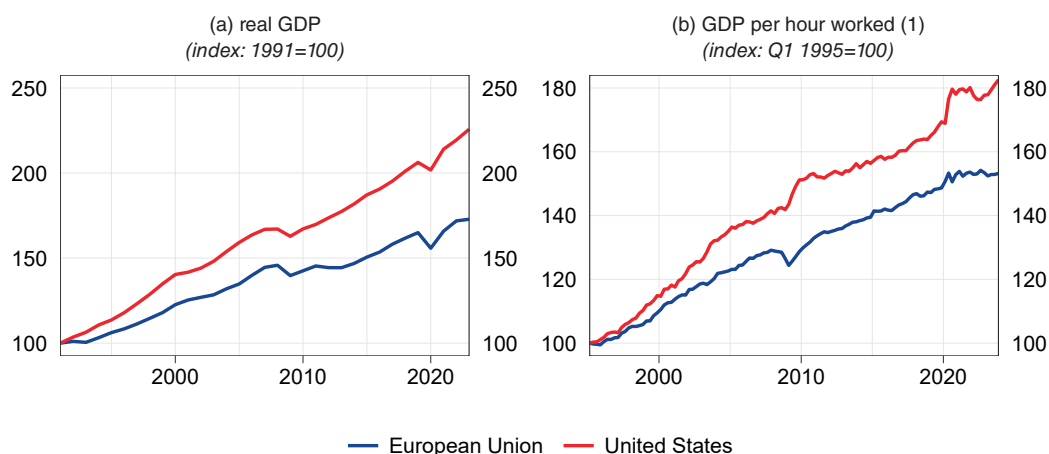
However, the European economy is struggling to keep pace with the most dynamic countries, the United States above all (Figure 1.a), mainly because of low productivity growth (Figure 1.b).

The fact that the European economy is losing ground is nothing new. The gap with the United States emerged at the end of the last century, with the spread of information and communication technologies, and subsequently widened with the digital revolution and, more recently, artificial intelligence.

---

\* My thanks go to Antonella Foglia, Valentina Memoli, Roberto Pisano, Pietro Rizza, Anatoli Segura Vélez, Pietro Tommasino, and Stefania Zotteri for their valuable research and contributions.

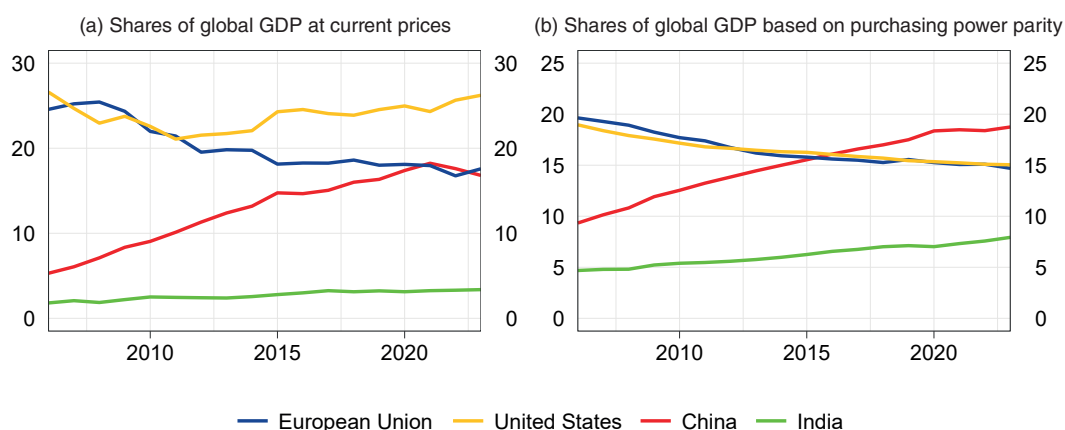
### GDP growth and productivity gaps between the European Union and the United States



Sources: For panel (a), IMF. For panel (b), Bureau of Labor Statistics and Eurostat.  
 (1) GDP per hour worked in the private sector.

These three missed opportunities for Europe are interrelated and are an indication of structural weaknesses. Their effects are visible in Europe's declining economic position (Figure 2) and, ultimately, in the living conditions of its citizens: if Italy or Spain were US states, they would be in the lowest quintile in terms of GDP per capita, as would the European Union as a whole.<sup>1</sup>

### Global GDP shares of the world's leading economies (per cent)



Source: IMF.

The European economic and social model that took shape after the Second World War, based on the principles of freedom, equality and solidarity, as well as international cooperation, has been a marker of civil progress. This model has proven successful in many areas, as shown by the data on life expectancy.

It must be preserved, and to do this we need an economy that can grow and generate widespread prosperity.

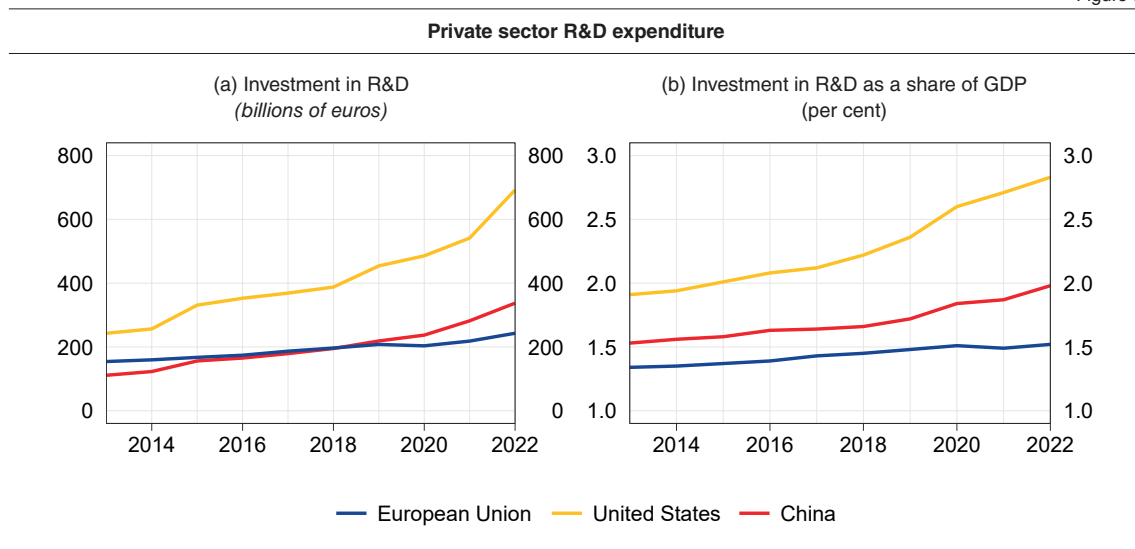
<sup>1</sup> 2023 GDP in terms of purchasing power parity.

In the remainder of my speech, I will focus on one goal that I consider to be a priority: putting innovation at the heart of economic policies as a driver of productivity and growth, and mobilizing public and private resources to this end.

## 1. Innovation, technology and productivity

At the root of the European economy’s low productivity lies its insufficient capacity for innovation, which in turn is due to the lack of dynamism in the business sector. In the last decade, investment in research and development by European companies has been about 60 per cent that of US companies, and the gap has been widening over time (Figure 3).<sup>2</sup>

Figure 3



Sources: For the European Union, Eurostat; for China and the United States, OECD.

This is compounded by an unfavourable sectoral composition of research activity in Europe, 30 per cent of which is concentrated in mature sectors.<sup>3</sup> Over the past two decades, the companies at the top of the research and development investment scoreboard have mostly been in the automotive sector, which is now struggling to keep up with the more radical innovations by its extra-European competitors.<sup>4</sup>

In the United States, instead, the companies and sectors that spend the most on research and development have changed over time. Twenty years ago it was car manufacturers;

<sup>2</sup> The percentage is broadly the same both in terms of purchasing power parity and as a ratio of GDP. The gap is even greater, as shown in Figure 3.a, at current monetary values, which are affected by exchange rate fluctuations and differences in price dynamics. At purchasing power parity, the ratio fell from 62 per cent in 2013 to 50 per cent in 2023.

<sup>3</sup> E. Nindl et al., *The 2023 EU Industrial R&D Investment Scoreboard*, Publications Office of the European Union, 2023. The figures relate to the 2,500 companies that invest the most in research and development worldwide.

<sup>4</sup> C. Fuest, D. Gros, P.-L. Mengel, G. Presidente and J. Tirole, *EU innovation policy: How to Escape the Middle Technology Trap*, EconPol Policy Report, 2024.

today it is digital economy and technology-intensive companies, with new players continually emerging that are capable of achieving significant growth and capitalization in a short period of time.

There are three main reasons for the predominance of middle technology sectors in Europe.

To begin with, the innovation gap that has been building up since the end of the last century, when Europe's production system failed to make the most of the opportunities provided by the spread of the Internet and of information and communication technologies. Then came the US tech giants (Google, Apple, Facebook, Amazon, and Microsoft), whose access to massive datasets, scientific know-how, financial resources, and extensive customer bases, has ensured them a dominant position today as digital service providers and in cutting-edge fields such as artificial intelligence.

The European economy's capacity to innovate is also limited by the fragmentation of research and development activities among firms, universities and research centres based in different countries. This hinders the transfer of knowledge and ideas, and hampers the undertaking of projects with high funding requirements.

Finally, the lack of integration between the scientific and business worlds and the rigidity of the EU administrative and regulatory framework stand in the way of transforming research results into competitive products and services for the global marketplace.

AI is an eminent case in point.<sup>5</sup> Although European research centres have produced high-level studies in this field, the contribution of European businesses to the development of AI technology is negligible: between 2013 and 2023, private investments in AI amounted to \$20 billion in Europe, compared with \$100 billion in China and \$330 billion in the US.<sup>6</sup> Though it remains unclear to what extent AI will increase labour productivity, it is clear that remaining on the sidelines of technological progress – as mere users of innovation developed elsewhere – would be short-sighted.

Greater involvement of European companies alongside a handful of global tech giants would not only benefit the economy but also safeguard citizens' fundamental rights such as personal data protection and pluralism in media and information.

## 2. The investment we need for a new Europe

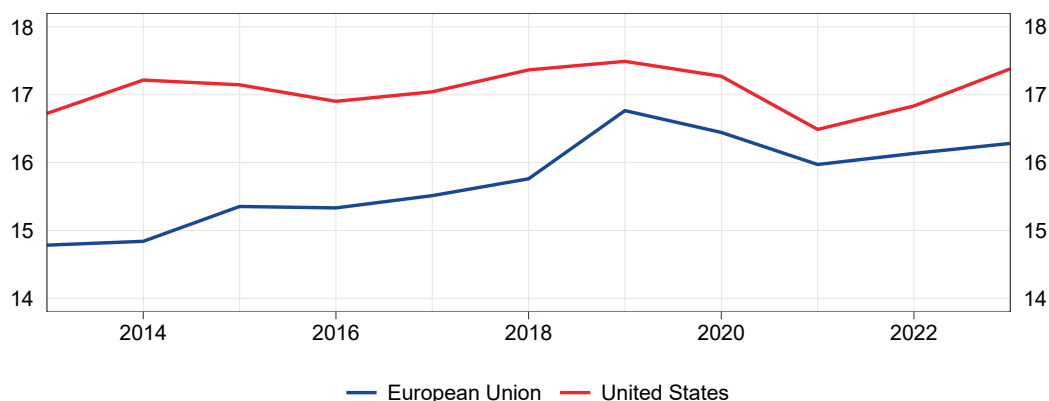
Over the last ten years, capital investment in Europe has been systematically lower than in the United States; the gap, which had narrowed in the years before the pandemic, is now widening again (Figure 4). Moreover, the trends in investment in research and development point to problems in the quality and composition of spending.

---

<sup>5</sup> Similar considerations apply to many other areas such as robotics, biotechnology and space exploration.

<sup>6</sup> N. Maslej et al., *Artificial Intelligence Index Report 2024*, AI Index Steering Committee, Institute for Human-Centered AI, Stanford University, Stanford, April 2024.

**Capital expenditure (1)**  
(per cent of GDP)



Sources: For the European Union, Eurostat; for the United States, Bureau of Economic Analysis.  
(1) Capital expenditure is calculated as the difference between gross fixed investment and investment in housing.

Europe will need significant resources to achieve sustainable economic growth and to secure its strategic autonomy.

According to various analyses,<sup>7</sup> a further €800 billion per year will be required in public and private investment until 2030 for the twin green and digital transition and for strengthening its defence capacity.<sup>8</sup>

This amount, equal to almost 5 per cent of the EU's GDP every year,<sup>9</sup> does not include all of the expenditure needed to improve our innovation capacity, such as that for upgrading the skills required by emerging technologies. I will not go into the details of these estimates. Rather, I would like to focus on three issues.

The first one is the need to implement strategic projects through European initiatives.

Their high cost would make investment too burdensome for individual Member States, even for those that are financially sounder.<sup>10</sup> Only by joining forces can we improve the functioning of the EU's single market, exploit economies of scale, avoid duplication

<sup>7</sup> F. Panetta, 'Investing in Europe's future: The case for a rethink', speech delivered at the Istituto per gli Studi di Politica Internazionale (ISPI), Milan, 11 November 2022; F. Panetta, 'The future of Europe's economy amid geopolitical risks and global fragmentation', *Lectio Magistralis* marking the conferral of an honorary degree in Juridical Sciences in Banking and Finance by the University of Roma Tre, 23 April 2024; O. Bouabdallah, E. Dorrucchi, L. Hoendervangers and C. Nerlich, 'Mind the gap: Europe's strategic investment needs and how to support them', The ECB Blog, 27 June 2024; M. Draghi, *The future of European competitiveness*, 2024.

<sup>8</sup> Climate-related investment needs in the EU amount to around €620 billion per year on average (European Commission, *2023 Strategic Foresight Report. Sustainability and people's wellbeing at the heart of Europe's Open Strategic Autonomy*, COM(2023) 376 final, 6 July 2023, p. 7). This amount must be increased by around €125 billion per year for the digital transition and by around €75 billion per year to bring defence spending to 2 per cent of GDP, in line with NATO commitments.

<sup>9</sup> Based on GDP for 2023.

<sup>10</sup> For example, recent estimates produced for Germany alone point to around €800 billion additional cumulative investment needs over the period 2025-30; see F. Heilmann et al., 'Public financing needs for the modernisation of Germany', *Dezernat Zukunft*, 2024.

resulting from overlapping national initiatives, and stave off the free-rider problems that often occur with public goods.<sup>11</sup>

The second issue is the source of funds.

Such major interventions require joint public and private resources. In the past, four fifths of European capital investment were financed by the private sector and the remainder by the public sector.<sup>12</sup>

However, it is reasonable to expect that the share of public sector investment will increase in the future, since many projects – such as the production of innovative technologies, the digital transition, energy security and defence – involve European public goods. Furthermore, numerous projects, especially in the early stages, have low returns and uncertain outcomes; this is why the public sector plays such a key role in fostering private sector initiatives. A historic example of this is the DARPA project in the United States, which, since the 1960s, has paved the way for the development of the Internet.<sup>13</sup>

Last but not least is the need to help European citizens understand that the high investment costs will be offset by equally high rewards. During this transition, it will be essential to protect the most vulnerable segments of the population, which might be more affected by the changes. This approach will be crucial to mitigate any social or political pushback and to strengthen public support for the EU project.

### 3. The role of public sector resources

Europe has been in an anomalous situation for years. On the one hand, some countries have very high levels of public debt – which is a significant problem for Spain and even more so for Italy. On the other hand, the European common debt is very low.

The bulk of the EU's public debt consists of funding for the NextGenerationEU (NGEU) programme. The funds under the Recovery and Resilience Facility, the main instrument of the NGEU, amount to €650 billion; a further €80 billion have been allocated to several existing programmes already included in the EU budget. However, the NGEU programme will end in 2026 and, from 2028 onwards, the outstanding volume of EU bonds will start to decrease, reaching nearly zero over the next three decades.

---

<sup>11</sup> Within a given territory, public goods are non-rivalrous (extending their use to everyone does not require additional costs) and non-excludable (it is not possible to restrict their use to those who have helped finance them). The latter feature is at the root of free-rider problems, i.e., in our case, the incentive for a State to benefit from the efforts of others (e.g. in the environmental field) without making any efforts of its own.

<sup>12</sup> M. Draghi, 2024, op. cit.

<sup>13</sup> In 1958, the United States founded the Advanced Research Projects Agency (ARPA; later renamed Defense ARPA, or DARPA), with the aim of developing breakthrough military technology. In 1969, they launched ARPAnet, a computer network connecting ARPA to a number of US universities. During the 1970s, the number of universities connected to the network grew and a new protocol was created to streamline and expedite communication between and among network computers, thereby laying the foundations for the development of the Internet as we know it today. DARPA's activities rely on the interaction between academia, the corporate sector and government agencies.

Creating a common fiscal capacity to finance public goods would help Europe overcome this anomaly.

To be clear: this proposal does not imply the creation of a 'fiscal union', and would require neither an EU finance minister nor mechanisms for systematic transfers between countries.<sup>14</sup> The idea, instead, is to set up a common spending programme to finance investments that are indispensable for all European citizens, through a continent-wide productivity compact. To paraphrase Keynes, what matters is not to do better or worse those things which the Member States are already doing, but to do the things that are not being done at all.<sup>15</sup>

Here is an example that may help illustrate my point.

If the EU issued debt securities to fund up to 25 per cent of an investment plan worth €800 billion a year for six years, by 2030 the European common debt would reach 6 per cent of the EU's GDP. Taking into account NGEU bonds and other programmes managed by the European Commission, it would reach 10 per cent of GDP (Figure 5).<sup>16</sup>

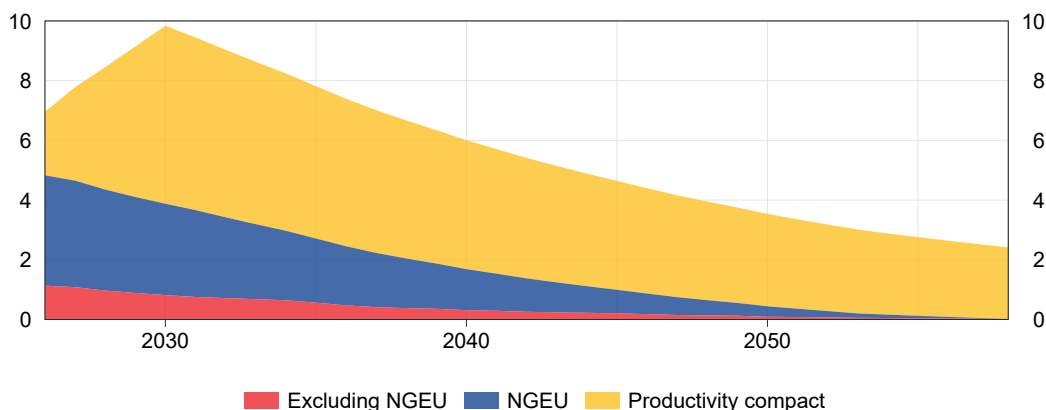
---

<sup>14</sup> Let me only mention in passing the other important functions that a common fiscal capacity could perform. As well as mitigating the impact of local shocks that affect only some Member States (a form of mutual insurance), a common fiscal capacity would enable the better management of aggregate demand. This way, the European fiscal policy would no longer be the mere sum of national fiscal stances, but could be made consistent with the cyclical conditions of the euro-area economy as a whole and with the monetary policy stance.

<sup>15</sup> 'The important thing for Government is not to do things which individuals are doing already, and to do them a little better or a little worse; but to do those things which at present are not done at all.' Keynes made the point in his 1926 essay *The End of Laissez-faire*, referring to the best way to allocate tasks between the public and private sector within a single country (J.M. Keynes, *The End of Laissez-faire*, London, Hogarth Press, 1926).

<sup>16</sup> The macroeconomic assumptions underlying the simulations are that: the interest rate on the productivity compact will be 3 per cent (equal to the weighted average of the yields on the ten-year bonds of the EU Member States); real GDP growth forecasts up to 2026 are sourced from European Commission, *European Economic Forecast. Autumn 2024*, Institutional Paper, 296, November 2024; between 2027 and 2030 real growth will align with potential GDP growth (1 per cent), as estimated by the European Commission in *2024 Ageing Report. Economic and Budgetary Projections for the EU Member States (2022-2070)*, Institutional Paper, 279, April 2024; from 2031 onwards, the growth forecasts are in line with those made by the European Commission in the same document; from 2027 onwards, inflation remains stable at 2 per cent. Debt 'excluding NGEU' means debt relating to the following financial assistance programmes managed by the European Commission: the European instrument for temporary Support to mitigate Unemployment Risks in an Emergency (SURE), the European Financial Stabilisation Mechanism (EFSM), the Balance of Payments (BoP) assistance facility, the Euratom Research and Training Programme, the Macro Financial Assistance (MFA) and Macro Financial Assistance+ (MFA+) programmes, and the loan component of the Ukraine Facility. For SURE, EFSM, BoP, Euratom and MFA the assumption is that the capital will be almost entirely repaid by 2058, as stated in European Commission, *Consolidated annual accounts of the European Union for the financial year 2023*, COM (2024) 272 final, 2024; for the funds disbursed to Ukraine under the MFA+ programme, the Ukraine facility and the exceptional macrofinancial assistance package adopted by the EU Council on October, the assumption is that they will start to be repaid in 2033. For NGEU, the assumption is that by 2026 all EU Member States will have received the full amount of funds requested and that grant-related borrowings will be repaid linearly between 2028 and 2058 (between 2032 and 2053 for loan-related borrowings). Finally, with regard to the productivity compact, the assumption is that from 2031 onwards, Member States will only repay interest on bonds, whose amount will therefore remain constant in nominal terms.

**Simulations of the stock of common EU bonds issued  
to fund the financial assistance programmes managed by the European Commission**  
(per cent of GDP)



Sources: For the financial assistance programmes (including NGEU), calculations based on European Commission data; for the simulations, see Footnote 16.

The increase in liabilities would be small at central level and used exclusively to boost the productivity of the European economy;<sup>17</sup> it would limit the investment expenditure needs of Member States, which could thus reduce their public debt more quickly.

The creation of a liquid secondary market would make it possible to reduce EU bond yields, which are currently penalized by the low liquidity of trading and the absence of derivative instruments to hedge market risks. Based on Banca d'Italia estimates, solving these critical issues could reduce the yields on common EU bonds by over 20 basis points.<sup>18</sup>

Regular issuances of securities by the EU would also provide us with a European safe asset which, as I will explain, is indispensable for the development of a European capital market.

This course of action, however, needs to take into account three important preconditions: the rationalization of the resources already allocated to EU programmes; obtaining the commitment of high-debt Member States to improve their public accounts in order to prevent the EU's overall debt from rising excessively; and guaranteeing transparent management of EU projects, by ensuring that the resources are actually used to increase productivity and that there is full accountability for all decisions made.

<sup>17</sup> A flow of resources, which can conservatively be estimated at around 0.2 per cent of the EU's GDP for 2031, would be sufficient to repay the additional common debt incurred in the years 2025-30. If, as we could reasonably expect, the plan should lead to higher potential growth, the cost would then fall.

<sup>18</sup> K. Pallara, M. Pericoli and P. Tommasino, 'Issuing European safe assets: how to get the most out of Eurobonds?', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), forthcoming.



#### 4. A European capital market for innovation

One of the biggest obstacles when it comes to investing in innovation in Europe is the lack of an efficient capital market that is integrated at EU level and can select the most capable entrepreneurs and support high-risk, high-yield projects from the very outset.<sup>19</sup>

The investment plan I have described above will require a significant contribution on the part of financial intermediaries and private investors, not only in terms of the resources required, but also to select and monitor the projects.

Given the riskiness of the investments, the equity market and other specialized forms of investment – such as private equity and venture capital – will play a fundamental role. Market dynamics may well provide solutions to problems that would otherwise be difficult to solve. However, the conditions must be created for these forces to play out in full.

Greater financial integration would make the euro area more attractive to investors, both foreign and domestic. The European economy has been running a balance-of-payments surplus for years. Therefore, it has been generating savings that exceed domestic investment, partly redirecting them abroad. Prior to the pandemic, domestic financial resources invested outside of the euro area averaged over €300 billion per year, or almost 3 per cent of GDP. Had they been directed towards domestic business initiatives, capital investment on our continent would have increased by one fifth.

A single capital market would improve the allocation of savings. It would also boost cross-border financial flows between Member States, providing European households, firms and financial intermediaries with better diversification opportunities. This would allow them to mitigate the impact of local shocks and to take part in projects with higher risks and returns. The financial sector currently enables European investors to absorb just one fourth of local GDP shocks, compared with three fourths in the United States.

To make progress towards a single capital market in Europe, two fundamental problems must be addressed.

The first is the lack of a European safe asset.

A common safe asset is essential for the functioning of any developed capital market. The possibility of trading a risk-free benchmark would facilitate the pricing of financial products such as corporate bonds and derivatives, thereby encouraging their development. Furthermore, it would provide a form of collateral that could be used across countries and market segments, facilitating collateralized trading in interbank markets and allowing better risk diversification by financial intermediaries. A safe asset would also attract foreign investment, thereby strengthening the international role of the euro.

---

<sup>19</sup> E. Letta, *Much more than a market: speed, security, solidarity. Empowering the Single Market to deliver a sustainable future and prosperity for all EU Citizens*, April 2024.

The second problem is the lack of a complete banking union, which restricts European banks to operating mainly in national markets. Establishing the Single Supervisory Mechanism and the Single Resolution Mechanism was a major step forward, but it fell short of creating a fully integrated European banking market.<sup>20</sup> A sequential, small-steps approach was taken, which has not worked.<sup>21</sup>

Banks play a crucial role in the major capital markets: from asset management to bond and equity underwriting and placement, and from initial public offerings to financial advisory and market-making services. An integrated capital market requires that banks be fully operational throughout the euro area.

The introduction of a European safe asset and the completion of the banking union are the most important preconditions for creating a single capital market, but they are not the only ones. We must not forget the importance of drafting a single European Finance Act, of strengthening central supervision, and of harmonizing corporate crisis management mechanisms.

## Conclusions

Jean Monnet once said: 'Europe will be forged in crisis'.<sup>22</sup> This statement is not only a beacon of hope in hard times, but also a reminder that we must embrace every challenge as an opportunity to transform our continent.

Today, we are facing momentous changes: the twin digital and green transition, the deteriorating geopolitical outlook, demographic and migration pressures, and the fragmentation of world trade. These are not temporary crises, but major processes that require appropriate responses.

To face them, we need to build an economy that can grow, innovate and generate widespread prosperity. No Member State can do this alone. We need coordinated action at European level: a productivity compact that mobilizes public and private investment in strategic common goods.

This endeavour is not just a response to the need to recover lost ground, but also a blueprint for the future. It means strengthening technological sovereignty, creating jobs, improving the quality of life of citizens and protecting such fundamental values as freedom and pluralism.

---

<sup>20</sup> The credit sector remains fragmented along national lines: there is no European deposit guarantee scheme, the bank crisis management framework is incomplete and obstacles to the transfer of banking groups' capital and liquidity across countries still exist.

<sup>21</sup> F. Panetta, 'Europe's shared destiny, economics and the law', *Lectio Magistralis* by Fabio Panetta, Member of the Executive Board of the ECB, on the occasion of the conferral of an honorary degree in Law by the University of Cassino and Southern Lazio, 6 April 2022.

<sup>22</sup> 'L'Europe se fera dans les crises et elle sera la somme des solutions apportées à ces crises' (J. Monnet, *Mémoires*, Paris, Fayard, 1976).

To achieve these goals, it is essential that we introduce a European safe asset, complete the banking union, and develop a European capital market that is better able to finance innovative high-risk projects. We must also create a business environment that encourages entrepreneurship and innovation, overcoming regulatory and administrative rigidities that hold back our growth potential.

We cannot afford a sequential, small-steps approach. The necessary reforms are interconnected and mutually reinforcing: they must be implemented with determination and vision, building on the recent analyses by Mario Draghi and Enrico Letta.

Europe can and must take control of its own destiny. Like Niccolò Machiavelli's archer, we must aim higher to hit our target.<sup>23</sup> Together, Member States can turn challenges into opportunities and build a future of prosperity and progress for all European citizens.

---

<sup>23</sup> 'It's like the clever archer who senses that his target is too far off, knows the limitations of his bow, and so aims far higher than he normally would, not because he really wants his arrow to go that high, but to have it fall from a height on to his target'. (N. Machiavelli, *The Prince*, Chapter VI, 1532, translated by Tim Parks, 2009).

Printed on EU-Ecolabel certified paper  
(registration number F1/11/1)

*The life-cycle environmental footprint of the paper used  
was offset by purchasing carbon credits and planting trees in Italy*

Designed and printed by the Printing and Publishing Division of Banca d'Italia