



Is Private Equity Really Illiquid?

- Philippe Jost, Vice President and Mauro Pfister, Senior Director, Capital Dynamics

Private equity funds generally have a contractual initial life of 10 years – most often in the form of a limited partnership or equivalent vehicle. The first 5-6 years correspond to the fund's investment period, during which the fund manager can draw down capital committed by investors. Thereafter, the manager can generally no longer draw down unused committed capital other than for fees, expenses and follow-on investments. As soon as investments are realized (underlying companies are sold or liquidated after going public), the capital and profits are distributed to investors. The timing of the drawdowns and distributions is completely out of the control of the limited partners. In addition, there is no way of liquidating the partnership interests without a transaction on the secondary market.

This illiquidity is one of the major perceived risks when considering private equity as an asset class in which to invest. Certainly, the risk of loss associated with selling partnership interests on the secondary market at a discount on the reported NAV is high. By means of historical simulations, this article shows that despite being illiquid, private equity funds are self-liquidating i.e., after a certain number of years, the net cash flow is positive while the net asset value decreases.

An investor with a mature portfolio can consider its private equity portfolio as partially liquid. Capital Dynamics has extensive experience in using simulations to help investors estimate the average future capital calls and distributions as well as understand the risk associated with the uncontrollable nature of private equity cash flows.

Self-Liquidation of Private Equity

For our analysis, we simulate a portfolio of a fictitious investor who commits to private equity regularly and in a diversified

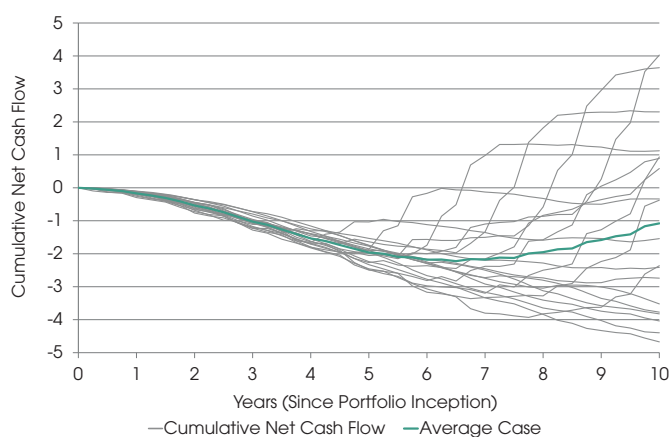
manner. Therefore, it makes sense to use pooled cash flows per vintage year to approximate the private equity portfolio; the Preqin¹ database has been used for this purpose. Fig. 1 shows the evolution of the net cash flow of portfolios committing \$1mn per year during 10 years. Each black line represents the quarterly net cash flow evolution of a portfolio with different starting vintage years ranging from 1986 to 2005. The green line represents the average case. Typically, the investor needs less than \$4mn to finance this investment strategy and after 7-8 years the portfolio starts to be self-financing i.e. the distributions are larger than the capital calls. Some scenarios are self-financing in later stages and also have higher financing costs.

This article focuses on the period that is not displayed in the previous figure. What happens to the NAV and to the net cash flow if an investor suddenly decides or is forced (for any given reason) to stop committing to private equity? Considering the situation depicted in the previous graph, we expect the portfolios to be self-financing after 7-8 years.

Fig. 2 shows that after investing in private equity for 10 years, the portfolio typically generates sufficient cash to be self-financing for the rest of its life. The asset base slightly increases during the first 1-2 years because the last committed funds are still building exposure and then steadily decreases thereafter. The annual distributed cash is close to 20% of the starting NAV. On average, the portfolio pays out 100% of its starting NAV after 4-5 years. These numbers precisely explain what we would like to highlight about private equity: despite being illiquid, it is self-liquidating.

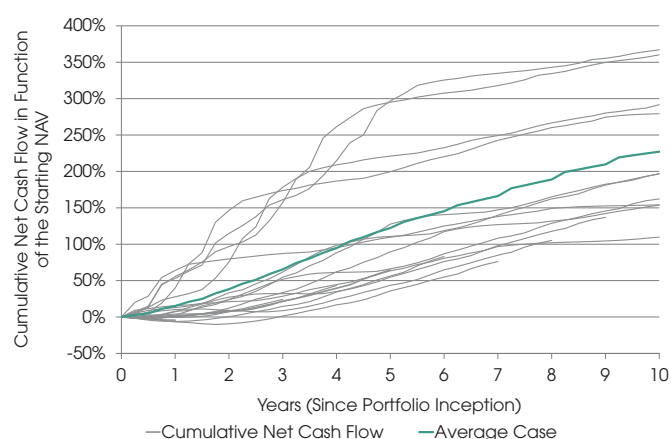
The number of years during which the investor commits to private equity has a profound impact on the cash flow profile during the liquidation period. For a small number of commitment years, most of the funds are still in the investment phase and are

Fig. 1: Net Cash Flow of Private Equity Portfolios Investing Regularly across 10 Years



The green line represents the average situation.
Source: Capital Dynamics calculations based on Preqin data.

Fig. 2: Net Cash Flow of Private Equity Portfolios after Having Invested Regularly across 10 Years



The starting vintage is 1986 and the last one is 2004. For the last considered vintage, the figure only shows one year of data.
Source: Capital Dynamics calculations based on Preqin data.

¹Quarterly private equity cash flow and NAV from the Preqin database as of October 2015. All data is for an LP with a 10,000,000 commitment. Data has been aggregated by vintage years and normalized. Real estate and infrastructure funds have not been taken into account.



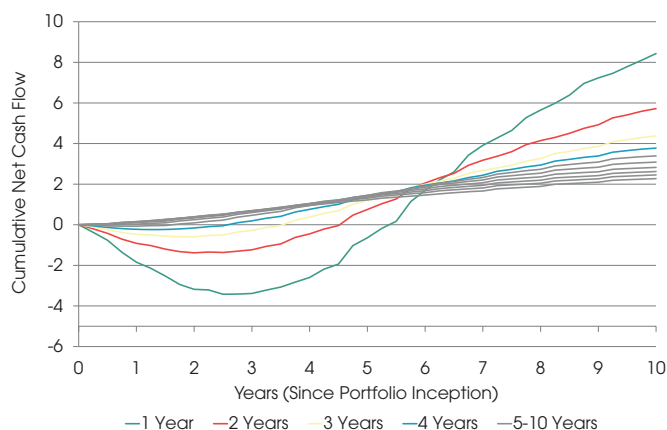
drawing capital from the investor. Therefore, the portfolio is not likely to be cash flow positive. This situation is depicted in Fig. 3, where younger portfolios are illustrated with coloured lines. The cash flow patterns for more mature portfolios are depicted in black. After five years, an investor has already built a portfolio that is close to being self-financing. We, therefore, advise investors to commit over a minimum of five consecutive years to ensure that a decision to stop investing in private equity will not automatically necessitate a sale of the portfolio due to cash flow requirements.

Optimize Liquidity Management with Simulations

When a private equity portfolio ages, it tends to become self-financing. However, it may take some time to reach this state and even a mature portfolio might experience years where the sum of the capital called is larger than the distributions. Therefore, prudent investors need adequate risk management tools allowing them to quantify the liquidity requirements in adverse situations. Cash flow simulation fulfills this purpose.

Modelling the cash flow of a private equity portfolio is challenging and there are several different models. The simplest models generally use shape functions that represent the future cash flow as a single smooth line for each fund. This approach disregards the variability of the cash flows and focuses solely on the average case. This limitation can be overcome by using Monte Carlo methods based on historical private equity data. The simulations can be enhanced by taking the relationship between private and public equity into account. For each run of the Monte Carlo method, a unique simulated public market environment can be used to scale the distributions and the NAV of the private equity portfolio. Fig. 4 shows an example of a simulation for a portfolio invested over three years in US buyout funds (three funds per year).

Fig. 3. Liquidation Rate of the Net Asset Value in Relation to the Number of Commitment Years



Source: Capital Dynamics calculations based on Preqin data

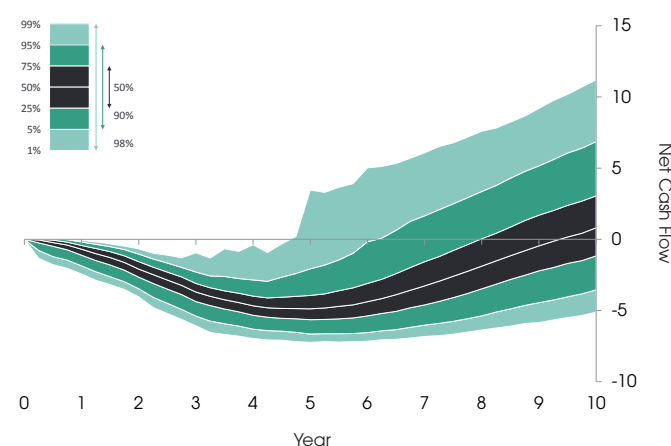
The net cash flow chart of the portfolio of primary funds illustrated in Fig. 4 is a powerful tool to derive the liquidity requirements in various scenarios and especially in adverse situations. Different hypotheses about future commitments can be added and compared. Therefore, the simulations can also be used to optimize future commitments (funds' geographies, styles and ticket sizes) in relation to the expected liquidity generated by a portfolio and the specific requirement of an investor.

Conclusion

The observation that a mature private equity program generates significant cash (i.e. on average 20% of the NAV after the last commitment year is distributed annually) should alleviate the often perceived concern that private equity is an illiquid asset class. On average, a mature portfolio pays out 100% of its NAV after 4-5 years. These figures support our belief that despite being illiquid, private equity is self-liquidating. This has noticeable implications for different types of investors.

We have shown that a consistent method for new investors to enter the private equity asset class is to commit regularly during approximately a five-year period. This will lead to a portfolio that is approaching self-liquidation, and while still being relatively immature, it is possible to assess its performance. By definition, long-term investors are convinced by the advantages of investing in private equity. They are more sensitive to the fact that their holding would be able to generate a sufficient amount of cash in a reasonable timeframe if needed. Both existing and new investors can benefit from cash flow simulations as they quantify the cash requirements (on average) to design the commitment pacing or to evaluate the risks in difficult market environments.

Fig. 4. Cash Flow Simulations for a Fictitious Portfolio of Primary Funds



Source: Capital Dynamics calculations based on Thomson Venture Economics data

Capital Dynamics

Capital Dynamics is an independent, global asset manager, investing in private equity and clean energy infrastructure. We manage investments through a broad range of products and opportunities including separate account solutions, funds and structured products. Capital Dynamics and all its affiliates have \$21bn in assets under discretionary management, advisement and administration as of June 30, 2015. The firm's history goes back to 1988. Its 20 most senior investment professionals have over 20 years of experience in private asset management on average. We believe our experience and culture of innovation give us superior insight and help us deliver returns for our clients. We invest locally while operating globally from our London, New York, Zug, Tokyo, Hong Kong, Silicon Valley, Munich, Birmingham, Seoul and Scottsdale offices.

www.capdyn.com

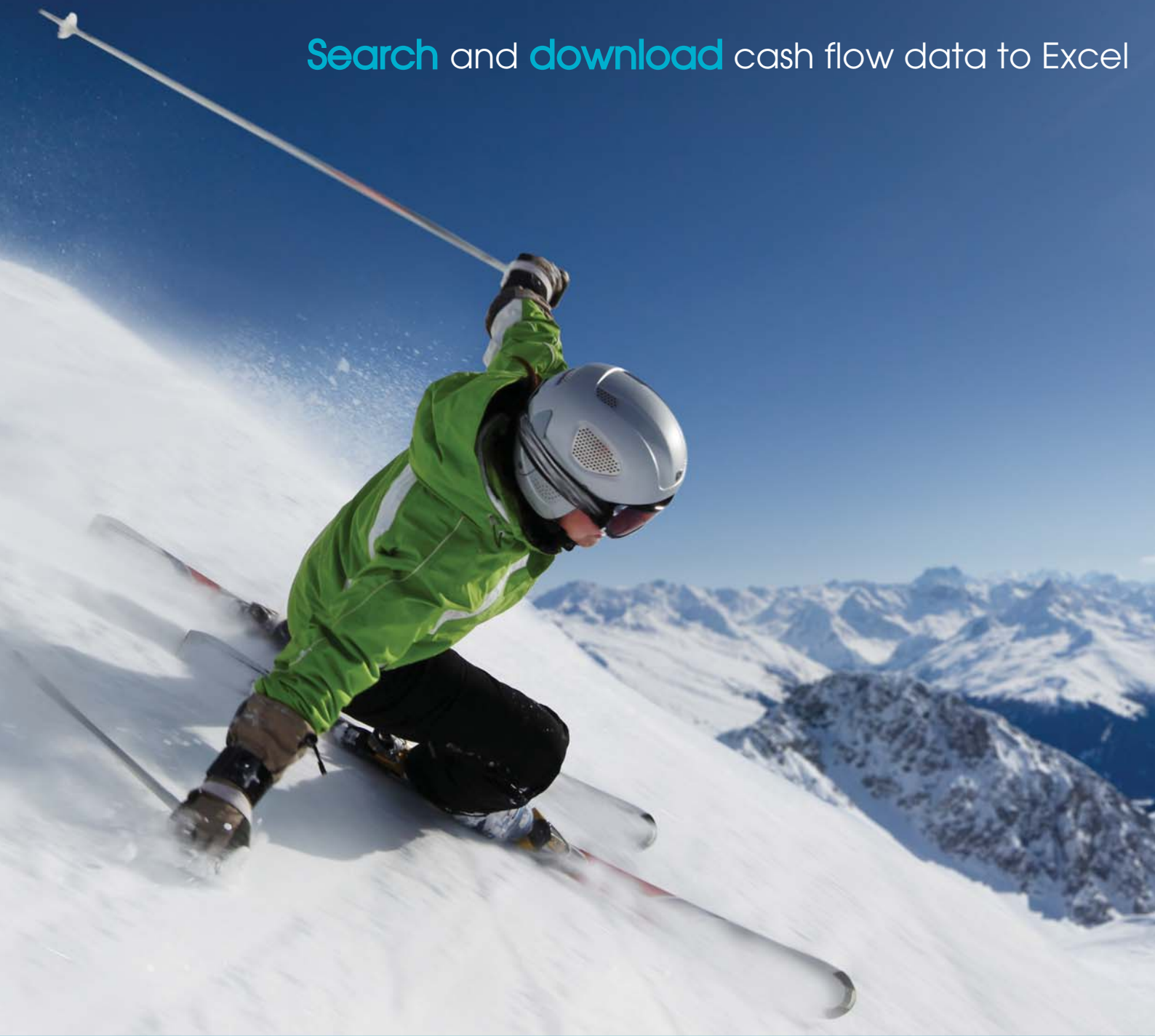
Access the largest source of private capital cash flow data

See cash flow data for 3,100 named funds

Predict future cash flow patterns

Conduct financial modelling

Search and **download** cash flow data to Excel



Register for demo access to find out how Preqin's **Private Capital Cash Flow Data** can help your business:

www.preqin.com/cashflow

 preqin

alternative assets. intelligent data.