

W O R K I N G P A P E R

Measuring International Finance · Part II

Measuring the Performance of International Financial Centers

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** The author is the Managing Director of the World Alliance of International Financial Centers.
This paper reflects the views of the author and not those of the World Alliance.*

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Abstract

Present frameworks for assessing the performance of international financial centers primarily focus on enabling conditions: regulatory quality, infrastructure, and human capital. They are measured mainly through perception surveys. They capture what makes a center attractive but say little about what a center actually does. This paper, the second in a series on measuring international finance, proposes a functional approach. It defines four core dimensions of financial center performance: domestic impact, international contribution, international connectivity, and attractiveness. These span two analytical axes, scope of contribution (national versus international) and directionality of flows (inward-facing versus outward-facing), and are anchored in a foundation of enabling conditions. Three complementary factors, innovation capacity, reputation and trust, as well as resilience, act as amplifiers and safeguards of functional performance. The paper develops detailed measurement frameworks for each complementary factor: innovation capacity is decomposed into knowledge generation, entrepreneurial ecosystem, regulatory innovation, and adoption and diffusion; reputation and trust into institutional trustworthiness, international standards compliance, market confidence signals, and perception and narrative; and resilience into diversification, agility, and institutional depth. Two practical instruments are derived from the framework. A diagnostic dashboard provides individual financial centers with a structured self-assessment throughout all dimensions, designed to reveal performance discrepancies and identify development opportunities. A four-stage typology from National Service Centers through Regional Gateways and International Specialists to Fully Integrated Global Hubs classifies financial centers by functional profile and maps characteristic strategic pathways, to be validated empirically through cluster analysis. The framework is explicitly designed not as a ranking but as a diagnostic and strategic tool for financial center stakeholders.

Foreword

As Managing Director of the World Alliance of International Financial Centers, I closely follow the release of new rankings for our members, leading financial centers. Anyone who has read my latest working paper, the first in this series, already knows that there are plenty of such rankings. They are very useful as a marketing tool for international financial centers, as they regularly bring financial centers and their crucial role into the headlines. Usually, some financial centers are pleased with the improvements and proudly report them to their shareholders.

But are these rankings really what determine whether a foreign financial firm sets up shop, an international asset manager shifts client funds, or a global corporate plans its IPO at your stock exchange? And what exactly are they comparing? Is there a universal, fair benchmark for financial centers worldwide?

I don't think so. Financial centers are too diverse; not all of them pursue the same objectives.

I have therefore been giving some thought over the past few months to how else to measure the performance of financial centers. With this working paper, I would like to spark a discussion on the topic by presenting a possible framework.

The goal here is not to develop yet another ranking or rating, but to provide the leadership of a financial center with a management tool to track and optimize the development of their financial hub.

This may then also be reflected in a better ranking. But that would merely be a positive side effect.

Finally, I thank Thomas Krantz for all his valuable input.

1. Introduction

International financial centers or IFCs occupy a critical position in the global economy, channeling capital across borders, enabling risk management, and providing the infrastructure through which trade, investment, and innovation are financed. Yet despite their importance, there is no widely accepted framework for measuring what a financial center actually does rather than the conditions it offers.

Existing benchmarks, most notably the Global Financial Centers Index (GFCI), assess performance and competitiveness primarily through survey-based perceptions and instrumental factors such as regulatory environment, infrastructure, and human capital. These benchmarks were analyzed in the first part of this working paper series. (Biedermann, 2026)

They regularly capture the enabling conditions for financial center activity. Still, they tell us relatively little about the functions a center performs or the value it creates for domestic and international stakeholders.

This working paper, the second in our series, proposes an alternative approach. Rather than focusing on what makes a financial center attractive, it examines what a financial center does and for which stakeholders. The framework is structured around four functional dimensions that collectively describe the scope and directionality of a center's contribution. These dimensions are complemented by enabling and amplifying factors that shape future development.

The paper develops two practical instruments based on this framework: a diagnostic dashboard enabling each financial center to assess its performance profile across multiple dimensions, and a typology that situates financial centers within characteristic evolutionary stages. The purpose is not to rank centers, but to guide the management of international financial centers in business development and to support them in communicating with their stakeholders on impact and value generation.

1.2 Report Structure

The report is structured as follows. Section 2 outlines enabling conditions as structural prerequisites for financial centers. Sections 3 and 4 detail the core functional dimensions of financial center contribution and complementary factors. Section 5 examines the interactions among these factors. Section 6 introduces a diagnostic dashboard as a structured self-assessment tool for financial centers and provides two examples. Sections 7 to 9 provide methodologies for measuring innovation capacity, reputation and trust, and resilience. Sections 10 and 11 conclude by presenting a typology of financial centers and discussing institutional implications. A bibliography is included at the end.

2. Enabling Conditions

Enabling conditions (🕒) are the structural prerequisites that support performance across all four functional dimensions described in Section 3. These prerequisites are not functional outputs themselves, but they are necessary, though not sufficient, for functional performance. Importantly, enabling conditions serve as leading indicators: deterioration in these areas will eventually erode functional performance, while improvements establish the foundation for future gains.

The current section expands the treatment of enabling conditions into a systematic framework. Whereas the four functional dimensions (Section 3) describe what a financial center does, and the complementary factors (Section 4) capture what amplifies or safeguards that performance, enabling conditions describe what makes performance possible in the first place. They are organized into four clusters: the institutional framework, the economic framework, infrastructure and connectivity, and the talent environment.

2.1 Institutional Framework

The institutional framework encompasses the governance prerequisites on which all financial center activity rests. Without a credible, predictable, and effective institutional environment, neither domestic financial development nor international engagement can be sustained. We suggest looking at the following four interrelated areas:

Regulatory and legal framework quality captures the clarity, coherence, and predictability of the rules governing financial activity. Relevant indicators include the [World Bank B-READY indicators](#) for contract enforcement and business registration; the [World Justice Project Rule of Law Index](#); the time and cost of enforcing a commercial contract in court; and the availability and use of alternative dispute resolution mechanisms, including international arbitration. A center whose regulatory framework is well-designed but poorly enforced scores differently from one that is both well-designed and effectively administered. The distinction between de jure and de facto quality matters. For a more detailed analysis, we recommend consulting the [Regulatory Genome Project](#) at the Judge Business School, University of Cambridge.

Rule of law and judicial effectiveness measure the reliability and independence of the legal system. Key indicators include the independence of the judiciary from political interference; the availability of specialized financial or commercial courts or tribunals; the average duration of commercial dispute resolution; the predictability of judicial outcomes in comparable cases; the enforceability of contracts and arbitration awards; and the recognition of the center's legal framework as an acceptable governing law for international financial contracts. Sources such as the [EU Justice Scoreboard](#) and the [World Justice Project Rule of Law Index](#) provide standardized, comparable data.

Anti-corruption environment assesses the prevalence and enforcement of anti-corruption norms. [Transparency International's Corruption Perceptions Index](#) provides a widely referenced benchmark. Still, it should be supplemented by indicators of enforcement activity: the number and outcomes of financial crime prosecutions, the effectiveness of asset recovery mechanisms, and the transparency of public procurement processes. Corruption undermines institutional trustworthiness and creates a reputational drag that affects all other dimensions.

Political stability and the quality of state governance capture the broader political environment in which the financial center operates. The [World Bank Worldwide Governance Indicators](#) provide a

comprehensive, comparable assessment across six dimensions: “voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption.” (Handoyo, 2023) Sovereign credit ratings from the major rating agencies provide a market-based composite signal that incorporates state governance quality as well as economic fundamentals.

2.2 Economic Framework

The economic framework covers the macroeconomic and fiscal conditions that shape the cost-benefit calculus for financial institutions and their clients when choosing a location.

Macroeconomic stability is a threshold requirement. Relevant indicators include inflation levels and volatility; exchange rate stability and currency convertibility; the trajectory of public debt and fiscal sustainability; the credibility of the central bank’s monetary policy framework, which can be proxied by inflation expectation anchoring or central bank transparency indices; and the sovereign credit rating as a composite market signal. A center operating in a macroeconomically unstable environment faces a structural ceiling on its international development, as volatility and currency risk deter the long-term commitments required by international financial activity.

Tax encompasses the corporate tax rate and effective tax burden on financial institutions; the treatment of international income, including withholding taxes on dividends, interest, and royalties; personal income tax rates for financial professionals, which affect talent attraction; value-added tax treatment of financial services; and the network of double taxation treaties. Tax should be assessed relative to peer centers rather than in absolute terms, since location decisions are inherently comparative. The [OECD Tax Database](#) and [World Bank Paying Taxes](#) data provide standardized inputs.

Cost of doing business captures the operational costs of running financial activities from the center. Key indicators include commercial real estate costs for prime office space; salary levels for comparable roles relative to peer centers; operational costs, including utilities, telecommunications, and business services; and the overall cost of doing business relative to the center’s revenue opportunity. The important nuance is that the cost of doing business should be measured relative to functionality: a center that is expensive but delivers proportionally higher value may be more competitive than a cheaper alternative with fewer capabilities.

Capital account openness measures the freedom of cross-border capital movement. The [IMF’s Annual Report on Exchange Arrangements and Exchange Restrictions](#) (AREAER) provides a standardized classification. Relevant dimensions include restrictions on inward and outward portfolio and direct investment; currency convertibility for current and capital account transactions; and the existence of capital flow management measures. A center with strong domestic fundamentals but a restricted capital account cannot fully develop its international dimensions.

Market access architecture captures the degree to which the center’s financial institutions can operate across borders. This includes the availability of passporting rights or equivalence regimes (particularly relevant in the EU context, but also for ASEAN and other regional frameworks); the network of bilateral and multilateral free trade agreements with financial services provisions; mutual recognition agreements for regulatory standards, professional qualifications, and licenses; and membership in or association with supranational regulatory arrangements. A center with excellent domestic conditions but restricted market access has a hard ceiling on its international potential.

2.3 Infrastructure and Connectivity

Infrastructure and connectivity form the operational prerequisites for financial center activity. They determine how efficiently and reliably financial transactions can be executed, whether the technological substrate supports the increasingly digital nature of financial services, and how well the center is connected, both physically and digitally, to the rest of the world. The latter will be particularly important for International contribution (②) and international connectivity (③), discussed in 3.2 and 3.3.

Digital infrastructure measures the technological backbone that financial operations depend on. Key indicators include internet bandwidth and latency to major financial centers; data center capacity, redundancy, and security; the availability and quality of cloud computing infrastructure accessible to financial institutions; and the uptime and throughput of domestic payment systems. As financial services become increasingly digital, the quality of digital infrastructure has shifted from a supporting factor to a core differentiator.

Physical infrastructure encompasses the tangible operational environment. This includes the quality and availability of commercial real estate suitable for financial institutions; urban transport infrastructure that affects daily operational efficiency and professionals' commuting times; the reliability of the power supply and utilities; and the overall standard of urban services. While less visible than digital infrastructure, deficiencies in physical infrastructure create operational frictions that accumulate over time.

International transport connectivity captures the ease of physical access to and from the center. Relevant indicators include the number of direct flight routes to major financial centers and key markets; flight frequency and reliability; airport quality and processing efficiency; and, where applicable, high-speed rail connections. International transport connectivity matters for both business travel and the center's attractiveness to internationally mobile professionals. Centers with poor connectivity face a structural disadvantage in maintaining face-to-face relationships, which remain important in financial services notwithstanding digitalization.

Data governance and digital regulatory frameworks have become an enabler in their own right as financial services increasingly depend on data flows. This includes data protection legislation and its compatibility with cross-border data transfers; cybersecurity requirements and incident response frameworks; cloud computing policies for financial institutions, particularly regarding data localization requirements; digital identity and electronic signature frameworks; and the regulatory treatment of emerging technologies such as artificial intelligence and distributed ledger technology.

Time zone positioning is a structural given rather than a policy variable, but it is a genuine enabler. A center's position within the global time zone structure determines which other major markets it overlaps with during business hours. London's enduring advantage partly rests on its ability to bridge Asian and American trading hours. For centers in less favorable time zones, the question becomes whether they compensate by extending trading hours, improving technological connectivity, or focusing strategically on markets within their natural time zone window. Time zone positioning cannot be improved through policy, but it should be acknowledged in the dashboard as a structural parameter that shapes what is achievable.

2.4 Talent Environment

The talent environment determines the center's ability to attract, develop, and retain the human capital on which all financial center activity depends. It encompasses both the existing stock of talent and the mechanisms through which that stock is replenished and augmented. The [World Alliance of International Financial Centers](#) compiled best practices from its members, which form the basis of our considerations. (WAIFC, 2025)

Human capital stock measures the current depth and quality of the available workforce. Relevant indicators include the number of financial services professionals relative to the center's size; the breadth of expertise across financial sub-sectors (banking, insurance, asset management, capital markets, FinTech); the availability of specialized professional services (legal, accounting, actuarial, compliance); and the presence of professionals with international experience and multilingual capabilities. The human capital stock reflects decades of accumulated investment. It is one of the most significant barriers to entry for aspiring financial centers, but also a source of constant poaching worldwide.

Education and training infrastructure captures the center's capacity to produce and replenish its talent. This includes the presence and quality of universities with strong programs in finance, economics, law, and business; specialized professional training institutes; industry certification bodies; and continuing professional development frameworks. Centers that depend entirely on importing talent are structurally more vulnerable than those that also produce it locally, because imported talent is mobile and can leave when conditions change.

Immigration and talent mobility regime measures how easily the center can attract and retain international professionals: a distinct enabler, not merely a sub-component of human capital. Key indicators include processing times and approval rates for work visas and residence permits for financial professionals; the availability of fast-track schemes for high-skilled workers; spousal work rights, which frequently influence family relocation decisions; the portability and mutual recognition of professional qualifications; and the ease of obtaining long-term or permanent residence. Leading financial centers have invested heavily in streamlined immigration regimes for financial professionals, and the differences in regime quality are measurable and consequential for talent flows.

Quality of life and liveability determine the center's attractiveness as a place to live, which directly affects its ability to attract and retain internationally mobile talent. Key indicators include personal safety and security; healthcare quality and accessibility; education options, particularly international schools for expatriate families; housing availability and affordability for professional workers; environmental quality; cultural and recreational infrastructure; and overall liveability. Several established indices, [Mercer Quality of Living](#), The [Economist Intelligence Unit Liveability Index](#), and [Monocle Quality of Life Survey](#), provide standardized, comparable data. Quality of life is sometimes treated as peripheral to financial center competitiveness. Still, for a workforce that is internationally mobile and has options, it is a decisive factor in location and retention decisions.

Professional qualification recognition captures whether qualifications earned elsewhere are recognized and usable in the center. This includes the recognition of foreign law degrees and admission to the local bar; the acceptance of international accounting and audit qualifications; the recognition of foreign financial regulatory certifications; and bilateral or multilateral agreements on the equivalence of professional qualifications. Centers that impose burdensome re-qualification requirements deter

international professionals, while those with streamlined recognition processes lower the barriers to talent inflow.

2.5 Implications for Measurement

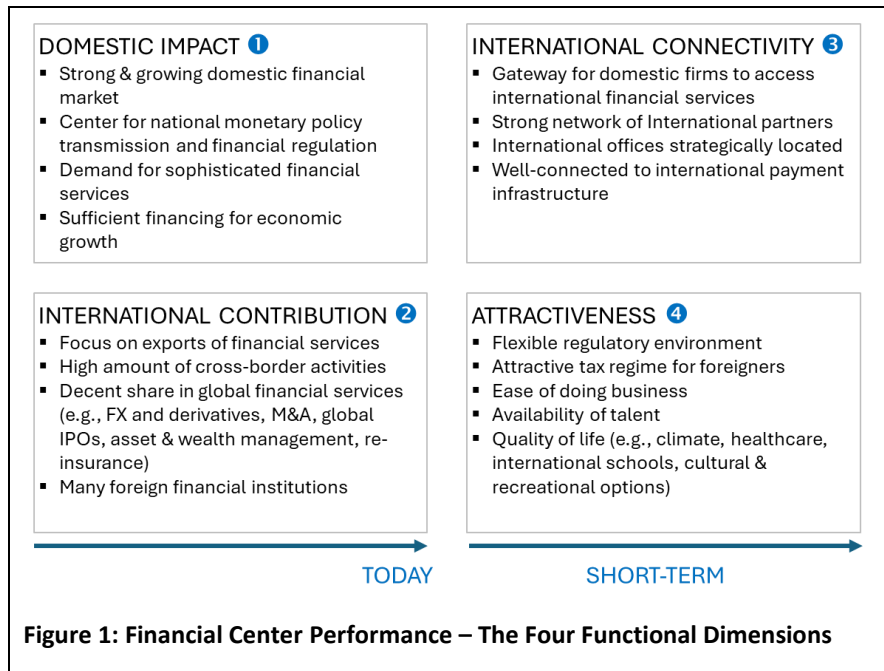
The four clusters serve different diagnostic purposes. The institutional framework is the most fundamental. Weaknesses here undermine everything else, and improvements are typically slow and require sustained political commitment. The economic framework is partly policy-driven and partly exogenous; tax and market access architecture can be adjusted more rapidly than macroeconomic stability. Infrastructure and connectivity involve long-term investment with significant lead times. The talent environment reflects both accumulated history and current policy choices.

For the diagnostic dashboard, presented in Section 6, enabling conditions should be reported at the cluster level, with patterns across clusters providing diagnostic insight. A center with strong institutional and economic frameworks but weak infrastructure may be constrained by underinvestment in physical and digital capital. Conversely, a center with excellent infrastructure but a weak institutional framework may be operationally attractive without the governance credibility required for international trust. Similarly, a center with robust frameworks but a restrictive talent mobility regime may struggle to translate structural advantages into functional performance due to difficulties attracting the necessary talent.

A key characteristic of enabling conditions is their temporal dimension. As they precede functional performance, changes in enabling conditions anticipate and predict shifts in the four functional dimensions. For example, a decline in regulatory quality may reduce attractiveness and connectivity over time. Conversely, improvements in market access architecture or immigration regimes create latent potential that can gradually enhance international performance. Therefore, the dashboard should track both the current status and the trajectory of enabling conditions, as the rate and direction of change may offer more strategic insight than absolute levels.

3. The Four Functional Dimensions

The framework rests on four core dimensions that describe what a financial center contributes. Together, they span two axes: the scope of contribution (national versus international) and the directionality of flows (inward-facing versus outward-facing).



3.1 Domestic Impact

Domestic impact (①) captures the financial center’s role in serving the domestic economy. This includes the provision of banking, insurance, and capital market services to national enterprises and households; the center’s share of national GDP, employment, and tax revenue; and its function as the primary locus of monetary policy transmission and financial regulation within the country.

The national contribution is the foundational layer. Without a critical mass of domestic financial activity, a center lacks the institutional depth, talent pool, and market infrastructure on which international functions are built. Even the most globally oriented centers derive a substantial portion of their strength from serving large domestic economies.

3.2 International Contribution

International contribution (②) measures the center’s role in facilitating cross-border financial activity. This encompasses the volume and value of international transactions processed through the center; its share in global markets for foreign exchange, derivatives, cross-border lending, asset management, and insurance; and its contribution to international capital allocation, including the intermediation of savings and investment across jurisdictions.

The international contribution captures the center's significance beyond its national borders. A center may be domestically important but internationally marginal, or it may punch well above its national economic weight in specific international market segments.

3.3 International Connectivity

International connectivity (③) captures the center's role as a gateway through which domestic firms access international financial services. This outward-facing, centrifugal function describes the extent to which national enterprises can reach global capital markets, international insurance capacity, cross-border payment systems, and foreign investment opportunities through their domestic financial center.

Connectivity can be assessed through the breadth and depth of correspondent banking relationships; the availability of international capital market access for domestic issuers; the range of international financial products and services accessible through locally present institutions; and the integration of the center into global payment, clearing, and settlement infrastructure.

A center with strong connectivity serves as a force multiplier for the national economy, enabling domestic enterprises to operate internationally without relocating their financial relationships abroad.

3.4 Attractiveness

Attractiveness (④) refers to the center's capacity to attract foreign financial institutions and foreign enterprises seeking financial services. This centripetal force reflects the center's pull on international capital, talent, and institutional presence.

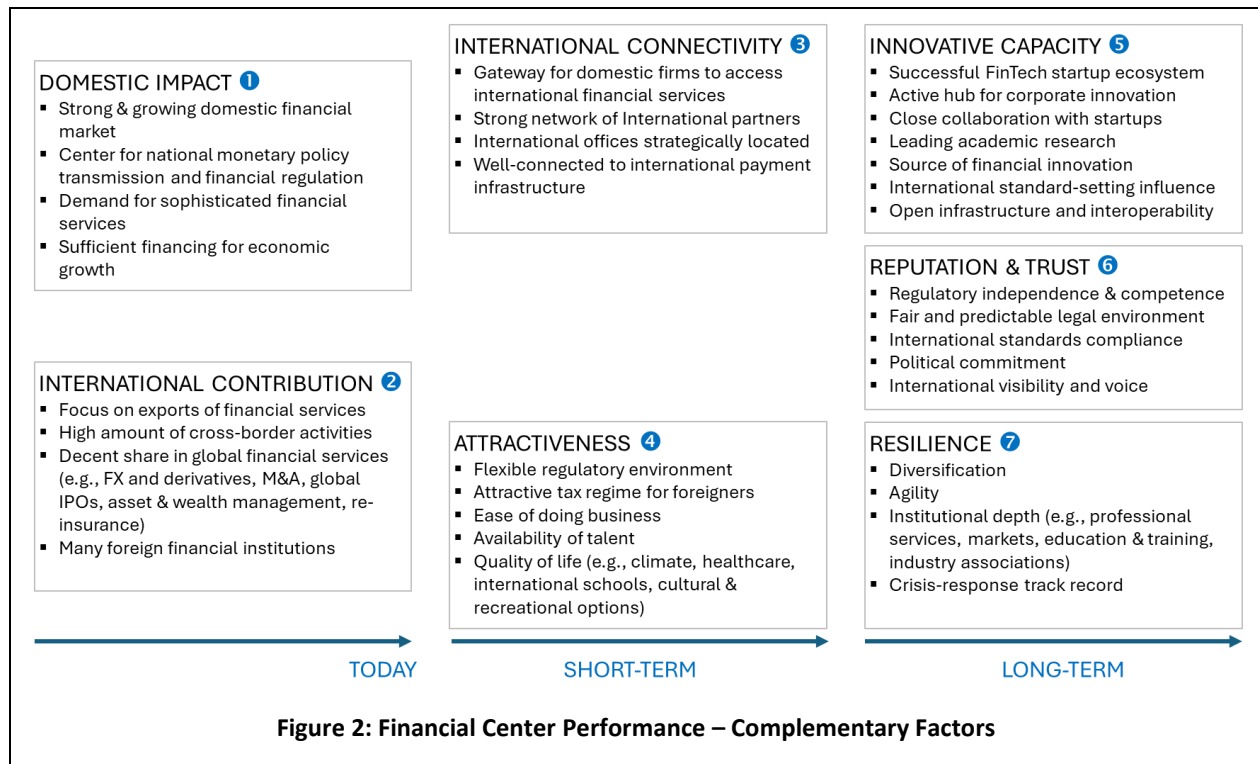
Attractiveness depends on the flexibility of the regulatory framework; the tax framework for international companies and professionals, including double tax treaties; ease of doing business; the availability of domestic and international talent; and the quality of life, including climate, healthcare, international schools, and cultural and recreational options.

Attractiveness can be measured through the number and growth rate of foreign financial institutions with operational presence in the center; the volume of inward foreign direct investment into the financial sector; licensing activity for foreign firms; and the extent to which foreign non-financial corporations choose the center as a hub for treasury, capital-raising, or risk management functions.

Attractiveness is related to, but distinct from, international contribution. A center may process large international volumes without being a significant destination for foreign institutional presence (functioning as a pass-through), or it may host many foreign institutions that primarily serve local or regional markets rather than generating international flows.

4. Complementary Factors

The four functional dimensions describe what a financial center delivers. A complete assessment of performance also requires consideration of factors that amplify or safeguard this performance.



4.1 Innovation Capacity

Innovation capacity (5) refers to the center's ability to develop new financial products, regulatory approaches, market structures, or business models that are subsequently adopted elsewhere. This generative function goes beyond serving existing demand. It creates new possibilities.

Historical examples illustrate the concept, e.g., London's role in developing the Eurodollar market. More recently, centers have competed to establish regulatory sandboxes, tokenization frameworks, and approaches to artificial intelligence in financial services.

Innovation capacity is difficult to measure directly, but proxies include the number and value of FinTech firms and investments; the adoption rate of regulatory innovations by other jurisdictions; patent and intellectual property activity in financial technology; and the center's role in setting international standards. We will look at this in detail in Section 7.

4.2 Reputation and Trust

Reputation and trust (🕒) are cumulative, slow-building, and easily damaged assets that act as a multiplier across all other dimensions. It is closely related to attractiveness but not identical: attractiveness describes revealed preference (who comes), while reputation describes the underlying perception (why they come, or why they stay away).

Some financial centers benefit from historically accumulated trust that exceeds their current functional performance; others suffer reputational deficits that constrain their development despite strong fundamentals.

Reputation is shaped by the quality of the legal framework, the perceived fairness and efficiency of the judicial system, regulatory credibility, adherence to international standards (including anti-money laundering and tax transparency), and the stakeholders' commitment to maintaining the center's integrity.

While reputation and trust are usually measured through global surveys of financial practitioners, we will discuss an alternative approach in Section 8.

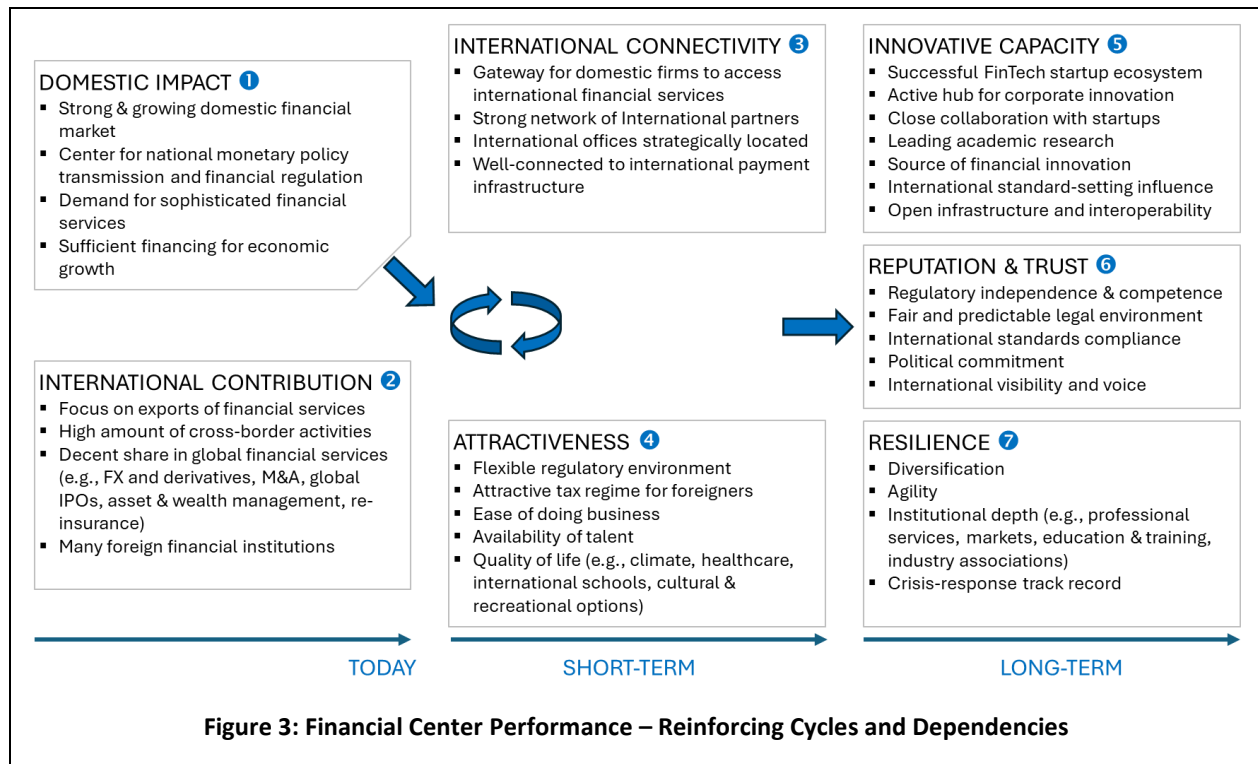
4.3 Resilience

Resilience (🛡️) describes the center's ability to maintain functionality under stress, such as financial crises, geopolitical shocks, pandemics, or technological disruptions. A center may perform well on all four functional dimensions in normal conditions but prove fragile when tested.

Resilience can be assessed through the diversification of the financial sector across sub-sectors and client segments; the depth and liquidity of core markets under stress conditions; the quality of crisis management frameworks, including resolution regimes and lender-of-last-resort arrangements; the redundancy and security of critical infrastructure, tested frequently; and the historical track record of upholding operational continuity through disruptions. We will take this up in more detail in Section 8.

5. How the Dimensions Interact

The dimensions described above are not independent. Understanding their interdependencies is essential for both diagnosis and strategy.



5.1 Reinforcing Cycles

The four functional dimensions form self-reinforcing loops. Stronger international connectivity (③) increases attractiveness to foreign institutions (④), because these institutions seek access to a well-connected hub. A growing presence of foreign institutions, in turn, increases the center's international contribution (②), which further deepens connectivity. The national impact (①) provides the foundation: without a critical mass of domestic activity, there is no substrate for international functions.

These reinforcing dynamics explain two characteristic features of financial center geography: the tendency toward concentration (successful centers attract more activity, which makes them more successful) and the difficulty of building a new center from scratch (the virtuous cycle must be initiated before it can sustain itself).

The world economy continues to grow, and ever more actors connect to financial services, even of the simplest kinds. The financial services pie is growing.

5.2 Hierarchical Dependencies

The factors are not equally weighted over time. Enabling conditions (❶) are upstream; they are necessary prerequisites. The national impact builds on these as the foundational layer. International functions (❷, ❸, ❹) presuppose a functioning national base and then reinforce each other. Innovation capacity (❺) and reputation (❻) act as multipliers at every level. Resilience (❼) functions as an insurance mechanism that protects the entire system.

This hierarchy has practical implications for strategy: a center that attempts to develop international functions without first securing its enabling conditions and national base is building on sand. Conversely, a center with strong foundations but underdeveloped international functions has unrealized potential that targeted interventions can unlock.

5.3 Tensions and Trade-offs

Not all interactions are mutually reinforcing. Important tensions exist. Rigorous regulation may reduce short-term attractiveness (❹) while strengthening reputation (❻) and resilience (❼) in the longer term. A center that specializes heavily in international activity (❷, ❸, ❹) may lose its domestic anchoring (❶), undermining political legitimacy and societal support. Conversely, an excessively inward-looking orientation erodes international competitiveness over time.

Recognizing these trade-offs is critical for strategy formulation. There is no single optimum. The appropriate balance depends on the center's stage of development, its national economic context, and its strategic ambition.

The strategies to be deployed must remain dynamic; adaptation and mid-course adjustments are essential leadership qualities.

6. The Diagnostic Dashboard

The first practical instrument derived from this framework is a diagnostic dashboard that provides each financial center with a structured self-assessment across the four functional dimensions and the complementary factors.

The dashboard is designed for internal use by financial center stakeholders: regulators, development agencies, industry associations, and policymakers. Its purpose is not to produce a single score or a public ranking, but to identify the center's specific profile: where it is strong, where gaps exist, and where the most significant development opportunities lie.

For each dimension, the dashboard would present a set of quantitative indicators alongside qualitative assessments. The selection of indicators must balance comprehensiveness with data availability across a diverse set of financial centers, from global hubs to regional players.

6.1 The Four Functional Dimensions

Candidate indicators for the national contribution include financial sector share of GDP, financial sector employment, tax revenue from financial services, and domestic credit depth. Furthermore, bank assets/GDP, treasury market assets/GDP, equity market cap/GDP, and insurance assets/GDP, as well as government-held FX reserves and gold.

For the international contribution: cross-border financial flows (data from the [Bank of International Settlements](#)), share in key global markets (foreign exchange, derivatives, asset management), and international transaction volumes.

For attractiveness: number and growth of foreign financial institutions, foreign direct investment in the financial sector, and new license issuance to foreign firms.

For connectivity: correspondent banking relationships, international capital market access for domestic issuers, and integration into global payment and settlement systems.

The diagnostic value lies particularly in the discrepancies between dimensions. A center with high attractiveness but low international contribution may face integration problems. Foreign institutions are present but insufficiently embedded in international flows, suggesting an enclave structure. A center with a strong international contribution but declining attractiveness may be consuming accumulated capital without replenishing it. These diagnostic patterns are more informative than any aggregate score.

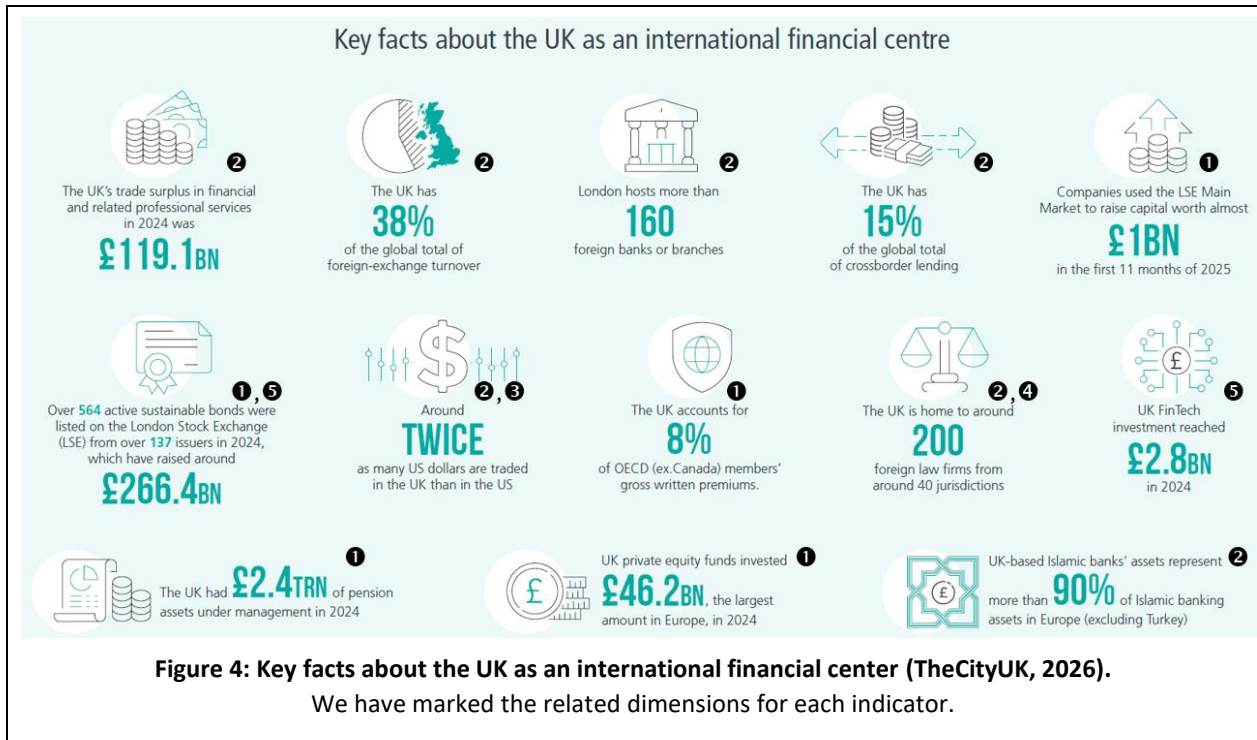
6.2 Examples

For the dashboard examples, we need to restrict ourselves to publicly available ones. It is reasonable to assume that financial centers that provide comprehensive public dashboards will maintain even more detailed internal dashboards. They will not necessarily show weaker areas and include underperforming indicators in their marketing materials.

We have selected two examples from the World Alliance membership:

TheCityUK publishes key facts annually. Its report “highlights the depth and diversity of the UK-based industry’s global contribution.” (TheCityUK, 2026)

The main dashboard on page 3 of the report features a selection of indicators covering dimensions ❶ to ❺ (see Figure 4), but the focus is clearly on the international contribution (❷). This makes sense for London, given its business mix.



Interestingly, the full report also covers “the UK’s role in specialist financial services,” highlighting Green finance, Islamic finance, FinTech, and Maritime finance (pages 16-19), jointly with a large number of related indicators.

It is also worth noting that the report barely touches on enabling conditions. For a financial center like London, it is taken for granted that it performs exceptionally well in this category.

The report lists key qualifiers for attractiveness (❹) as well as reputation and trust (❻): “Regulatory and supervisory coherence, tax policy, deep pools of talent, sustainable finance policy commitment, openness to technology and innovation, and political recognition and support.” Still, it does not provide any measures for them.

Looking at the complementary factors, the full report covers innovative capacity (❺) in more detail. The section “Financial services education and training” on pages 20 and 21 states, for instance, “In relation to the QS ranking 2025, three UK universities are part of the global top 10 higher-level institutions specialized in accounting and finance courses. Seven UK universities lead the top 10 higher-level institutions with a great reputation in accounting and finance courses in Europe.” Resilience (❼) is only mentioned indirectly.

Luxembourg for Finance regularly updates its “key figures,” providing a dashboard of key indicators for the general public (Luxembourg for Finance, 2025).

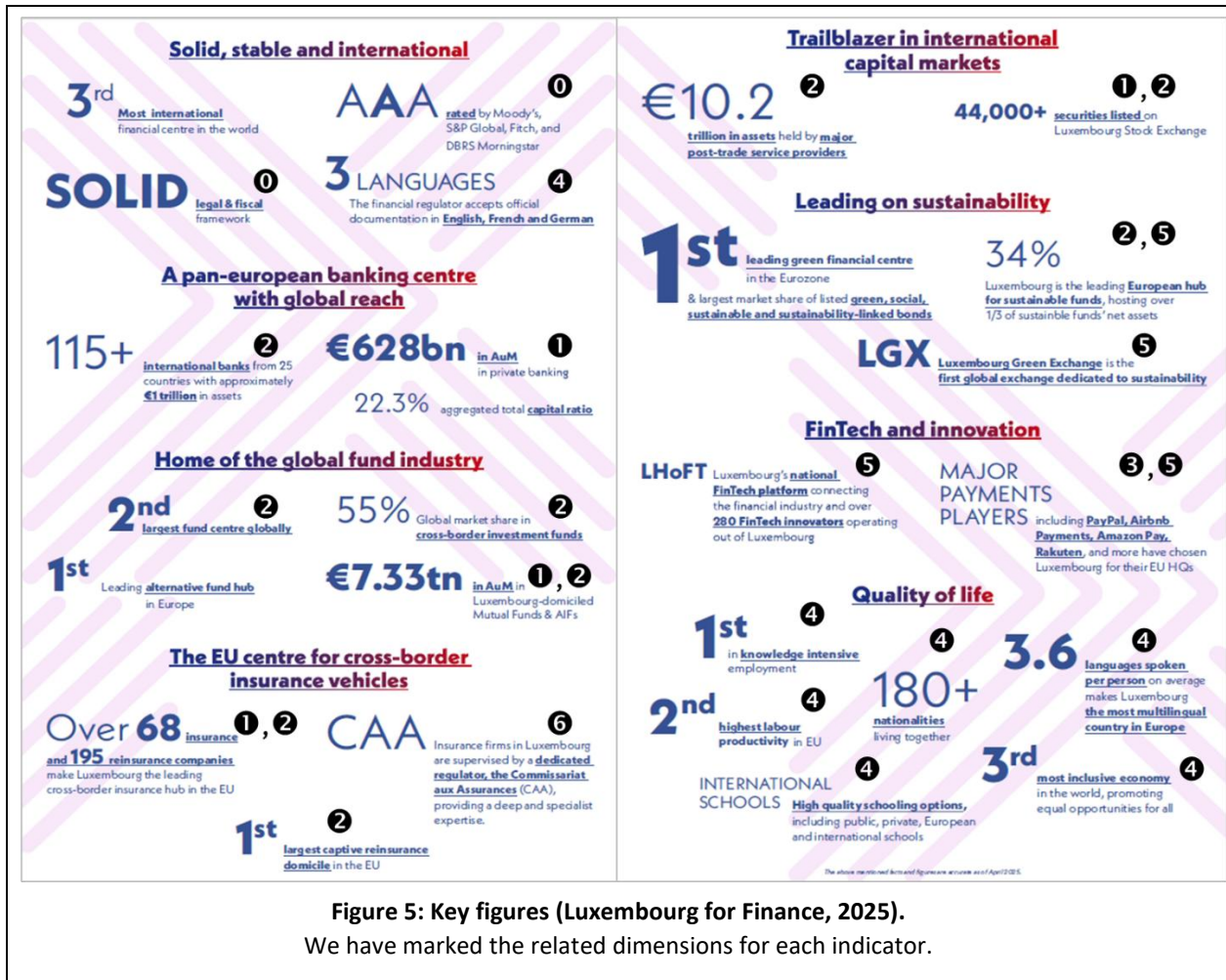


Figure 5: Key figures (Luxembourg for Finance, 2025).

We have marked the related dimensions for each indicator.

The dashboard features a selection of indicators covering dimensions ① to ⑥ (see Figure 5), only resilience (⑦) is missing. The focus is on the international contribution (②) and attractiveness (④), which fit well with Luxembourg’s role as the leading cross-border investment fund center and an attractive location for corporates to finance their European and global activities.

Complementary factors highlight Luxembourg’s innovation capacity (⑤), particularly in areas such as financial technologies, payments, and sustainability.

7. Measuring Innovation Capacity

Innovation capacity is a critical determinant of a financial center's long-term competitiveness. Centers that generate and diffuse innovations (new products, regulatory models, technologies, or market structures) shape the industry's future and attract the talent and investment that follow. Centers that merely adopt innovations developed elsewhere remain dependent on external dynamism.

That said, innovation is not restricted to happening only locally. Given sufficient international connectivity (⑤), e.g., among universities, research institutes, or startup-hubs, innovation can also happen globally.

In this section, when we talk about innovation, we refer to innovation in the financial industry. The financial industry and financial centers also have a role to play in financing innovation across the country's industries, which is part of the domestic impact (①).

A comprehensive measurement of innovation capacity must cover the full innovation cycle, from the generation of knowledge through its commercial application and regulatory enablement to its adoption within the center and diffusion beyond it. Most existing frameworks focus heavily on the creation side. They count startups and venture capital while neglecting the equally important question of whether innovations are actually adopted and exported. The framework proposed here addresses both halves of the cycle through four categories.

7.1 Knowledge Generation

The first category captures the intellectual raw material from which financial innovation emerges. It assesses whether the center produces the ideas and the people that drive innovation in financial services.

Financial research output measures the quality and volume of research produced by universities, research institutes, and think tanks located in the center. Relevant indicators include the number of publications in leading finance, economics, and financial technology journals; citation impact; the presence of research centers with an explicit focus on financial services, regulation, or technology; and the extent to which research produced in the center informs policy debates and industry practice internationally.

Intellectual property activity captures innovation outputs that are formally protected or registered. Patents in financial technology, covering areas such as algorithmic trading, blockchain applications, risk modeling, regulatory technology, and payment systems, provide a quantifiable proxy for the center's technological inventiveness. While patent counts have well-known limitations as indicators of innovation, they offer a standardized, cross-country-comparable metric that can be tracked over time.

Specialized human capital production assesses the center's capacity to generate innovation-ready talent. This goes beyond the general human capital stock (which is captured under enabling conditions) to focus specifically on the pipeline for innovation: specialised master's programmes in financial technology, quantitative finance, or financial regulation; data science and artificial intelligence programmes with financial services applications; coding bootcamps and technical training oriented toward the financial industry; and the center's ability to attract international students and researchers in these fields.

7.2 Entrepreneurial Ecosystem

The second category captures the translation of knowledge into commercial ventures. It measures whether the center converts ideas into viable businesses, products, and services.

FinTech company formation and growth are the most visible indicators. Relevant metrics include the number of startups founded and operating in the center; the number and valuation of high-growth firms, including but not limited to unicorns; survival and scaling rates over time; and the breadth of the FinTech sector across segments such as payments, lending, insurance technology, wealth management technology, and regulatory technology. A center with many startups but few that scale beyond the early stage has a different innovation profile and a different set of challenges than one that consistently produces companies capable of reaching international scale.

Investment activity measures the capital available to finance innovation. Venture capital and growth equity investment in financial technology, measured both in absolute terms and as a share of the total investment market, indicates investor confidence in the center's innovation ecosystem. The presence of specialized financial technology investors, rather than generalist funds, signals deeper ecosystem maturity. While the availability of sufficient capital is an important enabler, this capital can also run amok, as we witnessed a few times in recent decades, for instance, during the [dot-com bubble of 1995-2001](#). In those times, financial markets waste a huge amount of capital.

Corporate innovation by incumbents captures a dimension that FinTech metrics alone miss. A large share of financial innovation occurs within established institutions: new products, new risk models, and digital transformation of existing service delivery. Relevant indicators include research and development expenditure by financial institutions headquartered in or operating within the center, the number and activity levels of in-house innovation laboratories, and corporate venture capital programs. A center where innovation is driven solely by startups, rather than embedded in incumbent practice, has a shallower and more fragile innovation ecosystem than one where entrepreneurial and institutional innovation reinforce each other.

Collaboration density assesses the connectivity of the innovation ecosystem. Financial services innovation increasingly occurs at the interface between startups, incumbents, regulators, and academic institutions. The density of accelerator and incubator programs run by financial institutions, the frequency and quality of regulatory-industry working groups on emerging topics, and the extent of university-industry research partnerships are all relevant indicators. Isolated excellence in any one actor type is less generative than a well-connected ecosystem in which knowledge, talent, and capital circulate among all participants.

7.3 Regulatory Innovation and Adaptation

The third category merits separate treatment because financial services innovation is shaped by regulation more profoundly than innovation in almost any other sector. Regulation can enable, channel, constrain, or extinguish innovation. Regulatory innovation is itself a competitive differentiator for financial centers.

New framework development measures the rate at which the center introduces regulatory frameworks for emerging activities. Relevant examples include FinTech licensing regimes, digital asset and tokenization frameworks, open banking mandates, regulatory approaches to artificial intelligence in financial services, and sustainable finance disclosure and classification systems. The question is not merely whether the center regulates these areas, but whether it does so early and in ways that other jurisdictions subsequently

adopt or adapt. While financial centers should avoid being laggards, it is not always advisable to be the pioneer. Following others and adjusting for what worked and what went wrong that others had to pay for.

Experimental mechanisms capture the center's willingness and capacity to test new regulatory approaches under controlled conditions. Regulatory sandboxes, innovation hubs, and structured testing environments allow both regulators and market participants to explore new models without full systemic exposure. The availability, scope, and utilization rate of such mechanisms indicate the regulatory culture's orientation toward experimentation.

Regulatory velocity measures the time from the identification of a regulatory need to effective implementation. This is distinct from regulatory responsiveness under the resilience framework (which focuses on crisis adaptation): here, the emphasis is on how quickly the center develops forward-looking frameworks for emerging opportunities. A center that identifies a new regulatory need but takes years to implement a response loses innovators to faster-moving jurisdictions.

International standard-setting influence assesses the center's role in shaping the global regulatory architecture. Participation and leadership in bodies such as [IOSCO](#), the [Financial Stability Board](#), the [Basel Committee](#) on Banking Supervision, the [Financial Action Task Force](#), or the [International Sustainability Standards Board](#) (ISSB); the frequency with which the center's regulatory models are adopted or referenced by other jurisdictions; and the center's role in developing international standards for emerging areas such as digital assets, climate risk, and artificial intelligence governance. A center that exports regulatory models exercises a form of soft power, reinforcing its attractiveness and connectivity.

7.4 Adoption and Diffusion

The fourth category addresses the dimension most often neglected in innovation measurement: whether innovations developed in the center are actually taken up, both domestically and internationally. A center can produce many patents, FinTechs, and regulatory frameworks while remaining an innovation laboratory whose outputs are commercialized or implemented elsewhere. This category measures the center's ability to close the cycle from invention to impact.

Domestic adoption rate measures the speed and breadth with which innovations are taken up by the center's own financial sector. Relevant indicators include the penetration rate of digital financial services among consumers and enterprises; the share of financial transactions processed through new technology platforms; the integration of FinTech solutions into incumbent service delivery; and the uptake of new regulatory frameworks by market participants. A center where innovation remains confined to pilot projects or niche applications has not yet converted inventiveness into systemic impact.

International diffusion captures the extent to which innovations originating in the center are replicated, adopted, or adapted by other jurisdictions. Singapore's regulatory sandbox model, being adopted across dozens of countries, and a center's sustainable finance taxonomy, used as a reference point by other regulators, are examples of innovation export. This dimension measures whether the center functions as a laboratory for the global financial system: a role that reinforces its reputation, attractiveness, and international connectivity.

Open infrastructure and interoperability assess the availability of shared resources that lower barriers to adopting innovation. Open banking APIs, standardized data-sharing frameworks, sandbox environments accessible to a broad range of participants, and testing facilities that enable integration with existing

infrastructure all facilitate scaling innovations from prototype to production. The quality of this open infrastructure determines how easily innovations can be adopted at scale, both within the center and beyond it.

7.5 Diagnostic Patterns

As with resilience, the diagnostic value of measuring innovation capacity lies in patterns across categories rather than in any single aggregate score.

Characteristic profiles include:

- A financial center strong in knowledge generation but weak in the entrepreneurial ecosystem is producing research and talent that is commercialized elsewhere: an innovation drain that indicates a missing link between academia and industry.
- A financial center with a vibrant entrepreneurial ecosystem but weak regulatory innovation suggests a market that thrives despite rather than because of its regulatory environment, which limits scalability and may drive mature firms to relocate.
- A financial center strong in regulatory innovation but weak in adoption may have well-designed frameworks that the market has not yet responded to, possibly because the entrepreneurial ecosystem or the enabling conditions are insufficiently developed.
- A financial center strong in all creation-side categories (7.1 through 7.3) but weak in adoption and diffusion is an innovation laboratory whose outputs benefit other jurisdictions more than itself.

Each pattern implies different strategic interventions. The dashboard should present the four categories separately, allowing each financial center to identify where its innovation cycle breaks down and where targeted investment can yield the greatest returns.

8. Measuring Reputation and Trust

Reputation occupies a distinctive position in the framework. Unlike the functional dimensions, which describe what a center does, and unlike the other complementary factors, which describe structural conditions, reputation sits at the boundary between objective fact and subjective perception. A center's compliance record is verifiable; its reputation is what people believe about that record. The two can diverge significantly in both directions.

Some centers enjoy reputational capital that exceeds their current performance, inherited trust from decades of institutional stability, and prudent governance. Others have reformed substantially but still carry a reputational deficit from past failings. The measurement framework must therefore capture both the objective foundations of trust and the subjective overlay that determines how these foundations are perceived and acted upon.

Reputation also differs from the other complementary factors in its temporal dynamics. It accumulates slowly but can be destroyed rapidly. This asymmetry means that the rate and direction of change in reputation can be more strategically significant than its absolute level at any given point. The measurement approach must account for this by tracking trajectories alongside current assessments.

8.1 Institutional Trustworthiness

Institutional trustworthiness is the bedrock of reputation: the actual quality of governance that trust should, in principle, reflect. It assesses whether the center's institutions merit the confidence placed in them.

Regulatory independence and competence assess the governance structure, resourcing, and operational effectiveness of the financial regulatory authorities. Relevant indicators include the de jure and de facto independence of the regulator from political interference; the adequacy of regulatory budgets and staffing relative to the scope of supervised activity; the frequency and quality of enforcement actions; and the outcomes of international peer reviews, most notably the [Financial Sector Assessment Program](#) (FSAP) conducted jointly by the IMF and the World Bank. A regulator that is well-resourced, independent, and visibly active in enforcement builds credibility through demonstrated competence.

Judicial quality for financial matters measures the reliability of the legal system in relation to financial activity. Key indicators include the availability of specialized financial or commercial courts or tribunals; the average duration of commercial dispute resolution; the predictability of judicial outcomes in comparable cases; the enforceability of contracts and arbitration awards; and the recognition of the center's legal framework as an acceptable governing law for international financial contracts. Judicial quality is a particularly important component because it underpins the enforceability of all financial commitments made within or through the center.

Regulatory process transparency assesses the predictability and consultative quality of legislative and regulatory processes. Centers that provide adequate notice before regulatory changes, engage systematically with industry stakeholders during the drafting process, apply rules consistently once enacted, and avoid retroactive amendments build a reputation for reliability. Predictability is valued by international financial institutions at least as much as the content of any individual regulation, because it enables long-term planning and investment commitments.

Political commitment to the financial center assesses whether the government treats it as a strategic national asset, both in rhetoric and in practice. Relevant evidence includes dedicated institutional mandates for financial center development, budget allocations for financial sector infrastructure, the consistency of policy orientation across electoral cycles, and the degree to which financial center interests are represented in trade negotiations and international diplomacy. A center whose political environment is marked by frequent policy reversals, or whose government views the financial sector primarily as a source of tax revenue rather than a strategic asset, faces structural credibility constraints.

8.2 International Standards Compliance

International standards compliance is the most objectively measurable component of reputation and the one most directly consequential for the center's standing in the global regulatory community. It assesses whether the center complies with the norms that the international system collectively enforces. For the [World Alliance of International Financial Centers](#), for instance, a certain level of compliance with international standards is a requirement for membership.

Anti-money laundering and counter-terrorist financing (AML/CFT) is assessed primarily through mutual evaluations conducted under the auspices of the [Financial Action Task Force](#) (FATF) and its regional bodies. The outcomes of these evaluations, both technical compliance ratings and effectiveness assessments, provide a standardized, internationally recognized measure. Inclusion on or removal from the [FATF grey list](#) has immediate and tangible consequences for the center, including increased compliance costs for resident institutions, withdrawal of correspondent banking relationships, and reputational damage that can take years to reverse.

Tax transparency and information exchange are evaluated through the [OECD Global Forum on Transparency and Exchange of Information for Tax Purposes](#). Peer review ratings on both the exchange of information on request and the automatic exchange under the [Common Reporting Standard](#) (CRS) provide a comparable, internationally recognized assessment. Compliance in this area has become a threshold requirement for legitimacy in the international financial community; non-compliance increasingly triggers both formal consequences (loss of market access, enhanced due diligence requirements) and informal ones (reputational contagion).

Adherence to prudential standards involves compliance with the international frameworks established by the [Basel Committee on Banking Supervision](#), [IOSCO](#), and the [International Association of Insurance Supervisors](#) (IAIS). While compliance is typically assessed at the national rather than financial center level, the center's reputation is directly affected by the quality and timeliness of national implementation. A jurisdiction that is slow to adopt international standards, or that implements them in a way that is perceived as weakening their intent, incurs a reputational cost that affects the financial center's standing. An excellent source is the [FSB's Compendium of Standards](#).

Watchlist and grey list status provide a binary but high-impact indicator. Inclusion on a negative list, whether maintained by the FATF, the EU, or other bodies, creates an immediate and measurable impact on the center's functional dimensions: correspondent banking relationships contract, compliance costs for institutions operating from the center increase, and the center's attractiveness to new entrants declines. The trajectory of list status, whether the center is moving toward inclusion, has recently been removed, or has never been listed, is itself a reputational signal.

8.3 Market Confidence Signals

Market confidence signals move the assessment from what the center does to how the market responds. They capture revealed trust through observable market behavior rather than stated opinion, providing a check on whether institutional credibility and standards compliance translate into actual confidence among market participants.

Risk pricing offers a market-based measure of institutional trust. The risk premium demanded on sovereign debt and on debt issued by financial institutions headquartered in the center, relative to comparable jurisdictions with similar economic fundamentals, reflects the market's aggregate assessment of institutional quality, regulatory stability, and political reliability. Changes in risk pricing over time can serve as an early warning indicator of shifting confidence, often preceding more visible manifestations of reputational change.

Institutional behavior under stress reveals confidence more accurately than any survey. When international financial institutions face a choice between maintaining, expanding, or reducing their presence in a center during a period of stress (financial, geopolitical, or reputational), their collective decisions provide a powerful signal. A center from which institutions withdraw at the first sign of difficulty has a revealed confidence deficit regardless of what perception surveys indicate. Conversely, a center that retains or attracts institutions during turbulent periods demonstrates durable trust. We will elaborate on this further in Section 9 on Resilience.

Correspondent banking trajectory is one of the clearest market signals of evolving trust. The sustained loss of correspondent banking relationships, driven by international banks' de-risking decisions, suggests that the cost-benefit calculus of maintaining connections with the center has shifted in favor of de-risking. Because correspondent banking decisions aggregate large amounts of due diligence information and compliance judgment, the trend in these relationships functions as a composite market confidence indicator.

Governing law preference captures a subtle but revealing dimension of trust. The willingness of international counterparties to accept the center's legal jurisdiction as the governing law in cross-border financial contracts reflects deep confidence in the judicial system, regulatory stability, and enforceability of commitments. Centers whose law is frequently chosen for international contracts, most notably English law and New York law, benefit from a compounding reputational advantage. Emerging centers that aspire to this status can track trends in governing-law selections as an indicator of growing international confidence.

8.4 Perception and Narrative

The fourth component captures the most subjective yet consequential dimension: what people believe about the center and whether those beliefs accurately reflect underlying reality. Perception shapes behavior independently of fundamentals, and managing the narrative is therefore a legitimate strategic concern.

Survey-based reputation assessments measure the center's standing as perceived by financial professionals, institutional investors, and corporate decision-makers. The [Global Financial Centres Index](#) (GFCI) perception data, despite the limitations of survey methodology, provides a useful input as one

measure among several. Sector-specific surveys, such as those conducted among asset managers, insurers, or corporate treasurers, may provide more targeted insights than general financial center rankings. Please refer to the first part of our series for more details on the GFCI and other financial center indicators. (Biedermann, 2026)

Media sentiment captures the tone and frequency of international media coverage of the center as a financial hub. Whether coverage is dominated by positive narratives (innovation, growth, stability, reform) or negative ones (scandal, regulatory failure, opacity, illicit finance) shapes stakeholders' perceptions, even if they never directly interact with the center. Systematic media sentiment analysis, tracking coverage volume and valence over time, provides a leading indicator of reputational shifts that may subsequently affect investment and location decisions.

Narrative clarity and coherence assess whether the center has an articulated, internally consistent, and internationally recognized value proposition. Some centers are perceived through clear, distinctive narratives. Others suffer from vague or outdated perceptions that do not reflect their current capabilities. The gap between the center's actual profile and its perceived profile is itself a diagnostic indicator: a large gap suggests either a communication failure or a case where reality has yet to catch up with aspiration.

International visibility and voice measure the center's presence and influence in international policy discussions, conferences, industry events, and thought leadership. Participation in the global conversation about the future of financial services, through publications, speaking roles, hosting international events, and active contributions to policy debates, shapes perceptions even when it does not directly drive short-term decisions. Centers that are absent from these discussions are, over time, absent from consideration.

To achieve this, we highly recommend that every financial center have a sustained communications policy. All its services should be regularly forwarded through reliable media outlets – those that the center leadership uses and trusts. Furthermore, all stakeholders should speak with one voice, coordinated by the center's communications team.

8.5 Diagnostic Patterns

As with the other complementary factors, the diagnostic value of reputation measurement lies in the pattern across the four components.

A center with strong institutional credibility and standards compliance, but weak market confidence and perception, has a *communication problem*. The substance is there, but the narrative has not caught up. This is a common pattern among reformed centers that have substantially improved their regulatory frameworks but have not yet translated improvement into international recognition. The strategic response is targeted international engagement, visibility, and sustained demonstration of the new reality.

A center with strong perception but weakening standards compliance or institutional credibility is *living on borrowed time*. Reputational capital accumulated in the past is being consumed faster than it is replenished. This is a dangerous position because the gap between perception and reality will eventually close, and when it does, the adjustment tends to be abrupt rather than gradual. Reputation erodes slowly while fundamentals deteriorate, but collapses rapidly once a threshold of dissonance is crossed.

A center with strong standards compliance but weak institutional credibility signals *formal compliance without substantive commitment*. The letter of international standards is met. Still, the underlying quality of governance does not support genuine trust. This pattern is sometimes associated with centers that have

been incentivized to improve their formal compliance record, for example, to exit a grey list, without undertaking the deeper institutional reform that would make compliance self-sustaining.

A center strong across all four components has *compounding trust*. Each component reinforces the others, and the center benefits from a reputational premium that acts as a multiplier on its functional dimensions. This compounding effect is one of the principal mechanisms through which leading financial centers maintain their position: trust begets activity, activity generates revenue that funds institutional quality, and institutional quality reinforces trust.

8.6 The Relationship to Attractiveness

The boundary between reputation (a complementary factor) and attractiveness (④) requires explicit clarification. Attractiveness measures revealed outcomes: who comes and what they bring. Reputation explains the underlying motivation: why they come, or why they stay away.

A center can be attractive for reasons unrelated to trust, such as favorable tax treatment, proximity to a key market, specific regulatory permissions, or cost advantages. Conversely, a center with an excellent reputation may be less attractive if it lacks other prerequisites, such as market size, connectivity, or cost competitiveness. The two are correlated but not identical, and distinguishing them allows for a more precise diagnosis. A center whose attractiveness depends primarily on factors other than trust is more vulnerable than one whose attractiveness is grounded in durable reputational strength, because non-trust-based advantages can be replicated or eroded by policy changes elsewhere.

9. Measuring Resilience

Resilience presents a fundamental measurement challenge: it is revealed under stress but must be assessed in normal times. Direct observation is possible only retrospectively, when a crisis has already occurred. For a forward-looking diagnostic framework, resilience must therefore be measured through proxies that capture the mechanisms through which centers absorb, adapt to, and recover from shocks.

Three complementary components, diversification, agility, and institutional depth, together provide a comprehensive proxy structure. Each addresses a distinct failure mode, and their combination produces a resilience assessment that is both analytically grounded and practically useful.

9.1 Diversification: The Structural Buffer

Diversification measures the center's exposure to concentration risk. A well-diversified center can absorb sector-specific, geographic, or policy-driven shocks without systemic impairment. Diversification operates across several layers, each of which can be measured.

Sectoral diversification captures the distribution of financial activity across sub-sectors: banking, insurance, asset management, capital markets, FinTech, and professional services. A center dominated by a single sub-sector is structurally fragile: a downturn in that segment becomes systemic. The [Herfindahl-Hirschman Index](#) (HHI) applied to employment or gross value added across financial sub-sectors provides a clean, comparable metric. A lower HHI indicates a more balanced sectoral structure and, by implication, greater resilience to sector-specific shocks.

Client and counterparty diversification examines the geographic and sectoral origin of the center's international flows. A center whose international contribution (②) or attractiveness (④) depends heavily on a single source region or client type is vulnerable to geopolitical or macroeconomic shocks concentrated in that region. This dimension maps directly onto the framework's centripetal logic: resilience requires that inward flows come from multiple directions rather than through a single dominant corridor.

It goes without saying that client and counterparty diversification also matter for domestic actors. Last but not least, financial innovations and new markets, such as Islamic finance, can offer an additional element of stability because the counterparty relationships are differentiated.

Revenue model diversification assesses whether the center's value proposition rests on a single competitive advantage, such as a favorable tax regime, a specific regulatory treatment, or proximity to a single large market, or on multiple, independent pillars. Centers built on a single regulatory arbitrage are exposed to policy convergence: when other jurisdictions adopt similar frameworks, the advantage erodes. Diversification of the reasons for the center's attractiveness matters as much as diversification of the activities conducted there.

Institutional diversity refers to the mix of institution types present in the center: global banks, regional players, boutique specialists, FinTech firms, and professional service providers. An ecosystem with varied institutional types responds to shocks differently than one dominated by a few large institutions whose simultaneous distress becomes systemic. Institutional diversity also supports faster reallocation of resources after a shock, as different institution types have different risk exposures and recovery trajectories.

9.2 Agility: The Adaptive Capacity

Agility captures something diversification cannot: the speed and effectiveness of adaptive response. A center can be well diversified but institutionally rigid, unable to respond to novel challenges. Conversely, a concentrated center with high agility may pivot successfully when its core activity is disrupted. Agility is harder to measure than diversification, but several proxies are available.

Regulatory responsiveness measures the time between identifying a regulatory need and implementing an effective response. How quickly did the center establish a FinTech licensing framework when digital financial services emerged? How rapidly did it adapt prudential rules to enable remote working during the COVID-19 pandemic? How fast is it developing governance frameworks for artificial intelligence in financial services?

A **regulatory sandbox** is a controlled environment established to understand the opportunities and risks associated with specific innovations and to develop an appropriate regulatory environment to accommodate them effectively. A regulatory sandbox typically involves a temporary regulatory waiver or flexibility, allowing new products, services, or business models to be tested with fewer regulatory constraints. (OECD, 2025)

Regulatory sandboxes are themselves an agility mechanism. They allow controlled experimentation without requiring full systemic commitment to untested approaches. They also help regulators better understand new developments. Regulators cannot anticipate or prejudge something new. They must wait somewhat to see what it is and how the market reacts.

Market structure adaptability describes the speed at which the center's financial ecosystem incorporates new products, technologies, or market segments. Proxies include time-to-market for new financial products, the adoption trajectory of new payment technologies, and the growth rate of emerging sub-sectors such as digital assets or sustainable finance instruments. A center where new market segments develop rapidly signals an ecosystem capable of reconfiguring itself in response to changing demand. Market structure adaptability also depends on public and professional education, linking agility and adaptability with innovation capacity (5).

Crisis response track record is the most direct measure of agility, but it is inherently backward-looking. It examines how the center performed during specific stress events: the 2008 global financial crisis, the COVID-19 pandemic, and geopolitical disruptions. Did transaction volumes hold up? Did institutions maintain or expand their presence? Did the regulatory framework prove adaptable? The limitation is that past crises may not predict future ones, but a consistent pattern of effective crisis management is nonetheless informative.

Decision-making architecture is a qualitative but important indicator. Centers with streamlined governance structures, established public-private dialogue mechanisms, and clear institutional mandates for financial sector development tend to respond faster to emerging challenges. A center where regulatory change requires lengthy parliamentary processes across multiple committees is structurally slower than one where the financial regulator has delegated authority and can act within defined parameters. The governance of the financial center, not just the governance of financial regulation, matters for agility.

9.3 Institutional Depth: The Recovery Capacity

The third component addresses a question that diversification and agility do not fully cover: if a center is hit by a severe shock, how quickly and fully can it recover? Institutional depth measures the thickness of the center's institutional fabric: the accumulated stock of capabilities, relationships, and infrastructure that supports regeneration.

Professional services depth refers to the density and quality of the supporting ecosystem: legal firms with financial sector specialization, accounting and audit practices, management consultancies, actuaries, and compliance specialists. These services are not the headline activity of a financial center, but they form the connective tissue that enables complex financial transactions and institutional operations. A center with a deep professional services layer can support rapid rebuilding after a disruption because the supporting infrastructure remains intact even if some financial institutions withdraw.

Market depth and liquidity measure the ability of core markets to absorb volatility without seizing up. Deep, liquid markets (in equities, fixed income, foreign exchange, and derivatives) provide a stabilizing function during stress, allowing price discovery to continue and transactions to be executed even under adverse conditions. Market depth is typically assessed through bid-ask spreads under normal and stressed conditions, trading volumes relative to outstanding positions, and the speed of price recovery after large transactions.

Training and education infrastructure captures the center's capacity to replenish its human capital. The presence of universities with strong finance, economics, and law programs, professional training institutes, and industry certification bodies ensures that the talent pipeline is not dependent on immigration alone. After a shock that displaces some professionals, a center with a strong local training infrastructure recovers its human capital faster.

Industry association and standard-setting density reflect the presence of institutions that facilitate collective action, knowledge exchange, and coordinated responses. Industry bodies, standard-setting committees, and professional associations create channels through which the financial community can organize a collective response to disruptions. Their absence makes coordinated recovery significantly harder.

9.4 Integrating the Three Components

Together, the three components answer the three fundamental resilience questions. Diversification answers: Can the center absorb a known, sector-specific, or region-specific shock? Agility answers: Can the center adapt to an unforeseen shock whose nature could not have been anticipated? Institutional depth answers: Can the center recover if it is severely hit, restoring its functional capacity within a reasonable timeframe?

For the diagnostic dashboard, resilience should therefore be reported as a vector of the three sub-indicators rather than a single score. The diagnostic value lies in the pattern: a center with high diversification but low agility can weather familiar risks but is vulnerable to novel disruptions. A center with high agility but shallow institutional depth can pivot quickly but may lack the substance to sustain recovery. Identifying these patterns allows each center to target its resilience-building efforts where they will have the greatest marginal impact.

10. A Financial Center Typology

The second instrument is a typology that classifies financial centers by functional profile, situating them within characteristic stages of development. The typology is not a ranking. It is a map of evolutionary positions from which strategic pathways can be derived.

10.1 Four Stages of Development

Stage 1: National Service Centers. The financial center primarily serves the domestic economy. ❶ is dominant; ❷ through ❹ are weakly developed. The financial sector exists because the national economy requires it, not because it exerts independent international pull. Many smaller or younger financial centers occupy this position. The strategic priority at this stage is to strengthen the enabling conditions and deepen the national financial ecosystem.

Stage 2: Regional Gateways. The center begins to serve a bridging function, either as an entry point for foreign capital into the region (❹ grows) or as a platform for domestic enterprises to access international finance (❷ grows). Typically, one of these directions develops first, creating the conditions for the other to follow. The strategic priority shifts toward building the institutional infrastructure and regulatory credibility required for cross-border activity.

Stage 3: International Specialists. The center has developed disproportionate international significance in specific segments or functions. ❷ is strong within these niches; ❸ and ❹ are sectorally pronounced. These centers achieve global relevance through focused specialization rather than breadth. The strategic question at this stage is whether and how to broaden the base while protecting the advantages of specialization.

Stage 4: Fully Integrated Global Hubs. All four functional dimensions are strongly developed and mutually reinforcing. These centers are systemically significant for the global financial system. The number of centers at this stage is inherently small because agglomeration effects drive concentration. Strategic priorities at this stage center on maintaining competitiveness, managing systemic risk, and adapting to structural shifts in the global financial system.

10.2 Strategic Pathways

Not all centers need to or should aspire to the next stage. A national service center that excels in its domestic role may be more valuable to its economy than one that prematurely pursues internationalization at the expense of domestic anchoring. The typology is a tool for informed strategic choice, not a ladder to climb.

The typology's practical value lies in its ability to derive stage-specific strategies. Particular challenges and preconditions characterize each transition between stages.

The transition from Stage 1 to Stage 2 requires building credible regulatory institutions, establishing a track record of macroeconomic stability, and creating targeted incentive structures for initial cross-border activity. The transition from Stage 2 to Stage 3 demands deeper specialization, the development of domain-specific expertise and legal infrastructure, and effective international marketing of the center's

capabilities. Within Stage 3, broadening beyond the initial niche requires careful management to avoid diluting established strengths while building new ones.

10.3 Empirical Derivation

An important methodological principle: the typology should be derived empirically from the dashboard data rather than imposed normatively. Cluster analysis applied to the functional profiles of a sufficiently diverse sample of financial centers can reveal whether the hypothesized four-stage structure is confirmed by reality, or whether the actual landscape is more differentiated.

It is plausible, for example, that some centers skip stages entirely, moving directly from national service center to international specialist by deliberately creating a regulatory niche. Others may follow non-linear paths, developing strong connectivity before attractiveness or achieving international significance in one dimension while remaining underdeveloped in others. An empirically grounded typology captures these variations and provides richer strategic guidance than a purely theoretical model.

Returning to the example of TheCityUK elaborated in 6.2, we can see from its public dashboard that all four functional dimensions are well developed. They also mutually reinforce each other. London is a prime example of a Fully Integrated Global Hub and is undoubtedly systemically significant to the global financial system.

Luxembourg, as reflected in Luxembourg for Finance's public dashboard (6.2), is transitioning from an International Specialist to a Fully Integrated Global Hub. Its initial strength has been in the cross-border investment funds business, but it has expanded into several other areas, including financial technology, payments, and sustainability, in recent decades. It is doing well in all four functional dimensions on those topics.

11. Institutional Implications and Next Steps

The World Alliance of International Financial Centers is uniquely positioned to further develop this framework. As a neutral, member-driven association of financial centers at all stages of development, it can ensure that the instruments serve the interests of a diverse membership rather than reflecting the perspective of any single center or group of centers.

Several questions require further development. First, the selection of indicators for the diagnostic dashboard must balance analytical rigor with the practical availability of data across a heterogeneous set of financial centers. Second, the governance of the methodology, including external validation, transparency of assumptions, and mechanisms for updating the framework, will determine its credibility. Third, the relationship between the dashboard and the typology needs careful calibration: the dashboard is a private diagnostic tool; the typology, if published, must be framed constructively to avoid the perception of ranking by another name.

The framework's distinctive contribution lies in its functional orientation, its combination of diagnostic and strategic instruments, and its explicit recognition that competitiveness is not a single number but a multidimensional profile. Measuring what financial centers do, rather than merely what conditions they offer, provides a basis for more targeted, evidence-based strategies.

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