FAND's Marquee

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1) Executive Summary

The Bretton Woods institutions favor patient capital over hot money, and supplement private capital where it is not available on reasonable terms. FAND's national balance sheets for most members since 1950 suggest that has happened, at a snail's pace and unevenly (Figure 4). Priced as a premium at the Bank borrower tier, drag on access fell to nothing in high-income members by 1990 and in middle-income members by about 2010. It never left the low-income group; is near 50 basis points today after 200 in the 1990s; and since 2015 a small premium has returned to both middle-income groups. The question for the Bank is pace, not course.

Figure 1 shows Bank financial preferences influence more than its loans. A 'vase' of cross-border capital considers them in setting long-term rates, when private capital gets that patient and not just 'hot money'. The Bank's per capita income construct gave the vase a base; FAND/MEP thickens the base by recognizing and valuing the wealth of nations—the true collateral for patient capital. FAND and markets rate the low-income group similarly. They part in the middle. Markets charge middle-income members that still draw on IDA about 700 basis points on equity and 450 on debt, close to the low-income group. FAND finds almost none of them on its floor (Figure 5a). The market seems to price 'fragile' treasuries or liquidity; FAND is pricing places where Trust has slipped or solvency. A member can have one or both; the Bank's IDA-eligible ratings scarcely notice either.

Two indicators give FAND's take. Net Worth is the bottom line of the balance sheet MEP left on page 65 in 1995: capitalized Atlas GNI (Commonwealth, CW), split into Four Types of Capital, qualified by cross-border claim-rights (Figure 2). A derived Wealth Risk Premium prices fourth type shortfall below a floor as a rate add-on as a sovereign risk counted as a liability, Deferred Maintenance of Trust (DM). That fourth type of capital—Social Infrastructure (SI) in MEP, Other Substantive Rights (OSR) in FAND—is largest in every income group. Yet orthodox national accounts do not recognize, let alone value, it. FAND posits a floor below which revenue-generating units are impaired, in ways that can't be remedied by adding other types of capital. The prototype sets that at 20% of CW as about where adding other types of capital seems to hit diminishing if not negative marginal returns. So building more roads or schools, or turning forests to timber and mining subsoil assets generates less income where OSR is on the floor than where it is higher. 'Take off' to private capital can't be at reasonable rates if there is DM. FAND's Wealth Risk Premia thus turns social assessment into something patient capital can read.

Set against Atlas GNI as output, FAND's CW and the Bank's Changing Wealth of Nations (CWoN) tell different stories (Figure 3). CWoN has China and India becoming more efficient (lower K/O) than the US, and Burundi, Angola and the Republic of Congo going from massive inefficiency to ratios near the US; so it implies less need for concessional funds. FAND shows slow progress and a long way to 'take-off' for low-income countries in particular.

Net Worth (NW) differs from CW by International Investment Positions: under 1 percent of CW, net, for high-income members but almost 5 percent for low-income ones. The US is about there but, as the main reserve currency, may not feel the social drag. So the ratio gauges 'debt overhang' with this exception. The issues compound in the low-income group: most people on the OSR floor live in nations owing others more than 3% of their wealth (Figure 6).

A sequence, not a grade. Where OSR is on the floor, money for roads, forests or schools is booked by FAND as deferred maintenance of Trust until it is not. The risk premium says how far off the floor a member is; neither the market's premium nor the Bank's rating can. Carrying that premium beside Atlas GNI in the financial preference mechanism is the operational case MEP made in 1995 and FAND makes now.

Supplying more of other types of capital disappoints when OSR is on the floor. FAND gauges this in a way private capital can assess. It suggests Beyond GDP do more than tinker with Atlas GNI. It ought to try rebuilding trust in quantification as a technology of trust for financial preference mechanisms. FAND distills about a million observations, with 'heterodox' methodologies run through AI by a substantive and a systems expert; albeit with a combined century of experience, both begun in the Fund. While crude and poorly vetted, results suggest the Bank can now realize the system MEP could only hint at in 1995. What it now needs is input from more substantive and systems experts.

2) Background

This note highlights two indicators in the First Agentic Navigator for Development (FAND) that were the buried lede in the Bank's 1995 Monitoring Environmental Progress (MEP, page 65). One is Net Worth, the bottom line of a Fundist balance sheet with Four Types of Capital. The other shows even MEP's residual for a fourth (Social Infrastructure) is analytically useful. MEP-type balance sheets for most nations (1950-2025) give FAND a Wealth Risk Premium that reveals a critical 'takeoff' step in Bank borrower access to private capital at reasonable rates—basically since Bretton Woods began.

The Bank's wealth work has passed through stages. MEP (1995) capitalized GNI with Social Infrastructure as the residual fourth type of capital. Where Is the Wealth of Nations (2006) and CWoN 2011 kept this top-down anchor but moved it to consumption, and left the residual—'intangible capital'—unfloored, so that it could go negative with nothing booked against it to say why. CWoN 2018 dropped the anchor for Jorgenson–Fraumeni human capital and settled for three types of capital. CWoN 2024 keeps that construction.[1] FAND would restore the anchor but with an interpretable residual and a liability-side entry that can carry analytic weight.

MEP aimed to strengthen trust in Atlas GNI as a financial preference mechanism, for Fundists and Materialists.[2] It came out as FASB set recognition and valuation guidelines

[1] World Bank, *Where Is the Wealth of Nations? Measuring Capital for the 21st Century* (2006) and *The Changing Wealth of Nations* (2011): total wealth as the present value of consumption, intangible capital as the residual, negative for some resource exporters. Lange, Wodon and Carey, eds., *The Changing Wealth of Nations 2018*: Jorgenson–Fraumeni lifetime earnings for human capital, the consumption anchor dropped. *The Changing Wealth of Nations 2024* keeps that construction. Hamilton and Liu (2013), cited below, is the bridge: the residual split into human capital and a remainder.

[2] See J. R. Hicks, "Capital Controversies: Ancient and Modern," *American Economic Review* 64(2), Papers and Proceedings (May 1974), 307–316. Hicks sorted capital theorists into Materialists, for whom capital is the goods, and Fundists, for whom it is a fund of value; and confessed to having been both A later note gives my own reading of page 316.

for indefinite and long-lived assets held and used, apart from those held for sale.[3] So businesses are now Fundists about hold-and-use; but remain Materialist about held for sale. FAND/MEP went Fundist since nations are not designed to hold asset groups for sale. Data issues arise in mimicking business reporting by revenue-generating unit. However, FAND offers proof-of-concept metrics to show its national (TL1) accounts could and should be built from (geographic) components; TL2 or TL3 in OECD/EU terms.

CWoN is Materialist since it only recognizes what it can price as if held for sale. This doesn't just throw the baby of financial preference mechanism out with methodological bathwater. It reuses what businesses consider old bathwater. That is a major information asymmetry in public-private exchanges; one eroding (official) quantification as a technology of trust. Distrust is compounded by abstruse methodologies that justify rather than test theories of one price, convergence, etc.

While hardly a panacea, FAND aims for identified ambivalence in debates like Fundist-Materialist. Fundists get a true balance sheet. Materialists can settle for FAND's version of CWoN's three types of capital; and get a view beyond CWoN's 1995-2020 window. FAND presumes patient capital want that longer view, even if—and arguably more so if—it reflects metrics available to decision-makers at a time and place.

It is becoming acceptable to note Information Technology (IT) does not observe what is 'real'. IT, too, is real. And IT has enabled recursive, self-referencing processes at least since the US Constitution enshrined enumeration as a tool of empowerment of governed over their government. Whether IT is used that way in any nation is and long has been another matter.

Bretton Woods institutions respect disparate forms of government. As the Constitution does States' rights. Yet States are obliged to report quite detailed information to the Census. As Fund Article VIII(5) obliges its members.

3) Introduction

FAND is the **F**irst app that lets users plan trips in the vast expanse of **D**evelopment, broadly defined. It does so by mapping What is observed; When and Where; and by and about Whom (i.e., reporting and subject entity). It lets users **N**avigate concept hierarchies in each dimension to focus on part of the expanse. It is **A**gentic in construction (heavy lifting done by AI) and by segueing to AI apps that field How and Why questions about a focal area—compared to some other part of the expanse.

Prototype construction was managed by a two-man team; one on substance, the other on systems. Each began his career in the Fund. They have a century of relevant work experience between them. Results are available in prototype to other experts in each field who see its potential as a way to help governments and the governed agree where they are, and where they are going in that expanse.

Going subnational gets into how governments deal with the governed. That has been beyond the ken of Bretton Woods institutions. However, it is the level where a nation's revenue-generating units do or don't get impaired, and Bank projects do or don't meet the Economic Rates of Return (ERR) used to justify engagement. So FAND's 'bottom up' work is subnational and by 'objects' a Materialist takes as building blocks (Value ≡ Price ×

[3] FASB, Statement No. 121, *Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of* (March 1995); superseded by Statement No. 144 (2001), now ASC 360-10. The international counterpart is IAS 36, *Impairment of Assets* (1998); IFRS 5 (2004) governs assets held for sale.

Quantity). Concept hierarchies 'tether' observations as What is observed, When (annual 1950-2031), Where (to TL3) and Who is the subject as well as Who is reporting. FAND's marquee indicators don't require such 'thickening'.

This paper is meant for those experts willing to suspend disbelief to consider FAND's value added, or novelties that were the lede buried in the Bank's 1995 Monitoring Environmental Progress (MEP, page 65). The marquee highlights two indicators. One goes from the wealth metrics that got press coverage of MEP to the balance sheet bottom line: Net Worth. The other considers what it all means for a Bretton Woods vision of an international financial system; one where patient capital replaces 'hot money' and all members have access to private capital at reasonable rates.[4] FAND proposes a Wealth Risk Premium to gauge how far each Bank borrower is from such access.

Patient capital in a sovereign's borders works at varying mixes of levels of risk and reward. National governance of finance and social networks forms a 'vase' for capital patient within such borders. Bretton Woods relied more on quantification as a technology of trust in designing a global vase. This is clear in Fund Article VIII(5), detailing information members are obliged to provide. Mainly about the vase, or what is now quantified as International Investment Positions (IIP); the obligation in fact extended to gauging the base, with 'national income' the umbrella term.

Figure 1. Cross-Border Claims of Bank Borrowers

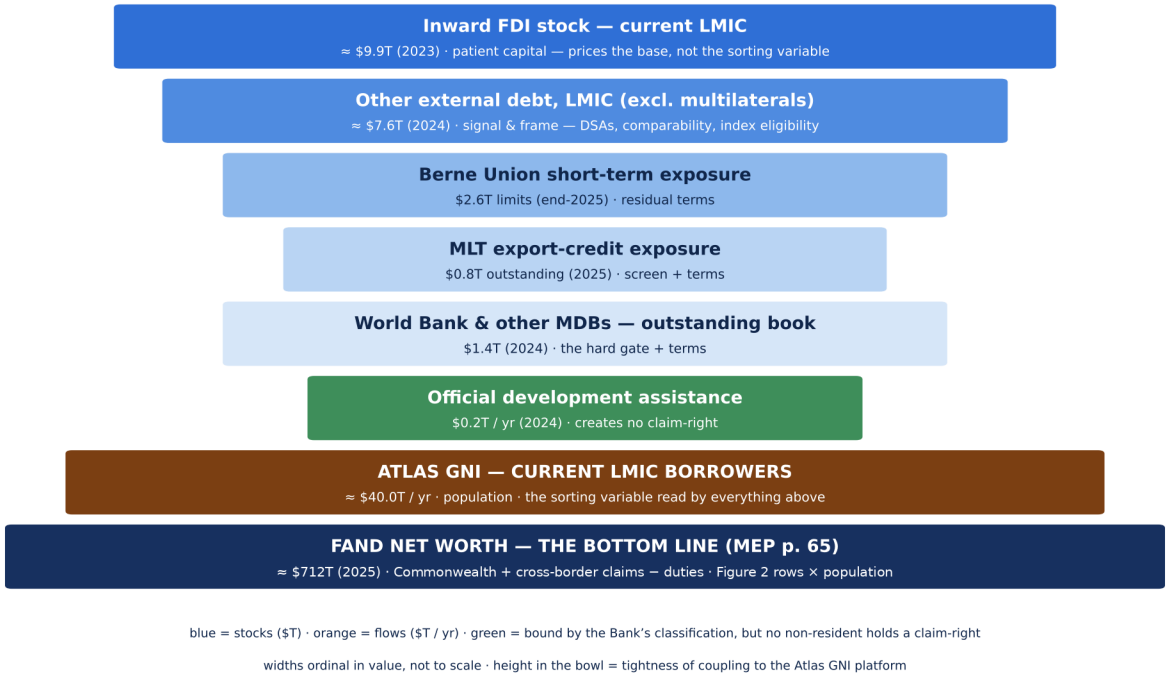


Figure 1 pictures this global vase for members still unable to access private capital at reasonable rates. One reason is trust in global exchanges waned as Bretton Woods collapsed; leading the Bank to rely more on quantification as its technology of trust. Low per capita income became a necessary but not sufficient condition for its funds. Quantifying the base led others to do the same in their decision-making. That helped fill the vase but placed more weight on the Bank's Atlas GNI metrics. By the time I became

[4] A if not the main purpose of the World Bank, according to its Articles of Agreement.

gatekeeper for such data (1985), the top tiers of the IIP vase loomed large over that thinly described base. So I sought to thicken the base with national balance sheets. Which MEP proposed a decade later and FAND now provides.

How tier-rates vary. Cross-border claims on low- and middle-income economies stack in tiers: about $10 trillion of inward FDI at the top, $7.6 trillion of other external debt below it, and $1.4 trillion from the Bank and other development banks near the base. Such cross-border liabilities equal half of Atlas GNI but barely 3% of capitalized GNI. Market premia over high-income economies are about 370 basis points at the FDI tier and 230 at the debt tier. FAND's novel Wealth Risk Premium for the Bank tier is in single digits overall. Low-income countries (LIC), however, are much higher throughout the vase; at 810, 620, and 48 respectively (Figure 5a).

Apart from scale, markets and FAND agree LIC have been left behind; but not on middle income countries (MIC). Markets charge those still IDA-eligible almost as much as LIC; signaling revenue-generating capacity is not enough for 'take-off' to capital markets. FAND considers what more may be involved, starting with how businesses value asset groups with long-lived assets held and used.[5]

FAND expects a decision support system to send coherent signals. The Bank allows "separate but equal" signaling. This is clear for FAND's marquee indicators. FAND/MEP explain GNI generation in terms of a national productive stock of Four Types of Capital. The Bank cut the GNI link by summing three of the four as Comprehensive Wealth, in Changing Wealth of Nations 2024 (CWoN).

FAND's marquee indicators clarify the vase's role with Net Worth, which recognizes and values cross-border claims and duties; and a derivative admitting private capital assess impairment risks and recovery costs the public sector does not recognize, let alone value. Severed from its financial preference mechanism, CWoN has no such link to other signals. Setting aside arcana of voting rights and models, this note considers Bank Country Performance Ratings (CPR) for the IDA-eligible.

4) FAND/MEP Balance Sheet

Figure 2. Balance sheets by World Bank income group, 2025 (US$ per resident)

Code	Row	High income (HIC)	Upper middle (UMIC)	Lower middle (LMIC)	Low income (LIC)
1.1.1	Claim-Rights (= PA + NC + CBA)	335,261	60,760	12,769	5,440
1.1.1.2	PA — Produced Assets	162,174	42,996	7,420	2,134
1.1.1.3	NC — Natural Capital	13,943	10,922	4,511	3,028
1.1.1.4	CBA — Cross-Border Claim-Rights	159,144	6,842	838	277
1.1.2	Substantive Rights (= HR + OSR)	638,469	129,784	34,658	8,423
1.1.2.1	HR — Human Resources	281,782	57,939	8,779	3,561
1.1.2.2	OSR — Other Substantive Rights	356,687	71,845	25,880	4,862
	ASSETS (= PA + NC + CBA + HR + OSR) ≡ LIABILITIES (DM + CBL + NW)	**973,731**	**190,544**	**47,427**	**13,862**
1.2.1.1	DM — Deferred Maintenance of Trust	449	188	30	594
1.2.3	CBL — Cross-Border Duties	163,199	6,453	1,334	874
1.2.4	NW — Net Worth	810,083	183,904	46,064	12,395
	CW — Commonwealth (capitalized income)	*814,138*	*183,514*	*46,559*	*12,991*
	Risk premium over 1.5 % (basis points)	*1*	*1*	*1*	*36*

[5] See, for example, pwc on impairment under IFRS and GASB.

Code	Row	High income (HIC)	Upper middle (UMIC)	Lower middle (LMIC)	Low income (LIC)
	Population (millions)	*1,421*	*3,093*	*2,946*	*769*

World Bank FY27 income groups (high income includes the United States). Population-weighted means per resident, current US$ at exchange rates; 2025 gaps completed by assuming non-reporters move with their group. The floor for OSR is 20 % of CW. Cross-border rows are the IMF-published positions wherever one is published (2025 for the 84 reporting economies; 1990–2024 wherever the production sum of source-format buckets differs from the published total); other members move with their group.

Source: OconEco FAND.

MEP, and now FAND, capitalizes Atlas GNI.[6] Capitalized versions of the textbook inputs, labor and capital, are then subtracted. Capital is split between Produced Assets (PA) and Natural Capital (NC) because claim-rights to the latter are so incomplete that it is routinely undervalued even when and where scarce. MEP used then-best-practice to capitalize labor as Human Resources (HR), and derived its first residual, the logical equivalent of the Solow residual: Social Infrastructure (SI) in the balance sheet on MEP page 65.

FAND indicators show what MEP could only hint: more produced assets, natural capital and human resources cannot do much when a member's Other Substantive Rights (OSR), or the Fourth Type of Capital, is on the floor. Balance sheets in Figure 2 use an arbitrary floor (20% of CW) but any floor would show many more borrowers on it in the past, than now. And those still on the floor are mostly low-income, whose Deferred Maintenance (DM) is 5% of CW. That yields a Wealth Risk Premium of 36 basis points against about 1 for other income groups.

The gap between Net Worth and CW (1.1.1.4 less 1.2.3 in Figure 2) is the net cross-border position (CBA − CBL). It is a policy signal in its own right. Residents of high-income economies owe nonresidents about $4,100 each, net, under 1 percent of CW. Except for the US, which has gone from main creditor to debt overhang close to that of LIC in relative terms—about 5 percent of CW.

The straw that broke the back in MEP reporting was finding negative SI. Internally, I showed it was mostly for borrowers whose project Economic Rates of Return (ERR) fell short of expectations. ERR took place for granted: roads are maintained, contracts honored, educated work in place. Low, and certainly negative SI, question all that. In such cases, investing in other types of capital falls short of expectations for reasons no production function can explain. That made the MEP balance sheet more, not less, fraught. So it took two decades for the Bank to acknowledge negative SI, and then only in academic articles.[7]

UNSNA balance sheets only book claim-rights and duties; 1.1.1 in Figure 2; what laws recognize and value as assets. HR and OSR have no such rights, so they are beyond its balance sheets. FAND recognizes them as substantive rights, 1.1.2; with a valuation 'halo' that goes from the zeros implied by UNSNA to positive values then emerging from disparate data sources and methods. CWoN has a foot in each camp. It recognizes HR and resorts to Bank authority to value it in Comprehensive Wealth, then throws the SI baby out with the bathwater of residualism.

[6] FAND switched to capitalizes Atlas GDP since (CBA-CBL) conceptually capitalizes net factor income. In both cases a simple forward-looking algorithm is applied. It posits those of working age (and not in school) generate the same revenue (GDP) until they retire. Annual changes thus reflect demographic factors as well as technological changes, etc.

[7] See work of my deputy on MEP, Kirk Hamilton; notably with the OECD's Liu in Human Capital, Tangible Wealth, and the Intangible Capital Residual (2013).

FAND calls the fourth type of capital Other Substantive Rights (OSR) to emphasize the role of legal systems. It may be reasonable to treat a sovereign's laws about asset recognition and valuation as dispositive in its borders. Except sovereigns change laws and cross-border accounts involve two or more sovereigns.

FAND uses a Hohfeldian scheme to handle the complexities. In the deterministic, dimensionless world of classical economics, there is no need for sovereigns, ledgers of consent to exchanges, or laws about exchanges. In our world legal systems set claim-rights and duties for "property". This does not deny other 'objects' exist and may have other, substantive, rights of value. Nor that objects move among classes of rights.

Ending slavery meant a major shift from claim- to substantive-rights[8]. A steady stream of intangible property rights is moving the other way, with many 'unrecognized" assets ready to cross.[9]

This points to a deeper conceptual issue in CWoN. It is neither fish nor fowl. It goes beyond UNSNA Materialism by implying something like a claim-right attaches to Human Resources (HR). Its current HR methodology then ascribes some value in place attachment, or Other Substantive Rights (OSR), to individuals. This makes CWoN far less useful, than FAND, for studies of migration, etc..

FAND/MEP argue that, quantitatively, the baby—SI in MEP, OSR in FAND—is first among equals among Four Types of Capital. They are equals in the sense that revenue of a revenue-generating unit is, by definition, generated jointly, not severally. Logically, not recognizing one type of capital, or valuing it at zero, attributes its value to one or more of the others. Like pricing a forest at zero if trees are "not scarce" adds value added to severance. But trees, humans, and such are only scarce in given places and times; and national accounts are designed to downplay if not ignore such local knowledge.

It is in this sense that national constructs, including those in FAND, are thin descriptions.

Only recognizing three types of capital means attributing value of the fourth to one or more of the three. An economy with zero OSR is no more a going concern than one with zero HR. It is first among equals on two counts Figure 2 makes plain. OSR is the largest single asset on every income group's balance sheet, 34 to 54 percent of assets. And it is the one whose shortfall impairs the return on the other three, as the floor below sets out. Least recognized: UNSNA books it at zero, CWoN carries NC and HR but leaves the fourth type out, and no orthodox database holds a number for it. NC was once in the same position; thirty years of natural capital accounting have moved it onto the Bank's books. OSR is where NC was in 1995.

Since SI was already doubly-fraught, MEP did not try making it triply so by explaining why I think SI unlike HR. Without getting into Hohfeldian jural correlates and such. HR is investing in individuals, notably their health and education. It is embedded in individuals and moves with them. SI invests in how people collaborate *and* compete, place-attached social compacts – 'enumerated' or not.

Having cut my professional eye-teeth when multiple-currency practices were the norm, it seemed to me the most neglected issue was broken cross-rates for time and wealth, with the latter as in the Old English term, wēle. So MEP and now FAND claim that it is not impossible to concoct objective enough measures of wēle to let the governed and

[8] The Bank's Sasha Dray is co-author of a paper showing the 'path dependence' of this event in the US.

[9] See, for example, Intangible assets and firm performance: The relative effects of recognized and unrecognized assets, Bagna et al; and Morgan Stanley's Intangibles and Earnings: Improving the Usefulness of Financial Statements

government communicate clear enough signals about what those cross-rates ought to be —whatever they are. Orthodoxy would prefer to throw the baby of SI out with the bathwater of imprecise metrics.[10]

a) Wealth as Policy Signal: FAND versus Bank (CWoN)

MEP capitalized Atlas GNI because that was and is the key indicator in Bank and related financial preference mechanism.[11] The logic was then emerging best business practice for indefinite- and long-lived assets held for use; not for sale.[12] And accepting that no contract is perfect or complete; so residual control rights and other factors beyond the pale of written laws have value. And there is a well-established theory of jural correlates that goes well beyond that pale in much this way.[13]

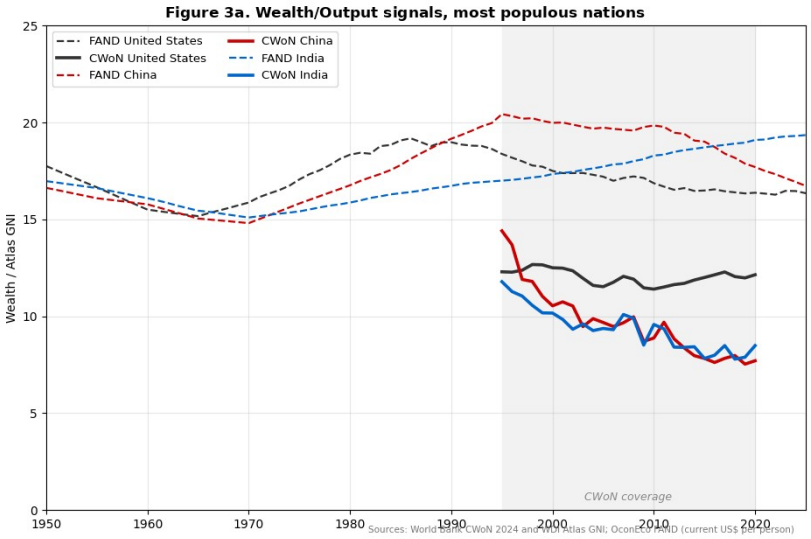
Whatever its conceptual merits, FAND's 'heterodoxy' aims to improve the signal-to-noise ratio in enumeration within decision support systems like those of Bretton Woods institutions. Figure 3a is a case in point. It compares FAND's CW (MEP's Total Wealth) and CWoN's Comprehensive Wealth as numerators in a capital/output (K/O) ratio, with Atlas GNI as "O" (as it sets financial preferences). CW rather than Net Worth, because CWoN carries no cross-border duties to net off; the comparison is of productive bases. Since theory has patient capital attracted by its most productive use, it must gravitate towards places where K/O is lowest, other things being equal. They rarely are, but an indicator is to point; and FAND and CWoN point patient capital in different global directions.

[10] No orthodox source now treats Social Capital, let alone SI, as a measurable factor of production. The 2025 SNA (chapter 35) defines social capital but keeps it off the balance sheet: techniques to value it in money "have not yet been widely developed", so it offers five physical indicators instead, generalized trust first among them. The positive values came from the Bank's intangible residual, which Hamilton and Liu (note 3) split into human capital and a remainder that is SI without the name. The Bank dropped the residual from CWoN 2024, which builds wealth up from produced, human and natural capital alone. Since Hamilton's death in 2024 the question of what is missing is kept alive outside the Bank: by his co-editor Cameron Hepburn at Oxford (National Wealth: What is Missing, Why it Matters, 2017), and by the Wealth Economy project at Cambridge (Zenghelis, Agarwala, Coyle: Measuring Wealth, Delivering Prosperity, 2019; Valuing Wealth, Building Prosperity, 2020), which puts social and institutional capital among six national assets and holds that trust can be measured well enough to explain productivity. No one has since carried the remainder forward as a number. FAND's halo spans the SNA's zero and those positive values.

[11] In this sense, I apply identified ambivalence to J.R. Hicks' view (in Capital Controversies: Ancient and Modern, 1974, page 316); that a statistician "could be nothing else" but a Materialist. Ambivalence comes from having a hand in modifying standards like UNSNA, and seeing it lag behind how legal systems push the outer limits of claim-rights (and correlates). Being better than most at gauging the next limit gave me more the forward-looking stance of a Fundist. In this sense, a Fundist may recognize and value Substantive Rights (1.1.2); a Materialist may not. So MEP proposed, and FAND composes, a balance sheet to inform both camps.

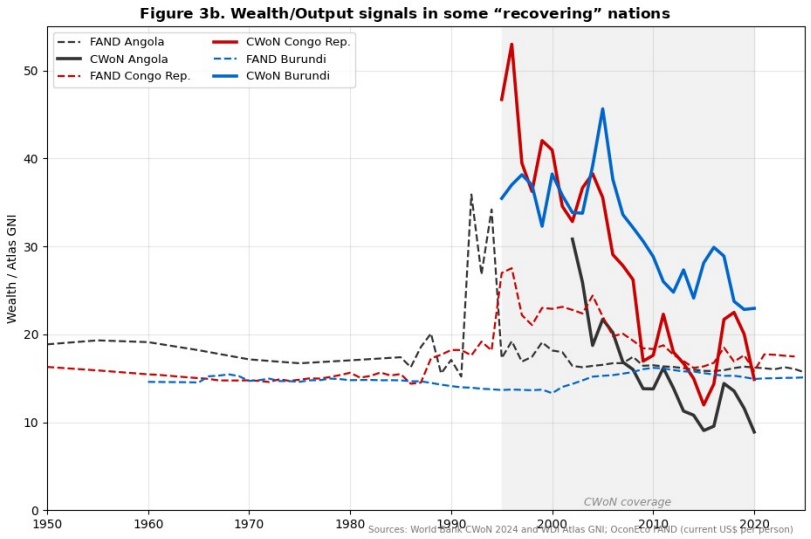
[12] Now codified in FASB as ASC 360 and IFRS as IAS 36, it takes the Fundist position that recognition is about revenue-generating units as a bundle of components the Materialist can price; and values the whole as a forward-looking revenue stream that may be more or less than sum of priced components. Then, as diversified corporations have many such units, a nation bundles of all in a sovereign's domain.

[13] here, FAND relies mainly on The Hohfeldian Analysis of Legal and Moral Relationships in Rights and Right-Holding: A Philosophical Investigation, Matthew H. Kramer (2024).



Considering only years of interest to CWoN, China and India became remarkably more productive than the US. That implies access to private capital on reasonable terms became markedly easier even compared to the US. If so, both ready to 'graduate' from financial preferences. And equally so. FAND has them on quite different trajectories; more so if assessed over Bretton Woods' long history. Even if CWoN were more precise about the three (which this note debates), the price of its precision is assessing 'path dependence' on a quarter century rather than thrice that.

Figure 3b considers the other end of the risk premium spectrum: three borrowers few think near graduation. The contrast in signals is even starker. CWoN has all three racing down from K/O ratios of 35 to 50 in the 1990s to between 9 and 23 by 2020, toward US levels if not as impressively as China and India, and so signaling less need for financial preferences. FAND has Burundi flat near 15 throughout; Angola flat except for 1992–94, when hyperinflation collapsed Atlas GNI but not CW; and Congo Rep. drifting from the mid-20s back to the teens as its GDP-basis CW and its Atlas GNI converged. Less need for financial preferences is not what those trajectories say.



These are “recovering” nations in the sense that they were far below the floor in the past, and less so now. FAND renames the liability item to clarify that it is about loss of trust in a social compact.[14] Which raised impairment risks and recovery costs. This helps FAND move from problem identification to problem solving. Which is the role of decision support systems.

b. Cross-Border Risk Assessment

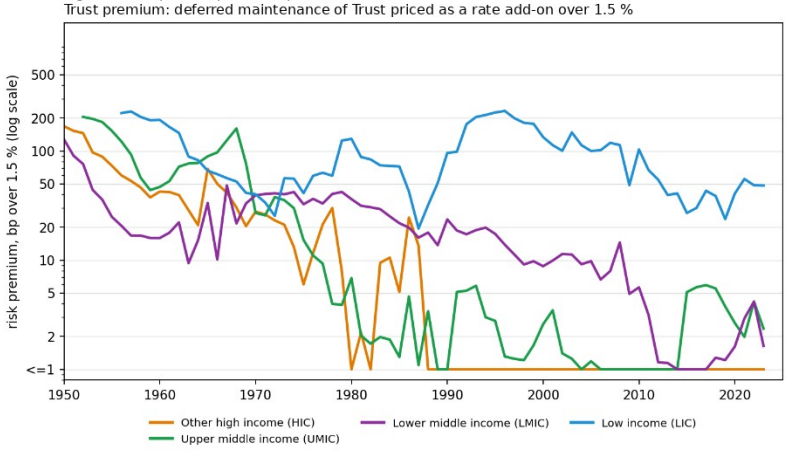
The Bank’s financial preference mechanism is designed to get all members to ‘take-off’: accessing private capital at reasonable rates. The unstated complication is that most private capital lies beyond a sovereign’s borders, in another sovereign’s grasp. Reaching it takes trust among sovereigns whose domestic financial systems differ markedly, in public versus private ownership and control and in how complex and complete they are. Any international system must intermediate among those systems, so pricing one intermediation, say Argentina’s with global markets, refers back to all the others. Bretton Woods was meant to keep the arbitrage gains and losses from that small overall, and the Bank’s role within it is to reduce the risks its mechanism can reach.

K/O is a useful decision making construct if other things are similar, which they rarely are. One of the main ways they are not is that China and Tuvalu are not comparable units of analysis despite both being as sovereign nations. Much of the noise in policy signals arises from Simpson’s Paradox[15] this scale difference introduces into assessment of impairment risks and recovery costs at national or ‘firm’ level. In short, differences in OSR.

Ideally, patient capital invests directly in places, not indirectly in financial instruments that pool risk over places (revenue-generating units). Trust is required for any investment; more so as roundabout production rises. Since finance gets quite roundabout, it is quite dependent on trust. So financial structure matters for development, if only as a “stick’ in a trust bundle.[16] And even if one presumes that bundle is just what is encoded in laws and such, it is clearly subject to nontrivial cross-border and inter-temporal variance.

So FAND posits a minimum OSR ‘bundle’ on the asset side of its balance sheet. Below that floor, lack of trust is a drag on production, and particularly on access to private capital at reasonable rates. This prototype sets the floor at 20% of CW, somewhat arbitrarily.[17] OSR residuals below that floor then lead to a liability item FAND calls Deferred Maintenance of Trust (DM). The floor also states the MEP proposition in arithmetic. OSR is what remains of CW after PA, NC and HR; so adding any of the three to a member on the floor, without

Figure 4. The price of patient capital, 1950-2023
Trust premium: deferred maintenance of Trust priced as a rate add-on over 1.5 %



Source: OconEco FAND TL1 (GDP basis; ledger D1). Population-weighted per person, current US$ at exchange rates, FY27 income groups.
Data: FigA_ThreePanel_data_20260926_fix.xlsx (repairs 2026-09-26: Brazil pre-1970 Tier C; cross-border backfill under the Ratio-Splice Protocol; fuelwood as S190 perpetuity; forest leaves P6 median; Indonesia 1950-66 denomination + D29-CONV; North Korea from 1954).

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raising the income the place capitalizes, does not raise its net worth. It raises DM one for one. Financial preferences that build assets in such a place are booked as deferred maintenance until OSR is off the floor.[18] Figure 4 prices DM as a risk premium since 1950. Every other income group's premium fell to nothing, high income by 1990 and the middle-income groups by about 2010; the low-income group's never has, sitting near 50 basis points today after a spike to 200 in the 1990s. Whether from efforts of the Bank and such or more roundabout, progress elsewhere has left them behind.

Figure 4 leaves two things to explain: a premium that never leaves the low-income group, and one that has lately returned, in small amounts, to both middle-income groups. Figure 5a sets that premium beside what others charge or judge for the same people. Cross-border claims on low- and middle-income economies stack in tiers, and every tier claims to take the Bank's financial preference mechanism into account in its own allocation. At the top is about $10 trillion of inward FDI; below it, $7.6 trillion of other external debt; near the base, $1.4 trillion lent by the Bank and other development banks; all of it resting on some $40 trillion a year of Atlas GNI. The market's price at the top tier is the equity risk premium and at the debt tier the sovereign default spread, each read here as the excess over high-income economies, where most capital is. The Bank tier should carry markedly less, and that is where FAND's premium belongs.

Figure 5a. Risk premium by tier of cross-border claims, by World Bank income group, July 2026 (basis points over high income)

World Bank income group	People (millions)	Inward FDI, about $10 trillion: equity risk premium	Other external debt, about $7.6 trillion: default spread	Bank and other MDBs, $1.4 trillion: FAND premium	Bank rating (1/CPR)
High income	1,391	0	0	0	–
Upper middle income	3,034	189	105	2	–
Lower middle income, no IDA access	1,694	319	166	1	–
Middle income, IDA access	1,206	695	453	2	0.33
Low income	612	814	617	48	0.36
All low and middle income	**6,546**	**368**	**227**	**6**	**–**

World Bank FY27 income groups. Middle income is split by current access to IDA (IDA-only or Blend); 29 million people in upper-middle-income small states with such access are counted in that row. Market premiums are Damodaran's July 2026 estimates, built on Moody's sovereign ratings: the total equity risk premium at the FDI tier and the rating-based default spread at the debt tier, each a population-weighted mean over the people priced, less the same mean for high income. The equity premium is the mature-market premium plus 1.55 times the default spread, so the two market columns rest on one rating. FAND premium is for 2023, a mean over all people in the group, as in Figure 4. The Bank rating is the inverse of the IDA Country Performance Rating for 2023, so that higher means riskier; the Bank rates only IDA-eligible members. Tier sizes are stocks for 2023 to 2025. For S&P grades of IDA-eligible members and compilation methods, see FAND and the World Bank's ratings: technical note.

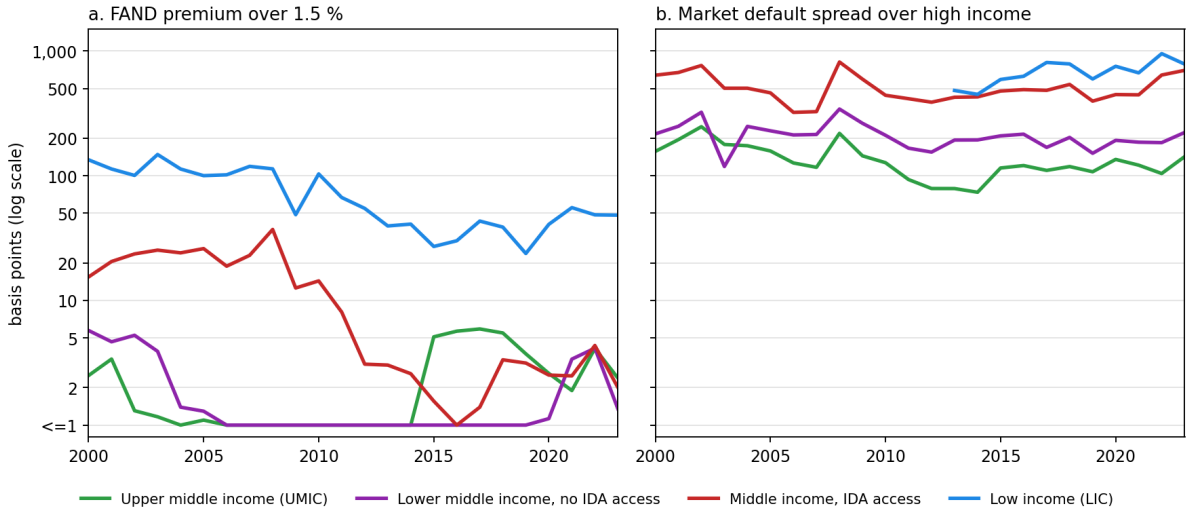
Source: Damodaran, Country Default Spreads and Risk Premiums (NYU Stern, July 2026); UNCTAD, World Investment Report 2024; World Bank, International Debt Statistics, IDA Country Performance Ratings and FY27 classifications; OconEco FAND.

The ladder runs as it should. For all low- and middle-income economies the market asks about 370 basis points more than in high-income economies at the FDI tier and 230 at the debt tier; FAND's premium at the Bank tier is 6. The rungs are highest where income is lowest: about 810, 620 and 48 for the low-income group. The middle is where the raters part. The market prices middle-income members that still draw on IDA close to the low-income group, at about 700 basis points on FDI against 190 to 320 for the rest of middle

[18] FAND's own panel is consistent with the proposition but not yet probative. Over 1961–2023, produced assets per resident grew 0.3 % a year relative to US income where the floor binds and 1.0 % where it does not, and natural capital fell faster on the floor; but human resources grew faster on the floor, not slower, and the five years after a member leaves the floor show no acceleration in any of the three. The Bank's own project ratings (technical note) are the same on and off the floor. Establishing the sequence is a direction for further work; the accounting holds regardless.

income. FAND finds almost none of them on the floor and gives every middle-income row 1 or 2 basis points. The Bank's own rating leans the market's way, but faintly: 0.36 for the low-income group against 0.33 for middle-income members with IDA access.

Figure 5b. Figure 4 since 2000, beside the market's default spread (basis points, log scale)



Groups and weights as in Figure 5a. FAND year t is set beside Damodaran's update of the following January. The market panel shows the default spread only, and its low-income line begins in 2013, the first year the panel covers that group. Access to IDA is the current lending category held fixed. Source: as Figure 5a.

Figure 5b reads Figure 4 again since 2000 with the market beside it. In the low-income group both stay high: FAND's premium throughout, the market's for as long as it has priced these members; and the Bank's rating of the group has edged up, from 0.33 in 2006 to 0.36 in 2023. The recent return of a premium shows in both readings but falls in different places. The market's has risen most for middle-income members with IDA access, from about 400 basis points in 2019 to 700 in 2023. FAND's has returned where there is no such access: in upper middle income from 2015 and in lower middle income from 2020, at 1 to 6 basis points, while its premium for members with IDA access fell from about 25 in the mid-2000s to 2. The market is pricing treasuries under strain; FAND is pricing places where Trust has slipped. A member can have either problem without the other.

A sequence, not a grade. Where OSR is on the floor, money for roads, forests or schools is booked by FAND as deferred maintenance of Trust until it is not. The risk premium says how far off the floor a member is; neither the market's premium nor the Bank's rating can. Carrying that premium beside Atlas GNI in the financial preference mechanism is the operational case MEP made in 1995 and FAND makes now.

c. Debt Overhang

The second marquee indicator is Net Worth: Commonwealth plus what nonresidents owe a nation's residents, less what those residents owe nonresidents. In Figure 2 the two differ by little. High-income residents owe nonresidents less than 1 percent of their Commonwealth, net; low-income residents owe nearly 5 percent of theirs. The difference

is arithmetically small and effectively large. Commonwealth capitalizes some sixteen years of income, so 5 percent of wealth is about three-quarters of a year's income, owed at the highest premiums in Figure 5a.

Nor does the ratio mean the same thing everywhere. Residents of the United States owe nonresidents about 4.5 percent of their Commonwealth, much the same share as the low-income group, and pay no premium on it. For them the position is patient capital arriving. For a member on the floor it is overhang, because the premium falls on every dollar rolled over. The balance sheet reports deferred maintenance and cross-border duties on separate lines because in accounting terms they are separable. In fact they are not: the premium decides whether a given net position is access or overhang. Figure 6 counts the people on each side.

Figure 6. People in members that owe nonresidents, net, and on FAND's floor, 2023 (millions)

World Bank income group	People (millions)	Owing more than 3 % of Commonwealth	Owing 1 to 3 %	On FAND's floor	On the floor and owing more than 3 %
High income	1,391	440	207	0	0
Upper middle income	3,063	76	1,004	41	3
Lower middle income	2,871	371	502	46	0
Low income	612	427	86	234	212
World	**7,937**	**1,313**	**1,798**	**320**	**216**

World Bank FY27 income groups (high income includes the United States). Net position is cross-border claim-rights less cross-border duties, as a percent of Commonwealth; members without cross-border data (191 million people) are not counted in the owing columns. On the floor: Other Substantive Rights at 20 percent of Commonwealth, so that FAND books Deferred Maintenance of Trust. Balance sheets for 2023, as in Figures 4 and 5; Figure 2 is for 2025.

Source: OconEco FAND.

In the low-income group the two liabilities compound. Of its 612 million people, 427 million live in members that owe nonresidents more than 3 percent of their Commonwealth, and 212 of the 234 million on the floor are among them. Elsewhere they rarely meet: 87 million middle-income people are on the floor, and 3 million of them are in members owing that much. The two can be told apart where capital already has access. Where it does not, they cannot.

The Bank's own rating concedes the point. Its CPIA scores sixteen criteria in four clusters of equal weight, with debt policy one criterion in the first. The rating that allocates IDA's funds, the CPR, does not keep those weights. It puts 68 percent on the fourth cluster, D, which sets the sovereign's capacity to budget and to raise revenue, the capacity that services debt, beside property rights, public administration and transparency, on which Trust rests. The other three clusters share 24 percent and the Bank's own portfolio the rest. A weighting that looked objective because it was equal gave way to one skewed toward what most concerns capital in moving from high-income economies to the rest.

Both ratings, the Bank's and the agencies', carry a weakness MEP flagged in 1995. Its appendix arranged indicators by pressure, state and response, with impact as a fourth column, and warned that they "should not be combined across columns, since that would be mixing cause and effect"; a composite's "weights, or embedded valuation rules, can be debated." The Human Development Index is the familiar case; the CPR and the agencies' letter grades are others. Their weights rest on the authority of those who set them. A balance sheet has to rest on prices, and FAND's rule for which prices is Adam Smith's: the natural price, toward which market prices gravitate, with the gap between the two read as a market imperfection.

So the two marquee indicators are read together. Net Worth says how much of a nation's wealth is owed abroad or due from abroad; the premium says what that position costs to carry. A member has graduated when the premium is gone, whatever the position.

5) Work in Progress

The work under way connects the dots between the two marquee indicators, with Smith's natural price as the end-game: one balance sheet in which Net Worth and the premium are valued on the same principle, so that neither needs a composite to interpret it. Some imperfections that hold market prices away from natural ones are inherent, since the future is uncertain and no contract is complete. Others are artifacts of government, including some meant to turn uncertainty into risk that became openings for arbitrage. A sovereign that follows Smith should see connecting the dots as an organic process, more synaptic than drafted. Those following other models may see their task as choosing which dots to connect.

Balance sheets. Sheets for about 195 economies are compiled back to 1950, with Country Pages for the largest and a first Country Brief, for Bolivia, that tests the numbers against the country's own history.

Cross-border positions. The claims and duties behind Net Worth are being carried back from 1990 to 1950, so that Figure 6 can be read over the whole Bretton Woods period as Figure 4 is.

The premium on a moving base. Beside the fixed 1.5 percent, the premium is already computed over a measured market rate that has ranged from near zero to over 6 percent since 2000. In 2023 it gives the low-income group 44 basis points against 48.

The market's price. Damodaran's default spreads are in hand for every year from 2001 to 2026. His equity premiums for those years come next, to carry Figure 5b up the ladder.

The Bank's rating. Every CPIA criterion for 2005 to 2025 and the CPR for 2006 to 2023 are set beside the balance sheets in the technical note. The first finding is that FAND's premium follows cluster D, transparency and property rights above all, and not the debt-policy criterion.

The sequence. A first event study of members leaving the floor is done. It is consistent with the MEP proposition and not yet probative.

Replication. A replication package, with sources, methods and quality notes for each series, accompanies the database, and compilation is moving to a shared code repository so that others can rerun and refine it.

Below the nation. The same balance sheet is being compiled for US states and counties.

Technical note. A companion note, Fundist and Materialist content of each type of capital: FAND and CWoN, sets out what the Background compresses—Hicks, FASB, the three stages of the Bank's wealth work, the floor's calibration—with a cross-validation of the three types against CWoN 2024 by income group, 1995–2020, as its annex.