WORLD BANK REFORM ANALYSIS · COMPANION NOTE

Why the System Does Not Learn: A Game Theory Analysis of the World Bank's Institutional Equilibrium

Prisoner's Dilemma, Nash Equilibrium, and the Structural Conditions That Prevent Reform Without External Intervention

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Executive Summary

The companion paper on institutional power architecture documents a pattern that has persisted for thirty years: economist Country Directors consistently allocate 1.5 to 2 times more IDA resources to Development Policy Operations than non-economist Country Directors; MTI commands the largest portfolio and the worst outcome record; the Wappenhans Report identified the approval culture in 1992 and nothing changed. Every institutional strategy review has produced the same finding. Every reform cycle has produced the same outcome: the pattern continues.

This note asks why. The answer is not that the individuals involved are incompetent or corrupt. The answer is that the World Bank's institutional incentive architecture is a Nash equilibrium — a stable configuration in which every actor is individually rational and no single actor has the incentive to unilaterally change their behaviour, even though the collective outcome is development failure at scale.

Game theory provides the formal framework for understanding why this equilibrium is so durable — and what class of intervention is actually capable of disrupting it. The finding is uncomfortable: reforms that operate within the existing payoff structure — new strategies, new guidelines, new reporting requirements — will not change the equilibrium. The payoff structure itself must change. That requires external intervention by shareholders. It cannot emerge from within the institution.

CENTRAL ARGUMENT

The World Bank's approval culture is not a management failure. It is a Nash equilibrium. Each actor — the task team leader, the Country Director, the MTI Practice Manager, the Board, the borrowing government, the IMF — is playing a dominant strategy given the payoff structure they face. No single actor has the individual incentive to defect from the equilibrium. Wappenhans named it in 1992. IEG has documented it every year since. It has not changed because the payoff structure has not changed. That structure is maintained by the sovereign guarantee, the Board governance architecture, and the MTI career pipeline. Changing any one of them changes the equilibrium. None of the three has changed.

1. The Payoff Structure: What Each Actor Is Maximising

Before mapping the game, it is necessary to establish what each actor in the World Bank system is actually maximising — as distinct from what they are formally mandated to maximise. These are not the same thing, and the gap between them is where the institutional failure lives.

Actor	Formal Mandate	Actual Maximand	Alignment?
Task Team Leader	Development outcomes in the project portfolio	Approvals, disbursements, positive ISR ratings, senior management goodwill	LOW — promotions reward approvals, not outcomes
Country Director	Country programme outcomes; client satisfaction	Finance Ministry relationships; portfolio volume; MTI goodwill for next posting	LOW — next posting determined by MTI network, not IEG ratings
MTI Practice Manager	Quality economic policy dialogue; sustainable fiscal frameworks	DPO pipeline volume; staff headcount; GP budget allocation; influence over CD appointments	NONE — GP power scales with portfolio size regardless of outcomes
Board of Executive Directors	Independent oversight of Bank operations on behalf of shareholders	Ratifying management proposals; avoiding implication of prior approvals; maintaining cordial relations	NONE — co-approval eliminates independent oversight function
Borrowing Government / MOF	National development outcomes; fiscal sustainability	Fast budget financing; avoiding conditionality enforcement; maintaining Bank relationship	PARTIAL — government captures budget support without reform delivery
IMF Resident Representative	Macro stability; programme compliance; surveillance integrity	Maintaining Bank cooperation; joint DSA access; avoiding institutional rivalry	LOW — acquiesces to Bank DPO duplication to protect working relationship
World Bank Institution	Development outcomes in borrowing countries	AAA rating; preferred creditor status; disbursement volume; fee income	NONE — sovereign guarantee means no financial stake in development outcomes

The critical observation in this table is in the final row. The World Bank's institutional payoff is structurally decoupled from development outcomes. The sovereign guarantee and preferred creditor status mean that the institution collects repayment regardless of whether the project worked. The AAA rating is maintained by the creditworthiness of the sovereign borrowers, not by the quality of the Bank's lending decisions. This is the structural foundation of the entire equilibrium: the institution that is supposed to discipline poor development outcomes has no financial stake in whether those outcomes are achieved.

2. The Prisoner's Dilemma at the Project Level

The classic Prisoner's Dilemma involves two players who would both be better off cooperating but who each have a dominant strategy to defect. The payoff structure ensures that defection is individually rational regardless of what the other player does, even though mutual defection produces a worse collective outcome than mutual cooperation.

At the project level, the World Bank faces a multi-player version of this dilemma. The 'cooperative' outcome — rigorous project design, honest reporting, genuine conditionality enforcement — produces the best development results but imposes costs on every individual player: slower preparation, more difficult government negotiations, career risk if the project is rated poorly, reduced portfolio volume. The 'defect' outcome — fast DPO approval, letter-verified prior actions, optimistic ISR ratings — produces poor development results but rewards every individual player: career advancement, Finance Ministry goodwill, portfolio scale, and institutional comfort.

	Government Cooperates (implements reform)	Government Defects (signs letter, does not reform)
Bank Cooperates (rigorous design, enforcement)	Best outcome: genuine reform, development impact, sustainable results. Individual cost: slow, difficult, career risk if fails. RARELY OBSERVED.	Worst outcome for Bank: effort invested, reform not delivered, IEG rates poor. Maximum individual cost. PUNISHES COOPERATION.
Bank Defects (fast DPO, letter verification)	Government over-delivers; Bank gets credit it did not earn. Individual reward for Bank: portfolio volume, fast approval. STABLE.	Dominant equilibrium: poor development outcome, but both parties meet formal obligations. Individual reward for all: money disbursed, letter signed. MOST COMMON OUTCOME.

The bottom-right cell is the Nash equilibrium: the Bank approves a DPO against letter-verified prior actions the government has not genuinely implemented; the government signs the Letter of Development Policy describing reforms it does not intend to complete; the money is disbursed; the ISR rates the project Moderately Satisfactory; the Country Director's portfolio looks strong; the Finance Minister has budget support; and IEG publishes an ICR five years later noting that the prior actions were not sustained. By then, both the Country Director and the Finance Minister have moved on.

THE DEFECTION PAYOFF

The bottom-right cell is stable because defection is the dominant strategy for both players simultaneously. The Bank defects because fast DPO approval rewards individual careers. The government defects because letter verification imposes no real implementation cost. Neither player needs to coordinate their defection — the payoff structure makes it individually rational for each. This is why the pattern appears in every country, across every decade, regardless of who holds the specific positions.

3. The Nash Equilibrium: Why No Single Actor Can Exit

A Nash equilibrium is a configuration in which no player can improve their individual outcome by unilaterally changing their strategy, given the strategies of all other players. The World Bank's approval culture is a Nash equilibrium in this precise technical sense. Consider what happens if any single actor tries to unilaterally defect from the equilibrium:

The Task Team Leader Who Refuses to Approve

A Task Team Leader who refuses to approve a DPO because the prior actions are unverifiable faces: delayed or cancelled operation (reduced portfolio volume); senior management pressure to find a way

to approve; Country Director displeasure (affects performance rating); no career reward for the refusal even if subsequent IEG evaluation confirms the TTL was right. The TTL who defects from the approval culture is individually punished even when their judgement is correct. This is the textbook dominant strategy condition: defecting from cooperation is individually rational regardless of outcome.

The Country Director Who Resists MTI

A Country Director who pushes back against MTI's DPO pipeline — who argues for investment operations over budget support, who insists on independent prior action verification, who allocates the country envelope away from macro DPOs — faces: reduced MTI goodwill (MTI influences CD posting decisions); Finance Ministry frustration (government prefers fast budget support); lower portfolio volume metrics (which senior management monitors); and no career reward for better IEG ratings that emerge after the CD has left the country. The data in Annex A of the companion paper shows that non-economist CDs who resist DPOs are genuinely less common in the selection pool — a selection effect that the equilibrium itself produces over time.

The Board Member Who Challenges Management

A Board member who votes against a project or demands outcome accountability for prior approvals faces: implicating their own previous votes on related operations; damaging bilateral relationships with the management teams they must work with every day; and producing no tangible benefit because Board recommendations to management are advisory rather than binding in practice. The Board's co-approval architecture means that independent scrutiny is structurally unavailable: you cannot challenge an outcome you helped create without challenging yourself.

The Borrowing Government That Demands Better Design

A Finance Minister who insists on investment operations rather than budget support — who refuses to sign a Letter of Development Policy against undeliverable prior actions — faces: slower disbursement (government needs the money now); reduced Bank engagement (the CMU's attention follows the DPO pipeline); and no institutional mechanism to register their preference for different instrument design. Governments that resist DPOs receive less money more slowly. The payoff structure punishes the preference for better development outcomes.

THE NASH EQUILIBRIUM DEFINED

Every actor in the system has a dominant strategy that contributes to the approval culture. No single actor can improve their individual outcome by unilaterally changing their strategy. The task team leader cannot exit. The Country Director cannot exit. The Board cannot exit. The government cannot exit. The equilibrium is self-enforcing without any explicit coordination. This is why it has persisted for thirty years despite being visible in IEG data throughout that period. It is not sustained by conspiracy. It is sustained by the rational behaviour of individuals in a system with a distorted payoff structure.

4. The MTI Pipeline as Equilibrium Enforcement

Standard game theory identifies equilibria as stable configurations, but does not always specify the enforcement mechanism that prevents defection. In the World Bank's case, the enforcement mechanism is the MTI career pipeline documented in the companion paper.

The pipeline operates as a repeated game with reputation effects. Unlike a one-shot prisoner's dilemma — where defection is dominant because there is no future — the World Bank career is a repeated game played over 20–35 years. In repeated games, cooperation can emerge when players value future interactions sufficiently. But the World Bank's repeated game has an important asymmetry: the relevant reputation is not 'did your projects deliver development outcomes' but 'are you aligned with the institutional culture and the MTI network.'

A Country Director who resists DPOs, challenges MTI's portfolio dominance, or insists on genuine prior action enforcement acquires a reputation within the MTI network as difficult, uncommercial, or insufficiently client-oriented. This reputation affects their next posting — the most consequential payoff in their career. The Country Director who maximises DPO volume, maintains strong Finance Ministry relationships, and avoids confrontation with MTI acquires the opposite reputation and gets the better next posting.

The result is what game theorists call a reputation equilibrium: the approval culture is enforced not by formal rules but by repeated-game reputation effects operating through the MTI network. Individual actors who might prefer to cooperate — to design better projects, enforce conditionality genuinely, allocate more resources to investment operations — are deterred from doing so by the career consequences that the equilibrium imposes on defectors.

THE GRIM TRIGGER

In game theory, a 'grim trigger' strategy punishes defection permanently and severely. The MTI pipeline operates as a soft version of this: a Country Director who defects from the DPO culture does not lose their job, but they lose access to the best next postings. Over a 30-year career, this is a substantial deterrent. The equilibrium is self-enforcing because every actor who has survived to seniority has demonstrated willingness to play the equilibrium strategy. Those who would not play it were filtered out earlier in the pipeline. This selection effect explains why the Marie-Nelly natural experiment is so striking: non-economist CDs who reach the Country Director level are rare precisely because the pipeline systematically disadvantages them.

5. The Sovereign Guarantee as Structural Parameter

The payoff structure that produces the Nash equilibrium is ultimately grounded in one structural feature: the World Bank's sovereign guarantee and preferred creditor status. This is not an operational detail. It is the foundational parameter that sets every other payoff in the game.

Because the Bank holds preferred creditor status and lends only to sovereigns, it has never recorded a default. Its AAA credit rating is maintained by the creditworthiness of its borrowers, not by the quality of its lending decisions. The consequence is precisely what game theory would predict: an institution with no financial stake in the outcome of its own lending decisions will optimise for the variables it does have a financial stake in — disbursement volume, fee income, and portfolio scale.

This creates what economists call a moral hazard problem of an unusual kind. Moral hazard typically describes a situation in which insurance reduces the incentive to avoid the insured risk. Here, the sovereign guarantee effectively insures the World Bank against the consequences of poor development outcomes. The Bank is the insurer that cannot lose. The government is the insured party

that pays the premium — the loan repayment — regardless of whether the insured event (development impact) occurred.

	Project Delivers Satisfactory Outcomes	Project Fails (Below Satisfactory)
World Bank	Loan repaid. Fees collected. Portfolio rated well. Reputation enhanced.	Loan repaid. Fees collected. Portfolio rated Moderately Satisfactory. Staff promoted.
Borrowing Country	Development outcomes delivered. Debt incurred is justified. Population benefits.	Development outcomes not delivered. Debt must still be serviced. Population bears cost of failure AND debt.
Private Investor (PSW/IFC)	Returns achieved. IFC equity appreciates. MIGA insurance not triggered.	Returns protected by PRG structure. Guarantee called. Sovereign absorbs loss.

The table makes the asymmetry explicit. The World Bank's payoff is identical in both columns: loan repaid, fees collected. The borrowing country's payoff is radically different: development outcomes in one column, debt without outcomes in the other. The institution that designs and approves the operation has no financial stake in which column is realised. This is the structural parameter that makes the Nash equilibrium stable. As long as this parameter is unchanged, no reform within the system — no new strategy, no new guideline, no new reporting requirement — can change the equilibrium. Individual actors will always return to the dominant strategy because the payoff structure has not changed.

6. The IMF: The Same Equilibrium, the Same Structural Parameter

The World Bank is not the only Bretton Woods institution whose behaviour is explained by this game theory framework. The IMF faces an identical payoff structure — and produces an identical equilibrium. The mechanism is the same: preferred creditor status and sovereign guarantee decouple the institution's financial payoff from the quality of its lending decisions. The only difference is that the IMF has no IEG. It has no project-level evaluation database. It has been lending for 81 years without one.

The COVID-19 emergency financing episode provides the clearest single demonstration of what the IMF's payoff structure produces when it is under maximum disbursement pressure. Between March 2020 and August 2021, the IMF mobilised approximately $26 billion in emergency financing for 45 Sub-Saharan African countries under the Rapid Financing Instrument. The governance framework was, in the IMF's own language, a checklist. The IEO documented that fewer than a majority of staff involved in emergency financing considered the governance commitments useful in preventing diversion of funds. The institution continued to describe the same commitments as safeguards.

THE IMF PAYOFF MATRIX: IDENTICAL STRUCTURE, NO EVALUATION DATABASE

The IMF approves emergency financing. The governance framework is a checklist. The money disburses. Fraud and corruption occur — documented at 20–30 percent of emergency finance in individual cases per the IMF's own Legal Department (WP/25/75, April 2025). The repayment

obligation is set at disbursement and is not adjusted. The IMF collects full repayment. The borrowing country bears the entire cost of both the institutional failure and the debt service. The institution that designed a flawed instrument, accepted unenforceable commitments, and processed governance failures without accountability collected full repayment. This is not a policy failure. It is the Nash equilibrium of an institution whose payoff is structurally decoupled from development outcomes.

The Nigeria case is the most extensively documented single instance. On April 28, 2020, the IMF Executive Board approved $3.4 billion — 100 percent of Nigeria's quota — under the Rapid Financing Instrument. The entire sum was disbursed in a single tranche, without structural conditionality, against governance commitments that carried no binding enforcement mechanism. At the time of disbursement, the institution's senior financial leadership was, as prosecutors later described, engaged in a systematic programme of treasury theft. The Accountant General of the Federation was convicted by a Federal High Court in Abuja in 2024. Nigeria repaid in full. The IMF collected its fees. The repayment obligation was not adjusted.

The governance commitments the IMF accepted included dedicated budget lines, monthly portal reporting, procurement publication with beneficial ownership disclosure, and an independent audit by the Auditor General within six months of the end of the emergency. Only one of four governance commitments was implemented. The audit did not happen on schedule. The Fund knew, at the point of disbursement, what the Nigerian PFM environment looked like — a 2019 PEFA assessment it had participated in documented low budget credibility, insufficient financial disclosure, and poor asset and liability management. It disbursed anyway. The payoff structure made disbursement the dominant strategy regardless of what the governance intelligence showed.

SEVEN COUNTRIES. SEVEN DOCUMENTED FIDUCIARY FAILURES. FULL REPAYMENT IN EACH CASE.

The companion paper — Rushing to Disburse: The IMF's COVID-19 Disbursements to Sub-Saharan Africa (mdbreform.com, March 2026) — documents the pattern across seven country case studies: Malawi (Auditor General found widespread malfeasance); Nigeria (Accountant General convicted); Kenya (KEMSA procurement scandal; 97 percent of supplies undelivered); South Africa (three special audit reports finding overpricing and potential fraud); Senegal (ministerial embezzlement; five former ministers charged May 2025); Togo (court of auditors documented procurement collapse); Zimbabwe (two-month-old Hungarian shell company received $60 million contract). Seven countries. Seven documented fiduciary failures. Full repayment collected in each case. The institution's financial payoff was identical in all seven. See: mdbreform.com/rushing-to-disburse-africa-imf-and-covid/

The second paper — How Not to Lend in an Emergency: Nigeria's $3.4 Billion IMF RFI (mdbreform.com, March 2026) — documents the Nigeria case in granular detail, including the PEFA intelligence the IMF possessed before disbursement, the governance commitment architecture and its enforcement gaps, the IEO evaluation findings, and the Legal Department's WP/25/75 confirmation. See: mdbreform.com/how-not-to-lend-in-emergency-situations-2/

The game theory implication is precise. The IMF's equilibrium is maintained by the same three structural parameters as the World Bank's: the preferred creditor status and sovereign guarantee that decouple the institution's payoff from outcomes; the Board governance architecture that co-approves emergency financing without independent scrutiny of the governance environment into which it flows; and — in place of the MTI career pipeline — the Article IV and programme review culture that rewards disbursement speed and client relations over conditionality enforcement. The IMF has no

IEG equivalent imposing even the modest reputational cost of a published Unsatisfactory rating. Its equilibrium is therefore even more stable than the World Bank's: the dominant strategy is more clearly dominant because the feedback mechanism is weaker.

The reform implication follows directly. The five demands in the Day 6 open letter to the Governors — non-resident Board, IMF project-level ratings, internal incentive reform, PRG/PSW governance review, and clawback provisions on principal — apply to both institutions. The IMF's resistance to a project-level rating system is itself the evidence that such a system would change the equilibrium. An institution that can lend $3.4 billion to a country whose Accountant General is subsequently convicted, collect full repayment, and face no institutional accountability consequence has a payoff structure that a rating system would directly threaten. That resistance is the signal that the reform targets the right structural parameter.

7. The Inter-Institutional Game: A Cooperative Equilibrium Between Two Macro Tribes

The analysis so far has treated the IMF and the World Bank as separate institutions each operating their own Nash equilibrium. The fuller picture is more troubling: the two institutions are not in competition with each other over the macro-fiscal mandate. They are in a cooperative equilibrium that serves the interests of the macroeconomist tribe that controls both.

This cooperative equilibrium explains something that competition theory cannot: why thirty-five years of coordination agreements, concordats, and collaboration frameworks have produced no reduction in field-level duplication. The Malan Report (2007) found a 'fundamental failure of collaboration' — both institutions endorsed the finding and changed nothing. The 2023 IMF-World Bank Collaboration Framework repeats the language of the 2007 concordat almost verbatim. This is not institutional inertia. It is a stable cooperative equilibrium that neither institution has an incentive to exit.

THE THREE-PLAYER GAME

The mandate duplication between the IMF and the World Bank is not a two-player game. It is a three-player game: IMF macro team, World Bank MTI team, and the Finance Ministry. The first two players are in a cooperative equilibrium. The third player — who should be the arbiter — is structurally captured by both. The result: parallel conditionality, parallel frameworks, parallel missions to the same ministry — and no actor with the incentive or the authority to end it.

7.1 The IMF and World Bank Macroeconomist: One Professional Tribe

The key to understanding the inter-institutional dynamic is that IMF and World Bank macroeconomists are not rivals from different intellectual traditions. They are members of the same professional tribe. They completed the same PhD programs — Chicago, MIT, LSE, Harvard, Princeton. They publish in the same journals. They sit on each other's technical advisory panels. They rotate between institutions: Pierre Laporte, whose Ghana tenure ended in debt distress, had an IMF background before joining the World Bank. This pattern — IMF economists joining the World Bank's MTI practice, World Bank economists joining IMF country teams — is the norm, not the exception.

The professional formation is identical. The intellectual framework — macro-fiscal stabilisation as the prerequisite for development — is shared. The career incentive is aligned: both institutions reward Finance Ministry relationships, large programme volumes, and macro policy dialogue. The result is that when an IMF mission chief and a World Bank Country Economist sit across the table from a Finance Minister, they are not representing competing analytical traditions. They are two members of the same tribe, both of whom benefit from the Finance Minister needing both of them.

Player	Formal Role	Actual Payoff Maximand	Dominant Strategy	Result
IMF Macro Team	Macro surveillance; BOP support; programme lending	Maintain macro primacy; programme volume; ministerial access; institutional relevance beyond crisis cycles	Expand structural agenda into development territory; resist WB primacy claims; maintain parallel conditionality	Sustained macro mandate regardless of outcomes; full repayment via preferred creditor status
World Bank MTI Team	Development policy dialogue; structural reform via DPOs	DPO pipeline volume; Finance Ministry relationships; portfolio size; GP headcount and budget	Expand DPO programme into IMF mandate territory; resist IMF primacy claims; maintain Country Economist at same table as IMF mission	Sustained macro mandate regardless of outcomes; sovereign guarantee ensures repayment
Finance Ministry (MOF)	Government's primary interlocutor with both institutions; reform programme owner	Maximise budget support received; minimise reform implementation cost; avoid alienating either institution	Accept parallel conditionality from both; play institutions against each other where possible; signal reform intent without full delivery	Maximum financing with minimum reform; isomorphic mimicry as the rational equilibrium strategy

The payoff table reveals the cooperative structure immediately. The IMF and World Bank MTI teams are not competing for the Finance Ministry's attention in a zero-sum game. Both benefit from the Finance Ministry needing both of them simultaneously. If the IMF had exclusive macro primacy — as the 1944 Bretton Woods framework intended — the World Bank's need for a 300-person MTI Global Practice running $88 billion in DPOs would disappear. If the World Bank had exclusive primacy, the IMF's structural agenda in low-income countries would be challenged. Neither institution will voluntarily exit the overlap because the overlap is the source of their institutional mandate, their budget justification, and their ministerial access.

7.2 The Finance Ministry as Captured Player

The Finance Ministry is nominally the actor who should resolve the duplication — it is the government's interlocutor with both institutions and the signatory of both the Letter of Development Policy for the Bank's DPOs and the Letter of Intent for the IMF's programmes. In practice the Finance Ministry is the most structurally captured player in the game.

The capture operates through three mechanisms. First, financial dependency: the Finance Ministry needs budget support from both institutions. Refusing to engage with either institution's macro framework would risk the disbursement relationship. The Finance Minister who tells the IMF that

the Bank already covers fiscal policy dialogue — or tells the Bank that the IMF already handles debt management — risks triggering a programme review in one institution while seeking financing from the other. The dominant strategy is to accept both frameworks simultaneously.

Second, intellectual capture: senior Finance Ministry officials in low-income countries are frequently trained in the same PhD programmes as IMF and World Bank staff — often at institutions that receive significant funding from both. The intellectual framework that the Finance Ministry brings to its own budget and reform decisions is the same macro-fiscal framework that both institutions deploy. There is no independent analytical tradition inside the Finance Ministry from which to challenge the parallel conditionality.

Third, the reform implementation exit: the Finance Ministry has discovered — across decades of DPO and IMF programme cycles — that accepting prior actions and benchmark language does not require implementing them. The isomorphic mimicry that the DPO paper documents is not a failure of the Finance Ministry. It is the Finance Ministry's rational dominant strategy in a game where it must signal reform to both institutions to maintain financing relationships while managing the political economy constraints that make genuine reform difficult. The Finance Ministry's behaviour is perfectly rational given its payoffs. The institutions' behaviour — accepting letter-verified compliance — is equally rational given theirs.

BANGLADESH, PAKISTAN, ETHIOPIA, GHANA — THE FINANCE MINISTRY PLAYS BOTH SIDES

The five country cases in the mandate duplication paper document the Finance Ministry's dominant strategy in practice. Bangladesh maintained a dual-rate exchange rate system, satisfying Bank conditions on export competitiveness while drawing IMF criticism on reserve management — describing the experience as 'managing two reform frameworks simultaneously.' Pakistan's Ministry of Energy described the coordination burden as 'a second full-time job for our team.' Ethiopia's Finance Ministry publicly acknowledged 'conflicting timetables from our two major macro partners.' Ghana's government used the two institutions' divergent DSA conclusions to defer decisive action on debt — the very action that might have avoided the 2022 debt crisis. In each case the Finance Ministry's strategy was individually rational: accept parallel conditionality, manage the contradictions, extract maximum financing. The outcome was development failure. But no single actor defected from their dominant strategy to produce it.

7.3 Why the Cooperative Equilibrium Is More Stable Than a Competitive One

Standard game theory suggests that competition between two actors with overlapping mandates would eventually produce differentiation — one actor would specialise and the other would cede territory, producing a more efficient outcome. This has not happened in thirty-five years of IMF-World Bank mandate overlap. The reason is that the two institutions are not in a competitive game. They are in a cooperative game with a common interest in maintaining the size of the macro-fiscal policy space that both occupy.

The cooperative equilibrium is maintained by the professional tribe. When IMF and World Bank economists rotate between institutions — or collaborate on joint debt sustainability analyses, joint country economic memoranda, or joint technical assistance programmes — they are reinforcing the norm that macro-fiscal policy dialogue is the shared intellectual territory of the economics profession, not the exclusive mandate of either institution. The coordination frameworks the institutions produce — the 2007 concordat, the 2023 collaboration framework — are not failed attempts to reduce duplication. They are the institutional expression of the cooperative equilibrium: both institutions agree to coordinate, which means both institutions agree that both should continue doing the same work.

The Finance Ministry, as the captured third player, cannot disrupt this equilibrium. It has no leverage: it needs the financing from both institutions, and it lacks the analytical independence to challenge the shared intellectual framework that both deploy. The Governors of the World Bank and IMF — the finance ministers and central bank governors who are the ultimate shareholders — are in principle the only actors with the authority and the incentive structure to disrupt the cooperative equilibrium. But they face their own collective action problem: no single Governor has the incentive to unilaterally demand mandate consolidation when the coordinated action required involves all 190 member governments simultaneously.

THE STRUCTURAL CONCLUSION

The IMF-World Bank mandate duplication is a cooperative Nash equilibrium between two macro tribes, maintained by a captured third player and an absent external enforcer. The Finance Ministry cannot exit because it needs the financing. The IMF cannot exit because the structural agenda is its relevance beyond crisis cycles. The World Bank MTI cannot exit because the DPO pipeline is its institutional power base. The Governors could exit — but face a collective action problem of their own. The result: thirty-five years of coordination language, zero reduction in duplication, and an estimated $750 million to $1.1 billion per year in combined administrative costs spent on institutional ego maintenance. The companion paper on mandate duplication — Parallel Bureaucracies, Conflicted Governments, Wasted Billions (mdbreform.com/imf-world-bank-mandate-duplication/) — documents the full cost and proposes the three scenarios under which the equilibrium could be disrupted. Only Scenario 3 — Deep Mandate Consolidation — changes the payoff structure. Only the Governors can implement Scenario 3.

8. Why Previous Reforms Failed: A Game Theory Diagnosis

Every major reform attempt since Wappenhans (1992) has shared a common feature: it operated within the existing payoff structure rather than changing it. Game theory predicts that such reforms will fail, and the historical record confirms this.

Wappenhans (1992): Naming the Problem

The Wappenhans Report correctly identified the approval culture and recommended a shift from input to outcome metrics. The reform failed because it did not change the payoff structure. Individual staff were still promoted for approvals. Country Directors still needed MTI goodwill for their next posting. The Board still co-approved every operation. Naming the equilibrium is not the same as changing it.

Comprehensive Development Framework (1999): Expanding the Mandate

Wolfensohn's CDF expanded the Bank's mandate to encompass the full range of development inputs. This created more lending opportunities — more GPs, more products, more portfolio volume — without changing the payoff structure. The result was a larger institutional apparatus producing the same approval culture across a wider range of sectors. The Nash equilibrium expanded to fill the new space.

Results Measurement and the IDA Results Measurement System (2002 onwards)

The introduction of results frameworks, logical frameworks, and results matrices changed the paperwork of project design without changing the incentive structure. Staff learned to write results frameworks that satisfied the formal requirement while preserving the operational flexibility to continue the approval culture. The equilibrium adapted: prior actions were framed in output terms rather than outcome terms, making nominal compliance easier while actual reform remained unverified.

Zedillo Commission (2009): Targeting the Right Structural Parameter

The Zedillo Commission's recommendation to move to a non-resident Board was the reform most directly targeted at the structural parameter responsible for the equilibrium. A non-resident Board would break the co-approval architecture, allowing genuine independent oversight. The recommendation was not implemented. The reason is itself a game theory prediction: the Board has a dominant strategy to preserve its own institutional position. A Board that is asked to vote on whether to eliminate its own resident status faces a prisoner's dilemma with itself — and defects, as any rational actor would.

IDA Private Sector Window and Blended Finance (2017 onwards)

The PSW and blended finance instruments created new channels for IFC to move capital, with concessional subsidy from IDA. Game theory predicts the outcome: actors with dominant strategies toward volume maximisation will find the fastest route through the new instrument architecture. The result — non-competitive allocation, additionality questions, IFC substituting its own capital with PSW resources — is the equilibrium adapting to new instruments while preserving its essential structure.

THE PATTERN

Every reform that operates within the existing payoff structure produces the same outcome: the equilibrium absorbs the reform and continues. The approval culture is more resilient than the reforms that have been applied to it for thirty years. This is not a coincidence. It is what game theory predicts for a stable Nash equilibrium subject to within-system perturbations. The equilibrium can only be disrupted by a change to the structural parameters that define the payoff matrix. Those parameters are: the sovereign guarantee, the Board governance architecture, and the MTI career pipeline.

7. What Would Actually Change the Equilibrium

Game theory is precise about what is required to disrupt a Nash equilibrium: the payoff matrix itself must change, such that at least one player's dominant strategy changes. Within-system reforms — new guidelines, new reporting requirements, new strategy documents — do not change the payoff matrix. They add noise within the existing equilibrium. Three classes of intervention would actually change the payoff matrix.

Class 1: Changing the Institution's Financial Exposure to Outcomes

The sovereign guarantee is the foundational parameter that decouples the Bank's payoff from development outcomes. If the Bank had some financial stake in outcomes — through outcome-linked

pricing, partial clawback provisions, or mandatory co-financing of remediation operations from its own capital — the equilibrium changes. The institution would, for the first time, have a financial incentive to design operations that work rather than operations that disburse.

This is the reform that MTI and the Bank treasury will resist most fiercely. That resistance is itself the evidence that the reform targets the right structural parameter. An institution that has no financial stake in outcomes will oppose any reform that creates one, because the new stake would require the institution to change the behaviour that the current stake permits.

Class 2: Breaking the Co-Approval Architecture

Implementing the Zedillo Commission's 2009 recommendation — a non-resident Board that approves policy and strategy and delegates project approval to management — would break the co-approval dynamic that prevents independent oversight. A non-resident Board can scrutinise outcomes without implicating its own prior approvals. It changes the Board's dominant strategy from 'ratify to avoid implication' to 'scrutinise because we are not implicated.'

This reform requires shareholders to impose it, because the Board itself has a dominant strategy to block it. This is precisely why the recommendation has not been implemented in 17 years despite being analytically obvious. The Zedillo Commission could not change the Board's payoff matrix. Only the Governors can.

Class 3: Breaking the MTI Career Pipeline

The MTI pipeline functions as a reputation equilibrium enforcing the approval culture across career time horizons. Breaking it requires changes that alter the reputation signal: mandatory disclosure of Country Director professional backgrounds; diversity requirements in CD appointments; and — most critically — linking the CD appointment and promotion process to IEG outcome ratings during previous tenures rather than to portfolio volume and client satisfaction scores.

If the payoff to 'aligned with MTI culture' falls — because CD appointments now require demonstrated investment project outcomes and cannot be obtained solely through DPO volume — the reputation equilibrium collapses. Individual actors who would prefer to cooperate (design better projects, enforce conditionality genuinely) find that the career punishment for doing so is reduced. The equilibrium shifts.

Reform Type	Payoff Matrix Change?	Equilibrium Impact	Who Can Implement?
New strategy document / framework	NO — does not change any actor's payoff	None — equilibrium absorbs reform	Management (and therefore will not change equilibrium)
New reporting requirements / results frameworks	NO — changes paperwork, not payoffs	Minimal — actors adapt compliance without changing behaviour	Management (and therefore will not change equilibrium)
IEG evaluation mandate expansion	PARTIAL — increases reputational cost of failure,	Modest — names failures, but no actor's dominant strategy changes	Board resolution (but Board's own dominant strategy resists)

Reform Type	Payoff Matrix Change?	Equilibrium Impact	Who Can Implement?
	but no financial cost		
Non-resident Board (Zedillo)	YES — eliminates co-approval; changes Board's dominant strategy	SIGNIFICANT — Board can scrutinise without self-implication	Governors only — Board cannot impose on itself
CD appointment diversity requirements	YES — breaks MTI reputation enforcement; changes career payoff	SIGNIFICANT — reduces equilibrium enforcement mechanism	Management with Board directive — requires external pressure
Outcome-linked pricing / clawback on principal	YES — gives institution financial stake in outcomes for first time	TRANSFORMATIVE — changes foundational structural parameter	Governors only — institution will not voluntarily accept financial exposure to outcomes

8. Implications for Shareholder Action

The game theory analysis produces one clear policy conclusion: the reforms that would actually change the World Bank's institutional equilibrium are precisely the reforms that require shareholder action to implement. They cannot be implemented by management, because management's dominant strategy is to preserve the equilibrium. They cannot be implemented by the Board, because the Board's dominant strategy is to ratify management proposals. They can only be implemented by the Governors — the finance ministers and central bank governors who are the ultimate shareholders of the institution.

This is not a rhetorical conclusion. It follows directly from the game theory analysis. In a Nash equilibrium, unilateral defection by any player within the system is individually irrational. The only way to change the equilibrium is to change the payoff structure, which requires action by an external actor whose payoffs are defined differently. The Governors are that external actor. They are not embedded in the MTI career pipeline. They are not subject to the co-approval architecture. They do not depend on Finance Ministry relationships for their next posting. They have the authority to change the structural parameters — the Board governance, the appointment process, the financial exposure — that maintain the equilibrium.

The five recommendations in the companion paper should be evaluated through this lens. Recommendations 1 (instrument justification transparency) and 3 (prior action verification standards) operate within the existing payoff structure — they add accountability requirements without changing any actor's dominant strategy. They will be absorbed by the equilibrium. Recommendations 2 (CD background disclosure and diversity), 4 (portfolio balance trigger), and 5 (MTI restructuring) target the MTI career pipeline — they change the reputation payoff and therefore have equilibrium-changing potential, but require sustained external pressure to implement against management resistance.

The reform not explicitly numbered in the companion paper — but implicit in the game theory analysis — is the most important: changing the institution's financial exposure to outcomes. Outcome-linked pricing on PRG operations, clawback provisions on loan principal where operations

produce documented sector-level damage, mandatory co-financing of remediation operations from institutional capital rather than new sovereign debt — any of these would change the foundational structural parameter. They would give the World Bank, for the first time in its 80-year history, a financial stake in whether its operations work.

THE CONCLUSION FOR GOVERNORS

The World Bank's approval culture is a Nash equilibrium sustained by three structural parameters: the sovereign guarantee that decouples the institution's payoff from development outcomes; the co-approval Board architecture that prevents independent oversight; and the MTI career pipeline that enforces the equilibrium through reputation effects across 30-year careers. Thirty years of within-system reforms have not changed any of these parameters, and the equilibrium has persisted. The only actors with the authority and the incentive structure to change these parameters are the Governors. The five demands in the open letter to the Governors — non-resident Board, IMF project ratings, internal incentive reform, PRG/PSW governance review, and clawback on loan principal — map directly onto the three structural parameters. They are not additional reform proposals. They are the minimum set of parameter changes required to disrupt an equilibrium that has been stable for three decades.

11. Methodological Note

This note applies standard game theory concepts — Nash equilibrium, dominant strategy, repeated game, reputation equilibrium, moral hazard — to the institutional dynamics documented in the companion empirical paper. It draws on: Dixit and Nalebuff, Thinking Strategically (1991); Kreps, Game Theory and Economic Modelling (1990); Tirole, The Theory of Industrial Organisation (1988) for reputation equilibrium concepts; Easterly, The Elusive Quest for Growth (2001) and Rajan and Subramanian (2008) for the development aid incentive structure; and the game theory of institutional reform in Acemoglu and Robinson, Why Nations Fail (2012). The application to the World Bank specifically draws on the IEG evaluation record cited in the companion paper and on the author's direct observation and participation in CMU operations across Africa between 2003 and 2023.