EUIPO
EUROPEAN UNION
INTELLECTUAL PROPERTY OFFICE

IP-backed finance in Europe: State of Play and Future Perspectives

Towards a Functional European IP Finance Market

April 2026

Contents

Foreword

One of the main goals of the EUIPO's Strategic Plan 2030 is to position intellectual property (IP) as a cornerstone of Europe's innovation ecosystem—an essential lever to address the challenges identified in the 2024 Draghi and Letta reports, which underscored Europe's persistent difficulty in converting innovation into global business success.

Europe stands at a decisive moment. It possesses world-class talent, a rich scientific base, and a vibrant culture of creativity. Our innovators generate ideas that shape the future. Yet too often, these ideas fail to scale up. The missing link is not ingenuity, but the ability to finance and commercialise it effectively.

Europe has the knowledge, the talent, and the ambition.

For many innovative companies, intellectual property is their most valuable asset. However, Europe's financial system has yet to fully recognise and mobilise the potential of IP as a basis for investment. This structural gap continues to push some of Europe's most promising startups to seek opportunities elsewhere, weakening our competitive position in an increasingly innovation-driven global economy.

Addressing this challenge is not only an economic necessity—it is a strategic imperative. Europe must ensure that its ideas are not only created here, but also developed, financed, and brought to market here. Encouragingly, awareness of this issue is growing, and momentum is building across institutions and stakeholders to find effective solutions.

This report is EUIPO's contribution to that debate. It sets out the pivotal role of IP in a modern, knowledge-based economy and examines the obstacles that innovative start-ups encounter when seeking to leverage their IP to access finance. While some of these barriers are inherent to the intangible and context-dependent nature of IP, many are systemic: regulatory fragmentation, risk aversion, limited transparency, and the absence of widely trusted valuation frameworks.

This foundational study goes beyond identifying the state of play of European IP-backed finance. It identifies concrete areas where policymakers, regulators, and market participants can work together to unlock the full potential of IP-backed finance. By doing so, we can help create an environment in which innovation thrives, investment flows more effectively, and European companies can scale and compete globally.

We look forward to continuing to work closely with European Institutions, IP Offices, international partners, and stakeholders across the public and private sectors in order to realise those ambitions.

João Negrão

Executive Director, EUIPO

Executive Summary

Europe faces a significant and widening productivity and innovation gap compared to other regions, driven primarily by slower productivity growth and weaker commercialisation of innovative ideas. While Europe excels at research and at generating innovative ideas, the transfer of these innovations to the market and private enterprises remains sluggish.

Europe does not lack entrepreneurial talent, technology, creativity or ideas. The constraint is the ability to finance the commercialisation of innovative ideas and scaling them up. Overall, Europe's inability to adequately finance and scale IP-rich innovative firms significantly hampers productivity growth, economic dynamism, and competitiveness.

While Europe's IP-intensive industries generate approximately **48% of EU GDP** and around **31% of employment,** Europe's financial ecosystem struggles to mobilise the continent's large household savings effectively into relatively higher-risk, higher-reward innovation investments, with a heavy reliance on bank lending rather than equity financing and banking regulations ill-suited to support innovation. Intangible assets, which now account for a growing share of global corporate value and are strongly linked to productivity growth, are underutilised in Europe due to a low level of acceptance of IP assets as a collateral in financial transactions. Intellectual property rights (IPR) help SMEs grow and improve their economic performance, but many European firms face barriers in leveraging them for financing.

In this context, the SME credit gap in the EU, estimated at up to **EUR 365 billion annually**, highlights a structurally underserved market. Conservatively, the addressable market for IP-backed finance — the share of the credit gap attributable to IP-rich firms — is estimated at **EUR 70–150 billion per year**. If appropriate infrastructure for disclosure, valuation and risk-sharing is implemented, IP-backed instruments could realistically mobilise **EUR 30–120 billion annually** in new financing flows. Over a ten-year horizon, this translates into **EUR 150–580 billion of additional mobilised financing**, with cumulative GDP impact estimated between **EUR 70 billion and EUR 750 billion** (between **0.4% and 4.2% of EU GDP**).

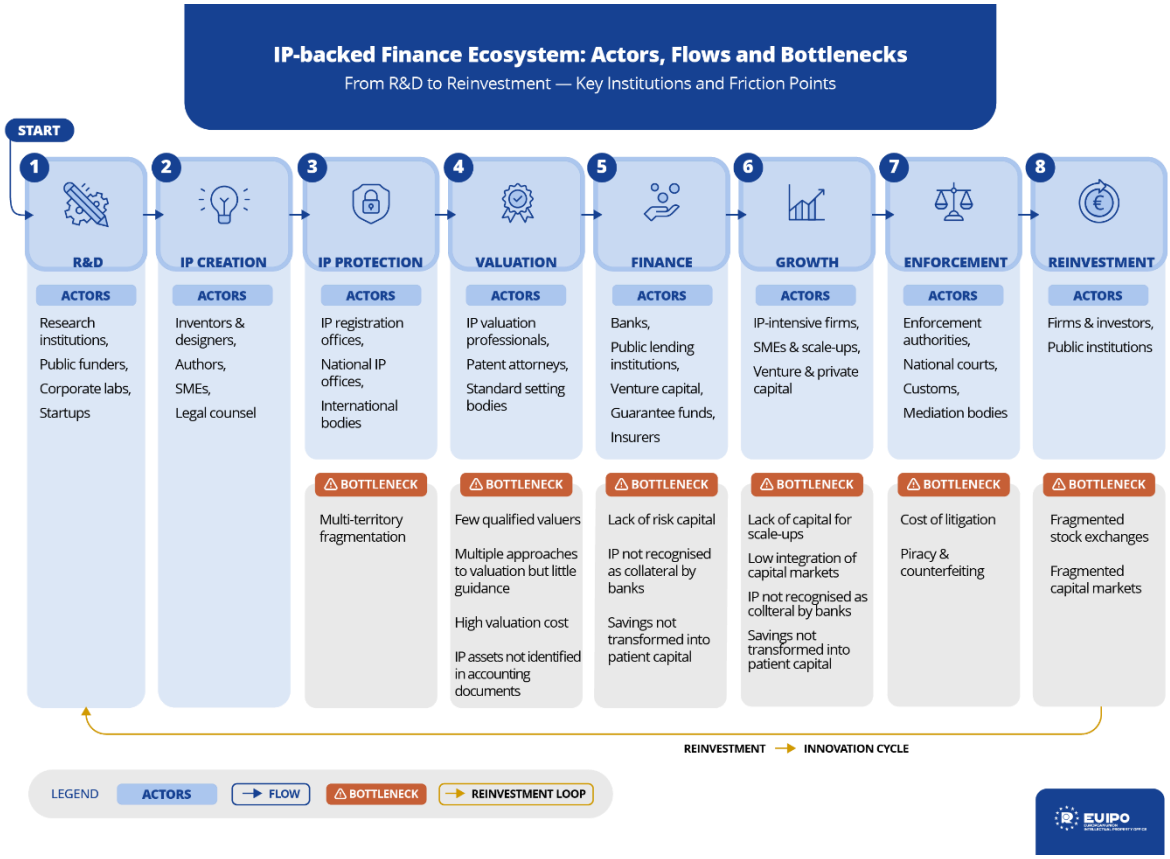
Financing constraints, especially in later-stage funding, combined with fragmented capital markets, remaining constraints in the Single Market for goods and services and limited exit opportunities, exacerbate these challenges by pushing many successful firms to relocate outside Europe, primarily to the US.

The importance of addressing the financial gap that hinders the growth of firms, particularly those that actively invest in intellectual property (IP) assets, is highlighted in this foundational report. Those assets are crucial for innovation, productivity growth and economic performance. The report provides an overview of the current state of IP-backed financing in Europe, identifies key challenges, and discusses potential ways of addressing them by various policy actions.

With this study, the EUIPO aims to contribute to a debate initiated by the Letta and Draghi reports (Draghi, 2024; Letta, 2024) and identify a set of potential comprehensive measures to help Europe's most innovative firms access the financial resources they need to grow. Progress in promoting wider use of intellectual property to access finance requires a coordinated effort of many institutions at national, European and global levels, and this report establishes a basis for a structured discussion with all relevant stakeholders.

Europe is currently designing the most ambitious mobilisation of capital in its history through the Savings and Investment Union (SIU). Whether capital reaches the innovative firms that are able to use it in the most productive way, depends on setting up the right IP-backed finance infrastructure. The aim should be a functional European market for IP-backed finance - one in which innovative firms can use their intellectual property to access credit, private-sector lenders routinely integrate IP into financing decisions, and institutional frameworks support this process. Without urgent reforms in innovation financing systems to identify, value, and finance IP-rich companies, capital will not be allocated effectively. This is not merely an IP policy question. It is a core competitiveness imperative.

Figure ES 1 IP-backed Finance Ecosystem: Actors, Flows and Bottlenecks



The relatively low uptake of IP-backed finance in Europe stems from mutually reinforcing structural barriers that create bottlenecks at every stage of the IP-backed

finance pipeline - from IP protection and valuation through to financing, growth, enforcement and reinvestment.

First, IP assets do not behave like conventional collateral: information asymmetry makes risk assessment difficult, IP value depends on complementary assets that cannot be easily transferred, and each IP asset is unique, with little comparable transaction data.

Second, fragmented rules and missing markets reinforce the problem: secondary markets for IP are weak, accounting standards restrict the recognition of internally generated intangibles, legal provisions governing security rights in IP are not harmonised across Member States, and the prudential banking framework reduces the attractiveness of IP as collateral.

Third, IP valuation remains costly: bespoke valuations are expensive and disproportionately so for SMEs, the pool of qualified valuation experts is small, and limited transaction data makes it difficult to validate outcomes.

Together, these barriers form a vicious circle: without transactions, no data accumulates; without data, risk assessment remains conservative; without credible risk assessment, no instruments can scale.

Addressing these barriers requires coordinated action across all three dimensions simultaneously. The report maps 18 possible actions across three pillars: **facilitating access to banking credit**, **strengthening IP valuation practices**, and **facilitating finance beyond banking credit**. While several of those proposals are forward-looking and will require further feasibility assessment before implementation, the most actionable may be organised into five sequenced priorities, aiming at laying the foundations for a functional IP-backed finance system in Europe.

Priority 1: Make IP visible

Before IP can be used for financing, it must be visible, structured and understandable by financial actors. Most IP assets, even high-value ones, are not properly identified in accounting documents, leaving intangible-rich firms misrepresented in their financial statements. Only 13% of IPR owners have tried to obtain financing through their IP assets, and a large majority have never conducted a professional valuation. The report proposes a voluntary comprehensive disclosure framework that would give companies a structured way to share information about their IP and intangible assets in a clear, consistent and usable format for financial actors.

Priority 2: Assign credible value to IP

Once IP is visible, financial institutions need to assign a credible economic value to it. Valuation approaches currently differ depending on intended use, type of intangible and geographical location, with little guidance and no common standard. Bespoke valuations are expensive, particularly for SMEs. The report proposes a European

International Valuation Standards aligned IP valuation architecture built on common principles, operational workflows and sector-specific guidance.

Priority 3: Leverage IP value into lending

Disclosure makes IP visible. Valuation assigns to it a credible economic value. But until sufficient trust is built, it will be difficult to convince lenders to provide financial resources against IP collateral. Financial institutions apply conservative assumptions, high "haircuts" or outright exclusion of IP from recoverable value. Guarantee schemes bridge this gap by absorbing part of the credit risk, allowing lenders to integrate IP information into credit assessments while mitigating residual risk. Guarantee-backed loans also benefit from the risk weighting of the guarantor rather than of the collateral, substantially reducing capital burdens under prudential banking rules. Risk-sharing instruments should be positioned as structural enablers of IP-backed finance in the initial phase. Those risk-sharing instruments comprise specific credit guarantee products targeting IP-backed loans; dedicated public lending against IPR collateral; and exploration of IP insurance products covering risks such as infringement or enforcement.

Priority 4: Build the evidence base

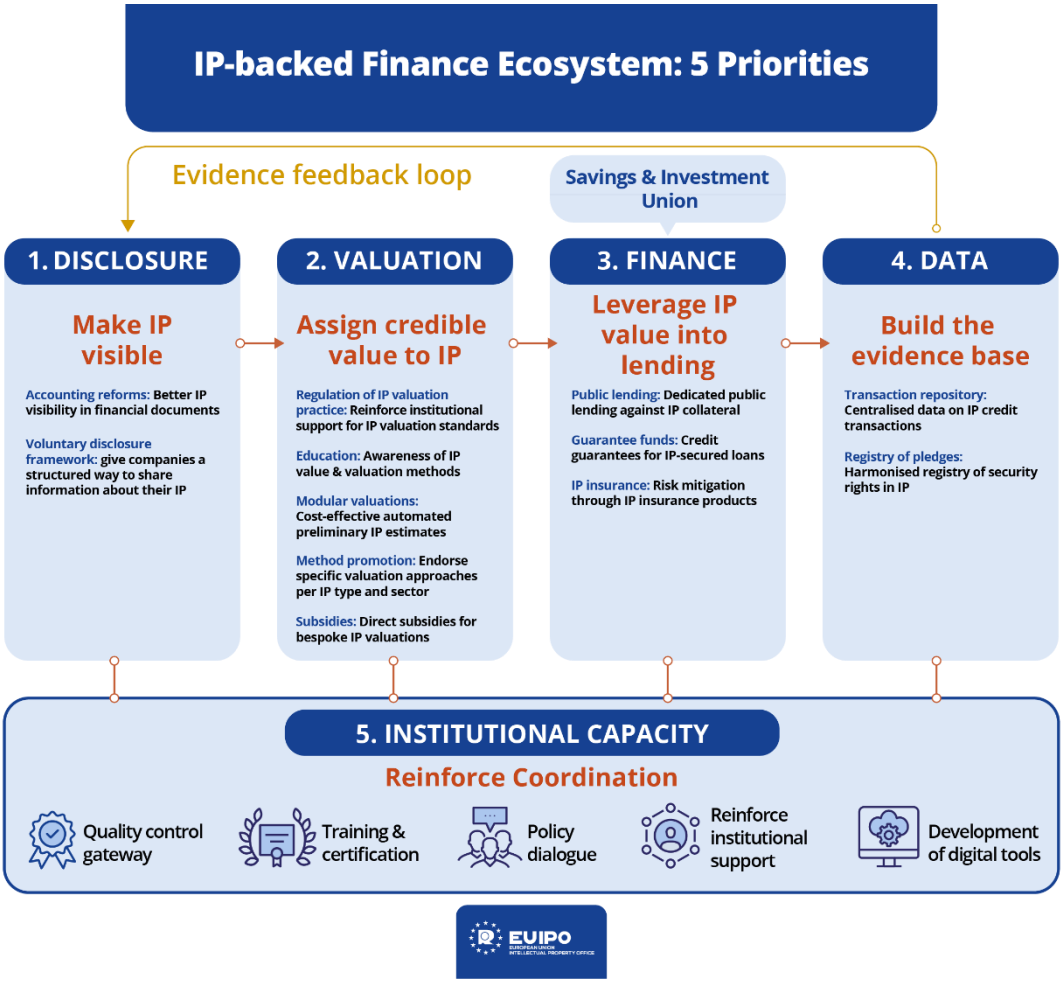
The absence of a reliable, standardised data foundation means that financial actors cannot assess IP-related risk at scale. Without data on recovery rates, default outcomes and transaction costs, conservative assumptions persist. This situation may be addressed by a targeted data requirements framework developed with financial institutions; interconnection of existing datasets held by EU and national partners before creating new databases; a privacy-respecting transactions dataset built through guarantee instrument partners; and a centralised register of IP pledges to enable lenders to verify whether an IP asset has already been used as collateral. Transaction data is the evidence base that makes IP-rich firms investable at scale: as performance records accumulate, institutional investors mobilised by SIU will be able to price IP-related risk with the same confidence as that applied to traditional asset classes.

Priority 5: Reinforce Coordination

The lifecycle developed under Priorities 1–4 requires a structured and consistent approach to sustain quality, consistency and uptake across Member States. The challenge is not only the absence of IP valuation experts, but also fragmentation of practices, limited convergence in methodologies, uneven SME access, and lack of common training and quality reference points. Therefore, the report proposes to reinforce coordination in relation to IP-backed finance to ensure the delivery of disclosure standards; quality control; access to valuation expertise; development of digital tools supporting the full lifecycle; collection of relevant data and preparation of analytical reports; stakeholder engagement and policy dialogue on regulatory matters related to IP-backed finance; as well as training and capacity building for finance professionals, fund managers, and innovative firms.

Without reinforced coordination, the readiness built through the first four priorities risks remaining fragmented and uneven - precisely the condition that would prevent SIU capital from reaching IP-rich firms consistently and at scale.

Figure ES 2 Five Priorities



In conclusion, this report presents a structured approach for the integration of intellectual property as a recognised financial asset within mainstream financial practices. There is an important reason to act now: the Savings and Investment Union is under construction. The European Commission is designing the reforms that will release substantial pools of long-term capital across Europe. But freed capital does not automatically reach innovative firms — it flows to where it can be assessed, priced and deployed with confidence. Without proper disclosure, valuation and risk-sharing mechanisms, capital will flow to sectors with established collateral or to markets with more mature infrastructure, rather than to Europe's knowledge-intensive firms. The five priorities determine how effectively the SIU dividend can support European innovators. Together, they unlock growth, mobilise private capital, and strengthen Europe's innovation sovereignty.

Definitions

Intangible assets are conceptualised by economists as non-physical resources under a firm's control, from which future economic benefits can be anticipated. These resources typically result from previous investments made by the firm (Crouzet & Ma, 2023). Intangible assets are crucial building blocks of economic or business moat[1], a concept that allows investors to identify firms with lasting structural competitive advantage, capable of defending profitability and market power against its competitors (OECD, 2024).

Given the breadth and, at times, the elusiveness of such assets and the plurality of the definitions, this paper adopts the narrower view based on identifiability and legal rights associated with intangibles.

Under International Accounting Standards (IAS 38), intangible assets are described as "*identifiable, non-monetary assets without physical substance*". Under International Valuation Standards (IVS), as "*a non-monetary asset that manifests itself by its economic properties. It does not have physical substance but grants rights and/or economic benefits to its owner*".[2] This emphasis on identifiability and legal rights closely aligns with the notion of Intellectual Property (IP).

While the economic rationale for expanding the utilisation of IP as a mechanism for accessing financial resources is grounded in scholarship examining the broader construct of intangible assets, the present study focuses specifically on a more restricted subset of intangibles – IP that helps define boundaries on inventions or other intangible assets (Spulber, 2015). The challenges identified and potential solutions proposed herein pertain primarily to intellectual property rights (IPRs).

Intellectual property is defined by the World Intellectual Property Organization (WIPO) as "*the legal rights which result from intellectual activity in the industrial, scientific, literary and artistic fields"*. The Convention Establishing the WIPO provides that *"'intellectual property' shall include rights relating to:*

- literary, artistic and scientific works,
- performances of performing artists, phonograms and broadcasts,
- inventions in all fields of human endeavour,
- scientific discoveries,
- industrial designs,
- trademarks, service marks and commercial names and designations,
- protection against unfair competition,

[1] https://www.morningstar.com/investing-terms/economic-moat
[2] IVS 210 20.01

and all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields"[3].

In this report, IP-backed finance is defined in a narrow scope, whereby IP serves primarily as an asset used in external financing transactions, while the firm retains strategic control over commercialisation. For reasons of analytical clarity and to maintain a coherent focus on financial products that provide capital while preserving in-house commercialisation, this report therefore does not include licensing, even though it remains an important, but conceptually separate, route to monetising IP. The main analytical questions in the licensing stream of literature concerns contract design, appropriation or access to complementary resources, rather than role of IP as collateral or the basis for risk-sharing financial instruments. Including licensing aspects would therefore blur the boundary between financial instruments and commercialisation strategies and substantially expand the conceptual scope of the report.

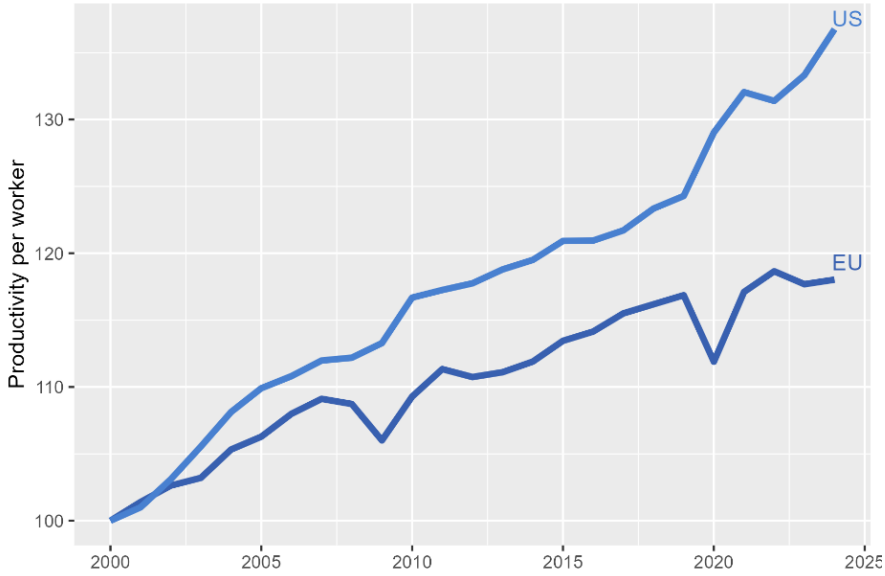
[3] Convention Establishing the World Intellectual Property Organization (WIPO) concluded in Stockholm on July 14, 1967 (Article 2 (viii)

1 Challenges to Innovation and Growth in Europe – the Financial Gap and Role of Intangible Assets.

Europe's productivity and innovation gap

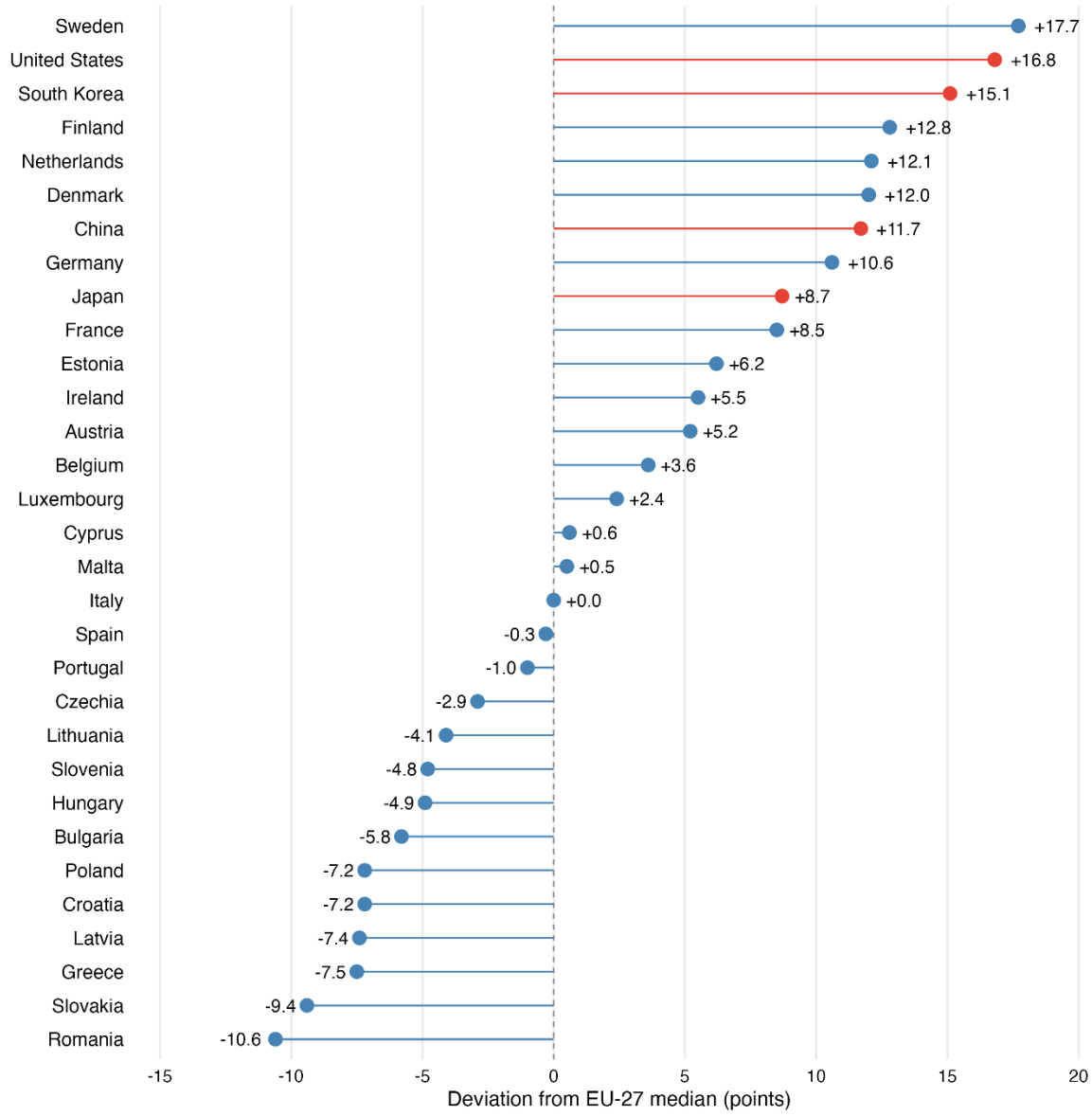
Over the past decade, Europe has faced sluggish growth and a widening productivity gap with the United States (Fratto et al., 2024). The EU-US GDP gap expanded significantly from 17% in 2002 to 30% in 2023. Lower productivity has been signalled as the key driver of Europe's competitive decline, accounting for approximately 70% of the per capita GDP gap (Draghi, 2024). Since 2019, productivity per worker has grown by only 0.5% annually compared to 1.6% in the US (European Employers' Institute, 2025).

Figure 1. Evolution of productivity in the EU and US from year 2000



Source of data for US ILO indicator GDP_205U_NOC_NB Output per worker (GDP constant 2015 US $) – ILO modelled estimates, Nov. 2024; Source of data for the EU – Eurostat dataset NAMA_10_LP_ULC – Labour productivity and unit labour cost, indicator RLPR_PER – Real labour productivity per person indexed to 2015. Data from both indicators has been indexed to 100 for year 2000.

Figure 2. Comparison of performance of EU27 countries and selected non-EU countries in the 2025 Global Innovation Index



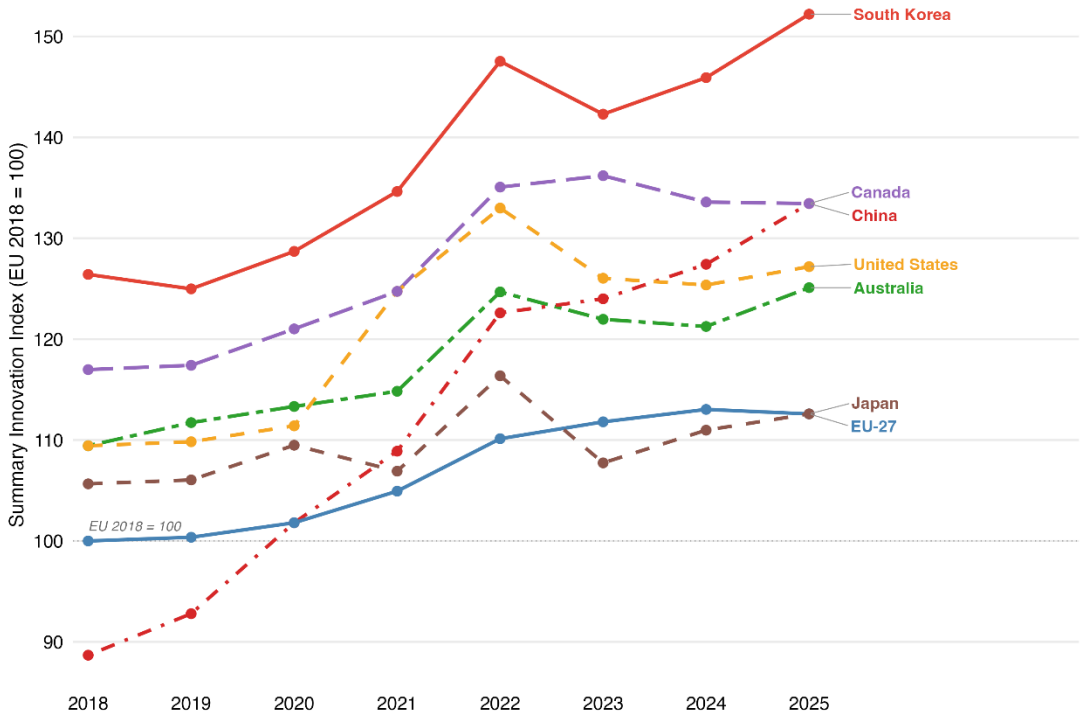
Source of data Global Innovation Index (GII) 2025 edition. Figure illustrates distance of each economy from the EU-27 median score

The European Union occupies a solid but increasingly challenged position in the global innovation race. According to the 2025 edition of Global Innovation Index, only four EU member states rank among the world's top innovating economies – Sweden (2nd), Finland (7th), the Netherlands (8th) and Denmark (9th) placing them alongside global frontrunners. The leading innovators in the EU outperform, however, other Member States significantly, with five of them placed in the fifth tier on the GII index.

The European Innovation Scoreboard (EIS) 2025 sounds a note of caution. While the EU's composite innovation performance has increased by 12.6 percentage points

since 2018, this growth has been decelerating. Between 2024 and 2025 performance declined marginally by 0.4 percentage points. However as seen in Figure 3, global competitors of the EU, with the exception of Japan, have been growing faster than the EU since 2018, widening the innovation gap.

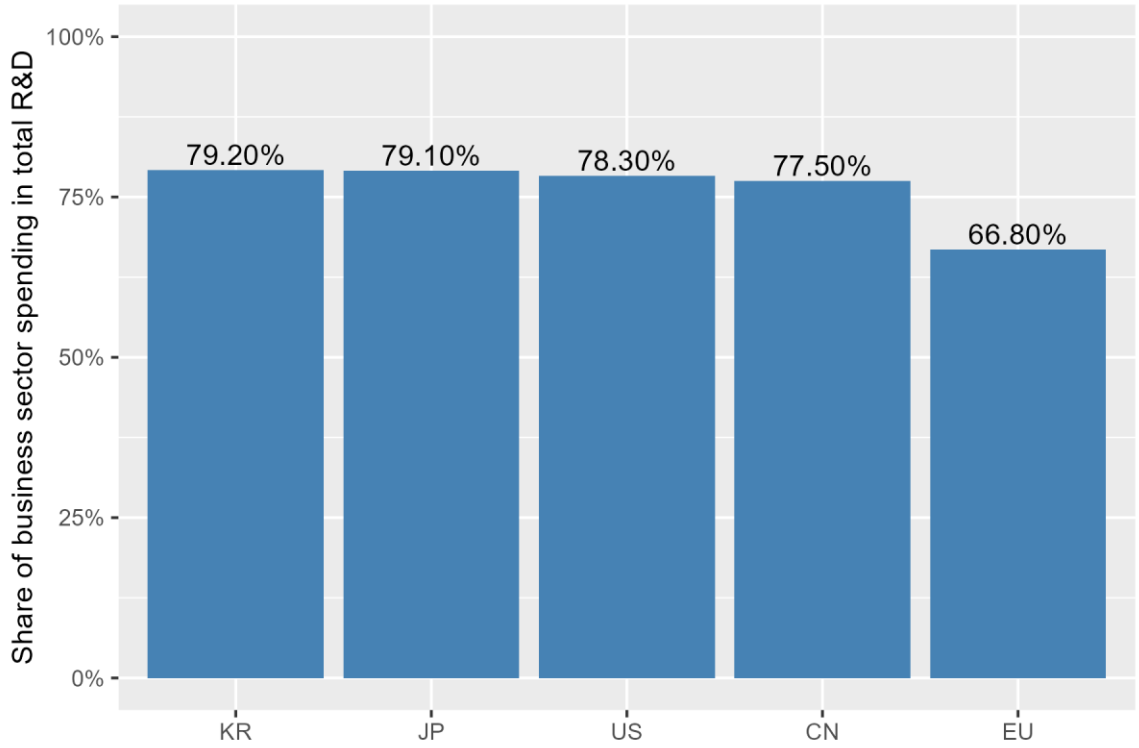
Figure 3. Evolution of the Summary Innovation Index between 2018 and 2025



Source of data: European Innovation Scoreboard 2025. Figure illustrates evolution of the Summary Innovation Index between 2018 and 2025

Europe's sluggish productivity growth stems from its struggle to successfully scale up new technologies. Although the EU excels at generating innovative ideas and has significant research capacity, this innovation is transferred to private enterprises and to the market at a slow pace. Public R&D spending in Europe is on par with the US. However, only about a third of European patents registered by universities and research organisations in Europe are commercially exploited (European Patent Office, 2020). The current system favours scientific publications over commercialisation.

Figure 4. Business enterprise sector R&D spending as a share of total R&D in the EU and selected countries in 2023



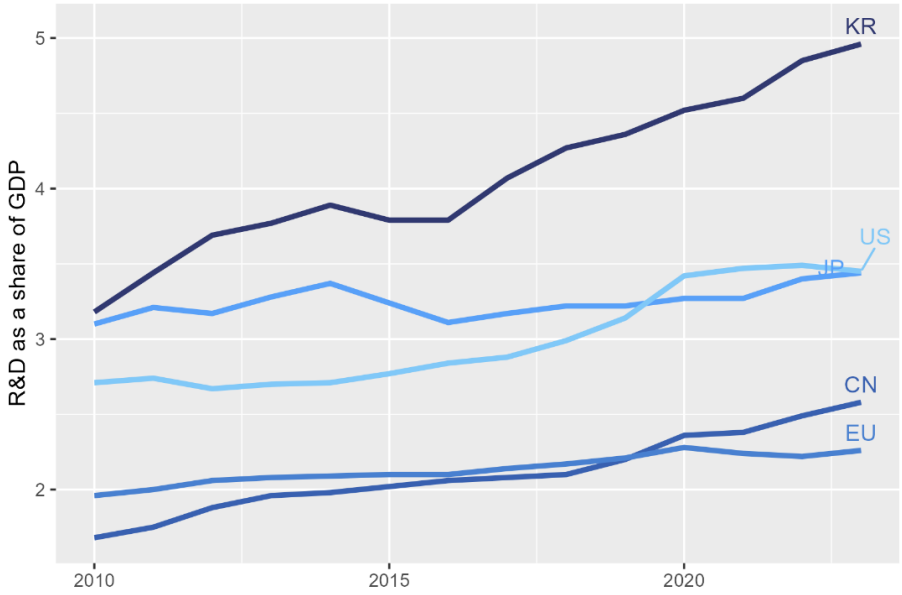
Own calculations based on – Eurostat dataset RD_E_GERDTOT – GERD by sector of performance- indicator for Business Enterprise Sector (BES) compared to indicator of total R&D spending

The share of EU firms among the top global R&D investors has been in decline since 2010, pointing to weaker business dynamism and inefficient resource allocation. In 2023 private R&D spending in Europe amounted to 1.3 % of GDP compared to 2.4 % in the US and 1.9 % in China (European Research Council & European Commission, 2025). The EU has a lower share of firms investing in the development and commercialisation of new products, processes and services compared to the US (39 % v 57 %) and this gap has more than doubled since 2021 (European Commission. Directorate General for Internal Market, Industry, Entrepreneurship and SMEs., 2025). With few exceptions, notably Ireland, Hungary, Sweden, Belgium and the Netherlands, the share of business sector spending in total R&D in the majority of the EU Member States is below 70 %.

The relatively lower R&D activity of the private sector in Europe is reflected in the overall R&D statistics. In the EU only 2.24% of GDP in 2023 was spent on the R&D

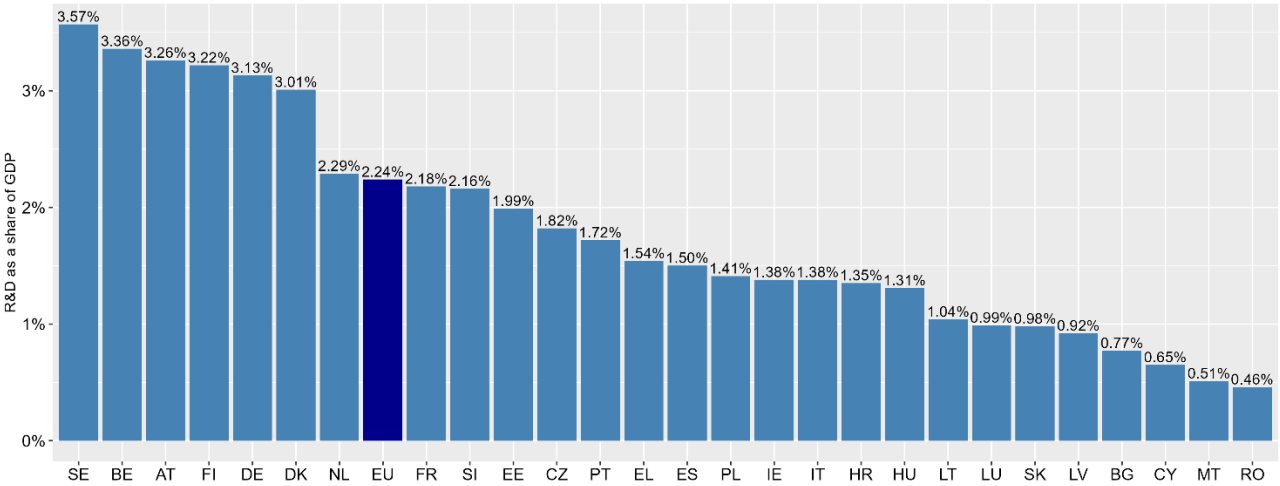
whereas the same indicator in South Korea amounted to 5.21%, in the US to 3.59 %, in Japan to 3.41% and in China to 2.56%[4].

Figure 5. Total R&D spending in the EU and selected countries



Source of data – Eurostat dataset RD_E_GERDTOT – GERD by sector of performance- all sectors, indicator – percentage of gross domestic product

Figure 6 Total R&D spending in the EU and EU Member States, 2024



Source of data – Eurostat dataset RD_E_GERDTOT – GERD by sector of performance- all sectors, indicator – percentage of gross domestic product

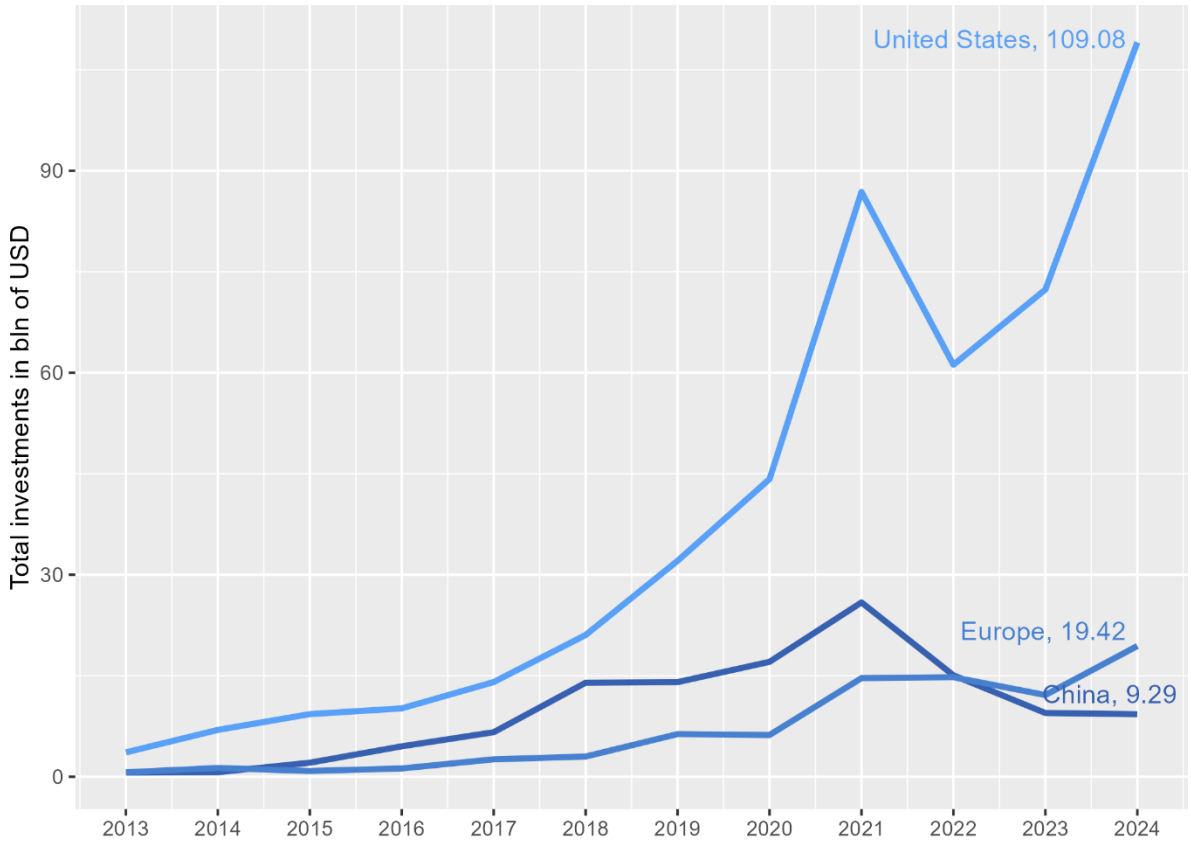
[4] Research and development expenditure (% of GDP), World Bank data https://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS

As seen in the Figure 6, there is an important heterogeneity in R&D spending among the Member States of the European Union. Five of them, namely Sweden, Belgium, Austria, Finland and Denmark surpass 3% of GDP spending set for the first time in the Lisbon Strategy, while quite a few of them do not even reach 1%.

Relative overrepresentation of public sector R&D may reflect some structural and path dependent differences in the organisation of R&D and innovation activities between economies. Each region has its own characteristics as regards R&D spending. The EU supports broad thematic areas with a number of specific support instruments. The US focuses on developing new disruptive innovations and breakthrough technologies that will potentially transform into innovative products. China excels in blending public and private resources into concentrated priority efforts such as AI and quantum technologies. However, in recent years, both the US and China were able to successfully leverage public R&D spending into higher private sector involvement in innovative activities (European Commission. Directorate General for Research and Innovation, 2025).

Increased private sector R&D activity in the US materialised in significant investments in general purpose technologies such as biotechnology, IT hardware, software and AI. These technologies, widely used across economic sectors, can drive further innovation and boost overall productivity. In fact, digital technology investments has been the key driver of the rising productivity gap between the EU and the US (Draghi, 2024). Europe is still lagging behind the US in breakthrough technologies' investment. In the year 2020, per capita investments in AI in the EU and UK were 60 % lower than in the US (European Commission. Joint Research Centre., 2022). As shown on Figure 7, global private investment in AI technologies in Europe in 2024 was over five times lower than corresponding investments in the US.

Figure 7 Global private investment in AI by geographic area, 2013-2024



Source of data: The 2025 AI Index Report (Maslej et al., 2025)

At the same time there has hardly been any change in the sectoral distribution of R&D spending in Europe in the last 20 years. Unlike their US or Chinese counterparts, well established European incumbents invest less in disruptive high-tech innovation, with high productivity growth potential and this perpetuates technological stagnation (Dietrich et al., 2024).

Financing constraints and scale-up challenges

Besides the R&D structure, commercialisation of innovation and scaling up of successful startups is the second factor slowing down productivity growth in the EU. Europe's challenges in fostering globally competitive companies are to large extent rooted in financing constraints (Letta et al., 2025). Draghi's analysis places inadequate financing of innovative firms at the heart of Europe's competitiveness crisis (Draghi, 2024). His analysis demonstrates that inadequate access to risk capital, in particular to venture capital, represents fundamental structural barrier to European competitiveness. Draghi frames innovation financing not merely as an economic issue but as an existential challenge to the European project itself. To bridge the

competitiveness gap Europe needs rapid adaptation to faster innovation cycles and boost agile investment in frontier technologies.

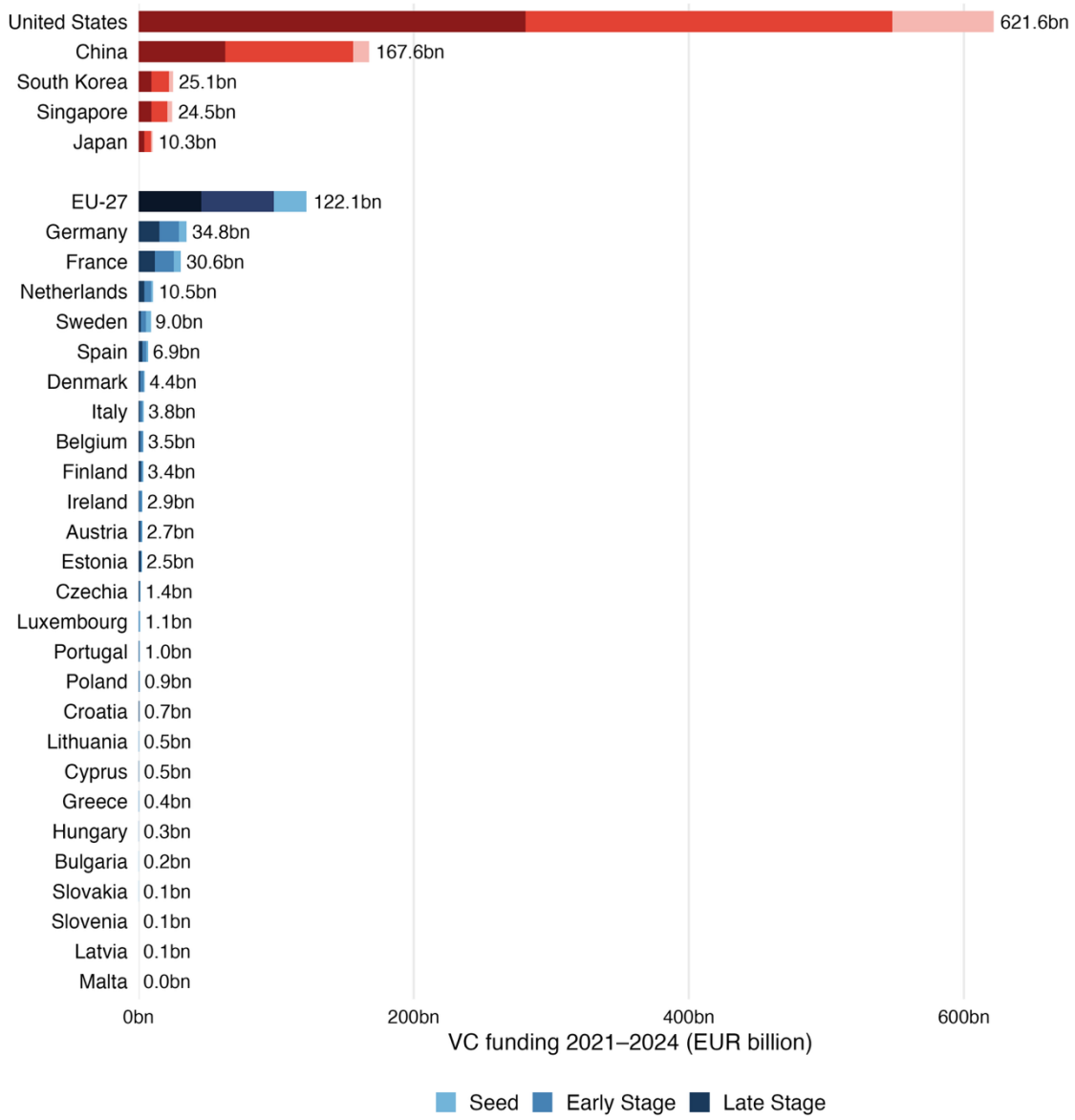
In the initial stages of a young, IP-heavy start-up company, there is limited generation of near-term cash flows, as they usually prioritise R&D and scaling up over immediate profitability, making repayment projections uncertain for lenders. Without proven revenue streams or an adequate tangible assets base, ambitious firms must rely on their own private financing, grants and equity funding (Brassell, M. & Boschmans, 2019).

The crucial role of venture capital for successful commercialisation of innovation is well known and well documented (Mallaby, 2022). Equity financing is crucial for innovative startups that lack tangible assets, face unstable cash flows, but have high growth potential. Younger firms with smaller cash flows and more intangible assets rely more on equity. Its flexibility is a key advantage, particularly when venture capitalists provide managerial expertise or when a firm's strategy is uncertain and collateral is limited (De Bettignies & Brander, 2007; Winton & Yerramilli, 2008). For dynamic start-ups with novel and innovative ideas at the pre-income phase, availability of risk capital is a crucial factor for successful commercialisation of their products and services. Yet Europe lags behind the US as regards availability of such funds.

Europe has no shortage of technology and entrepreneurial talents. Between 2016 and 2025 Europe has consistently seen more founders starting companies than the US (Atomico, 2025). Although the early stage funding has improved in Europe in the recent years, later-stage funding still lags behind (European Research Council & European Commission, 2025). The EU has 50% as many companies with market valuations under USD 500 million compared to the US, but this share drops to 10-15% for firms with higher market valuations, leading to far fewer mid-sized and high-value companies in Europe. Venture capital investment in the EU scale-ups is only 0.03% of GDP, compared to 0.19% in the US, limiting the ability of European firms to compete globally (Fratto et al., 2024). Without addressing these financing gaps, Europe risks falling behind in creating high-growth companies and developing new technologies, contributing to inefficient resource allocation and a lower GDP growth compared to the US and China.

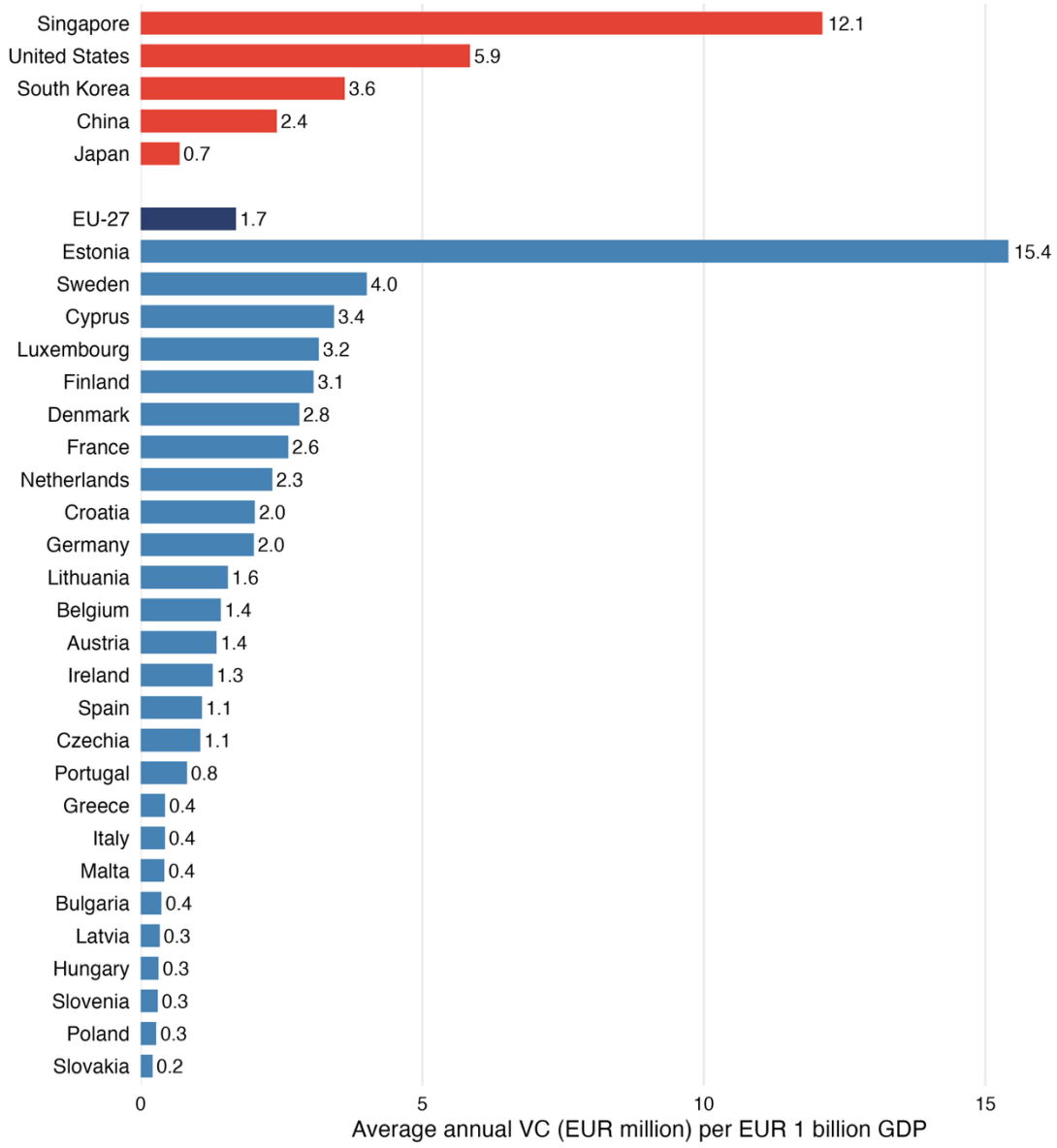
In the last 50 years, no European company with a value of over EUR 100 billion has been created, whereas in the same period six firms with capitalisation of over EUR 1 trillion have emerged in the US. Only four of the world's top 50 technology companies are European (Draghi, 2024).

Figure 8. Venture capital intensity over 2021-2024 period



Source: Crunchbase (January 2026 extract). Amounts converted to EUR using ECB annual average exchange rates. VC-type investments include seed, early-stage (Series A–B) and late-stage (Series C+) rounds.

Figure 9. Venture Capital Funding per EUR 1 bln GDP



Source: Crunchbase (January 2026 extract). Average annual venture capital intensity compared to GDP in 2024 (World Bank indicator NY.GDP.MKTP.CD – GDP at current prices (USD). Amounts converted to EUR using ECB annual average exchange rates. VC-type investments include seed, early-stage (Series A–B) and late-stage (Series C+) rounds.

Figure 8 illustrates the scale of venture capital financing gap facing European innovative firms. Between 2021 and 2024 the United States raised over EUR 621 billion – more than five times the EU-27 total of EUR 122.1 billion. China attracted EUR 167.6 billion. When adjusted for GDP (Figure 9), the gap is equally striking: the EU-27 average of EUR 1.7 million in VC per EUR 1 billion of GDP compared to EUR 5.9 million in the United States, EUR 3.6 million in South Korea and EUR 2.4 million in China. Only Japan, at EUR 0.7 million, falls below the EU average among the comparators. Both figures illustrate the large heterogeneity among the member states, with Estonia standing out as a positive outlier at EUR 15.4 million per EUR 1 billion of GDP – a level exceeding even Singapore and the United States. Several member states approach the level of VC intensity in China, but many member states do not reach the level of EUR 1 million per 1 billion GDP. This fragmentation of VC markets across member states means that access to risk capital is geographically uneven, with innovative firms in lower-intensity markets facing a compounded disadvantage: less local capital, thinner networks of investors and weaker exit options.

The EIB notes that European scale-ups raise 50% less capital than their San Francisco counterparts by their tenth year, consistently across industries and economic cycles. This gap is largely due to the reliance on foreign investors, with 82% of EU scale-up investments involving foreign lead or sole investors, compared to 14% in San Francisco (Fratto et al., 2024). This financing gap forces European scaleups to seek funding outside of the EU and many of them to relocate to benefit from larger markets, better entrepreneurial expertise and more accessible capital. Between 2008 and 2021, close to 30% of European “unicorns” relocated their headquarters outside the EU, with the majority of them moving to the US (Draghi, 2024).

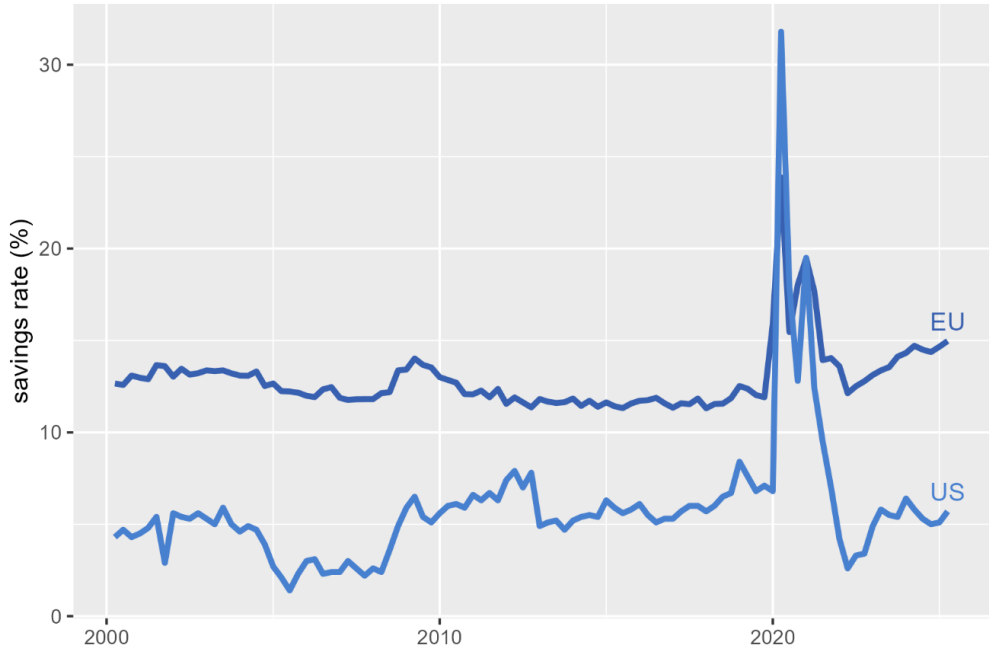
Exit opportunities, such as initial public offerings, acquisitions or secondary market sales play a crucial role in the financing of start-ups by providing the liquidity that allows founders and investors to realise returns on their investments at earlier stages. The prospect of a successful exit motivates venture capitalists and other early investors to provide early-stage funding despite high risks and long investment horizons. A lack of exit opportunities for investors constitutes one of the most important factors in the underdevelopment of venture and growth capital funds in the EU. European capital markets are highly fragmented, and the majority of trading in each country takes place in the domestic stock exchange (Arampatzi et al., 2025). No European public market has sufficient liquidity and depth to offer attractive exit opportunities for growth companies in Europe (Letta et al., 2025).

The untapped savings potential in Europe’s innovation economy

Europe’s financial system remains ill-suited for the innovation-driven economy required to compete on a global scale. The way to overcome this challenge is to unlock the large volume of savings that households and other economic players in the EU

have hoarded and to channel it towards greater investment in the most productive activities. Historically Europeans save a higher proportion of their income compared to Americans. However, for various reasons, they tend to hold a large proportion of savings in bank accounts. In Q1 of 2025 EU households saved almost 15% of their disposable income, which is almost triple the US rate of 5.1%[5]. However, Europeans hold much more assets in deposits and currency, while US households tend to keep most of their assets in equity, insurance and pension funds.

Figure 10. Comparison of savings rates in the EU and US



Source of data for the US – Personal Saving Rate (PSAVERT) Federal Reserve Bank of St. Louis shows personal saving as a percentage of disposable personal income (DPI); Source of data for the EU – NASQ_10_KI dataset, indicator S.14_S.15 Gross household saving rate

As seen on Figure 11, US pension funds manage assets equivalent to over 150% of the GDP. In the EU as a whole, it is less than 30%[6]. Despite managing the assets of over EUR 8 trillion, European pension funds invest only 4.3% of their capital into venture funds, private capital or infrastructure investments, compared to around 11% of US pension capital being channelled into these types of investments[7].

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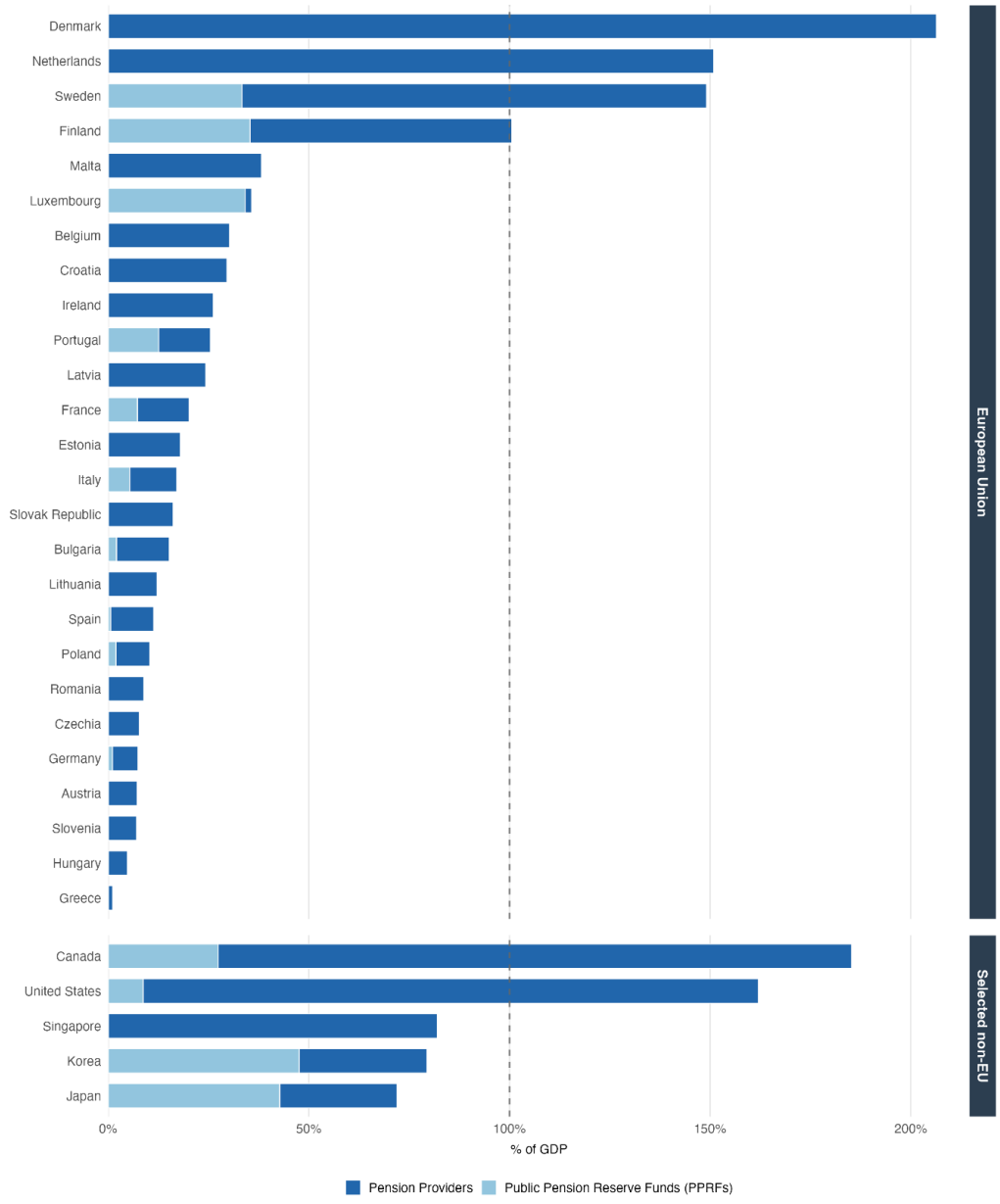
[5] Data for the US – Federal Reserve Bank of St. Louis https://fred.stlouisfed.org/series/PSAVERT, Data for the European Union Eurostat https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Quarterly_sector_accounts_-_households

[6] https://www.economist.com/finance-and-economics/2026/03/04/european-pensions-are-a-30trn-missed-opportunity

[7] *Unlocking the capital to fund European change.* Forward. Invest Europe. June 2024, https://www.investeurope.eu/media/ny2hn1xd/forward-2024-2029-spread.pdf

However, similarly to R&D investments, there are large differences between Member States both as regards the size of the assets managed by pension funds and the share of those assets that are invested in equities. Danish pension funds manage relatively the largest pool of assets, exceeding 200% of Danish GDP. Dutch and Swedish pension funds' assets are close to 150% of GDP. At least 20% of assets managed by pension funds in those three countries are invested in equities[8].

Figure 11. Pension assets as a percentage of GDP



Source of data Global Pension Statistics and other sources (OECD, 2025). Assets earmarked for retirement at the end of 2024, https://data-viewer.oecd.org?chartId=f3b7b07d-d82f-4dc3-ab47-0e917f5bc560

8 https://www.economist.com/finance-and-economics/2026/03/04/european-pensions-are-a-30trn-missed-opportunity

Even as the role of non-bank finance has increased over time, EU companies continue to rely disproportionately on bank lending compared to their global competitors. In Europe, capital markets account for merely 14% of non-financial corporate financing, in stark contrast to the United States, where 36% of such funding is derived from capital market sources (Letta et al., 2025). Bank loan is by far the most preferred type of financing by SMEs in Europe, with only a small minority of firms preferring equity financing[9]. Banks are currently not best placed to finance innovation, which requires a greater presence of patient and risk-tolerant equity investors. Banks operate under heavy prudential regulation burdens and lack the expertise to screen and monitor innovative companies. Furthermore, the conditions for SMEs to access debt financing have deteriorated in recent years, driven by the ongoing Russian aggression against Ukraine, and the consequent increases in the cost of energy and inflation, supply chains disruption and shortages of raw materials. As a consequence, in the period 2017-2023, between 982 000 and 1 395 000 financially viable European SMEs were unsuccessful in accessing debt financing and even conservative estimates indicate that the EU27 annual debt financing gap stood at EUR 37 billion in 2023 (European Commission. Directorate General for Internal Market, Industry, Entrepreneurship and SMEs., 2025)

The European financial ecosystem favours safe, incremental innovation projects over more risky disruptive innovations (European Research Council & European Commission, 2025). In search of higher profits, a significant portion of European savings flows to other regions, particularly to the US (Letta et al., 2025). Boosting the involvement of private and retail investors in funding innovative European businesses is essential for creating the financial ecosystem needed to support innovation-led firms across Europe. Aligning the proportion of household savings currently held in deposits in the EU with that observed in the United States could potentially release in excess of EUR 7 trillion for allocation to market-based financial instruments across Europe.

Intellectual property rights: a growth catalyst for European SMEs

Fostering an enabling environment for the growth and expansion of innovative companies investing in IP assets is a crucial factor for bridging the productivity gap between the EU and the US. Intangible assets have emerged as a transformative force in modern economies. These assets, encompassing technology, creativity, design and brand value, have become central to the value of enterprises and are recognised as key drivers of future growth. Since 2008, intangible investments have largely outpaced total tangible investments globally and the gap in the growth rate in investments between intangible and tangible assets has been constantly growing since then (WIPO, 2025b). The recent WIPO Global Intangible Finance Tracker (GIFT) has shown that Global Corporate Intangible Value rose from USD 6 trillion in 1996 to USD

[9] The Survey on the Access to Finance of Enterprises (SAFE), January 2025

79.4 trillion in 2024. The share of intangible assets in the total value of the top global firms[10] ranged in 2024 between 64% in the case of Morocco to 90% in the case of US firms[11].

This shift underscores the rising importance of intangible assets in shaping economic outcomes. Extensive economic research highlights the strong link between intangible investments/IP activity and improved economic performance both at macro and micro level (C. Corrado et al., 2016; C. A. Corrado et al., 2012; Farre-Mensa et al., 2020).

IPRs activity of SMEs serves as a good indicator of their future performance. A 2019 study by the EUIPO and EPO (EUIPO & EPO, 2019), based on a sample of European SMEs, found that IPR active firms were 21% more likely to experience a growth period and 10% more likely to become high-growth firms (HGFs). The likelihood of high growth increases further for SMEs that file European IPRs, particularly in high-tech industries, where European patents double the probability of experiencing rapid expansion. Trade marks also play a critical role, with European Union trade mark filings increasing turnover growth likelihood by 1.32 times. Additionally, combining multiple IPRs enhances growth prospects - SMEs using bundles of patents, trade marks, and design rights achieve the highest predictive power for future success.

The 2025 EUIPO and EPO research shows that companies with registered IPRs consistently outperform non-owners, particularly in terms of per-employee revenue and compensation. The study finds that IPR-owning firms generate 41% more revenue per employee than those without registered rights. This advantage is even more pronounced among SMEs, where IPR holders see a 44% revenue boost, despite ownership rates being below 10%. While large firms also benefit from IPR ownership, the difference is smaller, with a 16% revenue premium over non-owners (EUIPO & EPO, 2025).

IPR-intensive industries play a crucial role in the EU economy. These industries, characterised by above-average ownership of IPRs per employee, accounted for 30.6 % of total employment in the EU between 2021 and 2023, up from 30.1 % in the previous period. Beyond job creation, IPR-intensive industries drive economic output, contributing almost 48 % of the EU's GDP and generating a EUR 108 billion trade surplus. They attract most of the private equity and venture capital investments in the EU. Over 88 % of total funding from these sources was invested between 2021 and 2023 in start-ups operating in IPR-intensive industries. Notably, workers in these industries benefit from a 41 % wage premium over those in non-IPR-intensive sectors, reflecting their greater value-added per worker (EPO & EUIPO, 2026).

[10] Defined as top 15 firms in terms of their ownership of intangible assets for each country

[11] https://www.wipo.int/en/web/global-innovation-index/w/blogs/2025/the-value-of-intangible-assets-of-corporations#:~:text=The%20Value%20of%20Intangible%20Assets%20of%20Corporations,Trillion%20in%202024.%20Home.%20Global%20Innovation%20Index.

Research shows that intellectual property (IP) can bridge information gaps, promote transparency between borrowers and lenders, and act as a market signal (Czarnitzki et al., 2014). Saidi and Zaldokas (2016) found patents may replace “soft” information from relationship lenders. This feature of IP rights is critical for risk capital, which operates with fewer formal constraints and accepts higher risks for greater rewards.

Firms investing in intellectual property have a higher likelihood of securing finance from venture capital than non IP active firms (Fischer & de Rassenfosse, 2011; Hochberg et al., 2018a). A 2023 study on EU startups shows that filing for patents or trade marks in the seed or early growth stage significantly improves funding prospects. Startups that file for patents or trade marks have significantly higher odds of obtaining venture capital funding. A startup that has applied for an IP right has 2.6 times higher odds of receiving seed funding than one without IP filings. The effect is even stronger for European IP rights. Startups with both patents and trade marks experience the highest rise in funding odds (EUIPO & EPO, 2023). Similarly, a study by EUIPO and InvestEurope has shown that companies with pre-existing trade marks receive higher investments than firms without any IPRs. Expected investments in firms with trade marks is 55% higher at venture stage, 45% higher at growth stage and 68% higher at buyout stage. Firms with patents also receive higher investments, particularly at the buyout stage. Additionally, firms receiving higher investments are more likely to subsequently register patent or trade marks (EUIPO/Invest Europe, 2024).

Holding patents increases the likelihood of obtaining venture debt (Fischer & de Rassenfosse, 2011). While tangible and intangible assets used as collateral do not show strong substitutability, offering patents as collateral significantly improves a startup’s chances of securing venture debt. This highlights the distinct nature of venture debt, where patents and other intangible assets play a crucial role, setting it apart from traditional financing models.

An assessment of the possibility of large market opportunity is one of the most important elements in the initial screening phase of the potential venture investment. Ownership of IPR portfolio at this stage signals that the company can protect its market power in a sustainable way and gain extra-profits over time. In the more thorough due diligence process, venture capital firms (VCs) tend to involve external law firms to conduct a detailed assessment of the start-up’s IP portfolio and strategy and assess the technical and legal validity of its IP rights. During the assessment process, VCs tend to analyse entire IPR portfolios of the firms they want to invest in, without valuing each separate intangible asset (Munari et al., 2011).

These findings highlight the strategic importance of IP protection, not just as a legal safeguard but as a key driver of business scalability and competitiveness, especially given that SMEs are the backbone of the European economy, constituting 99% of EU businesses. However, even though IPR-holding companies with secured freedom to operate are more attractive to venture and other risk-capital investors, the limited

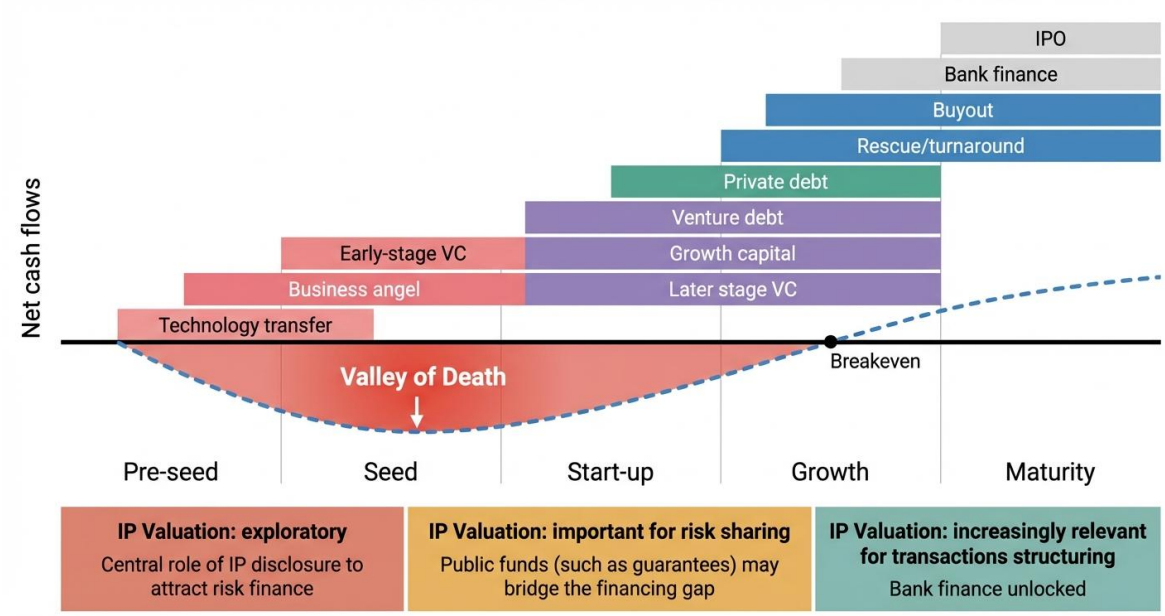
availability of such funding in Europe continues to be a major obstacle to scaling up innovative companies.

Financing challenges for intangible asset-rich firms: implications for EU productivity

Despite their significance, firms rich in intangible assets face substantial barriers in securing banking finance. This is a phenomenon affecting firms globally as it is related to features of intellectual property discussed in Section 2 of this report. Financial innovations such as venture capital and credit securitization can to some extent help reduce financing challenges for innovative firms. However, considering the vital role banks play in funding SMEs within the EU, sustained challenges in bank lending for innovative firms worsen the region's productivity gap.

Businesses navigate distinct stages of development, each presenting unique financial needs, risk exposures, and barriers to securing external funding. As firms progress, their ability to access capital evolves alongside their financial stability and financial needs, yet financial frictions, shifting market conditions, and risk perceptions continue to shape the funding landscape. Addressing these constraints is crucial to ensuring that firms can scale effectively, maximise productivity, and contribute to broader economic growth.

Figure 12. Sources of financing at different stages of a firm's life cycle



Source: Adapted from European Investment Bank, 2023

In general, newly created firms face worse prospects than older and more experienced rivals. Older firms benefit from a longer period of learning and their reputation based on past performance. Young firms face severe financial frictions that distort capital allocation and impede optimal scaling (Bottazzi et al., 2014; Pellegrino, 2018). Cash flow volatility and systematic and idiosyncratic risks are highest for young firms, declining with maturity. Lack of reputation translates directly into higher borrowing constraints for young firms (Diamond 1989). Although all groups of young firms may face important financial constraints, this problem is much more acute in the case of young firms that are engaging in R&D activities and are introducing innovations. Most of the value of innovative firms lies in their intangible assets that are difficult to use as collateral. Additionally, these firms need relatively more financial resources to commercialise their innovative ideas. Recent research shows that being innovative is associated with increased odds of facing financial constraints by between 21 and 32 % (Santos & Cincera, 2022). The financial constraints faced by young and innovative firms go on to have a negative impact on their subsequent innovation activity (Mohnen et al., 2008).

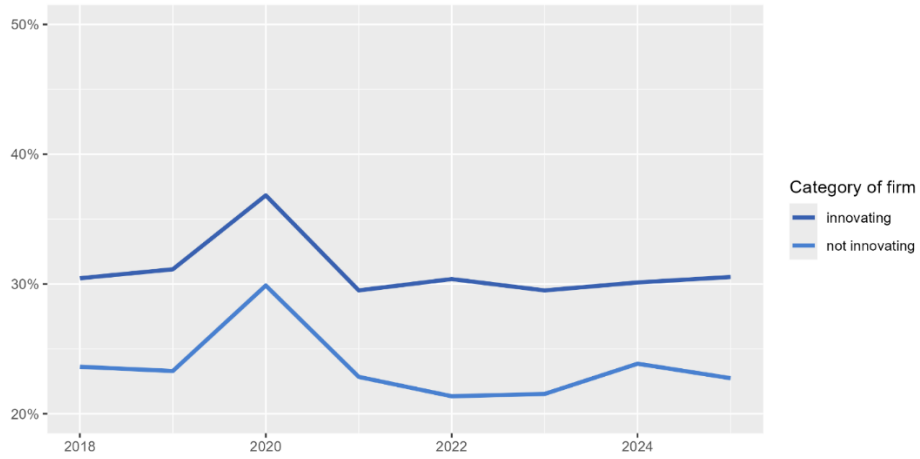
Innovation is related to high uncertainty (Hall, 2002), as new technologies and products may not meet customer demand and may fail. Most of the value of innovative firms is related to R&D and intangibles and not traditional immovable assets that are the preferred type of collateral by banks. High uncertainty and limited immovable property when compared to financial needs make debt financing at this stage of a firm's development largely inaccessible. Instead, businesses rely mostly on their

internal financing and equity financing – such as venture capital and angel investments (Hall, 2002).

As firms establish market presence and generate revenue, financial performance improves, reducing risk perceptions. Debt financing remains limited until firms demonstrate stable cash flows, although financial frictions ease. Studies show that firms transitioning from early to growth stages experience lower cash flow volatility and idiosyncratic risk (Amin et al., 2023). At these stages of a firm's life bank credit is becoming more accessible to firms that are already able to show less volatile cash flow and have acquired more tangible assets that may be used as a collateral. However, investment in intangibles like R&D remains constrained due to collateral difficulties.

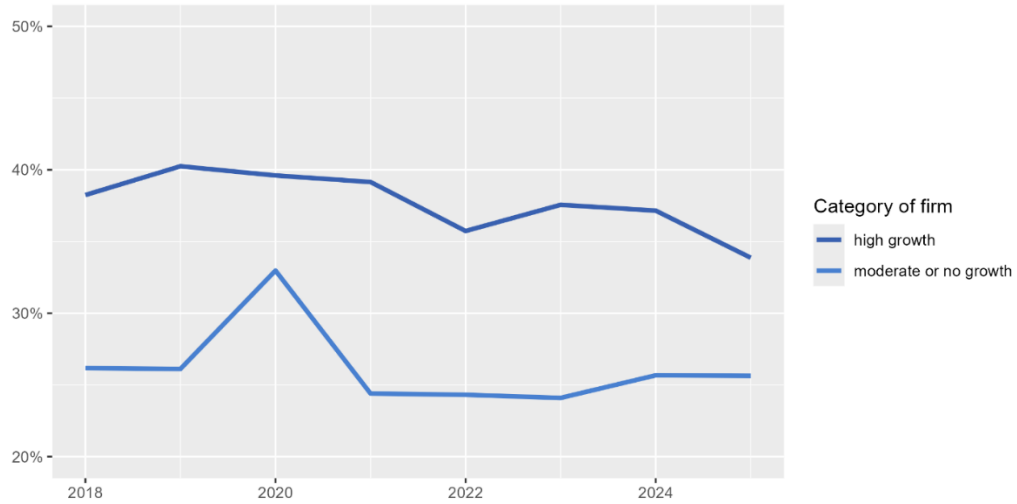
The most dynamic European firms consistently report access to finance as a major concern. This problem mostly affects firms that are innovative (Figure 13) and those that expect high growth (Figure 14).

Figure 13. Share of SMEs perceiving access to finance as a major concern – innovation status



Own calculations based on EC and ECB Survey on the access to finance of enterprises (SAFE). Innovating firms are those that indicated that during the past 12 months have introduced a new or significantly improved product or service to the market, a new or significantly improved production process or method, a new organization of management or a new way of selling their goods or services (Q1). Firms that indicated access to finance to be the major concern for them (Q0b). Major concern has been defined as a problem scoring at least seven on a scale of one to ten. Survey waves from 18 onwards included in the analysis

Figure 14. Share of SMEs perceiving access to finance as a major concern – expected turnover growth



Own calculations based on EC and ECB Survey on the access to finance of enterprises (SAFE). High growth firms are those that indicated that they expect to growth their turnover by more than 20% per year in the next three years (Q17). Firms that indicated access to finance to be the major concern for them (Q0b). Major concern has been defined as a problem scoring at least seven on a scale of one to ten. Survey waves from 18 onwards included in the analysis

Studies have shown that industries with high intangible intensity are more likely to experience financing gaps, which adversely affect their productivity and growth (Demmou et al., 2020). As intangible assets become more widespread, they are associated with reduced debt capacity and a greater reliance on internal financing (Bates et al., 2008; Dell'Ariccia et al., 2021; Falato et al., 2022). Moreover, credit quantity rationing and other loan conditions such as cost, maturity and collateral requirements have significant effect on further investments in intangibles (European Investment Bank., 2021). These challenges are particularly pronounced for small and medium-sized enterprises (SMEs) and start-ups, which struggle to compete with larger, established firms. Consequently, in sectors where intangibles are most essential, financial constraints become even more restrictive, exacerbating their adverse impact on productivity growth.

Financial frictions distort capital allocation, preventing firms from scaling up efficiently and significantly hampering economic productivity. These inefficiencies lower output per worker primarily due to depressed total factor productivity (TFP). On the other hand, a well-developed financial system facilitates resource reallocation, strengthening the link between productivity and firm growth, particularly in intangible-intensive industries. Improvements in access to finance and efficiency of financial institutions and markets disproportionately benefit intangible-intensive sectors (Demmou & Franco, 2021).

Most IPR active SMEs do not know how they can use their IP assets to secure financing. Only 13% of owners of IPR have tried to obtain financing through their IP assets and a large majority of them have never had a professional valuation of this class of assets (EUIPO, 2019).

A large portion of their value is not reflected in company financial reports, primarily due to their intangible nature. IP is harder to value, and does not always meet conventional accounting recognition criteria (Brand Finance, 2024; Lev & Gu, 2016). As a result, intangible-rich firms are often misvalued, leading to distorted investment decisions, higher capital costs, and an underestimation of their true economic contribution.

Wider acceptance of IP as collateral could substantially increase the borrowing capacity of firms investing in IP. Research has shown that Swedish firms were able to borrow 21% more and Dutch firms 26% more when pledging patents (Bracht & Czarnitzki, 2022). The use of IP as collateral serves as a robust signal to financial stakeholders, principally because the intrinsic value of IP is substantially greater for the borrowing entity than for the lender. The potential forfeiture of collateralised IP signifies a critical loss of core assets for the firm, which can fundamentally threaten its operational viability (Heller et al., 2024). Companies that use their intellectual property as collateral may therefore demonstrate increased motivation to fulfil their debt obligations promptly. This conjecture is backed up by empirical research. A 2018 study examining the British Business Bank's Enterprise Finance Guarantee (EFG) scheme found that firms with registered IP had significantly lower default (10% vs. 16%) and loss rates. This trend held across various industries, firm sizes, and ages, with patents having the strongest link to lower default risk, followed by trade marks. Firms holding both patents and trade marks faced the lowest risk (British Business Bank, 2018).

Despite the potential benefits of wider acceptance of IP as a collateral, tangible assets still constitute the backbone of credit collateral in Europe. There is a shortage of quantitative data on the level of use of IP as a collateral in the credit transactions in Europe. However, anecdotal evidence shows that, with some exceptions, such transactions are rare or very rare (Kieninger, 2020).

In conclusion, the widening financial gap in Europe, particularly in relation to intangible assets, presents a significant challenge to economic growth and productivity. The difficulty in securing financing for IP-intensive industries, especially SMEs and startups, exacerbates the region's productivity lag and limits its ability to scale up new technologies and foster innovation. To improve the EU's economic performance and resilience, it is important to take measures to enhance financing possibilities for intangible-rich firms that face disproportionate challenges when it comes to accessing financing.

The body of literature examined above suggests that broadening the availability of sophisticated financing mechanisms, in conjunction with strengthening lenders' capacity to leverage IP as collateral, presents significant opportunities for improving

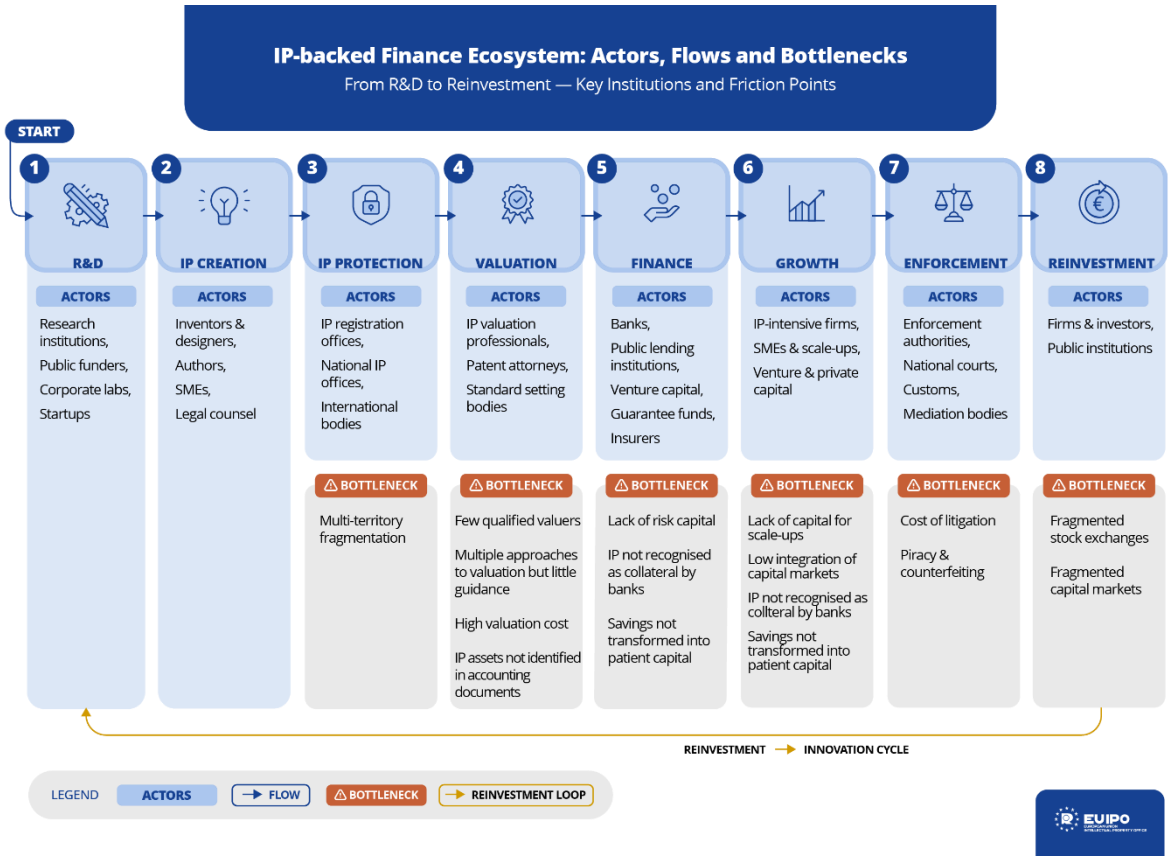
the profitability of investments in intangibles, fostering growth and scaling up of IP-intensive enterprises in Europe.

Furthermore, such initiatives are likely to promote the wider diffusion of innovations that enhance productivity across the EU economy, thereby contributing to narrowing the productivity differentials between the European Union and other leading global economies.

2 Analysis of Problems Related to Usage of IP to Access Finance

The relatively low uptake of IP-backed finance in Europe cannot be attributed to a single cause. As illustrated in the figure below, the journey from R&D to reinvestment passes through distinct stages and bottlenecks for IP-backed finance arise practically at each of them. This reflects three reinforcing sets of problems: the inherent characteristics of IP assets that make them fundamentally different from the tangible collateral that financial institutions are accustomed to assessing; the features of the current framework in the EU that compound those difficulties; and the constraints of current IP valuation practice that prevent credible economic value from being assigned to IP assets. This section examines all three sets of problems in turn.

Figure 15 IP-backed Finance Ecosystem: Actors, Flows and Bottlenecks



Analysis developed in this section will provide a framework for the comprehensive examination of solutions identified by scholars or already implemented in some countries that will be presented in section 3 and will constitute the basis for structured discussions on future initiatives facilitating access to finance for IP active firms.

2.1 Intellectual Property characteristics

2.1.1 Information asymmetry, non-rivalry, and weak signals

Within the context of innovation finance, **information asymmetry** emerges due to innovators having access to superior knowledge regarding the potential of their projects compared to external investors. Knowledge associated with new technologies and innovative solutions is largely tacit and cannot be fully codified. Moreover, the understanding of codified knowledge is heavily influenced by the specific context and the experience of those interpreting it (Foray, 2004). This disparity in information prevents investors from reliably distinguishing between high-potential and lower-quality ventures. Consequently, investors are inclined to base their offers on the

perceived average quality of projects, resulting in less favourable investment terms for the most promising innovations. This dynamic leads to innovation funding markets exhibiting characteristics akin to Akerlof's (1970) *"lemons"* market, wherein the inability to differentiate project quality heightens uncertainty around returns on investment. As a result, entrepreneurs with the most promising projects may refrain from accepting external financing under such conditions, thereby exacerbating the uncertainty associated with investment returns (Himmelberg & Petersen, 1994).

In extreme cases, severe information asymmetry can prevent R&D markets from functioning (Hall & Lerner, 2010). Venture capital is often seen as a solution to this "missing markets" problem, but full disclosure is ineffective since innovative ideas can be imitated. As R&D primarily generates non-rival knowledge - one firm's use does not limit another's, inducing vulnerability to imitation or financier appropriation - companies hesitate to share details due to competitive risks, weakening the credibility of their signals (Anton & Yao, 2002; Bhattacharya & Ritter, 1983). This reluctance, combined with the lemons' premium, makes external financing costlier than internal funding, particularly for intangible assets discouraging R&D and leading to underinvestment in innovation (Hall & Lerner, 2010).

2.1.2 Separability and redeployability

An asset is separable when it can be used by other entities besides the one that created it. It means that it can be sold or licensed to third parties and provide them with similar benefits as it provides to its creator (Crouzet & Ma, 2023). In general, many intangible assets are less separable than most physical assets because assets based on knowledge, such as intellectual property, are embedded in human capital and generally specialised to the particular firm (Hall & Lerner, 2010).

While separability and redeployability are similar concepts, they refer to distinct aspects of IP assets. Separability concerns an asset's ability to be transferred independently of the firm, whereas redeployability relates to its adaptability across different contexts, industries, or applications. Highly redeployable IP assets, such as general-purpose technologies, can be applied across multiple industries, increasing their market value and usability. In contrast, low-redeployability assets are more specialised and retain value primarily within their original context.

The value of intangibles, including IP, may depend on the existence of synergies and network effects. Many intangibles create value in conjunction with other complementary assets, including other intangibles and a tacit knowledge. This tacit knowledge is bound to people or organisations and therefore may be very difficult to transfer to other entities. Detaching IP from these complementary assets may be difficult and costly. Also synergies between IP and complementary assets may pose additional challenges as regards IP valuations (European Financial Reporting Advisory Group, 2021).

The degree of separability may change during the life cycle of a firm. When a company becomes more mature and has more cash flow that can be linked to the particular IP assets, using them as collateral may become more feasible. However, if IP is hardly separable from the company where it originated, other contractual forms of finance may be necessary, such as equity financing or credit against a bundle of tangible and intangible assets.

The degree of redeployability is a crucial factor in asset-backed debt financing, particularly in determining an asset's pledgeability as collateral. Redeployability affects an asset's liquidation value, an amount expected from the sale of assets in secondary markets, in case of company liquidation (Alderson & Betker, 1996). Therefore, it directly impacts lenders' willingness to accept IP as collateral, as higher liquidity implies lower risk. When an IP asset has low redeployability, creditors may be hesitant to finance loans secured by it or may demand higher credit spreads, as its resale value in the event of default would be uncertain. This relationship has been well-documented for tangible assets and extends to intangible assets too (Benmelech & Bergman, 2009; Hochberg et al., 2018b; H. Kim & Kung, 2017).

The impact of redeployability of assets on their acceptance as a collateral has also been confirmed by the European Central Bank in the European context. However the link between redeployability and worse credit terms was not supported by data (Degryse et al., 2025). Ciaramella et al. (2024), leveraging data from France and a major legal reform as a quasi-natural experiment, provide a comprehensive analysis of IP collateralisation. Their findings confirm that asset redeployability is a key determinant of IP pledgeability, positively influencing the likelihood of an IP asset being used as loan collateral.

2.1.3 Uncertainty regarding the value and useful economic life of intellectual property

Firms with substantial investments in intangible assets, such as IP, face unique risks that are difficult to hedge due to the uncertain economic life of those assets.

These risks stem from multiple factors, including the risk of external infringement, where unauthorised use or counterfeiting can erode the competitive advantage and revenue streams foreseen. The validity of IP rights may be challenged through litigation, regulatory changes, or jurisdictional inconsistencies. Additionally, technological risks arise as rapid innovation can render existing IP assets obsolete. They may be superseded by new technologies, more appealing designs or products that better suit customer tastes (Crouzet & Ma, 2023). The uncertainty surrounding the enforceability, valuation, and future relevance of IP assets complicates IP-backed financing, making lenders more cautious.

To some extent, uncertainty regarding the economic life of IP may hold back firms from presenting relevant information on intangibles on their balance sheet. The value

of intangibles may quickly diminish due to the technological progress or infringement, forcing firms to report value loss in subsequent reports (Lev & Gu, 2016).

2.1.4 Heterogenous character of individual IP assets

International Accounting Standard (IAS) 38 highlights the distinctive nature of intellectual property assets as a significant obstacle to the development of a vibrant secondary market for these rights [IAS 38, para 78].

Tangible assets may also be unique. For example, two apparently similar buildings may have very different value because the location of one is much more attractive than the location of the other. It is, however, possible to value them by referring to similar transactions and adjusting this information to the known factors that differentiate between two similar tangible assets. But the uniqueness of IP assets is of a different order when compared to tangible assets (UK Financial Reporting Council, 2019). One of the most important conditions for granting IPR protection to intangibles is their novelty and distinctiveness. Those characteristics make them particularly fit for their purpose but make transacting them a challenge.

This is explicitly recognised by International Valuations Standards **(**IVS) which state that “The heterogeneous nature of intangible assets and the fact that intangible assets are seldom transacted separately from other assets limit the availability of market evidence of transactions involving identical assets. Where market evidence is available, it usually comprises assets that are similar, but not identical to the subject asset.”[12]

Therefore, commercial dealing in IP is usually done through licensing, which does not involve a loss of ownership, or as a part of a larger transaction such as merger or acquisition. IP is deemed so important for firms that few SMEs will willingly sell their core IP. (Brassell, M. & Boschmans, K., 2022).

2.2 Current framework

2.2.1 Underdeveloped secondary markets and lack of data on transactions involving IP

The heterogeneous nature of individual IP, along with the low frequency of transactions and their often-confidential nature, makes data on IP-related transactions significantly scarcer and less transparent than data on transactions involving tangible

[12] International Valuation Standards. Effective 31 January 2025, IVS 210 50.04

assets. Although secondary markets for intangibles do exist, they are less structured, leading to less predictable pricing for IP compared to tangible assets (Brassell, M. & Boschmans, 2019).

In their analysis of the IP asset markets in Europe, Universität St. Galen and Frauenhofer (2011) concluded that there are three major drawbacks keeping European firms from transacting with IP:

- Low liquidity
- Low homogeneity
- Value uncertainty

The survey conducted in 2011 among 1000 top patent filers in Europe showed that the main barriers to engage in IP transactions were the difficulty in evaluating the financial value of IP, difficulties in finding a transaction partner and the difficulty in evaluating the novelty of technologies.

Given that the secondary markets for IPR are underdeveloped, businesses holding valuable IP are unlikely to sell it unless absolutely necessary, as these assets are crucial to their business model. Some large firms may refrain from transacting their unused IP assets for strategic reasons, as patterns of such transactions may reveal the most prospective areas of their main business focus to competitors (Chondrakis et al., 2021). This may be the reason behind the higher propensity among small firms (compared to their larger counterparts) to sell their recently granted patents. Additionally, many IP-heavy firms prefer to unlock the value of their IP by selling the entire company or by going public, especially if they are equity-backed, rather than opting for an asset sale. This presents a significant challenge for improving IP marketplaces, as the limited availability of high-quality assets directly impacts demand and distorts information about the IP value (Brassell & Maguire, 2017).

Data on secondary market transactions involving tangible assets give lenders a high degree of confidence regarding asset value. Without well-developed secondary markets and transaction repositories, there is no transparent marketplace to serve as an external benchmark for the realisable value, further complicating the valuation process. The development of transparent IP marketplaces could enhance lender confidence by demonstrating that similar assets can be subject to market transactions. They can also provide some reference as to the possible IP value. However, as discussed in Section 2.1, comparing one IP portfolio to another is a complex task that rarely yields accurate results, as each portfolio or even each individual IP is unique in terms of its context, characteristics, and benefits. The values revealed by past transactions have limited utility as a guidance for future valuations related to different intangibles.

2.2.2 Problems in identification of intangibles

Accounting standards regulate the financial information that firms must disclose, particularly in relation to how IP and intangible assets are represented in financial statements.

The rules governing the recognition of intangible assets in financial statements are regulated by IAS standard 38 intangible assets acquired in business combinations occurring on or after 31 March 2004, or otherwise to other intangible assets for annual periods beginning on or after 31 March 2004. The standard requires an entity to recognise an intangible asset, whether purchased or self-created (at cost value) if, and only if:

- It is probable that the future economic benefits that are attributable to the asset will flow to the entity; and
- the cost of the asset can be measured reliably.

It is assumed that the reliable measurement condition is satisfied for intangible assets that are acquired separately or in a business combination (IAS 38.33).

If an asset does not meet the criteria of definition or recognition, IAS 38 requires the expenditure on this item to be recognised as an expense when it is incurred (IAS 38.68).[13] This distinction between assets (capital) and expenses has profound consequences on financial reporting. Whereas assets (for instance plants or machinery) are related to future benefits, expenses (for instance salaries or rents) are payments for past services that are not related to future benefits. This implies that intangibles, including IP, do not imply any future benefits (Lev & Gu, 2016).

Intangibles are generally only recognised if acquired in business combination or on the secondary market. Internally generated intangibles may under some restrictive circumstances be recognised at cost at the development phase (Blum & de Mareüil-Villette, 2025). In practice however, irrespective of their value to the company, the majority of the internally generated assets are expensed in the profit and loss account. The distinction between internally generated and acquired intangibles stems from the preference of standard setters to base the values of assets on objectively determined prices of similar traded assets. Therefore, the value of intangibles developed internally are deemed not to be sufficiently certain and do not qualify to be presented in the balance sheet (Lev & Gu, 2016).

For acquired intangibles, an entity may choose to use either a cost model or the revaluation model for each class of intangible assets. Revaluation is only possible if fair value can be determined by reference to an active market.

[13] https://www.iasplus.com/en/standards/ias/ias38 accessed on 04/02/2025

IAS 38 includes the explicit prohibition to recognise some types of intangibles, including internally generated brands. Recognition of a brand is prohibited given that the cost of generating brands is difficult to distinguish from other operational costs.

IAS 38 allows for the provision of 'a brief description of significant intangible assets controlled by the entity but not recognised as assets because they did not meet the recognition criteria' (European Financial Reporting Advisory Group, 2021).

The accounting rules for SMEs are covered in a separate set of rules 'IFRS for SMEs Accounting Standards'[14]. Section 18, which outlines the treatment of intangible assets, does not substantially diverge from the requirements established under IAS 38.

Due to the limited number of situations in which intangible assets are recognised in the accounting documents, the majority of IP assets, even those with very high value for a company, are not sufficiently identified. Additionally, the current IFRS requirements result in a situation where very similar assets may be accounted for differently, depending on whether they were acquired or developed internally. When financial documents do not recognise intangibles, they are not reflecting the most important competitive factors for the most dynamic and promising firms, which thereby distorts the performance measures. It is increasingly difficult to compare entities that grow organically with those that acquire IP through mergers and acquisitions. As a result, there are rising concerns that financial statements may lose their relevance (Appleton et al., 2023; Lev & Gu, 2016). Additionally, by omitting the disclosure of corporate IP assets, a firm forgoes the strategic advantage conferred by those assets that may constitute its principal source of competitive advantage (Denoncourt, 2018; Peters & Winters, 2025).

It is important to note that, given the importance of IP, disclosure of information about intangibles may pose some risks. Some information about the company's IP strategy may be sensitive and its disclosure may undermine the firm's competitive position. Casella et al. (2023) attributed the reduced willingness to pursue public listings among US firms since mid-1990 to stricter disclosure regulation and the increased intangible capital share of firms.

Firms may be afraid of disclosing sensitive information on intangibles due to the spillover effect, which can benefit competitors (Crouzet et al., 2022). However, there is already some evidence that disclosure of IP improves the accuracy of the assessment of an entity's prospects, for instance by improving financial analysts' forecasts (Hsu & Chang, 2011).

[14] IFRS for SMEs Accounting standards. Third edition. February 2025

2.2.3 Lack of harmonisation of legal provisions governing IP-based collaterals

The lack of statutory law governing the admissibility of security rights in IP and unclear rules as regards creation of such rights and their perfection[15], has been pointed out as one of the major obstacles to wider adoption of IP as collateral in financial transactions (Kieninger, 2020). The framework for secured transactions has been developed with limited consideration for intellectual property, and international treaties aimed at harmonising IP regulations do not address security interests in IP assets. Consequently, divergent legal provisions persist even among EU member states regarding the establishment and perfection of security interests, as well as the types of security rights applicable to specific categories of IP. In some countries, the parties to transactions may choose between various types of security rights, with different rules, perfection procedures and priority requirements. In several jurisdictions, the existence of distinct registries for secured transactions and IP creates ambiguity regarding the appropriate procedures for perfecting security interests in IP assets (Kieninger, 2020). This ambiguity may potentially translate into disproportionally high costs of due diligence (Baldia, 2013).

Under Article 22 of Regulation (EU) 2017/1001 on the EU trade mark (EUTMR), an EU trade mark (EUTM) may, independently of the undertaking, be given as security or be made the subject of rights in rem; at the request of one of the parties, these rights or their transfer must be entered in the EUIPO Register and published. The same framework applies to Registered European Union Designs (REUDs). Registration with the EUIPO is voluntary but strongly advisable: it provides constructive notice to third parties and is a precondition for enforcing the pledge against subsequent transferees. The EUIPO does not examine whether a right in rem has been validly created or perfected under national law, it merely records and publishes the assertion. A pledge recorded in the EUIPO Official Journal but not perfected under the governing national law provides the secured creditor with notice but no enforceable security - the substantive validity and priority of the right in rem are governed by national law. Specifically, Article 19(2) EUTMR applies the law of the EU Member State in which the EUTM proprietor has its seat, domicile or establishment. Where the proprietor has none in the EU, Spanish law applies by default, since Spain is where the EUIPO has its headquarters. Perfecting a security interest requires compliance not only with the registration of *right in rem* with the EUIPO but also with the formalities of national law. At the level of EU Member States, all national trade mark, design and patent registries

[15] The term perfection refers to the legal process a lender uses to officially establish and make public their security interest in collateral. This process serves as a protection of the lender's rights against third parties who may also have claims on the same property. Perfection makes the security interest effective against third parties and gives the secured party priority in case multiple parties claim the same collateral.

permit the recording of pledges and security interests, but the applicable formalities, constitutive versus declaratory effect, and priority rules vary considerably across jurisdictions.

2.2.4 Higher regulatory capital burden under the Basel III framework

Banks are required to mitigate the credit risks they are exposed to. They are obliged to keep reserves in secured and liquid assets. Basel III is a framework setting international standards for bank capital adequacy and liquidity requirements. The goal of these standards is to increase the safety of the banking system by regulating bank leverage through provisions on minimum capital requirements and definitions of high-quality liquid assets. The foundation of capital requirements is the calculation of risk weighted assets (RWAs), which represent the total assets of a bank adjusted to their respective levels of risk represented by risk weight, ranging from 0% to 1 250%. This calculation determines how much capital banks have to hold as a safeguard against potential losses. Banks must maintain at least 8% of RWAs as total capital apart of additional mandatory buffers.

Banks may reduce the value of their RWAs and consequently lower their capital requirements by holding collateral against their exposures, provided that the collateral meets specific regulatory conditions. The collateralised portion of an exposure receives the risk weight of a collateral. With some exceptions, the risk weight of the collateralised portion must be at least 20%. Intangible assets, including IPRs, do not qualify as eligible collateral for capital relief purposes under the EU Capital Requirements Regulation and its further amendments (CRR III). [16] Terms of lending secured by intangibles are therefore often similar to those for unsecured lending (WIPO, 2022b). As unsecured capital exposure under Basel III is assigned 100% risk weight, a bank lending to a firm offering IP as a collateral must put aside capital representing the full capital adequacy ratio calculated from the whole value of the loan, without any offset from the pledged IP (Rafferty, 2024). As a result of those prudential regulations, firms with relatively more IP assets tend to rely on non-bank lenders or shadow banking institutions to cover their financial needs, compared to their less IP intensive counterparts (Lee & Paluszynski, 2022).

Basel III has been transposed into the EU law through the banking package (CRR III/CRD VI) - a series of legal acts, including, among others, the Capital Requirements Regulation (CRR) Regulation (EU) No 575/2013, most recently amended by CRR III – Regulation (EU) 2024/1623 and the accompanying CRD VI – Directive (EU)

[16] Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms most recently amended by CRR III (Regulation (EU) 2024/1623, applicable from January 2025) and accompanying CRD VI (Directive (EU) 2024/1619)

2024/1619. Article 36(1)(b) of CRR III explicitly states that institutions are required to deduct intangible assets, including IPRs, from Common Equity Tier 1 Capital. The regulation does not establish separate risk-weighting categories for different types of IP. These assets are subject to standard deduction requirements.

Basel III establishes minimum prudential requirements that must be transposed into national legislation. Unlike the original framework – which targets only internationally active banks – the EU implementation applies these requirements universally, covering all banks irrespective of whether they operate internationally. Other jurisdictions such as the US, Canada or Switzerland have implemented simpler rules for smaller banks that are not active internationally (Berg et al., 2025). On the other hand, the European Union has decided to maintain the SME Supporting Factor introduced in 2014. This mechanism provides banks with special relief related to lending to SMEs, which reduces the SMEs' borrowing costs (Broyer et al., 2022).

It is worth mentioning that under the prudential rules of the EU, banks may benefit from regulatory capital relief for the portion of the loan covered by a credit guarantee. In these cases, banks may apply the risk weight of the guarantor instead of that of the borrower. In a survey, conducted by the European Investment Fund, half of the credit institutions surveyed believed that obtaining regulatory capital relief was as important as the transfer of risk associated with a guarantee (Chatzouz et al., 2017).

The European Commission's targeted consultation on the competitiveness of the EU banking sector is expected to provide, among others, systematic, EU-wide evidence on the extent to which the prudential framework constitutes a binding constraint on IP-backed lending. The consultation explicitly asks banks whether they accept IP rights as collateral and, if not, to identify the main reasons for this – listing regulatory capital treatment as one of the options. It further invites banks to assess which EU-level measures would increase their willingness to lend against IP assets. The responses to this consultation should establish the evidentiary foundation for eventual policy responses tackling the problems related to IP-backed lending.

2.2.5 Lack of risk capital for IP-intensive start-ups

As discussed in Section 1, at the initial stages of a company's life, even IP-active firms with very promising business models are not able to generate sufficient cashflow to provide data for IP valuation or to convince lenders that they would be able to service their debt. Therefore, these ambitious firms must rely on their own private financing, grants and equity funding.

There is a huge gap in venture capital availability between the US and the EU. Whereas the most intensive R&D EU-based corporations provide about 22% of global corporate venture capital (CVC), EU-based startups receive only 9% of the total CVCs investments set up by the top global R&D investors. Over 80% of venture capital investment by the EU-based companies targets US-based companies (Fuest et al.,

2024; Grassano et al., 2022). The gap between venture capital investments in the EU and US amounts to 80% in the seed stage, 73% in the early stage and 82% in the later stage (Draghi, 2024).

Additionally, technology funding in Europe is mainly supported by public investors. Venture fund investments in patenting firms are mainly funnelled by the public funds such as the European Innovation Council (EIC), European Investment Bank (EIB) and European Institute of Innovation and Technology (EIT). All these programmes have an above average share of patenting firms in their investments' portfolios. The amount of funding startups received from private funds focusing on technology firms is over 60% lower in Europe than in the US. Whereas in the US the dominant role in the startup financing is played by private entities investing in late stage financing rounds, in Europe it is mainly public investors investing in early stage rounds (EPO, 2025).

2.3 Problems related to IP valuation

IP valuation is a necessary component of IP-backed finance, as financial institutions need to estimate the value of IP assets before accepting them as collateral. While there are commonly accepted standards, and professional organisations recognise them and include them in their training programmes, there is little oversight on how those standards are implemented in the actual valuations.

Additionally, valuation approaches differ depending on the intended use of the valuation, type of intangible asset and geographical location, reflecting varying local practices. There is little knowledge about the IP valuation approaches used among entrepreneurs and IP valuation services are generally not accessible to SMEs. Valuation requires experienced and educated independent professionals, but due to the relatively low demand for valuation services, there are few professionals with sufficient knowledge. Valuers of tangible assets can easily access market comparator information, as these assets are regularly traded. This enables valuations to account for factors like age, condition and location, making the process more straightforward. By comparison, IP valuation is often perceived as less standardised or reliable, complicating the acceptance of independent IP valuations.

IP valuation is a challenging process. This is due to asymmetric information, and the high dispersion of returns enabled by IP assets. Depending on the context, the estimated value of the IP asset may vary a lot. It may be different if estimated for a purchase transaction, infringement compensation or as a liquidation value in case of bankruptcy (Brassell, M. & Boschmans, K., 2018).

This section lists the main challenges related to the current state of IP valuation in the European Union.

2.3.1 General lack of information on IP valuation approaches

In their final report, the Expert Group on Intellectual Property Valuation concluded that it is not the lack of valuation methods per se, or the lack of standards for valuing IP, but rather the limited dissemination of knowledge about the various methods of IP valuation and the general lack of confidence in their results that limits the uptake of IP for financial purposes in Europe (European Commission. Directorate General for Research and Innovation., 2014). Knowledge of IP valuation methods and the possible usage of IP as collateral is limited both among the financial stakeholders as well as among the IP owners.

2.3.2 Low number of IP valuation professionals

The low demand for IP valuation for the purposes of securing funds results in the low interest among finance professionals in learning more about the specific methods of dealing with intangibles and IP valuations. The pool of experts that can provide IP rights valuations is small and mostly consists of specialists that are involved in other types of valuation exercises, IP valuation being a side activity for them.

2.3.3 High costs of IP valuations

The lack of a sufficient number of IP valuation specialists and the low number of valuations demanded result in relatively high costs for IPR valuation. Each individual IP valuation has to be tailor-made and requires extensive research into the specific features of each company and each type of IP. Valuation is more difficult given the scarce data available on the outcome of other valuations, which could otherwise serve as a comparison.

2.3.4 Uncertainty related to IP valuations

The lack of data on the low number of IP valuations makes it difficult to assess whether the outcome of the IP valuation is reasonable. In the EU, there is no institution that can assess the quality of IP valuations and that can issue guidance on best practices. Also, there is an insufficient risk literacy among valuation practitioners who often abstain from properly defining and communicating the risks related to intangibles (Blum, Forthcoming). Moreover, asset value is often context-dependent; for example, the IP of a distressed business is likely to be worth less than that of a successful one, even if the two were theoretically identical.

2.4 Rationale for policy intervention

The problems identified and discussed in this section make it more difficult for IP-active firms to access finance to scale up and grow their business based on innovative ideas. Given the importance of innovative companies to the EU economy, its reliance on bank financing and the important funding gap of most prospective start-ups and scale-ups,

insufficient access to finance for intangible-rich firms in Europe may be considered a market failure that warrants public intervention.

However, public support for access to finance for IP-active firms is currently at low levels in the European Union. In the *EU Startup and Scaleup Strategy*, the European Commission recognised that there is a lack of public financial guarantees to banks and other financial institutions engaging in lending against IP-based collateral. There are no incentives or educational campaigns targeting banks and other financial institutions to encourage them to engage in IP-backed financing.

Public intervention directly affects the cost-benefit determinants of using IP as collateral (Heller et al., 2024) and may be especially important in Europe, given its stronger reliance on public sector R&D and banking finance. It may be especially important at the beginning, when the lack of data on existing transactions and a limited experience with products that specifically address the needs of IP-active firms keeps private sector involvement at a minimum. However, in the long-term, policy intervention should build an effective scale of operations to enable the reduction of costs and encourage private institutions to accept intangibles as collateral. Public funds should be used to showcase good examples and build trust. Ultimately, policy should aim to foster the development of private sector instruments that facilitate the financing of IP, grounded in independent risk assessments and initiatives undertaken by private stakeholders. Given the prevailing lack of expertise in IP-backed financing and the limited availability of data necessary for risk evaluation, public intervention should concentrate on activities that promote knowledge dissemination and enhance confidence in IP assets. These initiatives could be financed entirely by the public sector or could take the form of blended finance initiatives, fostering public-private partnerships. Nevertheless, as IPRs mature into a recognised asset class, the role of public intervention should be gradually diminished. The ultimate objective is to establish a robust private market for IP financing in which private stakeholders have a comprehensive understanding of IP assets and routinely accept them as reliable collateral, without any need for subsidies from the public sector.

Brassell and Boschmans formulated the following indications for efficient policy intervention (2022):

- It must increase lenders' confidence in the recoverable value of intangibles;
- It should address the absence of capital relief against intangibles under current banking regulations;
- It has to achieve the appropriate scale that would allow for a reduction in the price of valuation and any additional procedures involved in using IP as collateral;
- It should be addressed to those sectors and types of firms where it can have the greatest economic impact;
- It should be designed in such a way as to remove the obstacles to greater involvement of private sector financial stakeholders.

In the longer term, private sector participation is essential.

The solutions discussed in this report are designed to transform IPRs into assets that are viable for banking and other financial stakeholders.

The prevailing restrictive policies governing the utilisation of IP as collateral in financial transactions significantly limit the potential for both innovative enterprises and financial institutions. Insufficient recognition of IP value results in high-growth firms with substantial development prospects either abandoning their projects or seeking alternative funding sources outside the European Union. This dynamic consequently leads European banks and financial stakeholders to miss out on profitable opportunities within rapidly evolving sectors. In light of these considerations, public intervention should prioritise the considerable opportunities associated with financing enterprises rich in IP and proactively incentivise financial institutions to acknowledge and capitalise on the commercial advantages inherent in extending these forms of finance.

3 Analysis of Policy Solutions to Facilitate Usage of IP to Access Finance

The success of IP-backed financing hinges on a holistic approach that integrates both public and private efforts. Strengthening public-private partnerships is crucial to raising awareness and establishing the necessary enablers. Building a sustainable ecosystem requires addressing the broader needs of enterprises, financial institutions, and service providers. Businesses must first develop a strong IP portfolio and enhance their IP management capabilities before seeking financing. Additionally, fostering expertise in IP valuation is essential to ensure accurate assessments and build confidence among financial institutions. A well-rounded strategy that considers the entire IP financing journey will create a more robust and effective ecosystem (WIPO, 2023a).

This section presents possible solutions that address specific problems described in Section 2. The proposed solutions have been identified in literature and some of them have already been implemented in some jurisdictions. Successful policy intervention that increases the uptake of IP assets to access finance will depend on a comprehensive strategy that implements sets of instruments and will tackle all or most of the specific problems related to accessing finance by innovative firms whose competitive edge relies on IP. The implementation of specific instruments will involve the cooperation and coordination of efforts between many stakeholders.

Given the dependence of European SMEs on banking credits, the main focus of public policy, at least in the initial phase, should be on making banking credits for IP-active companies more accessible, and by allowing use of their IPR as collateral.

3.1 Solutions to facilitate access to banking credit

3.1.1 Provision of dedicated public lending against IP collateral

This solution addresses the following problems:

- Underdeveloped secondary markets and lack of data on transactions involving IP (Section 2.2.1): public lending against IP assets generates transaction data from loans backed by IP collateral and creates a track record that may reduce reluctance from private lenders due to data scarcity.
- Higher regulatory capital burden under the Basel III framework (Section 2.2.4): public development banks operate under different objectives, balancing risk with public policy goals. This enables them to provide IP-secured loans despite the Basel III burdens.
- Lack of risk capital for IP intensive start-ups (Section 2.2.5): opening specific credit lines for IP-rich firms by development banks bridges the financing gap, exacerbated by a lack of tangible assets for traditional collateral and insufficient venture capital in Europe.
- Uncertainty related to IP valuations (Section 2.3.4): by providing data on performance of loans based on IP collateral this targeted lending will demonstrate IP's viability as security, gradually building private lender confidence and expanding market access for these firms.

Given the limited availability of data on comparable transactions and the heightened uncertainty associated with extending credit secured by IP collateral, financial institutions may be reluctant to lend against the IP collateral or, when they do, initial credit terms may be less favourable than those typically offered for transactions involving tangible collateral.

Due to an insufficient number of debt products accepting IP as collateral, provision of public lending money may be crucial at the beginning. Within these schemes, institutions such as national development banks may open new credit lines specifically designed for IP-active firms with insufficient tangible collateral to obtain credit at market terms. As a supplementary or alternative measure to direct public lending, public funds could be strategically deployed to enhance the conditions of IP-backed transactions offered by public or private banks – such as by partially subsidising transaction costs or providing preferential interest rates – thereby improving the overall attractiveness and viability of IP-based financing arrangements. These measures may showcase IPR as a quality asset and may be important to gain private stakeholders' confidence in IPR-backed financing until the necessary scale is achieved.

In 2023, the UK's NatWest Bank, which at the time was partially owned by the UK government, introduced the possibility of securing loans offered to high-growth firms

using their IPR assets. If the bank couldn't meet a high-growth business's borrowing needs through conventional collateral, it permitted covering the gap in the security coverage using the business's IPR assets. IPR could be accepted as a security for up to 50 % of its orderly disposal value (WIPO, 2023b).

Schemes that envisaged public lending secured by IPR collateral were developed in several Asian countries. The Development Bank of Japan started a programme providing IP-backed loans in 1995. During the 10-year period, these loans were provided to 260 companies (Brassell, M. & Boschmans, 2019).

Similar funds were set up in Korea and Malaysia. Since 2012, the Korea Development Bank started operating a 'Techno Banking' initiative, providing loans for purchasing, commercialising and collateralising IP. The Techno Bank provides loans against IP collateral both for the firms that originally developed the new technologies and those that want to purchase them from innovators (R. Kim, 2013).

In Malaysia, Malaysia Debt Ventures Berhad (MDV) was established by the government in 2002 to provide innovating financing facilities for firms active in the Information and Communications Technology sector (ICT). It offers loans of up to USD 225 000 or up to 80 % of the value of the IP, with a 2 % interest rate. Funds provided by Behard exclusively target the ICT sector, which was prioritised by the Malaysian government as the catalyst for growth.

Although, currently, to our knowledge, there are no public funding schemes offering credits against IP collateral in the EU, initiatives like these were developed in the past. There are also some projects that address the specific problems of innovative companies, helping them access funds to commercialise their innovative products.

In the past, the Austrian federal government's promotional bank, Austria Wirtschaftsservice GmbH (AWS), developed a pilot programme whereby a small number of loans were secured against IP. However, the programme was wound down, mainly due to the banks' difficulties in determining a suitable collateral value for IP (Brassell, M. & Boschmans, K., 2022).

More recently, the Hellenic Development Bank (HDB) created a funding tool called the 'Patent Fund'. It consists of two stages: Stage 1 covers the patent acquisition and filing costs related to IP expenses, while Stage 2 (currently in a beta version) provides funding of up to EUR 300 000 for costs related to the development and commercialisation of a minimum viable product (MVP) based on a patented invention. Apart from funding, this tool offers other benefits to beneficiaries such as networking and specialised industry knowledge and guidance. This instrument was developed to specifically address the high-risk, early-stage funding gap at early stages of the commercialisation of patented inventions. The fund was designed with an innovative structure that allows the HDB funding to be converted into equity in the event of a successful MVP phase. In these cases, the HDB has the right to participate, at a discount, in subsequent investment rounds. In the event of MVP phase failure, the

HDB disbursements are turned into a grant and the fund has the right to commercially exploit the patent[17].

Ideas for further exploration

The European Investment Bank (EIB) group, through partner financial institutions, already offers loans that are designated for SMEs and mid-caps. These loans come with specific provisions that ensure that intermediaries stick to specific policy priorities and eligibility criteria. The process of granting a loan to the final beneficiaries is managed by the financial intermediary.

It would be recommendable to engage in discussions with the EIB and public development banks regarding the possibility of **creating specific loan programmes** whereby credits could be **secured with IP**. In this respect, a pilot programme of IP-backed lending could be set up to demonstrate feasibility and reduce perceived risks. This would showcase the feasibility of IP collateral and would help to gather valuable data on the performance of loans collateralised with IP. Alternatively, public funds could be used to **improve the terms of credit** offered by private financial institutions, for instance by partially covering transaction costs or reducing the interest rates of these credits offered by financial institutions[18]. To the extent possible, these solutions should already have been introduced under the current multiannual financial framework (MFF).

3.1.2 Public guarantees

This solution addresses the following problems:

- Underdeveloped secondary markets and lack of data on IP based transactions (Section 2.2.1): data on the performance of credits guaranteed under such schemes may provide robust evidence of the risk-return profile for lending to IP-intensive firms.
- Higher regulatory capital burden under the Basel III framework (Section 2.2.4): as the loans covered by guarantees benefit from the risk weighting of guarantor rather than the risk weighting of the collateral, they can substantially reduce the capital burden for participating banks.

[17] HDB presentation at the AECM annual event, June 2023 https://aecm.eu/wp-content/uploads/2023/06/20230609-AECM-ESGZINcard-EN.pdf

[18] There are some examples of similar mechanism facilitating credit extension to SMEs. For instance, under the Nuova Sabatini measure in Italy, SMEs might obtain loans from commercial banks and leasing companies to finance machinery and equipment investments. Companies may apply for subsidized loans covering up to 80% of eligible investments, paired with an interest rate contribution from the Italian government. Under the Linked Deposit Program in some US states, the state places a deposit of public funds at participating financial institutions at a below-market interest rate. In exchange, the bank makes a loan to an eligible SME at an interest rate below its normal commercial rate.

- Lack of risk capital for IP intensive startups (Section 2.2.5): by unblocking credits from banks which would otherwise be more reluctant to accept IP as collateral.
- Uncertainty related to IP valuations (Section 2.3.4): Insights from non-performing guaranteed loans and IP disposals under these schemes offer empirical data to test and refine valuation methodologies, such as orderly disposal values.

Guarantees and insurance are among the most important elements of the policy mix, implemented in many countries that have taken steps to improve IP-backed finance. These measures are important for building confidence and reassuring lenders to accept IP pledges, as they help address any gaps in IP asset value in case recovery is necessary. They are particularly important in the early stages when data on past transactions is too scarce to develop sufficient knowledge about the risks involved in IP backed transactions and can compensate for the lack of a liquid secondary market. Public guarantees for IP would boost innovation at a lower cost than broad-based subsidies, as funds would be needed only in cases of failure (WIPO, 2024a).

Credit guarantee schemes "provide guarantees on loans to borrowers by covering a share of the default risk of the loan. In case of default by the borrower, the lender recovers the value of the guarantee" (Ferrari et al., 2014). Public or private institutions provide credit guarantees charging fees, which may be covered by the borrower, lender or both parties. In the context of IP-backed finance their key functions include supporting IP-pledged lending and enhancing the creditworthiness of loans and bonds (WIPO, 2024b). For each loan defaulting, a pre-established guarantee rate (certain % of the defaulted credit) is paid to the bank. Lending terms ensure that the full financial advantage of the guarantee is passed on to the SME, either through reduction of interest rate or lower collateral requirements.

Credit guarantee schemes allow credit/rationed firms to access bank financing and enable more risky innovative firms to obtain access to finance with better conditions. Credit guarantees thus act as a substitute for increased collateral (Brault & Signore, 2019).

Additional benefits stemming from credit guarantees is the capital relief for the portion of credit covered by a guarantee under the prudential regulations in the EU (see Section 2.2.4 of the present report).

Examples of IPR-specific guarantees include the credit guarantee schemes (CGS), which have been implemented in China, Singapore, and Korea.

The first initiative dedicated to IP-backed financing was created in 2006 in Shanghai to provide guarantees for loans to high-tech firms based on their IPR assets and goodwill. CGS schemes implemented in China are mainly patent oriented. There are some variations in the operation of regional schemes in China. In some regions, firms pledge their IPR to a specialist guarantee company, which then provides its

guarantees to lenders. In others, dedicated guarantee funds are established by regional governments (Brassell, M. & Boschmans, K., 2022).

Under the Intellectual Property Financing Scheme (IPFS), the Singapore Government aimed to help IP-rich companies secure financing by allowing them to use their intellectual property as collateral. To encourage financial institutions to participate, the government set up a guarantee facility overseen by IPValue Lab – a subsidiary of the Intellectual Property Office of Singapore (IPOS). Under this scheme, the government shared 80% of the loan loss risk on IP-backed loans. However, the scheme lasted only four years (2014–2018). WIPO (2023a) reports that the scheme was discontinued due to challenges such as high valuation costs[19], the absence of secondary markets, and financial institutions' lack of familiarity with structuring IP-backed loans. In Korea, loan guarantees are provided by the Korea Technology Finance Corporation (KOTEC or KIBO) or the Korea Credit Guarantee Fund (KODIT). In 2021, Korea introduced one interesting innovation, a guarantee system with IP investment options. It allows a guarantee agency to convert part of the patent guarantee amount into an IP stake (APEC Intellectual Property Rights Experts Group, 2023).

There are already several CGS operative in Europe, both at the European and national level. To our knowledge, there is, however, no single guarantee scheme focusing exclusively on providing guarantees for loans collateralised by IP. Comprehensive data on CGS operation in Europe gathered by the European Association of Guarantee Institutions (AECM) shows that the total number of supported EU SMEs in the portfolio of institutions active in AECM reached 1.7 million (Botsari et al., 2024).

There are four specific portfolio guarantee products implemented by the European Investment Fund (EIF) under the SME window of InvestEU programme. Although to our knowledge, these instruments do not provide specific guarantees to the credits given against the IP collateral, they are designed to address the financial needs of firms with relatively high investments in intangibles and who lack the traditional assets accepted by banks as collateral. The **SME Competitiveness Portfolio Guarantee Product** was designed to finance the needs of SMEs that are perceived as higher risk or lacking collateral. It targets enterprises which would otherwise not be granted loans, such as start-ups or young firms and provides improved financial conditions to those firms by, for instance, increased maturities or reduced collateral requirements.

Another guarantee product – the **Innovation and Digitalisation Portfolio Guarantee Product** – supports innovation and digitalisation-driven enterprises. It requires the final recipient of the guarantee to comply with at least one innovation or digitalisation criterion. Among these criteria, some are related to IPR.

[19] Depending on the type of valuation, average valuation cost for IPFS applicants ranged between 5 000 to 15 000 SGD (3 400 to 10 000 EUR) for quick assessment to over 32 000 SGD (21 000 EUR) for in-depth valuations (WIPO, 2023a)

- The final recipient must declare to primarily finance investments in intangible assets (including intellectual property) in particular where the Financial Intermediary's internal policies do not attribute a collateral value to such assets
- The final recipient has registered at least one technology right (such as patent, utility model, design right, topography of semiconductor products, supplementary protection certificate for medicinal products or other products for which such supplementary protection certificates may be obtained, plant breeder's certificate or software copyright) in the last 36 months, and the Final Recipient Transaction purpose is to enable, directly or indirectly, the use of this technology right.[20]

The InvestEU Portfolio Guarantee Products predecessor – the Loan Guarantee Facility (LGF) – operated under a programme for the competitiveness of enterprises and small and medium-sized enterprises (COSME). It supported 873 751 distinct SMEs through 1 173 780 transactions between 2014 and 2022. Until the end of 2022, EUR 54 billion had been provided to those SMEs. LGF facilitated credit transactions that were riskier than those financed by alternative public sources. As a part of the LGF evaluation exercise, the European Commission surveyed the financial intermediaries taking part in the programme. Among the possible benefits associated with LGF support, the highest number of participants (66 %) indicated that without the LGF, SME loans would have had higher collateral requirements (European Commission, 2024).

Ideas for further exploration

CGS that already exist in Europe may be of benefit to IP-intensive firms as they may already mitigate challenges related to lack of tangible collateral. There is already some evidence that firms that benefit from existing generalist guarantee schemes are more likely to subsequently register more IPRs than firms that are not using such schemes. However, existing schemes address the symptom - lack of sufficient tangible collateral – rather than the cause of the problem which is facilitation of usage of intangibles as collateral. These general guarantee schemes are therefore promoting SMEs' dependence on tangible collateral (Brassell, M. & Boschmans, K., 2022)

It is recommended to consider the **development of dedicated credit guarantee** products designed **for loans secured by IP pledges** in the next EC MFF. As an initial measure, incorporating specific IP-related requirements into general guarantee programmes for eligible firms would be beneficial. These requirements may include IP portfolio assessment – such as disclosure, screening and valuation of IP assets – to determine the suitability of these assets as collateral for bank lending. To this end, it

[20] Annex IVc Innovation and Digitalisation Portfolio Guarantee Product / Specific provisions accessed on 05/03/2025 https://www.eif.org/InvestEU/guarantee_products_calls/annex-iv-c-innovation-digitalisation-termsheet.pdf

would be important to quantify the current unserved demand for IP-backed loans in the EU.

As evidenced by the experiences with guarantee schemes already established and abandoned in other countries, the development of a guarantee scheme for credits secured by intellectual property presents considerable challenges. Issues such as the substantial costs associated with IP valuation, the lack of established secondary markets, and limited expertise among financial institutions in structuring IP-backed lending may jeopardise the feasibility of such initiatives. Consequently, any schemes introduced with the support of EU funds should be meticulously designed, carefully planned and strategically implemented to enhance their prospects of success.

3.1.3 IP insurance

This solution addresses the following problems:

- Uncertainty regarding the value and useful economic life of IP (Section 2.1.3): insurance policies designed to cover counterfeiting risks can reduce reluctance among private lenders, who may otherwise deny credit to businesses because of possible infringement concerns.
- Underdeveloped secondary markets and lack of data on IP based transactions (Section 2.2.1): data on performance of insurance products related to insurance of IP-backed collateral may provide further evidence of the risk-return profile for lending to IP-intensive firms.
- Uncertainty related to IP valuations (Section 2.3.4): data gathered for non-performing loans and IP disposed in the event of insured credits may serve to assess the credibility of IP valuations and may be used for improving the IP valuation quality.

IP collateral protection insurance may be an alternative to credit guarantees. Under this model, insurers guarantee a portion of the risks associated with default of borrowers who pledged their IP as collateral. To mitigate the high risk and uncertainty associated with IP-backed financing, collateral protection insurance products have been introduced as a risk-management tool in several countries, either as a bottom-up initiative of the private sector or as a public initiative. By transferring the risk of loan defaults to insurers, this mechanism helps financial institutions stabilise loan portfolio risk profiles.

Other types of IP related insurance, although not directly addressing the problem of insufficient collateral, may be important for mitigating intangible specific risks, such as the risk of infringement, and may be instrumental in increasing acceptance of IP as collateral.

In the US, IP collateral protection insurance (CPI) has emerged to address uncertainties related to the recoverable value of IP. It was first used following a global

financial crisis to resolve the problem of the insufficient value of collateral kept in immovable property by US banks, given the drop in the real estate prices and liquidity after the collapse of the Lehman Brothers (Brassell, M. & Boschmans, K., 2022). This new financial product consisted of revising the banks' portfolio in search of loans secured with patents with recoverable values. When such assets were found, insurers would issue a policy whereby they agreed to pay a lender a certain amount of money against the borrower's default.

Although this product was developed during the specific circumstances of a financial crisis, IPR insurance is still part of the offer of some insurance companies in the US. Insurers tend to offer this product for loans given to the companies with robust cash flows and market-proven technologies. Bundling IP loans with insurance has positively impacted the volume of IP lending in the US, although cases of defaults and subsequent losses have lowered the pace of growth in the recent years (Morris, 2024). The emergence of this type of insurance product has been entirely market driven.

In Singapore, the Loan Insurance Scheme (LIS), launched by Enterprise Singapore (ESG), allows enterprises to secure short-term trade financing loans from Participating Financial Institutions (PFIs), with commercial insurers covering a portion of the default risk. In the event of insolvency, loan losses are shared between the PFIs and the insurers engaged by the borrowing firms. To enhance accessibility, the Singapore government subsidised part of the insurance premium paid by enterprises. This subsidy, initially set at 50%, was raised to 80% in 2020 to provide additional support. Although the LIS was not specifically designed for IP-backed financing, companies with strong IP portfolios could benefit from the scheme. Singapore is also exploring further collaborations with commercial stakeholders to expand the adoption of tailor-made IP collateral protection insurance (WIPO, 2023a).

Recognising the possible impact of IP infringement disputes on the value of IP, the Intellectual Property Office of Singapore, in collaboration with Lloyd's Asia and Antares Underwriting Asia, introduced the Intellectual Property Insurance Initiative for Innovators (IPIII) in 2019. This initiative offers cost-effective legal protection to businesses holding Singapore-registered patents, trade marks or designs. Through IPIII, companies can obtain insurance coverage for the legal expenses related to both IP enforcement and defence against infringement claims. Additionally, in cases where an enterprise loses a legal dispute, the policy also covers the opponent's legal costs (WIPO, 2023a).

Since 2011, China's national IP authority has promoted patent and broader IP insurance to strengthen risk management for enterprises. It has conducted demand assessments, supported policy development, provided training, and simplified procedures to encourage uptake, while working with insurers to build a more structured system and improve risk-control mechanisms. Government-backed initiatives have further reinforced these efforts, encouraging the expansion of IP-based financing and pushing insurers to offer coverage for small and medium-sized

technology firms, as well as tailored products for overseas IP infringement liability, patent enforcement, and infringement-related losses (WIPO, 2024b).

China's IP insurance landscape now covers patents, trade marks, geographical indications, and copyright across their lifecycle, with four main product types: **liability insurance** for infringement liability, **guarantee insurance** for IP pledged lending guarantees, **credit insurance** covering credit risks related to patent licensing, and **cost-recovery insurance** covering IP infringement enforcement and losses. The market has also developed IP insurance service alliances that bring together insurers, law firms, and industry experts, as well as IP insurance consortia that pool underwriting capacity and offer expertise to members that may lack specific knowledge related to IP (WIPO, 2024b).

The maturity of the Chinese IP insurance market has been assessed in the White Paper on China's Intellectual Property Insurance Development released jointly by the China National Intellectual Property Administration and the People's Insurance Company of China in 2023. The report states that by the end of 2022, China's IP insurance has provided more than RMB 110 billion (EUR 13.34 billion) of risk protection for over 28 000 firms, covering over 46 000 IPRs (patents, trade marks, geographical indications and integrated circuit layout designs). The IP insurance system in China constitutes a relatively complex system with over 40 products providing insurance for patent pledge financing guarantees, trade mark infringement losses, patent enforcement, etc.[21]

To our knowledge there is no insurance product offered in Europe that addresses the value of intangibles used as a collateral in credit transactions. Consequently, given the limited availability of historical data and uncertain market demand, the introduction of such products within the European market may result in elevated costs, attributable to relatively higher risk premiums.

There are, however, already some specific IP insurance products covering legal defence and liability damages in the event of alleged or actual IP infringements, financial losses in the event of injunctions and the active enforcement of own IP rights (injunctions and prosecution) offered on the market.

Intellectual property insurance has the potential to bolster market confidence in IP assets by mitigating certain legal and commercial risks. Furthermore, it may encourage the broader utilisation of IP by SMEs, as such insurance can alleviate the financial burden associated with protecting intellectual property rights against infringement.

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[21] Webpage of Shanghai Patent & Trademark Law Office LLC, https://www.sptl.com/newsinfo/5576544.html?templateId=585306 accessed on 30/07/2025. Full version of the White Paper, in Chinese, is available under https://property.picc.com/cx_gywm/zxzx/xwsd/202302/P020230208510498792029.pdf

Ideas for further exploration

Assess the **legal and regulatory framework governing IP collateral insurance**. If any impediments slowing down uptake of IP-specific insurance are identified, regulatory reforms aimed at facilitating the broader integration and acceptance of intellectual property insurance instruments may be designed and implemented.

Explore the possibility of development of **new IP insurance products**. Collaborating with industry representatives would help understand the market's view on expanding IP insurance offerings. The dialogue could focus on designing coverage for specific risks such as risk of infringement, enforcement or default on a credit collateralized with IP. Based on the inputs and needs of the insurance sector, creating **additional incentives** or **pilot programmes** encouraging private insurers to offer tailored insurance products, especially targeting the value of IP offered as collateral, should be considered.

Launching **education campaigns** among insurance companies promoting the development and increased uptake of new products related to the insurance of risks specific to IP, is also recommended.

3.1.4 IP credit and insurance transactions repository

This solution addresses the following problems:

- Information asymmetry, non-rivalry and weak signals (Section 2.1.1): a centralised IP repository bridges information gaps by aggregating transaction data to reveal additional quality indicators, such as repayment histories and performance metrics from credit and insurance deals. This enables better due diligence, fostering trust between innovators and lenders.
- Underdeveloped secondary markets and lack of data on IP based transactions (Section 2.2.1): repository data on historical deals allows financiers to statistically model and price risks, such as default probabilities and recovery rates. Over time, this builds liquidity by standardising risk assessment across the market.
- Uncertainty related to IP valuations (Section 2.3.4): references to prior repository-recorded transactions provide credible benchmarks, enhancing valuation reliability through observable market outcomes.

The establishment of a data source containing information for use by valuation professionals was one of the recommendations of the European Commission Expert Group. This measure was meant to enhance the credibility of valuations (European Commission. Directorate General for Research and Innovation., 2014). Importantly, there are examples of functioning data pools created by financial institutions to better assess risks, such as the Global Emerging Markets Risk Database (GEMs)

Consortium, which could be used as a model for creating similar data pools for IP lending and insurance.

Although the use of direct comparators with previous transactions may never be achieved, because, by definition, each transaction is different, it may be helpful to know, for instance, the price range of the transactions that share important characteristics. The existence of such repositories is crucial for market-based approaches to IP valuation. If such a repository were to contain enough data, it may be helpful to IP valuation experts and practitioners, as they can base their valuation on more credible and testable assumptions. The existence of this data is also important to model the risks involved in IP-based transactions and is therefore necessary to help build trust in IP valuation. In the absence of public initiatives, stakeholders are unlikely to find data on the value of IP assets that are subject to market transactions and recovery levels in the event of bankruptcy.

The availability of transaction data may be key to lowering the costs of IP valuation but also to promote any regulatory changes in the future.

There are, however, some challenges related to creating this type of repository. Details of transactions with intangibles may be highly sensitive and parties to these transactions may be reluctant to reveal them. The EU Commission Expert Group proposed anonymising data, preserving the descriptive attributes of the parties to the transaction and some important contextual information (as opposed to providing the full details of those transactions) as a possible way to deal with the confidentiality issue (European Commission. Directorate General for Research and Innovation, 2014).

Creating incentives for firms willing to contribute data to the repository is an essential element that must be determined. Incentives may include access to anonymised data for use in future valuations. The Expert Group also suggested that the data contribution to the repository may be obligatory for companies that are public or those that want to take advantage of guarantee funds or tax incentives (European Commission. Directorate General for Research and Innovation., 2014). Brassel & Boschmans (2019) made suggestions regarding the type of data that should be captured in the repository:

- Eligibility criteria of all the applicants, regardless of whether they have been successful in obtaining finance or insurance;
- The information on assets pledged or insured, their valuation and the proportion of the estimated value that was relied upon by lender or insurer;
- In case the transaction goes into default – to what extent such a failure may be attributable to the quality of the underlying IP;
- Any actions undertaken by the lender or the insurer to remedy the default, including the value recovered by the lender or insurer.

To our knowledge, there is no such repository implemented by a public institution. There are however examples of private databases that store information on IP transactions.

Ideas for further exploration

Consider creating an **IP credit and insurance transactions repository** in Europe. It may be linked to a central registry of pledges (see Section 3.1.7) but would require gathering additional transaction data and follow-up on the status of bank credit until its repayment. To protect the anonymity of data on individual transactions, this repository may provide information in aggregate form, revealing information on ranges of valuations or certain types of scores based on past transactions with similar features. To promote stakeholder participation, it will be essential to develop incentives for firms, especially those benefiting from guarantee schemes or public subsidies, to contribute anonymised transaction data. Incentives could include access to anonymized benchmarking information, recognition or endorsement for transparent reporting, or the establishment of a certification scheme for firms and institutions that provide high quality data. Additionally, it will be important to engage with banking risk managers and legal experts to strike a proper balance between protecting banks' trade secrets and determining the scope of data that can be shared. Well-designed non-disclosure agreements will be crucial to attract key players and ensure that the repository contains sufficient, reliable background data to support market transparency.

3.1.5 Improving the visibility of IP in company finance documents (accounting regulations)

This solution addresses the following problems:

- Information asymmetry, non-rivalry, and weak signals (Section 2.1.1): the inclusion of standardised information on IP assets in the financial documents of a company would contribute to bridging information gaps between financiers and innovative firms.
- Separability and redeployability (Section 2.1.2): enhanced transparency of IP assets will allow financiers to independently evaluate the degree to which an IP asset can be separated from an organisation and transferred to external parties. Standardised narrative disclosures, such as those detailing the scope of potential applications, would provide creditors with the necessary information to assess the redeployability of an IP asset.
- Uncertainty regarding the useful economic life of the IP asset (Section 2.1.3): the inclusion of the narrative related to IP assets in the financial documents would allow financiers to better assess factors that could potentially impact the useful economic life of those assets.
- Heterogeneous nature of individual IP (Section 2.1.4) - using shared accounting standards for IP assets can partially contribute to the commoditisation of IP

assets, as it allows financiers to perform comparisons based on consistent standards.

- Problems in identification of intangibles (Section 2.2.2): better visibility of IP information in financial documents would help financiers identify IP assets best placed to be used in the financial transactions.
    - Uncertainty related to IP valuations (Section 2.3.4): providing descriptions of intellectual property assets within financial documentation using standardised criteria, even if limited to quantitative assessments, may enhance the comparability of IP valuations.

In a report for the European Commission published in 2014, the Expert group on IP Valuation noticed that there is a need to promote a more advanced narrative regarding intangibles and their role in value creation. It could be useful to improve access to information on the role of intangibles in business (European Commission. Directorate General for Research and Innovation., 2014).

So far, no jurisdiction has developed comprehensive disclosure rules that would facilitate the due recognition of the value of IP to the strategy and prospects of a company. There are, however, some examples of practical initiatives aimed at fostering greater disclosure of the value of IP in financial documents, mostly on a voluntary basis.

Japan was one of the first countries in the world to require publicly listed businesses to reflect the value of their IP on their balance sheets (Rafferty, 2024). This requirement was included in Japan's corporate governance code in 2021. The amended code does not, however, specify how or how much information should be disclosed[22].

The Korean Accounting Standards Board (KASB) proposed that information on *core intangibles* should be presented in a separate statement to be provided in the notes to the financial statements: the Statement of Core Intangibles (SCI). The SCI should also include internally developed assets, and they should be reported with equal importance as other elements, to help with investments decisions. Core intangible assets should be measured at fair value at the point of initial recognition and should continue to be evaluated at fair value (the present discounted value of future net cash inflows)[23].

In 2020, to improve transparency in intangible asset disclosures, the Singapore Exchange (SGX) and the Intellectual Property Office of Singapore (IPOS) introduced the Intangible Disclosure Evaluation and Audit Scheme (IDEAS). This initiative was designed for SGX-listed companies and those preparing for listing, emphasising the significance of intangible assets, which are often absent from conventional financial

[22] https://www.iam-media.com/article/ip-valuation-market-gaining-new-momentum-in-japan

[23] https://www.ifrs.org/content/dam/ifrs/meetings/2019/december/asaf/ap2-concept-and-design-kasb.pdf

statements. By assisting firms in evaluating and auditing their intangible assets, the programme enabled clearer communication of their contribution to business growth and competitive advantage. IDEAS provided financial assistance to help companies identify and disclose key intangible assets (WIPO, 2023a). Building on this experience, in 2023, IPOS and the Accounting and Corporate Regulatory Authority (ACRA) launched a public-private initiative, the Intangibles Disclosure Framework (IDF). This builds upon the International Valuation Standard IVS 210 on Intangible Assets. IDF outlines principles for businesses to disclose and communicate their intangible assets such as brand value, patents or registered designs in a systematic and comprehensive manner. It is being rolled out on a voluntary basis. To showcase the IDF, IPOS has encouraged the finalists of the WIPO-IPOS IP for Innovation Awards 2024 to prepare example reports[24].

Table 1. Main elements of the Intangibles Disclosure Framework (IDF)

	Strategy	Identification	Measurement	Management
Goal	Disclose how intangibles contribute to business, strategy and financial planning where such information is material*	Disclose the nature and characteristics of the intangibles that fit into the definition provided and categorize them	Disclose the performance metrics and drivers used to assess an enterprise's intangibles where such information is material*	Disclose how an enterprise identifies, assesses and manages the risks and opportunities of its intangibles

*Materiality is defined as something of importance for a firm and an ability to create value over time. Source: https://www.ipos.gov.sg/manage-ip/intangibles-disclosure-framework

There are some recent developments in the EU legislation that may improve the visibility of intangibles in the reporting documents of business enterprises.

The Expert group on Intellectual Property Valuation (European Commission. Directorate General for Research and Innovation., 2014) identified management reports accompanying financial statements as a possible vehicle for a narrative about firm-specific intangibles. The EU Directive 2013/34/EU sets out the requirements for management reports accompanying accounting documents. The analysis should include both financial and non-financial key performance indicators relevant to the business. Among others, the management report should provide information on activities in the field of research and development. Small firms may be exempted by

[24] https://www.ipos.gov.sg/manage-ip/intangibles-disclosure-framework

Member States from the obligation to produce a management report and SMEs may be exempted from including non-financial information.

The European Commission's consultation for the revision of the EU Non-Financial Reporting Directive (NFRD) asked respondents about additional categories of information that should be disclosed in the NFRD. Intangibles were chosen by 50% of the respondents and this view was more popular among users of non-financial information (59% of the respondents) (European Commission, 2020). The Corporate Sustainability Reporting Directive 2022/2464 (CSRD) introduced an obligation for large, medium and small enterprises that are public-interest entities[25] to report information on their key intangible resources and to explain how the business models of the undertakings fundamentally depend on these resources and how these resources are a source of value creation for the undertaking. Information on intangibles must be included in the Management Report. Although the Corporate Sustainability Reporting Directive is seen as a piece of legislation that could potentially improve the recognition of intangibles, there are currently few detailed guiding principles on how this type of information should be reported[26].

As a result of the first Omnibus package, requirements to improve the visibility of intangibles in accounting documents will, however, only be obligatory for the largest firms in the EU. The Omnibus package proposes the exclusion of approximately 80% of companies from the scope of the CSRD, limiting sustainability reporting requirements to only the largest enterprises with more than 1 000 employees and either a turnover above EUR 50 million or a balance sheet above EUR 25 million. The reporting requirements for companies currently within the scope of the CSRD that were required to report as of 2026 or 2027 are proposed to be postponed by two years.

On the other hand, the European Commission has requested the European Financial Reporting Advisory Group (EFRAG)[27] to submit a sustainability reporting standard for voluntary use by SMEs that are not covered by the reporting requirements of the CSRD (the voluntary sustainability reporting standard for non-listed micro, small and medium enterprises (VSME) standard). The VSME is intended to help SMEs provide sustainability information to banks and other stakeholders that may demand such information.

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[25] Public Interest Entities are defined in the EU legislation as all entities that are both governed by the law of a member state and listed on an EU regulated market, all credit institutions in the EU, all insurance undertakings in the EU and entities designated by member states as public-interest entities because of the nature of their business, size or number of employees.

[26] See for instance intervention of prof. Stefano Zambon during the recent WIPO IP Finance Dialogue The Value of intangible assets held on 13 May 2025

[27] EFRAG is a private association established in 2001. It is a forum of discussion on future reforms of the accounting standards, including rules on reporting intangibles. A financial reporting pillar of EFRAG influences the development of IFRS standards from a European perspective and provides advice on amendments to IFRS Standards to the European Commission.

Concurrently with the introduction of new requirements related to sustainability reporting, ongoing efforts are being made to reassess the adequacy of the existing IAS 38 standard provisions, in which the European Union stakeholders play an active role.

As part of the project *Better Information on Intangibles,* EFRAG published in 2021 a discussion paper *Better Information on Intangibles – which is the best way to go.* The Discussion paper considered three possible approaches:

- Recognition and measurement in the primary financial statements;
- Information on specific intangibles in the notes to the financial statements or in the management report;
- Information on future-oriented expenses and risk/opportunity factors that may affect future performance in the notes to the financial statements or in the management report.

Based on the feedback received in 2023, EFRAG published the Recommendations and Feedback Statement (European Financial Reporting Advisory Group, 2023). In this document EFRAG recommended among others:

- to consider and clarify the scope of IAS 38,
- to review the recognition criteria of IAS 38, including reconsideration of whether the rationales for prohibiting certain intangible assets from being recognised still apply;
- to consider a combination of different approaches to obtain better information on intangibles.

The EFRAG discussion paper (European Financial Reporting Advisory Group, 2021) outlines some very concrete proposals with various alternative methods regarding how the IAS 38 might be changed.

The document discusses the possibility of including information relating to specific intangibles that contribute the most to the business model of an entity that could include, for example, *'the type of the intangible; KPIs related to the intangible; the economic life of the intangible (if relevant); the selling price of products developed based on the intangible; whether it would need to be replaced; whether it is maintained through the operation of the entity; and whether it tends to increase in value when being used by customers*.' This information may be qualitative or quantitative (European Financial Reporting Advisory Group, 2021).

It is important to emphasise that the stakeholders who took part in the EFRAG consultation were less interested in exact information on the fair value of the asset, but rather in obtaining the information necessary to form their own opinion of the asset's value. Therefore, it may be less costly to provide information on the asset value outside of the financial report, for instance, in the management report.

Similar trends have been discovered in the survey commissioned by the Chartered Financial Analyst (CFA) Institute Research & Policy Centre among CFA Institute Members. Although the majority of the survey respondents support the view that, under the current accounting rules, the most important intangible assets are invisible on the balance sheet and their disclosure should be improved, they agree that any changes must be phased. Disclosure should precede the development of measurement methodology and recognition on the financial statements (Peters & Winters, 2025).

In April 2024, the International Accounting Standards Board (IASB), which is an independent group of experts responsible for the development and publication of the IFRS Accounting Standards, launched a survey on intangible accounting with a view to amending the current accounting requirements as regards intangible assets. Based on the survey carried out in May 2025, IASB staff defined the key objectives of the project as improving the usefulness of the information entities provide about intangible items in their financial statements and updating IAS 38 Intangible Assets to make it more suitable for the newer types of intangible asset and the new ways of using them. EFRAG is an active participant in the revision consultation. The IASB also decided that, in the first phase of the project, two parallel streams of work will be conducted: 1) assessment of user needs for information about recognised and unrecognised intangible assets and the expenditure associated with them in the financial statements, and 2) consideration of the eventual update of the definition of intangible asset through the test cases focused on the newer types of intangibles. In its contribution to the discussion on the IASB forum, EFRAG proposed that the IASB should focus on providing better information on intangibles that would better reflect the increasing importance of intangibles in today's business models. This would improve the comparability between companies that grow organically with those that do so through acquisition. It would also address the emerging types of transactions and assets[28].

Beyond its immediate effect on financial statement comparability, improved disclosure of IP assets carries important long-term implications for how lenders, investors and public bodies screen potential borrowers and recipients of public support. At present, the inability to observe the composition and quality of a firm's intangible portfolio forces those entities to rely on coarse proxies – patent counts, trade mark registrations – that capture the existence of IP protection but not its strategic significance or expected revenue contribution. As standardised narrative disclosure frameworks are adopted, they will generate structured, machine-readable data on intangible assets at scale.

[28] Papers prepared by the EFRAG Secretariat, Intangible assets team, for discussion at a joint public meetings of EFRAG FR TEG and EFRAG User Panel on 13 May 2025 and on 18 September 2025 https://www.efrag.org/system/files/sites/webpublishing/Meeting%20Documents/813/06-01%20-%20Issues%20paper%20-%20Intangibles%20-%20EFRAG%20joint%20FR%20TEG-UP%20meeting%202025-05-13.pdf
https://www.efrag.org/sites/default/files/media/document/2025-09/06-01_cover_note_-_intangibles_-_efrag_fr_teg-cfss_2025-18-09_2.pdf

This creates the conditions for a qualitative shift in screening practice: credit institutions and venture investors will be able to move from binary signals (does the firm hold IPRs?) towards portfolio-level assessments of IP breadth, concentration risk, expiry profiles and freedom to operate. These standardised screening tools can substantially reduce the per-transaction cost of IP due diligence, one of the most important barriers to IP-backed lending at the SME level.

Ideas for further exploration

Given the uncertainty regarding how the new requirements set by the Corporate Sustainability Reporting Directive 2022/2464 should be implemented, priority should be given to **developing the guidelines**.

Initiate discussion with financial regulators and relevant government bodies on the best way to **promote reporting on intangibles** either in mandatory accounting rules or as a complementary framework for intangibles reporting.

Develop **guidelines and standardized voluntary disclosure templates for companies to report on their IP assets**. These guidelines would help firms, especially SMEs, to systematically and clearly communicate the role, strategic importance and monetary value of their IP. Promoting such templates and guidelines as a voluntary practice could increase transparency, improve market confidence and gradually influence future mandatory reporting standards. Guidelines may be promoted among firms that are currently not required to report on intangibles, but whose business models may heavily depend on them and who may, therefore, be interested in reporting their IP value in view of using it as collateral in the future.

It seems that the current consensus is that there is a necessity for the improved disclosure of internally developed intangible assets. Their formal recognition in the financial statement should be a phased process. An essential step to improve IP visibility in financial and corporate reporting is **promoting the adoption of international harmonised disclosure standards and best practices**. Developing regional and EU guidelines for IP disclosure, reporting and valuation can facilitate cross-border comparability and trust among financiers, investors and stakeholders. Harmonisation would encourage more consistent and transparent reporting practices, helping stakeholders better assess the contribution of IP to the value of a company and reducing informational asymmetries.

Monitor developments related to the **revision of international accounting standards**, with the objective of ensuring that intellectual property is appropriately recognised within financial statements, regardless of whether such assets are internally generated or acquired as part of ongoing business operations.

Develop **public IP screening** – a capacity to proactively identify IP-driven and innovation-intensive firms and orient them towards appropriate financing pathways. This capacity may be developed based on existing EUIPO Scan tools. It would help IP-intensive companies understand how their IP profile aligns with available financing

instruments and generate standardised disclosure outputs that make them legible to the lenders and investors.

3.1.6 Development of secondary markets for IP and support for IP brokerage services

This solution addresses the following problems:

- Separability and redeployability (Section 2.1.2): currently, even when an IP asset satisfies the theoretical criteria for separability and redeployability, the absence of a liquid secondary market limits its usability in financial transactions. A stronger secondary market can enhance intrinsic separability and redeployability features of individual IP assets.
- Heterogenous character of individual IP assets (Section 2.1.4): the emergence of a liquid secondary market could promote the commodisation of IP assets by providing transaction benchmarks for comparable rights.
- Underdeveloped secondary markets and lack of data on transactions involving IP (section 2.2.1): this solution directly addresses weak secondary markets for IP assets.

Secondary markets for IP play a crucial role in transferring technologies and ideas from inventors to institutions that can commercialise them, improving economic efficiency through specialisation. This enables innovators to focus on knowledge creation while others bring ideas to market.

A well-functioning secondary market also enhances IP liquidity, which is particularly important when IP serves as collateral. Greater liquidity improves buyer-seller matching and ensures more accurate valuation, especially in bankruptcy cases. This, in turn, can boost bank lending. Companies, especially start-ups with more redeployable patents, tend to borrow more when patent markets are more liquid (Hochberg et al., 2018; Serrano and Ziedonis, 2018). By strengthening the viability of IP as a financial instrument, these markets facilitate smoother transactions and encourage wider acceptance of IP collateral.

Given the importance of the secondary market for facilitating IP usage to access finance, several countries undertook initiatives to support the development of IP marketplaces.

The Danish Patent and Trademark Office (DKPTO) established the first online marketplace for IP in the EU in 2007. The IP Marketplace served as a platform of exchange or licensing of patents, utility models, trade marks and designs. It also offered a set of ancillary services including searches, clearance and intelligence tracking. The IP Marketplace listed advisors who might assist parties to the transaction

with due diligence and legal services[29]. During its peak activity platform listed over 700 patents, 200 trade marks and close to 40 designs[30]. Nevertheless, following a comprehensive analysis, DKPTO decided to close the IP Marketplace in 2022. DKPTO analysis concluded that while IP may play important role, they are mostly traded as a part of larger setup, therefore a separate platform focusing solely on IP is not a viable way to encourage transactions [31]. In April 2024 DKPTO launched a new revamped initiative – IP Market Portal. Rather than a direct trading platform, this new initiative is a landing page, providing guidance and resources for IP trading activities.

There are also some patent transfer marketplaces already operating in Europe. For example, PatentAuction.com was founded in 2004 in Belgium. It is an online marketplace for innovative ideas protected by patents.

The Korea Development Bank (KDB) *Techno Bank* (see section 3.1.1), apart from offering loans against IP collateral, facilitates trading of high-quality technologies between firms. Under this program, the bank is linking research institutions and companies with promising technologies with companies willing to purchase them[32].

Similarly, Malaysia's IP Corporation (MyIPO) developed a specific marketplace: https://iprmarketplace.myipo.gov.my/ to facilitate trade with intangibles. Currently it has over 5 000 visits per month.

To help companies collaborate and develop business solutions, Singapore has created platforms like the **Innovation Marketplace** by Innovation Partner for Impact (IPI), which links businesses to a wide array of technology opportunities, expertise and resources across various stages of technology development and internationalisation. Another initiative, the **A*STAR Collaborative Commerce Marketplace**, is a B2B platform with over 1 000 companies that focuses on technological solutions, promoting business collaborations (WIPO, 2023a).

The WIPO Singapore Report (WIPO, 2023a) highlights the vital role of IP brokers and intermediaries in connecting IP rights holders with potential buyers and investors while ensuring anonymity in transactions. There were 158 companies operating in this space and 210 registered patent agents as of 2021 in Singapore. Ocean Tomo is widely credited with creating the first live multi lot patent auctions and the Bid Ask Market platform [33], providing a platform to purchase or sell patents globally. The firm has also partnered with public institutions, notably the NASA Goddard Space Flight Center,

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[29] Kenny Wong, *Trading Places,* Intellectual Property Magazine, July/August 2012, https://www.mayerbrown.com/-/media/files/news/2012/07/trading-places/files/feat/fileattachment/feat.pdf

[30] IP Exchange and Finance, A workshop report, June 14, 2015, JRC Conference and Workshop Reports, https://publications.jrc.ec.europa.eu/repository/handle/JRC103597

[31] https://www.dkpto.org/news/2024/apr/ip-market-portal-replaces-ip-marketplace

[32] https://www.koreatimes.co.kr/business/companies/20130324/kdbs-techno-banking-draws-interest-from-smes

[33] https://oceantomo.com/services/bid-ask-market/

obtaining an exclusive licence to commercialise more than 40 NASA technologies and conducting the first ever sale of a government patent licence through a public IP auction[34].

Since 2017, the Alibaba Ali Auctions platform has enabled the online sale of assets, both physical and intangible, of Chinese firms that are no longer in business[35]. One of the main problems of those auctions was lack of credible mechanism of setting reservation price. The new tool developed by Inngot, Rouse and Alibaba – Intangio has been designed to tackle this problem (see section 3.2.4 for more information).

One of the main problems of these auctions was the lack of a credible mechanism for setting a reservation price. The new tool developed by Inngot, Rouse and Alibaba, Intangio, has been designed to tackle this problem (see Section 3.2.3 for more information).

The creation of a single IPR Asset Market in Europe had already been proposed in 2011 by the Universität of St. Galen and Frauenhofer Society (Universität St. Galen & Frauenhofer, 2011). The authors of that report emphasised that auctions and intermediated markets have an advantage over the over-the-counter (OTC) market, as they facilitate central and transparent pricing and reduce the risks involved in OTC transactions. While IP marketplaces and intermediaries have grown since then, most IP transactions still occur through bilateral licensing deals or closed auction formats. This lack of openness reduces market transparency and liquidity, making it more difficult to assess IP value and connect buyers with sellers (Andrews & de Serres, 2012).

Technological progress has opened up new possibilities for enhancing secondary market liquidity by IPR tokenisation. Non-fungible tokens (NFTs) were presented as a possible way to revolutionise patent management by enabling the decentralised and transparent registration, trading and commercialisation of IP through blockchain technology (Bamakan et al., 2022). Blockchain can support the parties involved in an IPR transfer or licensing (WIPO, 2022a) making it easier to document the transaction and manage the financial flow between the IPR owner and investors. Still, issues like scalability, interoperability and regulation could hinder progress (Bamakan et al., 2022). IPwe, the first commercial effort in IPR tokenisation, highlights these challenges.

IPwe tried tokenising patents as patent NFTs via IPwe Digital Assets. Verifiable data was stored on each patent. Its goal was to reduce the time and costs of carrying out due diligence on patents and enabling smart contract transactions with patents[36].

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[34] https://partnerships.gsfc.nasa.gov/wp-content/uploads/ocean-tomo.pdf

[35] https://inngot.com/news-views/alibabas-auction-site-launches-intangio-patent-price-guidance-harnessing-new-inngot-api

[36] https://www.lfdecentralizedtrust.org/blog/2023/02/02/ipwe-launches-revolutionary-platform-and-deployment-of-25-million-patent-nfts-on-hybrid-casper-blockchain-and-hyperledger-fabric-network accessed on 03/03/2026

However, it did not reach sufficient market traction and went bankrupt in 2024[37]. The bankruptcy of IPwe – the most prominent commercial effort at patent tokenisation, illustrates the distance between the technical concept and viable commercial operation. The failure reflected insufficient market demand for the specific product offered and regulatory uncertainty around the securities law status of patent NFTs rather than any fundamental flaw in the underlying technology.

Ideas for further exploration

Undertake a comprehensive analysis of the **current state of play of secondary markets for IP rights**. This in-depth study would help identify optimal strategies for strengthening the market and enhancing the coordination among stakeholders involved in IP transactions. In particular, such as study would help to answer questions such as:

- what are the channels of exchange of information on the prospective transactions?
- how are negotiations between parties conducted?
- what types of transactions brokers are the most active in Europe?

Establish **collaboration with specialised IP brokerage firms** and intermediaries. This collaboration should aim at facilitating the efficient exchange of information, best practices, and transactional expertise, thereby strengthening the overall infrastructure supporting IP market activities.

Investigate the feasibility of development of a **centralised digital marketplace or platform** that would connect IP right holders, brokers, investors and potential buyers. This platform would facilitate transparent, efficient and accessible IP transactions, improve market liquidity and support the development of fully functioning secondary markets. It could include features such as standardised transaction terms and data analytics to inform pricing and valuation, thereby boosting confidence and the volume of IP trading.

3.1.7 Harmonisation of security rights in IP and creation of a central registry of pledges

This solution addresses the following problems:

- Underdeveloped secondary markets and lack of data on transactions involving IP (Section 2.2.1): a register would enable the provision of statistical information on the current scale of usage of IP in financial transactions.
- Lack of harmonisation of legal provisions governing IP based collateral (section 2.2.3): the existence of a central registry of pledges would improve the legal

[37] https://www.peakvalueip.com/post/down-but-not-out-ipwe-looks-to-restructure

certainty for the parties taking part in the financial transactions involving IP based collateral.

As discussed in Section 2.2.3, the lack of international harmonisation of secured transactions involving IPRs leads to divergent legal regimes, even within the EU. The absence of a centralised registry of IP pledges is a potential source of information asymmetries between borrowers and lenders and is detrimental to the willingness of financial stakeholders to accept IPR as collateral. This situation places IP assets in a much more disadvantageous position compared to tangible assets (Heller et al., 2024). A centralised register would also boost confidence in IP assets due to greater transparency on the priority of claims on IP in the event of insolvency proceedings.

The previous harmonisation of IP enforcement through the EU Enforcement Directive increased the borrowing capacity of IP-rich firms, especially younger, private SMEs with limited financing options (Gill & Heller, 2024) showing that legal framework harmonisation may be an effective way of facilitating access to finance for innovative firms in Europe.

Legislative gaps stemming from an insufficient level of harmonisation of security laws in IP have been partially mitigated through the implementation of soft law instruments, notably the UNCITRAL Legislative Guide on Secured Transactions in 2010 and the UNCITRAL Model Law on Secured Transactions in 2016. Similarly, in 2007, the International Trademark Association (INTA) issued a resolution on the Recordal of Security Interests in Trademarks[38].

The UNCITRAL Legislative Guide contains a Supplement on Security Rights in Intellectual Property. It covers, among other things, a process to create security rights in IP, ways to ensure the third-party effectiveness of security rights and priority rules, the enforcement of these security rights, the contractual freedom of the parties and ways of preserving in the event of insolvency.

Both the Model Law on Secured Transactions and the Supplement on Security Rights in Intellectual Property discuss the key characteristics of an IP security rights registry.

The key characteristics of registries are immutability, searchability and comprehensiveness. There are several options for setting up such registries. Information on financial interests may be added to the general security rights registry, to existing specialist registers, such as official records of patent and trade mark rights, or to a general registry of IP pledges, which may include security rights in IP that do not require registration, such as copyright. A general registry of IP pledges could serve as a one-stop shop for comprehensive information on all the credit transactions involving all types of IP as collateral. It could improve the transparency of information, would increase the trust of financial institutions and thus would support broader

[38] https://www.inta.org/wp-content/uploads/public-files/advocacy/board-resolutions/Recordal-of-Security-Interests-in-Trademarks-03.21.2007.pdf accessed on 14/08/2025

acceptance of IP as collateral in the EU. An additional advantage to creating a general registry of security rights in IP would be the possibility to link to additional information about the IP rights available in existing IP registers.

Ideas for further exploration

Conduct a comprehensive **study on current practices of registering and enforcing security interests in IP across jurisdictions**. This initial step would help to identify gaps, differences and best practices, forming a solid foundation for future harmonisation efforts. Initiate discussion between IP offices, legal experts, financial institutions and policymakers to share experiences, discuss challenges and build consensus on the key features and benefits of a future harmonised system.

Create a **register of IP pledges**. This register may contain detailed data on credit transactions backed by IP collateral and would function as a legal instrument perfecting security rights to IP assets in the EU. It would enable financial institutions to verify whether an IP asset has already been used as collateral in the past and would facilitate the provision of information on its current status. The new register should meet the criteria for perfection outlined in the UNCITRAL documents. Such a register would improve transparency, reduce legal risks and help lenders verify collateral status, encouraging more banks to accept IP as collateral. The architecture of the central EU IP pledge registry may use the Business Registers Interconnection System infrastructure and the eDelivery standards already mandated by the EU Inc Regulation[39].

Consider to what extent the automatic **cross-border data sharing mechanism** created by the EU Inc Regulation may be **extended** to cover registration of **security interests in IP assets** held by EU Inc companies. The EU Company Certificate format may in the future include information for registered charges over IP assets, providing lenders with a single authoritative source of information.

The EU may consider proposing a new **international convention governing interests in intangible rights**. Such a convention would aim to harmonise the legal frameworks related to creating, registering and perfecting security rights in IP. Analogous to the role fulfilled by the Cape Town Convention on International Interests in Mobile Equipment with respect to mobile equipment, this prospective convention would seek to establish a unified approach to the treatment of IP, thereby enhancing legal certainty and facilitating cross-border transactions involving IP as collateral.

[39] Proposal for a Regulation of the European Parliament and of the Council on the 28th regime corporate legal framework – 'EU INC.', COM(2026) 321, https://commission.europa.eu/document/download/3e9822aa-8cef-40a1-904e-a53fc68e7265_en?filename=Proposal%20for%20an%20EU%20Inc%20corporate%20legal%20framework.pdf

3.1.8 Combatting IP infringement and promoting IP mediation

This solution addresses the following problems:

- Uncertainty regarding value and useful economic life of intellectual property (Section 2.1.3): unauthorised use, counterfeiting, piracy, and unresolved IP disputes erode the competitive advantage that IP rights confer and undermine the revenue streams firms expect from their IP assets, directly reducing the value of IP offered as collateral. Both active enforcement and faster dispute resolution pathways reduce this uncertainty by preserving the economic conditions under which IP assets generate returns.
- Uncertainty related to IP valuations (Section 2.3.4): The cost and complexity of IP litigation can effectively prevent smaller firms from defending their IP rights, indirectly amplifying valuation uncertainty. Access to alternative dispute resolution (ADR) services lowers this barrier and allows disputes to be resolved before they significantly erode perceived asset value. Dispute outcomes directly affect market valuations of IP assets.

The value of an IP asset as productive capital and as collateral depends not only on its registration but on its effective enforceability. As described in Section 2.1.3, two distinct but interconnected mechanisms generate uncertainty about the economic life and residual value of IP rights: the external risk of infringement, whereby unauthorised use, counterfeiting or piracy erodes competitive advantage and revenue; and the internal risk posed by validity challenges or infringement disputes that, once initiated, introduce prolonged uncertainty about the scope and enforceability of the right itself. Both mechanisms are directly relevant to IP-backed finance. From a lender's perspective, the risk of pervasive infringement acts as a discount on the expected cash flows an IP asset is meant to generate, while open litigation or pending validity proceedings may render an IP right effectively unusable as collateral for the duration of the dispute.

The relationship between the strength of the IP enforcement framework and firms' ability to use IP assets in financial transactions is not merely theoretical. Gill and Heller (2024) provide causal evidence of this link, exploiting the staggered transposition of the 2004 EU Enforcement Directive across Member States to show that stronger IP enforcement significantly increased long-term debt-to-asset ratios among patenting firms, with those holding the most valuable portfolios experiencing a disproportionate increase of approximately 20 % in comparison with firms with relatively less valuable patents. The effects were most pronounced for young, private and financially constrained SMEs. The mechanism is twofold: more rigorous enforcement reduces uncertainty about the legal scope and expected cash flows of IPRs, making them more credible as collateral; and it directly stimulates patent pledging. The implication is that improvements in the enforcement environment through legislative harmonisation,

institutional capacity-building, or more effective enforcement tools may translate directly into expanded access to debt financing for IP-intensive firms.

The EUIPO addresses both dimensions through complementary instruments: the European Observatory on Infringements of Intellectual Property Rights, which works to quantify, monitor and reduce IP infringement at the systemic level; and the EUIPO Mediation Centre, which provides parties to IP disputes with faster, lower-cost and more predictable resolution pathways than litigation before courts or administrative tribunals.

The European Observatory on Infringements of Intellectual Property Rights operates under the EUIPO as a network of experts, specialist stakeholders and enforcement entities dedicated to fighting IP crime across the EU. The Observatory provides knowledge, tools and databases to support data collection and the exchange of information, equipping both rights holders and enforcement authorities with resources to act against counterfeiting and piracy.

The IP Enforcement Portal (IPEP) enables cooperation between IP rights holders, enforcement authorities such as police or customs and e-commerce platforms in combatting IP infringements across the EU. It enables the secure sharing of information and intelligence to detect counterfeits. Collaboration with Europol, Eurojust, custom authorities, national law enforcement agencies and private sector partners underpins operational enforcement: joint operations such as Operation LUDUS, targeting counterfeit toys, resulted in the seizure of 16.6 million packages with an assessed value of EUR 36.8 million since 2023[40]. In addition, the EUIPO and the Organisation for Economic Co-operation and Development (OECD) have jointly published studies mapping global trade in counterfeit and pirated goods, providing an evidentiary basis for international enforcement cooperation.

The second dimension of this solution concerns the uncertainty generated by disputes between IP rights holders themselves such as oppositions, cancellations, validity challenges, and related inter partes proceedings before the EUIPO. These proceedings, which can extend over months or years before administrative bodies and national courts, introduce risks that are hard to quantify and that lenders find the most difficult to manage: the possibility that a pledged IP right may be invalidated, narrowed in scope, or encumbered by an unresolved dispute at any point during the loan term.

ADR mechanisms, and mediation in particular, offer a structured alternative to litigation. In mediation, the disputing parties retain control over the outcome, enabling creative commercial solutions, such as licensing arrangements, co-existence agreements or royalty-sharing structures, that adjudicative bodies cannot impose. For IP asset holders and their lenders, a mediated settlement provides a defined resolution

[40] https://www.euipo.europa.eu/en/news/cracking-down-on-counterfeit-toys-euipo-supports-europol-s-operation-ludus

within a predictable time frame, after which the value and enforceability of the asset can be assessed with confidence.

In November 2023, the EUIPO launched its dedicated Mediation Centre, offering mediation, conciliation and expert determination services to parties engaged in inter partes proceedings before the EUIPO. SMEs were given priority access in this expansion, reflecting recognition of the disproportionate burden that prolonged IP disputes place on smaller, IP-intensive firms. All services are provided free of charge and conducted both online and offline through the ADR Centre.

Under the EUIPO's Strategic Plan 2030, the scope of ADR services is expected to expand further to cover a broader range of IP asset categories.

Ideas for further exploration

Ensure that **IP infringement remains a priority** for the EU under the European Multidisciplinary Platform Against Criminal Threats (**EMPACT**).

The digitalisation of commerce, the growth of cross-border e-commerce platforms and the emergence of new technologies have expanded both the scale of infringement and its complexity, requiring enforcement responses that are faster, better coordinated across jurisdictions and more capable of targeting the financial flows and business models that sustain IP crime. Ensure that the **tools available to right holders and enforcement authorities** keep pace with the methods used by infringers.

The **EUIPO Mediation Centre** should be more prominently **promoted** among financial institutions, IP-intensive SMEs, and their advisers as a mechanism that reduces the duration and unpredictability of IP rights disputes, thereby supporting the use of IP as collateral. Lenders evaluating IP-backed loan applications could be encouraged to assess whether pending proceedings before EUIPO would be amenable to mediation, with a view to resolving open uncertainties before finalising financing terms.

Consideration should be given to **broadening institutionalised ADR mechanisms** to cover infringement disputes litigated before national courts. Developing EU-wide standards or model frameworks for IP mediation in private disputes, building on the existing EUIPO model, could reduce the cost and unpredictability of IP enforcement across the Single Market, with positive downstream effects for the development of IP-backed finance. Expanding the availability and visibility of institutionalised IP mediation services and encouraging their use earlier in the lifecycle of IP disputes could meaningfully reduce the uncertainty that currently deters lenders from accepting IP assets as collateral and constrains the development of IP-backed finance across the Single Market.

3.1.9 Safeguarding lenders' rights in case of bankruptcy

This solution addresses the following problems:

- Separability and redeployability (Section 2.1.2): when intellectual property assets demonstrate limited separability and redeployability, it is often more beneficial for credit repayment arrangements to permit the owner to continue utilising the asset, even in circumstances of temporary financial hardship. This approach ensures that the owner, who possesses the requisite expertise to extract economic value from the asset, retains its use rather than transferring it to another party who may not be equipped to realise comparable benefits.

Efficient restructuring in bankruptcy is important. Debt financing options can be limited if the company's IP is non-separable and the firm is likely to go bankrupt if it has liquidity problems. If viable firms cannot continue to operate in the event they have temporary liquidity problems, it will be very difficult to get a loan against non-separable intangible collateral (Crouzet & Ma, 2023).

Current EU legislation leaves a lot of leeway to the Member States and the way they regulate insolvency procedures in the national body of law. This co-existence of 27 distinct insolvency laws creates considerable legal uncertainty, which was identified as an important obstacle for securitisation (Mack, 2024).

The current situation results in huge variance in the time it takes to recover a loan, and the recovery rates in the event of enforcement procedures in general. While the average net recovery rate from loans given to SMEs for the EU27 amounts to 31.5%, in Poland it is 5.3% while in Sweden it is 67.7%. While the time it takes to recover the loans given to SMEs in the EU27 is on average 3.3 years, it varies across the Member States. It is only 0.3 years in Croatia and 0.6 years in Sweden. However, in Italy it is 6.4 years. Finally, while the judicial cost to recovery of SME loans amounts to 3.5% of the notional amount outstanding at the time of default for the EU27, it may be as low as 0.1% in Hungary or Denmark and as high as 13.5% in France (European Banking Authority, 2020).

Harmonisation of the insolvency procedure is seen as an important step towards the Savings and Investment Union. This would increase legal certainty for cross-border investments.

In 2019, the European institutions adopted modern and streamlined rules facilitating restructuring [41]. This new approach enables an easier restart of business activities. The goal of this legal act was to ensure that more viable companies could be rescued and survive with only the non-viable firms being liquidated.

[41] Directive (EU) 2019/1023 of the European Parliament and of the Council of 20 June 2019 on preventive restructuring frameworks, on discharge of debt and disqualifications, and on measures to increase the efficiency of procedures concerning restructuring, insolvency and discharge of debt, and amending Directive (EU) 2017/1132 (Directive on restructuring and insolvency) (Text with EEA relevance.)

On 7 December 2022 the European Commission issued a proposal for a directive harmonising insolvency law in the EU. The proposal aims to enhance and harmonise three aspects of insolvency law:

- The recovery of assets from the liquidated insolvency estate;
- The efficiency of proceedings; and
- The predictable and fair distribution of the recovered value among creditors.

One of the goals of the draft directive is to prevent the excessive rates of the firms' liquidations with early restructuring processes. Early restructuring results in better recovery for lenders and the survival of viable companies that can continue contributing to the European economy.

The directive has since advanced significantly through the legislative process. In June 2025, the Council of the EU adopted its 'General Approach', paving the way for trilogue negotiations[42]. On 19 November 2025, the Council and the European Parliament reached a provisional political agreement on the compromise text[43]. The European Parliament formally endorsed the agreement in plenary on 10 March 2026. Formal adoption by the Council is pending at the time of writing, after which the Directive will enter into force 20 days after publication in the Official Journal, with a transposition deadline of approximately 33 months thereafter.

A notable change from the original Commission proposal concerns the treatment of insolvent micro-enterprises: the chapter providing a simplified winding-up procedure for micro-enterprises was deleted in its entirety from the compromise text, following objections from the Member States. The remaining provisions regulating insolvency procedures were retained with technical adjustments to thresholds and safeguards.

Several of these retained provisions are directly relevant to the separability and redeployability problems that make IP assets difficult to use as collateral. IP rights often derive a substantial part of their economic value from the human capital, organisational know-how, and commercial relationships embedded in the firm that created them. Separated from this context, as in a forced asset-by-asset liquidation, their market value may fall considerably below their in-use value, reducing the recovery available to secured lenders and deterring credit provision in the first place. The Directive addresses this in two principal ways. First, the pre-pack proceedings provisions allow a distressed company to arrange and complete the sale of its business, including its IP portfolio, before formally entering insolvency. By preserving

[42] Council of the EU. (2025, June 12). *EU insolvency law: Member states agree position on bringing national insolvency standards closer* [Press release]. https://www.consilium.europa.eu/en/press/press-releases/2025/06/12/eu-insolvency-law-member-states-agree-position-on-bringing-national-insolvency-standards-closer/

[43] Council of the EU. (2025, November 19). *Insolvency proceedings: Council and European Parliament agree on common EU rules* [Press release]. https://www.consilium.europa.eu/en/press/press-releases/2025/11/19/insolvency-proceedings-council-and-european-parliament-agree-on-common-eu-rules/

the organisational context in which the IP assets are exploited, pre-pack sales improve recovery prospects for IP-secured creditors. Second, the harmonised directors' duty to file for insolvency within three months of known or knowable insolvency, combined with strengthened avoidance action rules that deter pre-insolvency asset stripping, incentivises early intervention before prolonged operational disruption erodes the commercial value of intangible assets.

On 18 March 2026, the European Commission published the Proposal for a Regulation on the 28th Regime Corporate Legal Framework – 'EU Inc.'[44] announced in the Competitiveness Compass. The EU Inc Regulation introduces a supranational corporate legal form. Its simplified insolvency-related provisions applicable to the EU Inc. innovative startups harmonise procedural digitalisation: all communication between courts, insolvency practitioners, and parties to EU Inc proceedings must be conducted digitally (Articles 91, 97–99). The Member States are required to establish interconnected national electronic auction systems for asset sales, linked through the European e-Justice Portal. These provisions reduce the time and cost of IP asset realisation in distressed situations.

The Regulation does not, however, harmonise substantive insolvency law: the rules governing priority, recovery, and creditor rights remain subject to the law of the home Member State. The expected reduction in insolvency costs for EU Inc companies therefore operates at the procedural level. For IP-backed lenders, this matters primarily through faster and more transparent asset realisation.

The EU Inc framework is complementary to the Directive. The two instruments together improve the environment for IP collateral by: providing pre-pack proceedings that allow distressed EU Inc companies to be sold, preserving the organisational context in which the IP assets retain maximum value; mandating early director filing duties that allow for intervention before IP portfolios deteriorate; and digitising insolvency asset sales through interconnected auction platforms in case of winding up of the innovative start-up.

Ideas for further exploration

The adoption of the EU Insolvency Directive marks a significant step towards a more predictable insolvency environment for IP-secured creditors. The practical effectiveness of the new insolvency provisions will depend, however, on implementation at Member State level. In particular, **monitoring early transposition practice and case-law** across Member States would help identify whether additional guidance on IP-specific valuation in pre-pack contexts is needed. Especially verify how key IP-relevant provisions - pre-pack sale proceedings, directors' filing duties, and strengthened avoidance actions - are implemented across jurisdictions, and whether

[44] COM(2026) 321 final https://commission.europa.eu/document/download/3e9822aa-8cef-40a1-904e-a53fc68e7265_en?filename=Proposal%20for%20an%20EU%20Inc%20corporate%20legal%20framework.pdf

the EU Inc.'s interconnected electronic auction systems for asset realisation deliver the efficiency gains anticipated. Where Member States or practitioners develop effective approaches to value-preserving IP disposal, these should be documented and actively disseminated among member states and other stakeholders.

Follow the progress on the European Commission **study on the possible obstacles** for startups, scaleups and innovative companies stemming from **corporate restructuring processes** at the EU and Member States level to be published in 2026 and ensure the adequate assessment of issues related to IPR ownership.

Stimulate debates, workshops and conferences with representatives of insolvency authorities, judges, legal experts and financial sector stakeholders to share experiences and define good practices for **protecting IP rights during insolvency procedures**. This initial step can lay the groundwork for future harmonisation efforts and improve legal certainty regarding the protection of IP in distressed companies.

3.1.10 Setting up a recovery institution to liquidate IP assets in case of bankruptcy

This solution addresses the following problems:

- Underdeveloped secondary markets and lack of data on transactions involving IP (Section 2.2.1): institutions that handle IP asset liquidation for dissolved companies could ease lenders' concerns about disposing of assets in weak secondary markets.
- Uncertainty regarding IP valuations (Section 2.3.4): disposal institutions may determine repurchase prices based on the initial valuation, thereby alleviating lenders’ concerns about the value of IP assets.

Korea’s comprehensive review of IP in finance proposed to address the lack of confidence in the recoverable value of intangibles by increasing the funds available through an IP recovery fund run by the Korea Development Bank and create a specialist recovery institution. Its main goal was to purchase the defaulted IP assets from commercial banks (Korean Intellectual Property Office, 2019). The IP Collateral Recovery Support Organization was established in 2020 with the aim of purchasing IP pledged as collateral from financial institutions and disposing of it through licensing or selling (APEC Intellectual Property Rights Experts Group, 2023).

Ideas for further exploration

A recovery institution can potentially substitute for inefficient secondary markets. Its goal is to dispose of the IP from the liquidated firm in the most efficient manner, by paying off as much collateralised debt as possible and by selling the IP to the entities that may make the best use of them. Its main advantage is to ease the burden of the disposal of IP from the financial institutions who may not have sufficient experience in dealing with this type of financial assets. But ultimately, it must find buyers for the disposed assets. Therefore, a sound knowledge of the functioning of secondary IP markets and a broad network of contacts with key stakeholders are a necessary condition for success. Furthermore, a recovery institution may introduce a moral hazard whereby lenders may not be prudent enough while evaluating the IP collateral if they expect the losses to be absorbed by the recovery institution. They may be willing to accept estimations that are too high in value. To mitigate these risks, clear eligibility criteria, shared risk mechanisms and independent valuations should be in place.

It would be recommendable to **liaise with KDB** to exchange information and data on the performance of the **IP Collateral Recovery Institution**. Where possible, empirical data obtained from the KDB should be analysed to provide robust evidence regarding the efficacy of this pioneering institution prior to considering the establishment of a similar entity within the European Union.

3.1.11 Easing banks' regulatory burdens related to accepting IP pledges by securitisation of IP-backed loans

This solution addresses the following problem:

- Higher regulatory capital burden under the Basel III framework (Section 2.2.4): the current prudential treatment of intangible assets reduces the attractiveness of IP-backed loans for banks. IP-based securitization products can help transfer risk to capital market investors, partially alleviating the burden without requiring changes to the Basel framework itself.

It seems highly unlikely that the Basel III treatment of intangibles will change, at least in the short term. It would require coordinated international efforts. The idea was recently pitched by the World Bank but still requires some time to mature. However, some countries have implemented provisions that aim to ease other regulatory burdens related to accepting IP pledges by banks. These efforts have supported the expansion of IP-backed lending, fostering greater private sector involvement and encouraging financial institutions to develop tailored solutions for businesses, particularly micro, small, and medium-sized enterprises (MSMEs).

For example, in 2019, the China Banking and Insurance Regulatory Commission[45] (CBIRC), along with the China National Intellectual Property Administration (CNIPA) and the National Copyright Administration of China, released a notice aimed at strengthening IP-pledged lending. This notice stated that if a non-performing loan (NPL) rate for IP-backed loans exceeds that of other loan categories by no more than three percentage points, it will not negatively impact a commercial bank's performance rating by regulators. Moreover, to support internal bank evaluators, the notice introduced measures such as separate credit planning for IP-pledged loans. Banks were also encouraged to refine their due diligence procedures and establish performance assessment frameworks tailored to IP-backed financing. To further mitigate risks, the notice also provided partial or full exemptions from liability for banks, provided they adhered to due diligence and legal obligations. These measures have incentivised financial institutions to expand IP-backed lending, particularly benefiting technology-driven MSMEs (WIPO, 2024b).

One way to ease regulatory burdens on banks related to the provision of credit against IPR is to promote IPR-backed loan securitisation. The securitisation of IP assets consists of converting predictable IP-related cash flows into tradable securities that can be sold to investors.

There are two models of securitisation for IP assets. Standard IPR securitisation entails the presence of IPR assets with predictable cash flows, it is mostly used by older and bigger entities with proven track records.

Often, in these transactions IP rights are transferred to special-purpose vehicles (SPV) to add an additional layer of security in the event of bankruptcy of the IP owner. This structure ensures that investors' claims are tied solely to the cash flow of the IP and are decoupled from the owner's credit risk. In the next step, the SPV issues securities that are sold to investors. The terms of the securities reflect the expected cash flows from licence agreements. The most important advantage of securitisation is that it does not require offering any other assets, tangible or intangible, as collateral in the transactions, unlike in standard credit arrangements where IPR is pledged on top of other collateral and the value assigned to the IP is relatively low in comparison to the amount of credit. Additionally, these transactions do not create new debt on the company balance sheet.

This idea was pioneered by converting the music royalties to David Bowie's albums into bonds in 1997 (Borod, 2005). There are examples of similar transactions involving patents and trade marks. For instance, in 2003, Guess? securitised the cash flow related to various licensing agreements involving their Guess? trade mark.

This type of securitisation may be facilitated by technological advancements. IPR tokenisation, as discussed in Section 2.2.1, could make it possible to convert IP assets

[45] Now succeeded by National Financial Regulatory Administration (NFRA)

into tradable securities without the need for third-party intermediaries. These tradable instruments might assist companies in financing the commercialisation of their IP assets, allowing them to retain full ownership of the business. IP tokens sold to investors would provide claims on future revenues generated by IP. To our knowledge, the concept of Initial Intellectual Property Rights Offerings (IIPROs) has not advanced beyond the idea stage yet. Tokenisation of IP assets may reduce some of the important frictions in IP securitisation such as fragmented and jurisdiction-specific IP ownership records, high intermediation costs for small portfolios and the difficulty of meeting transparency and homogeneity requirements under the EU Securitisation Regulation[46]. It seems that in the European context, the most productive near-term application of tokenisation to IP securitisation would be to use distributed ledger technology (DLT) infrastructure as an operational layer within a conventional securitisation legal framework. Representing IP rights as security tokens on a DLT infrastructure would create a shared, immutable record of ownership and assignment history, reducing due diligence costs and the risk of competing claims. Smart contracts governing the token could automate royalty collection and contract monitoring, replicating in a programmable form the servicer functions that currently require costly intermediaries. Automated and auditable cash flow reporting produced by the smart contract would, moreover, reduce the investor's due diligence burden. Current EU legislation[47] foresees a possibility to pilot the issuance of financial instruments on DLT infrastructure under the regulatory sandbox – under waived or modified legal requirements. The DLT Pilot Regime has, however, seen very limited market uptake. In its comprehensive review published in June 2025 ESMA attributed the slow uptake to structural design constraints and recommended some adjustments, such as enlarging the scope of eligible assets, that potentially may provide a viable pathway for piloting hybrid IP securitisation structures in the future[48]. In December 2025, under a broader market integration package, the European Commission has proposed a major upgrade to the DLT Pilot Regime that addresses the ESMA proposals[49].

In a more traditional setting, the securitisation technique may also be used to package small IPR-backed loans and convert these relatively illiquid assets into tradable securities by banks (Deutsche Bank Research, 2024). Securitisation may be used to ease some regulatory burdens by banks offering loans against IPR collateral and thus may directly impact the access of innovative SMEs to credit.

Several economies have developed experience with IP securitisation, though at varying scales. In Japan, early copyright securitisations were pioneered in the early

[46] Regulation (EU) 2017/2402
[47] Regulation (EU) 2022/858 of the European Parliament and of the Council of 30 May 2022 on a pilot regime for market infrastructures based on distributed ledger technology,
[48] ESMA Report on the Functioning and Review of the DLT Pilot Regime - Pursuant to Article 14 of Regulation (EU) 2022/858, https://www.esma.europa.eu/sites/default/files/2025-06/ESMA75-117376770-460_Report_on_the_functioning_and_review_of_the_DLTR_-_Art.14.pdf
[49] https://ec.europa.eu/commission/presscorner/detail/en/qanda_25_2894

2000s: video game company Konami (2000) and film-maker Shochiku (2002) both securitised future cash flows from copyrighted content targeting niche investors attracted by the revenue potential of specific IP portfolios. The market expanded further during the mid-2000s, with various products packaging IPRs alongside traditional assets, before contracting after the collapse of the Lehman Brothers (WIPO, 2025b). In the United Kingdom, Duke Royalty offers royalty-based financing whereby investors provide upfront capital in exchange for rights to future licensing income – a structure that sidesteps the collateral disposal problem. Coutts & Co. has developed a speciality in project finance for film producers, with copyright-protected scripts forming part of the security (WIPO, 2023b). In Poland, the Act on Bonds explicitly enables the issuance of IP-backed securities, and the dynamism of the start-up system has attracted venture capital firms to IP-supported securities alongside bank lending; several investment funds – including the PKO Global Technology and Innovation Subfund and the PFR Closed-End Investment Fund of Non-Public Assets – invest in high-tech sectors with IP portfolios (WIPO, 2025a).

China's efforts to promote securitisation are driven mainly by the government. In 2018, the CNIPA and the China Securities Regulatory Commission (CSRC) established a pilot working group to promote IPR securitisation (Song & Liu, 2022). By the end of 2023, a total of 150 IP securitisation products with a total value of CNH 33 billion (EUR 4.3 billion at the 2023 exchange rate), were issued in China (Rafferty, 2024). There are two general models of IP-backed security products developed in China: standard securitisation, based on transfer of IPR to SPV, and IP pledging-based securitisation, whereby firms use their IPRs as collateral for loans that are then bundled into asset-based securities (WIPO, 2024b).

Regulation (EU) 2017/2402 lays out a comprehensive framework for assets securitisation in Europe. The regulation does not specify any separate regime as regards IP-backed securitisation. Its main goal was to establish an EU securitisation market without increasing risks to financial stability. As a well-functioning securitisation market has the potential to unlock capital to fund Europe's economy, it is high on the political agenda in the EU Regulation (EU) 2017/2402 lays out a comprehensive framework for assets securitization in Europe. Regulation does not specify any separate regime as regards IP-backed securitization. Its main goal was to establish an EU securitisation market without increasing risks to financial stability. As a well-functioning securitisation market has a potential to unlock capital to fund Europe's economy, it is high on a political agenda in the EU.

On 17 June 2025, the European Commission adopted a package of legislative proposals to reform the EU Securitisation Framework[50]. Rather than overhauling the framework, the proposals target high-burden, low-benefit requirements for removal while preserving core safeguards. Separate amendments to the Solvency II Delegated

[50] https://finance.ec.europa.eu/publications/commission-proposes-measures-revive-eu-securitisation-framework_en

Regulation introduced in October 2025 aim to adjust overly conservative capital requirements for insurers investing in securitisation, currently a barrier to broadening the investor base.

The 2025 proposals do not introduce any specific regime for IP-backed or intangible asset securitisation, which remain calibrated on traditional credit-based asset pools with established historical default and recovery data. However, several changes may create conditions that are more conducive to IP-backed structures in the future. The simplified due diligence regime lowers institutional investor entry costs for novel asset classes, where assessment burdens are currently particularly high. The new lighter template for private securitisations – with repository access restricted to supervisors – suits the confidentiality requirements typical of IP-intensive transactions. The reduction of the STS homogeneity threshold from 100 to 70 percent for cross-border SME loan pools signals regulatory openness to greater portfolio heterogeneity, which, in principle, may include IP assets. Furthermore, the Solvency II capital relief, if substantial, would expand the institutional investor base available for IP-backed structures. The 2025 package thus removes frictions from the general securitisation market which may benefit IP assets securitisation efforts in the future, though without creating a dedicated enabling environment for IP-backed products.

Ideas for further exploration

Investigate legal and administrative obstacles to developing **securitisation products based on credits secured with IP assets**. Those loans could be divided into various tranches depending on IP valuation and risk analysis. The tranches would be then converted into structured finance products such as assets-backed securities and could be sold to different investors depending on their risk appetite.

Investigate the **tokenisation of IP rights** as a possible tool to ease the structural frictions that hinder IP-backed securitisation. Monitor possible future amendments to the current DLT Pilot Regime[51] and advocate for changes that would enable pilot hybrid IP assets securitisation structures.

The legislative works on the new securitisation legislative package and **amendments** to the **DLT Pilot Regime** should be monitored to ensure that it creates a genuine IP-securitisation enabling environment.

Collect and present practical examples and empirical evidence illustrating **performance of securitisation products** across various markets. This would help strengthen the perception of safety and viability, while also addressing regulatory concerns and perceived risks associated with IP securitisation.

Monitor international regulatory developments regarding the prudential treatment of intangible collateral under the Basel III framework.

[51] Regulation (EU) 2022/858

3.2 Solutions related to IP valuation

3.2.1 Introduction to IP valuation approaches and methods

The valuation of tangible assets is a pretty standard procedure facilitated by the availability of data on the price of similar assets transacted in the past. The unique features of IP discussed in this report and the lack of comprehensive data on past transactions makes IP valuation a much more complex exercise. Nevertheless, there are several valuation methodologies discussed in the literature that are generally accepted by IP valuers.

These methods have been converted into several IP valuation standards developed internationally, such as:

- ISO 10688:2010 Brand valuation - Requirements for monetary brand valuation.
- DIN77100 - General Principles for Monetary Patent Valuation.
- Two standards issued by the Austrian Standard Institute:
    - ONORM A6800:2010 Valuation of the intangible asset “brand”
    - ONORM A6801 Method for patent valuation - a process for the qualitative assessment and monetary valuation of patents, utility models and patentable know-how.

Additionally, the International Valuation Standards Council has established the International Valuation Standards, which, under IVS 210, set out recommended practice and professional guidelines relevant to the valuation of intangible assets[52].

In general, these standards describe in detail the procedures involved in calculating IP value using variants of the methods discussed below but they do not promote any of them in particular.

3.2.1.1 Methods under the Market Approach

Under the market approach, the value of intellectual property is determined by reference to data about past market transactions involving comparable assets. The biggest disadvantage of this method is insufficient availability of data on secondary market transactions. Also, the heterogenous character of each intangible asset and the fact that intangible assets are rarely sold separately from other property, makes it difficult to find similar or even comparable transactions (International Valuation Standards Council, 2025).

[52] International Valuation Standards. Effective 31 January 2025

3.2.1.2 Methods under the Cost Approach

Under the cost approach the value of an intangible asset is determined based on the replacement cost of a similar asset[53]. The cost approach should be used when no other approach can be applied satisfactorily[54] The biggest disadvantage of this method lies in the possible incongruency between the investments made to produce the given asset and its economic value. Also, it may be relatively difficult to isolate expenditures related to intangible asset from other expenditures of a firm, since not all intangible investments are reported in isolation. The replacement cost approach[55] may help overcome some of those difficulties, but it may also be seen as more subjective if there are no relevant benchmark prices accessible.

3.2.1.3 Methods under the Income Approach

Income-based methods may be used whenever there is an information on prospective cash flows and the useful economic life of an intangible asset. There are several methods based on income.

The with-and-without method (Premium profits/incremental income)

This method estimates the difference between the value of the business in the event that it uses the intangible asset in question with the value of the same business without actually using the intangible asset.

The excess earnings method

This method calculates the net present value of the cash flows that the buyer would generate from the asset, minus the charges related to the complementary assets that are necessary to use in order to exploit the intangible asset in question. Its variant, the greenfield method, assumes that the intangible asset in question is the only asset owned by a start-up company and the valuer must calculate the costs necessary to build all the complementary assets necessary to sustain the cash flows from the intangible asset. Since many assets are used jointly for production, it is not easy to isolate the cash flows attributed to the asset in question.

[53] IVS 210 70.01
[54] IVS 210 70.04
[55] which estimates the value of intangible asset by determining the cost required to develop or acquire a comparable asset with equivalent functionality or utility as of the valuation date

The relief-from-royalty method

This method relies on an estimation of the discounted value of the royalty that a company would have to pay to license an intangible asset. It essentially estimates savings related to owning rather than licensing a specific intangible asset. The royalties may be determined either by analysis of comparable licensing transactions or by estimation of economic benefits that can be derived from the IP and shared between the IPR owner and the licensor.

This method is the most popular and is the preferred method promoted by some IP offices, for instance in Korea and Malaysia (Brassell, M. & Boschmans, K., 2022).

3.2.2 Regulation of IP valuation practice

Problems addressed by this solution:

- Low number of IP valuation professionals (Section 2.3.2): this solution would establish a clear career trajectory offering improved professional opportunities, and motivating more individuals to enter this field.
- Uncertainty related to IP valuations (Section 2.3.4): developing clear methodologies for valuation and conducting regular assessments of IP valuation quality can help mitigate uncertainties related to IP valuations.

The European Commission Expert Group proposed creating an organisation that would oversee IP valuation practice in Europe in 2014. One of the most important goals of this organisation would be to increase confidence in the quality of valuations by ensuring that they are in line with generally accepted principles and standards. An organisation like this could create a register of expert IP valuers, who could be certified after passing relevant aptitude tests. The Expert Group proposed two variants for creating such an organisation:

- A centralised organisation dependent on the EU institutions;
- An umbrella of universities across the EU.

The additional tasks of such an organisation would be the education and training of IP valuers and the possibility to assess the quality of the valuations performed by the certified experts and even to correct them should the quality of the valuation not be up to the standards (European Commission. Directorate General for Research and Innovation., 2014).

There are some examples of similar institutions that have been set up in other countries.

The general rules of IP valuation in China are set out in the Asset Appraisal Law of 2016. IP valuation in China is regulated and led by the CNIPA and the China Appraisal Society. The China Appraisal Society has published a range of standards and guidance documents, such as the Patent Evaluation Guidelines introduced in

September 2023, as a national standard for more scientific and comprehensive patent evaluation (WIPO, 2024b). In some cases, the IP valuation performed by the certified valuer is mandatory. For instance, determining the amount of share capital that should be issued against the value of the IP assets contributed to a new venture (Brassell, M. & Boschmans, K., 2022).

In Korea, KIPO (now MOIP, Ministry of Intellectual Property) is responsible for valuer accreditation through its subsidiary the Korea Invention Promotion Association. KIPO has launched an IP Valuation Management Centre, which randomly selects valuation results to assess their quality and the extent to which existing standards have been taken into account in a valuation (Rafferty, 2024).

The Chartered Valuer and Appraiser (CVA) program, introduced in 2016 in Singapore, aligns with the International Valuation Standards (IVS) and covers key areas such as entity valuation, asset-specific valuation and intangible asset valuation.

In the Startup and Scaleup Strategy[56] the European Commission announced that it will develop a framework for IP valuation and IP-backed financing in cooperation with EUIPO.

Ideas for further exploration

Define the **framework for IP valuation** for IP-backed financing as stipulated in the EU Startup and Scaleup Strategy.

Develop and harmonize **valuation standards and methodologies**, control of quality of IP valuations and promoting and dissemination of the best practices.

Consider **setting up an EU body** with tasks related to the regulation of **IP valuation practice** in Europe. The body may be responsible, among others, for setting valuation standards in Europe, in cooperation with other organisations, as well as promoting them among professionals and providing training and certification for IP valuation experts. It could also be responsible for assessing the quality of valuations. These activities should be undertaken within the framework of the Startup and Scaleup Strategy, in alignment with the initiative to develop a comprehensive framework for IP valuation and IP-backed financing across Europe.

3.2.3 Education and promotion campaigns focused on IP value, IP valuation methodologies and IP-backed financing

This solution addresses the following problems:

[56] Communication from the Commission to the European Parliament, The Council, The European Economic and Social Committee and the Committee of the Regions. The EU Startup and Scaleup Strategy. Choose Europe to start and scale (SWD(2025) 138 final)

- General lack of information on IP valuation approaches (Section 2.3.1): this solution directly addresses the problem of lack of information on IP valuation approaches.
- Uncertainty related to IP valuations (Section 2.3.4): enhancing the overall understanding of the approaches and methods of IP valuation may help mitigate uncertainty associated with such valuations.

As indicated in Section 2.2.1, one of the major obstacles to the acceptance of IP as collateral is the scarcity of comprehensive data on previous transactions. Nevertheless, several institutions - including the EUIPO - have systematically compiled empirical evidence demonstrating that IP owners generally exhibit higher productivity, improved growth trajectories, and more favourable access to risk capital. In the interim, until robust datasets concerning credit transactions involving IP-backed collateral are established, these studies may serve as a foundation for awareness campaigns aimed at informing and engaging stakeholders within the financial sector.

WIPO exemplifies effective practices in promoting the importance of intellectual property valuation methods within the professional community. WIPO conducts various programmes and events designed to build IP valuation capabilities across various regions and countries. For instance, in October 2023 WIPO, together with KIPO, organised a masterclass on "IP, Valuation and Finance." This seminar used real-world case studies to give participants the knowledge and skills necessary to leverage IP for finance and business growth[57]. WIPO provides knowledge on IP valuation methodologies through its National Training Seminars on IP Valuation, which focus on the practical aspects of the valuation process in concrete regional institutional frameworks. One of the examples of this regional cooperation is the WIPO ASEAN IP Valuation Project launched in 2023. The stated goals of this programme were to increase trust in IP valuation work and promote best practices in the region. The project consists of two phases. During the first stage, 400 practitioners were interviewed to identify the current challenges to the wider adoption of IP valuation and best practices used by professionals. During the second stage, the ASEAN IP valuation toolkit was created. It will be used as a reference for training programmes on IP valuation in the region[58].

WIPO also hosts the “IP Finance Dialogue” conferences targeting the general public and available online. The most recent was held in Geneva on 13 May 2025.

Ideas for further exploration

To boost the uptake of IP valuations and lower their cost, a number of **IP valuation professionals** with sufficient knowledge and who are capable of conducting evaluation projects of sufficient quality will need to be trained. Therefore, it will be

[57] https://www.wipo.int/en/web/wipo-academy/w/news/2023/news_0065

[58] https://www.aseanip.org/docs/default-source/asean-ip-publications/ip_valuation_toolkit_0415---23oct2024.pdf?sfvrsn=4812aafc_1

necessary to **develop educational materials and courses** targeting professionals who are already versed in the financial valuation of other assets. Development of a comprehensive educational toolkit, paired with recognisable certification of the IP valuation skills would create a viable learning path for future IP valuation professionals and would increase the attractiveness of this career path. A comprehensive educational toolkit may facilitate cross-border knowledge exchange through conferences, webinars and online courses.

Consider establishing **a certification scheme for IP valuation professionals**. This scheme could cover professional training, examination and regular quality checks of IP valuations. With the development and promotion of a standardised certification and training framework for IP evaluators, authorities would aim to establish common standards of competence, methodology and professional ethics. This would enhance the overall quality, consistency and trustworthiness of IP valuations. Additionally, a recognised certification would facilitate international recognition of evaluators and valuation reports, supporting greater uniformity and reliability in IP transactions, financing and insolvency procedures.

Consider developing an **awareness campaign aimed at financial sector stakeholders**. Educational resources should leverage existing academic literature and research reports. Where gaps are identified, new empirical studies could be commissioned in collaboration with financial institutions. For example, comparative analyses of credit performance in the EU between IP-owning firms and those lacking IP-related activities may serve as a useful proxy for evaluating the creditworthiness of enterprises using IP as collateral. The objective of such a programme would be to enhance their understanding of both the strategic role and the economic value of IP assets within contemporary markets.

3.2.4 Modular IP valuations

Problems addressed by this solution:

- Information asymmetry, non-rivalry and weak signals (Section 2.1.1): valuations from modular standardised tools can reduce information asymmetry and facilitate structured discussions on financial arrangements between financiers and IP asset owners.
- Low number of IP valuation professionals (Section 2.3.2): until an adequate pool of qualified experts is available, modular IP valuations can be used as an initial estimate to identify the most promising IP assets for more detailed evaluation by professionals.
- High costs of IP valuations (Section 2.3.3): modular IP valuations can provide a preliminary estimate for different assets, contributing to decreasing the costs by identifying the most promising IP for expert review. The bespoke detailed valuation may then be done only for the most promising assets.

Until there is a sufficient pool of IP valuation professionals, the development of automatic or semi-automatic tools may be an attractive, time- and cost-efficient solution. It cannot replace bespoke valuations by professional valuers, but may be helpful in the initial assessment of the possible range of values of an IP asset. Modular valuation tools could also be used to update, within pre-established parameters, initial valuations done by IP valuators. This would allow them to gather valuable data that can be used to fine-tune the operations of the modular IP valuation tool.

Some countries have already developed such tools. Depending on the level of automation, it may offer a qualitative assessment of, or it may assign a range of financial values to an IP asset.

There are several modular valuation tools operating in Korea. KIPO has developed the 'Smart 3' tool. It is designed to be used to assess the of value of IPR portfolios including US and European patent rights. The tool does not offer the financial value of the underlying asset but rather offers a 'rating' similar to the rankings assigned by rating agencies.

Similarly, KIPO has developed the KIBO Patent Appraisal System (KPAS) a tool that aims to promote an IP guarantee strategy at a low cost of evaluation. In its initial phase, it provided qualitative information rather than quantitative data on the possible financial value, which was seen as its main limitation (M.-S. Kim et al., 2021).

More recently, KIPO has developed KPAS II – a web-based system using artificial intelligence and a wide range of technology and financial data to provide an estimate of the feasible economic value of patented technology. Based on the estimates of the KPAS II tool, KIPO operates an 'IP fast guarantees' path[59].

In 2021 Inngot, Rouse and Alibaba released Intangio, a tool to assist insolvency professionals to set a reservation price for the patents previously owned by firms that are no longer operating. Intangio provides valuation guidance both based on the patents' characteristics and previous transactions (Rafferty, 2024). Intangio has two layers. Insolvency practitioners may conduct an initial free of charge check to verify whether a patent is of significant value. They can then proceed to a more detailed report either for an individual patent or a portfolio of up to 10 patents[60]. The main purpose of the tool is to help set a price for the patent auctions operated by the Alibaba Ali Auctions platform (see Section 3.1.6). The main driver behind the Intangio was an observation that some patent valuations at the Ali Auctions platform were too high to attract bidders' interest.

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[59] https://www.kipo.go.kr/en/BoardApp/UEngBodApp?a=&c=1003&seq=1712&supp_cd=001&board_id=kiponews&cp=1&pg=1&npp=10&catmenu=ek06_01_01&sdate=&edate=&type=&bunryu=&tag_yn=&searchKey=1&searchVal

[60] https://inngot.com/news-views/alibabas-auction-site-launches-intangio-patent-price-guidance-harnessing-new-inngot-api

Another tool, developed by CNIPA, is the Patent Valuation Index which enables the analysis of patent value based on three dimensions: legal, technical and economic, which are further subdivided into 18 further indicators (WIPO, 2024b).

DKPTO, in collaboration with Professor Jan Mouritsen from the Copenhagen Business School, developed a patent evaluation tool called IPScore. This tool has been further adapted and developed by the European Patent Office (EPO). Its current iteration, IPScore3, was released by the EPO in September 2023. It enables the calculation of the net present value of patented technologies as well as preparation of the comprehensive qualitative assessment of the strengths and weaknesses of the patent portfolio[61].

Although not primarily designed to provide IP valuation, it is worth mentioning the Sofia Innovation Scoring system developed by the Hellenic Development Bank. This data-driven decision support framework automates the innovation scoring process for stakeholders within the financial sector. The system specifically addresses the limitations inherent in traditional credit scoring models, which typically rely on a firm's historical performance, an approach ill-suited to innovative start-ups that often possess limited historical data and seldom demonstrate positive cash flows during their early stages of development. The Sofia system offers an auxiliary scorecard tailored to the unique characteristics of nascent, innovative enterprises, which can be integrated with existing scoring methodologies. By incorporating forward-looking innovation criteria alongside conventional financial indicators, the system seeks to facilitate more comprehensive appraisals of business plans with strong potential for scalability and market success. The innovation scoring model evaluates 139 distinct factors across six Innovation Scoring Models, enabling the measurement of both disruptive and process innovation. Among the criteria assessed is the proportion of intangible assets relative to total assets value[62].

Ideas for further exploration

The **development and wider adoption** of **modular IP valuation tools** should be actively encouraged across the EU. Such tools are not a substitute for bespoke assessments conducted by qualified IP valuers, nor should they be presented as such. Their primary value lies in lowering the threshold at which IP owners first engage with the concept of valuation, helping rights holders develop an understanding of the economic significance of their intangible assets and assess whether these assets could support IP-backed financing arrangements. In this sense, modular tools serve as a first step in a two-stage process, providing an accessible, indicative estimate that can subsequently be validated and refined through a professional valuation carried out by a certified IP valuer.

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[61] https://link.epo.org/web/IPscore_3.0_manual_en.pdf

[62] HDB presentation at the AECM Annual Event, June 2023 https://aecm.eu/wp-content/uploads/2023/06/20230609-AECM-ESGZINcard-EN.pdf

Consider setting up initiatives aimed at **exchanging best practices and promoting international standards for modular IP valuations**. This cooperation should also include data sharing and its integration into tools to enhance the accuracy and robustness of the estimates provided.

3.2.5 Promotion of specific methods of IP valuation

Problems addressed by this solution:

- General lack of information on IP valuation approaches (Section 2.3.1).
- Uncertainty related to IP valuations (Section 2.3.4): implementing this solution will offer clear guidance on the preferred valuation approaches for specific scenarios, thereby minimising uncertainty and enhancing the availability of information on optimal practices.

Apart from the standards establishing approaches to IP valuation, in some countries authorities endorse and promote the use of concrete valuation methods.

The relief from royalty method has been endorsed in various valuation contexts as a recommended valuation method in Korea. In general, the royalty rates used for valuation are extracted from technology transfer databases. The same method for IPR valuation is endorsed by the Malaysian authorities (APEC Intellectual Property Rights Experts Group, 2023).

Ideas for further exploration

Consider **endorsing specific approaches to IP valuation** as most adequate for particular types of intellectual property. As an alternative, detailed guides should be prepared explaining the existing methods of valuation and specifying those that are the most adequate given the specific circumstances of an asset. Once specific approaches to valuation are endorsed, they should be promoted as standards for valuation of IP as collateral and for risk assessment in credit guarantee and IP insurance frameworks.

3.2.6 Direct subsidies for IP valuation

This solution addresses the following problems:

- The high cost of IP valuations (Section 2.3.3): providing direct subsidies for IPR valuation services could effectively address the issue of high expenses and enhance accessibility for particular groups of firms, including highly innovative SMEs.

Bespoke IP valuations are costly and their prices are unlikely to go down, at least until a sufficient pool of valuers is available. The high cost of bespoke IP valuations may be a high barrier to many SMEs that may discourage them from using their IP assets as

collateral for bank credits. Therefore, some countries offer subsidies to cover at least part of the cost of valuations.

KIPO offers subsidies within the IP Finance-Linked Valuation Support programme. To qualify for this subsidy, applicants must meet several criteria. It targets SMEs with registered patents or patent applications that are being actively commercialised. Subsidies are available for firms that are planning to use IPR as collateral for bank loans. Subject to pre-approval, subsidies are available from KIPO for the cost of valuation and, in the case of bank loans, they typically cover up to 50 % of the valuation costs or up to KRW 5 million (EUR 3 200 EUR). Within this programme KIPO cooperates with designated valuation institutions, authorised to conduct IP valuations for financing purposes and banks who offer IP-backed loans (APEC Intellectual Property Rights Experts Group, 2023).

Subsidies are also available under the PASS PI (Pass Propriété Intellectuelle) programme implemented by the French National Institute of Industrial Property (INPI). This programme helps start-ups and SMEs to fund initial IP strategy steps, covering up to 50 % of the costs of eligible services (up to EUR 3 000). IP asset evaluation is listed among the eligible services. It allows SMEs to estimate the legal and financial value of their IP assets, particularly for in-kind contributions in the process of mergers and acquisitions, transfers or initial public offering preparation. The service enables SMEs to obtain an independent assessment of the value of their intangible assets[63].

Ideas for further exploration

Consider creating **subsidy programs for IP valuation services**, potentially as part of the SME Fund. For such program to be effective, several fundamental prerequisites must be satisfied. First, an adequate pool of certified valuers must be established to ensure the reliability and consistency of valuations. Second, consensus should be reached regarding the valuation methodologies endorsed within the framework of the initiative. Third, robust data infrastructure must be developed to systematically collect and analyse relevant information, supporting the design and implementation of future measures intended to facilitate access to IP-backed financing.

3.3 Facilitate finance beyond banking credit

3.3.1 Public grants for R&D and commercialisation

This solution addresses the following problems:

- Information asymmetry, non-rivalry, and weak signals (Section 2.1.1),
- Separability and redeployability (Section 2.1.2),

[63] https://www.inpi.fr/en/nos-solutions/financer-sa-propriete-intellectuelle/pass-pi

- Uncertainty regarding the value and useful economic life of intellectual property (Section 2.1.3),
- Heterogenous character of individual IP (Section 2.1.4): when IP assets are in the early stages of development and generate minimal cash flow, their intrinsic qualities often make them unattractive as collateral for financial stakeholders. Public grants for research, development, and commercialisation can help address this market gap during the initial phases of IP assets development.
- Lack of risk capital for IP-intensive start-ups (Section 2.2.5): This solution directly addresses the problem of insufficient engagement of private stakeholders in the financing of innovation.

Banking credit is hardly available at the very initial stage of the development of entrepreneurial ideas, where the ideas have not yet been tested on the market. Unfortunately, however, the successful commercialisation of innovation requires access to specific complementary assets which exceed the resources available to most start-ups.

Given the critical importance of innovation for economic growth, governments develop specific programmes and provide public money to support the commercialisation of innovative undertakings.

Horizon Europe is the key funding programme of the EU for research and innovation. It provides grants and financial support for research and innovation to a range of beneficiaries representing both the public and private sectors. The main pillar, aimed at incentivising private investment in R&D is Pillar II Global challenges and European industrial leadership, with a budget of EUR 52.5 billion[64]. Private firms and industry represent over 42% of the beneficiaries of the slightly over 4 000 grants signed as of 8 April 2025.

Grants are also available through Pillar III of Horizon Europe – Innovative Europe, administered by the European Innovation Council (EIC), established in 2018. It supports innovations with breakthrough or a disruptive nature and scale up potential. 70 % of the EUR 10.4 billion budget of the EIC is earmarked for SMEs. Funds earmarked for SMEs are partially managed in cooperation with the European Partnership on Innovative SMEs, supporting funding programmes such as ‘Eurostars’ and ‘Innowwide’, forging international cooperation between innovative SMEs and encouraging their global expansion[65].

The EIC is operating complementary instruments that aim to bridge the gap from idea to market. Pathfinder offers R&I grants from early technology to proof of concept. Transition offers R&I grants for projects from proof of concept to pre-commercial phase

[64] https://research-and-innovation.ec.europa.eu/document/download/9224c3b4-f529-4b48-b21b-879c442002a2_en?filename=ec_rtd_he-investing-to-shape-our-future.pdf
[65] ibidem

and Accelerator is offering grants and investments for single SMEs and start-ups working on projects from pre-commercial and market to scale-up phase.

Grants for R&D and commercialisation are also available through the European Regional Development Fund and specific national programmes managed by Member States. As a response to the call to governments from the Competitiveness Council, in December 2022, 22 Member States reported developing their own investment and regulatory initiatives to help scale-ups access financing[66].

While grants address the cost side of early-stage innovation, demand-side instruments address the revenue side. Public procurement mechanisms – when designed to engage with innovative companies at an early stage – can provide contracted revenue, market validation and documented technical milestones that are directly useful for IP-backed financing, even where traditional financial track records are absent at the early stage of a firm development. The EU public procurement framework provides three mechanisms of relevance to early-stage IP-intensive companies:

- Pre-Commercial Procurement (PCP),
- Public Procurement of Innovative Solutions (PPI),
- Innovation Partnerships.

Beyond formal procurement procedures, Advance Purchase Agreements (APAs) – contractual obligations by public authorities to purchase defined quantities at defined prices, conditional on meeting specifications – provide the most direct conversion of uncertain future cash flows into contractually certain revenue. APAs were deployed at scale for COVID 19 vaccines (managed by the Commission across all Member States) and are embedded in the European Chips Act and Critical Raw Materials Act for strategic technologies. For IP-intensive companies, an APA is functionally close to accounts receivable, it can be used to support revenue-based financing or pledged as a future revenue stream in structured lending.

Ideas for further exploration

Inclusion of **IPR-based criteria in the assessment of applications for grants for EU support** should be considered. Greater acknowledgment of the importance of IP strategy during the early stages of innovation would highlight its critical role in the successful commercialisation of innovations, thereby fostering a deeper appreciation of the value of IPRs in driving commercial success. It would also help the beneficiaries of public grants to create valuable IP assets, that will help them obtain financial resources for later scale-up phases in their firms' growth. To the extent possible, specific elements related to the IP strategy should be included in the grants criteria already present in the current Multiannual Financial Framework (MFF).

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[66] https://research-and-innovation.ec.europa.eu/strategy/support-policy-making/shaping-eu-research-and-innovation-policy/new-european-innovation-agenda/new-european-innovation-agenda-roadmap/flagship-1-funding-deep-tech-scale-ups_en#paragraph_4759

Include **fees related to registration of IP rights as eligible expenses** within all financial schemes supporting R&D and commercialisation of innovation results.

Provide comprehensive **IP related information and educational programs for beneficiaries of EIC instruments**. Such programmes may include references to the IPR management strategies standards such as ISO 56005 or DIN 77006, for instance, in the form of 'IP investment Readiness' support programme. Such a programme may target early-stage companies with tailored training on IP management, IP assets valuation and legal advisory services.

Establish the **"Innova IP Fund"** which would provide targeted financial support to innovative SMEs for the registration and commercialisation of their IP rights.

3.3.2 Increase availability of risk capital

This solution addresses the following problems:

- Information asymmetry, non-rivalry, and weak signals (Section 2.1.1).
- Separability and redeployability (Section 2.1.2).
- Uncertainty regarding the value and useful economic life of intellectual property (Section 2.1.3).
- Heterogenous character of individual IP assets (Section 2.1.4).
- Lack of risk capital for IP intensive start-ups (Section 2.2.5).

When IP assets are in the early stages of development and generate minimal cash flow, their intrinsic qualities often make them unsuitable for traditional debt financing, as lenders typically require tangible collateral and established revenue streams. In this context, equity and venture capital financing become especially valuable. These forms of investment do not rely on immediate cash flow or physical assets; instead, they focus on the growth potential and innovative capabilities of the business. Venture capitalists and equity investors are prepared to take on higher risk in exchange for ownership stakes, supporting start-ups and innovative firms through capital injection, mentorship, and strategic resources during their formative phases.

Draghi's report (Draghi, 2024) recommended higher reliance on long-term patient capital that is able to tolerate higher risks related to innovative projects. Increase of venture and private capital availability is therefore one of the crucial elements necessary to bridge the competitive gap with the US. The effective channelling of savings into innovative ventures is the most important solution for innovation financing in Europe.

The risk profile of ambitious innovative companies at the initial stage of their development is different from their counterparts starting business on the mature markets. There is a lot of uncertainty related to novel, untested ideas that are hardly quantifiable. Traditional banking credits are not well suited to the necessities of

innovative companies. Therefore, a well-functioning capital market that is able to efficiently channel funds into riskier assets in pursuit of higher growth is a crucial element in nurturing future technological champions. It was a key element in the emergence of US innovation poles in recent decades. The EU VC market is relatively small due to risk aversion and the fragmentation of capital markets in the EU and differences in the national rules (European Investment Bank, 2024).

The EU Inc Corporate Legal Framework directly addresses the legal fragmentation of the EU corporate market that has historically discouraged cross-border VC investment.

EU Inc is structured to be investment-ready by design. For IP-intensive companies whose primary assets are intangible, the EU Inc no-capital-requirement is particularly significant: a startup's patent portfolio, software, or proprietary data can constitute its entire value without any corresponding paid-in capital. The flexible share structure facilitates the type of multi-round equity financing - seed, Series A, B, and growth rounds - that IP-intensive companies depend on. The EU Company Certificate provides a harmonised, machine-readable document certifying company status usable before any national authority or court in the EU, reducing the due diligence and legal opinion costs that currently inflate transaction costs in cross-border VC rounds.

For the young ambitious firms that have not reached a phase of positive cash flow that can be tied to particular IP assets, equity finance may be the only option to get the external financial resources for their further development. The European Commission has recently introduced various initiatives to enhance the availability of risk capital and channel it into innovation financing.

As discussed in Section 2.2.5, European pension funds which are kept in assets are only a tiny share of those managed by US pension funds. Assuming that the pension funds' assets in the EU reach the level of the US funds – 140 % of GDP, with 25 % of those funds being invested in equities, which is a level similar to the Danish, Dutch and Swedish funds and a substantial part of these funds is invested in Europe. The funds available to European firms could grow by over EUR 1 trillion[67].

The Competitiveness Compass sets the vision of strengthening the EU's competitiveness building upon the recommendations of the Draghi report. Based on the Competitiveness Compass, the European Commission has developed a package of comprehensive legislative changes to boost the competitiveness of European companies by turning European citizens' savings into investments, particularly early-stage technologies with game-changing potential. The European Commission strives to accelerate the Savings and Investments Union (SIU) project that will provide incentives for risk capital and will ensure seamless flow of investments across the EU. Building on prior Capital Markets Union efforts, the SIU emphasizes citizen-focused

[67] https://www.economist.com/finance-and-economics/2026/03/04/european-pensions-are-a-30trn-missed-opportunity

reforms to boost household wealth, enhance financial literacy, and reduce market fragmentation, while enabling SMEs and innovative firms to access diverse types of non-bank financing.

The strategy outlines four pillars: promoting effective savings products like enhanced Pan-European Personal Pension Product (PEPP) and savings/investment accounts with incentives; expanding financing options such as equity investments by institutional investors under clarified prudential rules; integrating markets through legislative packages on trading venues, settlement, and fund distribution to cut cross-border barriers; and strengthening supervision in the Single Market.

On 20 November 2025, the European Commission adopted a comprehensive package of measures to enhance supplementary pensions. These initiatives complement public pensions without replacing them, addressing issues like low participation in occupational and personal schemes.

Key proposals include a Recommendation urging Member States to introduce auto-enrolment in supplementary pensions (with opt-out options) and develop pension tracking systems, providing the public with transparent information on their pension rights and projected benefits across all pension schemes. Legislative amendments to the Directive on Institutions for Occupational Retirement Provision (IORP) II Directive and the Pan-European Personal Pension Product (PEPP) Regulation seek to foster economies of scale, reduce costs, enable diversified investments (especially in equities under a clarified prudent person principle) and introduce a 'Basic PEPP' for accessible, low-cost options[68].

In March 2026, the European Commission completed a public consultation regarding barriers arising from the implementation of the European Venture Capital Funds Regulation (EuVECA), the Alternative Investment Fund Managers Directive (AIFMD), and national investment fund legal frameworks. The primary goal of the consultations and the proposed reforms is to enhance the competitiveness of venture and growth capital funds in the EU, and to facilitate their cross-border operations within the EU single market to enable greater scale. A legislative proposal revising the EuVECA Regulation is expected in Q3 2026 under the Savings and Investment Union strategy roadmap.

European institutions also commit substantial public funds to encourage private investment and boost financial support for innovative companies across Europe.

The InvestEU Programme supports sustainable investment, innovation and job creation in Europe. It aims to trigger more than EUR 372 billion in private investments to high EU policy priority areas between 2021-2027[69]. It brings together multiple earlier

[68] https://ec.europa.eu/commission/presscorner/detail/en/ip_25_2738
[69] https://investeu.europa.eu/investeu-programme_en

financial instruments facilitating simpler, more efficient and more flexible investments in EU companies.

It builds upon previous instruments established under COSME such as the COSME – Equity Facility for Growth (EFG) or Horizon 2020 and the Pan-European Venture Capital Fund of Funds. InvestEU's SME window supports equity financing for SMEs and small mid-caps in EU policy special interest areas including innovation, deep and green tech. InvestEU allows financing at all the development stages from start-up to scale-up and initial public offering (IPO). Among its goals is to leverage private funding from investors such as business angels, venture capital funds, pension funds and insurance companies.

In particular, InvestEU provides support for (direct or intermediated) equity investments and co-investments in the areas of venture capital, private equity and private credit. Investments supported by InvestEU Equity address market gaps and sub-optimal investments and increase the availability of risk capital across all stages of company development. Some of the horizontal priorities targeted by the implementing partners backed by the InvestEU guarantee benefit firms investing in intangibles, for example:

- Tech Transfer funds (targeted by the European Investment Fund (EIF) and CDP Equity, for example) – targets projects converting R&D, skills and knowledge into commercial applications, products, processes as well as projects applying existing technologies in new areas.
- Business Angels- promote systematic co-investment with European business angels (targeted by the EIF).
- IPO funds - supports companies at pre-IPO and post IPO stages (targeted by the EIF).

The European Innovation Council (EIC) Fund serves as the venture capital division of the European Innovation Council. It currently manages a budget of EUR 10.1 billion (between 2021-2027) to support game-changing innovations from early-stage research to maturity[70]. It was set up as a capital fund under private law with the European Commission as its unique shareholder to fund companies under the EIC Accelerator. The Fund's goal is to bridge the funding gap for deep tech European start-ups that have market-creating potential but carry higher risk for private and public investors. The EIC Fund minimises those risks by providing patient capital. The EIC is targeting minority ownership stakes through investments of EUR 0.5 million to 15 million per company.

The EU Startup and Scaleup Strategy is the most recent initiative aiming to shift the European economy towards a more entrepreneurial and innovative model. Its ambition is to make Europe the best place in the world to launch and grow global technology

[70] https://eismea.ec.europa.eu/programmes/european-innovation-council_en

firms[71]. The EU Startup and Scaleup Strategy announced a series of targeted measures intended to enhance the financing environment for early-stage innovative enterprises in the EU. Among its key initiatives is the establishment of the Scaleup Europe Fund, a market-oriented entity that will operate under private management and co-financing and will function as an extension of the EIC Fund. The primary objective of this fund is to mobilise substantial private capital and facilitate direct equity investments in deep technology scale-up companies.

Furthermore, the European Commission proposed launching the European Innovation Investment Pact, to encourage large institutional investors to contribute to EU-based venture capital funds investing in start-ups and scale-ups in strategic sectors such as biotechnology, semiconductors and clean technologies.

Under the pan-European Scale-up Initiative announced in February 2022 in Paris, the EU seeks to mobilise funds for crucial high-tech companies in their late-stage development, when they scale their business from start-up status to bigger ventures[72]. In 2023, the European Investment Bank (EIB) Group and five EU Member States launched the European Tech Champions Initiative (ETCI) a 'Fund of Funds' with the aim of bridging the European scale-up gap with EUR 3.85 billion[73]. The ETCI invests in 10-15 large-scale venture capital funds, which provide financing to European firms in their late-stage growth phase. In this way, the ETCI seeks to mobilise over EUR 10 billion of investments in innovative companies in their growth stage.

One of the elements of the Competitiveness Compass consists of amendments to the InvestEU Regulation with the aim of reducing administrative burdens but also earmarking an additional package of EUR 50 billion in additional public and private investment. In the same vein, in August 2025, the EIB launched a new initiative, the TechEU platform, which aims to provide EUR 70 billion in start-up funding by 2027. This idea consists of linking various EU funding schemes together to provide financial means to start-ups, so a project will be assessed only once. In accordance with EIB estimations, this initiative will unlock EUR 250 billion in investments for the European tech sectors. The TechEU platform is designed to address the financial needs of European start-ups 'from idea to IPO'[74].

The EU Public Development Banks and Institutions (PDBIs) have a specific mandate to address market failures and redirect investments into public interest objectives that are not sufficiently financed by the private sector (European Commission. Directorate General for Economic and Financial Affairs., 2025). They play a crucial role in the

[71] Communication from the Commission to the European Parliament, The Council, The European Economic and Social Committee and the Committee of the Regions. The EU Startup and Scaleup Strategy. Choose Europe to start and scale (SWD(2025) 138 final)

[72] https://www.eib.org/en/press/all/2022-083-eib-group-supports-the-pan-european-scale-up-initiative-to-promote-tech-champions

[73] https://www.eib.org/en/press/all/2024-293-european-tech-leadership-requires-more-innovation-financing-eib-report-says

[74] https://www.eib.org/en/press/news/president-calvino-tech-firms-innovators-handelsblatt

implementation of the InvestEU programme. The PDBIs are also designing their own innovative schemes to address financing gaps at national level. They serve, therefore, as key intermediaries in implementing the EU financial instruments to support SMEs, bridge the gap between the operational model of traditional commercial banks and the unique financial needs of innovative, intangible-rich companies.

Ideas for further exploration

Promote research exploring correlations between firms' intellectual property activities and their growth trajectories, productivity, access to venture and private capital among financial stakeholders, including representatives of private equity, venture capital, and business angels. Furthermore, relevant academic studies that illustrate the connection between intellectual property engagement and firm performance ought to be systematically shared with these financial actors. More detailed information about the intricacies of IP law should be available to managers of venture capital funds to help them assess the IP maturity of firms, who are potential funding targets.

A **dedicated training programme for venture capital fund managers, private equity analysts, and business angels** should be developed**.** The programme should equip participants with the skills to assess IP portfolios as part of investment due diligence and to interpret IP rights as signals of market potential and technological defensibility.

Develop a complementary **training programme targeting management teams of innovative start-ups.** This programme should focus on preventing the early-stage IP errors that most commonly impede fundraising. The programme should also prepare firms for investor IP due diligence by familiarising participants with the questions and documentation they are likely to encounter during due diligence process.

The **EU Inc Regulation** should be explicitly promoted to the VC and start-up ecosystem as the preferred vehicle for **IP-intensive EU companies**.

The implementation of key **EU initiatives under the Savings and Investments Union** should be **monitored** to ensure that the solutions adopted do in fact address the necessities of innovative firms investing in IP assets.

The EU and the Member States should make greater use of **demand-side instruments** - including Pre-Commercial Procurement, Public Procurement of Innovative Solutions, and Advance Purchase Agreements - to help innovative start-ups build the revenue base and documented milestones needed to access IP-backed finance.

4 Setting out priorities for a functional IP-backed finance system in Europe

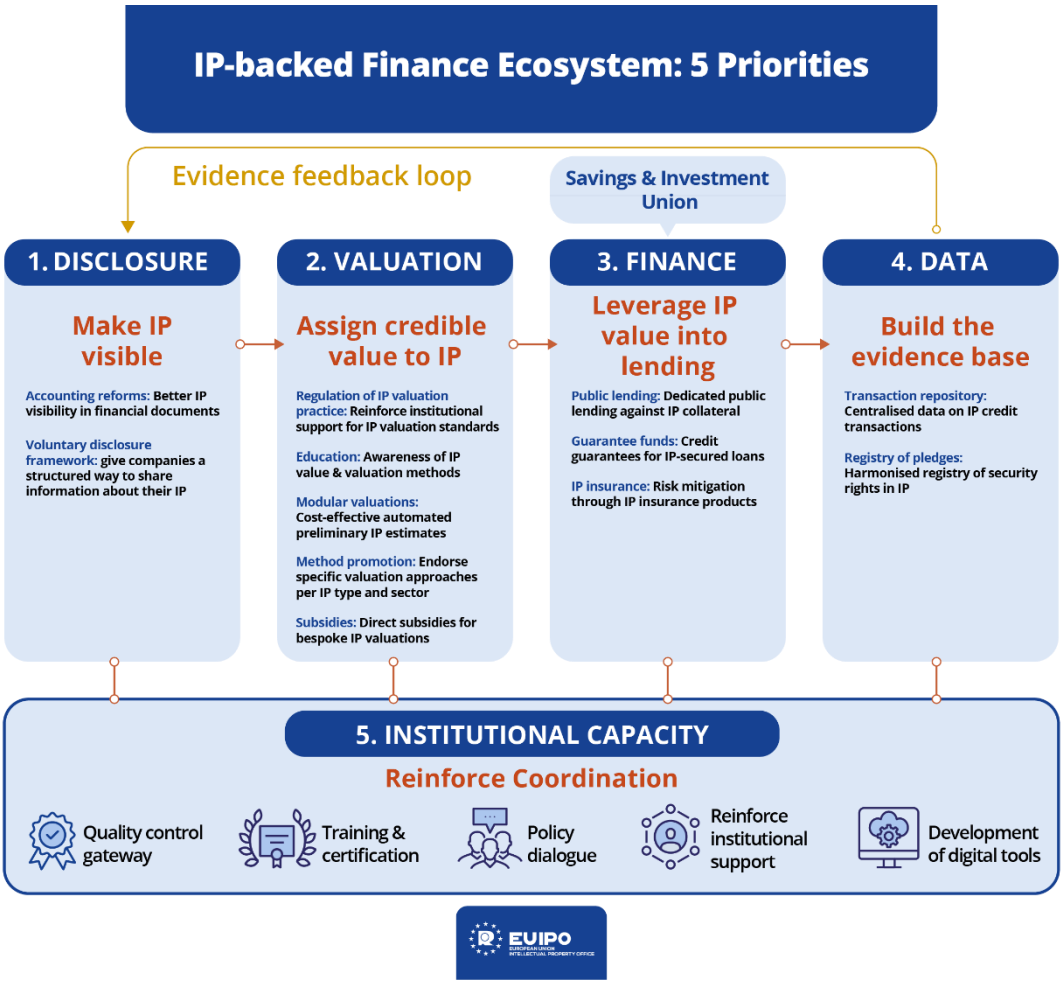
The analysis presented in the preceding chapters demonstrates that the barriers to IP-backed finance in Europe are structural, mutually reinforcing, and operate across the entire innovation lifecycle - from IP creation and protection through to financing, growth, enforcement and reinvestment. Addressing them requires more than a collection of individual policy measures. It requires a coherent, sequenced system in which each element builds on the previous one.

The report identifies 18 possible policy actions across three pillars: facilitating access to banking credit, strengthening IP valuation practices, and facilitating finance beyond banking credit. Several of these actions are forward-looking and will require further feasibility assessment, stakeholder consultation and, in some cases, legislative action before implementation. However, a subset of these actions - those that are most immediately actionable, most mutually reinforcing, and most directly linked to the infrastructure needed to absorb the capital that the Savings and Investment Union will mobilise - can be organised into five sequenced priorities.

Disclosure makes IP visible; **valuation** assigns to it credible economic value; **risk-sharing instruments** convert that value into actual lending; **data infrastructure** reduces conservative assumptions over time; and **reinforced coordination** ensures that the system operates consistently and at scale. Together, they constitute the minimum viable infrastructure for a functional European IP-backed finance system.

The case for prioritising these five groups of actions rests on three criteria. First, each addresses a bottleneck that currently blocks the entire chain. Second, each can be initiated through administrative, programmatic or institutional action with minimal legislative changes at the EU level. Third, each generates outputs that directly feed into the next priority, creating a self-reinforcing dynamic rather than isolated impacts.

Figure 16 Five Priorities



4.1 Priority 1: Make IP visible

Before IP can be used for financing, it must be visible, structured and understandable by financial actors. Today, most IP assets, even high valued ones, are not properly identified in accounting documents. As a result, intangible-rich firms are often misrepresented in their financial statements, and the information available to financial institutions is incomplete.

Most IPR-active SMEs do not realise how they can use their IP assets to secure financing. Only 13% of IPR owners have tried to obtain financing through their IP assets, and a large majority have never conducted a professional valuation. Information asymmetry between innovators and lenders suppresses the credibility, liquidity and measurable value of IP.

What needs to happen. introduce a voluntary comprehensive disclosure framework on financing, screening and valuation. It would be a structured way for companies to share information about their IP and intangible assets in a clear, consistent and usable format for financial actors. This framework would complement existing reporting standards, without creating new reporting obligations or interfering with accounting or sustainability standards.

This framework would enable screening to identify innovation- and IP-driven firms, including for public financial support. The IP Scan, already delivered through the SME Fund, constitutes the natural entry point. It could be progressively adapted into a financing-oriented disclosure tool, covering both registered IP rights and other relevant intangibles. This would allow SMEs to access the system at low cost and generate standardised disclosure outputs reusable across financing contexts.

Firms that have completed structured disclosure are immediately more legible to the investors and lenders that SIU reforms will mobilise – disclosure is the first step in becoming a bankable proposition for the capital Europe is about to release.

Key stakeholders. European institutions and public authorities; financial institutions and intermediaries; international accounting and reporting standards bodies; IP offices and national IP networks; and other relevant public and private entities.

4.2 Priority 2: Assign credible value to IP

Once IP is visible, financial institutions need to assign to it a credible economic value before integrating it into any financing decision. Today, valuation approaches differ depending on intended use, type of intangible asset and geographical location, reflecting varying local practices. There is little knowledge about IP valuation approaches among entrepreneurs and IP valuation services are generally not easily accessible or affordable. Bespoke valuations are tailor-made, require extensive research into specific features of each company and IP, and are particularly expensive for SMEs.

The potential is substantial – but realising it requires valuation that lenders trust.

What needs to happen. A European International Valuation Standards (IVS)-aligned IP valuation architecture should be developed. It should be built on common principles and documentation standards aligned with international standards, operational workflows that translate those principles into financing-ready valuation outputs, and sector-specific guidance that adapts to different industries, company profiles and financing instruments.

Delivering this architecture requires reinforced coordination at European level based on professional capacity and tools:

- **A training and certification framework for IP valuation professionals.** Educational programmes should be developed for prospective IP valuation professionals, providing knowledge on professional ethics standards and approaches to valuation of intellectual property. At the later stages, once the ecosystem matures, certification or accreditation pathways may be explored.
- **Direct subsidies for IP valuation.** Subsidy programmes for IP valuation services may be considered. For such programmes to be effective, an adequate pool of certified valuers must be established, consensus on endorsed methodologies must be reached, and robust data infrastructure must be developed.

Key stakeholders. Professional valuation bodies, European Commission and public authorities, EUIPO, national IP offices, industry associations; and other relevant public and private entities.

4.3 Priority 3: Leverage IP value into lending

Disclosure makes IP visible. Valuation assigns to it credible economic value. However, until enough trust is built in the value of IP assets, it will be difficult to convince lenders to provide financial resources against the IP collateral. Structured IP information captures forward-looking dimensions of borrower quality - innovation capacity, competitive positioning and possible revenue trajectory - that standard financial statements may not sufficiently reflect. However, its contribution to loss-given-default calculations is often much more limited, due to uncertainty around enforceability, transferability, market liquidity and recovery costs. Financial institutions therefore apply conservative assumptions – high "haircuts" or outright exclusion of IP from recoverable value.

Risk sharing instruments bridge this gap. By absorbing part of the credit risk, they allow lenders to integrate structured information on intellectual property into their credit assessments while mitigating residual risk. As the loans covered by guarantees benefit from the risk weighting of the guarantor rather than the risk weighting of the collateral, they can substantially reduce the capital burden for participating banks under the Basel III framework.

What needs to happen. Risk-sharing instruments should be positioned as structural enablers of IP-backed finance in the initial phase. Their role is to bridge the gap between the conservative recovery-based risk logic applied by financial institutions and the broader innovation and business value signalled by disclosure, screening and valuation outputs. This requires action across three fronts:

- **Credit guarantee products targeting IP-backed loans.** Specific credit guarantee products should be created for loans secured with IP pledges. Such products should be carefully designed and strategically implemented to address the substantial costs associated with IP valuation, the absence of established secondary markets, and limited expertise among financial institutions in structuring IP-backed lending. Instrument eligibility and assessment should be progressively aligned with lifecycle outputs such as structured evidence generated through disclosure frameworks, screening outputs, and purpose-driven valuation.
- **Dedicated public lending against IP collateral.** Discussions should be launched with the European Investment Bank (EIB) Group and national public development banks on the creation of specific loan programmes where credits could be secured with IP. A pilot programme of IP-backed lending would demonstrate feasibility and help gather valuable data on the performance of loans collateralised with IP. As an alternative or complement, public funds could be allocated to improve terms of credits offered by private financial institutions, providing favourable conditions such as interest rate subsidies, extended loan maturities and expert-led valuation support.
- **IP insurance products.** The legal and regulatory framework governing IP collateral insurance should be assessed. New IP insurance products should be explored in collaboration with industry representatives, focusing on coverage for specific risks such as infringement, enforcement or default on credit collateralised with IP. Pilot IP insurance products or partial risk-sharing schemes should be developed with selected insurers and guarantee agencies. These pilots would demonstrate the value of IP insurance, address legal uncertainties, and build confidence among financial institutions and SMEs.

Guarantee schemes and risk-sharing instruments are the mechanisms that convert SIU capital from an aspiration into actual lending: they give institutional investors and banks a safe entry point into IP-backed finance while the market is still maturing, ensuring that freed capital reaches innovative firms rather than flowing to safer, less productive destinations.

Key stakeholders. European Commission, EIB Group, European Investment Fund (EIF), national public development banks, national guarantee institutions; and other relevant public and private entities.

4.4 Priority 4: Build the evidence base

The absence of a reliable, standardised and accessible data foundation means financial actors cannot assess risk or make IP-related information usable at scale. Relevant data is dispersed across registries, programmes and private datasets, much of it is not harmonised, and reliable outcome-based evidence remains limited. Without data on recovery rates, default outcomes and transaction costs, conservative assumptions persist as a rational response – but they prevent the market from developing.

Data on secondary market transactions involving tangible assets give lenders a high degree of confidence regarding asset value. Without well-developed secondary markets and transaction repositories, there is no transparent marketplace to serve as an external benchmark for the realisable value of IP, further reinforcing conservative assumptions.

What needs to happen. Four actions are identified, sequenced to build on what already exists:

- **Establish a targeted data requirements framework (use-case first).** Define a limited set of data elements required to support IP-relevant risk assessment, developed in close collaboration with financial institutions and focused strictly on operational needs.
- **Interconnect existing datasets before creating new databases.** Prioritise reuse and limited interconnection of existing datasets already held by EU and national partners (IP registries, commercial registries, guarantee programme records), where this directly supports financing instruments.
- **Build a privacy-respecting transactions dataset through instrument partners.** Capture a small, comparable set of outcome indicators linked to real transactions, primarily through public instruments (guarantees, blended lending), including whether repayment or default occurred, whether recovery action was required, its duration, and broad categories of recovery costs. Anonymised and aggregated data create structured evidence to support learning, calibration and better instrument design over time. Availability of transaction data is important not only for lowering the costs of IP valuation but also for promoting any regulatory changes in the future.

- **Create a centralised register of IP pledges and improve visibility of existing security interests.** In several Member States, pledges or rights in rem over IP are recorded inconsistently across IP registries and commercial registries or remain voluntary. The creation of a centralised register of IP pledges would enable financial institutions to verify whether an IP asset has already been used as collateral, its status, and priority of claims.

Transaction data is the evidence base that makes IP-rich firms investible at scale: as performance records accumulate, institutional investors mobilised by SIU will be able to price IP-related risk with the same confidence they apply to traditional asset classes, enabling capital to flow freely and efficiently to Europe's most innovative companies.

Key stakeholders: European Commission, EIB Group, national guarantee institutions, financial market supervisory authorities, EUIPO, national IP offices, ministries responsible for pertinent legislative changes; and other relevant public and private entities.

4.5 Priority 5: Reinforce Coordination

The challenge is not only the absence of IP valuation experts, but also fragmentation of practices, limited convergence in methodologies, uneven access for SMEs, and lack of common training and quality reference points. Without coordination, this fragmentation undermines trust in valuation outcomes and limits scalability.

The lifecycle developed under Priorities 1-4 requires a structured and consistent approach to sustain quality, consistency and uptake across Member States.

What needs to happen.

- **Disclosure delivery through existing mechanisms**, progressively adapting IP Scan into a financing-oriented disclosure tool, delivered through national networks and intermediaries at low cost for SMEs and complemented by comprehensive IP-related information and educational programmes. Such programmes should be provided for beneficiaries of European Innovation Council (EIC) instruments and other forms of public support.
- **Quality control and gateway into screening**, verifying completeness and internal coherence of disclosure inputs and providing guidance on their quality before further steps. Screening would serve three practical purposes: helping firms understand how their IP profile aligns with available financing instruments; enabling matchmaking between companies and relevant support

measures; and identifying firms that could benefit from existing public initiatives. Screening outputs would be strictly non-binding. Where disclosures fall short, feedback loops allow SMEs to improve or update information, preserving inclusiveness while protecting system integrity.

- **Screening coordination**, defining screening use cases and entry criteria, ensuring that screening remains non-binding, and maintaining clear separation between screening and financing decisions. Screening outputs should not rank companies and should not create eligibility rights or exclusions, they should support orientation and matchmaking.
- **Valuation expertise and ecosystem coordination**, supporting convergence in valuation practices across Member States, facilitating access to a European ecosystem of qualified IP valuation experts, assessing the quality of the valuations and developing harmonised guidance, modular training, and exploration of certification pathways.
- **Development of digital tools supporting the full IP-backed finance lifecycle**. Digital tools lower the threshold at which IP owners first engage with disclosure and valuation and serve as a first step in a two-stage process – as indicative estimates that can subsequently be validated by professionals.
- **Stakeholder engagement and policy dialogue**, facilitating structured dialogue between financial institutions, valuation experts, intermediaries and national IP offices, and providing technical input into EU-level policy discussions. This includes engagement with existing networks and international organisations (Organisation for Economic Co-operation and Development, OECD; International Monetary Fund, IMF; World Bank/International Finance Corporation, IFC; World Intellectual Property Organization, WIPO) and structured cross-policy dialogue bringing together innovation and industrial policy actors, financial and guarantee institutions, valuation and professional bodies, and national IP offices.
- **Training and capacity building** are essential complements that may create EU-wide convergence without introducing new licensing requirements. Beyond finance professionals, dedicated training programmes should target venture capital fund managers, private equity analysts and business angels – equipping them to assess IP portfolios as part of investment due diligence and to interpret IP rights as signals of market potential and technological defensibility. A complementary programme should target founders and management teams of innovative start-ups, focusing on preventing the early-stage IP errors that most frequently impede fundraising and preparing firms for investor IP due diligence.

Key stakeholders. European Commission and innovation support bodies, EUIPO, national IP offices, professional valuation bodies, financial institutions and intermediaries and other relevant public and private entities.

4.6 Enabling Conditions: Secondary Markets, Legal Frameworks and Capital Mobilisation

The five priorities described above represent the most actionable subset of a broader set of options identified in this report. The remaining options are equally important for the long-term functioning of a European IP finance market.

Beyond the five priorities, progress depends on sustained attention to enabling conditions that improve the broader environment for IP-backed finance. These conditions are not framed as priorities because they cannot be delivered through administrative action alone – they depend on legislative processes, market evolution, and macro-level policy reforms that extend beyond any single institution or programme. Some of them depend also to large extent on the prior establishment of the IP-backed finance infrastructure and sufficient transactions volume. Nonetheless, they are essential for the system to reach its full potential and must be actively monitored and shaped.

Development of secondary markets. Well-functioning secondary markets for IP assets would give lenders external benchmarks for realisable value, reducing their reliance on conservative assumptions and gradually diminishing the need for public guarantees. This condition sits outside the five priorities because secondary markets cannot be created by policy design alone – they emerge as transaction volumes grow, data infrastructure matures, and investor confidence builds, all of which depend on the priorities delivering first. A comprehensive analysis of the current state of play of secondary markets for IP rights should be undertaken to identify optimal strategies for strengthening the market. Collaboration should be established with specialised IP brokerage firms and intermediaries to facilitate exchange of information, best practices and transactional expertise. The feasibility of a centralised digital marketplace connecting IP right holders, brokers, investors and potential buyers should be investigated, including features such as standardised transaction terms and data analytics to inform pricing and valuation.

Securitisation of IP-backed loans. IP-backed securitisation offers a long-term pathway to ease regulatory burdens on banks and channel institutional capital into IP-intensive lending at scale, amplifying the impact of the lending instruments developed under Priority 3. It is treated as an enabling condition rather than a priority because it requires a sufficient pool of seasoned IP-backed loans to exist before structured

finance products become viable – it is the downstream benefit of the priorities working, not a precondition for starting them. The 2025 EU Securitisation Framework reform removes frictions that may benefit IP asset securitisation efforts, though without creating a dedicated enabling environment. Developments in distributed ledger technology (DLT) and tokenisation of IP rights should be monitored and advocated as tools to ease structural frictions, including through future amendments to the DLT Pilot Regime.

Harmonisation of insolvency frameworks. Predictable recovery of IP assets in insolvency is a precondition for lenders to treat those assets as genuine collateral rather than a theoretical claim. This condition is placed outside the five priorities because the primary legislative action is already substantially underway and the immediate task is implementation monitoring rather than priority-setting. New legal provisions create procedural conditions under which IP assets are more likely to retain their productive value throughout insolvency proceedings. Implementation at Member State level should be monitored, including early transposition practice and case law, to identify whether additional guidance on IP-specific valuation in pre-pack contexts is needed.

Mobilising savings into innovation. Channelling Europe's substantial household and institutional savings into patient, risk-bearing capital is the macro-level fuel that allows the IP-backed finance system to operate at meaningful scale. This condition sits outside the five priorities because it is driven by EU-wide structural reforms pension regulation, capital markets integration, prudential rules for institutional investors – that lie beyond the remit of IP and innovation policy actors. The SIU, supplementary pension reforms, enhanced Pan-European Personal Pension Product (PEPP) regulation, and the EIB's EUR 70 billion TechEU platform represent essential macro-level conditions. Crucially, the impact of these initiatives depends on whether the underlying infrastructure for IP-backed finance is in place: firms that have disclosed their IP, undergone credible valuation, and engaged with guarantee-backed lending instruments are far better positioned to attract and absorb the capital that SIU reforms will release.

5 Annex: Map of Solutions Proposed in the Report

Figure 17 Problems solutions map

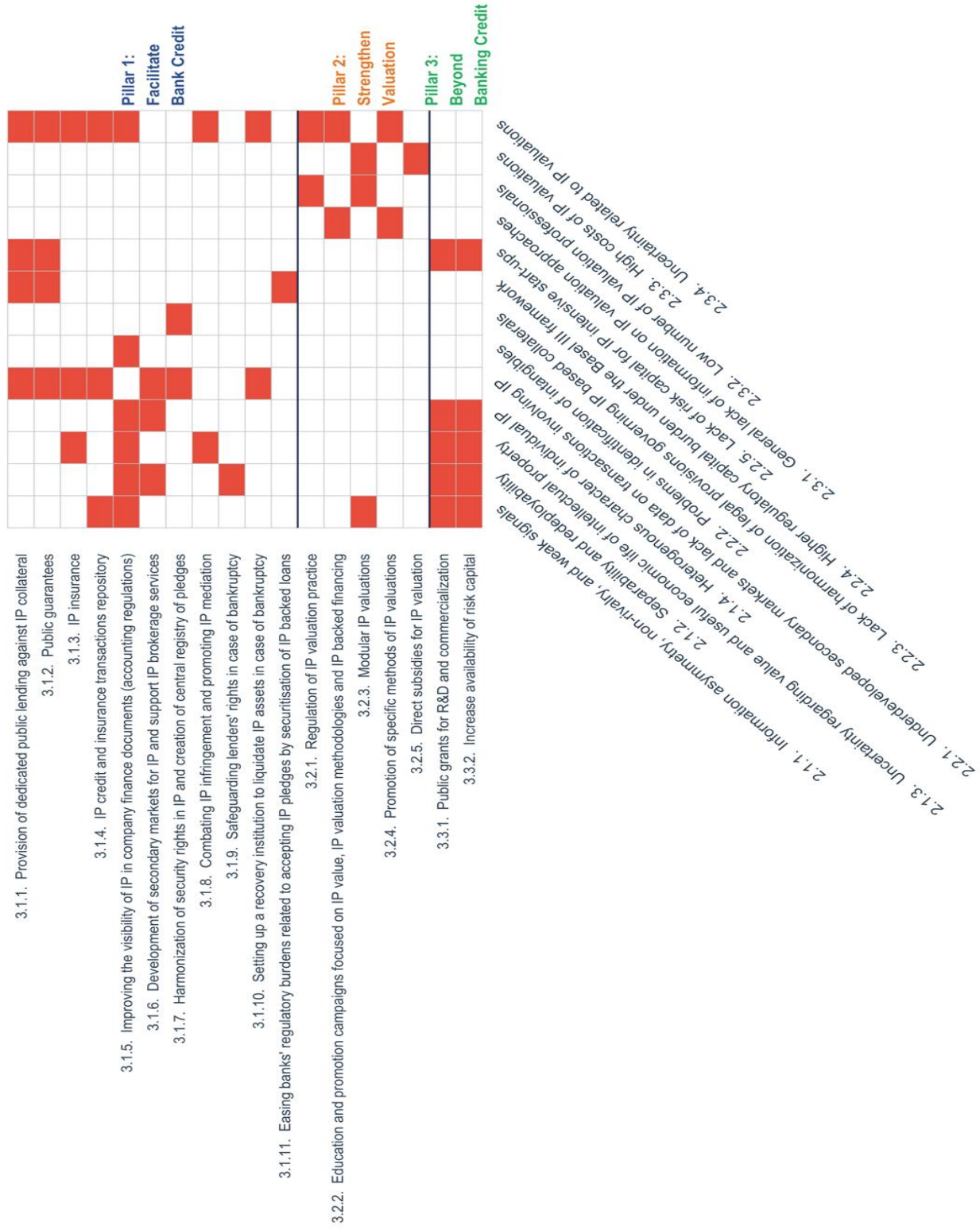


Figure 18 Solutions addressing intellectual property characteristics

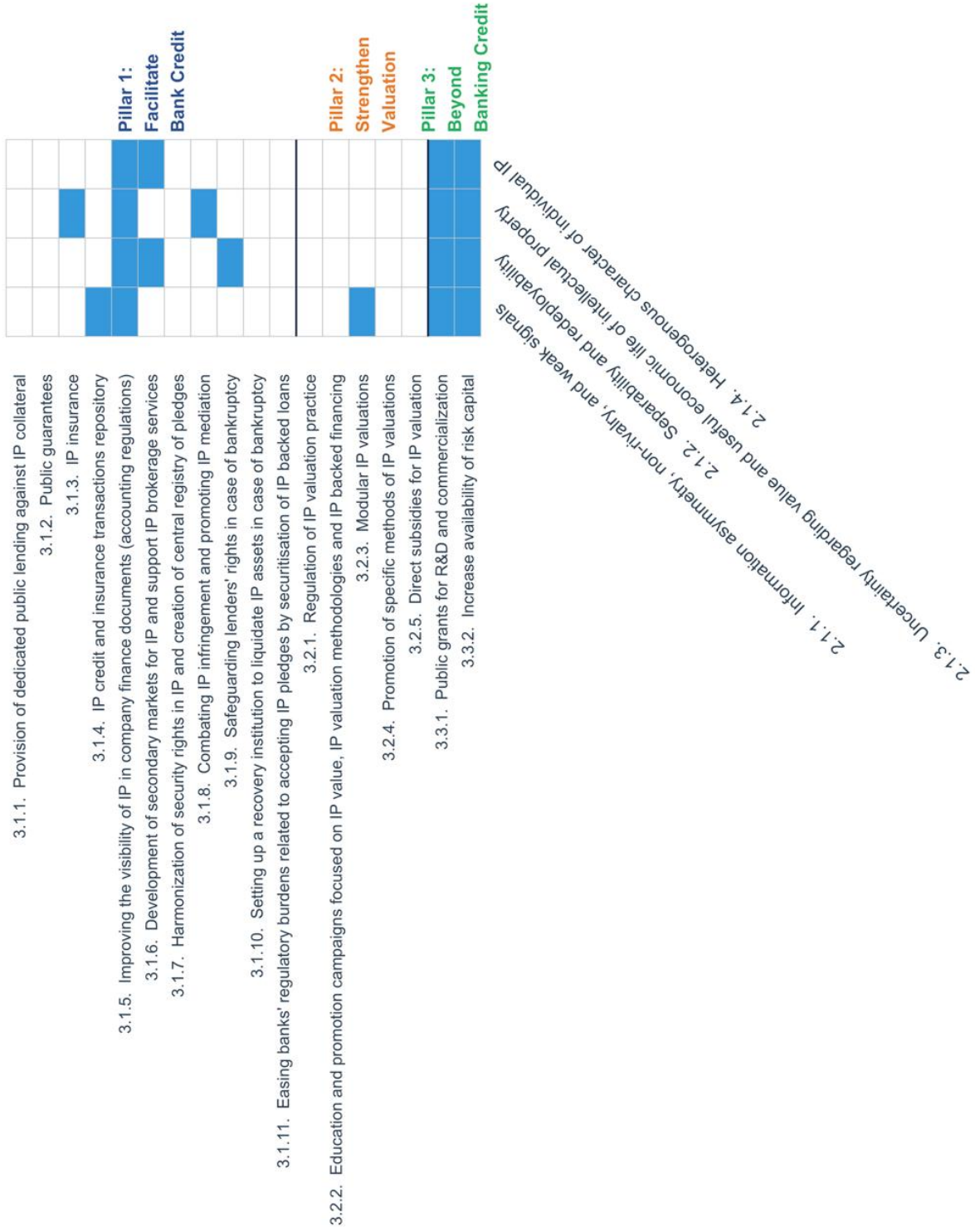


Figure 19 Solutions addressing current framework problems

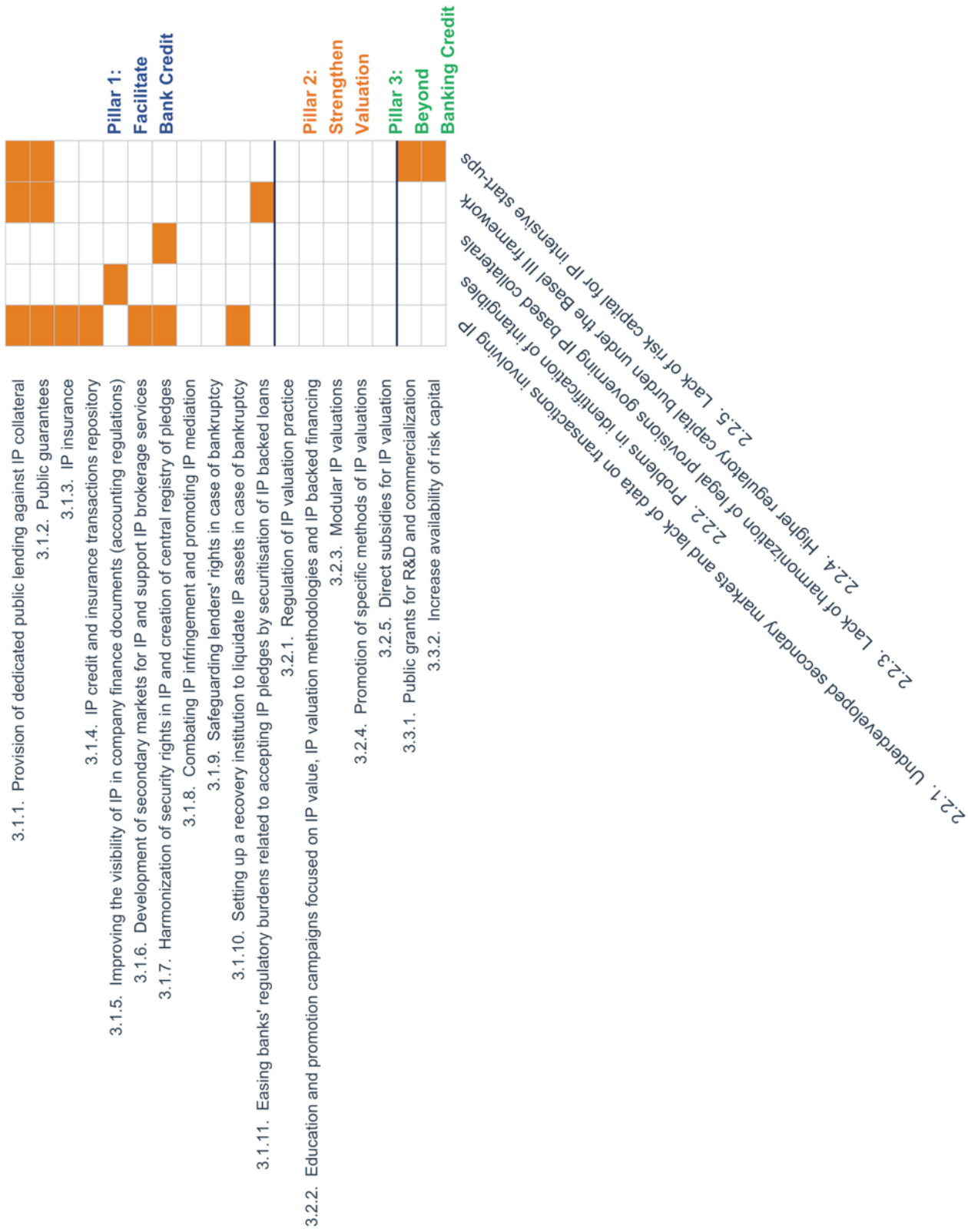
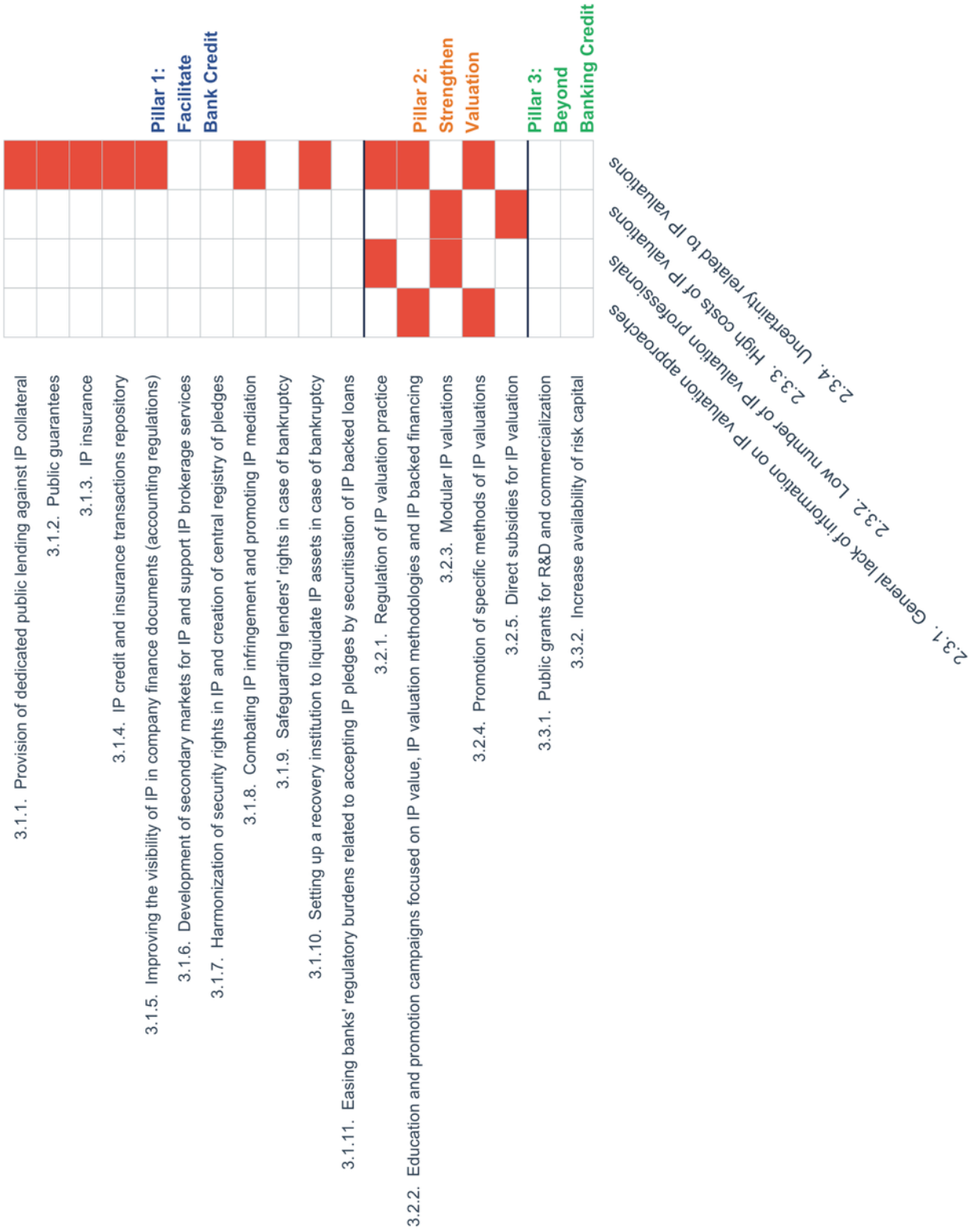


Figure 20 Solutions addressing problems related to IP valuation



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