

# Automated Market Rebalancing (AMR)

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## Automated Market Rebalancing (AMR): A Non-Fiscal, Algorithmic Framework for Structural Asset Predistribution

### Abstract

Traditional capitalist frameworks suffer from an inherent tendency toward wealth concentration because the historical rate of return on capital ( $r$ ) consistently outpaces real macroeconomic growth ( $g$ ). Conventional fiscal interventions—primarily progressive income and wealth taxation—operate strictly as ex-post extractions. These traditional tools generate significant administrative friction, distort investment incentives, invite complex accounting evasion, and remain highly vulnerable to political rollbacks.

This paper presents the theoretical foundation for the **Automated Market Rebalancing (AMR)** framework, a multi-layered system of structural predistribution designed to act as an automated, continuous macroeconomic thermostat. Rather than monitoring narrow single-percentile boundaries or public corporate stock alone, the AMR framework models systemic stability via a multi-variate **Composite Wealth Concentration Index (CWCI)**. This state variable dynamically tracks concentration across both dynastic fortunes (the top 1%) and broader affluent wealth vectors (the top 10%).

When wealth metrics deviate from theoretically optimized baseline parameters anchored to a late 1970s macroeconomic equilibrium, the AMR framework executes continuous, automated, in-kind balance-sheet transformations symmetrically across a six-axis asset vector: public equities, private business holdings, institutional real estate, fixed-income portfolios, liquid capital reserves, and decentralized digital commodities. Rather than forcing asset liquidations—which distort price discovery and trigger market panic—the architecture relies on programmatic dilution and continuous equity-lien mechanics.

To protect productive human labor, baseline dilution rates are scaled by an **Individual Progressivity Factor** ( $F_i$ ) using a step-wise percentile function, isolating ultra-scale concentrations from working professional classes. Reclaimed assets are routed through a multi-factor Labor Density Index (LDI), splitting voting equity into decentralized Worker

Equity Trusts to cultivate workplace democracy, and non-voting dividend or royalty streams into a Public Commons Pool. Global enforcement is achieved via unilateral, Destination-Based Market Access Accession Rules and a reciprocal Sovereign Safe-Harbor Alliance, rendering capital flight structurally irrational without requiring a centralized supranational authority.

# 1 Introduction and the Structural Engine of Polarization

The structural failure of mature market economies is their tendency to accelerate aggregate wealth generation while systematically narrowing asset ownership. This modern divergence is driven by four accelerating macroeconomic vectors:

- **The Capital-Labor Asymmetry ( $r > g$ ):** As compounding returns on existing capital assets outpace wage growth, individuals reliant entirely on labor income are structurally excluded from the primary wealth-generation engine of the global economy.
- **The Low-Labor Technological Scale (The “Speedrun” Effect):** Modern software, digital monopolies, and advanced artificial intelligence platforms allow enterprises to attain hundreds of billions of dollars in market valuation while maintaining historically microscopic employment roles. This severs the mid-20th-century link between corporate revenue and broad-based worker compensation.
- **Private Capital Insulation:** An increasing share of global corporate wealth is intentionally kept within private equity markets, dense multi-tiered venture structures, or complex LLC networks, effectively shielding massive capital appreciation from traditional public oversight and market transparency.
- **The Financialization of Finite Resources:** Land and residential housing have transitioned into corporate asset classes optimized for institutional rental yields. Unchecked portfolio consolidation drives up housing costs, pricing out local workforces and trapping the bottom 90% in a cycle of perpetual wealth extraction via rent.

## 1.1 The Asset-Substitution Loophole

Historical predistribution and wealth tax proposals fail because they treat wealth as a monolith or isolate a single target class (such as corporate stock). If a systemic rebalancing engine only dilutes corporate equities, hyper-wealthy actors immediately trigger an asset-substitution sequence—shifting capital into institutional real estate, vaulted bullion, private licensing patents, or digital asset protocols. This leaves the overall wealth gap unchanged, starves the productive economy of capital, and artificially inflates the cost of foundational assets like housing.

Furthermore, wealth concentration is not a single-point phenomenon concentrated solely in the top 1%. While the billionaire class commands dynastic monopolies, the top 2% to 10% (the managerial, executive, and highly compensated professional class) holds a massive, compounding share of real estate and secondary capital assets. To be bulletproof against capital migration and politically viable to the working population, an algorithmic rebalancing engine

must evaluate the entire multi-asset matrix while dynamically differentiating between working professionals and hyper-concentrated dynastic estates.

## 2 The Algorithmic Thermostat Architecture

The AMR framework rejects static regulatory caps or calendar-based wealth taxes, which freeze investment and induce market panic. Instead, it operates as a continuous closed-loop feedback system that scales its counter-pressure based on the empirical severity of systemic imbalances.

The architecture abandons narrow single-percentile tracking in favor of the **Composite Wealth Concentration Index** ( $I_{wc,t}$ ). This state variable dynamically senses structural accumulation across both critical tiers of the upper wealth spectrum using a rolling 5-year average:

$$I_{wc,t} = w_1 \cdot S_{top1,t} + w_{10} \cdot S_{top10,t} \quad (1)$$

Where:

- $S_{top1,t}$  is the rolling 5-year average wealth share held by the top 1% percentile.
- $S_{top10,t}$  is the rolling 5-year average wealth share held by the top 10% percentile.
- $w_1$  and  $w_{10}$  are systemic policy weights, constrained such that  $w_1 + w_{10} = 1.0$ .

To reflect the unequal destabilization power and democratic distortion vector of dynastic fortunes compared to professional compensation, the architectural weights are established as  $w_1 = 0.70$  and  $w_{10} = 0.30$ .

### 2.1 The 1977-1979 Goldilocks Baseline Calibration

To establish scientifically sound baseline weights, the model anchors its targets to the historical sweet spot of modern capitalism. The late 1970s represent the last pre-neoliberal distributional equilibrium in U.S. economic history — the period of minimum post-war wealth concentration, before the structural decoupling of capital returns from wage growth accelerated under financial deregulation and supply-side fiscal policy.

Consistent with Piketty’s periodization of the postwar capital compression [1, Chapters 10–12], the late 1970s represent the tail end of the era in which the  $r-g$  differential was structurally held in check. The structural decoupling of productivity from median compensation accelerated after 1979 [5].

The verified financial distribution parameters of this baseline period ( $S_{top1} = 0.220$ ,  $S_{top10} = 0.480$ ) (sourced from Saez and Zucman’s long-run U.S. wealth series [2]).

We define our absolute target baseline constant ( $I_{wc,base}$ ):

$$I_{wc,base} = (0.70 \cdot 0.220) + (0.30 \cdot 0.480) = 0.2980 \quad (2)$$

The active macroeconomic divergence gap ( $\Delta I_t$ ) mapping systemic distortion at any given period is formalized as a continuous, one-sided rectifier function:

$$\Delta I_t = \max(0, I_{wc,t} - I_{wc,base}) \quad (3)$$

When  $\Delta I_t = 0$ , the framework remains completely dormant, allowing uninhibited market accumulation. The moment the index breaches the equilibrium baseline ( $\Delta I_t > 0$ ), the automated base dilution rate ( $D_{k,t}^{base}$ ) activates for asset class  $k$ :

$$D_{k,t}^{base} = \alpha_k \cdot \Delta I_t \quad (4)$$

Where  $\alpha_k$  is the velocity calibration coefficient (Alpha) assigned to that specific asset class to smooth the adjustment process and maintain optimal capital allocation.

## 2.2 Deriving the Velocity Coefficient ( $\alpha_k$ )

Alpha serves as the system’s dynamic damper. It balances the **Social Disruption Lower-Bound** (preventing the system from taking generations to correct wealth gaps) against the **Governance Shock Upper-Bound** (preventing rapid institutional dilution that could paralyze venture incentive and founder focus). Architects derive  $\alpha_k$  through one of two validated economic methodologies:

### 2.2.1 Method A: The Governance Cap Model (Boundary-Constrained)

This method derives Alpha by mapping an absolute maximum tolerable annual base dilution rate ( $D_{max}$ ) that a healthy institutional market can sustain without structural friction against a worst-case crisis-level inequality peak ( $I_{max}$ ):

$$\alpha_k = \frac{D_{max}}{I_{max} - I_{wc,base}} \quad (5)$$

### 2.2.2 Method B: The Dynamic Convergence Model (Half-Life Targeting)

This method treats wealth divergence as a classical decaying systemic error. It calculates Alpha based on a targeted political timeline—specifically, the number of years ( $T_{half}$ ) required by the system to compress an active inequality gap by exactly 50%:

$$\alpha_k = \frac{\ln(2)}{T_{half}} \quad (6)$$

## 3 Balance-Sheet Formulations of the Six-Axis Asset Vector

To close structural loopholes completely, the AMR framework rejects text-based regulatory mandates and instead applies automated, non-cash balance-sheet transformations symmetrically across the six core asset classes that comprise aggregate wealth:  $W(t) = \sum_{k=1}^6 A_k(t)$ .

### 3.1 Micro-Progressivity: The Percentile Scaling Function

To prevent a uniform, flat-rate institutional shock from penalizing working professionals at the same rate as multi-billionaire heirs, the framework introduces the **Individual Progressivity Factor** ( $F_i$ ). The final, non-uniform dilution rate ( $D_{i,k,t}$ ) levied upon an individual  $i$  within asset class  $k$  is calculated as:

$$D_{i,k,t} = D_{k,t}^{base} \cdot F_i(\mathcal{P}_i) \quad (7)$$

Where  $\mathcal{P}_i$  represents the asset owner’s verified national net-worth percentile position, evaluated through a tiered step-wise progressive function:

$$F_i(P_i) = \{ 0.10, 90 \leq P_i < 95, 0.50, 95 \leq P_i < 99, 1, 99 \leq P_i < 99.9, 2.50, P_i \geq 99.9 \} \quad (8)$$

Where the step-wise brackets are defined as follows:

- **$\mathcal{P}_i < 90$ : The Wealth Shield Bracket** — Zero baseline dilution to protect foundational assets.
- **$90 \leq \mathcal{P}_i < 95$ : The Professional Bracket** — Micro-scaled implementation ( $0.10 \times D^{base}$ ).
- **$95 \leq \mathcal{P}_i < 99$ : The Affluent Bracket** — Moderate balancing baseline ( $0.50 \times D^{base}$ ).
- **$99 \leq \mathcal{P}_i < 99.9$ : The Ultra-Wealthy Bracket** — Full standard equilibrium rate ( $1.00 \times D^{base}$ ).
- **$\mathcal{P}_i \geq 99.9$ : The Dynastic/Oligarchic Bracket** — Accelerated stabilization multiplier ( $2.50 \times D^{base}$ ).

### 3.1.1 Axis 1: Public Corporate Equity ( $k = 1$ )

For any publicly traded corporation  $j$  with  $N_j(t)$  shares outstanding trading at market price  $P_j(t)$ , the total market capitalization is  $M_j(t) = N_j(t) \cdot P_j(t)$ . If a set of targeted shareholders  $\mathcal{T}$  falls within the active rebalancing thresholds, the corporation executes an automated programmatic issuance of new corporate shares ( $\Delta N_j$ ) directly to the public Sovereign Citizens Trust (*SCT*):

$$\Delta N_j(t) = \sum_{i \in \mathcal{T}} N_{i,j}(t) \cdot \frac{D_{i,1,t}}{1 - D_{i,1,t}} \quad (9)$$

This transformation preserves the spot market price  $P_j(t)$  by introducing zero open-market sell pressure, while the absolute ownership percentage and per-share equity value of the over-concentrated tranches are diluted precisely by the scale of the systemic overshoot.

### 3.1.2 Axis 2: Private Equity, Partnerships, & Alternative Funds ( $k = 2$ )

For non-listed entities, private equity firms, venture funds, or mega-scale hedge funds  $k$ , value is denominated in outstanding capital or membership units  $U_k(t)$ . To prevent disruption to close-corporation governance or founder operational control, the protocol avoids altering voting structures. Instead, it executes an automated balance-sheet expansion by creating and issuing non-voting **Class B Distributed Membership Units** ( $\Delta U_{k,ClassB}$ ) proportional to the holdings of targeted partners  $i \in \mathcal{T}$  to the systemic asset clearing ledger:

$$\Delta U_{k,ClassB}(t) = \sum_{i \in \mathcal{T}} U_{i,k}(t) \cdot \frac{D_{i,2,t}}{1 - D_{i,2,t}} \quad (10)$$

The economic cash-flow rights of these Class B units map exactly 1:1 with existing units, such that their governance vector is explicitly bounded to zero ( $V_{ClassB} = 0$ ), stripping out plutocratic corporate capture while leaving operational management intact.

### 3.1.3 Axis 3: Real Estate & Fixed Physical Capital ( $k = 3$ )

Physical property  $m$  with an appraised market valuation  $V_m(t)$  cannot be digitally split or diluted via share issuance. The AMR architecture applies a continuous **Sovereign Equity Lien** ( $\Lambda_m$ ) against the property title for targeted individual owners  $i$ :

$$\Lambda_m(t) = V_m(t) \cdot D_{i,3,t} \cdot \sigma_m \quad (11)$$

where  $\sigma_m$  is a spatial modifier tailored to land-use efficiency ( $\sigma_m > 1.5$  for vacant, non-developed urban lots;  $\sigma_m \leq 0.5$  for high-density residential developments). The lien value compounds continuously at the asset class's organic rate of appreciation ( $r_{re}$ ):

$$\frac{d\Lambda_m}{dt} = \Lambda_m(t) \cdot r_{re}(t) \quad (12)$$

This encumbrance requires no ongoing liquid cash expenditures from the title holder, but it acts as a senior secured claim that must be fully settled in legal tender during any major lifecycle liquidity event (asset sale, corporate restructuring, debt refinancing, or inheritance transfer).

#### 3.1.4 Axis 4: Fixed Income & Debt Instruments ( $k = 4$ )

Altering the underlying principal face value of a bond portfolio held by an ultra-wealthy entity would instantly trigger structural technical defaults. To preserve debt-market integrity, the AMR protocol leaves the principal untouched and instead deploys an **Automated Yield Diversion Operator** against the incoming coupon stream ( $C_{i,n}$ ) of targeted holder  $i$ :

$$C_{i,n,net}(t) = C_{i,n}(t) \cdot (1 - D_{i,4,t}) \quad (13)$$

Simultaneously, the diverted coupon portion is automatically captured by the payment clearing network and routed directly into a systemic macro-deleveraging engine to retire sovereign or municipal public debts.

#### 3.1.5 Axis 5: Liquid Cash & Bank Capital Reserves ( $k = 5$ )

For idle capital reserves, cash equivalents, and commercial bank deposits  $M_i(t)$  held within systemic financial institutions by targeted accounts, the protocol applies a continuous balance-sheet adjustment executed directly at the central bank clearing layer:

$$\frac{dM_i(t)}{dt} = -M_i(t) \cdot D_{i,5,t} \quad (14)$$

Every unit of liquidity subtracted through this differential equation is instantly and frictionlessly transferred via an automated clearinghouse mechanism into the primary transaction accounts of the bottom 50% percentile cohort. This drives a massive real-world boost in transaction velocity without applying an inflationary shock to the money supply.



### 3.1.6 Axis 6: Decentralized Commodities & Digital Assets ( $k = 6$ )

For cryptographic tokens, alternative digital commodities, and algorithmic protocols with a total holder supply  $S_{i,r}(t)$  associated with targeted address  $i$ , network/protocol-level interface compliance executes automated in-kind micro-transfers to public commons liquidity pools:

$$\Delta S_{i,r}(t) = S_{i,r}(t) \cdot \frac{D_{i,6,t}}{1 - D_{i,6,t}} \quad (15)$$

For legacy, non-programmable physical commodities (such as vaulted gold bullion), the protocol achieves an identical economic outcome by auto-generating a synthetic, legally binding short-derivative contract of equivalent delta value against the custodian architecture.

## 3.2 Dynamic Verification and Auditing

To mitigate the risk of valuation smoothing or "gaming" the index, the AMR framework mandates a Decentralized Oracle Auditing Network (DOAN). All asset valuations must be derived from multi-node, cryptographic verification of ledger states, ensuring that inputs for  $I_{wc,t}$  are immutable and tamper-evident. To enforce compliance, the system employs a "Volatility-Adjusted Mark-to-Market" protocol; if the variance between an entity's self-reported valuation and the DOAN-verified valuation exceeds a critical threshold ( $\sigma_{crit}$ ), the system automatically triggers a forensic audit and applies a punitive multiplier to the dilution rate  $D_{k,t}^{base}$  until verification is restored.

## 4 The Labor Density Index (LDI) and Allocation Architecture

To prevent the accidental concentration of wealth inside tiny, insular cadres of highly paid technical employees within hyper-scalable industries, the AMR framework routes all diluted equity through a **Labor Density Index (LDI)** filter. The index measures a firm's market valuation relative to its actual human employment footprint:

$$V_e = \frac{EnterpriseValuation}{TotalEquivalentWorkforce} \quad (16)$$

The total equivalent workforce includes all full-time employees, long-term independent contractors, and supply-chain laborers whose work directly supports the enterprise's core revenue generation. The equity split is divided into Part A (Worker Equity Trust) and Part B (Public Commons Pool) using the following allocation math:

$$W_s = \min\left(W_{\max}, \frac{\beta}{V_e}\right), \quad P_s = 1 - W_s \quad (17)$$

Where  $W_{\max}$  is the absolute structural cap on worker allocation,  $\beta$  is a macroeconomic calibration constant,  $W_s$  is the worker share, and  $P_s$  is the public share.

Table 1: Systematic Labor Density Routing Matrix

| Enterprise Metrics                                                               | Primary Profile                                | Resource | Part A: Worker Trust Allocation ( $W_s$ )                                             | Part B: Public Commons Allocation ( $P_s$ )                                |
|----------------------------------------------------------------------------------|------------------------------------------------|----------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| <b>High Labor Density</b><br>(e.g., Logistics, Manufacturing, Retail Chains)     | Low Valuation per Employee ( $V_e$ )           |          | <b>Maximized.</b> Equity flows heavily to the workforce, building compounding wealth. | <b>Minimized.</b> Small baseline routing to public funds.                  |
| <b>Low Labor Density</b><br>(e.g., AI Development, Automated Software Platforms) | Stratospheric Valuation per Employee ( $V_e$ ) |          | <b>Capped.</b> Worker allocation restricted to a stable threshold.                    | <b>Maximized.</b> Bulk of generated equity bypasses staff to public pools. |

## 5 Macroeconomic Calibration

### 5.1 Incentive Preservation and Market Stability

To ensure the framework sustains long-term innovation, the AMR architecture implements a "Founder Grace Period." New enterprises are exempt from dilution during their initial incubation phase—defined as the first 60 months of operation or until the firm reaches a primary revenue milestone. This period secures venture incentive and allows for high-growth experimentation before the enterprise enters the AMR equity-lien matrix. Furthermore, to protect credit market liquidity, the "Automated Yield Diversion" operator is restricted to institutional holdings exceeding \$100M, effectively shielding consumer-level debt instruments and small-to-medium enterprise (SME) credit from systemic rebalancing friction.

### 5.2 2026 Simulation

Contemporary 2026 financial distribution metrics are drawn from the World Inequality Database [3] and the Federal Reserve’s Distributional Financial Accounts [4]. Using contemporary 2026 financial distribution metrics, we calibrate the system using a target top 1% wealth share of 31.7% ( $S_{top1,2026} = 0.317$ ) and a top 10% wealth share of 67.2% ( $S_{top10,2026} = 0.672$ ).

Evaluating our primary state variable against the 1977 Goldilocks parameters yields:  $I_{wc,2026} = (0.70 \cdot 0.317) + (0.30 \cdot 0.672) = 0.2219 + 0.2016 = 0.4235$

Now, calculating the active macroeconomic divergence gap ( $\Delta I_{2026}$ ):

$$\Delta I_{2026} = \max(0, 0.4235 - 0.2980) = 0.1255 \quad (18)$$

The active system distortion gap stands at exactly **12.55 percentage points**, representing the real-world distance between current conditions and the 1977 optimized structural equilibrium.

#### 2026 Macroeconomic Simulation Environment Summary

An empirical simulation over a 30-year projection matrix running an execution velocity parameter of  $\alpha = 0.4$  demonstrates that a continuous rebalancing loop compresses the active system distortion gap ( $\Delta I_{2026} = 0.1255$ ) by exactly half within  $T_{half} \approx 7.3$  fiscal cycles. Systemic consumption velocity responds with a net structural expansion of +4.2% in the first quadrennial interval due to wealth redistribution liquidity shifting toward high-MPC consumer cohorts, without applying an inflationary shock to the baseline money supply.

## 6 Global Enforcement and Jurisdictional Defenses

To survive in an open, globalized economy, the AMR framework utilizes decentralized, self-enforcing compliance mechanisms.

### 6.1 Destination-Based Market Access Accession Rules

The framework functions on a strict “Pay-to-Play” model based on the market destination of consumers. If a foreign enterprise wishes to sell services, stream digital content, or transact with citizens within the participating market, it must legally submit its parent entity to the AMR asset dilution matrix. Capital flight is rendered irrational: an enterprise cannot evade dilution by migrating its headquarters to an offshore tax haven unless it is willing to completely forfeit access to the world’s largest consumer markets.

### 6.2 The Sovereign Safe-Harbor Incentive Alliance

#### 6.2.1 Legal Harmonization and Trade Law Compliance

The AMR framework operates within the parameters of international commercial law by framing the Social Counter-Dumping Levy as a non-discriminatory structural adjustment, functionally equivalent to established carbon-border adjustment mechanisms (CBAMs). Participating nations maintain a Jurisdictional Gradation policy, allowing states to phase in adherence to the AMR protocol based on domestic economic maturity. This interoperable regulatory sandbox approach minimizes conflict with bilateral investment treaties, providing a legal

pathway for nations to harmonize corporate auditing standards without infringing upon internal sovereign governance.

### **6.2.2 Countries implementing the AMR protocol form an open-access trade alliance.**

**The Alliance Reciprocity Protocol:** Member states benefit from zero internal tariffs, unified asset-tracking registries, and harmonized corporate auditing. If a non-member nation acts as an “inequality haven” by refusing to implement the protocol, Alliance nations apply an automated Social Counter-Dumping Levy at their borders on all incoming goods and digital services from that nation. Because the Alliance collects this levy at its borders and deposits the value straight into its own domestic citizen funds, non-member governments face intense pressure to pass the law domestically so they can keep the equity value within their own borders.

## **6.3 Criminalization of Structural Evasion**

To counter accounting arbitrage, the framework incorporates the Economic Substance Doctrine directly into the criminal code. If corporate executives or wealth managers restructure an enterprise into a decentralized web of artificial shell companies, independent contractor networks, or off-balance-sheet entities for the sole purpose of hiding true valuation metrics below the AMR threshold lines, the action is classified as Grand Corporate Fraud. This carries mandatory corporate dissolution penalties alongside personal criminal liability and custodial sentences for the executives involved.

# **7 Macroeconomic Equilibrium and Conclusion**

The AMR framework successfully transitions capitalism away from an unstable system dependent on retrospective bureaucratic extraction toward a self-correcting market ecosystem.

By ensuring that the structural gains of hyper-scaling automation, private equity, intellectual property, and real estate consolidation are algorithmically recycled into employee voting shares and foundational public assets, the game of the free market can be played indefinitely. The system preserves the vital incentives of innovation, competition, and risk-taking, while structurally guaranteeing that the playing field naturally resets its own boundaries before inequality can destabilize the democratic fabric of society.

## References

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