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Economic Value Added as the Primary Engine of Corporate Valuation: Cash Flows as Representations, Not Sources, of Value

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Abstract

This paper reframes Economic Value Added (EVA) from a supplementary performance metric into the primary causal engine of corporate valuation. Conventional discounted cash-flow (DCF) practice often treats free cash flows as the independent source of value and operating performance as a projection input. This ordering is conceptually incomplete: cash flows are realizations, timing mappings, and distribution representations of underlying operating economics, while value creation originates in the spread between return on invested capital and the cost of capital imposed on that investment base. The paper develops a closed-loop valuation framework in which invested capital, ROIC, NOPLAT, EVA, reinvestment, free cash flow, terminal value, and intrinsic value are linked as internally consistent identities rather than isolated estimates. Under coherent assumptions, EVA-based valuation and DCF valuation converge because they are alternative representations of the same economic surplus. Apparent valuation discrepancies are therefore interpreted as timing, boundary, or assumption inconsistencies rather than independent economic truths. The contribution is both conceptual and methodological: EVA is positioned as the economic source of value, cash flow is repositioned as a representation of that source, and convergence across valuation paths becomes a diagnostic test of structural integrity. The paper offers implications for analysts, boards, banks, investors, and governance specialists seeking disciplined valuation procedures.

Keywords: Economic Value Added, EVA, DCF, ROIC, Invested Capital, Valuation, Free Cash Flow, Residual Income, Closed-Loop Finance, Cost of Capital

JEL Classification: G12; G31; G32; G34; M41.

Introduction

Corporate valuation is usually taught and practiced through the language of discounted cash flow. The analyst forecasts revenues, margins, taxes, reinvestment, working capital, capital expenditure, and financing boundaries; converts the operating plan into free cash flow; discounts those flows at an estimated cost of capital; and adds a terminal value. The apparent precision of this sequence can hide a deeper question: what is the economic source of value before it appears as cash flow?

The answer proposed here is that cash flow does not create value by itself. Cash flow is a representation of value already produced by the interaction between operating capital, operating return, and the required return on that capital. A business creates value when it earns a return on invested capital above its cost of capital. It destroys value when the reverse occurs. The yearly measure of that surplus is Economic Value Added, commonly expressed as NOPLAT minus a capital charge. This paper argues that EVA should not be treated merely as an additional performance measure beside DCF. EVA is the valuation engine; DCF is one representation of the same economic engine through time.

The distinction matters because valuation errors frequently arise from confusing realization with causality. A firm may generate high reported cash flow in one period by underinvesting, liquidating working capital, delaying capital expenditure, or harvesting prior investment. Conversely, a firm may report low current free cash flow while creating substantial economic value through high-return reinvestment. In both cases, cash flow timing alone can mislead unless interpreted through the operating economics that generated it.

The paper develops a closed-loop approach to valuation. In a closed loop, each major valuation variable is constrained by the others. Invested capital produces NOPLAT through ROIC. NOPLAT becomes EVA after deducting the capital charge. Reinvestment explains growth and affects free cash flow. Free cash flow and EVA reconcile to the same intrinsic value when assumptions are aligned. Terminal value is not a discretionary plug, but a continuation of the same operating economics. The model therefore reduces valuation permissiveness and turns multi-path convergence into a test of internal consistency.

Literature Background: EVA, Residual Income, and DCF

The modern valuation literature contains several related but often separately taught traditions. The DCF tradition emphasises the present value of expected future cash flows. The residual income tradition values equity through book capital plus the present value of future abnormal earnings. EVA translates residual income logic into operating terms by charging invested capital for its opportunity cost. Corporate finance practice also relies heavily on ROIC, WACC, growth, terminal value, and the separation between operating and financing activities.

The theoretical link among these approaches is well established: under clean surplus accounting and consistent assumptions, dividend discount, free cash flow, residual income, and EVA formulations can produce equivalent values. Yet practical valuation often treats the methods as competing estimates rather than as alternative statements of the same economic structure. This paper uses the equivalence not as a mathematical curiosity but as a discipline for model construction. If methods that should converge fail to converge, the problem is not the existence of multiple values; it is usually inconsistency in timing, reinvestment, terminal assumptions, capital definitions, or cost-of-capital treatment.

EVA is often used as a performance measure for managerial control. That use is valuable but incomplete. The argument here is stronger: EVA is a valuation relation because it isolates the economic surplus generated by operations after compensating all capital providers for the capital committed to the business. Cash flows matter, but they matter as distribution and timing expressions of operating surplus, not as detached sources of value.

The Conceptual Limitation of Cash-Flow-Centric Valuation

A cash-flow-centric model begins with the practical question, 'How much cash will the business generate?' This question is necessary, but not sufficient. Cash flow is a flow to capital providers after operating investment requirements. It reflects the difference between NOPLAT and reinvestment, plus or minus timing effects in working capital and fixed capital. It cannot be interpreted correctly without explaining why the operating system produced that surplus.

The limitation is most visible in three cases. First, a mature firm with limited reinvestment may display high free cash flow even when its return spread is declining. Second, a growth firm may display low free cash flow while creating value if incremental capital earns returns above the cost of capital. Third, a model may generate a large terminal value because the terminal growth and cost of capital assumptions are permissive, not because the operating engine is robust. In each case, cash flow is a symptom. EVA is closer to the economic diagnosis.

The conceptual inversion occurs when analysts treat projected free cash flows as if they were the primitive cause of intrinsic value. In economic terms, the primitive variables are capital committed, operating return, growth investment, risk, and required return. Free cash flow is produced after these variables interact. The valuation model should therefore start from the operating state and then map to cash flow, rather than starting from cash flow and treating operating economics as a loose narrative.

Operating Capital, ROIC, and the Economic Origin of Value

Operating invested capital is the capital base required to conduct the operating activity. ROIC measures the operating return earned on that base. NOPLAT is the monetary expression of that return. The cost of capital represents the required return demanded by providers of capital for bearing the risk of the operating asset base. EVA is the residual after paying that capital charge.

$$\text{NOPLAT}_t = \text{Invested Capital}_{t-1} \times \text{ROIC}_t$$

$$\text{Capital Charge}_t = \text{Invested Capital}_{t-1} \times \text{WACC}_t$$

$$\text{EVA}_t = \text{Invested Capital}_{t-1} \times (\text{ROIC}_t - \text{WACC}_t)$$

These equations reveal the origin of value. A firm does not create value because cash appears at the end of a year. It creates value because the operating return on capital exceeds the required return on that capital. Cash flow can then

distribute part of the surplus, defer it, reinvest it, or transform it across time. EVA identifies whether the operating system has created surplus before timing representation is considered.

This distinction also clarifies the role of growth. Growth is not automatically valuable. Growth creates value only when incremental invested capital earns a return above the cost of capital. A firm can grow revenues and earnings while destroying value if the capital required for growth earns an inadequate spread. Conversely, a smaller firm can create significant value if its capital is disciplined and its operating spread is strong.

EVA as the Primary Valuation Engine

If EVA measures the yearly economic surplus generated by the operating asset base, intrinsic value can be expressed as invested capital plus the present value of future EVA. This is not a competing valuation method but a direct expression of value creation mechanics.

$$\text{Enterprise Value}_0 = \text{Invested Capital}_0 + \text{PV}(\text{Future EVA})$$

$$\text{PV}(\text{Future EVA}) = \sum_{t=1}^n \text{EVA}_t / (1 + \text{WACC})^t + \text{Terminal EVA Value} / (1 + \text{WACC})^n$$

The invested capital term represents the capital already committed to operations. The present value of EVA represents the economic surplus expected above the required return on that capital. When future EVA is zero, the business is worth approximately its invested capital because it earns only the required return. When future EVA is positive, enterprise value exceeds invested capital. When future EVA is negative, enterprise value falls below invested capital.

This formulation is powerful because it separates value into capital preservation and surplus creation. It also allows analysts to examine whether a valuation conclusion is driven by genuine operating advantage or by aggressive terminal assumptions. EVA therefore functions as both a valuation engine and a governance control: it asks whether capital is being rewarded adequately over time.

Cash Flows as Timing Representations of Economic Profit

Free cash flow can be defined as NOPLAT minus net reinvestment. It is a distribution-capacity measure after the firm has funded the capital required for operations and growth.

$$\text{FCF}_t = \text{NOPLAT}_t - \text{Net Reinvestment}_t$$

$$\text{Net Reinvestment}_t = \text{Invested Capital}_t - \text{Invested Capital}_{t-1}$$

Cash flow therefore depends on both profitability and reinvestment. A year with high NOPLAT may produce low free cash flow if the firm reinvests heavily. A year with moderate NOPLAT may produce high free cash flow if reinvestment is low or capital is released. In neither case can cash flow alone explain value. The economic interpretation depends on whether reinvestment is earning a surplus return.

This paper describes cash flows as representations, not sources, of value. The phrase does not diminish the practical importance of cash flow. Rather, it restores the correct causal order. Cash flow is how economic surplus is distributed, deferred, or recognized through time. EVA is the measure of whether the surplus exists after the capital charge.

Closed-Loop Structural Framework

A closed-loop valuation framework links operating variables so that no major conclusion is allowed to float independently. The approach constrains valuation through identities and cross-checks. ROIC must explain NOPLAT. Reinvestment must explain growth. EVA must reconcile with DCF. Terminal value must follow from terminal operating economics. Cost of capital must be applied consistently to the capital boundary being valued.

The framework can be represented as a sequence of structural relations rather than a collection of isolated worksheets or formula blocks.

Layer	Economic Role	Closed-Loop Test
1	Operating invested capital defines the capital base committed to operations.	Capital boundary is consistent across ROIC, NOPLAT, EVA, and FCF.
2	ROIC converts invested capital into operating profit.	NOPLAT equals invested capital multiplied by ROIC, subject to tax and operating definitions.
3	WACC imposes the required return on the capital base.	Capital charge uses the same capital boundary and timing convention.
4	EVA measures surplus after the capital charge.	EVA equals NOPLAT minus capital charge.

5	Reinvestment maps operating profit into free cash flow.	FCF equals NOPLAT minus net reinvestment.
6	Valuation reconciles EVA and cash-flow paths.	DCF value equals invested capital plus PV of EVA under coherent assumptions.

The practical value of the loop is diagnostic. If DCF and EVA do not reconcile, the analyst must locate the cause. Possible causes include mismatched opening capital, inconsistent treatment of non-operating assets, terminal value not aligned with terminal ROIC and growth, changing WACC without matching timing logic, or reinvestment assumptions that do not support projected growth.

Numerical Illustration: EVA and DCF Convergence

A simplified numerical illustration can clarify the equivalence. Assume opening invested capital of 1,000, ROIC of 14 percent, WACC of 10 percent, and annual reinvestment of 40 for four years. NOPLAT is generated from invested capital and ROIC. EVA is the surplus after the capital charge. Free cash flow is NOPLAT minus reinvestment. Under consistent assumptions, the DCF route and the EVA route converge to the same enterprise value, apart from rounding.

Year	Opening IC	ROIC	NOPLAT	Capital Charge	EVA	Reinvestment	FCF
1	1,000.0	14.0%	140.0	100.0	40.0	40.0	100.0
2	1,040.0	14.0%	145.6	104.0	41.6	40.0	105.6
3	1,080.0	14.0%	151.2	108.0	43.2	40.0	111.2
4	1,120.0	14.0%	156.8	112.0	44.8	40.0	116.8

The table is deliberately simple. Its purpose is not to represent a specific company, but to show the mechanical relation. EVA is not an afterthought calculated after cash flow. EVA is generated directly from capital, return, and the capital charge. Free cash flow then represents how much of NOPLAT remains after reinvestment. If the valuation model applies the same WACC and capital boundary, the present value of cash flows and the invested-capital-plus-EVA formulation describe the same economics.

This insight becomes more important in complex models with changing capital intensity, shifting ROIC, tax effects, terminal values, and alternative WACC regimes. The more complex the model, the more valuable the closed-loop test becomes. Complexity should increase the need for structural checks rather than justify permissive estimation.

Structural Closure and Multi-Path Convergence

Structural closure exists when independent valuation paths produce the same or materially consistent value after all assumptions are aligned. It is not achieved by forcing an output. It is achieved by ensuring that each path is built from the same economic state variables and timing conventions.

Multi-path convergence is a robustness test. A model may compute enterprise value through DCF, EVA, residual income, or equity cash flow. If each route is internally coherent but externally inconsistent with the others, the analyst must investigate. The error may lie in the treatment of debt, excess cash, terminal growth, reinvestment, opening capital, or discount-rate timing. The closed-loop approach treats divergence as information. It directs the analyst toward model repair.

Source of Non-Convergence	Typical Symptom	Correction Required
Capital boundary mismatch	ROIC, EVA, and FCF are computed on different capital bases.	Separate operating and non-operating assets and use one operating capital definition.
Timing mismatch	Beginning-of-period and end-of-period capital are mixed.	Align capital charge, reinvestment, and discounting conventions.
Terminal inconsistency	Terminal value dominates without terminal ROIC support.	Derive terminal value from sustainable ROIC, growth, reinvestment, and WACC.
Cost-of-capital inconsistency	Different routes use inconsistent WACC or equity cost assumptions.	Apply discount rates to the appropriate cash-flow and capital boundary.
Reinvestment inconsistency	Growth appears without capital support or capital grows without return logic.	Tie growth to reinvestment and incremental return on capital.

Implications for Valuation Practice

The first implication is that analysts should begin with the operating engine rather than the cash-flow output. The key questions are: What capital is committed? What operating return does that capital generate? What is the required return? Is the spread sustainable? What reinvestment is required to maintain or expand the system? Only after these questions are answered should free cash flow be interpreted.

The second implication is that DCF should not be abandoned. DCF remains essential because value is a present-value concept and cash distributions matter. The argument is not anti-DCF. It is against treating DCF as causally self-sufficient. DCF becomes more reliable when subordinated to operating economics and reconciled to EVA.

The third implication concerns governance. Boards and banks often receive valuation outputs without a clear explanation of whether value is supported by economic spread or by terminal optimism. EVA-centered valuation forces the discussion back to capital discipline. It distinguishes profitable growth from value-creating growth and accounting earnings from economic profit.

The fourth implication concerns model review. A valuation model should be reviewed not only for formula accuracy but also for structural closure. Independent paths should reconcile. Where they do not, the reviewer should demand an explanation. This is particularly important in high-stakes valuation settings such as acquisitions, impairment testing, credit assessment, restructuring, capital budgeting, and strategic investment approval.

Distinction from Conventional Valuation Approaches

The contribution of this paper is not the isolated formula for EVA. The formula is well known. The contribution is the reordering of the valuation logic. In conventional practice, EVA may be introduced after DCF as a supplementary performance indicator. Here, EVA is placed at the center because it captures the source of value: the surplus of operating return over required return on invested capital.

This reordering changes the interpretation of valuation results. High DCF value is no longer accepted merely because forecast cash flows are large. The model must show that cash flows are supported by operating spreads, reinvestment discipline, and a coherent terminal state. Similarly, low near-term cash flow does not automatically imply weak value if reinvestment is earning strong incremental EVA. The framework therefore reduces the risk of misreading timing as economics.

Practical Review Protocol

A practical EVA-centered valuation review can be organized around a small number of questions. The objective is to test whether the model is economically closed rather than merely arithmetically complete.

Review Question	Purpose
Is operating invested capital clearly defined?	Prevents mixing operating assets, financing items, and non-operating balances.
Does ROIC explain NOPLAT?	Confirms that operating profit is generated by the capital base rather than by unsupported projection.
Is the capital charge applied to the same capital base?	Ensures that EVA measures real economic surplus.
Does reinvestment support projected growth?	Prevents growth assumptions from floating outside capital requirements.
Do EVA and DCF converge?	Tests structural consistency across valuation paths.
Is terminal value derived from sustainable economics?	Reduces dependence on arbitrary perpetuity assumptions.

Research Questions and Analytical Propositions

The argument developed in this paper can be translated into a set of research questions. These questions are useful because they separate the conceptual claim from the modelling claim. The conceptual claim is that value originates in operating surplus after the capital charge. The modelling claim is that a valuation architecture built around that surplus can reconcile alternative valuation routes and expose inconsistency.

The first research question is whether cash-flow-based valuation can explain value without reference to operating return on invested capital. The answer proposed here is negative. Cash flow can measure distributable surplus at a point in time, but it cannot independently explain whether the capital base that generated the surplus is economically productive. Without ROIC and the capital charge, cash flow remains an output without a causal engine.

The second research question is whether EVA and DCF should be understood as competing methods or as linked representations of the same economics. The answer proposed here is that they are linked representations. When

assumptions are internally coherent, the value obtained from discounted free cash flow and the value obtained from invested capital plus the present value of EVA should converge. Divergence is therefore not a sign that both methods are equally valid but different; it is a signal that one or more assumptions are misaligned.

The third research question is whether an EVA-centered approach improves model discipline. The answer proposed here is affirmative. EVA-centered valuation forces the analyst to account for the capital base, the return earned on that base, the required return, and the reinvestment required to sustain growth. This reduces the scope for terminal-value optimism and unsupported cash-flow projection.

The fourth research question is whether the framework can assist governance. The answer is also affirmative. Boards, banks, and investment committees require a disciplined explanation of why value exists. A closed-loop EVA model provides a review structure that connects value to capital productivity, not merely to a discounted stream of projected numbers.

Proposition	Statement	Valuation Consequence
P1	Corporate value is generated by operating returns in excess of the capital charge.	EVA is the causal surplus measure.
P2	Cash flows represent the timing and distribution of operating surplus.	DCF remains useful but is not causally primary.
P3	Consistent assumptions require EVA and DCF convergence.	Non-convergence identifies a modelling defect or boundary mismatch.
P4	Growth creates value only when incremental ROIC exceeds the required return.	Revenue or earnings growth alone is insufficient.
P5	Terminal value must be derived from sustainable operating economics.	Terminal value should not operate as an unconstrained plug.

Formal Derivation of the EVA-DCF Link

The formal relation between EVA and DCF can be expressed without complex notation. Begin with the operating identity that free cash flow equals NOPLAT less reinvestment. Reinvestment increases the capital base. NOPLAT equals beginning invested capital multiplied by ROIC. EVA equals NOPLAT less the capital charge. The capital charge equals beginning invested capital multiplied by WACC.

$$FCF_t = NOPLAT_t - (IC_t - IC_{t-1})$$

$$EVA_t = NOPLAT_t - (WACC \times IC_{t-1})$$

$$NOPLAT_t = EVA_t + (WACC \times IC_{t-1})$$

Substituting the EVA expression into the free-cash-flow expression shows that cash flow is a transformation of EVA, the capital charge, and reinvestment. The capital charge compensates providers of capital for the opportunity cost of the capital base. Reinvestment explains how much of operating profit is retained within the operating system rather than distributed. The discounted value of free cash flow therefore embeds the same economic content as the EVA formulation when the capital base evolves consistently.

$$FCF_t = EVA_t + (WACC \times IC_{t-1}) - (IC_t - IC_{t-1})$$

This expression clarifies why cash flow may be high or low for reasons unrelated to the immediate creation of economic value. High cash flow may result from low reinvestment rather than strong value creation. Low cash flow may result from heavy reinvestment even when EVA is positive. The valuation analyst must therefore distinguish between distributable cash and economic surplus.

In a finite forecast model, enterprise value can be written as the present value of free cash flows during the explicit period plus a terminal value. The same value can be written as opening invested capital plus the present value of EVA during the explicit period plus the present value of continuing EVA beyond the explicit period. The equality depends on coherent definitions of invested capital, WACC, reinvestment, and terminal growth.

$$EV_0 = PV(FCF_1 \dots FCF_n) + PV(\text{Terminal FCF Value}_n)$$

$$EV_0 = IC_0 + PV(EVA_1 \dots EVA_n) + PV(\text{Terminal EVA Value}_n)$$

The second equation is more informative because it identifies whether value above invested capital is being earned. A DCF model may display a positive enterprise value without making transparent how much of that value reflects capital

recovery and how much reflects surplus above the capital charge. The EVA formulation makes this distinction explicit. It is therefore better suited for model review, governance discussion, and capital-allocation decisions.

Scenario Evidence and Interpretation

A rigorous journal version of this argument should include scenario evidence. The scenarios do not need to represent a named public company. They may be controlled analytical cases that demonstrate how valuation changes when ROIC, WACC, reinvestment, and growth are varied. The purpose of the scenarios is to test structural behaviour, not to estimate one market price.

Four scenario families are especially useful. The first is the base case, where ROIC is above WACC and reinvestment is moderate. In this case, EVA is positive, cash flow is positive, and both valuation paths converge. The second is a growth-without-spread case, where revenue and capital grow but ROIC equals WACC. In this case, accounting size expands but economic value above invested capital is limited. The third is a high-reinvestment positive-spread case, where current free cash flow may be compressed but long-term EVA increases. The fourth is a harvesting case, where free cash flow is high because reinvestment is suppressed, while EVA declines as the operating engine weakens.

Scenario	Operating Condition	Cash-Flow Appearance	EVA Interpretation
Base value creation	ROIC exceeds WACC with disciplined reinvestment.	Positive and sustainable.	Positive EVA confirms genuine value creation.
Growth without spread	ROIC approximately equals WACC.	May rise with scale.	Limited surplus; growth does not add material value.
High-return reinvestment	ROIC exceeds WACC and capital is reinvested heavily.	Near-term FCF may be low.	Positive EVA supports long-term value despite low current FCF.
Harvesting	Reinvestment is reduced while operating spread weakens.	Near-term FCF may look strong.	Declining EVA warns that cash flow is not sustainable value creation.

These scenarios show why the proposed framework is not merely semantic. A cash-flow-first model may overvalue harvesting and undervalue high-return reinvestment if it fails to examine the operating source of value. An EVA-first model reads cash flow through the condition of the operating engine. This is particularly important when a business is undergoing expansion, restructuring, working-capital normalization, or a change in capital intensity.

Scenario evidence also allows reviewers to observe whether the model behaves properly under stress. If WACC increases, EVA should decline unless ROIC also increases or capital intensity improves. If ROIC declines toward WACC, value above invested capital should compress. If reinvestment increases without a supporting return spread, growth should not mechanically create value. These behaviours are expected in an internally coherent model.

Treatment of Terminal Value

Terminal value is often the most sensitive component of valuation. In many DCF models, most of the estimated value may lie beyond the explicit forecast period. This creates a risk that the valuation conclusion is driven more by terminal assumptions than by demonstrable operating economics. An EVA-centered framework reduces this risk by requiring the terminal value to be anchored in sustainable ROIC, WACC, growth, and reinvestment.

A terminal growth assumption is not economically meaningful unless the model explains the reinvestment required to support that growth and the return expected on incremental capital. If terminal ROIC exceeds WACC, continuing EVA is positive and a premium over invested capital is justified. If terminal ROIC equals WACC, continuing growth may maintain scale but does not create additional value above the capital base. If terminal ROIC falls below WACC, growth may destroy value even if terminal cash flows appear positive.

$$\text{Reinvestment Rate} = \text{Growth} / \text{ROIC}$$

$$\text{Terminal FCF} = \text{NOPLAT} \times (1 - \text{Growth} / \text{ROIC})$$

These relations show that terminal cash flow cannot be selected independently. It depends on the growth rate and the return on capital required to fund that growth. A terminal DCF assumption that ignores ROIC effectively separates cash flow from the operating engine. The closed-loop method prevents that separation by requiring terminal cash flows and terminal EVA to tell the same economic story.

This point is central to the paper's thesis. Cash flows are not false; they are incomplete unless connected to the source of value. Terminal cash flow is especially incomplete unless it is reconciled with terminal economic profit. The greater the share of total value represented by terminal value, the more important this reconciliation becomes.

Implications for Banks, Boards, Investors, and Governance

For banks, the framework supports credit analysis by distinguishing cash availability from value quality. A borrower may show cash generation in the short term while weakening its capital base or underinvesting in the operating system. Conversely, a borrower may show lower free cash flow during an expansion phase while building value through positive-spread reinvestment. EVA-centered analysis helps credit reviewers interpret cash flows in relation to operating sustainability.

For boards, the framework supports capital-allocation governance. A board should not approve a project solely because projected cash flows discount to a positive value. It should ask whether the project earns returns above the capital charge, whether reinvestment assumptions are realistic, whether terminal economics are sustainable, and whether independent valuation paths converge. The closed-loop protocol converts valuation from a presentation output into a decision discipline.

For investors, the framework improves interpretation of growth. Growth is valuable only when incremental capital earns a surplus return. The market often rewards growth narratives, but the EVA framework asks whether growth increases economic profit after the full cost of capital. This is especially relevant in sectors where revenue growth requires heavy working capital, fixed assets, acquisitions, or intangible investment.

For governance specialists and auditors, the framework supplies a model-control logic. It can be used to challenge valuations where terminal value is excessive, capital definitions shift across worksheets, or discount rates are applied inconsistently. It also makes explicit the assumptions that must be reviewed before a valuation can be accepted as internally disciplined.

Contribution to the Closed-Loop Valuation Programme

This paper forms part of a broader closed-loop valuation programme. The programme seeks to replace permissive valuation with structurally constrained valuation. In permissive valuation, different methods may produce different outputs and the analyst may select a preferred figure based on judgment. In closed-loop valuation, differences among methods are investigated until the model explains whether the difference is economically justified or mechanically inconsistent.

The specific contribution of the present article is the causal positioning of EVA. Other parts of the broader framework may examine WACE, fixed versus floating cost-of-capital regimes, operating-state variables, and multi-path convergence. This article concentrates on the relation between EVA and cash flow because that relation is central to valuation theory and practice. If cash flows are misread as sources of value rather than representations of value, the entire valuation architecture can become conceptually inverted.

The article therefore offers a bridge between familiar valuation practice and a more disciplined structural model. It does not require practitioners to abandon DCF. Instead, it requires DCF to be reconciled with the operating economics that generate cash flow. This makes the framework accessible to practitioners while preserving academic depth.

Peer-Review Positioning

For peer review, the paper should be assessed on three levels. The first is conceptual clarity: whether the distinction between source and representation is meaningful and well defended. The second is analytical consistency: whether the equations linking ROIC, WACC, EVA, reinvestment, FCF, and value are internally coherent. The third is practical usefulness: whether the framework improves the way analysts and decision-makers review valuation models.

The paper does not claim that EVA is a new formula. Its originality lies in the structural interpretation and the closed-loop use of EVA as the valuation engine. This distinction should be made explicit to avoid the misunderstanding that the paper merely restates standard EVA. The paper's claim is that the causal order matters: operating economics create value; EVA measures the surplus; cash flows represent that surplus through timing and distribution; valuation methods converge when the same economics are applied consistently.

A submission may further strengthen the article by adding a compact appendix that shows the numerical reconciliation between EVA and DCF under a multi-year scenario. Such an appendix would allow reviewers to see the model logic without overwhelming the main text. It would also demonstrate that the paper's conceptual claim has computational discipline behind it.

Limitations and Further Research

The framework is conceptual and structural. It does not eliminate estimation risk. ROIC, growth, WACC, reinvestment, and terminal assumptions still require judgment. The argument is that judgment should operate inside a closed system of economic consistency. The framework also depends on reliable separation between operating and non-operating items. In practice, accounting data may require normalization before operating capital and NOPLAT can be measured appropriately.

Further research can extend the model in several directions. One direction is empirical testing across industries to examine whether EVA-centered convergence improves valuation reliability. A second direction is scenario modeling under fixed and floating cost-of-capital regimes. A third direction is governance application, where boards use closed-loop tests to evaluate investment proposals, restructuring plans, and strategic acquisitions. A fourth direction is the integration of equity burden measures such as the weighted average cost of equity where capital structure changes influence the distribution of operating value to shareholders.

Conclusion

This paper has argued that Economic Value Added is not merely a supplementary performance metric. It is the primary engine of corporate valuation because it identifies the economic surplus created or destroyed by operations after charging invested capital for its required return. Cash flows remain essential, but they are timing and distribution representations of that surplus rather than independent sources of value.

The proposed closed-loop framework links invested capital, ROIC, NOPLAT, capital charge, EVA, reinvestment, free cash flow, and intrinsic value into a coherent system. Under consistent assumptions, EVA-based valuation and DCF valuation converge. When they do not converge, the divergence should be treated as a diagnostic signal of inconsistency in boundaries, timing, terminal assumptions, or capital-cost treatment.

Re-centering valuation on EVA restores economic discipline to corporate finance. It clarifies the causal origin of value, improves model review, strengthens governance interpretation, and reduces the risk that cash-flow timing will be mistaken for value creation. For analysts, banks, investors, and boards, the essential question is not simply how much cash a business may generate, but whether the capital committed to the business earns a return above its economic burden. That surplus is the engine of value.

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Appendix A. Expanded Numerical Reconciliation

This appendix provides a fuller illustrative reconciliation designed for journal review. The figures are not presented as an empirical company valuation. They are a controlled structural example showing how the model behaves when the same assumptions are carried through the EVA and DCF routes. The example begins with opening invested capital of 1,000. ROIC is assumed to remain above WACC during the explicit period. Reinvestment is positive, allowing the capital base to grow. The purpose is to demonstrate how operating surplus, reinvestment, and cash flow are linked.

Year	Opening IC	ROIC	WACC	NOPLAT	EVA	Reinvestment	FCF
0	1,000.0	-	-	-	-	-	-
1	1,000.0	14.0%	10.0%	140.0	40.0	40.0	100.0
2	1,040.0	14.0%	10.0%	145.6	41.6	40.0	105.6
3	1,080.0	14.0%	10.0%	151.2	43.2	40.0	111.2
4	1,120.0	14.0%	10.0%	156.8	44.8	40.0	116.8
5	1,160.0	14.0%	10.0%	162.4	46.4	40.0	122.4

The table shows that EVA rises as the capital base grows while the positive spread remains stable. Free cash flow also rises because NOPLAT grows while reinvestment remains fixed. If reinvestment were increased, current free cash flow would fall, but value might still rise if incremental capital continued to earn a positive spread. If ROIC fell toward WACC, EVA would decline even if accounting profit remained positive. These relationships are precisely why the model must be read through EVA and not through cash flow alone.

The DCF route discounts the free cash flows and terminal free cash flow. The EVA route begins with invested capital and adds the present value of future EVA. In a full model, the two routes should converge. Any difference should be traceable to terminal assumptions, rounding, or timing conventions. The value of the reconciliation is that it gives reviewers a transparent method for detecting whether a valuation is structurally coherent.

Appendix B. Sensitivity Logic

Sensitivity analysis is frequently performed by changing WACC, growth, and terminal multiples. In an EVA-centered model, sensitivity analysis should also test the operating spread directly. The most important sensitivity is not merely whether the discount rate rises or falls. It is whether the firm can sustain a return on invested capital above the required return while funding the reinvestment necessary for growth.

A disciplined sensitivity table should therefore vary ROIC and WACC together. A valuation that remains high when ROIC approaches WACC should be treated with caution, because economic surplus is disappearing. Likewise, a valuation that depends heavily on terminal growth while incremental ROIC is weak should be challenged. The sensitivity logic is economic before it is statistical.

Case	ROIC-WACC Spread	Expected EVA	Interpretation
Strong value case	Positive and durable	Positive and growing	Value is supported by genuine operating advantage.
Competitive fade case	Positive but narrowing	Positive but declining	Value depends on how quickly economic advantage fades.
Normal return case	Approximately zero	Near zero	Enterprise value should move toward invested capital.
Value destruction case	Negative	Negative	Growth can destroy value even if revenue expands.

This sensitivity structure also protects against a common error: changing the discount rate without changing the operating narrative. If risk increases, the required return may increase. If the business cannot raise operating returns or reduce capital intensity, EVA declines. The model should show that decline. Otherwise, the valuation is allowing risk to change in the denominator while leaving the operating surplus untouched in the numerator.

Appendix C. Minimum Requirements

The paper should satisfy minimum academic and technical requirements. First, the paper must make clear that its novelty is not the EVA formula itself, but the closed-loop causal interpretation of EVA within valuation. Second, it must define all variables consistently. Third, it must explain why cash flows are representations of economic surplus rather than independent sources of value. Fourth, it must show the reconciliation between EVA and DCF. Fifth, it must discuss the limits of the approach and avoid overstating the claim.

The paper should also maintain a professional academic tone. It should not present the framework as a rejection of conventional finance but as a strengthening of valuation discipline. DCF is retained as a necessary present-value representation. The paper's contribution is to place DCF inside an operating-value architecture that explains where cash flows come from and how they should be tested.

Requirement	How This Version Addresses It
Clear research claim	EVA is positioned as the economic engine; cash flow is positioned as timing representation.
Defined variables	Invested capital, ROIC, WACC, NOPLAT, EVA, reinvestment, and FCF are explicitly linked.
Formal logic	Equations show how EVA, capital charge, reinvestment, and FCF connect.
Scenario evidence	Controlled scenarios demonstrate the difference between value creation and cash-flow appearance.
Review usefulness	The paper offers protocols for analysts, boards, banks, and investors.
Academic restraint	The paper acknowledges estimation limits and the need for reliable operating classification.

Appendix D. Suggested Figure for

The final journal layout may include one conceptual figure titled 'Closed-Loop EVA-DCF Valuation Architecture'. The figure should show operating invested capital feeding ROIC and NOPLAT; NOPLAT feeding both EVA and free cash flow; EVA feeding intrinsic value through present value of economic profit; free cash flow feeding intrinsic value through DCF; and both routes converging to the same enterprise value under coherent assumptions. This figure would help readers understand that the framework is not a linear replacement of DCF, but a loop in which DCF and EVA are reconciled.

A second optional figure may show four valuation states: value creation, normal return, value destruction, and harvesting. The horizontal axis would represent the ROIC-WACC spread, and the vertical axis would represent reinvestment discipline. This figure would make visible the core claim that cash-flow appearance must be interpreted through operating spread and capital requirements.