CIO Office Insights

الجزيرة كابيتال
ALJAZIRA CAPITAL الجزيرة للأسواق المالية

IRR: Understanding The Whole Story

November 2025

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KEY TAKEAWAYS

- IRR is the most cited metrics by LPs but is also one of the most misunderstood.
- Timing of cash flows, reinvestment assumptions, and short-term changes in performance can skew IRR.
- Additional metrics like MOIC, DPI/TVPI, MIRR, PME and Direct Alpha can provide a holistic performance picture.
- Using additional metrics in combination with IRR helps bring out meaningful insights into the performance of alternative investments.

THE POPULARITY OF IRR

For decades, Internal Rate of Return (IRR) has been the cornerstone metric for evaluating private market investments. Cambridge Associates notes that IRR's strength lies in its ability to capture the timing of both capital deployments and distributions, offering investors a standardized way to compare performance across funds, strategies, and vintages. Its familiarity and versatility have made it one of the most widely accepted tools in the industry.

This reliance is echoed in PitchBook's Annual Institutional Investor Survey, which found that 81% of limited partners (LPs) use IRR as their primary performance measure. PitchBook even refers to IRR as the community's "go-to" benchmark, underscoring how firmly it is embedded in private markets practice.

While there is increasing recognition that additional metrics such as Multiple on Invested Capital (MOIC) and Distributions to Paid-In Capital (DPI) provide additional insights into a fund's ultimate value creation, IRR continues to dominate. The choice of a metric, however, often depends on the nature of cash flows. For example, mutual fund like structures with more regular inflows and outflows are typically better evaluated using NAV based or total return measures, whereas private market investments with irregular cash flows are more effectively assessed using IRR and related metrics. IRR remains the primary lens through which investors assess success, highlighting not only its practical utility but also its role as the common language of private market performance.

INTERNAL RATE OF RETURN (IRR): A REFRESHER

- Represents the annualized rate of return, considering the timing and size of all cash flows.
- Net IRR reflects the return received by investors after deducting fees and costs.
- It is the discount rate at which the Net Present Value (NPV) of a fund's cash inflows equals its cash outflows.

Year	1	2	3	4	5	6	7
Net cash flow	(510,000)	(510,000)	40,000	70,000	150,000	290,000	1,850,152

IRR =18.46% for our illustration

$$\text{Net Present Value} = \frac{\text{Net Cash Flow}_1}{(1+\text{IRR})^1} + \frac{\text{Net Cash Flow}_2}{(1+\text{IRR})^2} + \cdots + \frac{\text{Net Cash Flow}_t}{(1+\text{IRR})^t}$$

IRR IS NOT TWR OR ROI

Metric	Measures	Time Sensitivity	Common Use Case
Internal Rate of Return (IRR)	Annualized rate that sets Net Present Value to 0.	✓	Evaluating investments with multiple cash flows.
Time-Weighted Return (TWR)	Return that eliminates the impact of cash inflows/outflows, reflecting manager's performance.	✗	Comparing performance across funds or managers, irrespective of timing of investor cash flows.
Return on Investment (ROI)	Total % return on amount invested.	✗	Quick profitability measure.

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CHALLENGES WITH IRR

Illustration: To understand the challenges with IRR, let's consider a hypothetical investor portfolio consisting of 4 funds.

	Net cash flow					Performance	
Year	1	2	3	4	5	Total Cash inflow	IRR
Fund A	(100,000)	120,000	30,000	30,000	20,000	200,000	56.6%
Fund B	(100,000)	50,000	50,000	50,000	50,000	200,000	34.9%
Fund C	(100,000)	30,000	40,000	60,000	70,000	200,000	29.3%
Fund D	(100,000)	-	-	-	200,000	200,000	18.9%

INSIGHT

IRR assumes that all cash flows generated by the investment are reinvested at the same rate as the IRR itself, which can be unrealistic.

- **Fund A:** Big chunk at the start, then smaller amounts later.
- **Fund B:** Even distribution each year.
- **Fund C:** Staggered payouts, weighted toward later years.
- **Fund D:** Gave nothing throughout the term except for a large chunk in the last year.

Reading in between the lines for **Fund A**: An investor commits $100,000 and receives $120,000 back in the very first year, followed by smaller payouts in later years. On paper, the IRR shoots above 50% a figure that looks impressive. But once that $120,000 leaves the fund, it stops compounding. The investor must reinvest it elsewhere, likely at lower returns, meaning the actual gain on the original capital is far less than the IRR suggests. In essence, IRR rewards early distributions but doesn't always capture the true, long-term return on invested capital.

WHY THIS MATTERS?

Real money isn't earned in percentages.

An IRR that looks spectacular on paper can still represent a poor real-world investment if the cash flows are small, delayed, or never returned in full.

For example, consider a $50k commitment that grows to $75k over 5 years showing an IRR of a 28.1% but turns a mere $25k gain over five years. In absolute dollar terms, it's hardly the "high-performance" story as the IRR percentage suggests.

Fundraising pitches love "shiny numbers."

In private equity and venture capital, IRR often looks attractive in a pitch deck, but on its own it can hide important details like the timing of cash flows, the actual dollar gains, and the strength of returns. Without these factors, investors may misjudge the real performance.

Misallocation of capital.

When decision-makers rely too heavily on IRR, they can choose investments with fast but low-dollar returns over slower, larger opportunities. This can hurt portfolio-level performance, especially for LPs who care about compounding large sums, not just hitting attractive internal rates.

Distorted Incentives for Management Teams

Management may chase quick exits or high-IRR deals instead of maximizing long-term equity value, leading to suboptimal portfolio growth.

LP Trust and Reputation Risk

Inflated returns presented through IRR without actual cash-based returns erode Limited Partners' confidence. Once credibility is lost, future fundraising becomes exponentially harder, regardless of portfolio's actual performance.

ADDITIONAL METRICS

1 Multiple on Invested Capital (MOIC)

- MOIC measures the total value generated relative to the capital invested, without considering time. It's a simple ratio: total value / invested capital. While it ignores cash flow timing, it clearly shows absolute capital growth, making it a quick gauge of overall investment success.
- **Example: Invested:** $10M; **Current value (realized + unrealized):** $25M; **MOIC** = 25 / 10 = 2.5x *(Every $1 invested is now worth $2.50)*

2 Distributions to Paid-In / Total Value to Paid-In (DPI / TVPI)

- DPI shows the actual cash returned to investors relative to capital invested, while TVPI adds unrealized gains to that picture. In this context, Residual Value to Paid-In (RVPI) specifically measures the unrealized value that remains in the portfolio relative to invested capital. Together, these three ratios provide a complete view of performance: DPI highlights realized cash returns, RVPI reflects the remaining unrealized value, and TVPI combines both to show total value creation. MOIC, DPI, and TVPI are not return metrics and should not be used in isolation; they should always be assessed alongside IRR to capture both absolute value creation and time-based performance. Additionally, MOIC and TVPI are often used interchangeably.
- **Example: Invested:** $10M; **Distributions to date:** $12M; DPI = 12 / 10 = 1.2x **Remaining NAV:** $8M; **RVPI** = 8 / 10 = 0.8x; **TVPI** = (12 + 8) / 10 = 2.0x

3 Modified IRR (MIRR) & Time-Weighted Return (TWR)

- MIRR improves on IRR by assuming reinvestment at a more realistic external rate rather than at the IRR itself, reducing the risk of overstating returns in cases with large early cash flows. Alongside this, both MIRR and TWR address key flaws of traditional IRR: MIRR corrects for unrealistic reinvestment assumptions, while TWR removes the distortions caused by the timing of investor contributions and withdrawals. That said, each has its limitations—MIRR relies on a subjective choice of reinvestment rate, which can vary by investor, while TWR does not fully capture the impact of irregular cash flow patterns.
- **Example (MIRR): Invested:** $10M invested over 3 years, with interim cash flows reinvested at the cost of capital (8%) rather than at the IRR; MIRR = 14.4% versus IRR = 17.5%.
- **Example (TWR):** If an investor places $1M in a fund that grows by 20% in the first year and then adds another $1M before the fund declines by 10% in the second year, the IRR is –0.7%, whereas the **TWR** shows a gain of 8% in total, equivalent to about 3.9% annualized.

4 Market Benchmarking Metrics (Public Market Equivalent & Direct Alpha)

- PME compares private investment performance to a relevant public market index, adjusting for cash flow timing. It answers the key question: "Did we beat the market?". PME helps investors judge whether private market risk and illiquidity produced excess value over public equities. Direct Alpha translates PME results into an annualized excess return figure over the public benchmark. Instead of just saying "we outperformed," it quantifies by how much per year.
- **Example: Invested:** $10M over time with distributions back over 5 years; *Simulated investment in S&P Listed Private Equity Index with same cash flows grows to $25M; Private investment grows to $30M* **PME** = 30 / 25 = 1.2 (20% outperformance vs public benchmark).
- **PME result:** *Private = 1.20x vs Public = 1.00x over 5 years; while* **Direct Alpha** = (1.2)^(1/5) – 1 = 3.7%
- This means the private investment outperformed the public market by 3.7% per year.

THE SYNERGY

Metrics	Synergy	Decision Making Process	Example
MOIC	IRR shows the annualized return speed; while MOIC shows total value multiple.	Distinguishes between a high IRR from a quick small exit vs. sustained compounding that yields a higher total value.	• **Fund P:** IRR = 25%, MOIC = 1.3× → Fast exit but small total gain. • **Fund Q:** IRR = 18%, MOIC = 3× → Lower speed but much higher total profit.
TVPI/DPI	IRR gives annual return; TVPI shows total value (realized + unrealized); DPI shows realized cash back.	Identifies whether the IRR is based on real cash flows or just paper gains.	• **Fund R:** IRR = 20%, TVPI = 2×, DPI = 0.5× → Most gains unrealized; execution risk remains. • **Fund S:** IRR = 17%, DPI = 1.8× → Lower IRR but almost all gains realized.
RVPI	IRR shows speed; RVPI (Residual Value to Paid-In) shows unrealized portfolio value still at work.	Assesses how much of the IRR depends on unsold assets (and thus subject to market volatility).	• **Fund T:** IRR = 22%, RVPI = 1.5× → Large unrealized exposure, risk if valuations fall. • **Fund U:** IRR = 15%, RVPI = 0.3× → Mostly realized, safer profile.
MIRR	IRR assumes reinvestment at IRR rate; MIRR adjusts for more realistic reinvestment rate.	Highlights whether the IRR is inflated by unrealistic reinvestment assumptions.	• **Fund V:** IRR = 25%, MIRR = 18% → IRR overstates return potential. • **Fund W:** IRR = 17%, MIRR = 16% → IRR more reliable.
TWR	IRR is cash-flow sensitive; TWR adjusts for timing effects and shows the fund's true compounded performance.	Reveals manager skill/performance by capturing portfolio growth regardless of investor contributions/withdrawals.	• **Fund X:** IRR = –0.7%, TWR = 3.9% → Cash-flow timing hurts IRR, but the fund compounded positively.

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Head Office: King Fahad Road, P.O. Box: 20438, Riyadh 11455, Saudi Arabia ،Tel: 011 2157000 - Fax: 011 2256068

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