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IPE Seminars

Challenges and Approaches in Performance Analysis of Illiquid Assets

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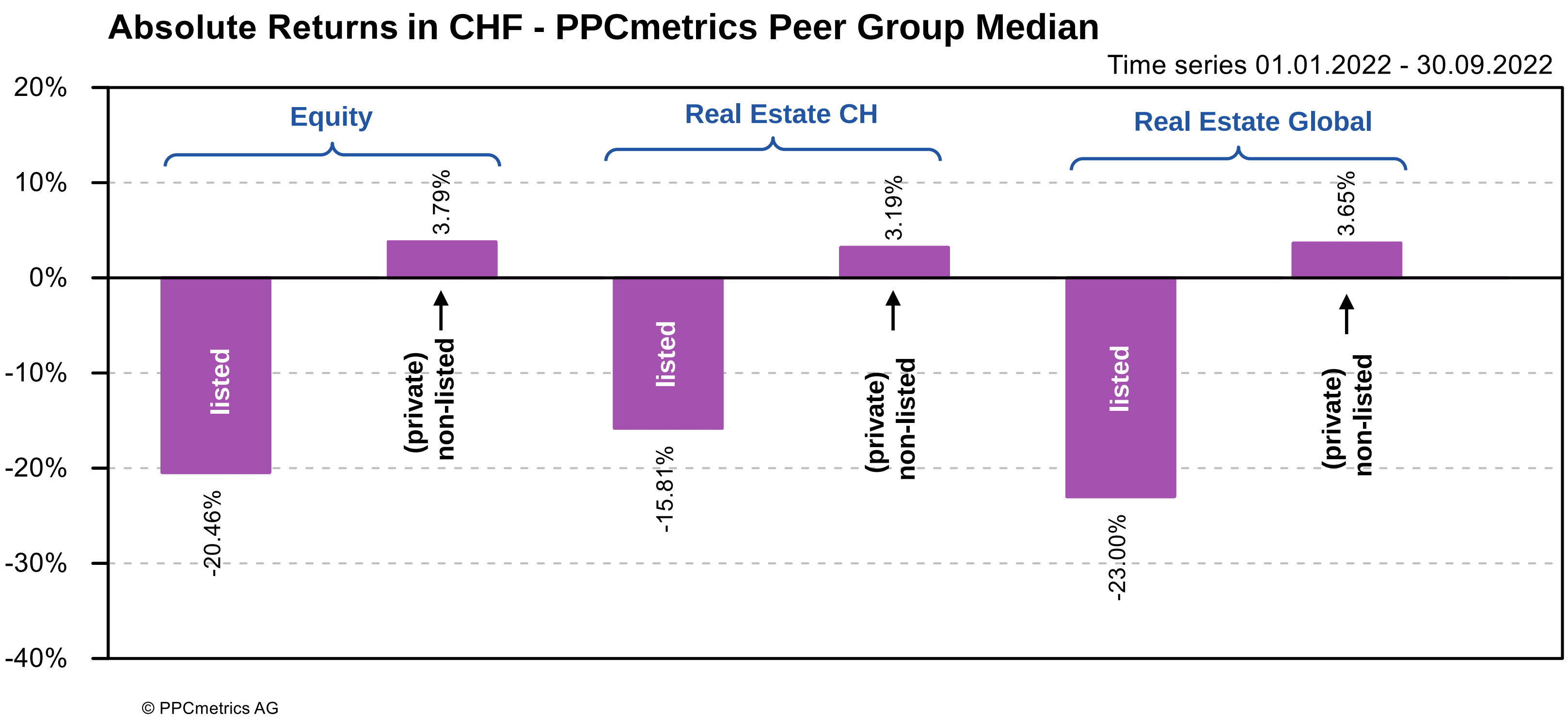
Zurich, 27 April 2023

Outline

- There has recently been an **increase** in **allocations** to **illiquid assets**, particularly in a low interest rate environment.
- Illiquid assets **cannot be easily sold** or **converted into cash without a substantial loss in value** and investors demand a **higher return** for bearing these **additional risks**.
- In the following, the challenges arising from the **valuations** of illiquid assets and the **implications for investors** are discussed.
- In addition, **modern approaches in performance analysis** of illiquid assets are shown.
- Finally, issues relating to the **investment and fee structures** of illiquid assets will be addressed.

Introduction



- What explains the **significant difference** in performances of **listed** and **unlisted** assets in 2022?

Valuation Issues

Absence of Market Prices implies Model Valuation

Market

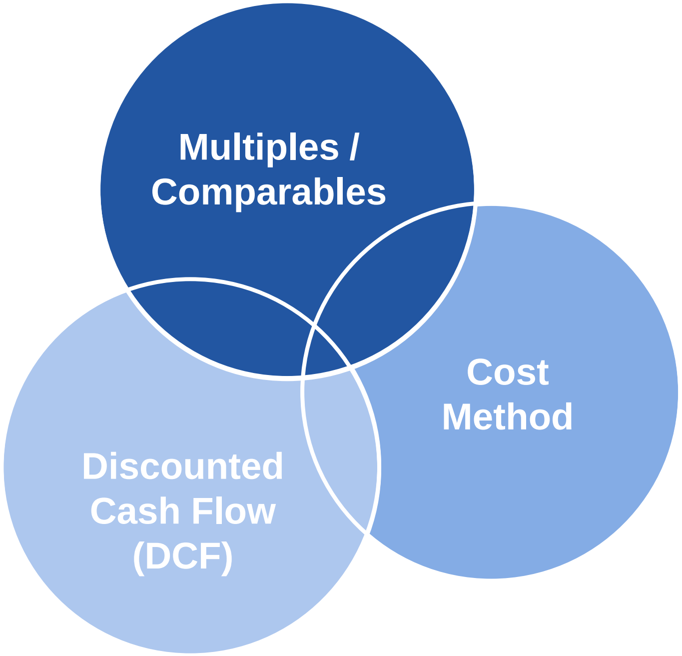
- In the **absence** of **market prices**, the **valuations** of illiquid assets are **based on models**.

Source: Shutterstock

Valuation Issues

Models depend on Inputs

Illiquid assets:
Mark-to-model



Liquid assets:
Mark-to-market

- Valuations based on models are usually **highly dependent on input variables** and prone to **discretionary influence**.

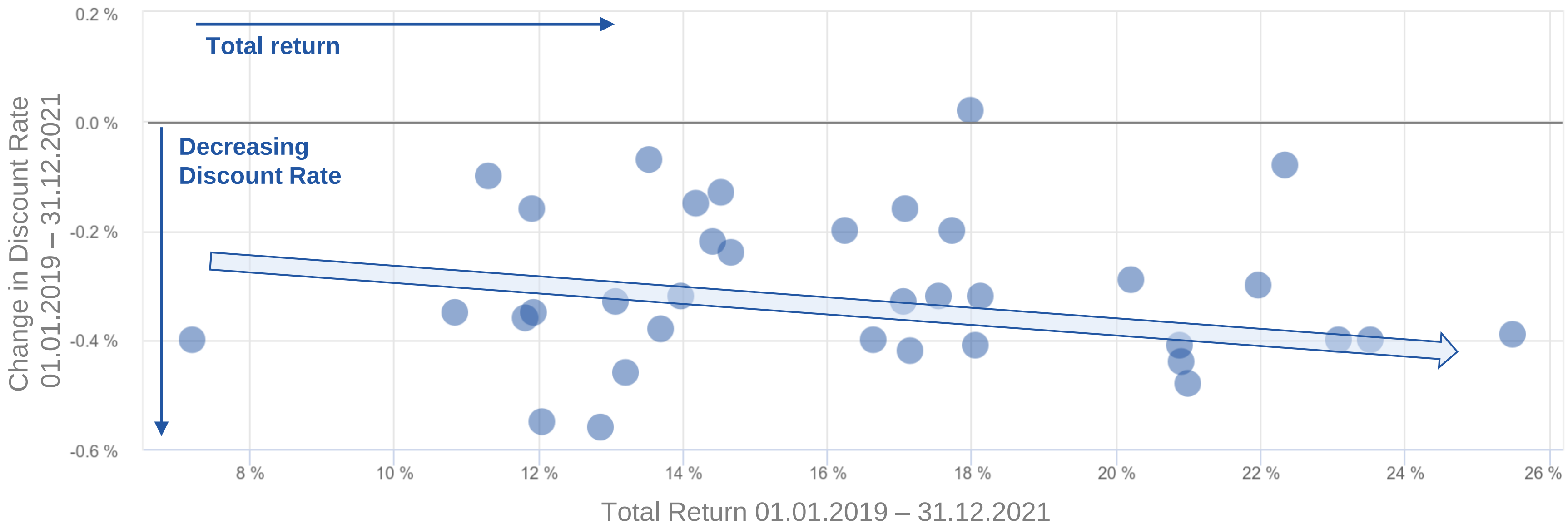
Valuation Issues

Case 1: Model Valuations vs. Total Returns

PPCmetrics Swiss Immo Tool - Swiss real estate investment foundations

Change in discount rate vs. total return

3 years (01.01.2019 – 31.12.2021)*

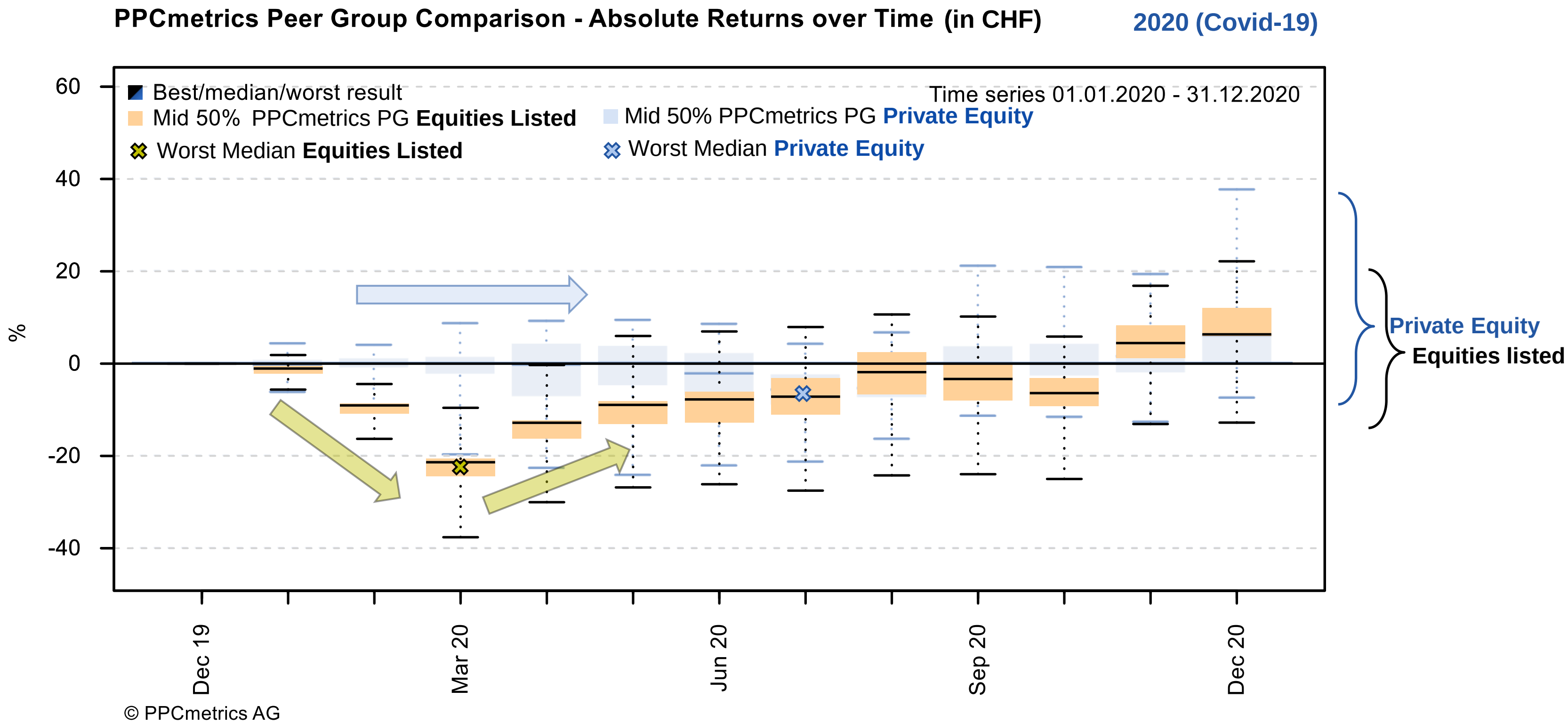


- **Reductions** in **discount rates** led to **higher returns** historically due to the **upward revaluations** of the underlying properties.

*Due to the availability of the annual reports, the period from 01.01.2019 to 31.12.2021 is analysed.

Valuation Issues

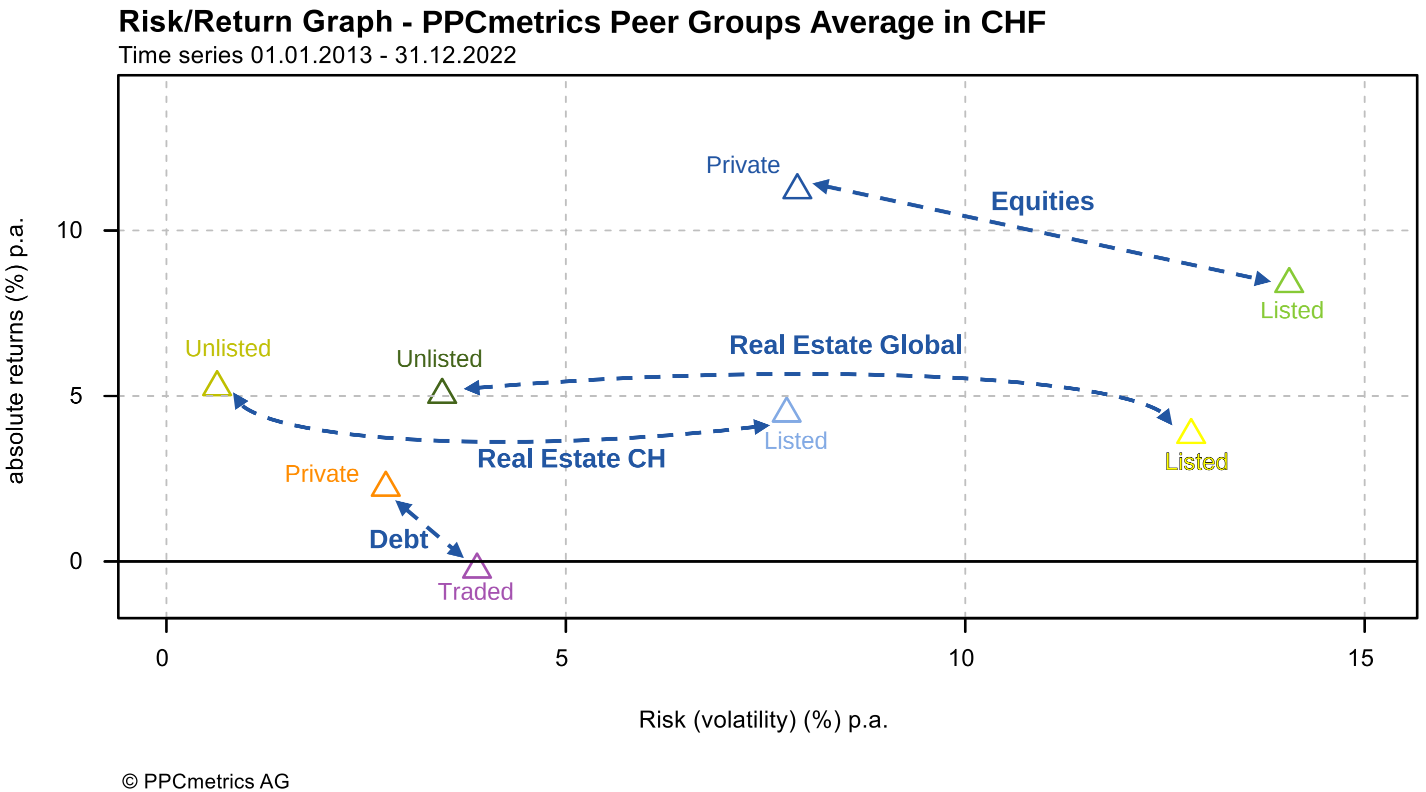
Case 2: Return Smoothing and Stale Pricing (1)



- The **volatility** of **listed equity mandates** is significantly **higher** compared to **private equity mandates**, whereas the **annual return** (median) for 2020 is **closely similar**.

Valuation Issues

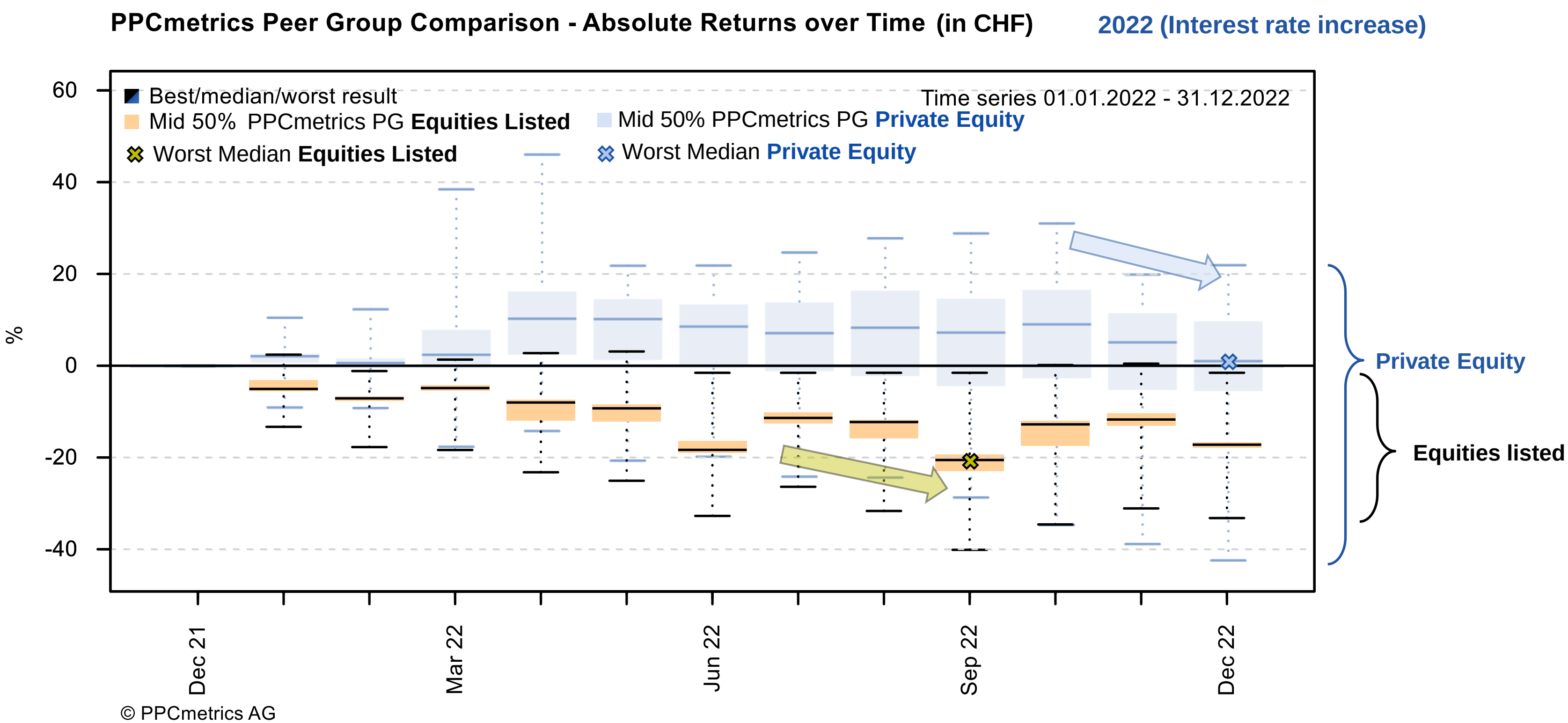
Case 2: Return Smoothing and Stale Pricing (2)



- **Return smoothing** and **stale pricing** leads to **allegedly lower volatility** and therefore an **underestimation** of **risks**.

Valuation Issues

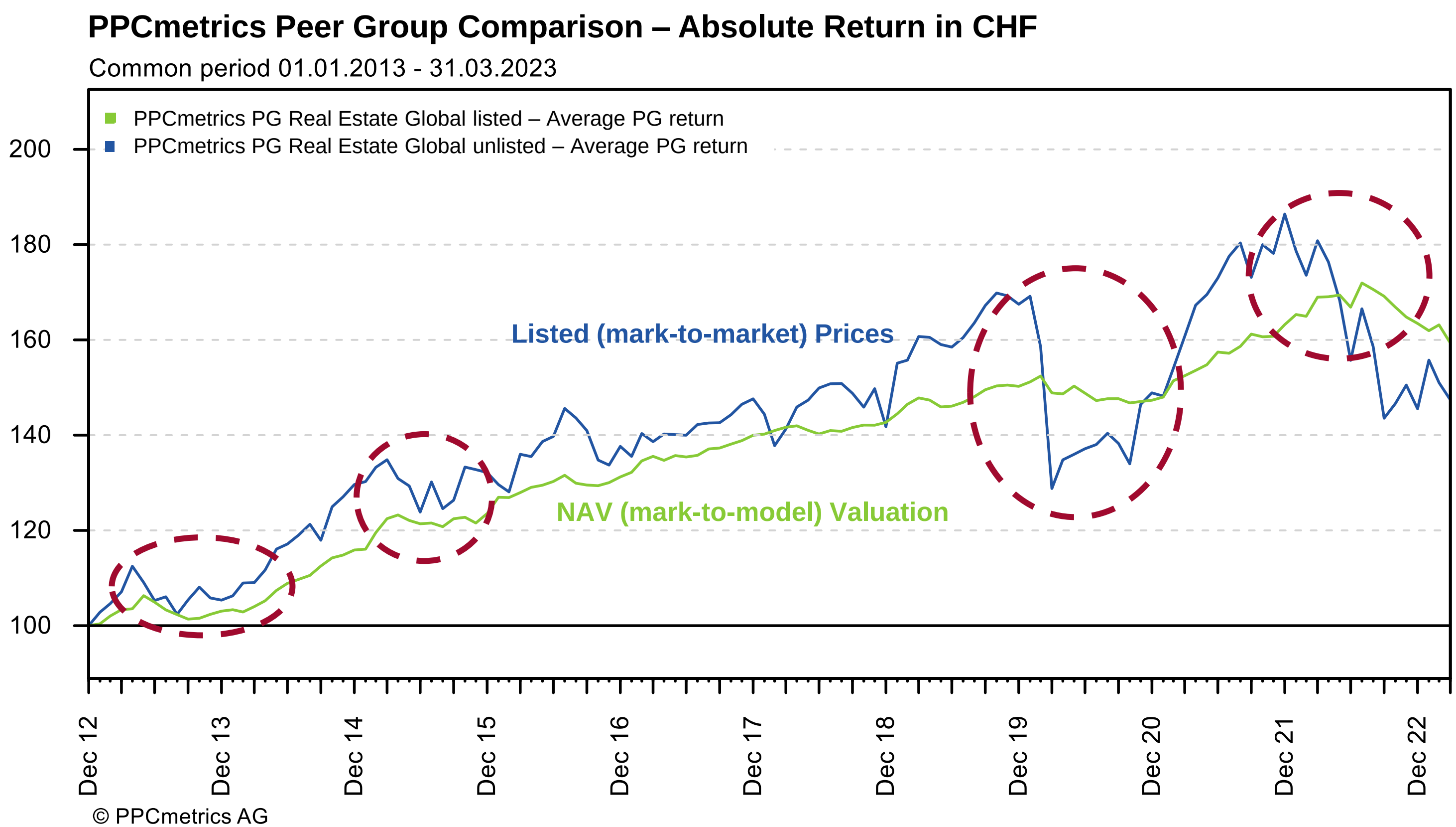
Case 3: Lagged Valuations and Correlations (1)



- While the **interest rate increase** in 2022 has been reflected in **listed equities immediately**, prices of **private equity** corrected with a **lag**.

Valuation Issues

Case 3: Lagged Valuations and Correlations (2)



- **Prices** of **unlisted real estate** usually react with a **delay** compared to **listed real estate**.

Valuation Issues

Case 3: Lagged Valuations and Correlations (3)

Correlations of Peer Group Average Returns

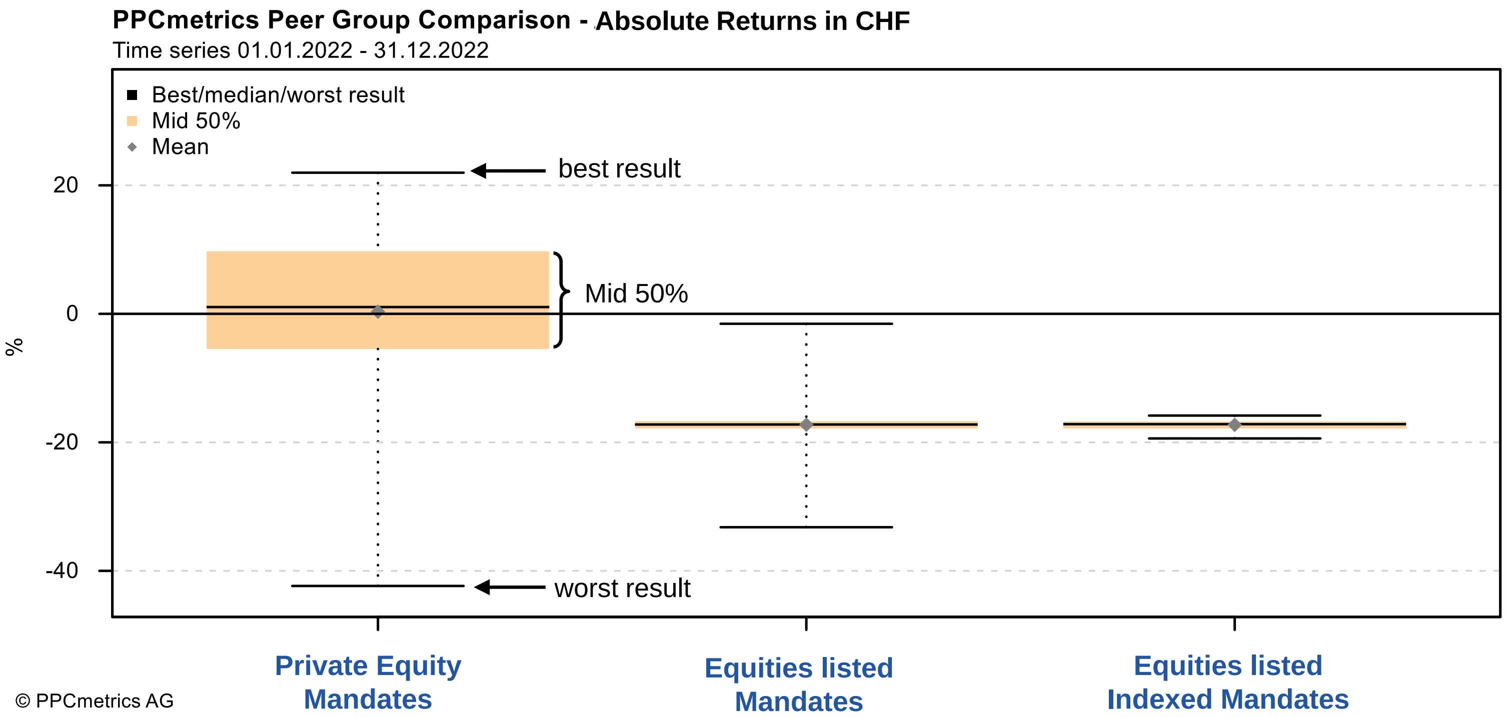
Time series: 01.01.2013 - 31.12.2022	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) **PPCmetrics PG Equities listed**	1.00							
(2) **PPCmetrics PG Private Equity**	0.22	1.00						
(3) **PPCmetrics PG Bonds Foreign Currency**	0.43	0.05	1.00					
(4) **PPCmetrics PG Private Debt**	0.36	0.70	0.09	1.00				
(5) **PPCmetrics PG Real Estate CH listed**	0.41	0.09	0.46	0.12	1.00			
(6) **PPCmetrics PG Real Estate CH unlisted**	0.03	0.13	-0.00	0.00	0.35	1.00		
(7) **PPCmetrics PG Real Estate Global listed**	0.78	0.10	0.60	0.20	0.53	0.10	1.00	
(8) **PPCmetrics PG Real Estate Global unlisted**	0.28	0.34	0.26	0.23	0.36	0.14	0.37	1.00

Correlations within Asset Class

- Due to **lagged valuations**, the **correlations** between listed and unlisted illiquid investments are **artificially lower**, both within the same asset class and with other asset classes.

Performance Analysis

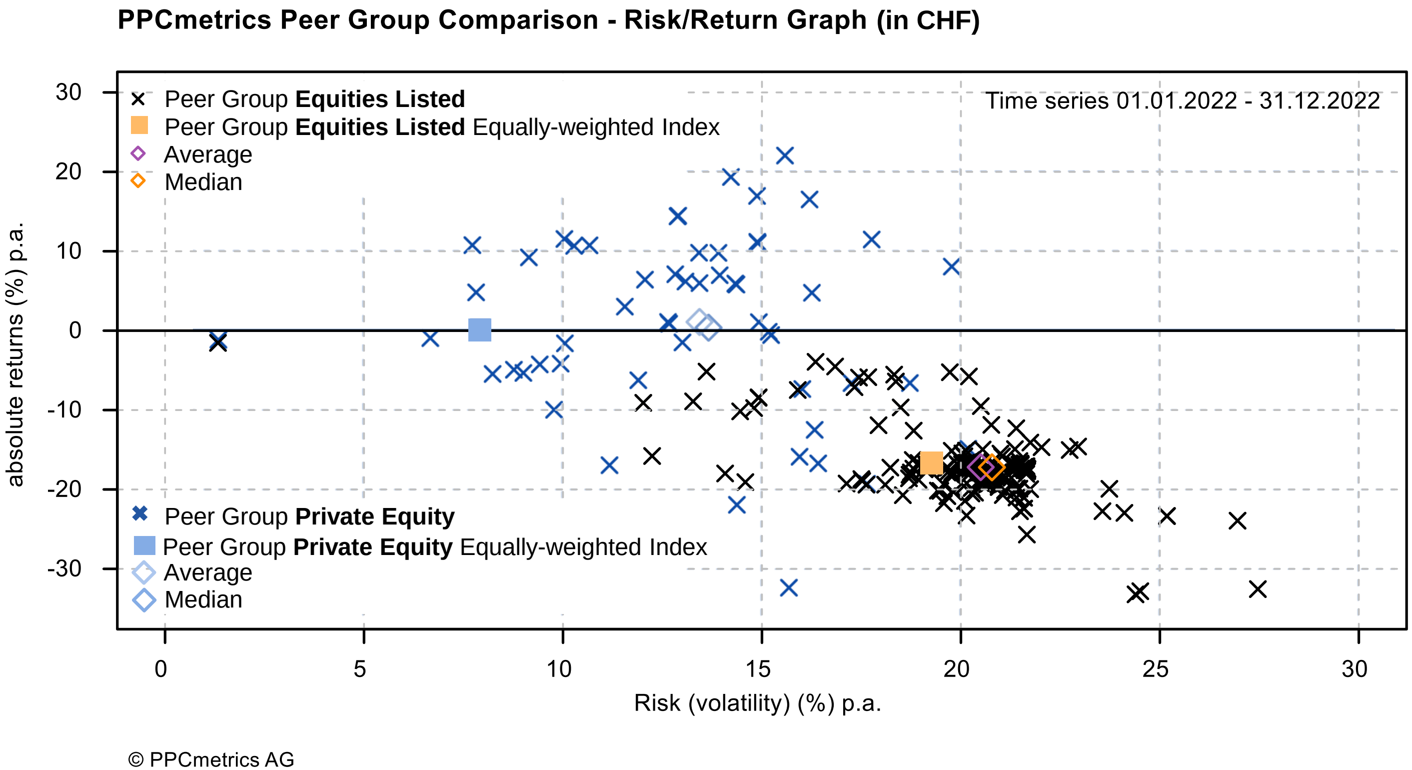
Case 4: High Dispersion of Returns (1)



- The **dispersion** of the returns in the **private equity** peer group is **large** compared to the listed equities peer group.

Performance Analysis

Case 4: High Dispersion of Returns (2)

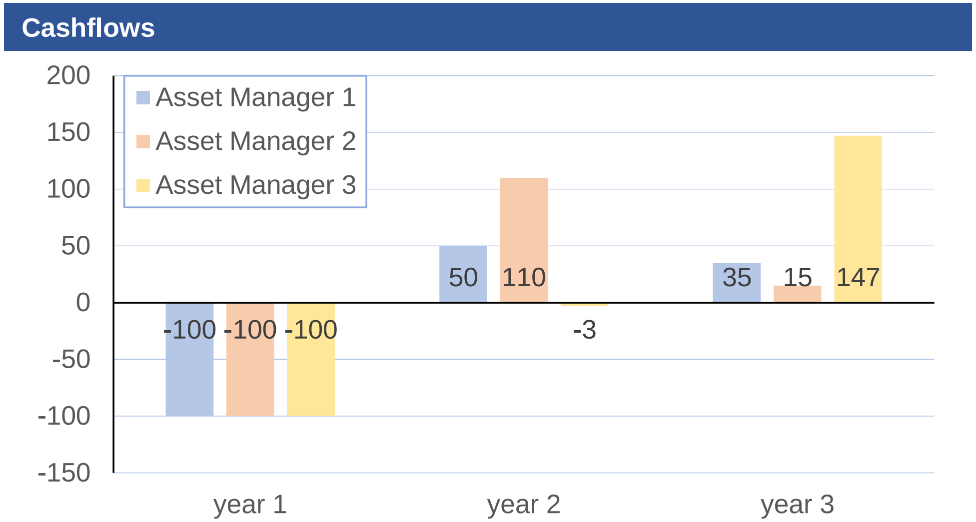


- Due to high dispersion of returns, the assessment of **private equity indices (benchmarks)** based on average returns should be carried out with **caution**.

Performance Analysis

Case 5: Performance Measurement (1)

- Who is the **best asset manager**?



- According to **traditional measures**, either **manager 2 or 3** are to be preferred.

	TWR p.a.	IRR	Multiple (TVPI)
Asset Manager 1	-14.0%	-10.8%	0.85
Asset Manager 2	15.3%	22.3%	1.25
Asset Manager 3	19.8%	19.7%	1.44

Performance Analysis

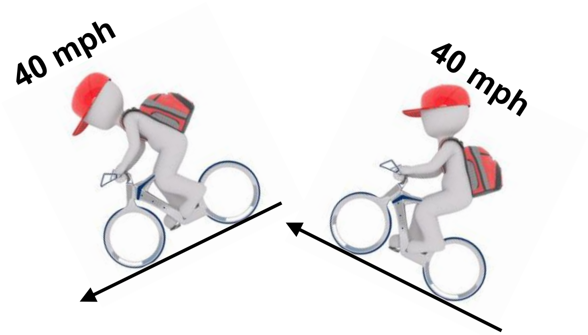
Case 5: Performance Measurement (2)

- How **meaningful** are **traditional performance measures**?

Absolute measures

Is asset manager 2's **IRR** of **22.3% good**?

Are risks and environment taken into account?



Asset manager 1 invested during the **financial crisis** of 2007-2009.

Asset manager 3 has taken out a loan to **leverage** the investment.

Are the peers considered?

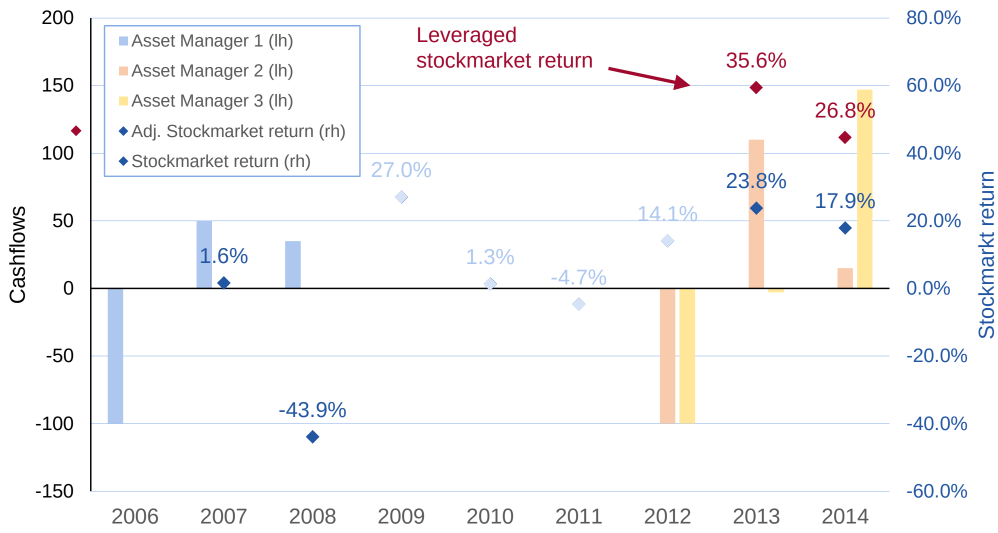
How good is asset manager 2 **compared** to peers?

Source: pixabay.com

Performance Analysis

Case 5: Performance Measurement (3)

- Considering the **market environment** and **risks**, **manager 1** is to be preferred.



Public Market Equivalent (PME):

- ✓ **Risks** and **market environment** are considered
- ✓ Allows for **comparison** with **listed investments**

	TWR p.a.	IRR	Multiple (TVPI)	PME	TWR p.a. stockmarket
Asset Manager 1	-14.0%	-10.8%	0.85	🏆 1.11	-24.5%
Asset Manager 2	15.3%	22.3%	1.25	0.99	20.8%
Asset Manager 3	19.8%	19.7%	1.44	0.83	31.1%

Investment and Fee Structures

Commitments, Target Allocation and Liquidity

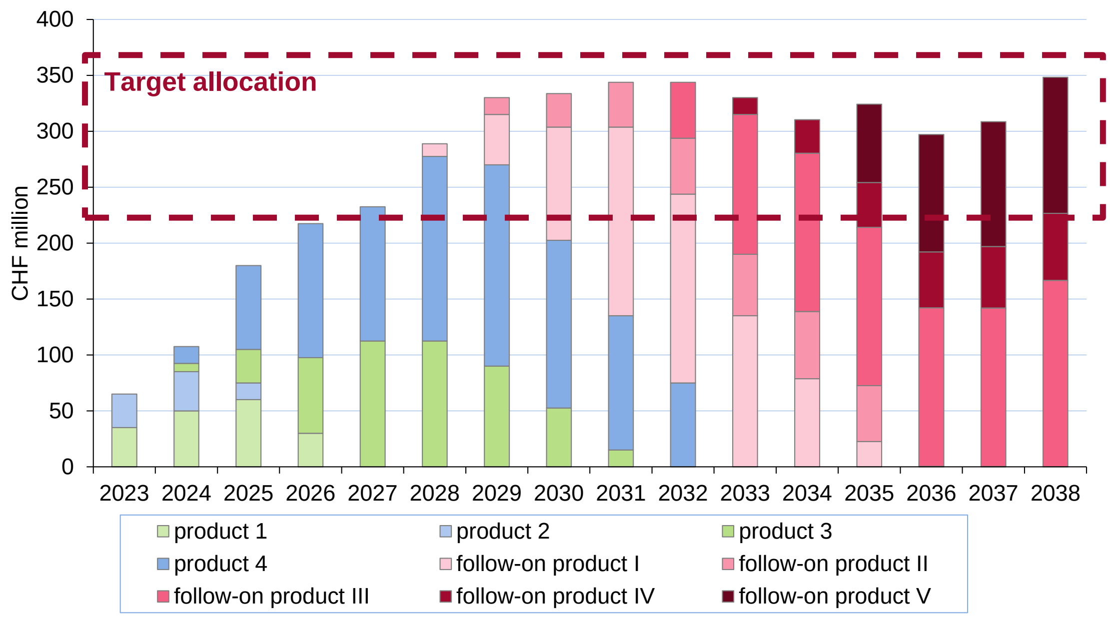
- With illiquid investments, the investor makes **commitments** that are **drawn down** and **repaid** by the asset manager over time.
- Therefore, the following **two central questions** arise:
  - How can the **target allocation** be achieved, maintained and, if necessary, reduced again?
  - How high should the **optimal liquidity level** be so that capital calls can be serviced and the costs due to liquidity are as low as possible?
- The **amount** and **timing** of the cash flows are **not known in advance** and must be **estimated**.
- **Contributions** are generally **more accurately predictable** and occur in the early years of the fund.
- **Distributions** are **dependent** on **many factors** (including the performance of the manager and the market environment) and are therefore more **difficult** to **estimate**.

Investment and Fee Structures

Case 6: Cash Flow Planning

- The **target allocation** and **optimal liquidity level** can be achieved via **expectations** of **asset managers**, **historical patterns**, **statistical simulation methods** and **qualitative assessments** of cash flows.

Simulation net investments (NAV)

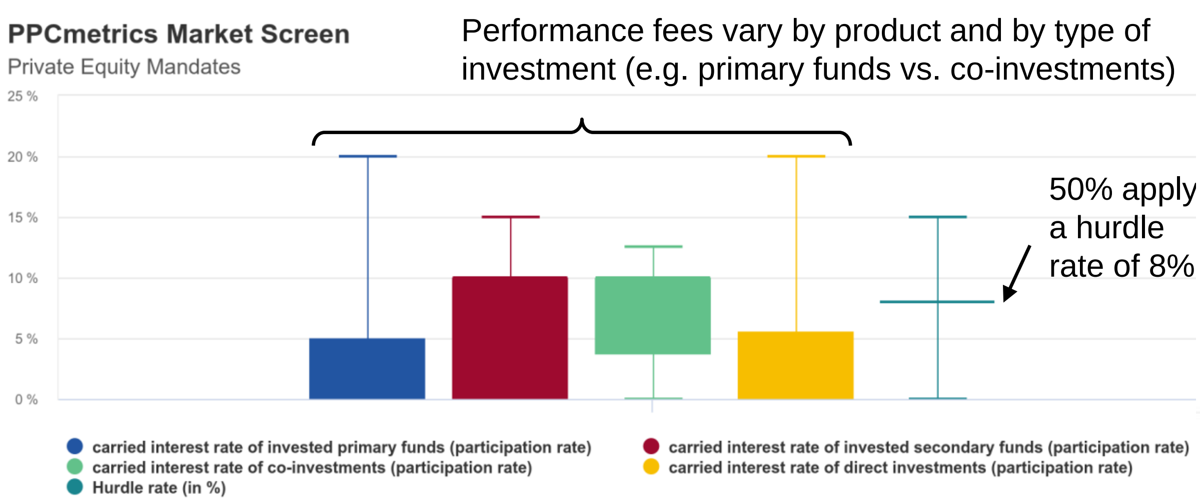


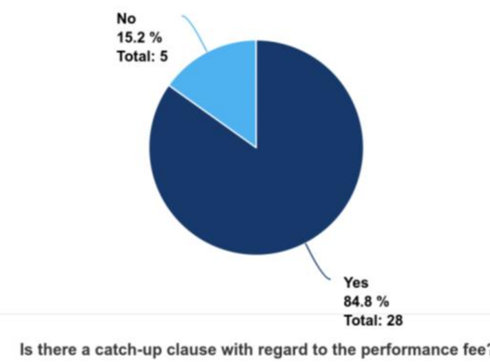
- **Investment** and **liquidity planning** should consider the **implementation** and **assumptions** about **future cash flows**.

Investment and Fee Structures

Case 7: Costs and Fee Structures

- Fee structures of illiquid investments are often **complex**, **less transparent** and **higher** than liquid investments.
- The fees typically include a **fixed management fee**, a **performance fee** (carried interest rate) and a **hurdle** above which the performance fee applies.





- Complex fee structures make it **challenging** to **compare providers**.
- In addition, **fees** are **not known in advance** due to the performance fee.

Takeaways

- Illiquid assets have a higher degree of complexity compared to traditional assets.
- Illiquidity and model valuations can lead to a smoothing of returns and therefore an underestimation of risks.
- Market development, risks and costs should be considered in performance analysis.
- In order to achieve the target allocation and optimal liquidity, it is advisable to consider the form of investment and the expected cash flows.
- It is recommended to understand the investment and fee structure and review costs for market conformity.

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