CAPITAL DYNAMICS
INSIGHTS

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PRIVATE EQUITY CO-INVESTMENT FUNDS – A COMPARISON OF RISKS AND RETURNS

INTRODUCTION

This empirical study takes a deeper look at performance and risk characteristics of private equity co-investment funds that have been available to institutional investors. It uses data from Preqin, a leading provider of intelligence on the alternative assets industry. Preqin refers to these private equity (PE) co-investment funds as multi-manager funds because they invest in transactions led by a number of different private equity managers (also referred to as sponsors) versus single manager (or single sponsor) funds that invest in transactions led by the same sponsor. A co-investment opportunity arises when a private equity sponsor wishes to acquire a company that requires more capital than the sponsor can prudently provide from their fund alone. The sponsor will typically reach out to their limited partners to make up the shortfall, who will then become equity co-investors in the company alongside the sponsor.

A number of private equity asset managers, who advise their clients on the selection of single-sponsor PE funds also have the skills to execute quickly on these potentially attractive co-investment

> **"THIS STUDY INDICATES THAT MULTI-MANAGER PRIVATE EQUITY CO-INVESTMENT FUNDS GENERALLY OUTPERFORM SINGLE-MANAGER PRIMARY PE FUNDS, WHILE DEMONSTRATING MORE ATTRACTIVE RISK CHARACTERISTICS ALONG WITH OTHER ADVANTAGES."**

opportunities offered to LPs by PE sponsors. This study takes a closer look at these asset managers' co-investment funds, by analyzing performance data for 98 multi-manager co-investment funds from 1998-2016 vintage years that invest in buyout, growth and turnaround deals. This information was then compared to a proprietary dataset of 2,045 single-manager buyout, growth and turnaround-focused private equity funds over the same period.

The results indicate that multi-manager private equity co-investment funds generally outperform single-manager primary funds, while demonstrating more attractive risk characteristics along with other advantages.

CO-INVESTMENT PERFORMANCE

While some private equity investors have held the view that co-investments suffered from adverse selection (*i.e.* selection bias), recent comprehensive academic research has shown this to be a myth. In their study, Braun, Schemmerl and Jenkinson analysed over 1,000 co-investments across 13,000 private equity transactions between 1981 and 2011[1].

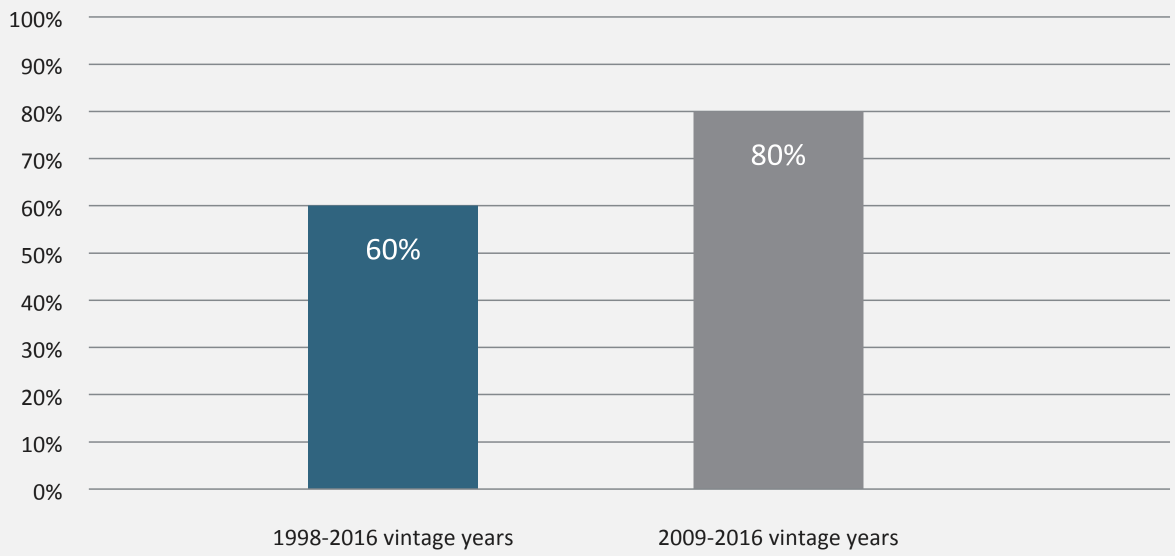
Their results suggested that "the like-for-like comparison between co-investments and other deals [not offered for co-investment] found no evidence of selection bias, either positive or negative." They also concluded that portfolios of co-investments could achieve better returns due to their lower costs[2]: "...We show that relatively small [*simulated*] portfolios of 10 buy-out [co-investment] deals on average outperform [conventional] fund returns, net of fees and costs."

Given the conclusion of the Braun, Schemmerl and Jenkinson study, we wanted to understand how the performance of *actual* co-investment funds compared to single-sponsor PE funds of the same vintage. The results of our analysis of the Preqin data, as illustrated in **figures 1 and 2**, shows that the majority of co-investment funds outperformed primary PE funds, on both a median net IRR and TVPI basis, using 1998-2016 vintage years. This outperformance is even greater using 2009-2016 vintage years, where 4 out of 5 co-investment funds outperformed primary PE funds on a net IRR basis.

> **"THE RESULTS OF OUR ANALYSIS OF PREQIN DATA SHOW THAT THE MAJORITY OF CO-INVESTMENT FUNDS OUTPERFORMED PRIMARY PE FUNDS, ON BOTH A MEDIAN NET IRR AND TVPI BASIS."**

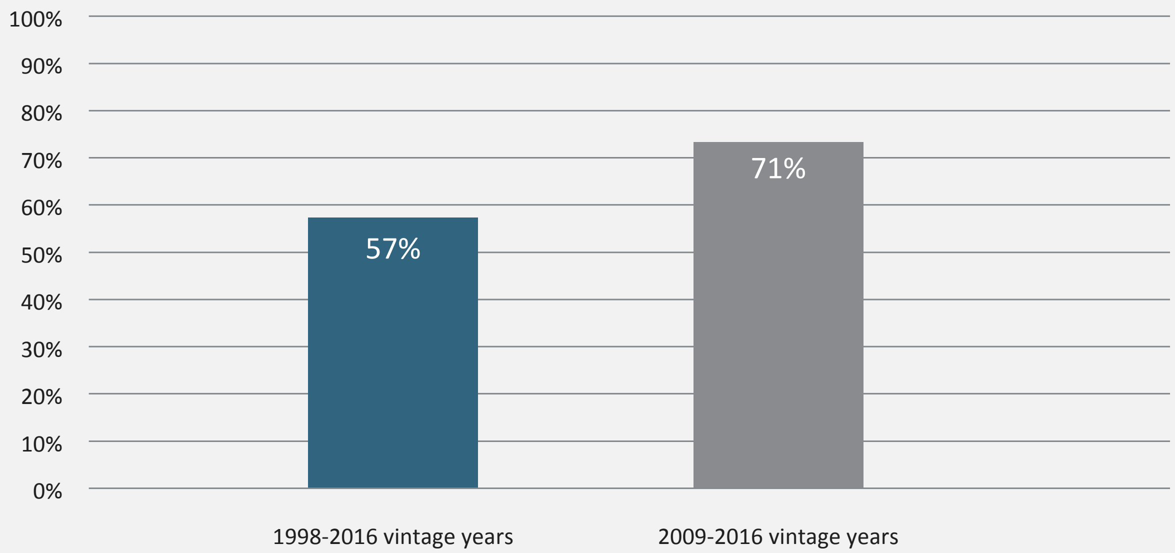
[1] Adverse Selection and the Performance of Private Equity Co-Investments, Braun/Jenkinson/Schemmerl, October 2018.
[2] The annual management fees and carried interests of a private equity co-investment fund are generally set at a level, which is approximately half that applicable to a typical private equity fund active in the mid-market.

FIGURE 1: PROPORTION OF CO-INVESTMENT FUNDS OUTPERFORMING PRIMARY PRIVATE EQUITY FUNDS (BASED ON MEDIAN NET IRR)



Source: Capital Dynamics

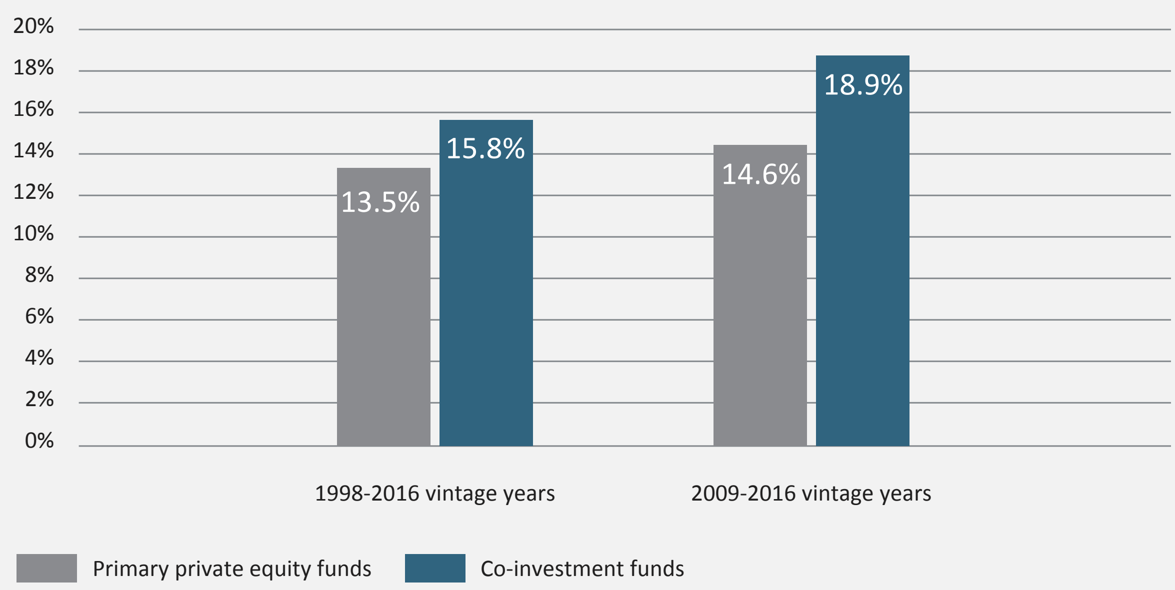
FIGURE 2: PROPORTION OF CO-INVESTMENT FUNDS OUTPERFORMING PRIMARY PRIVATE EQUITY FUNDS (BASED ON MEDIAN NET TVPI)



Source: Capital Dynamics

In terms of actual median net IRRs for the entire sample, co-investment funds with 1998-2016 vintage years have returned 15.8% versus 13.5%, while co-investment funds with 2009-16 vintage years have achieved 18.9% versus 14.6% for primary PE funds (**see figure 3**).

FIGURE 3: PERFORMANCE OF CO-INVESTMENT FUNDS VERSUS PRIMARY PRIVATE EQUITY FUNDS (MEDIAN NET IRR)



Source: Capital Dynamics

Average outperformance is attributable to the lower overall costs of a co-investment fund for an investor compared to those of a conventional private equity fund. Co-investment funds typically charge a 1% annual management fee on committed capital and take 10% of net gains in the portfolio as a performance fee. This is approximately half of what a typical buyout sponsor charges, and therefore, has a significant impact on the gross-to-net yield erosion, particularly on higher performing funds. **Figure 4** shows this impact based on the *actual* realized returns from Capital Dynamics' co-investment business[3].

The impact of typical private equity fees and carried interest can reduce a gross return by over 7% and the multiple on invested capital by almost 0.6x for a high-performing fund. Co-investment funds typically reduce these costs by half, which aids performance. However, outperformance is likely to be a combination of the favorable fee structure, and the co-investment manager's selection skills and ability to construct a high-quality and appropriately-diversified portfolio. Another feature may be the presence of two levels of due diligence on co-investments – that of the lead sponsor and the additional work done by the co-investment manager.

[3] Track record data for the mature portfolio are just an illustration to highlight the impact of management fees, carried interest and fund expenses. Past performance is not an indication of future results. Actual returns could vary significantly. A "gross return" means it does not reflect management fees or fund expenses.

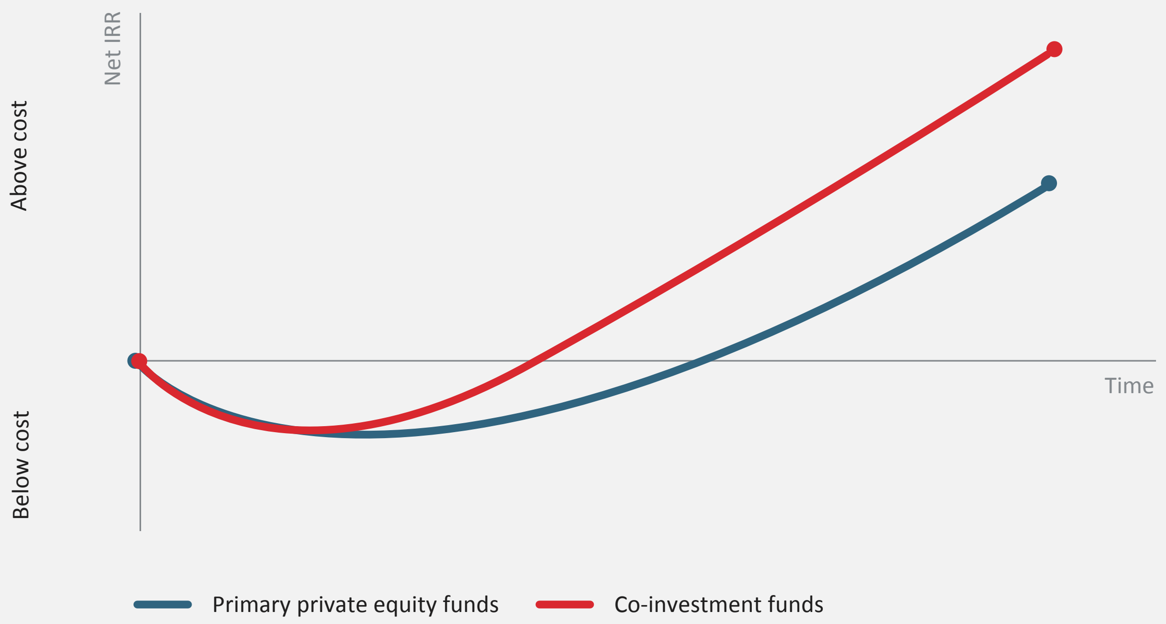
FIGURE 4: GROSS-TO-NET YIELD SPREADS: CO-INVESTMENTS FUNDS VS. PRIMARY PRIVATE EQUITY FUNDS

		Illustrative Net Return	
	Actual Gross Return	Typical Co-investment Fund Terms (1% Mgt. Fee & 10% Carry)	Typical Primary Private Equity Fund Terms (2% Mgt. Fee & 20% Carry)
IRR	29.7%	25.6%	22.6%
TVPI	2.73x	2.40x	2.17x

Source: Capital Dynamics

In addition, the lower fees charged by co-investment funds result in a shorter and shallower "J-curve" than primary private equity funds. The J-curve arises from the impact of upfront costs and expenses as well as annual fees in the early years of the funds' life, which often take the net asset value of the funds into negative territory for a period of time, before increasing equity valuations and realizations of the investments made return the net asset value to above cost. **Figure 5** illustrates the impact of the lower fees associated with co-investment funds on the J-curve.

FIGURE 5: IMPACT OF LOWER FEES OF CO-INVESTMENT FUNDS ON J-CURVE PERFORMANCE



Source: Capital Dynamics

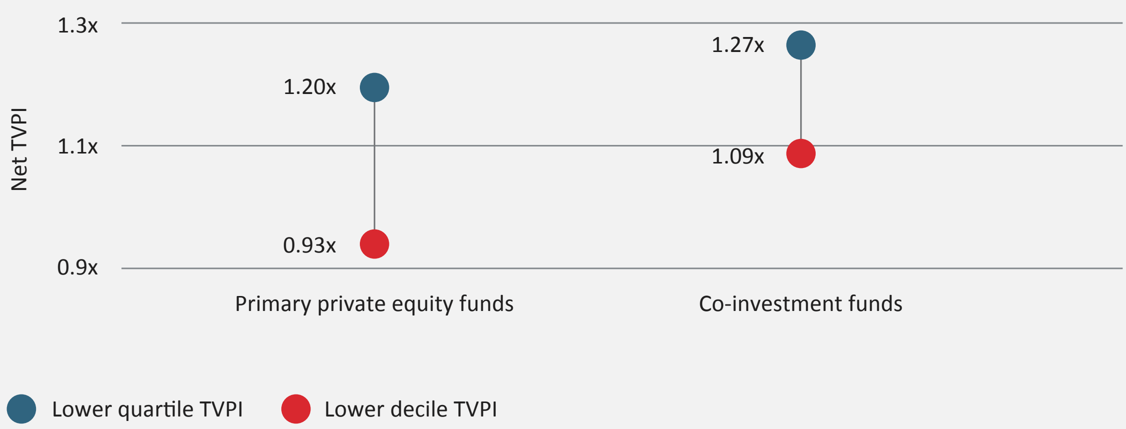
RISK PROFILE OF CO-INVESTMENT FUNDS

Unlike certain primary PE funds which may have a sector or country focus, co-investment funds aim to select deals from a broad range of sectors and geographies. To assess the risk profile of co-investment funds versus primary PE funds, we looked at three risk attributes using the data set of 98 multi-manager co-investment funds and 2,045 single-manager buyout, growth and turnaround-focused private equity funds with vintage years between 1998 and 2016. These risk characteristics include:

1. **DOWNSIDE RISK MITIGATION**
2. **LOSS RATIO**
3. **RETURN DISTRIBUTION**

The results demonstrate that not only do the co-investment funds outperform their primary peer group but they exhibit more attractive risk charateristics. This is illustrated in **figure 6** below using the spread between the lower quartile and lower decile ratio of Total Value to Paid-in Capital ("TVPI") as a measure of risk. The bottom decile of co-investment funds returned 0.16x more money on invested capital and mitigated risk by 17% versus the equivalent primary private equity funds. This improved risk mitigation is attributable to a greater diversification across sectors, geographies, and most importantly, the additional level of diversification inherent in a co-investment fund strategy, namely manager diversification. Our study, "Co-investments: Intelligent Portfolio Construction over Market Cycles" from June 2019, illustrated that Capital Dynamics' recent co-investment funds mitigate risk to an even greater extent – by approximately 60% versus an equivalent buyout fund selected at random from our database.

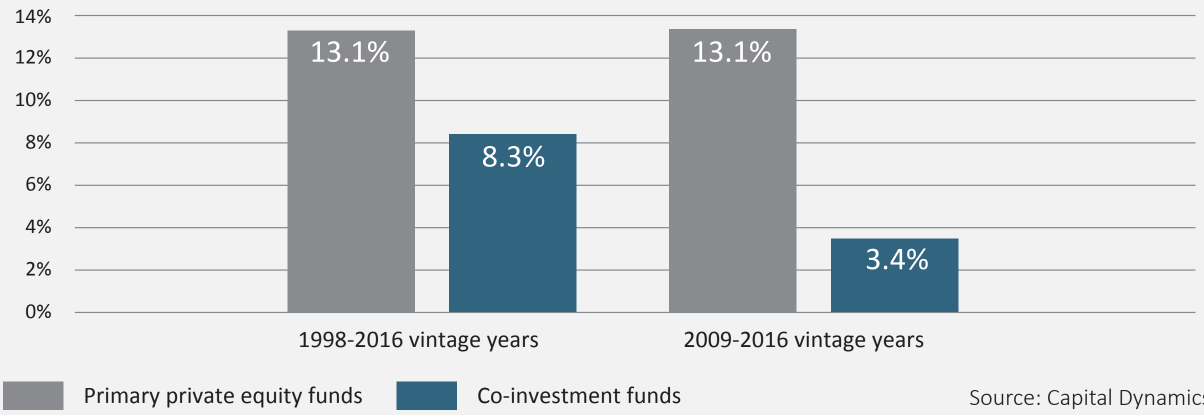
FIGURE 6: DOWNSIDE RISK MITIGATION



Source: Capital Dynamics

The loss rate analysis demonstrated in **figure 7** below shows the proportion of the funds in each group that returned less than 100% of the capital invested. Of those funds that have lost money, co-investment funds show significantly lower loss rates. The maximum, median, and average (mean) loss were all lower in the case of co-investment funds.

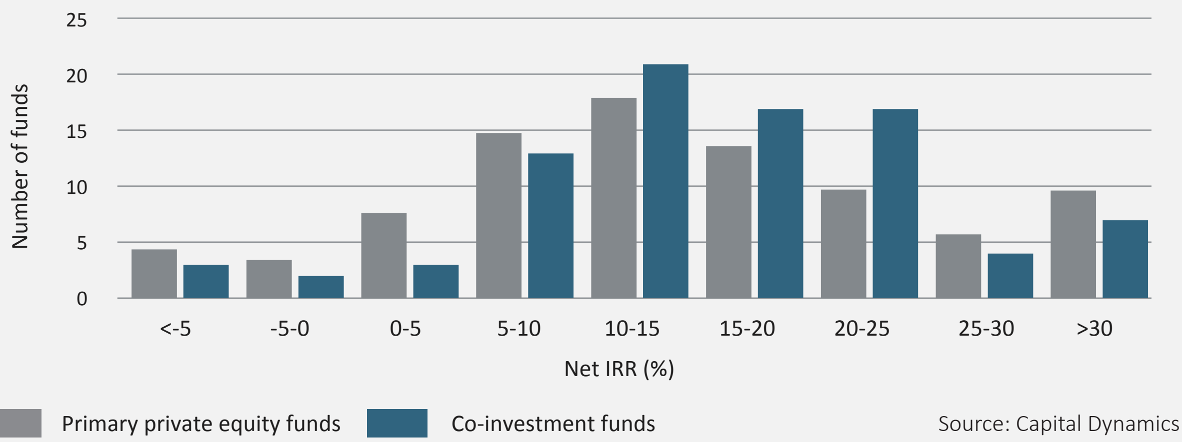
FIGURE 7: PROPORTION OF LOSS-MAKING FUNDS (TVPI < 1)



Source: Capital Dynamics

Finally, co-investment funds have a more favorable risk-adjusted return profile than primary private equity funds. This is demonstrated in **figure 8**, which illustrates that the return distribution of co-investment funds is more concentrated when compared to single-sponsor private equity funds. While co-investment funds may be less likely to achieve internal rates of return in excess of 25%, they are much more likely to deliver strong returns between 10% and 25% and far less likely to return zero or lose money. In part, the improved risk-adjusted return (with fewer outliers in either direction) likely results from the second layer of due diligence and underwriting performed by the co-investment fund manager. Further, co-investment funds appear to benefit from sponsor diversification. Co-investment funds will typically have one or two investments from particularly strong-performing managers for that vintage year, but also one or two from poorer performing funds. Hence, their returns are more concentrated in the middle of the distribution than primary private equity funds.

FIGURE 8: HISTOGRAM OF NET IRRs FOR CO-INVESTMENT FUNDS VERSUS PRIMARY PRIVATE EQUITY FUNDS[4]



Source: Capital Dynamics

[4]For comparative reasons, the number of primary private equity funds was scaled down in proportion to the sample size of co-investment funds.

CONCLUSION

Capital Dynamics' research suggests that, in general, private equity co-investment funds outperform single-manager primary PE funds, while demonstrating more attractive risk characteristics. This outperformance includes an optimized risk-adjusted return profile, lower risk-of-loss rates, and both a shorter and shallower "J-curve". Outperformance is probably attributable to the lower overall costs of a co-investment fund as well as the co-investment fund manager's selection skills and the presence of two levels of due diligence on each transaction – that of the lead sponsor as well as that of the co-investment manager. Downside protection results from enhanced portfolio diversification across geography, sector, industry, vintage year and lead investors/sponsor. As such, Capital Dynamics believes that there are substantial benefits to including co-investment funds as part of a well-balanced portfolio of private equity funds.

"CAPITAL DYNAMICS BELIEVES THAT THERE ARE SUBSTANTIAL BENEFITS TO INCLUDING CO-INVESTMENT FUNDS AS PART OF A WELL-BALANCED PORTFOLIO OF PE FUNDS, DUE TO THEIR RELATIVE OUTPERFORMANCE AND MORE ATTRACTIVE RISK CHARACTERISTICS VERSUS SINGLE-MANAGER PRIMARY PE FUNDS."

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ABOUT CAPITAL DYNAMICS

Capital Dynamics is an independent global asset management firm focusing on private assets including private equity, private credit, clean energy infrastructure and clean energy infrastructure credit. Capital Dynamics offers a diversified range of tailored offerings and customized solutions for a broad, global client base, including corporations, family offices, foundations and endowments, high net worth individuals, pension funds and others. The firm oversees more than USD 16 billion in assets under management and advisement[5]. Capital Dynamics is distinguished by its deep and sustained partnerships with clients, a culture that attracts entrepreneurial thought leaders and a commitment to providing innovative ideas and solutions for its clients.

Founded in 1999 and headquartered in Zug, Switzerland, Capital Dynamics employs approximately 160 professionals globally and maintains offices in New York, London, Tokyo, Hong Kong, San Francisco, Munich, Milan, Birmingham, Dubai and Seoul.

In 2019, Capital Dynamics was awarded the highest corporate rating (A+) from the UN-supported Principles for Responsible Investment, while the firm's clean energy infrastructure platform received top rankings from GRESB (the ESG benchmark for real assets) for commitment to sustainability.

[5]As of December 31, 2019

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