



Valuation challenges in the current environment

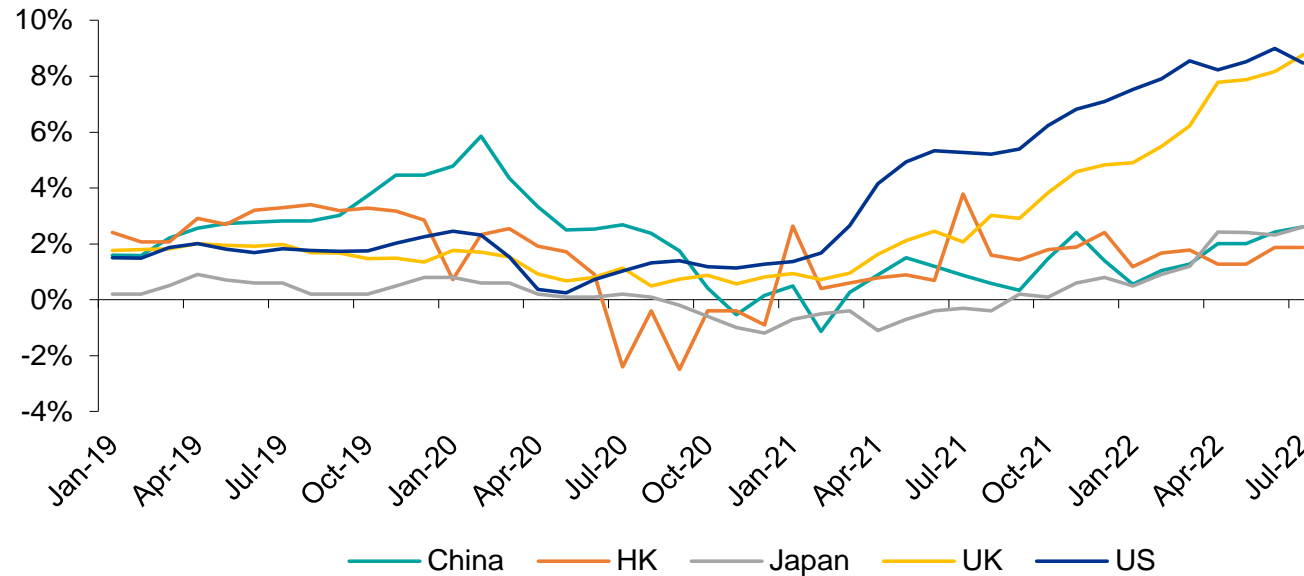
Financial Reporting Webinar Series

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Friday 7 October 2022



Both advanced economies and emerging markets record breaking record high inflation

Historical CPI % change



Source: EIU

US recorded record high inflation at 9.1% in 41 years in Jun 22

UK inflation rate rises to 40-year high of 10.1% in July 2022

Recovery from Covid



Supply chain disruption



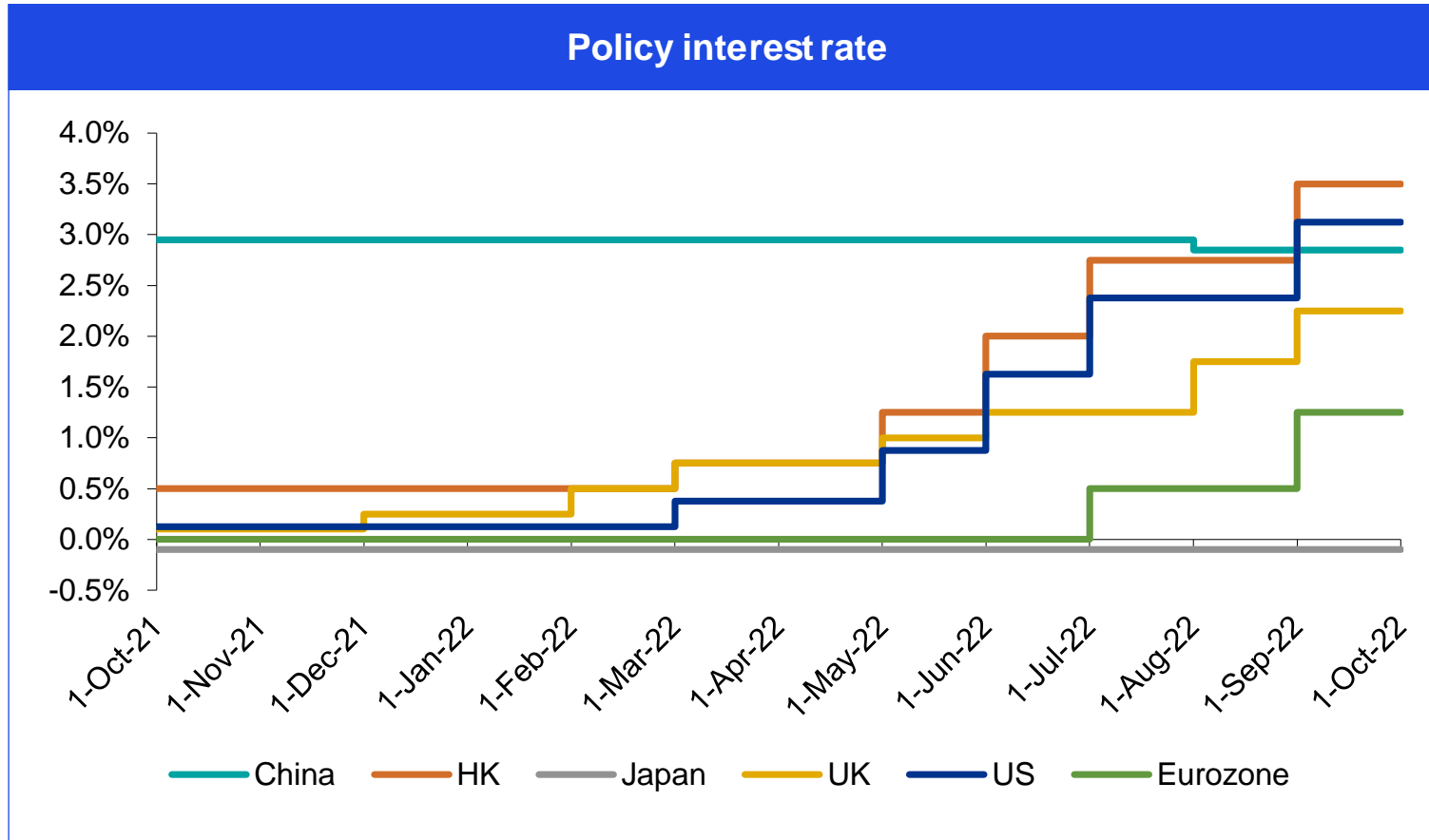
Russia-Ukraine conflict



Increase in commodity prices



Central banks raise interest rate to fight inflation



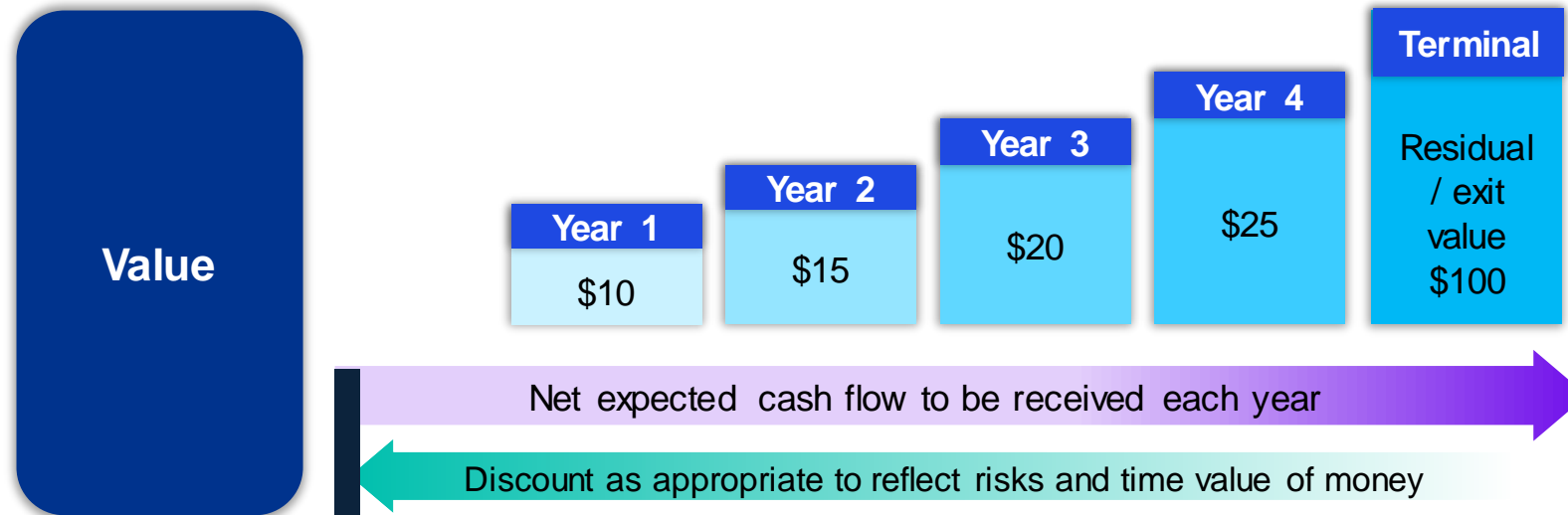
Source: Bloomberg

Policy Interest movement in 2022

Country	Rate	Movement in 2022
US	Fed Funds Target Rate	3.00%
UK	Bank of England Official Bank Rate	2.15%
Eurozone	European Central Bank Rate	1.25%
HK	HKMA Discount Window Base Rate	3.00%
China	PBOC One-year Lending Rate	-0.10%

Interest rates are expected to further increase in 2022/2023

Valuation is forward looking and market based, expected inflation and interest rate are considered in projection and discount rate



Incorporating inflation expectations on cashflow projection

- Revenue growth
- Operating margins
- CAPEX?

Incorporating inflation and interest rate expectations in discount rate

Discount Rate (WACC) = $\frac{E}{EV} \times \text{Cost of Equity} + \frac{D}{EV} \times \text{Cost of Debt} \times (1 - T)$

Inflation is expected to decline gradually over the next 18 to 24 months

Inflation Rate Forecast				
	2022	2023	2024	2025
US				
EIU	7.90%	3.70%	2.00%	1.90%
IMF	7.70%	2.90%	2.30%	2.00%
OECD	6.20%	3.40%	N/A	N/A
UK				
EIU	8.60%	8.00%	3.00%	2.00%
IMF	7.40%	5.30%	2.60%	1.90%
OECD	8.80%	5.90%	N/A	N/A
HK				
EIU	2.30%	2.80%	0.60%	0.70%
IMF	1.90%	2.10%	2.30%	2.50%
China				
EIU	2.40%	2.80%	2.30%	2.10%
IMF	2.10%	1.80%	2.00%	2.00%
OECD	2.20%	3.10%	N/A	N/A

Source: EIU, IMF and OECD

Projection:

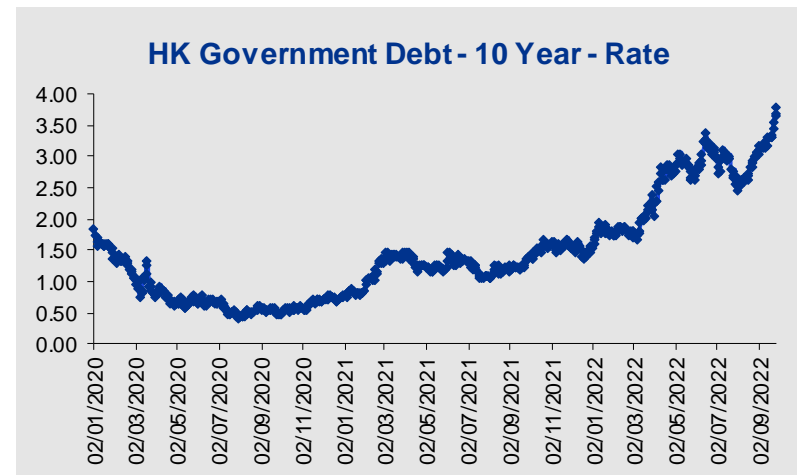
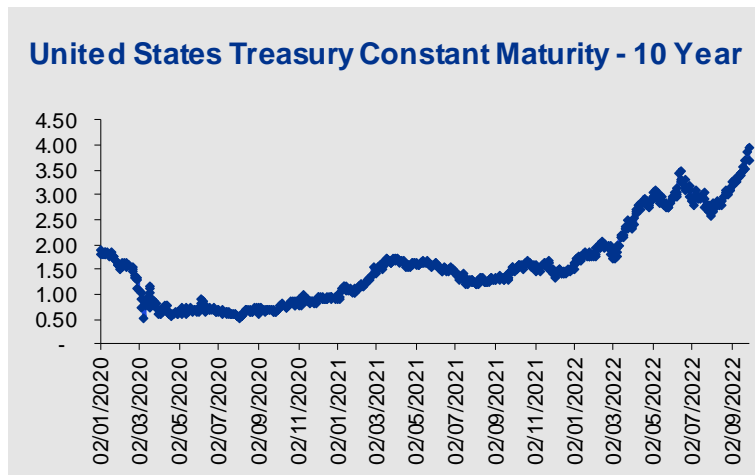
- **Extent to which inflation would affect future costs of material and labour?**
- **Can company increase the prices of products to compensate the increase in production costs?**
- **How would increase in cost affect the investment plan? What about maintenance CAPEX ?**

Risk free rate for most countries increases attributable to rising inflation and interest rate

$$\text{Discount Rate (WACC)} = \frac{E}{EV} \times \text{COE} + \frac{D}{EV} \times \text{COD} \times (1 - T)$$

$$\begin{aligned} \text{Cost of Equity} &= \text{Risk free rate} + \text{Beta} \times \text{ERP} + \text{Specific risk premium} \\ \text{Cost of Debt} &= \text{Risk free rate} + \text{Credit spread} \times (1 - T) \end{aligned}$$

Risk free rate



Source: Capital IQ



Value of properties suppressed amid rising interest rate

Homebuyers



Rising interest rate to build up repayment pressure



Fewer demand in the market



Slip in home prices due to weakened buying sentiment

Investors

BUY ←
SELL →



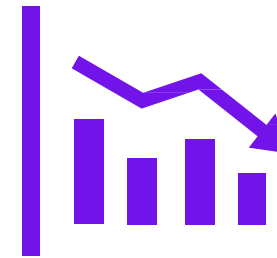
Investors turn cautious, leading to a lower activity volume

Higher risks expected in turn requires higher return



Fall in property prices

Developers



Housing prices to drop further amid crowded new launches



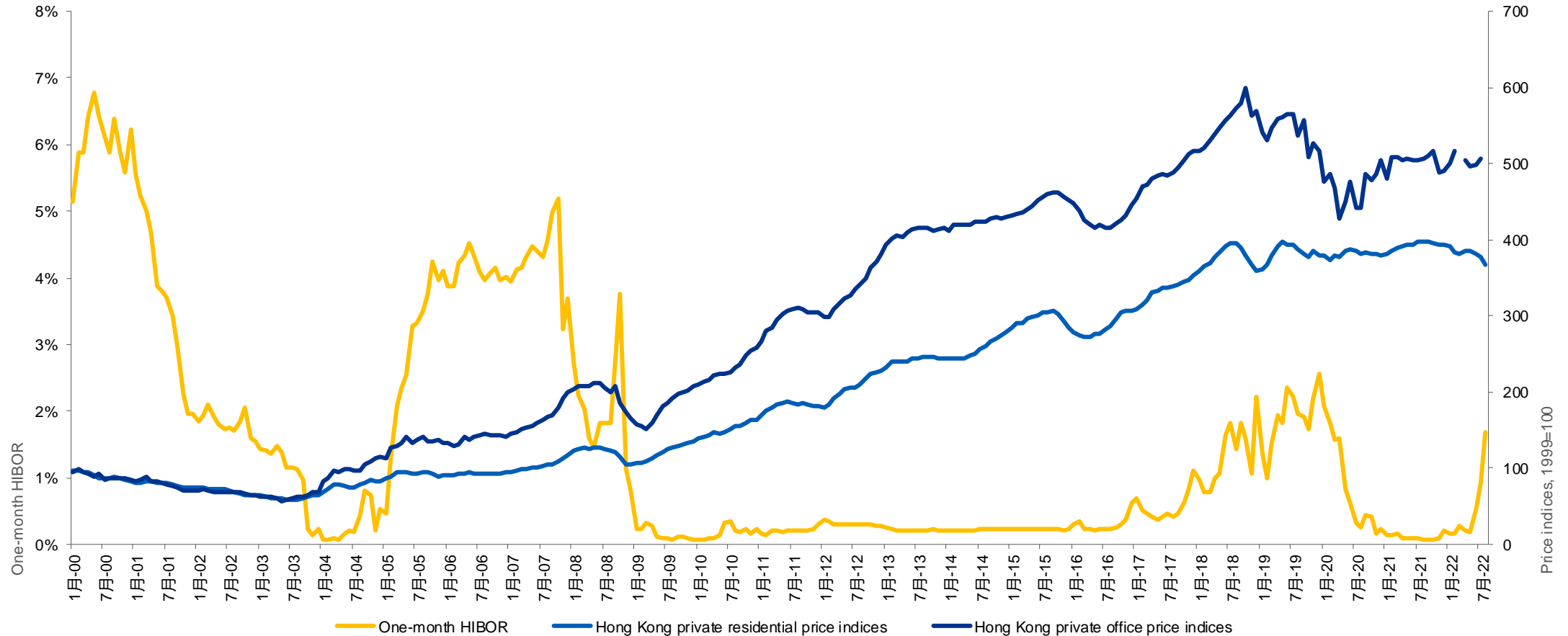
Developers' profits to yield higher with increased risks



Suppressed value of development projects

Interest rate and property prices negatively correlated

Correlation between interest rate and property prices in Hong Kong



Source: Hong Kong Rating and Valuation Department, Hong Kong Monetary Authority

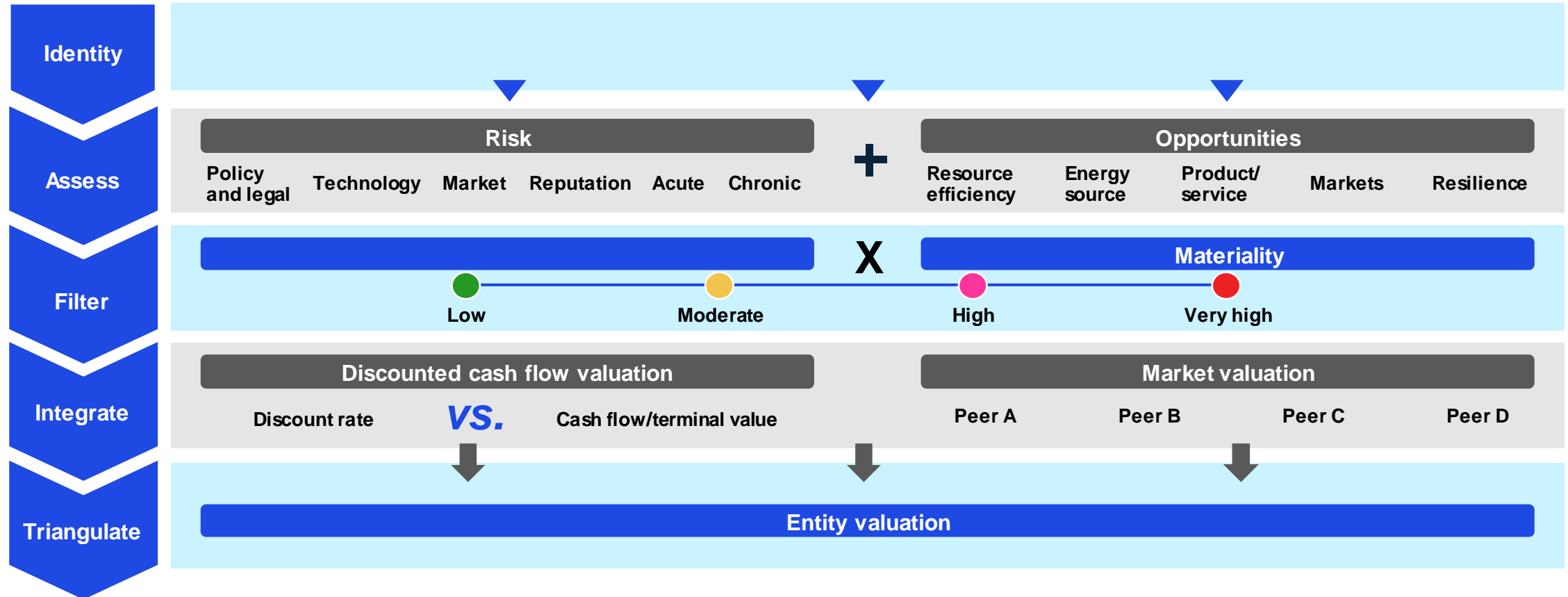
The US dollar is the strongest it has been in 20 years

Exchange Rate			
	4-Oct-22	1-Jan-22	USD Appreciation
EUR: USD	1.00	1.14	14.1%
GBP: USD	1.14	1.35	18.4%
USD : JPY	144.40	115.14	25.4%
USD : RMB	7.11	6.35	12.0%
USD: CAD	1.36	1.27	7.2%

Source: Capital IQ

How to factor climate change in the valuation?

The five-step climate change valuation framework



Source: A4S Essential Guide to Valuations and Climate Change (accountingforsustainability.org)

Climate risk impact on key assumptions for RE valuation



Rental premium

- LEED-certified office buildings record a 6.1% to 13.8% rental premium across China (compared to non-LEED certified buildings)



OPEX

- Decrease in water prices and costs with energy and water efficient assets and monitoring the utilization
- Higher insurance cost for assets with larger exposure to climate risk



CAPEX

- Damage to property and assets due to extreme weathers



Taxation

- 100% CAPEX deduction on Environmental protection machinery (e.g. waste treatment, wastewater treatment and air pollution control machinery) is allowed in year of purchase under HK profit tax



Cap rate/ Discount rate

- RICS suggested risk premium for assets not meeting sustainable characteristics should be reflected in discount rate/ cap rate

How to factor climate change in RE valuation? Example

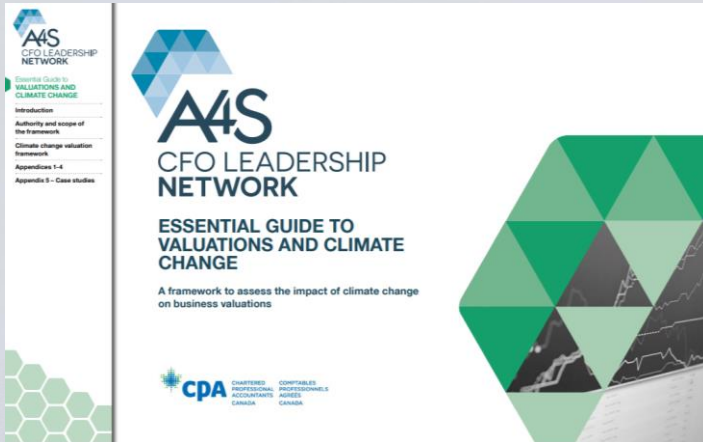


Climate risk/ sustainability considerations in forecasted cashflows

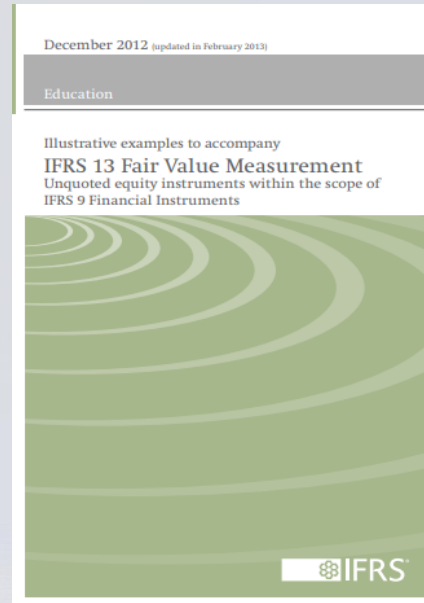
	Cashflow process	Adjustment	Climate risk/ ESG measures related factors
1	Revenue	Upwards	<ul style="list-style-type: none"> 'Green premium' achieving about 6.1% to 13.8% above the average rents China
		Downwards	<ul style="list-style-type: none"> Business interruption and Plants/ PPE obsolescence due to extreme weathers penalty on projects failed to meet the existing environmental ordinance
2	+ OPEX	Upwards	<ul style="list-style-type: none"> Higher insurance cost for assets with larger exposure to climate risk
		Downwards	<ul style="list-style-type: none"> Reduced operating cost with electricity and water efficiency.
	= EBITDA	EBITDA after adjustment	
3	- CAPEX	Upwards	<ul style="list-style-type: none"> Damage to property and assets due to extreme weathers
4	- Tax/ Fines	Upward	<ul style="list-style-type: none"> Penalties derived form violation on carbon emission restrictions, energy efficiency regulations
		Downward	<ul style="list-style-type: none"> Tax incentives for environmental friendly building installment
	- Change in WC		
	FCFF	FCFF after adjustment	
5	End Yield	Upwards	<ul style="list-style-type: none"> reflect good sustainability on the residual value
	Discount rate	Upward	<ul style="list-style-type: none"> Higher investment risk found in assets that do not display good sustainability characteristics

Resources

[Essential Guide to Valuations and Climate Change \(accountingforsustainability.org\)](https://www.accountingforsustainability.org)



[IFRS Foundation: Education material on fair value measurement](#)



[UK FRC: Thematic Review - Discount Rates May 2022](#)



[HK FRC: 2021 Annual Inspection Report](#)



Webinar dates and topics for 2022

- 26 January – HKEX Listing Rules Update
- 18 March – IFRS Sustainability Standards – The climate-related and general disclosure prototypes
- 20 May – Get ready for 2022 Interim Reporting season
- 10 June – Closing the gap between climate risk and climate strategy
- 15 July – Crypto-assets – tax and financial reporting considerations
- **7 October – Valuation challenges in the current environment**
- **18 November – ESG update/TCFD/Climate-risk on financial reports**
- **16 December – Year-end reporting reminders**



For more details and access to our webinar series:

<https://home.kpmg/cn/en/home/services/audit/ifrs-news/financial-reporting-webinar-series.html>

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