

Public Agenda Item #13

** Education Item: Valuation Practices in Private Markets*

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Private Markets Valuation

Agenda for Educational Item



- Overview of the operating environment
- Operational and financial diligence reviews
- Private equity processes and procedures
- Flow through to performance and reporting

Valuation Analysis

Accounting Standards



- GASB Statement #72 adopted by ERS for Fiscal Year 2016
- Managers report Net Asset Value (NAV) of investment to ERS
- ERS required to verify the consistent application of these standards



Investments for which
fair value is assigned by
ERS staff



Investments for which
fair value is assigned by
ERS managers

What is fair value?

"The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date."

Operating Environment

Timeline



- 1964: First modern leveraged buyout transaction
- 1989: KKR buys RJR Nabisco (“Barbarians at the Gate”)
- 2008: Fair value accounting adopted in private equity
- 2016: ERS adopts GASB 72 for fair value accounting
- 2017: SEC sets valuation as an enforcement priority
- 2020: Standards raised for auditor independence

- Clear accounting standards result in more accurate valuations

Fair Value Measurement and Private Equity Fund Interim Valuations

Sefiloglu, University of London 2021

The adoption of fair value accounting significantly increased the accuracy of interim valuations of buyout funds.

The improvement in valuation accuracy is persistent and not a temporary result depending on market-related factors.

Before adoption of ASC 820:

- average buyout investment was sold at **100%** over book value

After adoption of ASC 820:

- average buyout investment was sold at **16%** over book value

Operating Environment

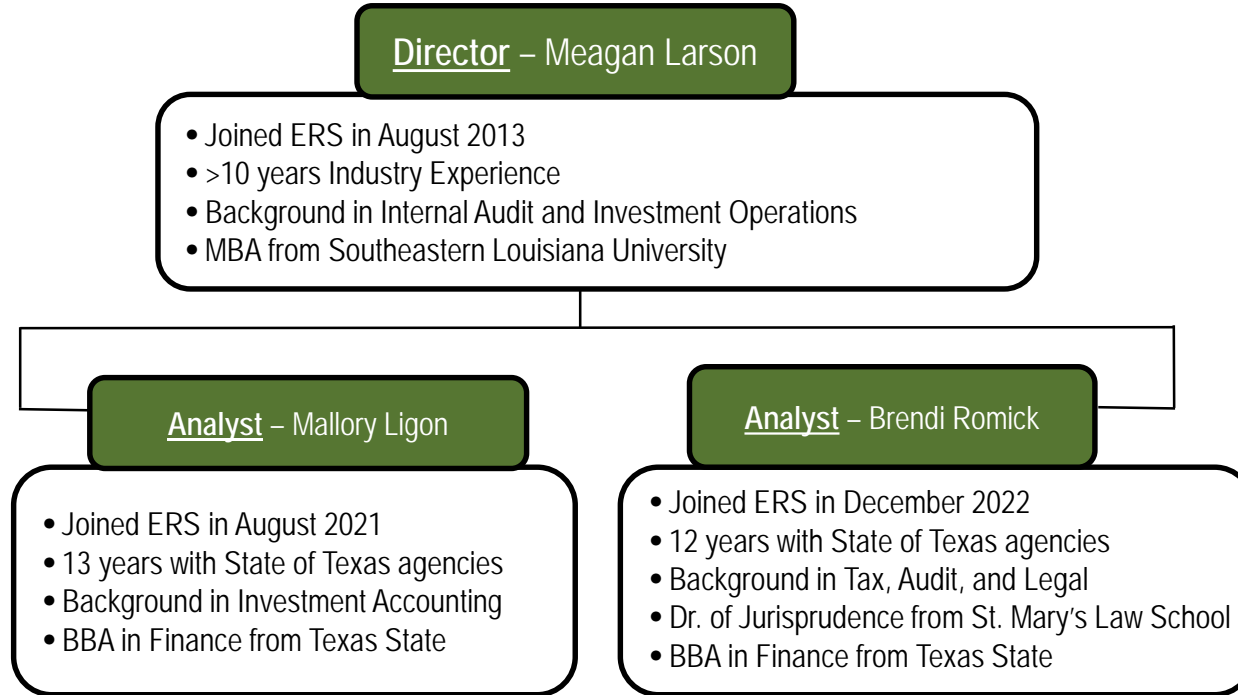
Valuation Ecosystem



- Accounting Boards
- Industry Organizations
- Independent Auditors
- Government Regulators
- Fund Counsel

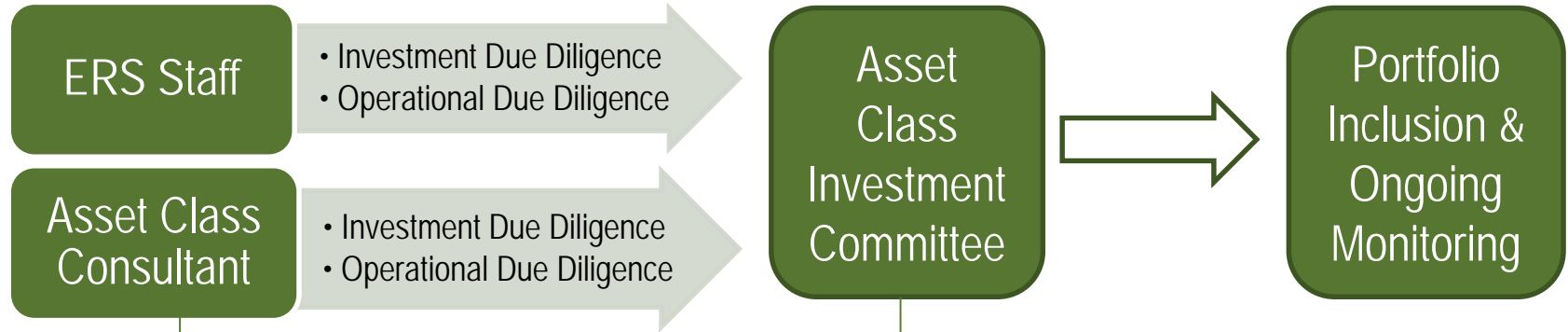
Valuation Diligence

Operational & Financial Diligence Team



Valuation Diligence

Due Diligence Framework



Asset Class Consultant roster includes:

- Aksia for private equity
- Meketa for real estate
- CBRE for infrastructure
- Albourne for hedge funds
- NEPC for other asset classes

Per IPS, each ACIC includes:

- ERS IAC Member
 - ERS Executive Director
 - ERS Chief Investment Officer
 - ERS Asset Class Director
- plus ERS Legal, Compliance

Valuation Diligence

Process Review



- Valuation Policy
 - Written document that defines the following:
 - Accounting standard
 - Valuation methodologies
 - Roles and responsibilities of the Valuation Committee
 - Use of external valuation reviews

Valuation Diligence

Process Review



- Valuation Committee
 - Governing body within a firm that is responsible for the review and approval of investment valuations
 - Best practices for valuation committees include:
 - Mix of investment and non-investment members, with majority comprised of non-investment members
 - Meet formally on a quarterly basis
 - Defined approval process for each investment's valuation

Valuation Diligence

Process Review



- Manager quarter-end procedures
 - After valuations are finalized, procedures are performed in order to create investor quarter-end capital account statements
 - Who is responsible for review?
 - What teams are involved?
 - When are investor statements sent out?
 - How are statements received by investors?

Private Equity Program

Current Portfolio



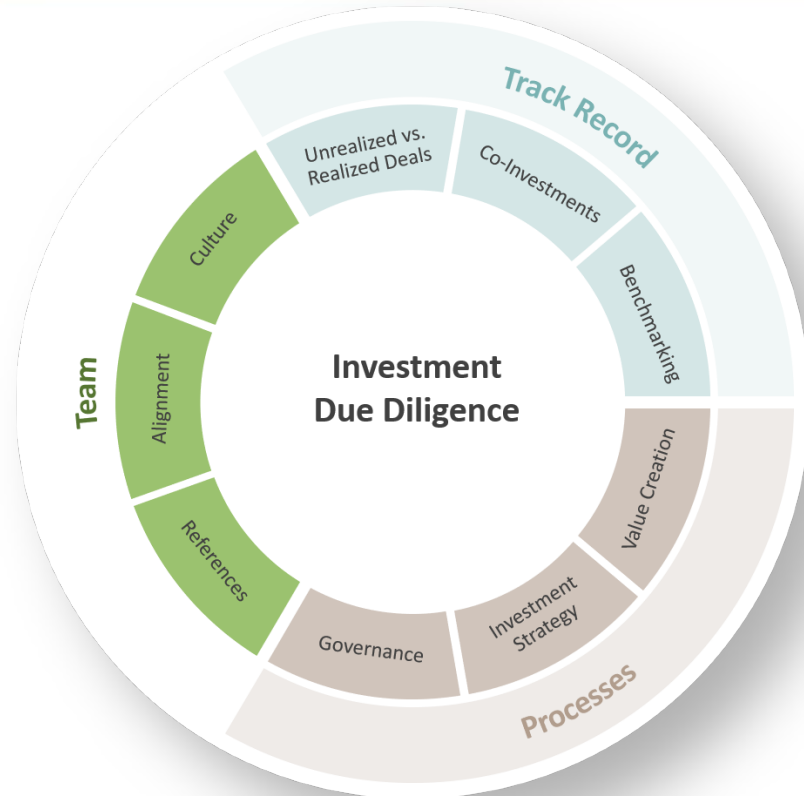
- ~58% of private equity portfolio is invested with key managers

	Top 10 Managers	Remaining Managers (33)
Total Economic Exposure	\$5.3 billion	\$3.9 billion
Funds	50	56
Co-investments	20	36
LPAC Seats	41	46

Private Equity Program

Investment Due Diligence

- Areas of focus include
 - Team and Firm Culture
 - Organizational Processes
 - Track Record



Private Equity Program

Investment Due Diligence



- Performance is evaluated at different levels using several metrics

Individual investments

- Gross internal rate of return (IRR)
- Multiple of invested capital (MOIC)

Fund overall

- Net internal rate of return (IRR)
- Total value to paid-in capital (TVPI)
- Distributed to paid-in capital (DPI)
- Public market equivalent (PME)

Private Equity Program

Investment Due Diligence



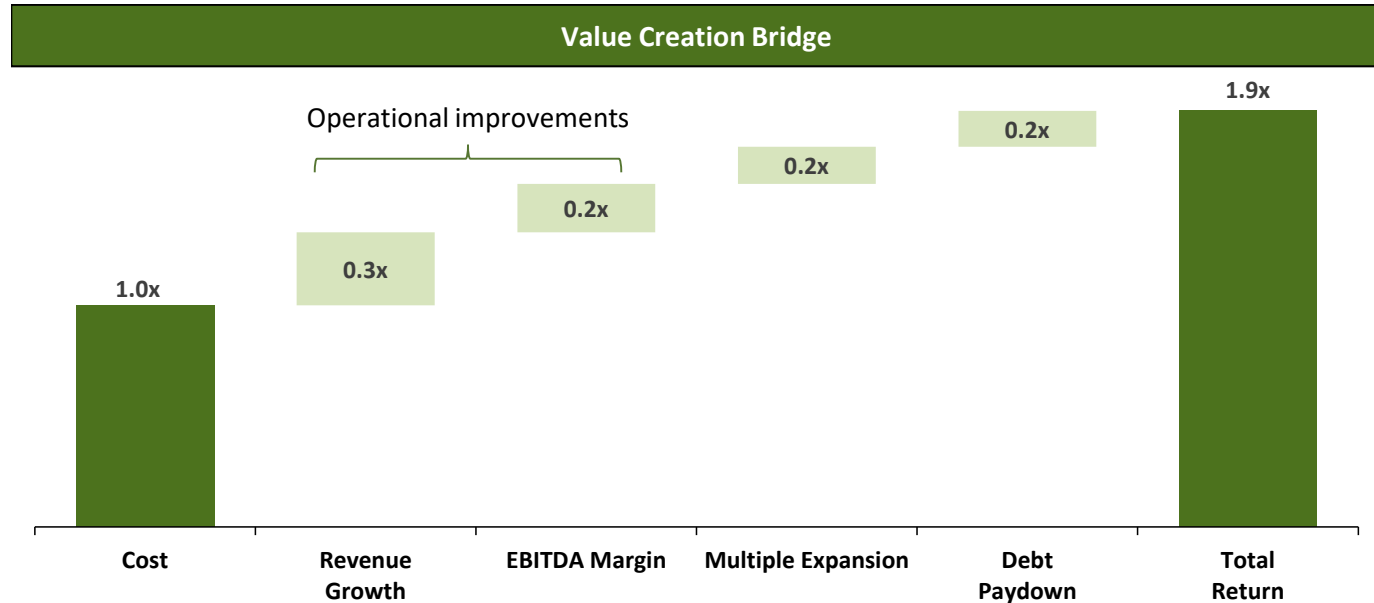
- Realized track record
 - Demonstrated results, valuations typically set by the market
 - Attributes of exits (sale, public offering, etc.)
 - Individual investment performance
 - Multiple of invested capital (MOIC), gross internal rate of return (IRR)
 - Value creation results

Private Equity Program

Investment Due Diligence



- Three elements of value creation
 - Operational improvements
 - Multiple expansion
 - Debt paydown



Private Equity Program

Investment Due Diligence

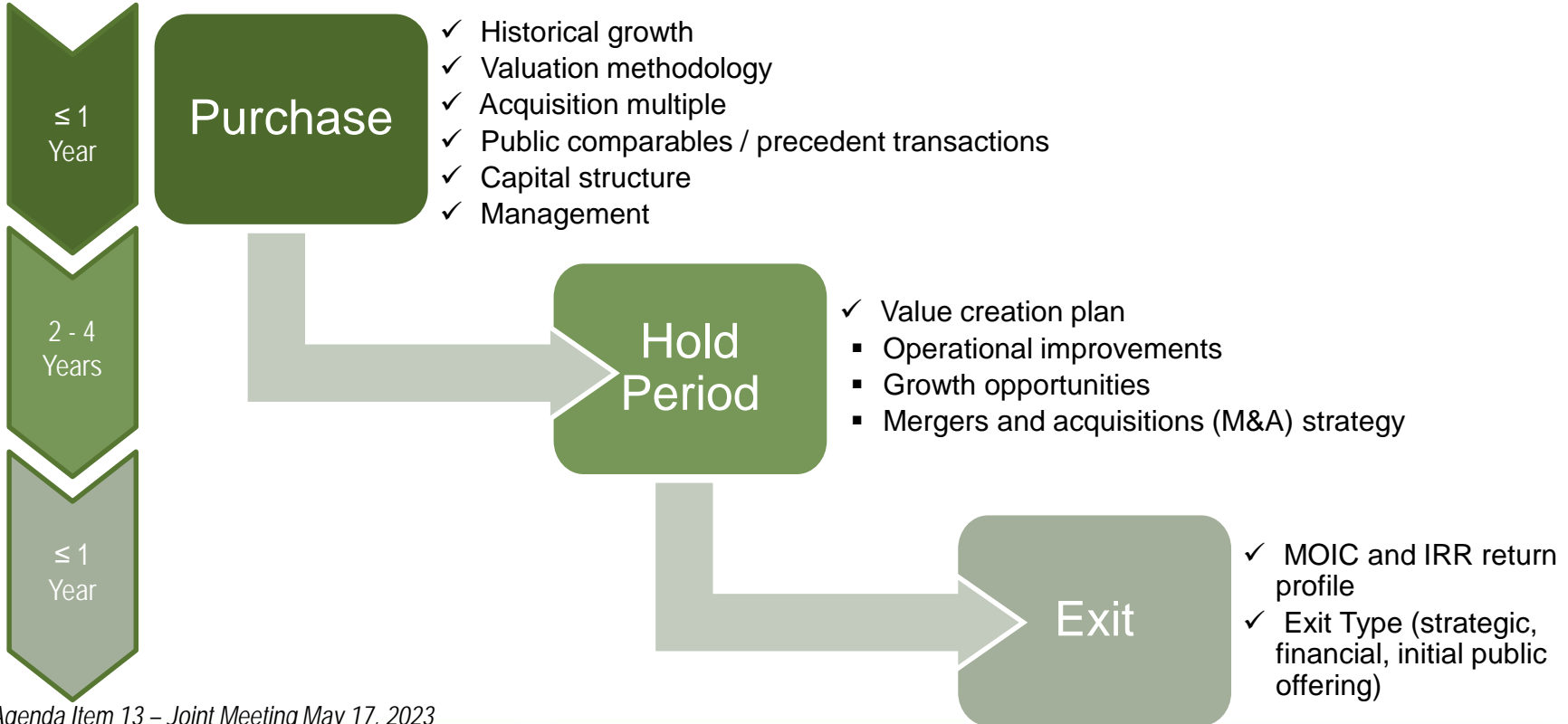


- Unrealized track record
 - Purchase prices paid for acquired assets
 - Financial performance since acquisition
 - Current valuations from mark-to-model approaches
 - Valuation trajectories

Private Equity Program



Co-investments



Private Equity Program

Portfolio Monitoring



Private Equity Program

Sample Schedule of Investments



Fund X Schedule of Investments Q4 2022

(\$ in millions)

Investment	Status	Industry	Invested	Realized	NAV	Total Value	Multiple	Q3'22 Mult.	Q4'21 Mult.
Investment A	Realized	Industry A	\$60.7	\$78.9	\$0.0	\$78.9	1.3x	1.3x	1.3x
Investment B	Realized	Industry A	103.8	235.3	0.0	235.3	2.3x	2.3x	2.3x
Investment C	Realized	Industry A	24.9	88.0	0.0	88.0	3.5x	3.5x	3.5x
Investment D	Realized	Industry A	88.1	166.8	0.0	166.8	1.9x	1.9x	1.9x
Investment E	Realized	Industry A	33.5	24.2	0.0	24.2	0.7x	0.7x	0.7x
Investment F	Realized	Industry A	87.4	192.0	0.0	192.0	2.2x	2.2x	2.2x
Investment G	Realized	Industry A	39.0	112.7	0.0	112.7	2.9x	2.9x	2.9x
Investment H	Realized	Industry A	38.9	90.6	0.0	90.6	2.3x	2.3x	2.3x
Investment I	Realized	Industry A	121.0	369.1	0.0	369.1	3.0x	3.0x	3.0x
Investment J	Realized	Industry A	71.0	210.1	0.0	210.1	3.0x	3.0x	3.0x
Investment K	Realized	Industry A	117.5	345.3	2.0	347.2	3.0x	2.2x	1.6x
Investment L	Unrealized	Industry A	138.2	3.0	489.9	492.9	3.6x	3.6x	3.0x
Total			\$923.9	\$1,915.9	\$491.9	\$2,407.8	2.6x	2.5x	2.4x

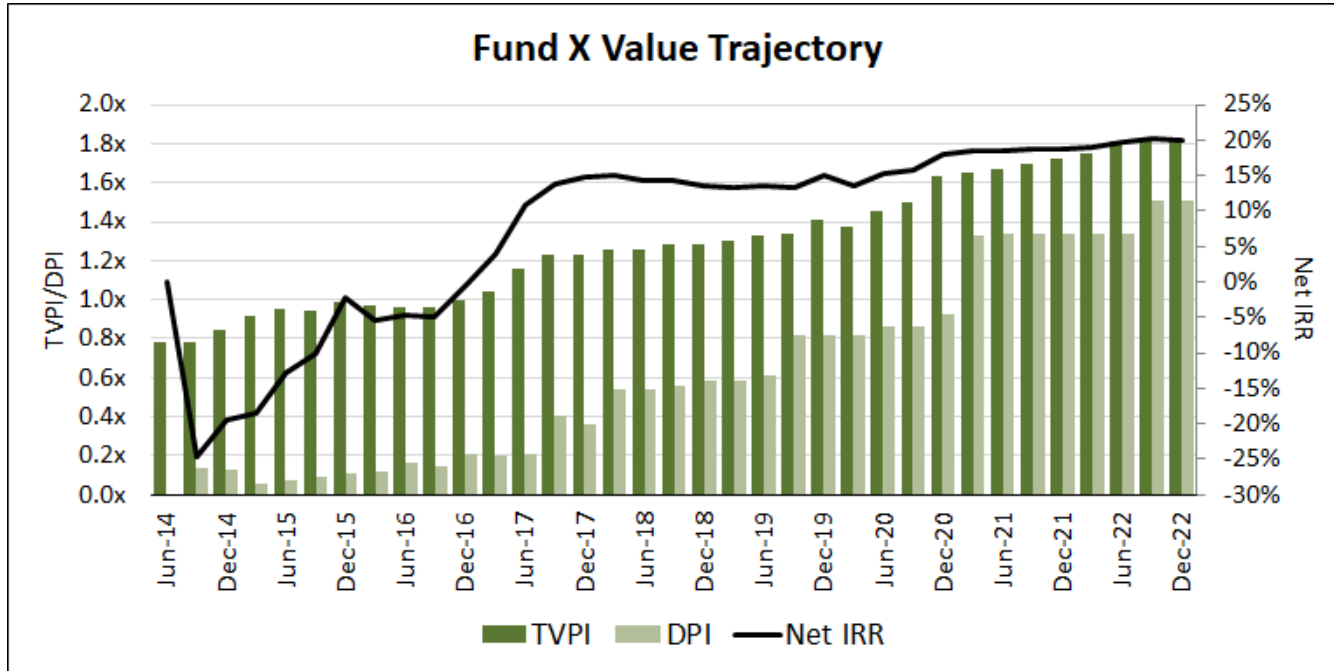
Investments	Gross MOIC	Gross IRR
12	2.6x	26%

Private Equity Program

Sample Fund Valuation Trajectory



- Fund performance often subject to the “J curve” effect early on

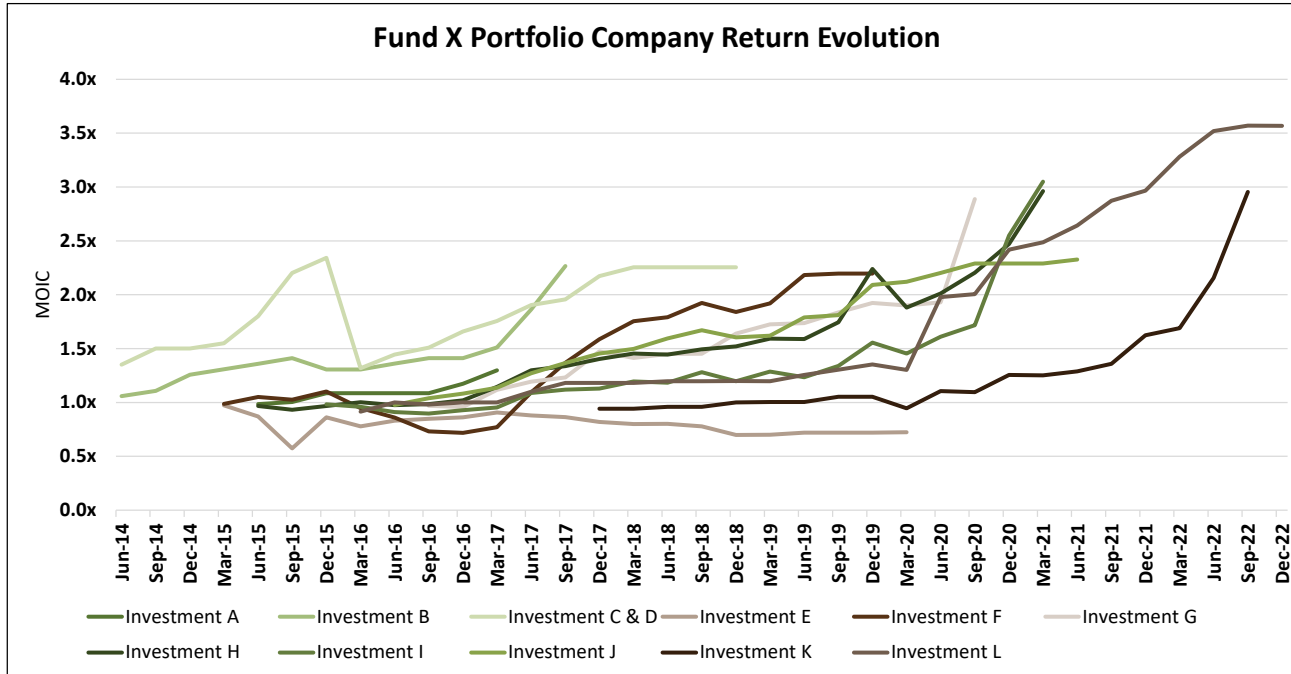


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Sample Fund Valuation Trajectory



- Average 35% value uptick at exit versus 1 year prior



Private Equity Program

Academic Insights



- Stepstone is a global private markets investment and advisory firm
- Published research paper in April 2023 analyzing private equity valuations

General Partners	Exits	Premium 3QP	Premium 5QP
100	2,406	24%	42%

Private Equity Program

Academic Insights



- Better private equity firms = more conservative valuations

Do Private Equity Funds Manipulate Reported Returns?

Brown et al, University North Carolina 2017

Some underperforming managers inflate reported returns during fundraising. However, those managers are less likely to raise a next fund, suggesting that investors can see through the manipulation.

In contrast, the authors find that top-performing funds likely understate their valuations. Such conservatism helps build a cushion against negative idiosyncratic returns in the future.

“...the behavior of GPs and investors is influenced by the acknowledgment of asymmetric information and the potential for gaming of reported performance.”

“...it appears that sophisticated investors are unlikely to systematically misallocate capital based on false signals from GPs.”

Governance Framework

Investment Valuation Committee (IVC)



- IPS updated require staff to review the valuations applied to all investments for reasonableness and reliability
- IVC meets quarterly and as needed to do so: reviews private market NAVs, valuations of public market assets, and special situations
- Composition: Director of OF&D (chair), CIO, DCIO, plus one representative each from public markets and private markets

Governance Framework

Valuation Lags



- Lag effects in private markets comes from several sources
 - Changes in public markets incorporated slowly
 - Four quarters for public market changes to flow through fully
 - Time needed to receive reporting
 - Preparation and distribution of account statements

Valuation Analysis

Performance Measurement



- Current ERS reporting approach akin to cash accounting
- Investment values are reported as known on a given date
- Reporting lag in private markets make quarter end numbers a mix

Governance Framework

Other Controls at ERS



- Finance including Investment Accounting
- Office of General Counsel including Investment Attorneys
- Internal Audit including Investment Compliance
- External Auditors

Governance Framework

External Reporting



- Annual Comprehensive Financial Report
- Annual asset class reviews with Board/IAC
- Quarterly performance reporting to Board/IAC
- Quarterly confidential reporting to Board via Portal

Discussion