Portfolio diversification: no one-size-fits-all approach

Diversification is rightly seen as a valuable tool in investment, but finding the perfect balance requires thorough analysis, and a strong investment platform to execute on it.

The challenge of hitting the right balance in diversification is well understood by investment professionals, and we often hear from Chief Investment Officers, trustees, and other asset allocators who are working to achieve that balance – not too little and not too much.

At Partners Group, we use five main dimensions to assess diversification for private markets portfolios:

- Vintage year
- Asset class (private equity, private infrastructure, private real estate, private debt)
- Asset type (direct investments, secondaries, primaries)
- Industry and region
- Number and size of positions

However, it is important to note that private markets portfolios should not be limited to rigid diversification guidelines. They should rely on a disciplined framework but remain flexible; focus on direct investments; invest across multiple asset classes, industries and regions; be spread across vintages; and use active position sizing to align diversification benefits with investors' unique objectives.

Methodology:

We used Partners Group's proprietary database of over 7,000 private markets transactions, stretching back to 1999, to analyze the return and risk impact of allocation changes in private equity portfolios. The database allowed us to create thousands of potential portfolios, with a wide range of strategies across multiple dimensions of portfolio diversification. By measuring the volatility and risk in each of these scenarios, we developed a diversification framework that allows us to focus on top risk drivers while maintaining desired portfolio returns.

Vintage year

One of the main ways investors think of diversifying private markets portfolios is across multiple vintages, or years. Unsurprisingly, we have found that building up a portfolio over time shows clear benefits in reducing volatility through vintage diversification, but only up to a point. For example, a typical portfolio of private equity investments deployed in one year has a volatility of 13.0%[1]. Adding a second vintage reduces portfolio volatility to 9.3%, while three vintages drop volatility to 7.7% and four vintages to 6.8%, or about half the volatility of holding just one vintage. The same pattern emerged when we analyzed downside risk. A private equity portfolio invested in one single vintage has an expected value at risk[2] of -24.0%, whereas for the average four-vintage mix that downside is only -4.1%.

However, beyond this point, marginal benefits from further vintage diversification start to diminish significantly. Adding a fifth vintage to the portfolio reduces volatility by just 50 basis points, with further vintages continuing to reduce the marginal benefit. While a calculated build-up phase is a key component of sound portfolio construction, longer build-up periods result in higher return drags associated with sitting underweight to an investor's target allocations, increasing overall portfolio costs and weighing on overall portfolio performance.

Our experience shows that investing between 10% and 40% of the target allocation each year over a four-year period achieves better risk-adjusted performance[3] by avoiding concentration in potentially 'bad' vintages. In addition, because four years is also a typical holding period for underlying private equity investments, meaningful portfolio liquidity can be expected at this point, allowing for a steady re-investment pace after the initial build-up.

Finally, while diversifying across four vintages is an optimal reference point in most market environments, more extreme market events that create a stronger flow of investment opportunities may call for shorter build-up periods of two to three years. This was the case, for example, after the Global Financial Crisis. Private markets managers who

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1. Volatility refers to measured volatility of final IRR of the overall portfolio. Based on Partners Group's proprietary database of historical private markets returns, including over 7,000 private market transactions across vintages 1999-2017.
2. Calculated as a three-standard-deviation event, 99% value at risk; based on 2,000 simulations taken from vintages 1999-2017 in Partners Group's proprietary database of historical private markets returns.
3. Risk-adjusted performance refers to returns taking into account potential drags to performance. Past performance is not indicative of future results.
Note: Diversification does not ensure a profit or protect against loss.

are not tied to a rigid deployment plan, but who are instead able to actively steer investment capacity in these scenarios, can reap the optimal vintage diversification benefits based on the prevailing market conditions.

Asset class and type

Across any number of vintages, introducing complementary asset classes can also carry diversification benefits. For example, for the four-vintage private equity portfolio outlined earlier, the 6.8% average volatility can be reduced to 5.8% by introducing a 10% allocation to private infrastructure, with a further reduction to 4.3% being possible by adding a 15% allocation to private real estate and a 5% allocation to private debt.[4]

The table and chart below show that asset class diversification can be combined with vintage year diversification to help reduce both volatility and downside risk. In our example, the value at risk for the private equity portfolio invested across four vintages (-4.1%) can be reduced to 0.1% by adding other asset classes to the allocation mix[5].

A similar amount of risk reduction is observed when including other asset types, for example, including an opportunistic secondary fund allocation to a portfolio of otherwise direct private equity investments.

Industry and region

Academic literature and practitioners have explored the benefits of diversification across industry sectors and regions, albeit focusing primarily on public markets. While it may seem reasonable to assume that such benefits can be extended to private markets, it is worth noting that the very nature of private markets investments – which rely on active engagement with portfolio companies to generate performance through bottom-up value creation – mean that this conventional wisdom is less directly applicable. Indeed, academic literature has shown contrasting evidence on the effect of sector and geographic diversification on private markets funds performance.

For private markets investors who seek to leverage their skills and expertise to develop and transform their portfolio companies, focusing their efforts on fewer sectors, themes or regions appears to lead to better outcomes and performance[6].

In this context, diversification *within* a manager's selected area of focus becomes paramount: each new investment should be considered through the lens of its incremental performance and risk contribution to the existing portfolio.

For example, at Partners Group, we apply a thematic investing approach across four industry verticals: Technology, Goods & Products, Health & Life, and Services. We aim to identify attractive businesses benefitting from select thematic growth trends, which we can capitalize on through our transformational investing approach. Currently, three giga themes guide our thematic investing: digitization & automation, new living and decarbonization.

Although these three giga themes guide our approach, we focus on the cascade of significant transformative trends that fall under these themes, looking beyond the top layer to identify companies operating in less obvious underlying sub-sectors, aiming to get exposure to growth trends at a much lower risk profile.

When adding a new thematic investment to a portfolio, we consider its idiosyncratic risk, sector/thematic risk, geographic risk, as well as its correlation to the existing portfolio. This allows us to combine investment themes into thoughtful portfolios, diversified across risk drivers within our giga themes and across our industry verticals.

Number and size of positions

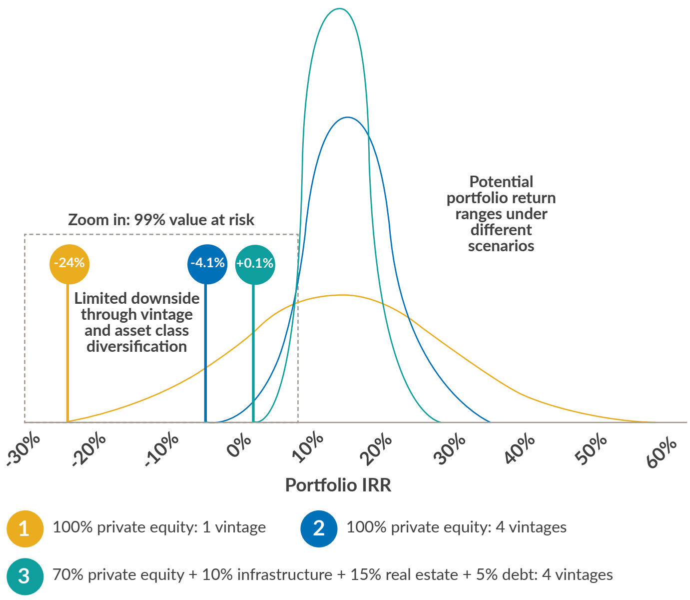
Portfolio diversification is directly influenced by the number of underlying investments that make up a portfolio, yet the optimal number of individual positions in a private markets portfolio is also driven by the overall investment objective, underlying asset class and asset type mix, as well as by the pace of portfolio build-up.

Assessing the impact of diversification on portfolio risk using historical scenario analysis

Vintage and asset class diversification may lower portfolio volatility...

Portfolio volatility[4]	100% PE	90% PE 10% PI	75% PE 10% PI 15% PRE	70% PE 10% PI 15% PRE 5% PD
1 vintage	13.0%	11.0%	10.3%	9.0%
2 vintages	9.3%	7.9%	6.5%	6.2%
3 vintages	7.7%	6.8%	5.6%	4.9%
4 vintages	6.8%	5.8%	5.6%	4.3%
5 vintages	6.3%	5.3%	4.2%	3.6%

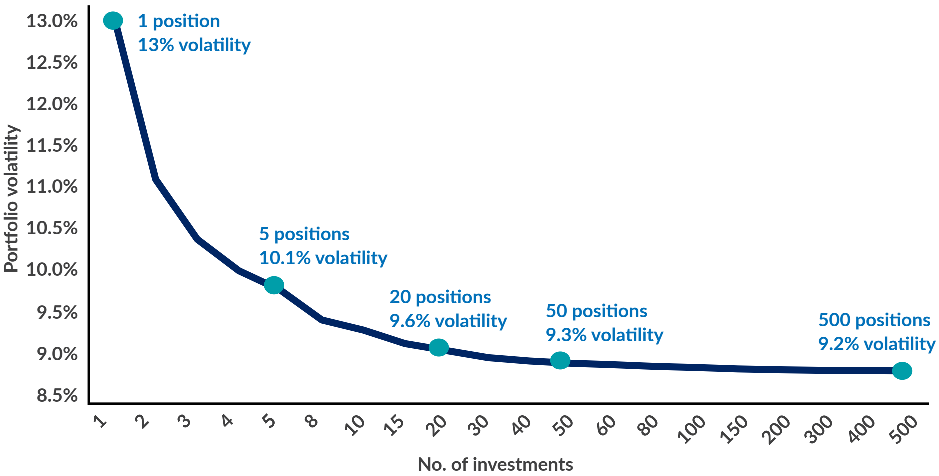
...and helps to mitigate downside risk[5]



Source: Partners Group (2022). For illustrative purposes only. The actual development of the program depends on many factors and may differ significantly. The performance shown refers to the hypothetical performance an investor would have obtained had it invested in the manner described and does not represent returns that any investor actually attained. The information presented is based upon the following hypothetical assumptions: 2,000 simulations taken from vintages 1999-2017 in Partners Group's proprietary database of historical private markets returns. Total sample size of over 7,000 investments. Portfolio build-up and positions are based on a diversified portfolio with around 10 to 20 private equity direct positions per vintage, 5 to 10 private equity secondaries and 5 primary lines. Note: PE = private equity; PI = private infrastructure; PRE = private real estate; PD = private debt.

4. Volatility refers to measured volatility of final IRR of the overall portfolio. Based on Partners Group's proprietary database of historical private markets returns, including over 7,000 private market transactions across vintages 1999-2017.
5. Calculated as a three-standard-deviation event, 99% value at risk; based on Partners Group's proprietary database of historical private markets returns with 2,000 simulations taken from vintages 1999-2017. Total sample size of over 7,000 investments. Portfolio build-up and positions are based on a diversified portfolio with around 10 to 20 private equity direct positions per vintage, 5 to 10 private equity secondaries and 5 primary lines.
6. Huss and Steger, 2020. Diversification and fund performance – An analysis of buyout funds. Journal of Risk and Financial Management, June 2020.

Diversification benefits fall beyond 50 portfolio positions



Source: Partners Group (2022). Assumes equally-weighted portfolios with stable parameters: each position has a standard deviation of 13% and the correlation between any pair of positions is 0.5. For illustrative purposes only.

For the sake of simplicity, we compared the volatility of a diversified portfolio relative to a concentrated one (measured by the number of underlying positions), using the stable parameters of a private equity directs portfolio and a four-year build-up period.

Unsurprisingly, concentrated portfolios display higher volatility. However, while increasing the number of positions reduces portfolio volatility, the marginal volatility reduction decreases as the portfolio becomes more and more diversified. A substantial decrease in volatility is achieved as the total number of positions approaches 20. Beyond 50 positions, the marginal diversification benefit is significantly reduced, and beyond 100 positions, marginal diversification benefits are minimal. Within private markets, trying to achieve 'over-diversified' portfolios will result in little gain but come at the cost of slower deployment and higher fee drag.

The number of positions alone, however, does not fully capture concentration risk: the size of each individual position is also a critical variable that determines the overall portfolio risk and return. Investors who adopt an active approach to managing their private markets portfolios can proactively manage the size of their positions, addressing concentration risk and steering portfolio risk/return in line with their investment objectives.

Finally, it is worth mentioning that while we have so far focused on direct investments, certain investors might prefer an integrated approach to private markets, where direct investments are complemented by select primaries and opportunistic secondaries.

The inclusion of fund investments alongside direct investments will naturally increase the number of underlying positions in a portfolio.

However, this tends to have more limited diversification benefits as the weight of each underlying position within a fund investment is low when measured against the overall portfolio. In other words, adding fund investments to a direct-focused strategy will not achieve the overall risk reduction benefit that the sheer number of underlying positions might suggest. The advantages of an integrated approach are instead the access that primaries provide to specialized and niche strategies and that secondaries provide to vintages that would otherwise no longer be investible.

Conclusion

Our analysis and experience suggest that hitting the right balance in diversification within a private markets portfolio requires a deep understanding of investors' objectives, combined with the ability to actively steer portfolios across five key dimensions: vintage year; asset class; asset type; industry and region; and number and size of positions.

To reap the benefits of diversification in private markets, investors should look for investment partners who can offer access to significant investment flow and a disciplined yet flexible approach to portfolio management.

A one-size-fits-all approach to diversification in private markets portfolios may result in limited investment flexibility, less control over deployment and higher fee drag. Investors should instead develop a consistent framework and solid guidelines in line with their unique investment objectives that allow for a more flexible approach to portfolio management.

That is the approach we employ: we start with our clients' objectives in mind, and we aim to capture diversification benefits while remaining focused on opportunities that will allow us to actively drive value creation. We aim to manage our direct programs along five dimensions of diversification to help maintain desired portfolio returns while aiming to decrease volatility and risk. We find this balance is achieved with 20 to 50 investments – depending on an investor's objectives – and underpinned by select thematic growth trends. For our integrated portfolios, we adjust our approach to include select primaries and opportunistic secondaries. While the resulting portfolio will have a higher number of underlying positions, we remain focused on the top risk drivers and on the potential pitfalls of over-diversification.

To reap the benefits of diversification in private markets, investors should look for investment partners who can offer access to significant investment flow and a disciplined yet flexible approach to portfolio management that mitigates portfolio risk, reduces costs and fee drag and captures the full return potential of value creation initiatives. ■

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