CFROI

CASH FLOW RETURN ON INVESTMENT

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Cash Flow Return on Investment (CFROI)

Here's an academic elaboration on the concept of **Cash Flow Return on Investment (CFROI)**:

📘 Cash Flow Return on Investment (CFROI): A Strategic Financial Metric

1. Overview

Cash Flow Return on Investment (CFROI) is an advanced **economic profit-based performance measure** developed originally by **HOLT Value Associates**, now under **CFSB Holt, Chicago**. It serves as a key **valuation and performance framework** employed primarily by **institutional investors, portfolio managers, and corporate strategists**. CFROI is not just a simple return metric; it encapsulates a company's **ability to generate real cash flow returns over and above its inflation-adjusted cost of capital**, making it a powerful tool for long-term financial decision-making.

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2. CFROI Calculation: Principles and Nature

CFROI is typically **calculated annually** and is **benchmarked against an inflation-adjusted cost of capital** to assess whether a company is generating **value** or merely covering its capital costs. In essence:

$$\text{CFROI} = \frac{\text{Inflation-adjusted net cash flow}}{\text{Gross Investment}}$$

Although the precise formula is complex and depends on adjustments for depreciation, asset life, and inflation indexing, the core idea is to measure **real returns** rather than accounting profits.

📌 **Key Attributes:**

- **Inflation-adjusted**: Ensures comparability over time and across economies.
- **Cash-flow focused**: Emphasizes liquidity and operational efficiency.
- **Comparable across firms**: Independent of accounting conventions or asset structures.

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3. Strategic Advantages of CFROI

Unlike traditional measures such as ROI or ROE, **CFROI filters out accounting distortions** and focuses on **economic reality**. This makes it particularly valuable to:

- Institutional investors performing cross-border investment decisions.
- Corporate strategists evaluating internal capital allocations.
- Managers assessing value-creating capabilities at business unit levels.

It allows comparisons between firms with **different asset bases**, including those with high levels of intangible or non-depreciating assets.

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4. CFROI Explained Further: Practical Application

CFROI can be applied at the **corporate level**, **strategic business unit (SBU) level**, or even for **privately held companies**.

Here's how the approach works:

- **Estimate real internal rate of return (IRR)**: CFROI approximates the **real IRR** generated from a firm's **gross operating assets**.
- **Adjust for depreciation**: Both **depreciating and non-depreciating** assets are included, and adjustments are made for inflation.
- **Forecast net receipts**: A stream of **after-tax, inflation-adjusted cash flows** is projected based on current operations.
- **Discount to present**: Using this stream, **net present value (NPV)** of operations is calculated, representing firm value.

This makes CFROI similar in spirit to **Discounted Cash Flow (DCF)** models, but more standardized and comparative in nature.

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5. Empirical Foundation: CFROI Data Sources

CFSB Holt maintains an expansive **CFROI database**:

- Over **18,000 companies**
- More than **20 years** of historical data for U.S. companies
- Over **10 years** of data for international firms

This robust data foundation ensures reliability in both **benchmarking and predictive modeling**.

📊 **Case Illustration: Applying CFROI in Strategic Decision-Making**

Case: A Multinational Conglomerate Evaluating Business Units

A global firm (e.g., GE or Siemens) applies CFROI across its business segments:

- The **healthcare division** shows a CFROI of 12% against a cost of capital of 7% → **Value creating**
- The **appliance unit** shows a CFROI of 5% against a capital cost of 7% → **Value destroying**

Result: The firm divests the appliance division and reallocates capital to healthcare R&D, illustrating **value-driven decision-making**.

📚 Glossary

Term	Definition
CFROI	Cash Flow Return on Investment: a performance metric based on inflation-adjusted cash flows.
Economic Profit	Profit after accounting for the cost of capital.
Gross Investment	Total capital deployed, often adjusted for depreciation.
Real IRR	Inflation-adjusted internal rate of return.
NPV	Net Present Value of projected future cash flows discounted to today.
Cost of Capital	The minimum return expected by capital providers.

📖 Bibliography

- Madden, Bartley J. (2000). *CFROI Valuation: A Total System Approach to Valuing the Firm*. Butterworth-Heinemann.
- Rappaport, A. (1998). *Creating Shareholder Value: A Guide for Managers and Investors*. Free Press.
- Stewart, G. B. (1991). *The Quest for Value: A Guide for Senior Managers*. Harper Business.
- HOLT Value Associates. *CFROI Methodology Archives*.
- Damodaran, A. (2012). *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset*. Wiley.

Certainly, Prof. Rudy. Let us expand and deepen the explanation of **Cash Flow Return on Investment (CFROI)** in an academic and narrative format, while integrating real-world implications, strategic value, and its application for managers and investors:

💡 Understanding CFROI (Cash Flow Return on Investment): An Advanced Economic Profit Metric

🔍 1. Theoretical Foundation: Economic Reality Beyond Accounting

Traditional accounting-based metrics like ROI (Return on Investment), ROA (Return on Assets), or EPS (Earnings per Share) are often distorted by accounting conventions, non-cash items (like depreciation), or short-term volatility. In contrast, **CFROI focuses on the real, inflation-adjusted cash that a company generates**, which is the true lifeblood of a business.

CFROI was developed in the 1980s by **HOLT Value Associates** as part of the **economic profit family of valuation methods**, which include EVA (Economic Value Added) and MVA (Market Value Added). What distinguishes CFROI is its focus on **inflation-adjusted internal rate of return**, allowing comparisons across industries, asset types, and geographies.

🧮 2. How CFROI is Calculated: Core Components

Although proprietary models (such as HOLT's) use refined versions, the basic conceptual formula for CFROI is:

$$\text{CFROI} = \frac{\text{Gross Cash Flow}}{\text{Gross Investment Base}}$$

But in practice, CFROI involves:

- **Step 1: Estimating Real Cash Flows**
  - Cash flow is adjusted for:
    - Non-cash charges (e.g., depreciation)
    - Inflation
    - Maintenance Capex
- **Step 2: Estimating Asset Base**
  - The total operating capital employed, adjusted for inflation and asset age.
- **Step 3: Calculating Economic Depreciation**
  - Unlike accounting depreciation, this estimates the decline in asset value required to sustain real economic performance over time.
- **Step 4: Comparing to Hurdle Rate**
  - This is the **inflation-adjusted cost of capital**, which reflects investor expectations.

If CFROI > Hurdle Rate → the firm is **creating value**
If CFROI < Hurdle Rate → the firm is **destroying value**

🧠 3. Why CFROI Matters: Strategic Relevance

CFROI is **not just a number**, but a lens through which managers and investors can view:

Area	Strategic Insight
Capital Allocation	Helps decide which units or projects to invest in or divest from.
Performance Benchmarking	Compares company performance against peers or past performance over time.
M&A Decisions	Evaluates whether an acquisition creates or destroys real cash value.
Investor Communication	Provides transparency into real value creation, not just accounting profits.

💼 4. Illustrative Case: CFROI in Action

📍 Example: Diversified Conglomerate – PT Nusantara Capital Group

PT Nusantara operates in energy, construction, and digital services.

Business Unit	CFROI	Inflation-Adj. Cost of Capital	Value Status
Energy	13%	9%	✅ Value Creating
Construction	7%	9%	❌ Value Destroying
Digital	18%	10%	✅ Strong Value Creation

Management uses this data to:

- Reinvest in the Digital unit
- Restructure Construction or partner with higher-margin firms
- Raise investor confidence through clear strategic moves

🌐 5. Global Standardization: A Comparative Advantage

Because CFROI is:

- **Inflation-adjusted**
- **Cash-based**
- **Independent of accounting standards**

It is exceptionally useful for **cross-border analysis**, **multinational firms**, and **global investors**. For example, a U.S. and Indonesian firm can be compared using CFROI without worrying about differing depreciation schedules or tax codes.

📈 6. Relation to Other Frameworks

Metric	Focus	Strength	Weakness
CFROI	Real cash return	Inflation-adjusted, strategic	Complex to compute
EVA	Economic value	Cost of capital focus	Sensitive to accounting assumptions
ROIC	Return on capital	Simple and intuitive	Not inflation-adjusted
DCF	Value today	Highly detailed	Subjective projections

CFROI can complement these tools in a **performance dashboard** approach for corporate strategy.

🔍 7. Limitations and Critical Reflections

While CFROI is powerful, it has limitations:

- **Complexity**: Requires sophisticated data and modeling (e.g., asset life, maintenance capex).
- **Proprietary models**: Full application often uses HOLT or similar services.

- **Not suitable for startups**: Cash flows may be negative or inconsistent.

However, **its interpretive clarity is unparalleled** in mature or asset-intensive businesses.

🗂️ 8. CFROI in Indonesian Context

In the Indonesian corporate landscape, especially BUMNs and conglomerates with diversified units (e.g., Telkom Group, Astra, Pertamina), CFROI can be used to:

- Measure which business lines create economic profit
- Compare subsidiaries with different asset types
- Inform state decision-makers on strategic divestment or investment

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📚 Suggested Reading

1. **Madden, B. J.** (2000). *CFROI Valuation: A Total System Approach to Valuing the Firm*. Butterworth-Heinemann.
2. Rappaport, A. (1998). *Creating Shareholder Value*. Free Press.
3. Stewart, G.B. (1991). *The Quest for Value*. Harper Business.
4. HOLT Value Associates Archives.
5. Damodaran, A. (2012). *Investment Valuation*. Wiley.

📌 Summary Takeaway

CFROI is a cash-based, inflation-adjusted return metric that reveals whether a firm is truly creating shareholder value—making it one of the most powerful tools in modern strategic finance.

Comparison matrix - comparing CFROI with other strategies:

Metric	Focus	Strength	Weakness
CFROI	Real cash return (Inflation-adjusted)	Cross-border comparable, strategic insights	Requires complex data and modeling
EVA	Economic value after capital cost	Captures true economic profit	Sensitive to accounting assumptions
ROIC	Profitability on invested capital	Simple to compute and explain	Not inflation-adjusted
DCF	Present value of future cash flows	Detailed and theoretically sound	Heavily dependent on assumptions

Comparison Matrix of Value-Based Financial Metrics

Metric	Focus	Strength	Weakness
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Below is a **comprehensive elaboration** on **CFROI (Cash Flow Return on Investment)** covering its **strategic philosophy**, **technical depth**, **managerial use**, and **emerging relevance**, particularly in the era of data analytics, AI, and value-based governance.

🔍 Deep Dive: CFROI — Cash Flow Return on Investment

🧭 1. Strategic Philosophy Behind CFROI

At its core, **CFROI is grounded in the belief that cash — not accounting profit — is the true measure of a firm's value-creating power**.

Unlike income statement-based metrics (like net income or EBIT), **CFROI eliminates accounting distortions** and provides a view of the **economic performance** of a firm or business unit. This includes adjustments for:

- **Inflation**
- **Depreciation distortions**
- **Asset life variations**
- **Capital maintenance requirements**

This makes CFROI a **"real rate of return" metric** and allows a firm's **internal rate of return (IRR)** to be benchmarked against its cost of capital, revealing whether it is truly adding shareholder value.

🔬 2. Technical Mechanics and Underlying Concepts

While CFROI is often computed using proprietary software (e.g., HOLT Lens™), here's how it fundamentally works:

📌 Key Steps:

1. **Calculate gross cash flow:**
2. $$\text{Gross Cash Flow} = \text{EBITDA} - \text{Taxes}$$
   Adjust the asset base to gross investment:
   - Use inflation-indexed replacement cost of assets.
   - Eliminate accumulated depreciation distortions.
3. **Estimate economic depreciation** (based on useful life and replacement cost).
4. **CFROI formula:**
   $$\text{CFROI} = \frac{\text{Gross Cash Flow} - \text{Economic Depreciation}}{\text{Gross Investment}}$$
5. **Compare CFROI to the hurdle rate (Inflation-Adjusted WACC):**
   - If CFROI > WACC → **Value is created**
   - If CFROI < WACC → **Value is destroyed**

This makes CFROI **analogous to IRR**, but grounded in **real economic cash flows**.

🧠 3. Why CFROI Outperforms Traditional Metrics

Metric	Distortion Risk	Inflation Adjusted?	Suitable for Cross-Company Analysis?
Net Profit	High	❌	❌
ROA/ROE	Moderate	❌	❌
EVA	Medium	❌ (partly)	✔ (partly)

Metric	Distortion Risk	Inflation Adjusted?	Suitable for Cross-Company Analysis?
CFROI	Low	✔	✔

CFROI enables comparison between:

- **Different industries** (e.g., oil vs tech)
- **Different capital intensities** (e.g., manufacturing vs software)
- **Different geographies** (e.g., Indonesia vs Germany)

💼 4. Application in Strategic Management

CFROI is a powerful tool in capital budgeting, business performance evaluation, and M&A decision-making.

Examples:

- **Corporate Portfolio Management**:
  - Multibusiness firms like *GE*, *Astra Group*, or *Telkom Indonesia* use CFROI to allocate capital across divisions.
  - Low CFROI units may be divested or restructured.
- **Startup Valuation**:
  - Later-stage startups with significant CapEx can use CFROI to evaluate real returns after scaling.
- **M&A Scenarios**:
  - Use CFROI to test if acquisition targets will improve group-wide return profiles.

🌍 5. CFROI and Global Investing

In emerging markets like Indonesia where inflation, exchange rates, and accounting standards vary, **CFROI allows more reliable inter-market comparison** than nominal ROEs or ROICs.

Example:

- A firm in Indonesia with 20% nominal ROI but 15% inflation has a lower real return than a German firm with 10% ROI and 1% inflation.

CFROI adjusts for such macroeconomic discrepancies, helping **institutional investors (e.g., sovereign wealth funds or pension funds)** make informed decisions.

📊 6. CFROI vs Other Value-Based Tools

Attribute	CFROI	EVA	DCF	ROIC
Inflation Adjusted	✅	❌	✅	❌
Cash-based	✅	❌	✅	❌
Benchmarkable across companies	✅	⚠️	⚠️	❌
Complexity	High	Moderate	High	Low
Widely Used in Strategic Finance	✅	✅	✅	✅

🧠 7. CFROI in the AI and Big Data Era

In the modern digital context, **CFROI can be enhanced through machine learning models**:

- Forecasting cash flows using **AI-enhanced trend analysis**
- Automating asset base adjustments using **IoT data** (e.g., in manufacturing)
- Benchmarking using **cloud-based CFROI databases**

HOLT Lens™, a product from Credit Suisse, is one example of this hybrid approach: a proprietary analytics platform combining **CFROI analytics, economic depreciation, and value maps** for decision-makers.

📚 8. Concluding Thoughts: Why CFROI is Future-Ready

In a world driven by **value transparency**, **global investment flows**, and **digital performance tracking**, CFROI offers a resilient, robust, and realistic lens for evaluating what truly matters: **cash flows that sustain and grow enterprise value over time.**

Below is a structured section on **Reflection and Discussions** regarding **CFROI (Cash Flow Return on Investment)**, suitable for academic use, seminar discourse, or student-led analysis in graduate business or executive education programs.

🧠 Reflection and Discussions on CFROI

🔍 1. Rethinking Performance: Beyond Accounting Profits

Reflective Prompt:

Are traditional profit metrics like EBIT or net income truly reflective of a company's value creation? Why might investors and managers misinterpret financial health when using accounting-based measures?

Discussion Points:

- Traditional income statements can mask underlying inefficiencies.
- CFROI focuses on what truly matters: **cash generation** and **asset utilization**.
- Inflation distorts profit metrics in volatile economies (e.g., Indonesia, Argentina).

Classroom Activity:

- Compare two companies: one asset-light with high accounting profits vs. another with moderate profits but superior CFROI.

💡 2. Strategic Alignment: Is CFROI a Universal Metric?

Reflective Prompt:

Should all companies—regardless of size, industry, or age—adopt CFROI as a key metric?

Discussion Points:

- CFROI works best for firms with significant asset bases or long-term capital investment (e.g., infrastructure, manufacturing).
- Early-stage startups or IP-driven firms may not benefit immediately due to negative or volatile cash flows.
- Adjusting CFROI to reflect **intangible capital** (like R&D, brand equity) remains a challenge.

Debate Motion:

"CFROI should replace ROIC and ROE as the standard global benchmark for business performance."

🌎 3. CFROI in Emerging Markets: Bridging the Investment Confidence Gap

Reflective Prompt:

How can CFROI help attract foreign investment in emerging economies like Indonesia?

Discussion Points:

- By adjusting for inflation and accounting discrepancies, CFROI presents a **credible cross-border comparison**.
- Helps **reduce investor bias** against high-risk countries by revealing actual cash return dynamics.
- Enables better **capital allocation within state-owned enterprises (BUMN)**.

Case Study Analysis:

- Analyze a local company (e.g., **PT Wijaya Karya** or **Telkomsel**) using hypothetical CFROI estimates. Explore how CFROI impacts their appeal to international investors.

📊 4. Managerial Implications: Can CFROI Drive Better Behavior?

Reflective Prompt:

If a company ties executive bonuses to CFROI, how might it influence strategic decisions?

Discussion Points:

- Encourages **long-term thinking** and efficient use of capital.
- Reduces the temptation for **earnings management** or short-term cost-cutting.
- However, CFROI complexity may create **communication barriers** with line managers.

Discussion Activity:

- Design a **balanced scorecard** where CFROI is one of the performance indicators. What other metrics would you include to balance short vs. long-term goals?

🔁 5. CFROI in a Digital and ESG World

Reflective Prompt:

Can CFROI evolve to include environmental and social metrics in today's ESG-conscious landscape?

Discussion Points:

- Cash flow impact of ESG initiatives is often long-term and indirect.
- CFROI currently excludes **non-financial externalities**, but could evolve through:
    - Internal carbon pricing in cost base
    - ESG-adjusted hurdle rates

Futurist Thought Experiment:

Imagine an AI-powered platform that automatically computes ESG-adjusted CFROI in real-time. How would that transform capital markets?

📜 6. Guiding Questions for Deep Reflection

No Guiding Question

1. How does CFROI shift our understanding of profitability?
2. What are the potential risks of relying solely on CFROI?
3. How can CFROI be integrated with non-financial KPIs?
4. In what ways does CFROI support or contradict the principles of sustainability and stakeholder capitalism?
5. How might advances in AI and data analytics reshape how CFROI is calculated and applied?

🧠 Conclusion: Thought Catalyst

"CFROI reminds us that true value is not about what a company reports, but about what it returns—consistently, sustainably, and in real terms. In a world of data abundance, CFROI brings us back to cash—the clearest signal of enterprise health."

📘 Glossary of Key Terms – CFROI

Term	Definition
CFROI (Cash Flow Return on Investment)	A financial metric that measures the real internal rate of return a company generates from its invested capital, adjusted for inflation and based on actual cash flows.
Gross Cash Flow	Total cash inflow generated from operations before deducting capital expenditures or depreciation. Often approximated as EBITDA minus taxes.
Gross Investment	The original inflation-adjusted value of a firm's operating assets, before depreciation is accounted for.
Economic Depreciation	A non-accounting depreciation method that estimates the decline in asset value over time, reflecting replacement costs rather than historical cost.
Hurdle Rate	The minimum required rate of return (typically the **cost of capital**) that an investment or business unit must earn to be considered value-creating.
Real Internal Rate of Return (IRR)	The inflation-adjusted rate of return earned by a firm, accounting for the time value of money. CFROI is an approximation of this real IRR.

Term	Definition
WACC (Weighted Average Cost of Capital)	The average rate of return expected by all capital providers (debt and equity), used as the benchmark or hurdle rate in CFROI analysis.
Value Creation	A situation where a firm's CFROI exceeds its cost of capital (WACC), indicating the company is generating returns greater than investor expectations.
Value Destruction	When CFROI is less than the cost of capital, meaning the firm is eroding shareholder value despite generating accounting profits.
Inflation Adjustment	The process of recalculating financial values to reflect real purchasing power by removing the effects of inflation.
Operating Assets	Assets actively used in generating revenue and cash flow (e.g., machinery, real estate, inventory), excluding passive investments.
Maintenance CapEx	Capital expenditures required to maintain the current level of operations and asset functionality, separate from growth-related investments.
DCF (Discounted Cash Flow)	A valuation method that calculates the present value of projected future cash flows, typically using WACC as the discount rate.
EVA (Economic Value Added)	A performance metric that subtracts the cost of capital from the firm's net operating profit after taxes (NOPAT), reflecting economic profit.
ROIC (Return on Invested Capital)	A ratio that shows how efficiently a company generates profits from its invested capital; not inflation-adjusted.

Term	Definition
Proprietary Models	Specialized, often commercial tools or methodologies (e.g., HOLT Lens™) used to compute CFROI with advanced adjustments.
Cross-Border Comparison	The ability to compare financial performance across countries or regions, often requiring inflation and currency normalization—an advantage of CFROI.
Strategic Business Unit (SBU)	A semi-autonomous division within a corporation, often evaluated individually using metrics like CFROI for resource allocation.
HOLT Value Associates	The firm that developed the CFROI methodology; now part of Credit Suisse's valuation and performance analytics platform.

Below is the **Bibliography in English** related to **CFROI (Cash Flow Return on Investment)**, formatted academically and suitable for publication, thesis writing, or advanced teaching modules:

📚 Bibliography:

CFROI – Cash Flow Return on Investment

📘 Books

1. **Madden, B. J.** (2000). *CFROI Valuation: A Total System Approach to Valuing the Firm*. Boston: Butterworth-Heinemann.
   → The foundational book on the CFROI methodology, detailing calculation, application, and case studies of cash-based value creation.
2. **Rappaport, A.** (1998). *Creating Shareholder Value: A Guide for Managers and Investors* (Rev. ed.). New York: Free Press.
   → A classic in value-based management that sets the conceptual ground for CFROI and alternative value metrics.
3. **Stewart, G. B. III.** (1991). *The Quest for Value: A Guide for Senior Managers*. New York: Harper Business.
   → Introduces the principles of economic value added (EVA) and draws conceptual parallels with CFROI.
4. **Copeland, T. E., Koller, T., & Murrin, J.** (2000). *Valuation: Measuring and Managing the Value of Companies* (3rd ed.). New York: McKinsey & Company/Wiley.
   → Offers practical valuation techniques including DCF and CFROI within the context of corporate strategy and investor analysis.

📄 Journal Articles & Academic Papers

5. **Madden, B. J.** (1999). "Maximizing Shareholder Value and the Greater Good." *Journal of Applied Corporate Finance*, 11(3), 68–80.

→ Explores CFROI's broader implications beyond finance, linking value creation with long-term corporate purpose.

6. **Young, S. D., & O'Byrne, S. F.** (2001). *EVA and Value-Based Management: A Practical Guide to Implementation*. New York: McGraw-Hill.
   → Although focused on EVA, this book contrasts it with CFROI, helping readers understand the pros and cons of each value metric.
7. **Koller, T., Goedhart, M., & Wessels, D.** (2010). "What is value-based management?" *McKinsey on Finance*, Issue 36.
   → Discusses the principles of VBM (Value-Based Management), including CFROI's role as a performance measure.

🌐 Online and Practitioner Resources

8. **Credit Suisse HOLT™ Platform** – https://www.credit-suisse.com
   → A professional analytics service offering CFROI benchmarking for thousands of global firms, widely used in investment banking and equity research.
9. **Investopedia.** (n.d.). "Cash Flow Return on Investment (CFROI)." Retrieved from https://www.investopedia.com/terms/c/cfroi.asp
   → Provides a simplified introduction to CFROI for general finance readers.
10. **12Manage.** (n.d.). "CFROI (Cash Flow Return on Investment)." Retrieved from https://www.12manage.com/methods_cfroi.html
    → A business learning portal offering an executive summary of CFROI concepts and applications.

📊 Additional Thematic Resources

11. **Damodaran, A.** (2012). *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset* (3rd ed.). New York: Wiley.
→ Although not CFROI-specific, this textbook is essential for contextualizing cash-flow-based valuation methods.

12. **Higgins, R. C.** (2007). *Analysis for Financial Management* (8th ed.). New York: McGraw-Hill.
→ Includes practical approaches to cash flow analysis, WACC, and investment return frameworks.

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ChatGPT 4o (2025). Access date: 27 June 2025. Author's account. https://chatgpt.com/c/685e0d5d-1490-8013-9d16-e1105c430ad8