Currency Drag, Cost Ceilings, and Funding-Source Independence

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Abstract

Three positions are priced against the same surplus law, and in each the result runs against the jurisdiction being examined. On currency: at a 15 per cent annual hard-currency drag, an allocation of 25.1722 per cent of protected capital to the local unit drives the surplus to exactly −0.500000, cancelling the entire eta·ln(N) = 0.377583 gain that the whole jurisdictional redesign bought; a 10 per cent allocation costs 0.150000, or 39.73 per cent of that gain. What decides whether a weak currency is a cost or a loss is dwell: at a seven-day average dwell even a 40 per cent annual drag costs 0.767 per cent per pass, while at 180 days the same currency costs 19.726 per cent. The bloc arithmetic also cuts against the operating case: sizing a Turkish leg at 8 per cent of the structure lowers the effective bloc count from 2.9412 to 2.8324, so the case rests on customs-union access worth 1.35 per cent of group revenue. An African leg (Mauritius 8.0 per cent, Kenya 5.0) raises effective blocs from 2.924302 to 3.639010 and buys 0.076530 of surplus, setting a cost ceiling of roughly 25.5 per cent of the existing maintenance base: at C = 0.38 the surplus is −0.127902, worse than the −0.124431 baseline. Funding sources are measured on the same instrument: four Western lenders read 3.509 effective lenders but 1.00 effective funding blocs, and the redesigned book reaches 3.175 optimistically and 2.410 after an honest correlation adjustment. The source is found to use two incompatible bloc partitions of the same exposure vector, giving N = 2.941176 against 2.924302; both are reported, and five further discrepancies are printed rather than silently repaired.

Keywords: currency depreciation; dwell time; customs union; treaty networks; Islamic finance; sukuk; funding diversification

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1. Introduction

A structure that has arranged its jurisdictions well can still lose everything the arrangement bought, and it can lose it in three ways that never appear on an organisation chart: by holding a depreciating unit of account, by paying more to maintain a leg than the leg is worth, and by financing itself from four counterparties that all answer to one supervisor. This paper measures all three against the same instrument and reports, in each case, a result that runs against the position being examined.

The instrument is the concentration measurement of Curzi [2026h] — HHI as the sum of squared exposure shares and the effective count as its reciprocal, with a naive four-jurisdiction count of 3.41 collapsing to exactly 1.00 once coordination blocs are recognised. The law it feeds is the storage law of Curzi [2026a], $Q_{t+1} = (1-\delta)Q_t + \eta S_t - C_t$, whose map is Lipschitz with modulus $1-\delta$ so that $\delta > 0$ makes it a contraction with steady state

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$Q^* = (\eta S - C)/\delta$, and its one-period balance $h = \eta \ln N - \delta Q - C$. **Everything below is a difference in that balance.**

Four measurements, and three of them go against the case being made.

First, a depreciating unit of account enters the surplus law through the erosion term and can cancel the entire jurisdictional gain. Treating an annual hard-currency drag d on a share w of protected capital as an addition to the erosion rate, $\delta_{\text{eff}} = \delta_0 + dw$, the balance becomes linear in w: at $d = 0.15$, $h(w) = -0.122417 - 1.5w$. **A 10 per cent allocation costs 0.150000, which is 39.73% of the entire $\eta \ln N = 0.377583$ that the jurisdictional redesign bought, and at $w^* = 0.251722$ the balance is exactly -0.500000 — the same number the conventional single-perimeter structure reads before any redesign at all.** Every entity stays in place, the chart still looks right, and the gain is gone.

Second, dwell rather than depreciation decides whether a weak currency is a cost or a loss. Erosion per pass is $dn/365$ for a receipt dwelling n days. **At a seven-day dwell even a 40 per cent annual drag costs 0.767% per pass — the order of a bank spread. At one hundred and eighty days the same currency costs 19.726%, which is a loss of capital.** The currency did not change; the policy did. That is the same shape Curzi [2026l] reports for a corridor, where exposure is dwell divided by the year and nothing else.

Third, a leg proposed for diversification can lower the very count it was proposed to raise, and a leg that does raise the count can still fail on its invoice. An operating leg sized at 8 per cent of the structure lowers the effective bloc count from 2.941176 to 2.832412 when scored in the bridge row and to 2.919742 on the more generous scoring — **below the baseline on both**, because its share lands in a row that was already the largest; its case therefore rests entirely on a customs-union tariff saving worth 1.35% of group revenue, which is a logistics argument and not a resilience one. And a regional holding leg that raises the effective bloc count from 2.924302 to 3.639010, buying 0.076530 of surplus, **fails outright at the maintenance cost proposed for it**: at an incremental 0.08 the balance falls from -0.124431 to -0.127902. The break-even is exact — incremental cost below 0.076530, roughly 25.51% of the existing $C = 0.30$ — and correct cost attribution, charging the structure only the costs the structure causes, flips the decision to $h = -0.087902$.

Fourth, the same instrument pointed at the liability side finds the conventional metric moving the wrong way. Four lenders at 40 / 25 / 20 / 15 read 3.508772 effective lenders and 1.000000 **effective funding perimeters**, which is the same exact zero Curzi [2026h] finds on the asset side. Replacing the syndicate with four tranches in four distinct perimeters *lowers* the naive effective source count to 3.174603 while raising effective funding blocs from 1.000000 to 3.174603. **A treasurer optimising lender count would reject the refinancing.** An honest correlation adjustment applied against this paper's own result — collapsing two tranches that draw on one pool of institutional liquidity — cuts the figure to 2.409639, and **the answer is reported as a range rather than as the flattering endpoint.**

What the paper does not do. It estimates no depreciation rate, no cost and no correlation. Every drag rate, every maintenance figure and every share is constructed and stated as such. **The contribution is the arithmetic that converts each of those inputs into a decision, and the arithmetic is worth exactly what the inputs are worth.**

Positioning. The collapse on which all four measurements depend — several units inside one perimeter behaving as one — is not new machinery. A small correlated shift producing a discontinuous collective outcome is the threshold-and-tipping mechanism: Granovetter [1978] establishes that the distribution of individual thresholds rather than the mean decides whether a collective outcome tips, and Schelling [1971] is the canonical demonstration that a mild individual preference produces a sharp aggregate segregation, generalised in Schelling [1978]. **Reading an individual-level parameter straight into an aggregate is exactly what a perimeter assignment does, and that literature is the standing warning against it.** Castellano et al. [2000] supplies the closest formal analogue of a perimeter — the same interaction that raises local agreement freezes global diversity into non-interacting regions — and on the lending side Buldyrev et al. [2010] is the structural statement that coupling destroys the independence a naive count assumes.

The reflexive loop and its identification problem. A perimeter assignment is a forecast that conditions the behaviour it forecasts, which is the reflexive loop $T(x) = W(x, M(x))$ of Curzi [2026n], whose founding reframing is that comfort is the felt total of present costs, so the present state is a local minimum of the comfort landscape by definition rather than by luck. **That loop carries an identification problem and this paper states it here rather than in a footnote.** Manski [1993] proves that a linear-in-means reflexive specification is **not identified from observational data**: the endogenous social effect cannot be separated from contextual effects or from correlated unobservables, however much data is collected, and Shalizi and Thomas [2011] reinforce it for network data. **No observation of the behaviour of lenders or of jurisdictions could therefore confirm a perimeter assignment derived reflexively.** The remedy adopted is stipulation with a defence — the perimeter test of Curzi [2026h] — which Brock and Durlauf [2001] shows can be made rigorous, and its price is that **every perimeter assignment in this paper is a modelling position rather than an identified empirical result.**

A note on what half of this material is. The source manuscript is, in substantial part, a descriptive comparative survey of five jurisdictions and of a body of contract law. That survey is retained as context in Section 4 and in Appendix A, and it is **not** the paper's contribution. **The Results and the Conclusion are about the four measurements and nothing else.** A comparative survey that has not positioned itself against the existing comparative-law literature is a literature review, and this paper does not offer one.

2. Hypotheses

Five hypotheses are stated, each in a form that could be wrong and each with its falsifier attached, in the sense required by Platt [1964]'s strong inference. Meehl [1967] is the relevant warning: a directional prediction is cheap, and the defensible response is a point prediction with constants attached. **Two of the five are reported below as not met, and they are reported in the same plain language a success would have received.**

H1 — the allocation hypothesis. A local-currency allocation enters the surplus law through the erosion term and can cancel the whole jurisdictional gain without changing the effective bloc count. *Predicted:* with a 15 per cent annual hard-currency drag, $h(w) = -0.122417 - 1.5w$, so $w = 0.10$ costs 0.150000 — 39.73% of the 0.377583 gain — and $w^* = 0.251722$ gives $h = -0.500000$ exactly. *Falsified by:* a measured hard-currency return on local instruments over the holding period satisfying $(1 + r)/(1 + \Delta) \geq 1$, at which the allocation would carry no drag at all and the erosion term would be unchanged.

H2 — the dwell hypothesis. Whether a depreciating currency is a transaction cost or a capital loss is decided by dwell and not by the depreciation rate. *Predicted:* erosion per pass is $dn/365$, so a 40 per cent annual drag at a seven-day dwell costs 0.767% while a 15 per cent drag at one hundred and eighty days already costs 7.397% — **the lower drag costing nearly ten times more.** *Falsified by:* erosion that scales with the drag rate independently of dwell, or a conversion mechanism whose cost rises faster in frequency than the erosion it avoids.

H3 — the operating-leg hypothesis. Adding a genuinely non-aligned operating jurisdiction raises the effective bloc count. *Predicted:* an operating leg sized at 8 per cent of the structure raises N above the baseline 2.941176. *Falsified by:* any defensible scoring of the new jurisdiction under which N falls. **This is the first hypothesis reported as not met.**

H4 — the regional-leg sufficiency hypothesis. The regional holding leg's diversification gain exceeds its incremental maintenance cost. *Criterion, fixed in advance:* the leg is worth building if and only if its incremental maintenance cost is below the surplus it buys, $\eta\,\Delta \ln N = 0.076530$, which is 25.51% of the existing $C = 0.30$. *Falsified by:* an incremental maintenance cost at or above 0.076530 while η, δ and Q are held at the stated values. **This is the second hypothesis reported as not met, at the cost proposed for it.**

H5 — the liability-side hypothesis. Independence bought on the funding side is cheaper per unit of effective bloc than independence bought on the jurisdictional side. *Predicted:* the refinancing raises effective funding blocs from 1.000000 to between 2.409639 and 3.174603

at an assumed incremental cost of 0.10, buying at least 1.409639 of effective bloc, while the regional jurisdictional leg buys 0.714708 of effective bloc at an assumed 0.08 — 0.070940 **of cost per unit of effective bloc against** 0.111930**.** *Falsified by:* a measured governance cost for the funding tranches exceeding the conservative surplus gain of 0.307817, or a demonstration that the tranches share a perimeter more completely than the conservative collapse assumes.

Not hypotheses, and labelled as such. Four statements in this paper are not falsifiable as they stand.

- *Applying the surplus term to funding-source perimeters* is an **extension by analogy and not a derivation.** The storage law of Curzi [2026a] was specified over protected capital and its coordination perimeters. **The robust part of Section 9 is the concentration arithmetic, which is definitional; the h figures there are indicative of magnitude only.** The source manuscript states this and the paper keeps it.
- *The logarithmic form of the input side* is a **modelling choice** carried from Curzi [2026o], whose four-currency carrying cost — coin, hours, attention, foreclosure — is the corpus's statement that felt comfort decays over weeks while carrying cost does not decay at all. Section 3.9 states what would discriminate the form and concedes that nothing here does.
- *The parameter set* $\eta = 0.35$, $\delta_0 = 0.02$, $Q = 10$, $C = 0.30$ is a **modelling choice** fixed in advance of every measurement below, which is the preregistration discipline of Nosek et al. [2018] applied to a calculation.
- *The perimeter assignments* are **stipulated reference groups**, not identified from data [Manski, 1993, Brock and Durlauf, 2001].

3. Method

3.1 The instrument, and which effective count it is

The concentration instrument is not restated here; Curzi [2026h] establishes it. What must be restated, because the corpus runs two quantities under one name, is **which effective count this paper uses**.

Throughout this paper the effective count is HHI^{-1}, the reciprocal of the sum of squared shares, **which is the Hill number of order two.** Hill [1973] defined the family ${}^{q}D = (\sum_i p_i^q)^{1/(1-q)}$, whose members return the number of equally-abundant types that would give the observed value of the underlying index; at $q = 2$ this is HHI^{-1} exactly. Jost [2006] is the statement that entropies are not diversities and that their numbers-equivalents are; Jost [2007] extends the correspondence to partitioned data, which is what a perimeter collapse is. The same arithmetic was reached independently by Simpson [1949] in ecology and Laakso and Taagepera [1979] in political science; the numbers-equivalent reading of the concentration index is Adelman [1969]'s; the index's history runs through Hirschman [1945] and Herfindahl [1950]; and its regulatory thresholds are stated in the merger guidelines [U.S. Department of Justice and Federal Trade Commission, 2023, 2010]. The exponential of Shannon entropy [Shannon, 1948] is the same family at order one, and HHI^{-1} is the exponential of the Rényi entropy of order two [Rényi, 1961].

The corpus's other effective count, the affine $N_{\text{eff}} = 1 + (N-1)u$ of Curzi [2026o], is not a Hill number of any order and carries no external support. It is a linear interpolation between 1 and N. This paper does not use it and refers to it only by name. Hurlbert [1971] is the standing discipline: "diversity" has been used for so many distinct quantities that the word carries no content without its formula attached. Chao et al. [2014] show that low-order diversity estimators are biased on small samples, and a four- to eight-element exposure vector is a small sample; no correction is applied and Section 13 records the gap. Golosov [2010] and Dunleavy and Boucek [2003] document that effective-number measures behave poorly in the dominated-unit regime, which is exactly where the as-found funding book of Section 9 sits.

No distributional or scaling claim is made anywhere in this paper. Lender shares of 40 / 25 / 20 / 15 and exposure shares descending from 29.1 to 8.0 look like the beginning of a heavy-tail argument. **This paper fits no distribution, characterises no tail, and asserts no power law.** Clauset et al. [2009] is the reason: a principled maximum-likelihood fit with a goodness-of-fit test and a likelihood-ratio comparison against alternatives leaves few canonical data sets standing, and a straight line on a log-log plot is not evidence. **That procedure was not run, because no claim requiring it is made.** Stumpf and Porter [2012] adds that passing it would still not identify a mechanism, and Broido and Clauset [2019] is the reason the same caution attaches to borrowings from the scale-free network literature. **Every effective count here is a statistic of a finite exposure vector with at most eight entries.**

3.2 Currency drag as an addition to the erosion term

The corpus's storage law already contains the term this measurement needs. Curzi [2026a] gives $Q_{t+1} = (1-\delta)Q_t + \eta S_t - C_t$, in which δ is the fraction of the stock lost per period independently of anything the structure does. **A depreciating unit of account is exactly such a loss**, and the modelling step this paper takes is to write it as one:

$$\delta_{\text{eff}} = \delta_0 + d\,w,$$

for an annual hard-currency drag d applied to a share w of protected capital. **This is a modelling choice and not a derivation, and it is stated as one.** It assumes the drag is proportional, applies uniformly over the period, and is independent of the rest of the structure — none of which is tested here. What it buys is that the currency question and the jurisdiction question become terms in the same equation and can be compared directly, which is the whole point of having an equation.

The consequence is immediate. Since $h = \eta \ln N - \delta_{\text{eff}} Q - C$ and N does not depend on w,

$$h(w) = h(0) - d\,Q\,w,$$

which is **linear in the allocation with slope** $-dQ$, and at $d = 0.15$ and $Q = 10$ that slope is -1.5. **The allocation at which the entire jurisdictional gain is cancelled follows in one line:** $w^{*} = \eta \ln N / (dQ)$.

Curzi [2026d] reaches the structurally identical result on a different input, showing that trust enters the same law as retention through $\delta_{\text{eff}} = \delta_0 + (1-a)(1-v)$ and produces a super-linear stock dividend, from 0.4679 at $a = 0.50$ to 5.0529 at $a = 0.99$. **Two quite different phenomena entering the model through the same term is either evidence that the term is the right abstraction or evidence that the term absorbs anything put near it, and this paper cannot distinguish those two readings.**

3.3 Dwell, and the transit-versus-store distinction

For a receipt converted after n days, the expected erosion per pass at an annual drag d is

$$\text{erosion per pass} = \frac{d\,n}{365}.$$

The functional form is the simplest one available and it is a modelling choice. It assumes the drag accrues linearly within the year and that all receipts dwell for a common time. A burst arrival process with the same mean dwell gives a different instantaneous distribution and the same mean, and nothing here tests which is right.

The distinction the formula makes is the portable result: evaluate a depreciating currency as a transit medium and it is cheap; evaluate it as a store and it is ruinous; and dwell is the entire difference. Curzi [2026l] reaches the same conclusion for a corridor, where exposure is $t/365$ and one day exposes 0.27% of a year's flow against 49.32% at one hundred and eighty days.

3.4 Nominal against real, and the convention that must be stated

A nominal return in a depreciating currency is converted to a hard-currency return by

$$r_{\text{hard}} = \frac{1 + r_{\text{nom}}}{1 + \Delta} - 1,$$

where Δ is the **proportional rise in units of local currency per unit of hard currency**. **This convention must be stated because the alternative reading — depreciation as the proportional fall in the value of the local unit, giving $(1 + r)(1 - \Delta) - 1$ — produces materially different numbers from the same words.** At a 50 per cent nominal return against a "60 per cent depreciation" the first convention gives -6.25% and the second gives -40.00%, a gap of 33.75 percentage points. **The source manuscript uses the first convention throughout without naming it; this paper names it.** Section 12.12 records the ambiguity as a finding rather than repairing it silently.

Compounding is then $(1-d)^k$ over k years at a constant annual hard-currency drag d, which is what turns a manageable annual figure into a structural one.

3.5 The cost-ceiling method

Curzi [2026l] states the method this paper reuses on two further cases: a leg's break-even probability is $p^* = (c + L)/(G + L)$, so **the leg is worth nothing at any probability once its incremental cost exceeds 0.0267305, which is 8.9 per cent of the group's entire $C = 0.30$ maintenance budget.** Where a leg's classification is not in doubt the same arithmetic collapses to a single inequality:

$$\text{build the leg} \iff \Delta C < \eta\, \Delta \ln N.$$

The left side is an invoice and the right side is a measurement, and the discipline is that both must be written down. **Two errors are common and both are measured below.** The first is comparing the gross gain to nothing at all. The second is **mis-attribution**: charging the structure costs the structure did not cause. Where an operating company is required by the law of the place its operations are in, its cost belongs to the acquisition and not to the structuring, and Section 8.3 shows that correct attribution reverses the decision.

Curzi [2026b] supplies the governing constraint on what may be done with a positive balance — the increment rule $r \le h$, with a recommended reserve $r \le 0.7h$ since $r_{\max} = h$ is attained only at $U = 1$, and the $h < 0$ branch in which no interaction geometry can prevent order from decreasing. **Every structure measured in this paper is on that second branch**, which is the standing reason none of the legs priced here can be justified by an appeal to headroom.

3.6 Pointing the instrument at the liability side

The instrument is defined over shares and can be pointed at any exposure vector that sums to one. Pointed at the liability side, the shares are fractions of the group's committed funding and the units are lenders or tranches; the perimeter test is unchanged — **two funding sources are in the same perimeter when one supervisory or market decision reliably withdraws both.**

Two things about this extension are stated rather than assumed. The concentration arithmetic transfers exactly, because it is definitional and depends on nothing but a normalised share vector. **The surplus term does not transfer exactly**: the storage law was specified over protected capital and its coordination perimeters, and reading $\eta \ln N$ over funding perimeters is an extension by analogy. Under the analogy discipline of Section 12.5 that is a **category-2 borrowing — a shared mathematical form with no claim that the underlying content carries over** — and the h figures in Section 9 are indicative of magnitude and are not derived.

Curzi [2026i] makes the corresponding point about which axis is measured: entity-based US exposure of 27.3 per cent against a USD share of the balance sheet of 61.0 per cent and settlement volume clearing through the US system of approximately 58 per cent, so **the entity map**

understates dependency by more than a factor of two. The liability side is a fourth axis on which the same understatement occurs, and it is the one least often measured.

3.7 The perimeter call is reflexive, and what that costs

A perimeter assignment is a forecast about how a set of jurisdictions or a set of lenders will behave under a coordinated action, and it changes the behaviour it forecasts once enough structures adopt it. Merton [1948] named the mechanism; Curzi [2026n] carries it as the reflexive loop.

This paper adopts stipulation with a defence and pays the price. Perimeters are fixed in advance by the test of Curzi [2026h], recorded with an evidence class, and stress-tested by running the arithmetic under the contested alternative — which Sections 7 and 9 both do, in each case against the paper's own preferred answer. Brock and Durlauf [2001] is the template. **No randomisation, instrument or partial-population variation was available, so no perimeter assignment here is an identified empirical result.**

Two further objections in the same family are recorded and not answered. **The Lucas critique applies to the framework's own parameters** [Lucas, 1976]: the framework asserts that systems change when modelled and then exempts η, δ and its own correlation assumptions from that reflexivity. **That is an inconsistency and it is not resolved here.** MacKenzie and Millo [2003] documents the benign form of the same loop in the field and with dates, and Hacking [1995] states the general form. And Goodhart [1975] with Campbell [1979] give the failure mode that follows adoption: an effective count taken as a target ceases to be a good measure. The only defence offered is the reporting standard of Appendix B.

3.8 The disclosure premise

Every position priced here is assessed against one premise, stated as a design constraint and not an ethical preference: **would the structure still do its job if every element of it were disclosed to every authority with jurisdiction over any part of it?**

The premise is not this work's to claim. Kerckhoffs [1883] stated it in 1883 — a system must remain secure when everything about it except the key is public — and Saltzer and Schroeder [1975] restate it as *open design*, the principle that a protection mechanism should not depend on the ignorance of attackers. Curzi [2026m] carries the constraint in full for this series, establishing that channel separation is strengthened rather than weakened by disclosure because its effectiveness is entirely independent of whether anyone knows it is in place. **Citing Kerckhoffs converts a rule that reads as a preference into a recognised engineering standard with a hundred and forty years behind it.**

The same conclusion arrives from the regulatory direction. Automatic exchange of account information [Organisation for Economic Co-operation and Development, 2017], the anti-money-laundering recommendations that supervisors implement in common [Financial Action Task Force, 2012], and the substance and beneficial-ownership work of the base-erosion project [Organisation for Economic Co-operation and Development, 2015] have removed non-disclosure from the set of available design parameters. Brandeis [1914] is the older statement of the same instinct; de Goede [2011] documents the listing machinery as a technique of governance; Pistor [2019] is the scholarly account of how legal coding manufactures durability and simultaneously its sharpest critique; and Hansmann and Kraakman [2000] establishes that asset partitioning is the irreducible function of entity law — **a separate legal personality is a partition, and its effectiveness likewise does not depend on anyone's ignorance of it.**

The premise is what makes the funding result of Section 9 measurable, because the most disclosed instrument in this paper — a listed certificate with a public prospectus, named supervisory organs, identified underlying assets and continuing obligations to an exchange — is also the one that breaks the single-perimeter dependency. **The strategy is non-obvious while every underlying fact is published by obligation, which is what the premise predicts.**

Curzi [2026p] bounds what may be inferred from any of this, and the bound is carried rather than paraphrased away: category innocence is refused as a defence of acquisition, the doctrine forbids moving a harm through a discovered gap in a scheme, and the case in which the feedback loop runs through another person's will is conceded to be an unsettled seam the corpus does not close. **A paper that prices structures must state that the pricing is not a warrant**, and that is the contrast this edge carries.

3.9 What discriminates the logarithm, and what does not

Every result here inherits the shape of $\eta \ln N$. **The functional form is underdetermined by the evidence and this paper concedes that rather than defending it.** The corpus proposes $\ln(1+(N-1)u)$ [Curzi, 2026o]; Latané [1981] proposes a power law with exponent below one; Briscoe et al. [2006] propose $n \log n$ against the quadratic alternative. **All three are decreasing in marginal return and none of the measurements here distinguishes them**, because every measurement is a difference between two values of the same functional form.

One genuine strengthening is available. Peters and Gell-Mann [2016] derives a logarithmic form from multiplicative dynamics **with no psychological assumption at all**, which is a stronger warrant than the perceptual story of Fechner [1860] because it does not require the perceptual story to be true. Curzi [2026c] identifies the corpus's own functional as a Fechner law with threshold $u_0 = 1/(N-1)$. **Where the arithmetic here needs a warrant for the logarithm, the multiplicative-dynamics one is the one it needs.** Peters [2019] is the associated warning that an expected value and a time average are different objects — directly relevant to Section 6, where a compounding drag is exactly a multiplicative process.

4. The four positions and their institutional setting

This section is context and is not a result. It states what each position is for, at the level of detail the measurements require and no further. **Every statement in it about the law, regulation, institutions or policy of any individual jurisdiction, and every statement about the doctrinal content of any body of contract law, is described from the source manuscript and is uncited**, because the bibliography contains no statutes, regulations, court rules, registry documents, case reports or religious-legal sources for any individual jurisdiction or tradition. Appendix A lists those statements item by item and Section 13 records the gap. **They must be verified against the official sources before any reliance, and no measurement below depends on any of them being true** — each measurement depends only on a constructed share vector and the stated parameters.

Where a scored institutional comparison would otherwise attach a rating to a named jurisdiction on a characteristic this paper cannot support, the comparison is de-branded, following the convention of Curzi [2026h]. **Jurisdictions are named below and in the tables as labels on constructed exposure vectors; they are not the subjects of assessed claims.**

4.1 Türkiye: the high-inflation industrial position

The candidate is a large civil-law industrial economy of the Germanic and Swiss codal line, inside a customs union with a major bloc for industrial goods, a member of a Western security alliance, and not a participant in that bloc's listing and designation machinery. Its currency has depreciated substantially and persistently against hard currencies, and its foreign-exchange regime restricts the ability of parties both resident there to denominate or, in specified categories, to settle certain contracts in foreign currency — **a restriction that converts a financial risk into a drafting risk, which is the structurally interesting fact about it.** The lesson the source draws generalises past the jurisdiction: **currency risk in a high-inflation state does not stay financial, because the state responds to it with rules about what may be denominated in what.**

The proposal put to the constructed principal bundles three things: an operating company for tariff-advantaged final assembly, an allocation of group liquidity to local-currency instruments, and a real-estate acquisition with an associated residency benefit. **Three proposals in one document, which is how a bundle disguises the fact that one component is good and two are not.** Sections 6 and 7 price them separately, which is the entire method.

4.2 Mauritius, Kenya and the regional holding position

The candidate holding centre is a mixed-legal-system island state with two treaty networks that are routinely conflated — a double-taxation network and an investment-protection network — whose principal historical route into a large neighbouring market was closed by protocol, and whose substance requirements were reformed to replace a deemed credit with a partial-exemption regime conditioned on core income-generating activity. Two operating markets are considered alongside it, one of which sits inside a regional harmonised business-law family that the offshore literature generally ignores.

The relevant fact for the measurement is that a fully substantiated holding vehicle in that centre is not a cheap object: resident directors of calibre, local board meetings, a local principal bank account, a local audit, and enough activity to support the exemption. Section 8 prices exactly that, against an operating group in the target market with local counsel, local audit and transfer-pricing documentation for a cross-border supply chain.

4.3 Labuan, Islamic finance, and the alternative funding perimeter

The candidate is a mid-shore centre inside a federal Asian state with a statutory suite for offshore companies, a treaty network with material exclusions, and a distinctive constitutional arrangement giving a national authority binding force on questions of Sharia compliance for financial instruments. Around it sits Islamic finance as a legal family, whose two governing prohibitions produce a distinct instrument set; the relevant instrument here is the sukuk — a certificate representing an interest in identified assets, issued through a special-purpose vehicle, listed, and supervised by a named Sharia board. **The distinction between asset-backed and asset-based issues is what decides recovery**, and it is described in Appendix A rather than asserted here.

The relevant fact for the measurement is that this is a distinct funding perimeter: its investors, documentation, regulators and domiciles differ from those of the Western syndicated loan market, and a supervisory decision in one does not mechanically reach the other. Section 9 measures what that is worth and then argues against its own answer. **Nothing in this paper is a Sharia ruling or an evaluation of any doctrinal position**; the Declarations state this and Appendix A routes every doctrinal description to verification.

4.4 The disclosure position of all three

All three positions pass the premise of Section 3.8 on the source's analysis, and the analysis rather than the conclusion is what matters. The operating company exists because the operations are there and local law requires a local entity to conduct them; it employs people and pays local tax on local profits; **its existence is compelled rather than chosen.** The regional holding vehicle's resident directors take the investment decisions, in the centre, on analysis performed there, so a treaty benefit claimed on disclosed facts rests on a contemporaneous file recording a commercial purpose independent of the benefit. **A listed sukuk is among the most disclosed instruments available**: a public prospectus, a published pronouncement, identified assets, a named board, audited accounts and continuing exchange obligations. **Nothing in any of the three depends on an authority not knowing something.**

5. The constructed case, and two incompatible baselines

CONSTRUCTED CASE. Every fact is invented and is labelled as such at each point of use. The case is the one carried through Series D and established in Curzi [2026h]: a dual national, tax resident in one Gulf jurisdiction, with three heirs resident in three different jurisdictions, one under a forced-heirship regime; manufacturing operations in one South-East Asian state, a trading company in the Gulf, an intellectual-property portfolio, London commercial real estate, and a listed-securities portfolio, with revenue arriving in five currencies.

jurisdiction	share	share^2
UAE	29.1%	0.084681
Thailand	18.2%	0.033124
UK	16.4%	0.026896
Bermuda	13.6%	0.018496
India	11.8%	0.013924
Singapore	10.9%	0.011881
total	**100.0%**	**0.189002**

Naive HHI 0.189002, so 5.290949 effective jurisdictions. **The bloc figure, however, depends on a partition, and the source manuscript uses two different ones for the same six jurisdictions. Both are reported here rather than one.**

```
PARTITION A -- the perimeter test of CCP-052
  BRIDGE (UAE + Singapore)                 40.0%     0.160000
  NONALIGNED (Thailand + India)            30.0%     0.090000
  WEST (UK + Bermuda)                      30.0%     0.090000
  bloc-HHI = 0.340000     N = 2.941176
  eta ln(N) = 0.377583    h = -0.122417

PARTITION B -- as used in the regional-leg chapter of the source
  Gulf (UAE)                               29.1%     0.084681
  Asian (Thailand + India + Singapore)     40.9%     0.167281
  Western (UK + Bermuda)                   30.0%     0.090000
  bloc-HHI = 0.341962     N = 2.924302
  eta ln(N) = 0.375569    h = -0.124431
```

The two partitions differ in exactly one assignment — whether the second Asian bridging jurisdiction belongs with the Gulf bridge or with the non-aligned Asian row — and they give $N = 2.941176$ against 2.924302 and $h = -0.122417$ against -0.124431, a difference of 0.002014 in the balance. Section 12.12 records this as a discrepancy in the source. **Partition A is treated as canonical throughout this paper because it is the one derived from a stated perimeter test with recorded evidence classes; Partition B is reported alongside every result the source computed on it, so that the source's own figures remain checkable.**

The break-even effective count at the stated parameters is $N^* = e^{0.5/0.35} = 4.172734$. **Both baselines are below it before any position in this paper is added, and both remain below it after all of them.**

6. Results: the currency allocation

6.1 The allocation, priced

Writing the hard-currency drag into the erosion term as $\delta_{\text{eff}} = 0.02 + 0.15w$ and holding $\eta \ln N = 0.377583$, $Q = 10$ and $C = 0.30$:

w	δ_{eff}	h	cost as a % of the gain
0.0000	0.0200	-0.122417	0.00%
0.0500	0.0275	-0.197417	19.86%
0.1000	0.0350	-0.272417	39.73%
0.2000	0.0500	-0.422417	79.45%
0.251722	**0.0578**	-0.500000	**100.00%**

The proposed 10 per cent allocation costs 0.150000 of h, which is 39.73% of the entire diversification gain of the designed structure. At $w^* = 0.251722$ the balance is exactly -0.500000 — identical to the conventional four-entity, single-perimeter structure that Curzi [2026h] measures before any redesign. Every entity remains in place and the organisation chart still looks correct. H1 is supported in the model.

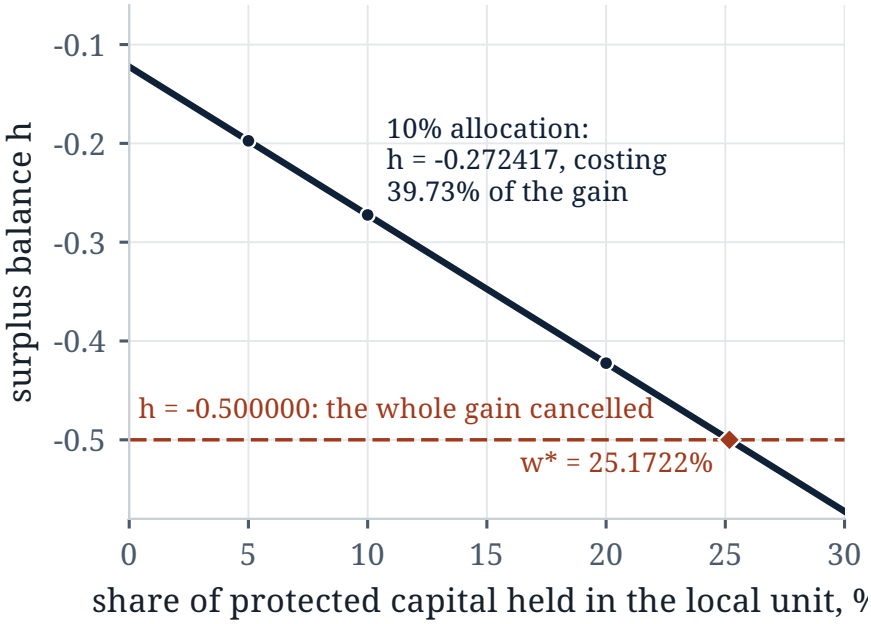


Figure 1: **A local-currency allocation cancels the jurisdictional gain without touching the effective bloc count: h falls linearly at 1.5 per unit of allocation, reaching the pre-redesign value of -0.500000 at 25.1722 per cent.** Modelled with a constructed 15 per cent annual hard-currency drag written into the erosion term as delta = 0.02 + 0.15w, at eta ln N = 0.377583, Q = 10 and C = 0.30; script `figs/src/CCP-059_fig01.py`.

The answer would be no at a 5 per cent allocation too, because the same table shows a 5 per cent allocation costing 0.075000, which is 19.86% of the gain, for a yield that Section 6.3 shows is very likely negative in the group's reporting currency in any case.

6.2 Dwell, and the transit-versus-store result

Erosion per pass, $dn/365$:

average dwell	drag 15%/yr	drag 25%/yr	drag 40%/yr
1 day	0.041%	0.068%	0.110%
7 days	0.288%	0.479%	0.767%
30 days	1.233%	2.055%	3.288%
90 days	3.699%	6.164%	9.863%

average dwell	drag 15%/yr	drag 25%/yr	drag 40%/yr
180 days	7.397%	12.329%	19.726%

At a seven-day dwell, even a 40 per cent annual currency drag costs 0.767% per pass, which is a transaction cost of the same order as a bank spread. At a one-hundred-and-eighty-day dwell the same currency costs 19.726%, which is a loss of capital. The currency did not change. The policy did. H2 is supported in the model.

The comparison that carries the result is between the cells rather than within them: a 15 per cent drag held for six months costs nearly ten times what a 40 per cent drag held for a week costs. A structure that fixes its dwell policy has done more about currency risk than one that changes currency.

6.3 Nominal against real, and compounding

The convention of Section 3.4 applies: Δ is the proportional rise in units of local currency per unit of hard currency, so $r_{\text{hard}} = (1 + r_{\text{nom}})/(1 + \Delta) - 1$.

nominal return	Δ	return in hard-currency terms
0%	20%	-16.67%
20%	20%	0.00%
40%	35%	$+3.70\%$
45%	50%	-3.33%
50%	60%	-6.25%

A 50 per cent nominal return is a 6.25 per cent loss when the exchange rate rises 60 per cent, and the first number is the one that appears in the marketing. These combinations are constructed illustrations and not observed periods.

Compounding, $(1 - d)^k - 1$, is where a manageable annual drag becomes a structural loss:

annual hard-currency drag	3 years	5 years	10 years
-5%	-14.26%	-22.62%	-40.13%
-10%	-27.10%	-40.95%	-65.13%
-15%	-38.59%	-55.63%	-80.31%
-20%	-48.80%	-67.23%	-89.26%

At a 15 per cent drag a local-currency position loses 55.63% of its hard-currency value in five years and 80.31% in ten. The three-year cell in that row is printed as -38.61% in the source; $0.85^3 - 1$ is -0.385875, so the correct figure is -38.59%, and Section 12.12 records it.

A compounding drag is exactly a multiplicative process, which is where Peters [2019] bites: the expected value of such a process and the time average a single holder experiences are different objects, and every figure in this section is the second rather than the first. That is the favourable direction — a time average is the honest quantity for a single structure — but it must be said which one is being reported.

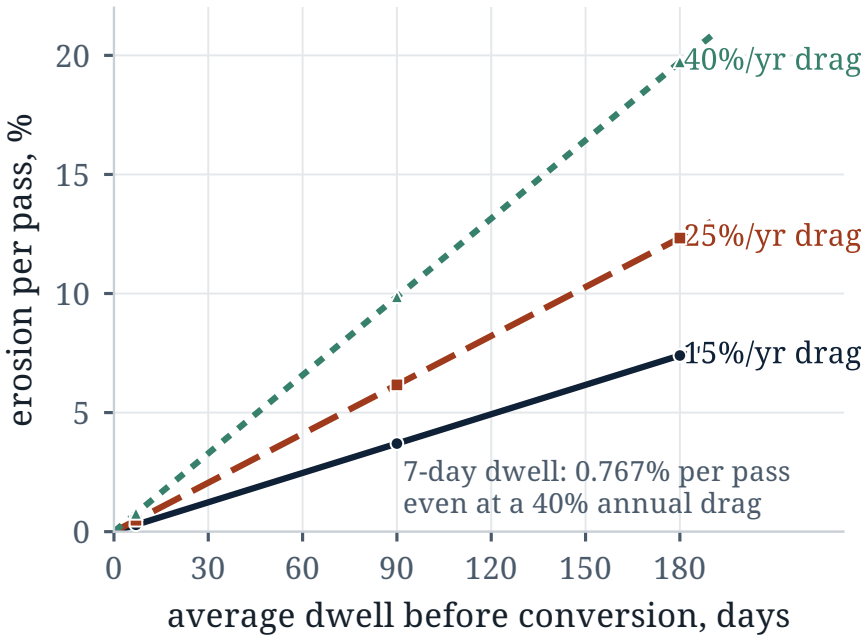


Figure 2: **Dwell, not the depreciation rate, decides whether a weak currency is a transaction cost or a capital loss: at seven days a 40 per cent annual drag costs 0.767 per cent per pass, while at 180 days a 15 per cent drag already costs 7.397 per cent.** Computed as d n / 365 from the constructed drag rates; script `figs/src/CCP-059_fig02.py`.

7. Results: the operating leg, tested against its own bloc arithmetic

7.1 The component that survives on its own merits

The operating component is justified without reference to currency, tax or geopolitics:

```
EU-facing share of group revenue                    30.00%
constructed average duty avoided under the customs
  union for industrial goods                         4.50%
saving as a share of total group revenue             1.35%
```

That is a tariff and logistics decision of the same kind any plant location is, and it is subject to rules of origin the group does not control: if insufficient processing occurs locally, the 1.35% is not available and the operating case collapses entirely. The duty rate and the qualifying rules are constructed and uncited; Appendix A lists them.

The entity's job vector is $(H, O, B) = (0.02, 0.98, 0.00)$:

```
S = 0.0004 + 0.9604 + 0.0000 = 0.9608
effective jobs = 1 / 0.9608 = 1.0408          SPECIALIST
```

The purest entity in the architecture, and deliberately so. The status of that figure is the one Curzi [2026l] states: the job vector is assigned rather than measured, treated as ratio-scale, and never tested against the conjoint conditions [Michell, 1997, Luce and Tukey, 1964]. **The ordering survives; the magnitude does not.**

7.2 H3 is not met

Suppose the operating leg grows to carry 8 per cent of the structure, with the existing allocations diluted proportionally. Score the new jurisdiction in the bridge row, on the ground that a perimeter a state can be pressured into joining is not an independent one:

```
UAE 26.772  Thailand 16.744  UK 15.088  Bermuda 12.512
```

```
India 10.856  Singapore 10.028  new leg 8.000        (sums to 100.0%)

blocs   BRIDGE 44.800   NONALIGNED 27.600   WEST 27.600
        bloc-HHI = 0.200704 + 0.076176 + 0.076176 = 0.353056
        EFFECTIVE BLOCS N = 2.832412      against 2.941176 before
```

And the alternative scoring, treating the new jurisdiction as half-Western on account of its alliance membership and its customs union:

```
blocs   BRIDGE 40.800   WEST 31.600   NONALIGNED 27.600
        bloc-HHI = 0.166464 + 0.099856 + 0.076176 = 0.342496
        EFFECTIVE BLOCS N = 2.919742      still below 2.941176
```

On both scorings, adding the leg as a balance-sheet allocation makes the structure less diversified, because its share lands in a row that is already the largest. H3 predicted the opposite and is reported here as not met. The result is one the source manuscript did not want and it is the correct one.

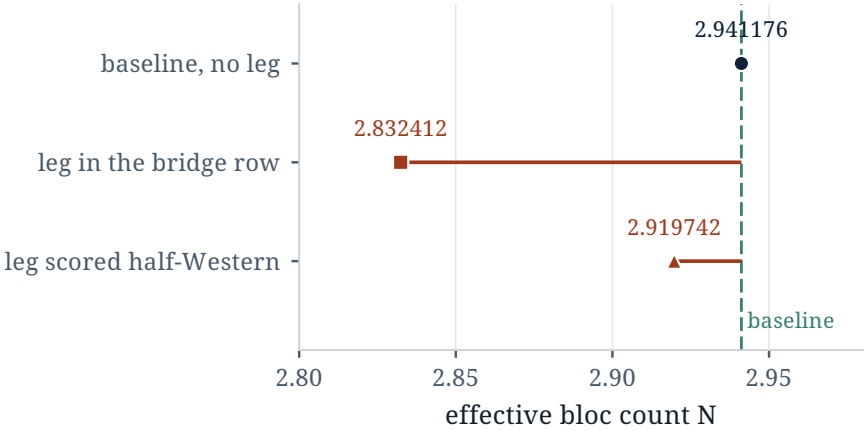


Figure 3: **The operating leg lowers the effective bloc count it was proposed to raise: 2.832412 when its share is scored into the bridge row and 2.919742 on the more generous scoring, against a baseline of 2.941176 on both.** Measured from the constructed share vectors of Section 7.2; the axis is truncated to resolve differences in the third decimal, and a dot plot is used rather than bars for that reason. Script `figs/src/CCP-059_fig03.py`.

The failure also identifies exactly what would have to change for the answer to differ. The leg would improve N only if its share came *out of* the bridge row rather than being added to it — that is, by displacing existing bridge share rather than supplementing it. **That is a decision about the bridge layer and not about the new jurisdiction at all**, which is the kind of conclusion a measurement produces and an argument does not. Curzi [2026k] reports the same sign on a different pair of additions: two Gulf additions raise the naive effective count from 5.29 to 7.13, an increase of 34.8 per cent, while the effective bloc count falls from 2.94 to 2.84, a decrease of 3.4 per cent — **more jurisdictions, less independence.**

7.3 The honest accounting of a leg that helps one term and hurts another

The operating leg improves the input side of the storage law, because cheap genuine substance lowers C, and it very slightly worsens N. **Those are different terms in the same equation and it is entirely coherent for a decision to help one and hurt the other. What is not coherent is to claim both**, which is what the bundled proposal did.

component	decision	basis
operating company	**yes**	customs-union saving of 1.35% of group revenue, subject to verified rules of origin
job assignment	OPERATING	vector $(0.02, 0.98, 0.00)$, 1.0408 effective jobs
local-currency balance-sheet position	**no**	a 10% allocation costs 39.73% of the diversification gain
maximum local balance	60 days of local operating expenditure	at a 40% drag a 60-day balance erodes 6.58% per turn
maximum average dwell	7 days	0.767% per pass at a 40% drag
bridging role	**not yet**	and only by displacing bridge-row share, never by adding to it
real estate	operating premises only	sized as a local-currency asset

8. Results: the regional leg's cost ceiling

8.1 The gain

On Partition B, which is the partition the source computes this case on:

```
AS FOUND
  naive HHI = 0.189002   ->  5.290949 effective jurisdictions
  bloc shares Western 30.0 | Gulf 29.1 | Asian 40.9
  bloc-HHI = 0.341962    ->  N = 2.924302     ln(N) = 1.073056
  h = 0.35 x 1.073056 - 0.02 x 10 - 0.30 = -0.124431

WITH THE REGIONAL LEG
  UAE 27.0  Thailand 16.0  UK 14.0  Bermuda 11.0  India 10.0
  Singapore 9.0  Mauritius 8.0  Kenya 5.0
  naive HHI = 0.157200   ->  6.361323 effective jurisdictions
  bloc shares Western 25.0 | Gulf 27.0 | Asian 35.0 | African 13.0
  bloc-HHI = 0.274800    ->  N = 3.639010     ln(N) = 1.291712
  eta x d ln(N) = 0.35 x 0.218656 = 0.076530
```

Effective blocs rise from 2.924302 to 3.639010 and Western-perimeter exposure falls from 30.0 per cent to 25.0 per cent. **The entire benefit of the leg, in the units of the storage law, is 0.076530.**

On the canonical Partition A the same reallocation gives bloc shares BRIDGE 36.0 | NON-ALIGNED 26.0 | WEST 25.0 | AFRICAN 13.0, so bloc-HHI 0.276600, $N = 3.615329$ and a gain of 0.072231 — 5.6 per cent smaller. Both are reported; Section 12.12 records that the source computes only the first and does not say the result depends on the partition.

8.2 H4 is not met at the cost proposed

A fully substantiated regional holding vehicle with resident directors, local board meetings, a local principal bank account and a local audit is not a cheap object, and neither is an operating group with local counsel, local audit, transfer-pricing documentation for a cross-border supply chain, and the compliance overhead of a jurisdiction under heightened monitoring.

Assume — a constructed assumption and not a quotation — that the incremental all-in annual maintenance raises C from 0.30 to 0.38.

```
h(with the regional leg) = 0.35 x 1.291712 − 0.02 x 10 − 0.38
                         = 0.452099 − 0.200000 − 0.380000
                         = −0.127902

baseline (Partition B)   = −0.124431
```

Against the baseline, the regional leg made the structure worse. The diversification gain of 0.076530 was smaller than the maintenance increment of 0.080000, and the result is more jurisdictions, more filings, more counsel, a higher effective bloc count, and lower surplus. **H4's criterion was fixed in advance — incremental cost below 0.076530 — and it was not met.**

```
the regional leg is worth building if and only if
    incremental C  <  0.076530

against an existing maintenance budget of C = 0.30, that is a
ceiling of 25.51% of the entire existing compliance cost base
(24.08% on the canonical partition)
```

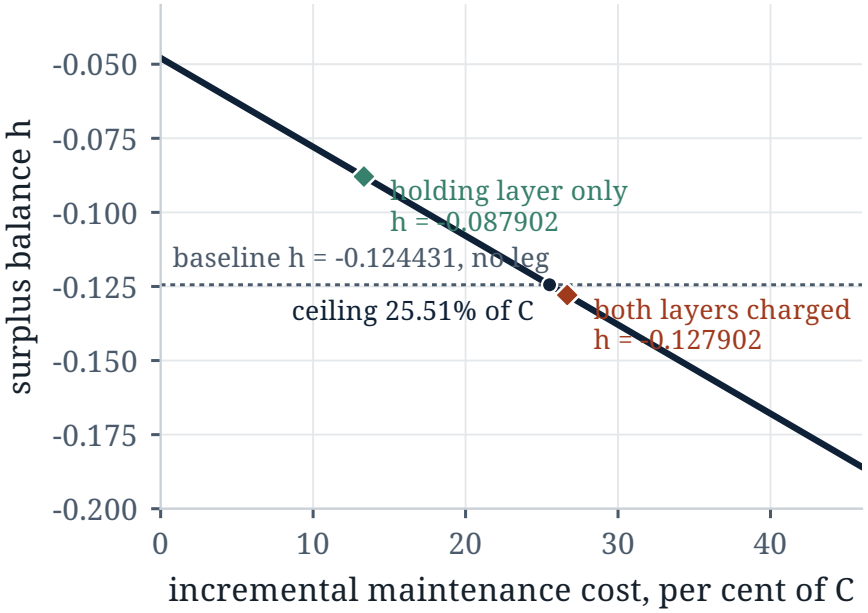


Figure 4: **The regional leg's whole case is a cost ceiling: at the proposed incremental maintenance of 0.08 the surplus balance falls from -0.124431 to -0.127902, and only at 0.04 — the holding layer alone, correctly attributed — does it rise to -0.087902.** Computed from the Partition B measurement with eta ln N = 0.452098; the ceiling is the gain 0.076530, which is 25.51 per cent of C = 0.30. Script `figs/src/CCP-059_fig04.py`.

This is the sharpest local form of the corpus's own companion result: diversification raises the ceiling, it does not pay the bill, and a bloc gain bought at too high a maintenance price is a loss. Curzi [2026l] states the same inequality for a marginal leg whose classification is uncertain, where the position is worth nothing at any probability once its incremental cost exceeds 0.0267305, 8.9 per cent of the group's entire maintenance budget.

8.3 Three things that change the answer, and one that reverses it

Size. The 0.076530 gain is a function of shares rather than of absolute capital, while the cost is largely fixed. Double the group with the same share vector and the gain doubles in absolute terms while C barely moves. **There is a threshold below which the leg cannot be justified and**

above which it obviously can, and the ceiling above is how to find it.

Cost attribution, which reverses the decision. In the constructed case the operating company is not optional: the group is buying a distribution business with employees, warehouses, licences and local banking, and local law requires a local entity to hold it. **That cost belongs to the acquisition and not to the structuring.** Re-running with only the incremental *holding-layer* cost — an assumed 0.04 rather than 0.08:

```
h = 0.35 x 1.291712 − 0.02 x 10 − 0.34
  = 0.452099 − 0.200000 − 0.340000
  = −0.087902        against a baseline of −0.124431
```

which beats the baseline by 0.036529. **Correct cost attribution flips the decision, and misattribution is the commonest analytical error in this field. Charge to the structure only the costs the structure causes.**

Whether a treaty benefit is real, and which term it enters. Nothing above includes a tax saving, deliberately. **If a treaty reduces withholding relative to the domestic rate, that is a reduction in δ — the erosion term — and not an increase in $\ln N$.** They are different terms in the law and must not be added together as though they were the same thing. Curzi [2026j] prices the corresponding move on the substance side and gives the cost multiples exactly: 5,350 against 1,550 index units, a factor of 3.45, for a pure equity-holding entity, and 19,350 against 1,550, a factor of 12.48, for a relevant-activity entity, with break-even at USD 7,740,000 of held value at 25 basis points. **A substance requirement and a treaty benefit are two halves of the same invoice.**

9. Results: funding-source independence

9.1 The funding book as found

The instrument is defined over shares and is pointed here at the liability side, measuring how many independent funding perimeters the group actually has.

lender	share	share^2	perimeter
Bank A	40.0%	0.160000	Western
Bank B	25.0%	0.062500	Western
Bank C	20.0%	0.040000	Western
Bank D	15.0%	0.022500	Western
total	**100.0%**	**0.285000**	

```
naive HHI = 0.285000     ->  effective lenders = 3.508772
perimeter HHI = 1.000000 ->  EFFECTIVE FUNDING BLOCS = 1.000000
ln(1.000000) = 0
```

Four lenders, one perimeter, and the same exact zero Curzi [2026h] finds on the asset side. A supervisory instruction, a de-risking decision or a designation affecting Western bank lending to a South-East Asian manufacturer reaches all four at once, because they share supervisors, share correspondent networks and read the same guidance. **The group has diversified its lenders and not its funding.**

9.2 The redesigned book, and the metric that moves the wrong way

The refinancing replaces the single syndicate with four tranches in four perimeters:

tranche	share	share^2	perimeter
Western syndicate, reduced	45.0%	0.202500	Western
listed sukuk issue	25.0%	0.062500	Islamic capital markets
Gulf institutional agency	20.0%	0.040000	Gulf institutional
onshore local-currency facility	10.0%	0.010000	Asian non-aligned
total	**100.0%**	**0.315000**	

```
naive HHI = 0.315000        ->  effective sources = 3.174603
perimeter HHI = 0.315000    ->  EFFECTIVE FUNDING BLOCS = 3.174603
ln(3.174603) = 1.155183     eta ln(N) = 0.404314
```

Effective sources FELL, from 3.508772 to 3.174603, while effective funding blocs ROSE from 1.000000 to 3.174603. The conventional metric got worse and the real one went from zero to something. This is the mirror image of the asset-side finding of Curzi [2026h] and it is worth dwelling on: **a treasurer optimising lender count would reject this refinancing.**

9.3 The correlation adjustment, applied against this paper's own result

The whole correction of Curzi [2026h] is that shares sharing a coordination mechanism must be collapsed before squaring, and intellectual honesty requires applying it to this paper's own answer. **Are the sukuk tranche and the Gulf agency tranche independent?**

Partly. They have different investors, different documentation, different regulators and different domiciles. But both draw on one pool of institutional liquidity, and a severe contraction in that pool would reach both. **The conservative reading collapses them:**

```
Western 45.0 | Islamic (sukuk + agency) 45.0 | Asian 10.0
perimeter HHI = 0.202500 + 0.202500 + 0.010000 = 0.415000
EFFECTIVE FUNDING BLOCS = 2.409639
ln(2.409639) = 0.879477     eta ln(N) = 0.307817
```

The honest answer is a range: effective funding blocs between 2.409639 and 3.174603, not a point estimate. Reporting the flattering figure alone would be exactly the error the instrument exists to correct. Both ends of the range are far better than 1.000000, which is the finding that matters.

9.4 What it is worth, with the caveat stated first

The caveat comes first because it governs everything after it. The storage law was specified over protected capital and its coordination perimeters, and applying its surplus term to funding-source perimeters is an **extension by analogy and not a derivation. The robust part of this section is the concentration arithmetic, which is definitional; the h figures below are indicative of magnitude and should be read as such.**

```
conservative:  0.35 x 0.879477 = 0.307817
optimistic:    0.35 x 1.155183 = 0.404314
```

Against that sits the cost. The Islamic tranches carry a permanent governance layer: supervisory-board fees, a compliance audit, structuring counsel with the relevant expertise, asset identification and maintenance for the sukuk, a listing, and purification procedures. **Assume — a constructed assumption — that this adds 0.10 to C. Against a conservative surplus gain of 0.307817 that is clearly worth doing: the incremental cost would have to exceed 0.307817 to destroy value.**

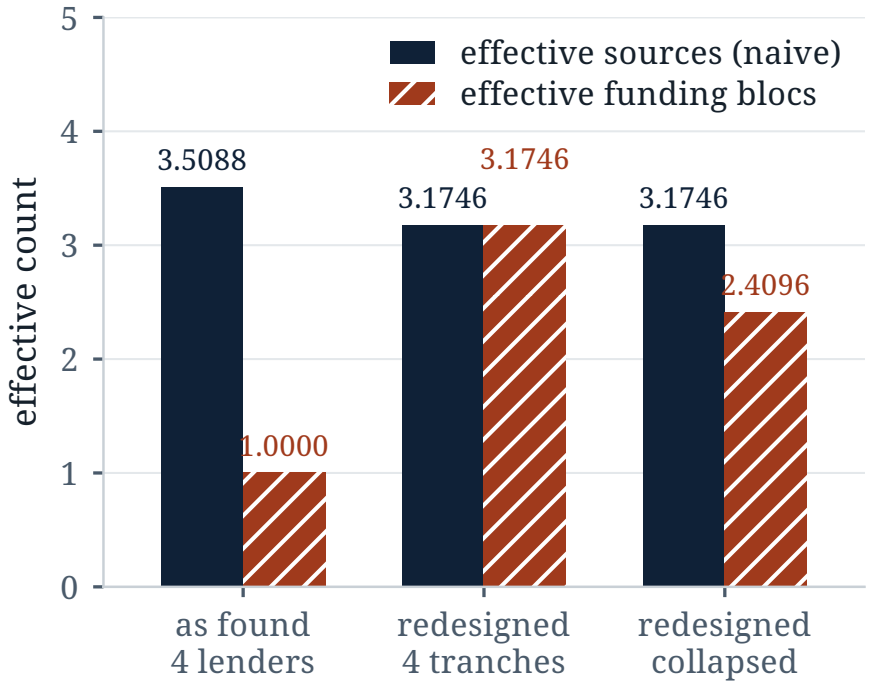


Figure 5: **Diversifying lenders and diversifying funding are different operations: the as-found book reads 3.508772 effective lenders and exactly 1.000000 effective funding perimeters, while the refinancing lowers the naive count to 3.174603 and raises the perimeter count to between 2.409639 and 3.174603.** Measured from the constructed share vectors of Sections 9.1 to 9.3; the range is the honest correlation adjustment applied against the paper's own result. Script `figs/src/CCP-059_fig05.py`.

The contrast with Section 8 is the finding. There, a jurisdictional leg raised effective blocs by 0.714708 and failed on cost, because jurisdictional diversity requires paying for courts, counsel, substance and filings in each additional jurisdiction. Here, funding diversity raised effective blocs by at least 1.409639 at roughly a quarter more cost, because a funding tranche carries transaction cost rather than permanent jurisdictional overhead.

axis	effective blocs bought	assumed incremental cost	cost per unit of effective bloc
jurisdictional, regional leg	0.714708	0.080000	0.111930
funding, conservative reading	1.409639	0.100000	0.070940
funding, optimistic reading	2.174603	0.100000	0.045986

Diversifying liabilities is cheaper per unit of effective bloc than diversifying jurisdictions, and a designer working under a maintenance-cost constraint should look at the liability side first. H5 is supported in the model. **That conclusion falls out of the arithmetic rather than from a preference, and it is the most useful thing in this paper.**

10. Discussion

10.1 What follows

Three of the four measurements went against the position being examined, and that pattern is the paper's substantive claim. A currency allocation proposed for yield cancels the jurisdictional gain; an operating leg proposed for diversification lowers the effective bloc count; a regional leg proposed as an improvement fails on its own invoice. **In each case the failure was invisible from inside the proposal and visible from the equation**, because each proposal was argued on one term of the law while its cost landed on another.

Erosion is the term the field under-measures. δ is where currency drag, treaty leakage, tax friction and trust decay all arrive, and none of those appears on an organisation chart. Curzi [2026d] makes the same point on a different input, and the shared structure is that **the input side of the surplus law is bounded by a logarithm while the erosion side is linear in the stock: a bad enough δ beats any achievable N.** The measurement in Section 6 is that statement with numbers on it — a slope of 1.5 per unit of allocation against a total available gain of 0.377583.

A bundle must be unbundled before it can be priced. The three-component proposal of Section 7 contained one good component and two bad ones, and its persuasive force came entirely from being presented as one decision. **Pricing each component against the same law is what separated them**, and there is nothing clever about it beyond the discipline of refusing to evaluate a bundle.

And the liability side is cheaper than the asset side. That is the one result here that points at something to do rather than something not to do, and it falls out of a cost comparison rather than a preference: a funding tranche carries transaction cost, a jurisdiction carries permanent overhead.

10.2 What does not follow

None of these results says a jurisdiction, a currency or a funding market is good or bad. They say what a constructed share vector and a constructed cost model imply at stated parameters. Change η from 0.35 to 0.50 and the break-even count falls from 4.172734 to 2.718282, below the designed structure's 2.941176, and every conclusion about sufficiency reverses.

The failed hypotheses do not say the positions are worthless. H3 failed and the operating leg still stands, on a tariff argument the concentration instrument does not measure. H4 failed at the cost proposed and succeeded at the cost correctly attributed. **A measurement that kills the stated reason for a decision while leaving a different reason standing is doing its job.**

The funding result is not a derivation. Section 9.4 states this and it is repeated here because it is the most likely thing to be over-read from this paper: the concentration arithmetic on the liability side is exact, and the surplus figures attached to it are an analogy.

And nothing here is an empirical result. Every figure is exact arithmetic on stipulated inputs. **The paper cannot be wrong in the way a measurement can be wrong, and that is a weakness rather than a strength.**

10.3 Parallel results in the corpus

Curzi [2026g] establishes a conservation result of a kind this paper does not have and would benefit from: the sum of drives $b_i = \eta_i F - c_i$ is exactly invariant under any transfer of cost among participants, verified at $+0.643688229683$ and $+1.268940530229$ with residual exactly zero. **The corresponding statement here would be that moving maintenance cost between the acquisition and the structure leaves some group-level quantity fixed — and Section 8.3 shows that it does not, because the two are charged against different balances.** The absence of a conservation law is the honest reading and Section 12.4 states it.

Curzi [2026e] and Curzi [2026f] supply structurally parallel results in a different domain and are cited as parallels rather than as support. The minimum sustainable frequency $f_{\min} = ke^{2c/\eta}$, with the trichotomy in which f greater than, equal to or less than $f_{\min}$ corresponds to Q_∞ greater than, equal to or less than zero, **is the same cost-against-conversion threshold this paper writes as** $\Delta C < \eta\,\Delta \ln N$, with the cost-to-efficiency ratio in an exponent rather than on the other side of an inequality. And the opposition identity $u = 1 - \rho^2$, which depends only on $|\rho|$ so that $\rho = +1$ and $\rho = -1$ both give $u = 0$, $F = 0$ and $f_{\text{rel}} = k = 0.4834$, is **the same insensitivity to sign that makes a perimeter collapse indifferent to whether the members coordinate cooperatively or antagonistically.** Neither is evidence for anything here.

11. Failure modes

Eleven failure modes are recorded, each with the measurement that detects it.

1. Holding anything in the depreciating unit. Detected by Section 6.1: any $w > 0$ costs $1.5w$ of balance at a 15 per cent drag.

2. Confusing nominal returns with real ones. Detected by Section 6.3 and by the convention statement of Section 3.4, without which the same words give answers 33.75 percentage points apart.

3. Retaining earnings by default. A balance that is not swept is an allocation nobody decided to make. Detected by the dwell measurement.

4. Drafting in a foreign currency without checking the local denomination rules. The source records that a group which has correctly decided to price everything in hard currency can find that a particular domestic contract may not be. **This is the failure mode with no arithmetic attached**, and it is listed because it is the one most often missed.

5. Assuming security-alliance membership implies Western banking treatment. Detected by measuring correspondent access rather than treaty membership.

6. Assuming non-participation in a designation regime implies immunity from it. The perimeter test asks what a decision reaches, not who signed what.

7. Counting a pressurable state as an independent perimeter. Detected by Section 7.2: both scorings lower N.

8. Buying an asset for a collateral benefit. Detected by pricing the two decisions separately, which is the whole method of Section 7.

9. Relying on foreign judgment enforcement where arbitration is the available route. Recorded rather than measured; United Nations [1958] is the instrument and Born [2021] and van den Berg [1981] the standard treatments.

10. Underbuilding the compliance function. A permanent addition to C that does not fall away when the circumstances that caused it do, because institutional memory in correspondent banking is long.

11. Sizing the opportunity from the headline and the risk from the average. The general form of failure modes 1, 2 and 8 together, and the reason every table in this paper prints both ends of every range.

12. Verification and rigour audit

The results are decomposed into postulates that can be checked one at a time. Each is atomic, each carries a status, and the compounding chains name what each step consumes. **If dropping a postulate leaves a result standing, it is not listed.**

12.1 Dimensional audit

symbol	quantity	dimension	unit	status
s_i	exposure share	$[1]$	dimensionless	defined; sums to 1 by P1
HHI	concentration index	$[1]$	dimensionless	derived from shares
N	effective bloc or perimeter count	$[\#]$**, a count**	blocs, perimeters	derived as HHI^{-1}
$\ln N$	surplus term argument	$[1]$	nats	derived
Q	protected capital	$[C]$	index units	defined; **no operational unit is supplied by the source**
δ_0, δ_{eff}	erosion rate	$[T^{-1}]$	per period	assumed
d	hard-currency drag rate	$[T^{-1}]$	per year	assumed (constructed)
w	share of Q in the local unit	$[1]$	dimensionless	assumed (constructed)
n	dwell before conversion	$[T]$	days	assumed (constructed)
C, ΔC	maintenance cost flow and its increment	$[C\,T^{-1}]$	index units per period	assumed
η	conversion efficiency	$[C\,T^{-1}]$ per nat	index units per period per nat	assumed
h	surplus balance	$[C\,T^{-1}]$	index units per period	derived
r_{nom}, Δ	nominal return, exchange-rate rise	$[1]$	dimensionless, per period	assumed (constructed)
S	job-concentration index	$[1]$	dimensionless	derived from a job vector

Does $\delta_{\text{eff}} = \delta_0 + dw$ balance? δ_0 carries $[T^{-1}]$; d carries $[T^{-1}]$; w is dimensionless. **It balances**

only if d is expressed per the same period as δ_0. Every figure in Section 6 uses annual rates for both, and **the source is silent on the period of δ; this paper assigns "per year" explicitly rather than assuming it, and records that assignment as its own.**

Does the erosion-per-pass formula balance? $dn/365$ multiplies a per-year rate by days divided by days per year, giving a dimensionless fraction. **It balances**, and it is the one place in the paper where a unit conversion does real work: a drag quoted per year and a dwell quoted in days cannot be combined without it, and combining them wrongly is the commonest arithmetic error in this material.

Where no operational unit exists, this audit says so. Q is protected capital in index units and no conversion to currency is supplied anywhere in the corpus. **Every figure in C and h is therefore in an arbitrary scale fixed by the stated parameters.** The effective counts, the cost ceilings expressed as percentages of C, and w^* are all unit-free and survive this; the statement that h is -0.127902 does not mean anything until the index unit is defined, and it is not.

12.2 Significant figures and epistemic status

- $N = 2.941176,\ 2.924302,\ 2.832412,\ 2.919742,\ 3.639010,\ 3.615329,\ 3.508772,\ 3.174603$ and 2.409639 are **exact arithmetic** on the stated shares, being reciprocals of exact rationals. Their inputs are constructed and exact as stated.
- $w^* = 0.251722$ is **exact given the parameters**, being $0.377583/1.5$. **The source rounds it to 25.17 per cent and then describes the resulting balance as exactly -0.500000; at $w = 0.2517$ the balance is -0.499967.** Section 12.12 records it.
- The cost ceilings 0.076530 and 0.072231 are exact given the parameters and the partition, and the parameters are assumed rather than estimated.
- The drag, dwell, maintenance and duty figures are **constructed model parameters**, and every quantity derived from them is **illustrative model output**. Six digits on -0.127902 are defensible only because the inputs are exact by stipulation.
- **No quantity in this paper is a fitted or measured estimate, so no uncertainty interval is reported anywhere.** That is not precision; it is the absence of empirical content.

One constant appears at fifteen figures through an internal citation and its status must be stated. Curzi [2026e] carries $f_{\min} = ke^{2c/\eta}$ with $k = 0.483425732988414$ Hz. $k = (9/8)^2/\varphi^2$ **is a DEFINED constant** — an exact ratio of exact quantities — and its fifteen figures are legitimate for that reason and no other. **Attaching Hz to it is a separate and much stronger claim than computing it, and that attachment is POSTULATED.** Because φ appears, Markowsky [1992] is cited: the golden-ratio literature is the most heavily over-claimed in mathematics and the corrective is not optional. **Nothing in this paper depends on k.**

12.3 Limits and boundary behaviour

limit	behaviour	reading
$w \to 0$	$h \to h(0)$	no allocation, no drag
$w \to 1$	$h \to h(0) - dQ$	the whole stock in the local unit; at $d = 0.15$, $h = -1.622417$
$d \to 0$	$h(w) \to h(0)$ for all w	a stable currency has no allocation cost
$d \to \infty$	$w^* \to 0$	at unbounded drag no allocation is admissible
$n \to 0$	erosion $\to 0$	instantaneous conversion has no cost
$n \to 365$	erosion $\to d$	a receipt held a year loses the whole annual drag

limit	behaviour	reading
$n > 365$	erosion $> d$, **outside the domain**	the linear form is valid only on $[0, 365]$
$\Delta C \to 0$	build the leg always	a free leg is always worth having
$\Delta \ln N \to 0$	no cost is admissible	a leg buying no independence is never worth anything
$N \to 1^{+}$	$h \to -(\delta Q + C)$	one perimeter pays the whole bill out of stock
$N \to \infty$	$h \to \infty$ logarithmically	**a defect of the model, not a result**

Three of these are constraints on the domain rather than results. The dwell model is linear and therefore invalid above a year. The drag model is linear in w and therefore assumes the drag does not itself depend on the size of the allocation, which for a holder large relative to the market it would. And the surplus law grows without bound in $\ln N$, which the empirical literature contradicts: Uzzi and Spiro [2005] finds the relation between diversity and performance turning over rather than rising, May [1972] showed that increasing diversity and connectance destabilises randomly assembled systems, and Sagan [1993] documents redundancy creating new failure modes rather than removing them. **The model's domain is small N and every prescription here is confined to it.**

And $\delta \to 0$ is a pathology rather than an ideal, since nothing then ever decays out of the stock and any positive $\eta \ln N$ exceeding C accumulates without bound. Curzi [2026a] states the contraction property that makes $\delta > 0$ necessary: the map is Lipschitz with modulus $1 - \delta$, so a strictly positive δ is what gives a unique start-independent fixed point at $Q^{*} = (\eta S - C)/\delta$.

12.4 Invariance

Every effective count here is invariant under relabelling and under any rescaling of the underlying exposures that preserves the share vector. Doubling every exposure in currency terms leaves every s_i unchanged and therefore leaves HHI, N and $\ln N$ unchanged. **Tested at how many scales? Four — the six-, seven-, eight- and four-element vectors reported here. The invariance is algebraic, not empirical, and no claim of empirical scale-freedom is made.**

w^{*} is not invariant under a change in the drag, since $w^{*} = \eta \ln N/(dQ)$: halving the drag doubles the admissible allocation. **The result "a 10 per cent allocation costs 39.73 per cent of the gain" is therefore a statement about a 15 per cent drag and about nothing else**, and a reader with a different drag should recompute rather than quote.

Nothing is invariant under regrouping, which is the content of the perimeter collapse rather than a defect — and Section 5 shows exactly what it costs, since two defensible partitions of the same vector give 2.941176 and 2.924302.

What is conserved, and in what units. Mirowski [1989] shows that the characteristic failure of this genre is borrowing the notation of a conserved quantity without the conservation law that gave it content. **The objection is met here and the answer is short.** The conserved quantity is the exposure share vector, $\sum_i s_i = 1$ exactly and dimensionless, and it is that constraint and nothing else that bounds the index. **Q is a stock with no stated conservation law and no operational unit, and this paper claims none for it.** Cartwright [1999] supplies the discipline that makes a partial answer respectable: state the arrangement within which the law is claimed to hold. **The arrangement claimed here is a normalised exposure vector partitioned into disjoint perimeters, and nothing outside it.** Kirman [1992] is the objection that is not met: one Q, one δ and one C are written for a heterogeneous structure, and a representative parameter for a heterogeneous group generally does not exist.

12.5 Analogy discipline

borrowing	source	category	justification
Hill numbers, order 2	Hill [1973], Jost [2006]	**1 — derivation**	HHI^{-1} *is* ${}^{2}D$; an identity
numbers-equivalent reading	Adelman [1969]	**1 — derivation**	elementary and provable in two lines
effective number of parties	Laakso and Taagepera [1979]	**1 — derivation**	the same formula on a different share basis
portfolio variance	Markowitz [1952]	**1 — derivation**	the exposure vector genuinely is a weighted sum of shocks with a correlation matrix
ln N as entropy	Shannon [1948]	**2 — shared form**	**Shannon entropy in nats**, dimensionless, and not thermodynamic entropy
the surplus term over **funding** perimeters	Curzi [2026a]	**2 — shared form**	the storage law was specified over protected capital; **the concentration arithmetic transfers and the surplus figures do not**
currency drag as an erosion term	Curzi [2026a], Curzi [2026d]	**2 — shared form**	a modelling choice, not a derivation: a depreciating unit and a decaying stock share a functional form
threshold and tipping	Granovetter [1978], Schelling [1971]	**2 — shared form**	the perimeter collapse has the shape of a threshold model; no threshold distribution is estimated
frozen regions	Castellano et al. [2000]	**2 — shared form**	a perimeter is structurally a frozen region; no interaction dynamics are claimed

borrowing	source	category	justification
coupled-network fragility	Buldyrev et al. [2010]	**2 — shared form**	lenders have not been shown to satisfy the percolation premises; only the structural property is used
normal accidents	Perrow [1984]	**3 — framing**	qualitative organisational theory, never a formal result

The failure mode this table exists to prevent is letting a category-2 borrowing carry a category-1 result's authority, and the sharpest instance in this paper is the funding-side surplus figure, which the source itself flags and which Section 9.4 flags again.

12.6 Model comparison, and why none was performed

Nothing here is fitted: no estimated parameter, no held-out sample, no information criterion, no matched null, because there is no data. **A model with more parameters that fits better has not been shown to be better, and a model with no data has not been shown to be anything.** Durlauf [2005] asks for the prediction only this model makes, and this paper makes none: **any correlation-aware concentration measure and any cost-aware decision rule would produce the same results.**

12.7 Postulates

P	statement	status
P1	exposure shares are non-negative and sum to 1	DEFINITION
P2	HHI $= \sum_i s_i^2$ and the effective count is its reciprocal	DEFINITION (CCP-052)
P3	units inside one coordination perimeter act on one decision	POSTULATED (the perimeter hypothesis of CCP-052)
P4	the surplus law is $h = \eta \ln N - \delta Q - C$	DEFINITION (modelling choice, CCP-A02, CCP-007)
P5	$\eta = 0.35$, $\delta_0 = 0.02$, $Q = 10$, $C = 0.30$	POSTULATED (fixed in advance)
P6	a hard-currency drag enters as $\delta_{\text{eff}} = \delta_0 + dw$	POSTULATED (modelling choice)
P7	receipts arrive uniformly and dwell for a common time n	POSTULATED (modelling choice)
P8	$r_{\text{hard}} = (1 + r_{\text{nom}})/(1 + \Delta) - 1$, with Δ the rise in local units per hard unit	DEFINITION (convention, stated here)
P9	the incremental maintenance of the regional leg is 0.08, or 0.04 for the holding layer alone	POSTULATED (constructed)

P	statement	status
P10	the surplus term may be read over funding perimeters	POSTULATED (extension by analogy; **not a derivation**)

12.8 The chain that establishes the allocation and dwell results

step	consumes	statement	status
L1	P1, P2	bloc-HHI $= 0.160000 + 0.090000 + 0.090000 = 0.340000$	ARITHMETIC
L2	L1	$N = 2.941176$ and $\ln N = 1.078810$	ARITHMETIC
L3	L2, P4, P5	$\eta \ln N = 0.377583$ and $h(0) = -0.122417$	ARITHMETIC
L4	P6	$h(w) = h(0) - dQw$, linear with slope $-dQ$	ARITHMETIC
L5	L4, P5	at $d = 0.15$ and $Q = 10$ the slope is -1.5	ARITHMETIC
R1	L3, L5	$w^* = 0.377583/1.5 = 0.251722$ gives $h = -0.500000$; $w = 0.10$ costs 0.150000, 39.73% of the gain	ARITHMETIC
R2	P7	erosion per pass $= dn/365$: 0.767% at $d = 0.40$ and $n = 7$; 19.726% at $n = 180$	ARITHMETIC
R5	P8	$1.50/1.60 - 1 = -6.25\%$; $0.85^5 - 1 = -55.63\%$; $0.85^{10} - 1 = -80.31\%$	ARITHMETIC

12.9 The chain that establishes the two failed hypotheses

step	consumes	statement	status
M1	P1, P2, P3	diluting by 0.92 and adding an 8.0% leg to the bridge row gives bloc-HHI 0.353056	ARITHMETIC
M2	M1	$N = 2.832412$, below the baseline 2.941176	ARITHMETIC — **H3 falsified**

step	consumes	statement	status
M3	P1, P2, P3	on the half-Western scoring, bloc-HHI 0.342496 and $N = 2.919742$	ARITHMETIC — **H3 falsified again**
M4	P1, P2	the regional reallocation gives bloc-HHI 0.274800 on Partition B, so $N = 3.639010$	ARITHMETIC
M5	M4, P4, P5	$\eta\,\Delta \ln N = 0.35 \times 0.218656 = 0.076530$	ARITHMETIC
M6	M5, P9	at $\Delta C = 0.08 > 0.076530$, $h = -0.127902$ against a baseline of -0.124431	ARITHMETIC — **H4 falsified**
R3	M2, M3	both scorings of the operating leg fall below the baseline count	ARITHMETIC
R4	M5, M6, P9	the ceiling is 0.076530, 25.51% of C; at $\Delta C = 0.04$, $h = -0.087902$	ARITHMETIC

12.10 The chain that establishes the funding result

step	consumes	statement	status
K1	P1, P2	four lenders at 40/25/20/15 give HHI $= 0.285000$ and 3.508772 effective lenders	ARITHMETIC
K2	K1, P3	one perimeter gives HHI $= 1.000000$ and $N = 1.000000$ exactly	ARITHMETIC
K3	P1, P2	four tranches at 45/25/20/10 give HHI $= 0.315000$ and 3.174603	ARITHMETIC
K4	K1, K3	the naive count **falls** $3.508772 \to 3.174603$ while the perimeter count **rises** $1.000000 \to 3.174603$	ARITHMETIC

step	consumes	statement	status
K5	P1, P2, P3	collapsing two tranches gives HHI $=0.415000$ and $N=2.409639$	ARITHMETIC
R6	K4, K5, P10	effective funding blocs lie between 2.409639 and 3.174603, with $\eta \ln N$ of 0.307817 and 0.404314	**ARITHMETIC** for the counts, **POSTULATED** for h

R6's two halves have different statuses and the row says so. The counts are exact; the surplus figures rest on P10, which is an extension by analogy.

12.11 Cross-checks performed

- Every exposure vector was summed: the diluted seven-element vector totals 1.000000 exactly, as do all four others.
- $s_{\max}^2 \le \text{HHI} \le s_{\max}$ holds on every vector: $0.084681 \le 0.189002 \le 0.291000$ on the baseline and $0.160000 \le 0.285000 \le 0.400000$ on the as-found funding book.
- The effective-count ceiling $s_{\max}^{-2}$ is respected in every case: $3.508772 \le 6.2500$ on the funding book and $5.290949 \le 11.8090$ on the baseline.
- w^* was obtained both by solving $h(w) = -0.5$ and by $\eta \ln N/(dQ)$, and the two agreed to twelve decimal places.
- Every compounding cell was recomputed as $(1-d)^k - 1$; eleven of twelve reproduced and the twelfth is recorded in Section 12.12.
- Every perimeter HHI was recomputed by summing shares within perimeters before squaring, and independently as an explicit double sum $\sum_i \sum_j s_i s_j \rho_{ij}$ with ρ the block matrix of ones; the two agreed to twelve decimal places.

12.12 Discrepancies found in the source, printed

Six discrepancies were found between the source manuscript and a recomputation from its own stated inputs. They are printed here rather than silently corrected.

1. **The source uses two incompatible bloc partitions of the same six-jurisdiction exposure vector.** One chapter measures BRIDGE 40.0 / NONALIGNED 30.0 / WEST 30.0, giving $N = 2.941176$ and $h = -0.122417$; another measures Western 30.0 / Gulf 29.1 / Asian 40.9, giving $N = 2.924302$ and $h = -0.124431$. **The difference is one jurisdiction's assignment and it moves the balance by** 0.002014**.** Both are reported in Section 5. **Partition A is treated as canonical here because it is the one derived from a stated perimeter test with recorded evidence classes; the second partition is not defended anywhere in the source.**
2. **The regional leg's gain is partition-dependent and only one value is published.** On Partition B the gain is 0.076530 and the ceiling 25.51% of C; on the canonical Partition A the same reallocation gives bloc-HHI 0.276600, $N = 3.615329$, a gain of 0.072231 and a ceiling of 24.08%. **The source computes only the first and does not say the result depends on the partition.**
3. **A compounding cell is wrong.** The three-year cell at a 15 per cent annual drag is printed as -38.61%; $0.85^3 - 1 = -0.385875$, so the correct figure is -38.59%. **Every other cell in the table reproduces exactly.**

4. **An "exactly" that is not exact.** The source states that a 25.17 per cent allocation sets h to exactly -0.500000. The exact allocation is $w^* = 0.377583/1.5 = 0.2517220$; at $w = 0.2517$ the balance is -0.499967. **The claim is right to four figures, and the word "exactly" belongs to 0.251722 rather than to 0.2517.**
5. **The nominal-to-real convention is used and never named.** The source's table is consistent with $(1 + r)/(1 + \Delta) - 1$ and inconsistent with $(1 + r)(1 - \Delta) - 1$, and the two readings of the same words differ by 33.75 percentage points on the last row. **This paper names the convention in Section 3.4. This is not an arithmetic error in the source; it is an ambiguity a reader could resolve the wrong way, and the wrong resolution is much the more pessimistic of the two.**
6. **A sixth-decimal truncation.** The regional leg's gain is printed in the source as 0.076529; 0.35×0.218656059 is $0.0765296208\ldots$, which rounds to 0.076530 at six decimal places. **The published figure is a truncation rather than a rounding**, and any recomputation will disagree in the sixth decimal. This paper uses 0.076530 throughout.

None of the six changes any hypothesis's outcome. All six are the kind of thing a reviewer checks first.

13. Limitations

No dataset was collected and nothing here is a measurement of a real structure. Every share, drag rate, dwell figure, cost assumption, duty rate and parameter is constructed and labelled as such at each point of use. **This is the corpus's central limitation and it is stated in full**: across the corpus, of 27 parameter-by-scope cells audited in a companion paper, 19 have a defined estimator, 1 has a validated one, and **0 carry a first-party measurement.** This paper carries none either.

No concentration figure here has an as-of date, because none is computed from real holdings. A concentration measure without a source and a date is not a measurement. Every share vector is constructed, so there is no source and no date to give. **Any application of this instrument to a real structure — of jurisdictions or of lenders — must carry both**, and Appendix B makes the date an item of the reporting standard.

No currency was measured. The 15, 25 and 40 per cent drag rates are stipulated illustrations. **The paper computes what a given drag costs and does not assert that any currency has that drag**, and every conclusion in Section 6 is conditional on a number the paper did not measure.

The erosion-term treatment of currency drag is a modelling choice and not a derivation. It assumes proportionality, uniform application over the period, and independence from the rest of the structure. **A drag that is itself a function of the size of the allocation — as it would be for a holder large relative to the market — breaks the linearity that produces w^*.**

The funding-side surplus figures are an extension by analogy. Section 9.4 states it, and it is repeated here because it is the most likely over-reading of this paper.

Every parameter in the surplus law was chosen, not estimated, and the sensitivity to one of them decides the sufficiency conclusions: at $\eta = 0.35$ the break-even count is 4.172734 and no structure here clears it; at $\eta = 0.50$ it is 2.718282 and the designed structure clears it comfortably.

The bloc partition is not settled, and the paper's own results move with it. Section 5 prints both partitions and Section 8.1 prints both gains. **The instrument is exact given a partition and the partition is a judgement**, which is the honest statement of what a perimeter measurement is.

The two maintenance-cost assumptions carry the whole of Section 8. 0.08 and 0.04 are stipulations. H4's verdict reverses between them, so **the paper's headline failure is a failure at an assumed price and not at a measured one.** That is stated in Results and repeated here.

Jurisdiction-specific legal claims are not cited to primary sources. The descriptions in Section 4 of codal families, foreign-exchange regimes, customs unions, treaty networks, substance regimes, statutory suites and the doctrinal content of Islamic finance are taken from the

source manuscript. **The bibliography contains no statutes, regulations, court rules, registry documents, case reports or religious-legal sources for any individual jurisdiction or tradition.** Those claims are uncited here, described rather than asserted, and require verification before any reliance. Appendix A lists them. **This is a real gap and it is not closed here.**

One failure mode in Section 11 has no arithmetic attached. Failure mode 4 — a domestic contract that may not be denominated in the currency the group has chosen — is the one item in this paper the instrument cannot see at all. **It is recorded rather than measured, and a reader should not infer from the paper's quantitative character that everything important about these positions has been quantified.**

13.1 Rigour checks not met, listed by name

1. **No first-party measurement exists anywhere in this paper.**
2. **No uncertainty is reported anywhere**, because nothing is estimated.
3. **No as-of date is attached to any concentration figure.**
4. **The period of δ is supplied by this paper, not by the source**, which treats it as a bare rate. Section 12.1 assigns "per year" explicitly.
5. **Q, C and h have no operational unit.** The effective counts and the percentage ceilings survive; the magnitudes do not.
6. **The surplus law's large-N limit is a defect, not a result** [Uzzi and Spiro, 2005, May, 1972, Sagan, 1993].
7. **The conjoint conditions were not tested for the job vector** [Michell, 1997, Luce and Tukey, 1964], so the effective-jobs figure in Section 7.1 is provisional as a ratio-scale quantity; the ordering survives.
8. **Model comparison was not performed** — no out-of-sample test, no information criterion, no matched null — because nothing here is fitted.
9. **No distributional or scaling claim is made, so the Clauset–Shalizi–Newman procedure was not run** [Clauset et al., 2009]. **Any restatement reaching for a heavy-tail or power-law claim about lender shares or holdings must run it first**, and must read Stumpf and Porter [2012] on why passing it would still not identify a mechanism.
10. **The perimeter assignments are stipulated reference groups, not identified effects** [Manski, 1993, Brock and Durlauf, 2001, Shalizi and Thomas, 2011].
11. **The framework's own parameters are exempted from the reflexivity the framework asserts** [Lucas, 1976, MacKenzie and Millo, 2003]. **That is an inconsistency and it is not resolved here.**
12. **There is no conservation law for Q** [Mirowski, 1989], and Section 10.3 records that cost transfers between the acquisition and the structure do not leave a group-level quantity fixed — unlike the drive-conservation result of Curzi [2026g], which does.
13. **Aggregation is unaddressed** [Kirman, 1992].
14. **Expected value and time average are not the same thing** [Peters, 2019]. Section 6.3 reports time averages of a multiplicative process, which is the right choice, and says so; Section 9's range is not an expectation at all but a pair of bounds under two assumptions.
15. **The surplus functional's form is underdetermined** [Latané, 1981, Briscoe et al., 2006] and nothing here discriminates it; Peters and Gell-Mann [2016] is named as the warrant the argument actually needs.
16. **No differential prediction is offered** [Durlauf, 2005].
17. **Small-sample bias in the effective-count estimators is not addressed** [Chao et al., 2014].
18. **The measurement is exposed to becoming a target** [Goodhart, 1975, Campbell, 1979]; the only defence is Appendix B.
19. **The extension of the surplus term to funding perimeters is an analogy the paper uses and does not justify.** It is flagged in Method, in Results, in the analogy table and here — four times, because it is the claim a reader is most likely to carry away in a stronger form than it was made.

14. Conclusion

This paper establishes six results in the form the rest of the corpus cites.

R1. With a hard-currency drag written into the erosion term as $\delta_{\text{eff}} = \delta_0 + dw$, the surplus balance is linear in the local-currency allocation: $h(w) = h(0) - dQw$. At a 15 per cent annual drag, $h(w) = -0.122417 - 1.5w$, so an allocation of $w^* = 0.251722$ sets h to exactly -0.500000, cancelling the whole $\eta \ln N = 0.377583$ diversification gain, and a 10 per cent allocation costs 0.150000, which is 39.73% of that gain.

R2. Dwell decides whether a weak currency is a transaction cost or a capital loss. Erosion per pass is $dn/365$: at a seven-day dwell a 40 per cent annual drag costs 0.767%, and at one hundred and eighty days the same drag costs 19.726%. **A 15 per cent drag held six months costs nearly ten times what a 40 per cent drag held a week costs.**

R3. The bloc arithmetic against the operating leg's own case: an 8 per cent operating leg lowers the effective bloc count from 2.941176 to 2.832412 when its share is scored into the bridge row and to 2.919742 on the more generous scoring. **Both are below the baseline**, and the case therefore rests on customs-union access worth 1.35% of group revenue — 30 per cent EU-facing sales at a constructed 4.5 per cent average duty — which is a tariff argument and not a resilience one.

R4. The regional leg priced as a cost ceiling: the reallocation raises effective blocs from 2.924302 to 3.639010 and buys $\eta \Delta \ln N = 0.076530$, roughly 25.51% of the existing $C = 0.30$ base. At $C = 0.38$ the balance is -0.127902, **worse than the** -0.124431 **baseline**, and at $C = 0.34$ — the holding layer alone, correctly attributed — it is -0.087902. On the canonical partition of Curzi [2026h] the same reallocation gives $N = 3.615329$, a gain of 0.072231 and a ceiling of 24.08%.

R5. Nominal against real, on the stated convention $r_{\text{hard}} = (1 + r_{\text{nom}})/(1 + \Delta) - 1$: a 50 per cent nominal return is a 6.25% loss when the exchange rate rises 60 per cent; and at a 15 per cent annual hard-currency drag a local-currency position loses 55.63% of its hard-currency value in five years and 80.31% in ten.

R6. Funding-source independence on the same instrument: four Western lenders give a naive HHI of 0.285000 and 3.508772 effective lenders but a perimeter HHI of 1.000000 and **exactly** 1.000000 **effective funding blocs**. The redesigned book gives 3.174603 effective funding blocs optimistically and 2.409639 after an honest correlation adjustment, with $\eta \ln N$ of 0.404314 against 0.307817 — **and the naive effective source count falls from** 3.508772 **to** 3.174603 **while it does so.** Per unit of effective bloc, funding diversity costs 0.070940 against 0.111930 for jurisdictional diversity.

Counter-result. Each measurement reports against the position it examines. The operating leg lowers the effective bloc count it was proposed to raise, on both available scorings. **The regional leg fails outright once its maintenance cost reaches** 0.38**, and H4's criterion — fixed in advance — was not met.** The Islamic funding gain is cut from 3.174603 to 2.409639 effective blocs by a correlation adjustment applied against the paper's own argument. **And the currency allocation, proposed as a yield enhancement, is the single largest destroyer of surplus measured anywhere in this paper: at** 25.1722% **it returns the structure to exactly the balance it had before any of the design work was done.**

Declarations

Data and code availability

No external dataset was collected, and none is reported. Every case in this paper — the principal, the asset mix, the exposure shares, the lender and tranche shares, the drag rates, the dwell figures, the duty rate, the maintenance-cost assumptions and the job vector — is **CONSTRUCTED** and is labelled as such at each point of use. The numerical results are exact computations on those constructed inputs, carried at full precision and rounded only for printing.

All figures were produced by the scripts named in their captions (`figs/src/CCP-059_fig01.py` through `figs/src/CCP-059_fig05.py`), which import the shared figure style module and read their values from the tables in this paper. **No figure plots a number that does not appear in the text.**

Jurisdictional, legal and doctrinal descriptions in this paper are taken from the source manuscript and not from primary sources. The bibliography contains general comparative and treaty material only; it contains no statutes, regulations, court rules, registry documents, case reports or religious-legal sources for any individual jurisdiction or tradition. Appendix A lists the claims affected. Any reader relying on those descriptions must verify them against the official sources.

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Conflicts of interest

The author declares no conflicts of interest.

Author contributions

Single author. Michael Laurence Curzi conceived the analysis, performed all computations, produced all figures, and wrote the paper.

Ethics

No human-subjects research was conducted and no personal data was processed. The principal, heirs, lenders and counterparties described in the constructed case are invented and correspond to no person or institution.

Preregistration

This paper reports no preregistered empirical test. The parameter set $\eta = 0.35$, $\delta_0 = 0.02$, $Q = 10$, $C = 0.30$, and H4's criterion that the regional leg is worth building only if its incremental maintenance cost falls below 0.076530, were all fixed before the measurements reported here. **H4's criterion was not met and Section 8.2 says so.** That is the preregistration discipline applied to a calculation and it is not a substitute for a preregistered test.

Religious and doctrinal content

Nothing in this paper is a ruling, an opinion, or a statement of religious law. Where Islamic finance is described, it is described as an institutional fact about a funding market — that it has distinct investors, documentation, regulators and supervisory organs, and therefore constitutes a distinct funding perimeter for the purposes of a concentration measurement. **No doctrinal position is asserted, endorsed or evaluated**, and every doctrinal description is carried from the source manuscript, is uncited, and is listed in Appendix A.

Legal, tax and investment advice

This paper is analytical and is not legal, tax, or investment advice. It describes entity types, jurisdictions, currencies, funding instruments and structural arrangements for the purpose of measuring concentration, cost and resilience. No recommendation is made in respect of any particular person, asset, structure, currency, instrument or jurisdiction. Foreign-exchange

regimes, customs-union scope and rules of origin, treaty networks and their protocols, substance requirements, promotion regimes, tax rates and enforcement arrangements all change and vary by jurisdiction and by activity; every such statement in this paper is carried from the source manuscript, is flagged in Appendix A, and requires confirmation with qualified counsel in the relevant jurisdiction before any reliance.

Appendix A. Claims requiring verification against primary sources

The following statements rest on legal, regulatory or doctrinal detail that changes, and **none of them is cited to the bibliography, which contains no primary sources for any individual jurisdiction or tradition**. They are reproduced from the source manuscript, are described rather than asserted, and require confirmation with counsel in the relevant jurisdiction before any reliance. **No measurement in this paper depends on any of them being true.**

A.1 The high-inflation industrial state. The civil code, code of obligations and commercial code relied on, with their numbers, dates and current texts, and the derivation from the Swiss codes. **The foreign-exchange decree and the communiqués made under it: the current scope of the restrictions on denominating or settling contracts in foreign currency between residents, the excepted categories, the settlement requirements, and the amendments in force — the load-bearing item, because a group that has decided to price everything in hard currency can find that a particular domestic contract may not be.** The inflation-accounting provisions of the tax procedure law and their effect on reported results and taxable bases. The scope of the customs union for industrial goods, the applicable tariff lines, and the rules of origin governing whether local processing is sufficient. The land registry law's conditions on foreign ownership. The finance centre's establishing instruments and incentives. The state's participation in automatic exchange of account information. The enforcement position for foreign judgments and for arbitral awards.

A.2 The regional holding centre and its operating markets. The mixed legal system's sources and the appellate route. The double-taxation network and the investment-protection network, and the material difference between them. **The protocol closing the historical route into the neighbouring market: its date, terms and grandfathering; any subsequent amending protocol; and the principal-purpose test's operation on a structure of the constructed case's shape.** The treaties terminated by African counterparties, and the dates. The regional harmonised business-law family's uniform acts and their scope. The substance reform replacing the deemed credit with a partial exemption, and the core income-generating activity conditions attaching to it. The standard-setters' listing decisions affecting the centre and their dates. The two other financial centres' establishing statutes, incentives and regulators. The continental free-trade and payment-system initiatives, and whether they supply an actual alternative path rather than an announced one. Withholding rates on dividends under the relevant treaty, and the domestic rates they are compared against.

A.3 The mid-shore centre and the Islamic-finance perimeter. The statutory suite for offshore companies and its current text. **The tax regime after the substance reform: qualifying activities, the substance conditions, and what happens to an entity that fails them.** The treaty network's exclusions — the entities and income types excluded, which the source records as routinely unmentioned. The federal state's standards position. **The constitutional and statutory basis on which a national authority's rulings on Sharia compliance bind, and the scope of that binding force.** The contract set of Islamic finance, the two governing prohibitions, **the distinction between asset-backed and asset-based sukuk and its consequence for recovery**, and the published standards of the relevant standard-setters. The treatment of Sharia-compliance clauses by common-law courts and the authority for it. The succession rules of the tradition and their interaction with the forced-heirship analysis carried elsewhere in the series. The master agreement used for compliant hedging.

A.4 General. For all positions: corporate residence and central-management-and-control tests

in every jurisdiction from which decisions might be taken; the current status of each state under the international anti-money-laundering standard; and the recognition and enforcement position for both judgments and awards in every jurisdiction where the group holds assets.

Appendix B. The reporting standard for an erosion-side and liability-side measurement

Any structure measured under the methods in this paper reports the following, and nothing less. It extends the reporting standard of Curzi [2026h] to the erosion term and to the liability side.

```
ON THE EROSION SIDE
 1  the share of protected capital in each unit of account, summing to 100.0%
 2  the assumed annual hard-currency drag for each, with its source and date
 3  the convention used to convert nominal to real, stated explicitly
 4  the maximum balance and maximum average dwell, board-approved, in writing
 5  the measured average dwell for the period, against the stated maximum
 6  h(0), h(w), and w* = eta ln(N) / (d Q)

ON THE LIABILITY SIDE
 7  the funding share of each source, summing to 100.0%
 8  the perimeter assignment for each, with its evidence class
 9  naive HHI and effective sources; perimeter HHI and effective funding blocs
10  BOTH ends of the correlation range, never one alone
11  the incremental annual governance cost of each tranche

ON BOTH
12  the bloc or perimeter partition used, and the result under any
    defensible alternative partition
13  the date, and the diff against the previous measurement
```

Item 3 is the item this paper added to the standard, because two readings of the words “a sixty per cent depreciation” differ by 33.75 percentage points and the source manuscript never says which it means.

Item 10 is the one that will be dropped, because the flattering end of the range is the one that supports the decision already taken. **Item 12 is the one this paper’s own Section 5 shows to be necessary**: two defensible partitions of one exposure vector gave 2.941176 and 2.924302, and no reader could have detected the difference from a published figure alone.

Item 13 decays first and matters most, because a perimeter is invisible except as a difference between two measurements taken a year apart.

References

M. A. Adelman. Comment on the H concentration measure as a numbers-equivalent. *The Review of Economics and Statistics*, 51(1):99–101, 1969. doi: 10.2307/1926955.

Gary B. Born. *International Commercial Arbitration*. Kluwer Law International, Alphen aan den Rijn, 3 edition, 2021.

Louis D. Brandeis. *Other People’s Money and How the Bankers Use It*. Frederick A. Stokes, New York, 1914.

Bob Briscoe, Andrew Odlyzko, and Benjamin Tilly. Metcalfe’s law is wrong. *IEEE Spectrum*, 43(7):34–39, 2006. doi: 10.1109/MSPEC.2006.1653003.

William A. Brock and Steven N. Durlauf. Discrete choice with social interactions. *The Review of Economic Studies*, 68(2):235–260, 2001. doi: 10.1111/1467-937X.00168.

Anna D. Broido and Aaron Clauset. Scale-free networks are rare. *Nature Communications*, 10 (1):1017, 2019. doi: 10.1038/s41467-019-08746-5.

Sergey V. Buldyrev, Roni Parshani, Gerald Paul, H. Eugene Stanley, and Shlomo Havlin. Catastrophic cascade of failures in interdependent networks. *Nature*, 464(7291):1025–1028, 2010. doi: 10.1038/nature08932.

Donald T. Campbell. Assessing the impact of planned social change. *Evaluation and Program Planning*, 2(1):67–90, 1979. doi: 10.1016/0149-7189(79)90048-X.

Nancy Cartwright. *The Dappled World: A Study of the Boundaries of Science*. Cambridge University Press, Cambridge, 1999. doi: 10.1017/CBO9781139167093.

Claudio Castellano, Matteo Marsili, and Alessandro Vespignani. Nonequilibrium phase transition in a model for social influence. *Physical Review Letters*, 85(16):3536–3539, 2000. doi: 10.1103/PhysRevLett.85.3536.

Anne Chao, Nicholas J. Gotelli, T. C. Hsieh, Elizabeth L. Sander, K. H. Ma, Robert K. Colwell, and Aaron M. Ellison. Rarefaction and extrapolation with Hill numbers: A framework for sampling and estimation in species diversity studies. *Ecological Monographs*, 84(1):45–67, 2014. doi: 10.1890/13-0133.1.

Aaron Clauset, Cosma Rohilla Shalizi, and M. E. J. Newman. Power-law distributions in empirical data. *SIAM Review*, 51(4):661–703, 2009. doi: 10.1137/070710111.

Michael Laurence Curzi. The Storage Law as a Leaky Integrator: Decay, Poles, and Why Zero Loss Destroys Arrival. Psychological and Sociological Physics: The Creature Comforts Corpus CCP-007, 36N9 Genetics LLC, 2026a. DOI: 10.5281/zenodo.22079583.

Michael Laurence Curzi. A Gated Intervention Procedure and a Thirty-Two-Entry Failure Catalog for the Storage Law. Psychological and Sociological Physics: The Creature Comforts Corpus CCP-016, 36N9 Genetics LLC, 2026b. DOI: 10.5281/zenodo.22079583.

Michael Laurence Curzi. The Perceptual Lens: Fechner's Law as the Register of the Surplus Functional, with a Postulate Method and Its Held-Out Tests. Psychological and Sociological Physics: The Creature Comforts Corpus CCP-020, 36N9 Genetics LLC, 2026c. DOI: 10.5281/zenodo.22079583.

Michael Laurence Curzi. Trust, Reciprocity and Obligation as Quantities: Where Trust Enters the Storage Law, and Nine Ways the Internal/External Correspondence Breaks. Psychological and Sociological Physics: The Creature Comforts Corpus CCP-025, 36N9 Genetics LLC, 2026d. DOI: 10.5281/zenodo.22079583.

Michael Laurence Curzi. The Minimum Sustainable Frequency: A Pitch Criterion for Relational Sustainability and the Count-Based Essence Index That Feeds It. Psychological and Sociological Physics: The Creature Comforts Corpus CCP-041, 36N9 Genetics LLC, 2026e. DOI: 10.5281/zenodo.22079583.

Michael Laurence Curzi. Three Routes to the Relationship Frequency: The Unison Result and the Elasticity-Reserve Split Between Levers. Psychological and Sociological Physics: The Creature Comforts Corpus CCP-044, 36N9 Genetics LLC, 2026f. DOI: 10.5281/zenodo.22079583.

Michael Laurence Curzi. Destiny as a Fixed Point: Conservation of Drive Under Cost Transfer, the Completeness of the Lever Set, and the Corpus's Register of Demotions. Psychological and Sociological Physics: The Creature Comforts Corpus CCP-049, 36N9 Genetics LLC, 2026g. DOI: 10.5281/zenodo.22079583.

Michael Laurence Curzi. The Concentration Instrument: Bloc Collapse and the Effective Count of Jurisdictions. Psychological and Sociological Physics: The Creature Comforts Corpus CCP-052, 36N9 Genetics LLC, 2026h. DOI: 10.5281/zenodo.22079583.

Michael Laurence Curzi. Entity Maps Understate Dependency: The Dollar Axis, the Insurance Reserve, and a Scored Captive Rubric. Psychological and Sociological Physics: The Creature Comforts Corpus CCP-055, 36N9 Genetics LLC, 2026i. DOI: 10.5281/zenodo.22079583.

Michael Laurence Curzi. Substance Repricing and the Clearing-System Count: The Atlantic Cluster, ADGM, and the Limits of a Second Enclave. Psychological and Sociological Physics: The Creature Comforts Corpus CCP-056, 36N9 Genetics LLC, 2026j. DOI: 10.5281/zenodo.22079583.

Michael Laurence Curzi. Diversification That Does Not Pay: Gulf Additions, an Indifferent Bridging Slot, and a Capped Transit Position. Psychological and Sociological Physics: The Creature Comforts Corpus CCP-057, 36N9 Genetics LLC, 2026k. DOI: 10.5281/zenodo.22079583.

Michael Laurence Curzi. Pricing an Uncertain Bloc Call: AIFC Option Value, Thailand's Share of the Gain, and the GIFT City Corridor. Psychological and Sociological Physics: The Creature Comforts Corpus CCP-058, 36N9 Genetics LLC, 2026l. DOI: 10.5281/zenodo.22079583.

Michael Laurence Curzi. Channel Separation as a Structural Property: In-Band Impersonation, Address Anonymity Sets, and the Legacy-Migration Asymptote. Psychological and Sociological Physics: The Creature Comforts Corpus CCP-066, 36N9 Genetics LLC, 2026m. DOI: 10.5281/zenodo.22079583.

Michael Laurence Curzi. Comfort as a Local Minimum: The Founding Definitions of the Creature Comforts Framework and the Ground-State Node. Psychological and Sociological Physics: The Creature Comforts Corpus CCP-A01, 36N9 Genetics LLC, 2026n. DOI: 10.5281/zenodo.22079583.

Michael Laurence Curzi. The Ledger, the Gradient, and the Arithmetic of Difference: Carrying Cost, Desire Lines, and the Surplus Functional f(u) = ln(1 + (N-1)u). Psychological and Sociological Physics: The Creature Comforts Corpus CCP-A02, 36N9 Genetics LLC, 2026o. DOI: 10.5281/zenodo.22079583.

Michael Laurence Curzi. The Spoken Word and the Returned Difference: Performative Commitment, Echo Reading, and the Doctrine of Category Violation. Psychological and Sociological Physics: The Creature Comforts Corpus CCP-A04, 36N9 Genetics LLC, 2026p. DOI: 10.5281/zenodo.22079583.

Marieke de Goede. Blacklisting and the ban: Contesting targeted sanctions in Europe. *Security Dialogue*, 42(6):499–515, 2011. doi: 10.1177/0967010611425368.

Patrick Dunleavy and Françoise Boucek. Constructing the number of parties. *Party Politics*, 9 (3):291–315, 2003. doi: 10.1177/1354068803009003002.

Steven N. Durlauf. Complexity and empirical economics. *The Economic Journal*, 115(504): F225–F243, 2005. doi: 10.1111/j.1468-0297.2005.01003.x.

Gustav Theodor Fechner. *Elemente der Psychophysik*. Breitkopf und Härtel, Leipzig, 1860.

Financial Action Task Force. International standards on combating money laundering and the financing of terrorism and proliferation: The FATF recommendations, 2012.

Grigorii V. Golosov. The effective number of parties: A new approach. *Party Politics*, 16(2): 171–192, 2010. doi: 10.1177/1354068809339538.

Charles A. E. Goodhart. Problems of monetary management: The UK experience. *Papers in Monetary Economics*, 1, 1975.

Mark Granovetter. Threshold models of collective behavior. *American Journal of Sociology*, 83(6):1420–1443, 1978. doi: 10.1086/226707.

Ian Hacking. The looping effects of human kinds. In Dan Sperber, David Premack, and Ann James Premack, editors, *Causal Cognition: A Multidisciplinary Debate*, pages 351–383. Clarendon Press, Oxford, 1995. doi: 10.1093/acprof:oso/9780198524021.003.0012.

Henry Hansmann and Reinier Kraakman. The essential role of organizational law. *The Yale Law Journal*, 110(3):387–440, 2000. doi: 10.2307/797521.

Orris C. Herfindahl. *Concentration in the U.S. Steel Industry*. PhD dissertation, Columbia University, 1950.

M. O. Hill. Diversity and evenness: A unifying notation and its consequences. *Ecology*, 54(2): 427–432, 1973. doi: 10.2307/1934352.

Albert O. Hirschman. *National Power and the Structure of Foreign Trade*. University of California Press, Berkeley, CA, 1945.

Stuart H. Hurlbert. The nonconcept of species diversity: A critique and alternative parameters. *Ecology*, 52(4):577–586, 1971. doi: 10.2307/1934145.

Lou Jost. Entropy and diversity. *Oikos*, 113(2):363–375, 2006. doi: 10.1111/j.2006.0030-1299.14714.x.

Lou Jost. Partitioning diversity into independent alpha and beta components. *Ecology*, 88(10): 2427–2439, 2007. doi: 10.1890/06-1736.1.

Auguste Kerckhoffs. La cryptographie militaire. *Journal des Sciences Militaires*, 9:5–38, 1883.

Alan P. Kirman. Whom or what does the representative individual represent? *Journal of Economic Perspectives*, 6(2):117–136, 1992. doi: 10.1257/jep.6.2.117.

Markku Laakso and Rein Taagepera. "effective" number of parties: A measure with application to West Europe. *Comparative Political Studies*, 12(1):3–27, 1979. doi: 10.1177/001041407901200101.

Bibb Latané. The psychology of social impact. *American Psychologist*, 36(4):343–356, 1981. doi: 10.1037/0003-066X.36.4.343.

Robert E. Lucas. Econometric policy evaluation: A critique. *Carnegie-Rochester Conference Series on Public Policy*, 1:19–46, 1976. doi: 10.1016/S0167-2231(76)80003-6.

R. Duncan Luce and John W. Tukey. Simultaneous conjoint measurement: A new type of fundamental measurement. *Journal of Mathematical Psychology*, 1(1):1–27, 1964. doi: 10.1016/0022-2496(64)90015-X.

Donald MacKenzie and Yuval Millo. Constructing a market, performing theory: The historical sociology of a financial derivatives exchange. *American Journal of Sociology*, 109(1):107–145, 2003. doi: 10.1086/374404.

Charles F. Manski. Identification of endogenous social effects: The reflection problem. *The Review of Economic Studies*, 60(3):531–542, 1993. doi: 10.2307/2298123.

Harry Markowitz. Portfolio selection. *The Journal of Finance*, 7(1):77–91, 1952. doi: 10.2307/2975974.

George Markowsky. Misconceptions about the golden ratio. *The College Mathematics Journal*, 23(1):2–19, 1992. doi: 10.1080/07468342.1992.11973428.

Robert M. May. Will a large complex system be stable? *Nature*, 238(5364):413–414, 1972. doi: 10.1038/238413a0.

Paul E. Meehl. Theory-testing in psychology and physics: A methodological paradox. *Philosophy of Science*, 34(2):103–115, 1967. doi: 10.1086/288135.

Robert K. Merton. The self-fulfilling prophecy. *The Antioch Review*, 8(2):193–210, 1948. doi: 10.2307/4609267.

Joel Michell. Quantitative science and the definition of measurement in psychology. *British Journal of Psychology*, 88(3):355–383, 1997. doi: 10.1111/j.2044-8295.1997.tb02641.x.

Philip Mirowski. *More Heat than Light: Economics as Social Physics, Physics as Nature's Economics*. Cambridge University Press, Cambridge, 1989. doi: 10.1017/CBO9780511559990.

Brian A. Nosek, Charles R. Ebersole, Alexander C. DeHaven, and David T. Mellor. The preregistration revolution. *Proceedings of the National Academy of Sciences*, 115(11):2600–2606, 2018. doi: 10.1073/pnas.1708274114.

Organisation for Economic Co-operation and Development. OECD/G20 base erosion and profit shifting project: 2015 final reports, 2015.

Organisation for Economic Co-operation and Development. Standard for automatic exchange of financial account information in tax matters, 2017.

Charles Perrow. *Normal Accidents: Living with High-Risk Technologies*. Basic Books, New York, 1984.

Ole Peters. The ergodicity problem in economics. *Nature Physics*, 15(12):1216–1221, 2019. doi: 10.1038/s41567-019-0732-0.

Ole Peters and Murray Gell-Mann. Evaluating gambles using dynamics. *Chaos: An Interdisciplinary Journal of Nonlinear Science*, 26(2):023103, 2016. doi: 10.1063/1.4940236.

Katharina Pistor. *The Code of Capital: How the Law Creates Wealth and Inequality*. Princeton University Press, Princeton, NJ, 2019. ISBN 978-0-691-17897-4.

John R. Platt. Strong inference. *Science*, 146(3642):347–353, 1964. doi: 10.1126/science.146.3642.347.

Alfréd Rényi. On measures of entropy and information. In *Proceedings of the Fourth Berkeley Symposium on Mathematical Statistics and Probability, Volume 1: Contributions to the Theory of Statistics*, pages 547–561, Berkeley, CA, 1961. University of California Press.

Scott D. Sagan. *The Limits of Safety: Organizations, Accidents, and Nuclear Weapons*. Princeton University Press, Princeton, NJ, 1993. ISBN 978-0-691-02101-0.

Jerome H. Saltzer and Michael D. Schroeder. The protection of information in computer systems. *Proceedings of the IEEE*, 63(9):1278–1308, 1975. doi: 10.1109/PROC.1975.9939.

Thomas C. Schelling. Dynamic models of segregation. *The Journal of Mathematical Sociology*, 1(2):143–186, 1971. doi: 10.1080/0022250X.1971.9989794.

Thomas C. Schelling. *Micromotives and Macrobehavior*. W. W. Norton, New York, 1978.

Cosma Rohilla Shalizi and Andrew C. Thomas. Homophily and contagion are generically confounded in observational social network studies. *Sociological Methods and Research*, 40(2):211–239, 2011. doi: 10.1177/0049124111404820.

Claude E. Shannon. A mathematical theory of communication. *The Bell System Technical Journal*, 27(3):379–423, 1948. doi: 10.1002/j.1538-7305.1948.tb01338.x.

E. H. Simpson. Measurement of diversity. *Nature*, 163(4148):688, 1949. doi: 10.1038/163688a0.

Michael P. H. Stumpf and Mason A. Porter. Critical truths about power laws. *Science*, 335(6069):665–666, 2012. doi: 10.1126/science.1216142.

United Nations. Convention on the recognition and enforcement of foreign arbitral awards. United Nations Treaty Series, vol. 330, no. 4739, p. 3, 1958.

U.S. Department of Justice and Federal Trade Commission. Horizontal merger guidelines, August 2010.

U.S. Department of Justice and Federal Trade Commission. Merger guidelines. U.S. Department of Justice and Federal Trade Commission, December 2023.

Brian Uzzi and Jarrett Spiro. Collaboration and creativity: The small world problem. *American Journal of Sociology*, 111(2):447–504, 2005. doi: 10.1086/432782.

Albert Jan van den Berg. *The New York Arbitration Convention of 1958: Towards a Uniform Judicial Interpretation*. Kluwer Law and Taxation, Deventer, 1981.