Visa Economic Empowerment Institute

FINANCIAL CONNECTIVITY INDICATOR

Methodology overview and validation document

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Prepared by Oxford Economics in collaboration with the Visa Economic Empowerment Institute (VEEI)

OXFORD ECONOMICS

VISA

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SECTION 1. OVERVIEW

The Financial Connectivity Indicator (FCI) captures the momentum and diversity of cross-border financial flows across 42 economies over the past three years. Produced by Oxford Economics in collaboration with the Visa Economic Empowerment Institute (VEEI), it provides a data-driven assessment of cross-border financial connections, drawing on 19 indicators organized into two pillars and five sub-pillars. This document describes the methodology used to construct the FCI.

The FCI covers 42 economies over the period 2023 to 2025, which supports country-level analysis of how connectivity is changing over time. The 2023 to 2025 window reflects the initial build, but the index is designed to be refreshed each year so that it continues to monitor connectivity over time, as described in Section 1.2. The observation window is annual. Country scores are expressed on a common scale centered at 100. This fixed reference point keeps scores comparable across countries and across time. A score above 100 indicates above-average performance relative to the cross-country mean in the reference year of 2025, and a score below 100 indicates below-average performance relative to that same benchmark.

Two lenses on connectivity. The index draws a deliberate distinction between connectivity that has been realized (i.e., actual financial flows) and the conditions that enable it. Pillar A, Cross-border Flows, measures observed cross-border flow of trade, investment, retail payments and remittances, and the diversification of the partners that carry them. Pillar B, Enabling Environment, measures the underlying structural conditions—namely the policy environment, payment acceptance environment, and the broader institutional and digital foundations that determine whether those flows can be generated and sustained. Keeping the two lenses separate is central to how the index is read. The realized side maps to outcomes, while the enabling side maps to the potential frictions that policy may most directly influence.

Positioning. The FCI works as a diagnostic layer beneath outcome-based monitoring of cross-border payments. Frameworks such as the *G20 Roadmap for Enhancing Cross-Border Payments* and the associated Financial Stability Board (FSB) indicators, track outcomes; for example, the objective of the G20 Roadmap is to make cross-border payments "cheaper, faster, more accessible and more transparent" to address cross-border frictions identified by the FSB. The FCI complements frameworks of this kind by measuring the structural conditions that lie behind those outcomes, which makes it possible to see where frictions may be originating and how they change over time.

1.1 Purpose of this document

This document sets out the full construction methodology of the FCI: its structure and design, the indicators and data sources it draws on, how the data are collected and processed, the country coverage, and the standardization, aggregation and weighting procedures used to convert raw inputs into comparable scores, including the formulas applied at each stage. Second, it summarizes the results and validation work from the initial index build: the headline patterns in the data, the relationship between connectivity and income, the robustness of rankings to alternative weighting choices, and the scope conditions and limitations that a user of the index should keep in view.

1.2 A dynamic framework, not a one-off snapshot

The FCI is designed as a repeatable framework rather than a single snapshot at a moment in time. It is built on a fixed reference to the 2025 cross-country mean and spread, with a transparent, reproducible construction process. Keeping a fixed reference and scale ensures that as the FCI is updated with new data, any change in a country's score reflects a change in measured connectivity rather than a shift in the benchmark. This property allows the FCI to function as a monitoring instrument, and distinguishes it from a one-off ranking.

Three features make the framework dynamic and extensible: (1) It is updateable, in that the same pipeline ingests each new vintage of source data and refreshes scores on the fixed reference base, so the index can be maintained on a regular cadence with limited manual intervention. (2) It is decomposable, so changes in headline figures can be traced through the pillar, sub-pillar and indicator hierarchy to uncover the root drivers in both realized-flows and enabling-conditions components. And (3) it is modular, in that indicators, sources and weights can be revised and the country set extended without breaking comparability with earlier vintages.

Used in this way, the FCI is a tool for analyzing the drivers of change and is not intended to serve as a static scoreboard or ranking metric. For policymakers, it indicates where regulatory and structural frictions may be concentrated, and how reforms can influence connectivity over time. It also provides a dynamic read on the structural connectivity of markets and the direction in which certain markets are heading. For researchers, it provides a consistent multi-year panel of connectivity measures that can be examined at indicator level. In each case the value lies not only in the level of a country's score in a given year but in the trajectory the framework reveals as it is updated.

SECTION 2. INDEX CONSTRUCTION

2.1 Structure and design

The FCI is organized as a three-tier hierarchy. Individual indicators are grouped into sub-pillars, which are combined into two pillars, which in turn aggregate into a single FCI score. The terminology is therefore Pillars (A and B), Sub-Pillars (1 to 5), and Indicators (1.1 to 5.5), with several indicators themselves built from underlying sub-indicators. The two pillars (A and B) are given equal weight in the aggregate published index, so that neither the realized nor the enabling side dominates the headline result.

Pillar A, Cross-border Flows, contains two sub-pillars that measure the scale of cross-border flows and the diversification of partners. Pillar B, Enabling Environment, contains three sub-pillars that assess the policy environment, payment acceptance environment, and institutional and digital foundations. The full structure, together with the published weights, is shown in Figure 1 and set out indicator by indicator in Section 2.2.

Figure 1. FCI architecture. *Two pillars, five sub-pillars and nineteen indicators, with the published theme-balanced weights. Indicators 3.1, 3.3, 3.5, 4.1 and 5.5 are equal-weighted composites of sub-indicators.*

FINANCIAL CONNECTIVITY INDICATOR Total score. Pillar A = Pillar B = 0.50				
PILLAR A: CROSS-BORDER FLOWS weight 0.50		**PILLAR B: ENABLING ENVIRONMENT** weight 0.50		
1 Scale of Cross-border Flows weight 0.36	**2 Partner Diversification** weight 0.14	**3 Policy Environment** weight 0.21	**4 Payment Acceptance Environment** weight 0.08	**5 Institutional & Digital Foundations** weight 0.21
1.1 Non-trade gross current account flows	2.1 Trade-route diversification (Herfindahl-Hirschman Index, HHI)	3.1 FATF assessment ratings	4.1 Cross-border payment decline rates	5.1 Worldwide Governance Indicators
1.2 Trade openness	2.2 Network distribution (HHI)	3.2 Anti-Money Laundering Index	4.2 POS terminals per 100k inhabitants	5.2 Tourism spending
1.3 Gross capital flows		3.3 Digital services trade openness		5.3 E-commerce intensity
1.4 Cross-border payment intensity		3.4 Remittance payment cost		5.4 Cross-border e-commerce intensity
1.5 Cross-border payments per inhabitant		3.5 Cross-border flow restrictions		5.5 Household digital payment access

The two pillars capture the dimensions summarized in Table 1 and Table 2.

Table 1. Pillar A (Cross-border Flows). *Sub-pillars and the dimension each captures.*

Sub-pillar	Dimension captured
1 Scale of Cross-border Flows	Integration into global financial networks, measured through the volume and intensity of cross-border financial activity relative to economic size, including trade, capital and payment flows, and the frequency with which the payment system is used.
2 Partner Diversification	The concentration or diversity of a country's trade and payment linkages across partners. A more diversified network is less exposed to disruption in any single partner or corridor; heavy reliance on one partner is a source of vulnerability.

Table 2. Pillar B (Enabling Environment). *Sub-pillars and the dimension each captures.*

Sub-pillar	Dimension captured
3 Policy Environment	The legal and policy framework governing cross-border financial flows, which includes the robustness of financial-crime controls and the degree of restriction imposed on cross-border services, remittances, data and other transactions.
4 Payment Acceptance Environment	The technical and operational capacity of a country's retail payment system to support cross-border transactions, including the reliability of payment routing and the depth of physical acceptance available to end users.
5 Institutional and Digital Foundations	Broader structural conditions that may shape a country's capacity to generate and sustain cross-border flows over the long term, including institutional quality, digital-commerce maturity, and household financial participation.

2.2 Indicator selection and data sources

The full indicator structure is set out in the tables below, one table per sub-pillar. For each indicator, the table shows its unit of measurement, data source, published weight, and native update frequency. The 19 underlying indicators contained in the FCI are drawn from public and proprietary sources, and were chosen on five criteria:

- **Relevance:** the degree to which each indicator captures a meaningful aspect of financial connectivity, as defined by the sub-pillar to which it is assigned.
- **Cross-country comparability:** indicators must be available in a consistent, comparable form for all 42 economies in the index. This requirement of full coverage across the selected economies ruled out some otherwise useful benchmark sources.
- **Source reliability:** preference is given to established international and proprietary data sources.
- **Periodicity:** preference is given to higher-frequency indicators where available.
- **Time-series availability:** indicators must be published as a repeated time series rather than as a one-off dataset, because the index is rebuilt each year. Several one-off datasets that were otherwise relevant could not be used for this reason.

The weight shown in each table is the indicator's share of the total index under the published theme-balanced regime, in which Pillars A and B each carry 50%, and every indicator is equally weighted within its pillar (see Section 2.6). Because Pillar A holds seven indicators and Pillar B holds twelve, each Pillar A indicator carries a larger individual weight than each Pillar B indicator.

2.2.1 Scale of Cross-border Flows (Sub-pillar 1)

Table 3. Sub-pillar 1 indicators. *Units, sources, weights and update frequency.*

Indicator	Units	Source	Weight	Frequency
1.1 Non-trade gross current account flows, % of GDP	% of GDP	National statistics offices / IMF Balance of Payments	7.1%	Quarterly
1.2 Trade openness (imports + exports, % of GDP)	% of GDP	National statistics offices / IMF Balance of Payments	7.1%	Quarterly
1.3 Gross capital flows, % of GDP	% of GDP	National statistics offices / IMF Balance of Payments	7.1%	Quarterly
1.4 Cross-border payment intensity (outbound US$ value), % of GDP	% of GDP	VisaNet transaction data	7.1%	Quarterly
1.5 Cross-border payments (transaction count), per inhabitant	Count per inhabitant	VisaNet transaction data	7.1%	Quarterly

2.2.2 Partner Diversification (Sub-pillar 2)

Table 4. Sub-pillar 2 indicator. *Units, sources, weights and update frequency.*

Indicator	Units	Source	Weight	Frequency
2.1 Diversification of trade routes (HHI)	Index (HHI)	IMF Direction of Trade Statistics	7.1%	Quarterly
2.2 Network distribution (bilateral cross-border payments, HHI)	Index (HHI)	VisaNet transaction data	7.1%	Quarterly

2.2.3 Policy Environment (Sub-pillar 3)

Table 5. Sub-pillar 3 indicator. *Units, sources, weights and update frequency.*

Indicator	Units	Source	Weight	Frequency
3.1 FATF assessment ratings	Composite score	Financial Action Task Force (FATF)	4.2%	Rolling updates (event-driven)
3.2 Anti-Money Laundering Index	Index	Basel Institute of Governance	4.2%	Annual
3.3 Openness of Digital services trade	Composite score	OECD	4.2%	Annual
3.4 Total cost for remittance payments	Cost deviation from peers (corridor average)	World Bank	4.2%	Quarterly
3.5 Restrictions on cross-border financial flows	Composite score	IMF (AREAER)	4.2%	Annual

2.2.4 Payment Acceptance Environment (Sub-pillar 4)

Table 6. Sub-pillar 4 indicator. *Units, sources, weights and update frequency.*

Indicator	Units	Source	Weight	Frequency
4.1 Cross-border payment decline rates	Composite score (% of transactions)	Visa	4.2%	Quarterly
4.2 Number of POS terminals, per 100k inhabitants	Per 100k inhabitants	Euromonitor	4.2%	Annual

2.2.5 Institutional & Digital Foundations (Sub-pillar 5)

Table 7. Sub-pillar 5 indicators. *Units, sources, weights and update frequency.*

Indicator	Units	Source	Weight	Frequency
5.1 Worldwide Governance Indicators (WGI)	Percentile score	World Bank	4.2%	Annual
5.2 Inbound + outbound tourism spending	% of GDP	UN Tourism	4.2%	Annual
5.3 E-commerce transaction intensity	% of transactions	Visa	4.2%	Quarterly
5.4 Cross-border e-commerce intensity	% of transactions	Visa	4.2%	Quarterly
5.5 Household digital payment access (Findex)	Composite score	World Bank Findex	4.2%	Triennial (survey)

2.3 Data sources, collection and processing

Data are drawn and assembled through a mix of automated and manual channels. Public macro-financial series covering balance of payments, trade, capital flows, and tourism, are taken from the Oxford Economics databank. International-organization series are pulled programmatically where an interface exists, namely IMF Direction of Trade Statistics via the IMF Data API and the OECD Digital Services Trade Restrictiveness Index (DSTRI) via the OECD API, and downloaded manually where they are not, namely the FATF assessment ratings, the Basel Anti-Money Laundering Index, the World Bank remittance-cost and Global Findex data, the IMF AREAER controls, and the Worldwide Governance Indicators. Retail payment series come from Visa proprietary VisaNet transaction data, and Point of Sale (POS) terminal counts from Euromonitor. Visa proprietary data are capped at 50% of the weight of any single sub-pillar to ensure the index is balanced and transparent.

2.3.1 Composite indicators

Some indicators are composites built from underlying sub-indicators rather than single series. In each case the sub-indicators were selected to isolate the aspect of connectivity relevant to the sub-pillar. Most composites are formed as the equal-weighted mean of their constituent sub-indicators, which is then treated as a single indicator and standardized in the usual way (Section 2.5). For an indicator

i built from K_i sub-indicators $s_{i,k}$, the composite value is:

$$I_i = (1/K_i) \times \Sigma_{k=1..K}\ s_{i,k}$$

This equal-weighted form applies to the FATF composite (3.1, covering five recommendations: R.10 customer due diligence, R.13 correspondent banking, R.14 money or value transfer service licensing, R.16 payment transparency, and R.19 higher-risk countries), the openness of digital-services trade (3.3, the subset of OECD DSTRI provisions bearing on payment access and cross-border data, which transforms yes/no regulatory provisions into a score), the IMF AREAER composite (3.5, seven categories of controls on invisible transactions, also transforming yes/no controls into a score), and household digital payment access (5.5, account ownership, wages received into an account, and having made a digital payment).

Cross-border payment decline rates (4.1) is a weighted composite of outbound and inbound cross-border decline rates, filtered to the decline reasons associated with network friction rather than issuer or customer decisions such as when decline is made to mitigate fraud. The outbound leg is weighted at 75% and the inbound leg at 25%, which gives more weight to cardholder-side declines than to merchant-side declines. Writing the summed outbound and inbound decline rates as their respective totals:

$$I_{4.1} = w_{\text{out}} \times \Sigma(\text{outbound decline rates}) + w_{\text{in}} \times \Sigma(\text{inbound decline rates})$$
$$\text{with } w_{\text{out}} = 0.75 \text{ and } w_{\text{in}} = 0.25$$

The composite is inverted at the standardization stage so that a higher score corresponds to fewer network-relevant declines, and therefore better payment reliability.

2.3.2 Diversification (HHI) indicators

The two diversification indicators (2.1 trade routes, 2.2 payment networks) are Herfindahl-Hirschman concentration measures computed on each country's bilateral partner shares, using gross trade for 2.1 and gross payment flows (inflows plus outflows) for 2.2. For country c with flow $f_{c,j}$ to partner j, the concentration index and partner shares are:

$$\text{HHI}_c = \Sigma_j \, (s_{c,j})^2 , \quad s_{c,j} = f_{c,j} \, / \, \Sigma_j \, f_{c,j}$$

The index ranges from $1/N$ for a country diversified evenly across N partners to 1 for a country with a single partner. The concentration measure is multiplied by minus one before standardization; that is, the scored input is $-\text{HHI}_c$. The key takeaway from this process is that a higher FCI score denotes greater diversification.

Bloc-tier adjustment. Indicators that measure trading partner concentration use a HHI assessment. However, this treats all concentration identically and assigns the same reading to a country whose flows are focused on a neighboring regional partner as to one focused on a single distant partner, even though deep regional integration is a structural feature of trade and payment networks rather than a deficiency. The bloc-tier adjustment addresses this by grouping partners into tiers according to regional and bloc membership and applying a tier weight

τ_j that discounts concentration on partners within an integrated regional bloc, giving the adjusted concentration:

$$\text{HHI}_c^{\text{adj}} = \Sigma_j \, \tau_j \, (s_{c,j})^2 , \quad 0 < \tau_j \leq 1$$

Two calibrations are held in the dashboard: a moderate discount (adj1), used as the headline resilience score, and a stronger discount (adj2), reported as a sensitivity. The adjustment affects a small number of regionally integrated economies, most visibly in North America, and both calibrations are retained so the headline and sensitivity readings remain transparent.

2.3.3 Transformations, smoothing and frequency handling

Two indicators use a transformation of their underlying series. The remittance-cost indicator (3.4) starts from the total cost of a remittance as a percentage of the transfer value, then expresses each country's value as a deviation from the relevant sender and receiver means. This isolates the policy and structural component of cost from the composition of a country's corridors, and it was chosen over a regression-based alternative on grounds of explainability and maintainability. The diversification indicators (2.1, 2.2) apply the HHI transformation and sign inversion described above.

Several higher-frequency series are smoothed with a four-quarter moving average before being used, namely the cross-border payment decline rates (4.1), the remittance-cost series (3.4), and the e-commerce measures (5.3 and 5.4). Data frequency otherwise varies across indicators. The index is assembled on a quarterly basis before being converted to the annual series used for publication. Where indicators are published less frequently than quarterly, values are carried forward to maintain a consistent quarterly series. For monthly indicators, the quarterly value is the mean of the months in the quarter. Where a country lacks a data point, the value from the closest available period is used, filling backwards and then forwards. This introduces some smoothing, but the extent of the distortion is limited and diminishes in more recent periods as source coverage improves.

2.4 Coverage

The index covers 42 economies. The list was built from a priority ranking on economic size (GDP), subject to the availability of Visa network data since several indicators draw on Visa proprietary series. The sample spans advanced, emerging, and developing economies across all major regions, but it follows Visa's network footprint rather than a purely economic-size threshold. Some large economies are not included, for example Russia, the United Arab Emirates and Nigeria, because the required network data are not available or robust enough. These omissions are not random. They shape which fragmentation questions the index can address, and the coverage criterion is stated explicitly so that users can interpret the sample accordingly.

Conduit hub economies. A few economies in the sample, notably Singapore and Hong Kong, act as gateway or conduit hubs and host substantial special-purpose-entity and pass-through activity. For these economies, gross capital-flow figures (indicator 1.3) reflect legal and tax structuring as much as broad economic integration, and their flow scores should be read with that in mind. The index neither removes these economies nor treats their measured flows at face value; the caveat is documented rather than applied as a scored adjustment. Some other well-known conduit economies, such as Ireland, the Netherlands and Belgium, fall outside the 42-economy set and so do not enter the index.

2.5 Standardization and scoring

Before aggregation, each indicator is standardized onto a common scale using z-scores, which express each observation as the number of standard deviations from the cross-country mean and remove differences in units and scale across indicators. For indicator i and country c, using the mean μ_i and standard deviation σ_i of the Q4 2025 reference distribution:

$$z_{c,i} = (x_{c,i} - \mu_i) / \sigma_i$$

Throughout the index, a higher score is more positive. To ensure this, indicators for which a higher raw value denotes a lower connectivity outcome are inverted, by multiplying the standardized value by minus one. A single reference period fixes the mean and standard deviation, which keeps scores comparable across years: a country whose score rises is improving relative to a fixed benchmark rather than being re-based against a moving mean. Standardized values are then recentered to a mean of 100 and rescaled for granularity:

$$S_{c,i} = 100 + 30 \times z_{c,i}, \text{ bounded to } [10, 190]$$

An economy one standard deviation above the 2025 mean scores 130, and one two standard deviations below it scores 40. Scores are bounded within three standard deviations of the mean, giving the range 10 to 190. The same scored scale carries through every level of the hierarchy.

2.6 Aggregation and weighting

Scores are aggregated up the hierarchy as weighted means; a sub-pillar score is the weighted mean of its indicators, a pillar score is the weighted mean of its sub-pillars, and the total the equal-weighted mean of the two pillars. Where an indicator is missing for an economy, the weights of the available indicators are proportionally rescaled to sum to their intended total, so that economies with differing coverage remain comparable. For sub-pillar p:

$$P_{c,p} = (\Sigma_{i \in p}\ w_i S_{c,i}) / (\Sigma_{i \in p}\ w_i)$$

Pillar scores are formed from sub-pillar scores by the same rule, and the total index is:

$$\mathrm{FCI}_c = 0.50 \times A_c + 0.50 \times B_c$$

The published index uses a theme-balanced weighting scheme. Each pillar carries 0.50 and, within each pillar, every indicator is weighted equally. Because Pillar A holds seven indicators and Pillar B holds twelve, this yields sub-pillar weights of 0.36 and 0.14 within Pillar A, and 0.21, 0.08 and 0.21 within Pillar B. Described precisely, the published total is uniform within pillars.

Three considerations motivate this choice. First, it asserts no causal hierarchy between realized flows and enabling conditions, a direction the three-year window cannot establish and one the project has not claimed. Second, it avoids the structural tilt of an equal-pillar scheme, which would give the enabling side more weight simply because it contains three sub-pillars to the realized side's two. Third, it preserves face validity, in that the benchmark economies remain at the top of the ranking. The realized (Pillar A) and enabling (Pillar B) scores are also reported separately, so both readings stay visible.

The index was tested against four pillar-weighting schemes, summarized in Table 8. The robustness results are set out in Section 3.5.

Table 8. Weighting schemes tested. *Pillar A = sub-pillars 1 and 2; Pillar B = sub-pillars 3 to 5. The theme-balanced scheme is the published regime.*

Weighting scheme	SP1	SP2	SP3	SP4	SP5	A / B
Equal pillars (each sub-pillar 0.20)	0.20	0.20	0.20	0.20	0.20	0.40 / 0.60
Theme-balanced (published)	**0.36**	**0.14**	**0.21**	**0.08**	**0.21**	**0.50 / 0.50**
Uniform per component (each indicator 1/19)	0.26	0.11	0.26	0.11	0.26	0.37 / 0.63
Structure-heavy (expert-ranked scenario)	0.07	0.13	0.27	0.20	0.33	0.20 / 0.80

Two deliberate weighting positions. The remittance-cost indicator (3.4) is retained at equal weight, not down-weighted, because it is the only price-based signal in the index; down-weighting it on flow-volume grounds would conflate its informational value with market size. And the Visa proprietary series are capped at 50% of any pillar's weight, so that no single data provider can drive a pillar result.

SECTION 3. INITIAL INDEX BUILD: RESULTS AND VALIDATION

This section summarizes the principal results of the first full index build and the validation work undertaken to confirm that the FCI behaves as a credible measure of financial connectivity. Relationships are described in associational terms; the three-year window is not designed to establish direction of causation between flows and structure, and no such claim is made.

3.1 Headline results

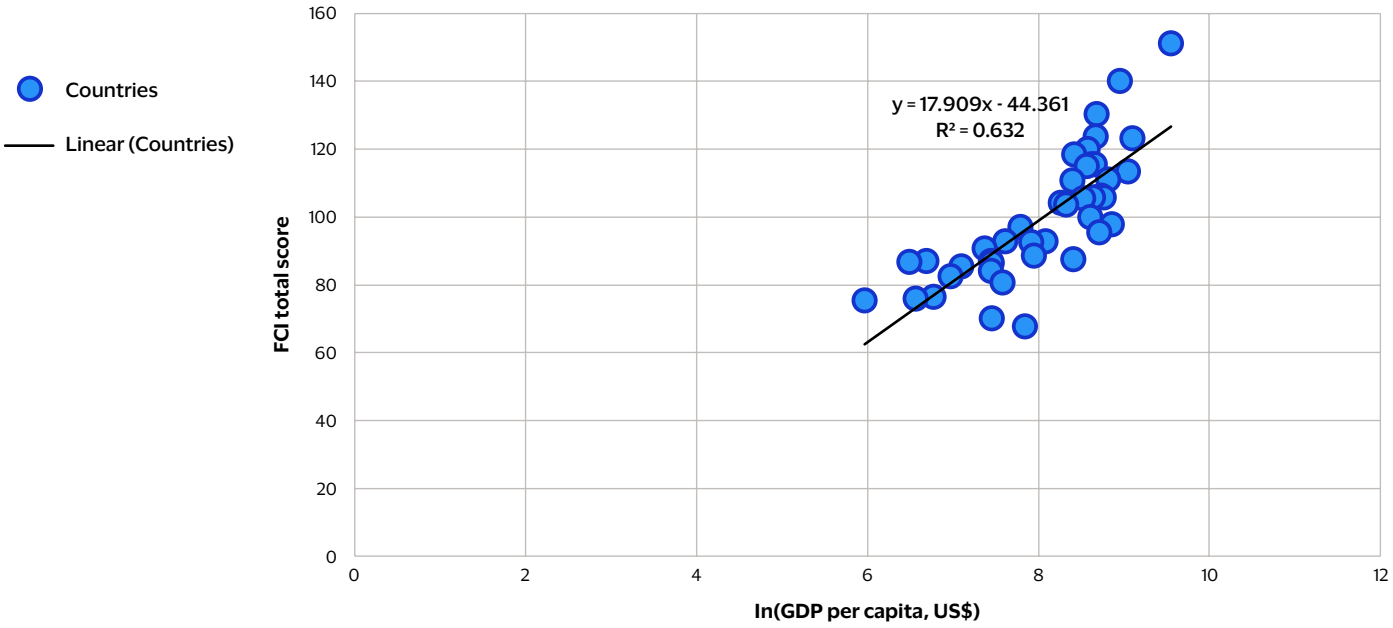
Under the published scheme, the 2025 scores run from 151 (highest connectivity) to 68 (lowest connectivity). The pattern by development level is as expected, with an advanced-economy average of 117, an emerging-economy average of 90, and a developing-economy average of 81. Regional averages range from 113 in Europe and 108 in East Asia and the Pacific, to 85 in the Middle East and Africa and 78 in South Asia. North America's average (92) sits below what its flow and policy performance alone would suggest, a pattern discussed in Section 3.3.

The central finding is broad improvement alongside concentrated slippage. Over the defined period of 2023 to 2025 almost every country improved on the overall index, and the largest single total decline is small. This movement is therefore not visible in the headline scores. It appears in the policy sub-pillar of several of the largest economies, whose scores on that sub-pillar declined even as their flows generally rose. This divergence, in which realized flows broadly increased while scores on the policy sub-pillar declined for some of the largest economies, is the main pattern to note from the initial series.

3.2 Connectivity and income

A foundational test for any composite connectivity index is its relationship with income. Regressing the total FCI score on the natural logarithm of GDP per capita across the 42 economy cross-section confirms a strong, positive relationship: income explains about two-thirds of the variation in scores, with an R-squared of 0.63. The GDP per capita series used is the one held in the dashboard (Oxford Economics databank), so the estimate reproduces the value reported on the published dashboard. This relationship is expected rather than a concern, since higher income economies with deeper domestic financial systems carry larger and more diversified cross-border balance sheets, a structural relationship documented by Lane and Milesi-Ferretti (2017). The correlation does not invalidate the index.

Figure 2. FCI total score against GDP per capita. *Log-linear fit, 42 countries, 2025. Income explains about two-thirds of the cross-country variation (R-squared 0.63). Source: Oxford Economics / Visa FCI.*



The residuals carry the information that matters here, that is, the economies that over- or under-perform the connectivity level their income would predict. These deviations are where the index adds information beyond a prosperity ranking. The largest negative deviations, meaning less connected than income would predict, include Mexico, Algeria, Turkey, Saudi Arabia and Canada. The largest positive deviations, meaning more connected than income would predict, include Singapore, Hong Kong, Finland, and, among developing economies, Kenya and Tanzania. The direction and magnitude of the deviation from the linear fit line are factors of interest for researchers encouraging both a deeper dive into the data as well as future research.

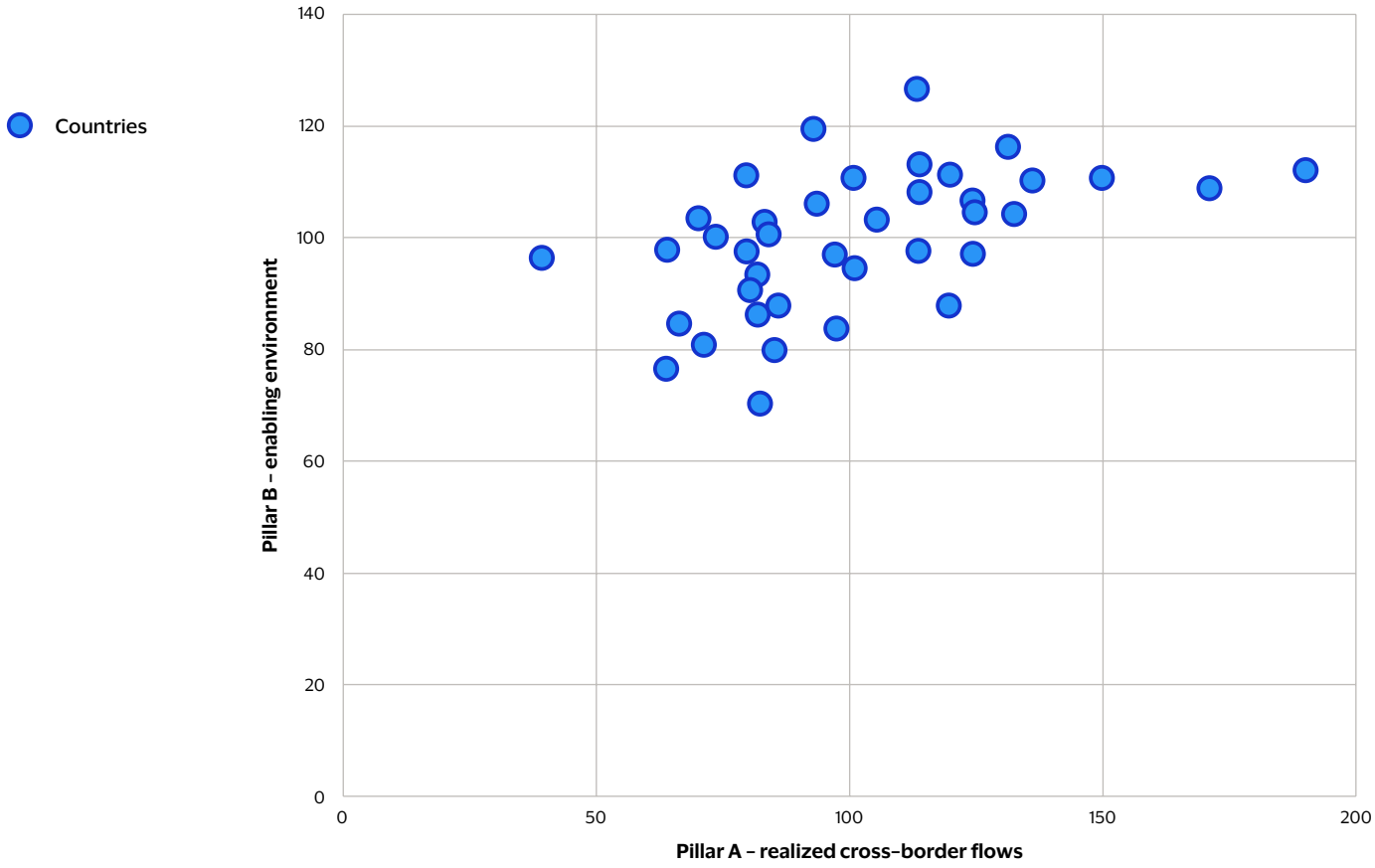
3.3 Flows or structure: decomposing the income-adjusted residual

Regressing the Pillar A (flows) and Pillar B (enabling) scores separately on log GDP per capita, and taking each country's residual from the respective fit, splits the income-adjusted gap into flows and structural components. Because the total is the equal-weighted mean of the two pillars and the regressions are linear, the two components sum exactly to the total residual.

3.4 Realized versus enabling connectivity, and enabling-conditions archetypes

Realized and enabling connectivity are only loosely linked. Plotting the Pillar A (realized flows) score against the Pillar B (enabling conditions) score across the 42 economies gives a correlation of about 0.50, so the two axes carry different information. This is the empirical basis for keeping them separate and equally weighted. For example, Singapore and Hong Kong are gateway hubs that have strong realized flows on a solid but comparatively thinner enabling base, while economies such as Spain and South Korea show strong enabling conditions ahead of their realized flows.

Figure 3. Realized flows against enabling environment. *Pillar A against Pillar B, 42 economies, 2025. The two lenses correlate about 0.50. Source: Oxford Economics / Visa FCI.*



Sorting the same economies on the two enabling pillars, the policy environment and payment acceptance environment, yields four groups of connectivity (Table 9). This is an enabling-conditions typology; it excludes flows, and the infrastructure axis rests on two retail indicators, so many economies sit between the archetype groupings. However, the archetypes provide an intuitive way to read the structural side of the index and anchor the microsite's central chart.

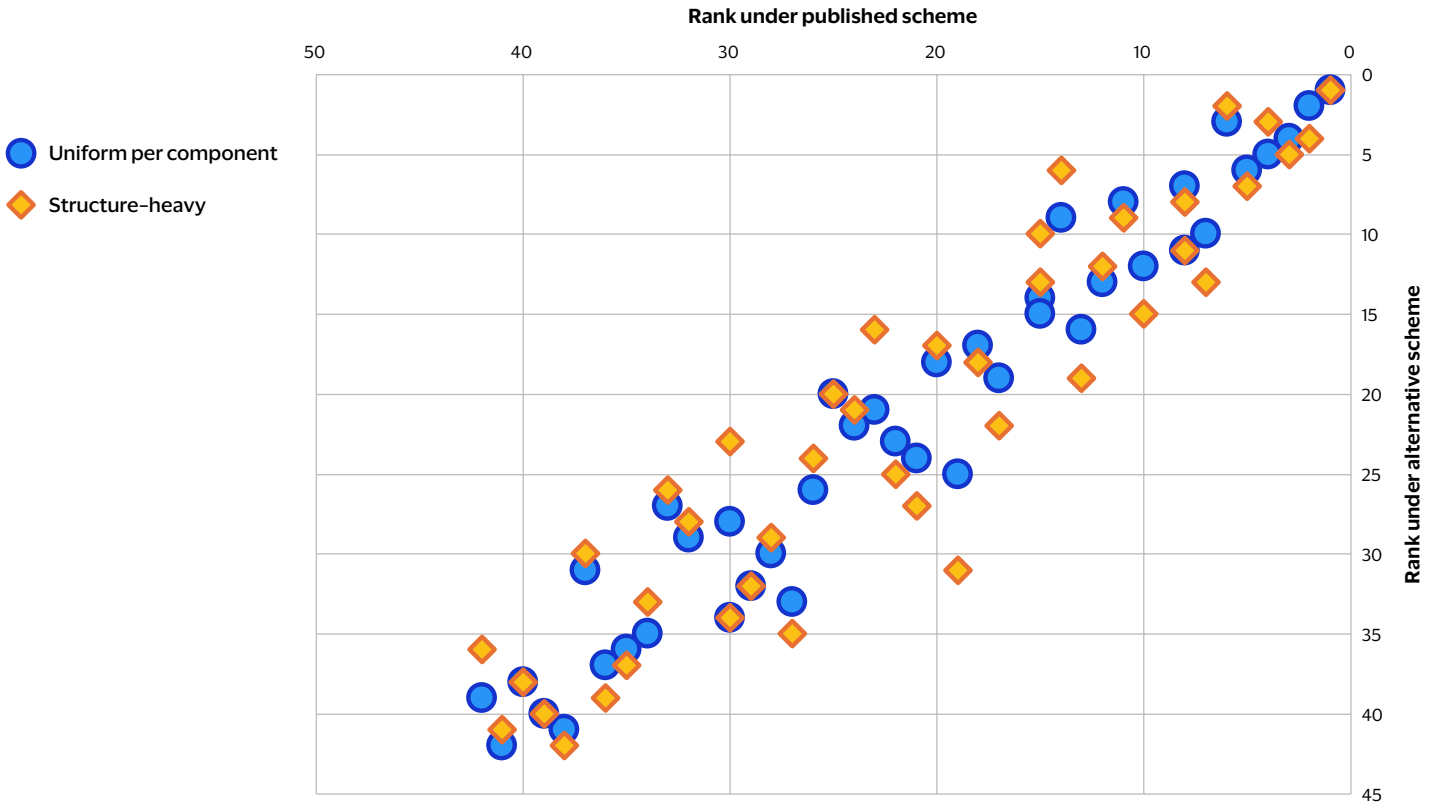
Table 9. Enabling-conditions groupings. *Four groups on the policy and payment acceptance environment plane.*

Group	Profile	Illustrative economies
Global connectors	Strong payment acceptance and policy environments.	Spain, Singapore, Finland, South Korea
Open system leaders	Open policy environment, but payment acceptance environment is less developed.	Colombia, Malaysia, Peru
Domestic-first systems	Established payment acceptance environment alongside a more restrictive policy environment.	China, Japan, Saudi Arabia
Early-stage connectors	A restrictive policy environment and a nascent payment acceptance environment.	Bangladesh, Tanzania, India

3.5 Robustness to the weighting choice

The scores change little across the four weighting schemes in Section 2.6. Spearman rank correlations against the published scheme are 0.99 for the uniform-within-pillars variant, 0.97 for uniform per component, and 0.93 for the structure-heavy scenario. A stable top tier of Singapore, Spain, Finland, the United Kingdom and Switzerland sits in the top eight under every scheme, so the overall ordering is a robust result.

Figure 4. Rank stability across weighting schemes. *Country rank under the published scheme against rank under two alternative schemes; points on the diagonal are unchanged. Spearman correlations are 0.97 (uniform per component) and 0.93 (structure-heavy). Source: Oxford Economics / Visa FCI.*



The exceptions are single-pillar economies. Hong Kong, whose score is flows-heavy, falls from above-average connectivity toward average connectivity when flows are down-weighted. South Korea, which has a well-established domestic payment acceptance environment, rises under schemes that reward strong acceptance capabilities. China, Canada and Brazil are sensitive to how much weight the diversification pillar carries. These concentrated profiles are best presented as a band for consideration rather than a single definitive position. Because the outputs are otherwise stable, the sensitivity of a small number of economies supports presenting the FCI as a directional signal rather than an absolute measure tuned to one view.

3.6 Scope and limitations

The initial build also clarified what the index does and does not measure. Stating these boundaries transparently supports the index's credibility with a policy audience.

- **Retail connectivity, not wholesale architecture.** The payment acceptance environment sub-pillar captures POS terminal density, payment decline rates, and transaction volume. It does not capture correspondent-banking access, SWIFT dependency, dollar clearing, or wholesale settlement architecture. This is the most important limitation for a user drawing conclusions about financial system sovereignty or systemic risk, and it reflects both data availability and a deliberate scope choice.
- **A time-limited observation window.** The annual series covers 2023 to 2025 only. The 2022 Russia-Ukraine financial shock falls just before it and the COVID period entirely outside it, so the index has not yet been observed under significant stress. Extending the series, subject to data agreements, would improve robustness.
- **Economy selection follows the Visa network footprint.** The 42-economies is a broad set but omits some economies whose fragmentation questions would be of interest, including because adequate data were not available. The selection criterion is stated explicitly for that reason. Nevertheless, the country set covers enough region-income combinations to allow deduction of insights across a wide range of economies.
- **Corridor diversification is a specific concept.** Sub-pillar 2 measures partner and corridor diversification, not the systemic resilience of non-bank financial intermediation tracked by the FSB. Because it rewards a spread of partners, it assigns lower scores to economies whose flows primarily occur with a single partner, such as Canada and Mexico with the United States. This can look surprising for economies that are otherwise well connected, but it reflects a real feature of their connectedness, namely a high dependence on one partner. Interoperability and ISO 20022 standards are outside the index and are cited to the relevant BIS and CPMI sources rather than proxied.
- **Regulation is measured as alignment on paper.** The standards and compliance indicators, for example the FATF ratings and the anti-money-laundering index, capture how closely an economy's framework aligns with international standards, rather than how effectively those measures are implemented or enforced. The policy environment reading is therefore closer to alignment on paper than to effectiveness in practice.
- **Emerging payment technologies are out of scope.** The index does not yet capture certain new and emerging technologies, in particular blockchain-based payment channels and stablecoins, which are likely to matter for cross-border connectivity in future and are potential candidates for a later extension.

SECTION 4. CONCLUSION

Traditional flow-based measures show a world that is becoming more connected. The FCI is designed to look beneath that headline to measure not only realized cross-border activity, but the regulatory and structural conditions that determine whether connectivity can be generated and sustained. Keeping the realized and enabling lenses separate is what allows the index to surface its central finding, namely broad improvement in flows alongside decreasing regulatory and policy openness among some of the largest economies, which a flow-only metric cannot see or measure. Because it is built on a fixed reference base and a reproducible pipeline, it is also a framework that can be updated and re-read over time rather than a one-off snapshot.

The initial build confirms that the index behaves as intended. Scores are strongly but incompletely related to income, and the income-adjusted residuals, split into flows and structure, identify where connectivity departs from what income alone would predict. The findings are robust across a demanding set of alternative weighting schemes, with only a small, well-understood group of single-pillar economies sensitive to the choice. The scope of the index is defined precisely: it measures retail connectivity and the openness of the rules around it, over a time-limited window, across an economy set that follows the Visa network footprint, and it is explicit about the wholesale layer it does not yet score.

On this basis the FCI is positioned as a credible, comparable and defensible diagnostic of financial connectivity. It complements official monitoring such as the G20 Roadmap for Enhancing Cross-Border Payments and the FSB KPIs rather than competing with it, and it provides a dynamic instrument for tracking how connectivity and its structural drivers can change over time. Its methodological choices favor maintainability and explainability, its results hold up to external scrutiny, and its stated limitations are boundaries of scope rather than defects of construction. The index is ready for use in cross-country benchmarking, policy analysis, and the associated communications outputs, and this document provides the methodological reference to support that use through handover and future update cycles.

About Visa Inc.

Visa Inc. (NYSE: V) is the world's leader in digital payments. Our mission is to connect the world through the most innovative, reliable, and secure payment network–enabling individuals, businesses, and economies to thrive. Our advanced global processing network, VisaNet, provides secure and reliable payments around the world, and is capable of handling more than 65,000 transaction messages a second. The company's relentless focus on innovation is a catalyst for the rapid growth of digital commerce on any device for everyone, everywhere. As the world moves from analog to digital, Visa is applying our brand, products, people, network, and scale to reshape the future of commerce.

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