



International Forum of Sovereign Wealth Funds



Case Study # 1

Investing in Private Equity

IFSWF Subcommittee II: Investment & Risk Management

Presented by:

Kuwait Investment Authority (Will Kinlaw)

Fondo Strategico Italiano (Roberto Marsella)

Executive Summary

Sovereign Wealth Funds that invest in private equity face a wide array of questions and challenges as they establish best practices. Among these, SWFs should consider:

- due diligence,
- control,
- diversification,
- performance,
- benchmarking,
- fee structure and
- other costs of running a private equity investment program.

In many cases, SWFs may also benefit from looking beyond the internal rate of return (IRR) to design strategies that ensure an enduring and welcoming reception from recipient countries. This case study explores best practices for SWFs who invest in private equity.

Objectives

- Review the history of SWF investment in private equity, the current landscape, and trends in the nature and structure of these investments.
- Evaluate the SWF track record with private equity and identify the specific capabilities that SWFs must develop to be successful.
- Discuss the need for SWFs to maintain a sustainable presence in key investment markets and to develop a comprehensive definition of successful private equity investment. Discuss the benefits and risks of going beyond an IRR-only based model of success and its implications. Identify specific practices (e.g., communication) to maximize sustainability.
- Discuss the due diligence process with a particular focus on the unique implications for SWFs.
- Discuss the private equity fee structure and the total cost of a private equity investment program (including internal staffing, consultants, etc.)
- Draw conclusions that apply to the broadest possible set of SWFs, while recognizing that all SWFs have unique objectives, circumstances, and constraints, and that no single solution will apply for all SWFs.

Questions to be addressed

- In what ways do SWFs face unique challenges and opportunities in private equity investing? Consider investment horizon, diversification, etc.
- What are the best practices for due diligence?
- What terms should an SWF negotiate when structuring a private equity deal?
- How should SWFs foster the value creation path of their private equity portfolio companies on an ongoing basis?
- Which tools and instruments can be used by SWFs to achieve their strategic goals with private equity investments? Why is communication strategic?
- How can SWFs develop sustainable private equity investment programs and maximize the likelihood of a welcome reception from recipient countries?
- How can risk management be proactive and helpful to senior management of SWFs within the context of the topics highlighted above?

Track record of private equity investing

Cumulative return on investment of private and public equity markets (1996 to present, private equity is net of fees)

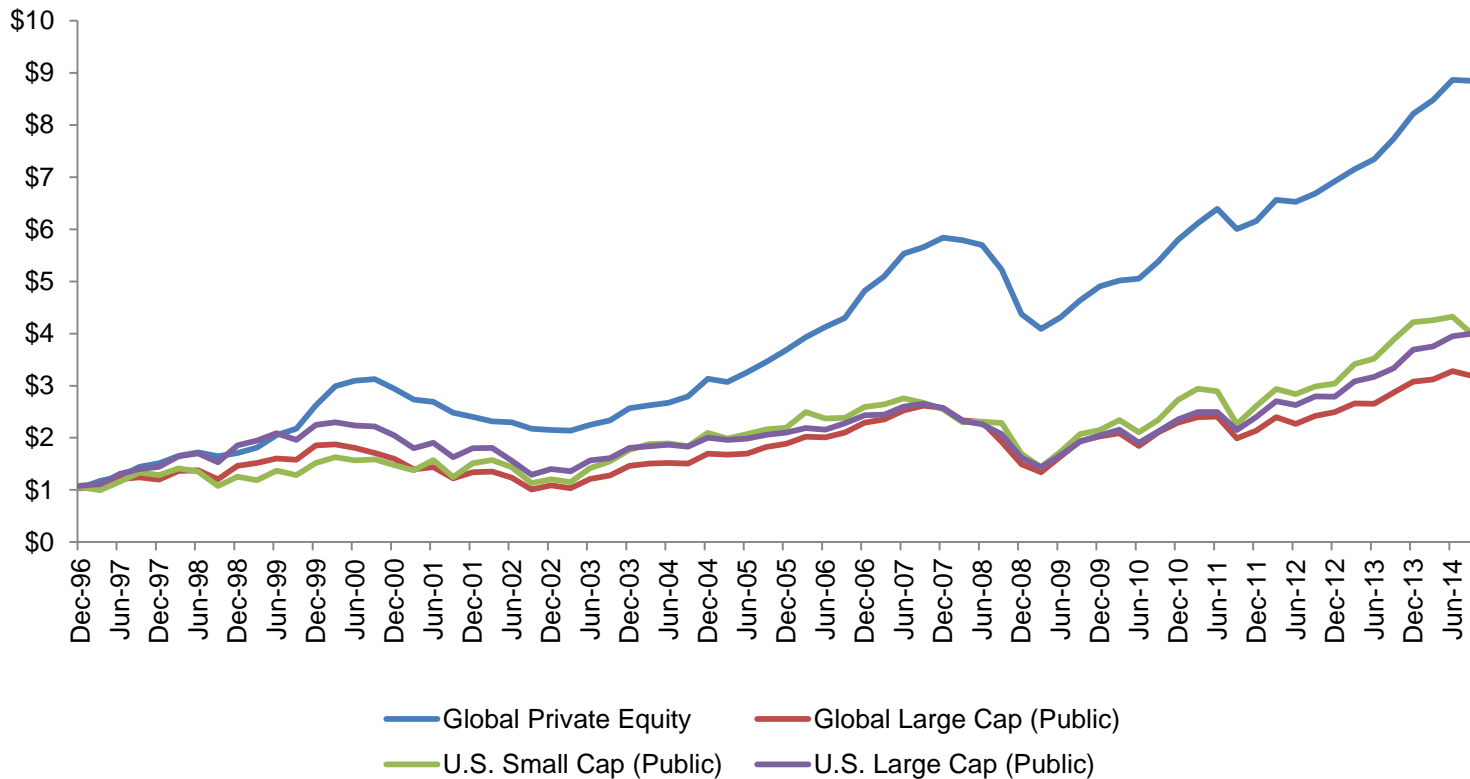
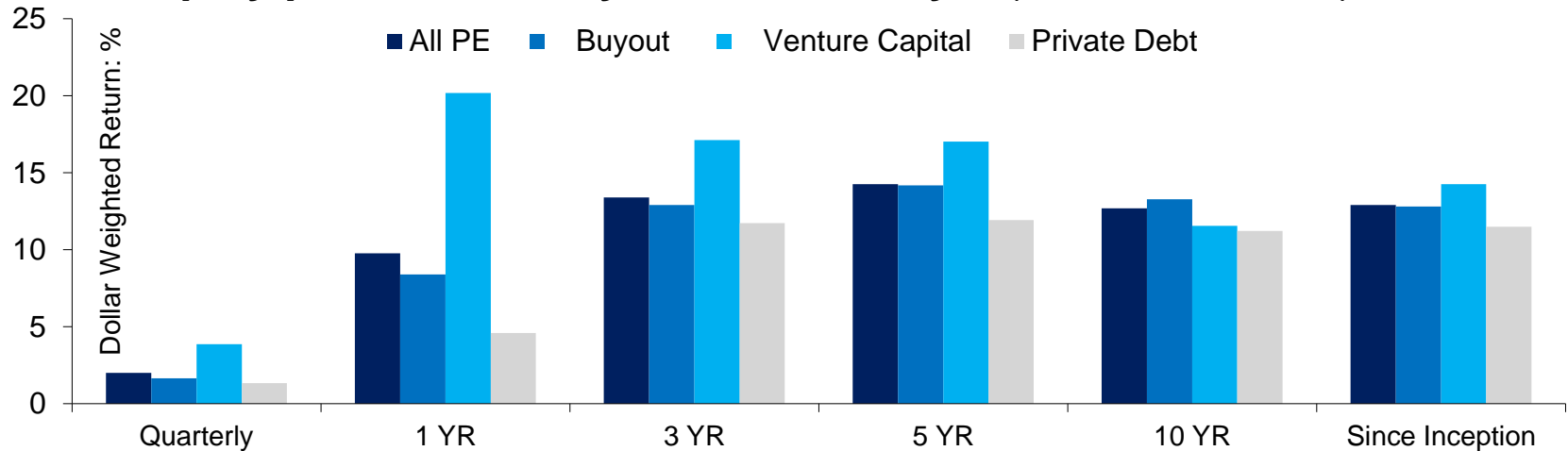


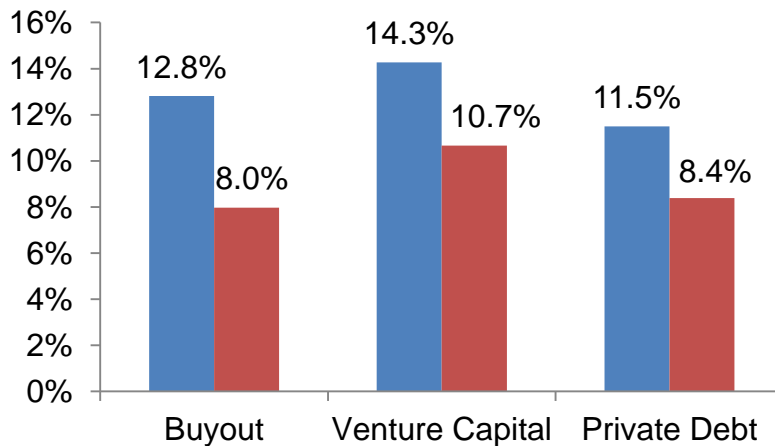
Chart shows the hypothetical total return on a \$1 initial investment placed on December 31, 1996. Global Private Equity is the State Street GX Private Equity Index, Global Large Cap is the MSCI All Country World Index, U.S. Small Cap is the Russell 2000 Index, and U.S. Large Cap is the S&P 500 Index. Source: Datastream, State Street Global Exchange.

Private equity performance by investment style (as of 31-Mar-15)

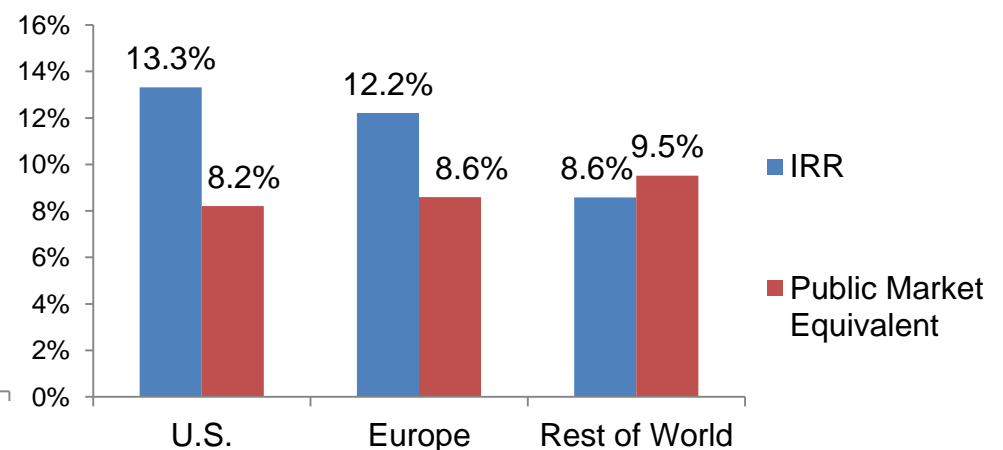


Private equity performance vs. public market equivalent (1980 to 31-Mar-15)

By Strategy



By Region



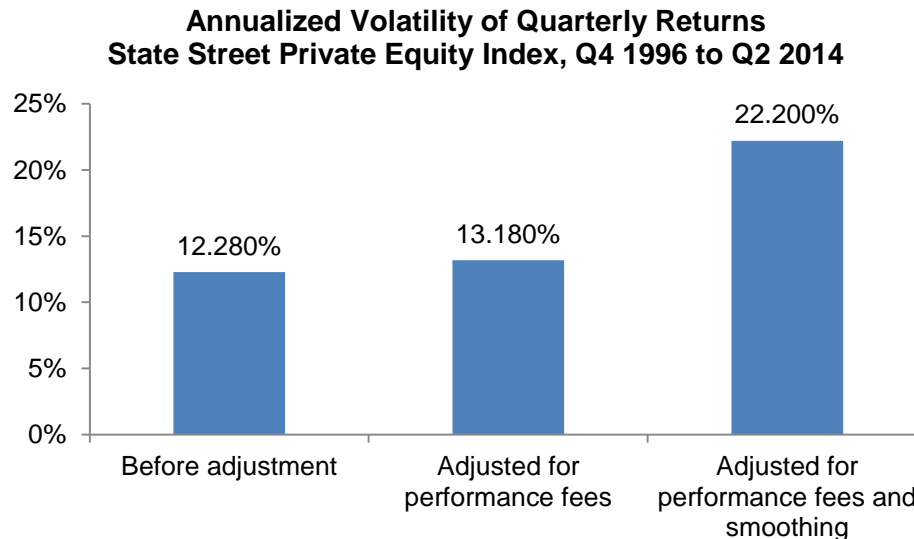
Challenges of private equity investing

Private equity investments can offer attractive performance but they also present a range of challenges. Specifically, private equity differs from most traditional asset classes in the following important ways:

- **Illiquidity.** The investments are typically illiquid due to lock-up requirements, thin secondary markets, and/or high costs of early exit.
- **Lack of benchmarks and objective data.** Private equity benchmarks are often biased and/or incomplete.
- **Appraisal-based pricing.** The underlying assets do not transact frequently, and benchmark indices based on appraisal pricing often understate risk and overstate diversification potential.
- **Performance fees.** Incentive fees reduce up-side, which may also understate risk and overstate the potential for diversification.
- **IRR methodology.** Quarterly NAVs reported by general partners and dollar-weighted, internal rate of return (IRR) calculations are challenging to compare with the time-weighted returns of other asset classes.
- **Resource demands.** Direct and co-investment requires specific in-house expertise, talent, and resources.

Measuring risk in private equity

- Incentive fees charged on outperformance will not reduce the risk of loss, but they will dampen simple volatility estimates because they reduce the size of positive returns.
- Appraisal-based valuation of private equity holdings create a “moving average effect” that also places a downward bias on volatility.

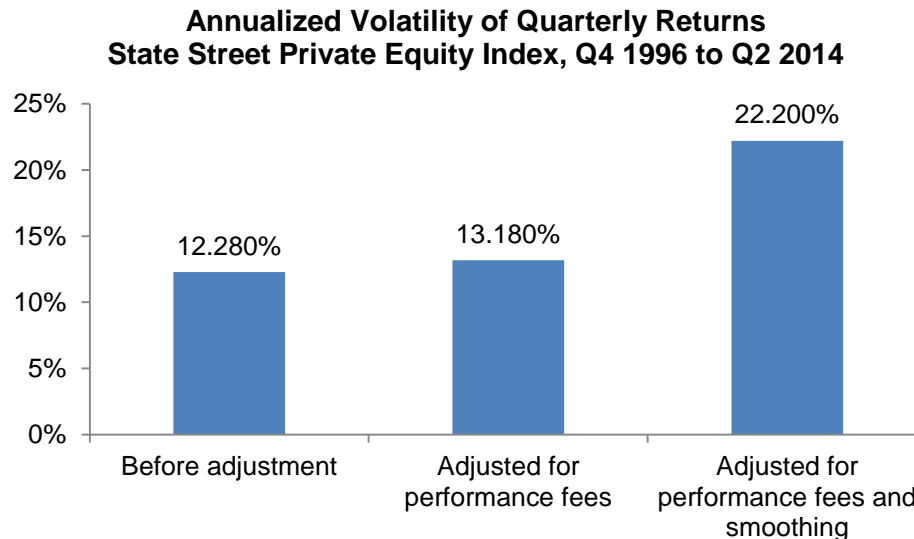


- For example, a recent paper calculated the annualized volatility (standard deviation) of quarterly private equity returns as 12% from Q4 1996 to Q2 2014, 13% with adjustment for biases from performance fees and 22% with adjustment for fees and smoothing.¹

¹ Source: Kinlaw et. al (2015).

Measuring risk in private equity

- Incentive fees charged on outperformance will not reduce the risk of loss, but they will dampen simple volatility estimates because they reduce the size of positive returns.
- Appraisal-based valuation of private equity holdings create a “moving average effect” that also places a downward bias on volatility.

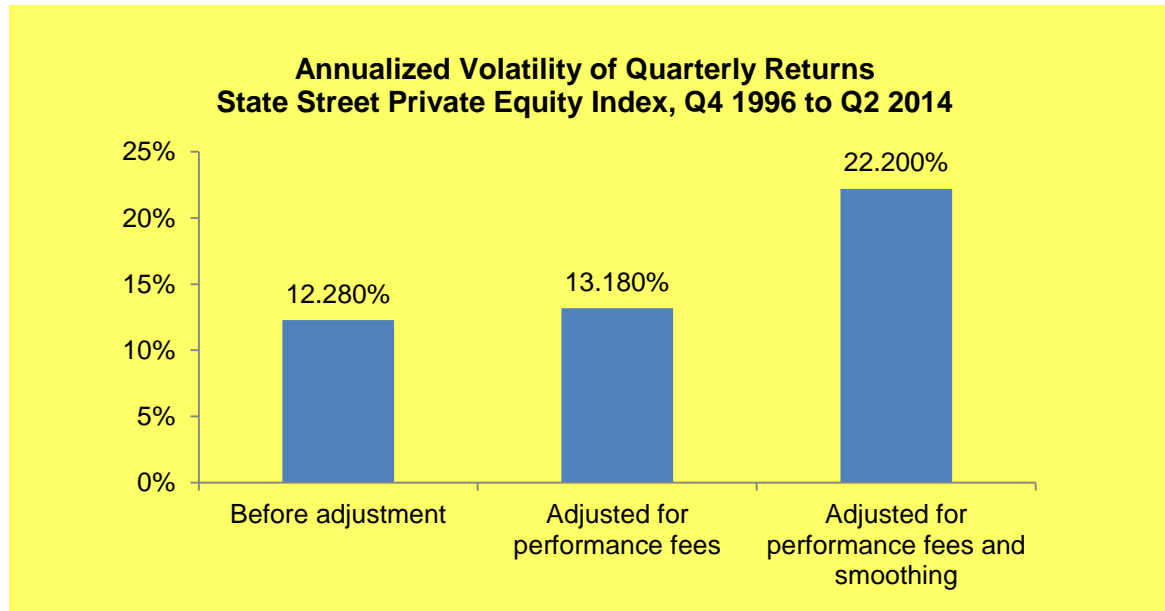


- For example, a recent paper calculated the annualized volatility (standard deviation) of quarterly private equity returns as 12% from Q4 1996 to Q2 2014, 13% with adjustment for biases from performance fees and 22% with adjustment for fees and smoothing.¹

¹ Source: Kinlaw et. al (2015).

Measuring risk in private equity

- Incentive fees charged on outperformance will not reduce the risk of loss, but they will dampen simple volatility estimates because they reduce the size of positive returns.
- Appraisal-based valuation of private equity holdings create a “moving average effect” that also places a downward bias on volatility.



- For example, a recent paper calculated the annualized volatility (standard deviation) of quarterly private equity returns as 12% from Q4 1996 to Q2 2014, 13% with adjustment for biases from performance fees and 22% with adjustment for fees and smoothing.¹

¹ Source: Kinlaw et. al (2015).

Recent academic findings relevant to SWFs

- Private equity returns are not driven entirely by company-specific alpha. For example, the sector exposures of private equity funds can explain a significant proportion of returns.¹ Leverage, size, and market beta factors have also been shown to explain private equity performance.
- Institutional investors have exhibited “home bias” in their selection of private equity funds. For example, U.S. public pensions often exhibit home-state bias in their private equity portfolios and this bias comes with a significant cost in foregone performance.²
- Larger private equity investors are able to achieve lower fees and more favorable terms.³
- There is some evidence that direct and co-investment structures have underperformed traditional fund investments, with the exception of direct buyout investments.⁴
- There is little consensus on the beta of private equity relative to public equity, with estimates ranging from well below 1.0 to nearly 2.0. However, The Public Market Equivalent (PME) measure can provide useful insight into private equity performance without requiring beta calculations.⁵

• ¹ W. Kinlaw, M. Kritzman, and J. Mao (forthcoming 2015) ² Y. Hochberg and J. Rauh (2013) ³ M. Rhodes-Kropf, L. Viceira, J. Dionne, and N. Burbank (2014) ⁴ L. Fang, V. Ivashina, J. Lerner (2015) ⁵ M. Sorensen and R. Jagannathan (2015)

Recent academic findings relevant to SWFs

- Private equity returns are not driven entirely by company-specific alpha. For example, the sector exposures of private equity funds can explain a significant proportion of returns.¹ Leverage, size, and market beta factors have also been shown to explain private equity performance.
- Institutional investors have exhibited “home bias” in their selection of private equity funds. For example, U.S. public pensions often exhibit home-state bias in their private equity portfolios and this bias comes with a significant cost in foregone performance.²
- Larger private equity investors are able to achieve lower fees and more favorable terms.³
- There is some evidence that direct and co-investment structures have underperformed traditional fund investments, with the exception of direct buyout investments.⁴
- There is little consensus on the beta of private equity relative to public equity, with estimates ranging from well below 1.0 to nearly 2.0. However, The Public Market Equivalent (PME) measure can provide useful insight into private equity performance without requiring beta calculations.⁵

• ¹ W. Kinlaw, M. Kritzman, and J. Mao (forthcoming 2015) ² Y. Hochberg and J. Rauh (2013) ³ M. Rhodes-Kropf, L. Viceira, J. Dionne, and N. Burbank (2014) ⁴ L. Fang, V. Ivashina, J. Lerner (2015) ⁵ M. Sorensen and R. Jagannathan (2015)

Recent academic findings relevant to SWFs

- Private equity returns are not driven entirely by company-specific alpha. For example, the sector exposures of private equity funds can explain a significant proportion of returns.¹ Leverage, size, and market beta factors have also been shown to explain private equity performance.
- Institutional investors have exhibited “home bias” in their selection of private equity funds. For example, U.S. public pensions often exhibit home-state bias in their private equity portfolios and this bias comes with a significant cost in foregone performance.²
- Larger private equity investors are able to achieve lower fees and more favorable terms.³
- There is some evidence that direct and co-investment structures have underperformed traditional fund investments, with the exception of direct buyout investments.⁴
- There is little consensus on the beta of private equity relative to public equity, with estimates ranging from well below 1.0 to nearly 2.0. However, The Public Market Equivalent (PME) measure can provide useful insight into private equity performance without requiring beta calculations.⁵

• ¹ W. Kinlaw, M. Kritzman, and J. Mao (forthcoming 2015) ² Y. Hochberg and J. Rauh (2013) ³ M. Rhodes-Kropf, L. Viceira, J. Dionne, and N. Burbank (2014) ⁴ L. Fang, V. Ivashina, J. Lerner (2015) ⁵ M. Sorensen and R. Jagannathan (2015)

Recent academic findings relevant to SWFs

- Private equity returns are not driven entirely by company-specific alpha. For example, the sector exposures of private equity funds can explain a significant proportion of returns.¹ Leverage, size, and market beta factors have also been shown to explain private equity performance.
- Institutional investors have exhibited “home bias” in their selection of private equity funds. For example, U.S. public pensions often exhibit home-state bias in their private equity portfolios and this bias comes with a significant cost in foregone performance.²
- Larger private equity investors are able to achieve lower fees and more favorable terms.³
- There is some evidence that direct and co-investment structures have underperformed traditional fund investments, with the exception of direct buyout investments.⁴
- There is little consensus on the beta of private equity relative to public equity, with estimates ranging from well below 1.0 to nearly 2.0. However, The Public Market Equivalent (PME) measure can provide useful insight into private equity performance without requiring beta calculations.⁵

• ¹ W. Kinlaw, M. Kritzman, and J. Mao (forthcoming 2015) ² Y. Hochberg and J. Rauh (2013) ³ M. Rhodes-Kropf, L. Viceira, J. Dionne, and N. Burbank (2014) ⁴ L. Fang, V. Ivashina, J. Lerner (2015) ⁵ M. Sorensen and R. Jagannathan (2015)

Recent academic findings relevant to SWFs

- Private equity returns are not driven entirely by company-specific alpha. For example, the sector exposures of private equity funds can explain a significant proportion of returns.¹ Leverage, size, and market beta factors have also been shown to explain private equity performance.
- Institutional investors have exhibited “home bias” in their selection of private equity funds. For example, U.S. public pensions often exhibit home-state bias in their private equity portfolios and this bias comes with a significant cost in foregone performance.²
- Larger private equity investors are able to achieve lower fees and more favorable terms.³
- There is some evidence that direct and co-investment structures have underperformed traditional fund investments, with the exception of direct buyout investments.⁴
- There is little consensus on the beta of private equity relative to public equity, with estimates ranging from well below 1.0 to nearly 2.0. However, The Public Market Equivalent (PME) measure can provide useful insight into private equity performance without requiring beta calculations.⁵

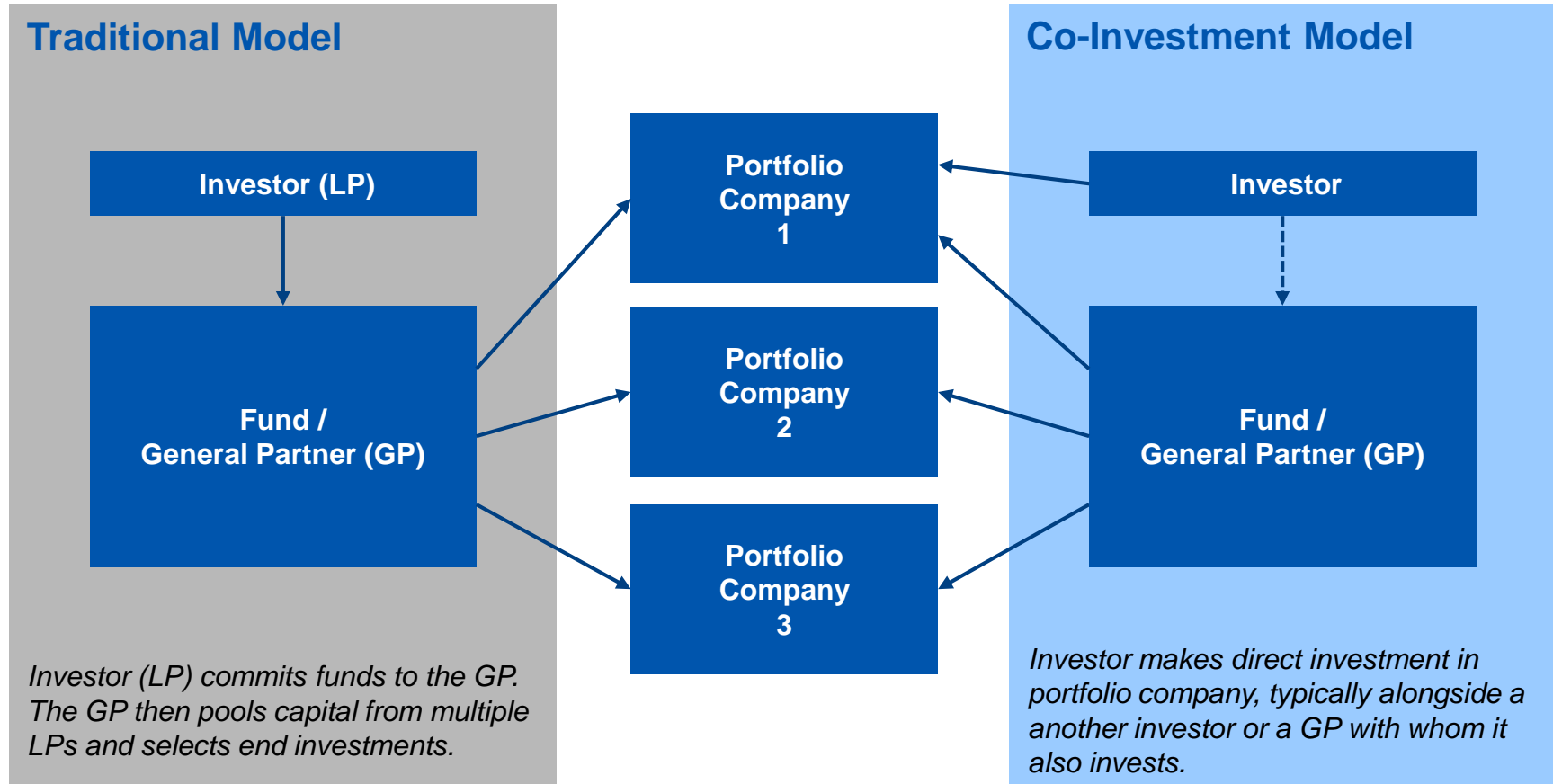
• ¹ W. Kinlaw, M. Kritzman, and J. Mao (forthcoming 2015) ² Y. Hochberg and J. Rauh (2013) ³ M. Rhodes-Kropf, L. Viceira, J. Dionne, and N. Burbank (2014) ⁴ L. Fang, V. Ivashina, J. Lerner (2015) ⁵ M. Sorensen and R. Jagannathan (2015)

Recent academic findings relevant to SWFs

- Private equity returns are not driven entirely by company-specific alpha. For example, the sector exposures of private equity funds can explain a significant proportion of returns.¹ Leverage, size, and market beta factors have also been shown to explain private equity performance.
- Institutional investors have exhibited “home bias” in their selection of private equity funds. For example, U.S. public pensions often exhibit home-state bias in their private equity portfolios and this bias comes with a significant cost in foregone performance.²
- Larger private equity investors are able to achieve lower fees and more favorable terms.³
- There is some evidence that direct and co-investment structures have underperformed traditional fund investments, with the exception of direct buyout investments.⁴
- There is little consensus on the beta of private equity relative to public equity, with estimates ranging from well below 1.0 to nearly 2.0. However, The Public Market Equivalent (PME) measure can provide useful insight into private equity performance without requiring beta calculations.⁵

• ¹ W. Kinlaw, M. Kritzman, and J. Mao (forthcoming 2015) ² Y. Hochberg and J. Rauh (2013) ³ M. Rhodes-Kropf, L. Viceira, J. Dionne, and N. Burbank (2014) ⁴ L. Fang, V. Ivashina, J. Lerner (2015) ⁵ M. Sorensen and R. Jagannathan (2015)

Private equity investment structures



Common models for private equity investment

“Yale Endowment” Model

Increase significantly the allocation to private equity, and specifically to venture capital, relative to public equities and fixed income.

“Texas Teachers” Model

Create strategic partnerships with large private equity managers to achieve lower fees and more attractive terms.

“Canadian Pensions” Model

Seek direct and co-investment opportunities in addition to, or instead of, traditional fund investments.

Best practices for monitoring the private equity portfolio

Best practices for monitoring the private equity portfolio

- **Investment Due Diligence**

- Evaluate investment strategy and track record for prospective managers.
- Align investments with SWF mission, assets, other investments, and strategic considerations.
- Negotiate appropriate fee structure and terms.
- Determine mix of traditional LP/GP structures vs. direct and co-investments.
- Review management team and perform reference check (score card) on prospective managers.
- Perform market analysis (top down and bottom up) and evaluate business strategy for portfolio companies.

Best practices for monitoring the private equity portfolio

- **Investment Due Diligence**

- Evaluate investment strategy and track record for prospective managers.
- Align investments with SWF mission, assets, other investments, and strategic considerations.
- Negotiate appropriate fee structure and terms.
- Determine mix of traditional LP/GP structures vs. direct and co-investments.
- Review management team and perform reference check (score card) on prospective managers.
- Perform market analysis (top down and bottom up) and evaluate business strategy for portfolio companies.

- **Operational Due Diligence**

- Seek GP operational transparency including internal processes and controls (financial, accounting, tax, human resources, etc.) with periodic checkups throughout the life of the investment.
- Maintain IT and security infrastructure.
- Guarantee legal and regulatory compliance.
- Incorporate ESG (Environmental Social Governance) considerations and comply with SWF policy constraints.
- Foster value creation. For example, create connections between companies that the SWF holds and perhaps share relevant information across SWFs. When companies work together it can accelerate the pace of innovation.

Best practices for monitoring the private equity portfolio

• Investment Due Diligence

- Evaluate investment strategy and track record for prospective managers.
- Align investments with SWF mission, assets, other investments, and strategic considerations.
- Negotiate appropriate fee structure and terms.
- Determine mix of traditional LP/GP structures vs. direct and co-investments.
- Review management team and perform reference check (score card) on prospective managers.
- Perform market analysis (top down and bottom up) and evaluate business strategy for portfolio companies.

• Operational Due Diligence

- Seek GP operational transparency including internal processes and controls (financial, accounting, tax, human resources, etc.) with periodic checkups throughout the life of the investment.
- Maintain IT and security infrastructure.
- Guarantee legal and regulatory compliance.
- Incorporate ESG (Environmental Social Governance) considerations and comply with SWF policy constraints.
- Foster value creation. For example, create connections between companies that the SWF holds and perhaps share relevant information across SWFs. When companies work together it can accelerate the pace of innovation.

Fostering the value creation in the private equity portfolio

- Certainly SWFs should follow best practices in monitoring their investments as described on the previous slide, but SWFs may also go further.

Fostering the value creation in the private equity portfolio

- Certainly SWFs should follow best practices in monitoring their investments as described on the previous slide, but SWFs may also go further.
- SWFs have an additional advantage over many smaller investors. They have a large amount of information as an information clearing house. When coupled with a strong business development function, such information can become source of additional value for the SWF portfolio companies - always in a fair, transparent and market-based manner.

Fostering the value creation in the private equity portfolio

- Certainly SWFs should follow best practices in monitoring their investments as described on the previous slide, but SWFs may also go further.
- SWFs have an additional advantage over many smaller investors. They have a large amount of information as an information clearing house. When coupled with a strong business development function, such information can become source of additional value for the SWF portfolio companies - always in a fair, transparent and market-based manner.
- SWFs typically have a large number of companies in their portfolio. Have investors fully mapped and explored the synergies across these companies? Have they acted on these synergies?
- SWFs also have well-developed institutional relationships. Can SWFs use these relationships to foster the value creation path of portfolio companies?
- Could two or more SWFs develop synergies among their joint portfolios of companies?

Sustainability of private equity investing

- Private equity investors often have the opportunity to influence the direction of portfolio companies by selecting the Board of Directors and determining company strategy.
- Portfolio companies have a range of stakeholders (customers, suppliers, workers, and the communities and territories of operation) and an SWF's impact on these stakeholders can be particularly sensitive when there are cross-border shareholders.

Sustainability of private equity investing

- Private equity investors often have the opportunity to influence the direction of portfolio companies by selecting the Board of Directors and determining company strategy.
- Portfolio companies have a range of stakeholders (customers, suppliers, workers, and the communities and territories of operation) and an SWF's impact on these stakeholders can be particularly sensitive when there are cross-border shareholders.
- Even in instances where an investment is successful (with respect to IRR, money multiple, etc.) reputational and headline risk can threaten the SWF's future investment opportunities.

Sustainability of private equity investing

- Private equity investors often have the opportunity to influence the direction of portfolio companies by selecting the Board of Directors and determining company strategy.
- Portfolio companies have a range of stakeholders (customers, suppliers, workers, and the communities and territories of operation) and an SWF's impact on these stakeholders can be particularly sensitive when there are cross-border shareholders.
- Even in instances where an investment is successful (with respect to IRR, money multiple, etc.) reputational and headline risk can threaten the SWF's future investment opportunities.
- SWFs might benefit from greater communication regarding the impact that their strategies have on key stakeholders. For example, SWFs can add value by directly and indirectly paying wages and taxes, and creating jobs in the recipient nation.
- It is important for SWFs to take care to protect their reputation during and after exiting portfolio companies. For example, a subsequent owner could make poor management decisions and try to shift blame back towards decisions from the period of SWF ownership.

Fee structure and total cost of ownership

- Traditional private equity fee structure has evolved from 2% management fees and 20% carried interest to a more flexible and competitive model where large investors can secure fee concessions and co-investment opportunities.
- However, the total cost of ownership for a private equity investment program extends beyond management fees: operational and investment due diligence and ongoing monitoring can require internal and external staff, data, and other fees. As an additional cost, having cash on hand for capital calls is expensive in a zero interest rate environment.
- SWFs are well-positioned to secure fee concessions and/or co-investment opportunities; however, a private equity program requires substantial resources: well-equipped talent, infrastructure, data and information systems, and external consulting, legal, and tax advice.
- SWFs who participate as co-investors or direct investors will require even more expertise, time, and resources which increases internal costs even if total costs are lower. To the extent that SWFs can leverage these resources to create “economies of scale,” direct and co-investment may be attractive options. Of course, this assumes that internally managed investments perform as well or better than fund investments.

Fee structure and total cost of ownership

- Traditional private equity fee structure has evolved from 2% management fees and 20% carried interest to a more flexible and competitive model where large investors can secure fee concessions and co-investment opportunities.
- However, the total cost of ownership for a private equity investment program extends beyond management fees: operational and investment due diligence and ongoing monitoring can require internal and external staff, data, and other fees. As an additional cost, having cash on hand for capital calls is expensive in a zero interest rate environment.
- SWFs are well-positioned to secure fee concessions and/or co-investment opportunities; however, a private equity program requires substantial resources: well-equipped talent, infrastructure, data and information systems, and external consulting, legal, and tax advice.
- SWFs who participate as co-investors or direct investors will require even more expertise, time, and resources which increases internal costs even if total costs are lower. To the extent that SWFs can leverage these resources to create “economies of scale,” direct and co-investment may be attractive options. Of course, this assumes that internally managed investments perform as well or better than fund investments.

Fee structure and total cost of ownership

- Traditional private equity fee structure has evolved from 2% management fees and 20% carried interest to a more flexible and competitive model where large investors can secure fee concessions and co-investment opportunities.
- However, the total cost of ownership for a private equity investment program extends beyond management fees: operational and investment due diligence and ongoing monitoring can require internal and external staff, data, and other fees. As an additional cost, having cash on hand for capital calls is expensive in a zero interest rate environment.
- SWFs are well-positioned to secure fee concessions and/or co-investment opportunities; however, a private equity program requires substantial resources: well-equipped talent, infrastructure, data and information systems, and external consulting, legal, and tax advice.
- SWFs who participate as co-investors or direct investors will require even more expertise, time, and resources which increases internal costs even if total costs are lower. To the extent that SWFs can leverage these resources to create “economies of scale,” direct and co-investment may be attractive options. Of course, this assumes that internally managed investments perform as well or better than fund investments.

Conclusions

- Many SWFs have increased their allocation to private equity as they have sought higher returns in a low-yield environment.
- SWFs and other large investors have put pressure on traditional fee and investment structures and have also increased their focus on co-investment and direct investment opportunities.
- SWFs face common challenges in measuring risk, data and analytics, and investment and operational due diligence.
- SWFs face unique challenges in managing additional constraints imposed by their mission, other assets, investment horizon, policy and political constraints, and staffing resources.
- As long-horizon investors, SWFs are well-positioned to participate in private equity due to their ability to extract fee concessions, and the potential to foster collaboration across their portfolio companies (and perhaps across those of other SWFs).

Conclusions

- Many SWFs have increased their allocation to private equity as they have sought higher returns in a low-yield environment.
- SWFs and other large investors have put pressure on traditional fee and investment structures and have also increased their focus on co-investment and direct investment opportunities.
- SWFs face common challenges in measuring risk, data and analytics, and investment and operational due diligence.
- SWFs face unique challenges in managing additional constraints imposed by their mission, other assets, investment horizon, policy and political constraints, and staffing resources.
- As long-horizon investors, SWFs are well-positioned to participate in private equity due to their ability to extract fee concessions, and the potential to foster collaboration across their portfolio companies (and perhaps across those of other SWFs).

Conclusions

- Many SWFs have increased their allocation to private equity as they have sought higher returns in a low-yield environment.
- SWFs and other large investors have put pressure on traditional fee and investment structures and have also increased their focus on co-investment and direct investment opportunities.
- SWFs face common challenges in measuring risk, data and analytics, and investment and operational due diligence.
- SWFs face unique challenges in managing additional constraints imposed by their mission, other assets, investment horizon, policy and political constraints, and staffing resources.
- As long-horizon investors, SWFs are well-positioned to participate in private equity due to their ability to extract fee concessions, and the potential to foster collaboration across their portfolio companies (and perhaps across those of other SWFs).

Conclusions

- Many SWFs have increased their allocation to private equity as they have sought higher returns in a low-yield environment.
- SWFs and other large investors have put pressure on traditional fee and investment structures and have also increased their focus on co-investment and direct investment opportunities.
- SWFs face common challenges in measuring risk, data and analytics, and investment and operational due diligence.
- SWFs face unique challenges in managing additional constraints imposed by their mission, other assets, investment horizon, policy and political constraints, and staffing resources.
- As long-horizon investors, SWFs are well-positioned to participate in private equity due to their ability to extract fee concessions, and the potential to foster collaboration across their portfolio companies (and perhaps across those of other SWFs).

Conclusions

- Many SWFs have increased their allocation to private equity as they have sought higher returns in a low-yield environment.
- SWFs and other large investors have put pressure on traditional fee and investment structures and have also increased their focus on co-investment and direct investment opportunities.
- SWFs face common challenges in measuring risk, data and analytics, and investment and operational due diligence.
- SWFs face unique challenges in managing additional constraints imposed by their mission, other assets, investment horizon, policy and political constraints, and staffing resources.
- As long-horizon investors, SWFs are well-positioned to participate in private equity due to their ability to extract fee concessions, and the potential to foster collaboration across their portfolio companies (and perhaps across those of other SWFs).

Conclusions

- Many SWFs have increased their allocation to private equity as they have sought higher returns in a low-yield environment.
- SWFs and other large investors have put pressure on traditional fee and investment structures and have also increased their focus on co-investment and direct investment opportunities.
- SWFs face common challenges in measuring risk, data and analytics, and investment and operational due diligence.
- SWFs face unique challenges in managing additional constraints imposed by their mission, other assets, investment horizon, policy and political constraints, and staffing resources.
- As long-horizon investors, SWFs are well-positioned to participate in private equity due to their ability to extract fee concessions, and the potential to foster collaboration across their portfolio companies (and perhaps across those of other SWFs).

References

- W. Kinlaw, M. Kritzman, and J. Mao, “The Components of Private Equity Performance: Implications for Portfolio Choice,” forthcoming in the *Journal of Alternative Investments*
- L. Fang, V. Ivashina, J. Lerner, “The Disintermediation of Financial Markets: Direct Investing in Private Equity,” *Journal of Financial Economics*, 116(1), April 2015.
- Y. Hochberg and J. Rauh, “Local Overweighting and Underperformance: Evidence from Limited Partner Private Equity Investments,” *The Review of Financial Studies*, 26(2), 403-451, 2013.
- M. Rhodes-Kropf, L. Viceira, J. Dionne, and N. Burbank, “Texas Teachers and the New Texas Way,” Harvard Business School Case 214-091, April 2014 (Revised June 2014).
- M. Sorensen and R. Jagannathan, “The Public Market Equivalent and Private Equity Performance,” *Financial Analysts Journal*, 71(4), July/August 2015.
- L. Adamson, “Sovereign Wealth Funds Put the Pressure on Private Equity,” *Institutional Investor*, September 24, 2013, accessed July 2015 at <http://www.institutionalinvestor.com/Article/3258198/Sovereign-Wealth-Funds-Put-the-Pressure-on-Private-Equity.html>
- G. Elton, B. Halloran, H. MacArthur, and S. Varma, “Sovereign Wealth Funds Could Be Private Equity’s New Best Friend,” *Forbes / Bain Insights*, June 19, 2012, accessed July 2015 at <http://www.forbes.com/sites/baininsights/2012/06/19/sovereign-wealth-funds-could-be-private-equitys-new-best-friend/>
- “Sovereign Wealth Funds Increase Allocations to Private Equity,” *Opalesque, Private Equity Strategies*, July 11, 2014, accessed July 2015 at <http://www.opalesque.com/private-equity-strategies/100/sovereign-wealth-funds-increase-allocations-to-private-equity.html>
- State Street Global Exchange Private Equity Index, accessed July 2015 at <http://www.ssgx.com/peindex/>.



IFSWF *Milano*

THE 7TH ANNUAL MEETING INTERNATIONAL FORUM OF SOVEREIGN WEALTH FUNDS



Fondo Strategico Italiano