

Best-of-put Shark-fin Note

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Sales

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Target Client and Product Specifics

Target Client

Investment preference:

- Asset Classes: Stock Index
- Geographic: East Asia

View on the market:

- Bearish on Asian stock markets but do not think it will go very far

Investment objective:

- Need full capital protection

Product Specifics

- Bearish Sharp fin Note with Best of Put Option
- Underlying of Best of Put Option: HSI, KOSPI 200 and Nikkei 225
- KO event: 87% downside barrier (Best performer)
- Provide rebate if KO event occurs

Advantage

Lower Premium

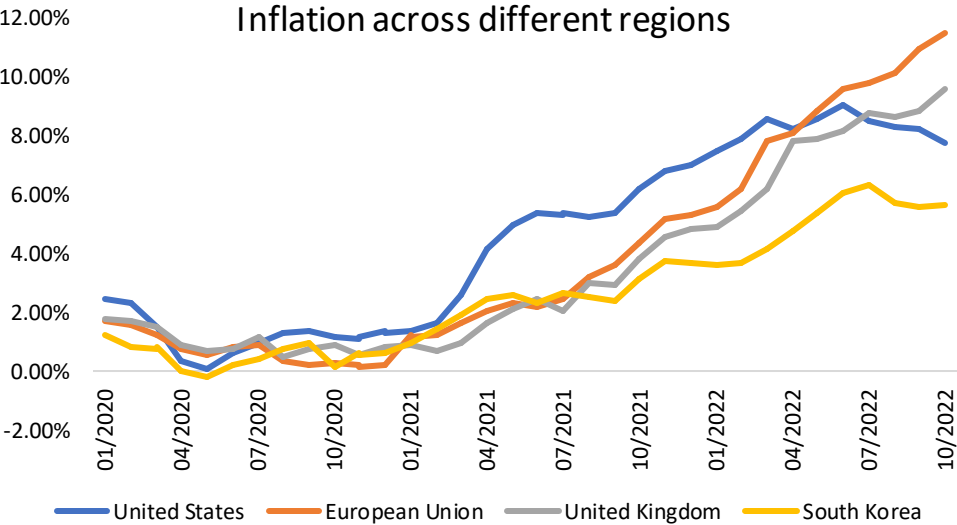
Capital Protection

Gain Market
Access

Rebate when KO
occurs

Global economy faces recession risk

FOMC Meeting Date	Decision
Mar 2022	+25 bps
May 2022	+50 bps
June 2022	+75 bps
July 2022	+75 bps
Sept 2022	+75 bps
Nov 2022	+75 bps

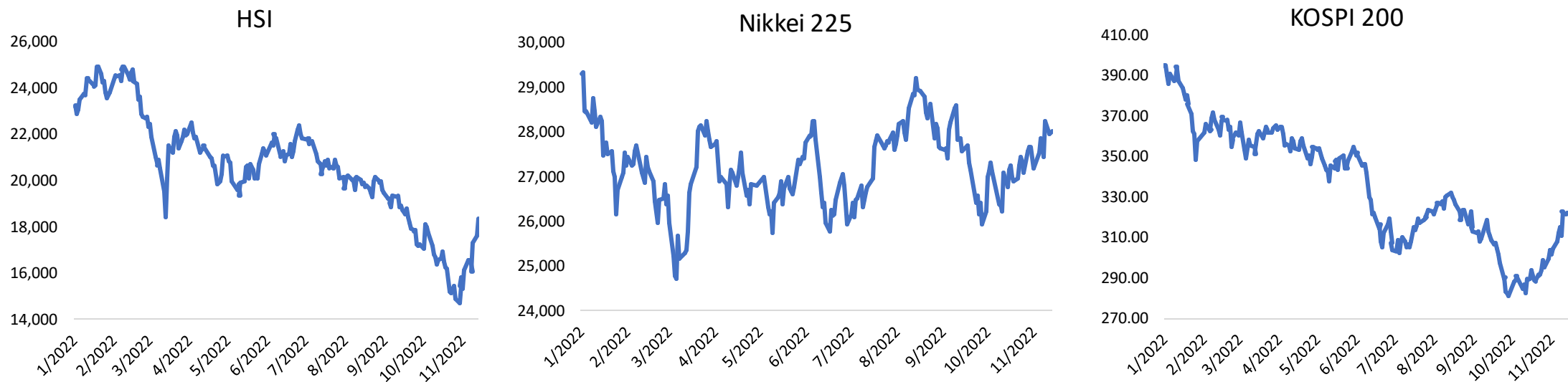


Source: Bloomberg, updated by 31 Oct 2022

It is very premature to be thinking about pausing. When people hear lags, they think about pauses. It's very premature, in my view, to talk about pausing our rate hikes. We have a way to go.



Bearish outlook across three regions



Source: Bloomberg, up to 16/11/2022

Three Economies have different problems:

Hong Kong: Negative GDP growth for three quarters. The movement between Hong Kong and mainland is still freezing.

Japan: Weak economy growth for decades and under current global interest rate hikes, Japanese Yen is greatly depreciating against USD. In Q3, Japan recorded -0.3% GDP growth MoM.

Korea: Current account has fallen for three consecutive months, and BoK suggested more interest rate hikes



Economic prospects are doomy and bear markets are likely to continue. However, Asia has relatively low inflation and has healthy economies, the market may not go down very much.

Structuring

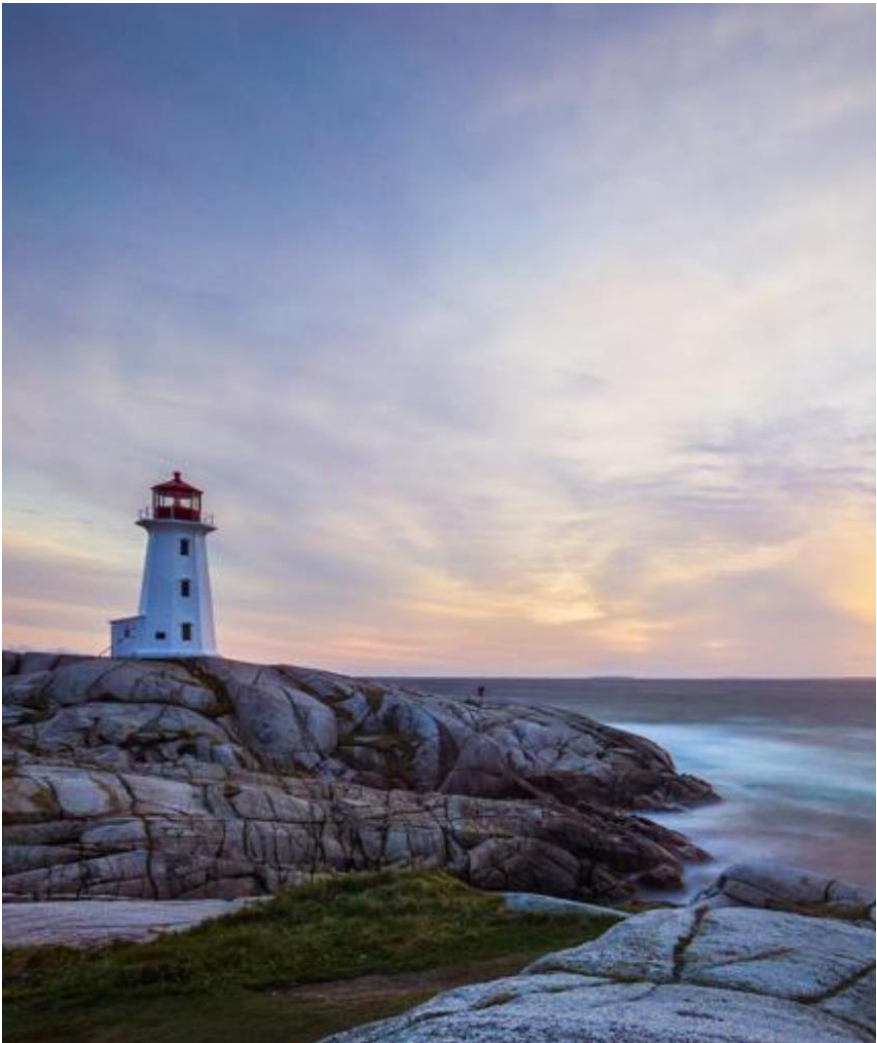
Sue

Product Overview

Indicative Terms

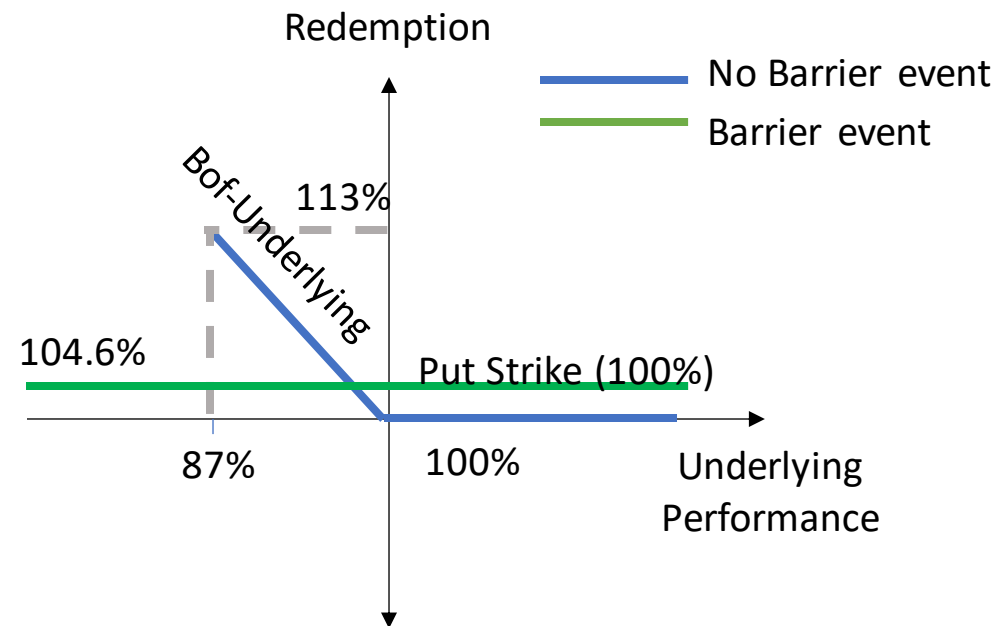
Underlyings	Best-of:
	HANG SENG Index (HSI Index)
	KOSPI 200 Index (KOSPI2 Index)
	NIKKEI 225 Index (NKY Index)
Settlement Currency	USD
Cross Currency Type	Quanto
Maturity	6M
Capital Protection	100%
Participation Rate	100%
Strike	100%
Barrier Type	Continuous
Downside Barrier	87% (13% OTM)
Rebate*	4.6%
Settlement	Cash

**Terms are indicative and subject to change*



Payoff Illustration

Payoff Diagram at Maturity



Redemption at maturity:

1) If no Knock Out Event occurred:

$PAR \times [100\% + \text{Max}(0\%, \text{Strike}\% - \text{Max}(\text{Index}_1(\text{Final})/\text{Index}_1(0), \text{Index}_2(\text{Final})/\text{Index}_2(0), \text{Index}_3(\text{Final})/\text{Index}_3(0)))]$

2) Otherwise:

100% of PAR + Rebate

Payoff at Maturity

Bof-index level at maturity (%)	Bof-index performance at maturity (%)	Return on investment if no KO before maturity (%)	Return on investment if KO before maturity (%)
85%	-15%	N/A	+4.6%
87%	-13%	+13%	+4.6%
90%	-10%	+10%	+4.6%
95%	-5%	+5%	+4.6%
100%	0%	0%	+4.6%
105%	+5%	0%	+4.6%
110%	+10%	0%	+4.6%

Scenario Analysis

	HSI Index	KOSPI 200 Index	Nikkei 225 Index	Best-of Put Payoff	Product Payoff if no KO before maturity	Product Payoff if KO before maturity
Scenario 1	-14%	5%	2%	0%	100%	104.6%
Scenario 2	-8%	-12%	-10%	8%	108%	104.6%
Scenario 3	-17%	-21%	-16%	N/A	100%	104.6%

Pricing

Product Breakdown

	Treasury Yield ¹ (%)	ZCB (%)	Option (%)
6M	4.584	97.7839	2.2161

Option Pricing¹

rebate 4.6%				
Barrier	HSI (%)	KOSPI2 (%)	NKY (%)	Min (%)
89%	2.6781	2.3269	2.4214	2.3269
88%	2.5984	2.2820	2.3950	2.2820
87%	2.5396	2.2661	2.3956	2.2661
86%	2.5013	2.2770	2.4203	2.2770
85%	2.4829	2.3119	2.4662	2.3119
84%	2.4832	2.3674	2.5300	2.3674

Historical Correlation Table²

	KOSPI2-NKY	KOSPI2-HSI	NKY-HSI
Average	0.5888	0.6161	0.5262
90 Percentile	0.7625	0.7598	0.6693
Max	0.8052	0.8287	0.7577

¹Source: Bloomberg, updated by 18 Nov 2022

²Source: Bloomberg, using the data from 15 Nov 2012 to 15 Nov 2022

Historical Volatility and Correlation²



Hedging

Edward

Short Position

Selling best-of down-and-out put to investor

Risk Exposure

Short volatility

Long skew

Short gamma

Long convexity

Short correlation

FX

Hedging strategy

Buy put ratio on HSI index

Dynamic re-hedging

Unwind the position if KO

Unhedged exposure

Short correlation

FX

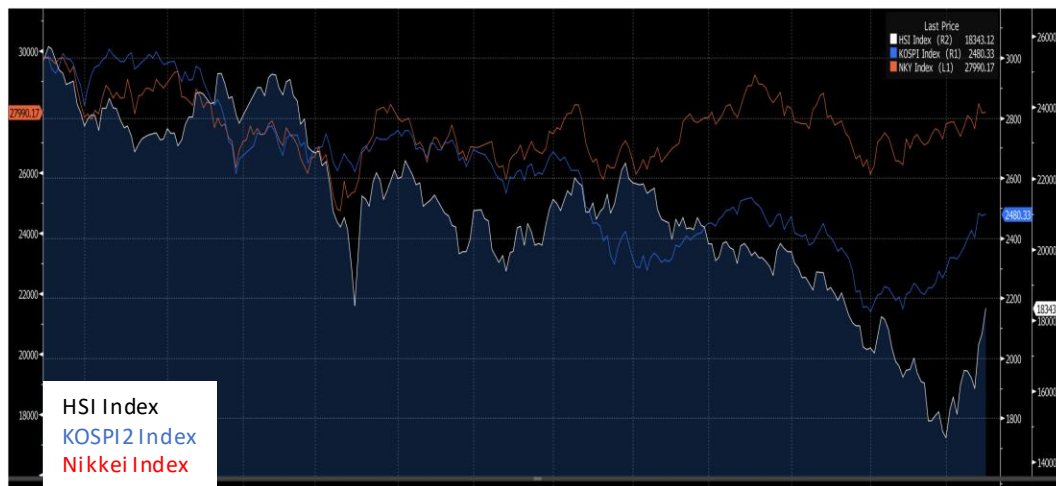
Barrier risk

Initial Position - Buy put ratio on HSI index

- Fed is more likely to slow the pace of rate hikes after better-than-expected CPI result
- China might ease zero covid policy in early 2023

HSI index rebound the fastest after US announced better than expected inflation result

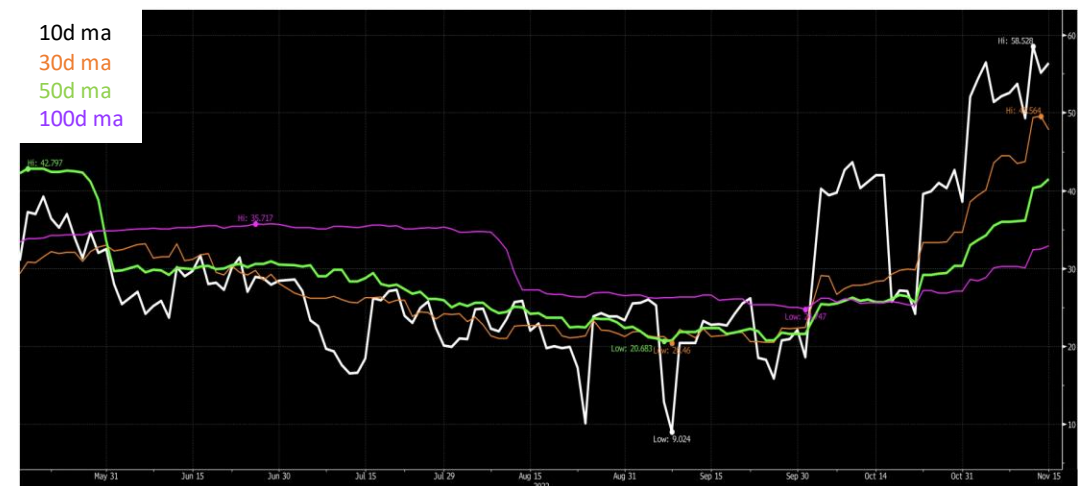
Normalized 1-year performance of HSI, Kospi2, NKY



Source: Bloomberg

HSI is the most volatile index among Kospi and Nikkei

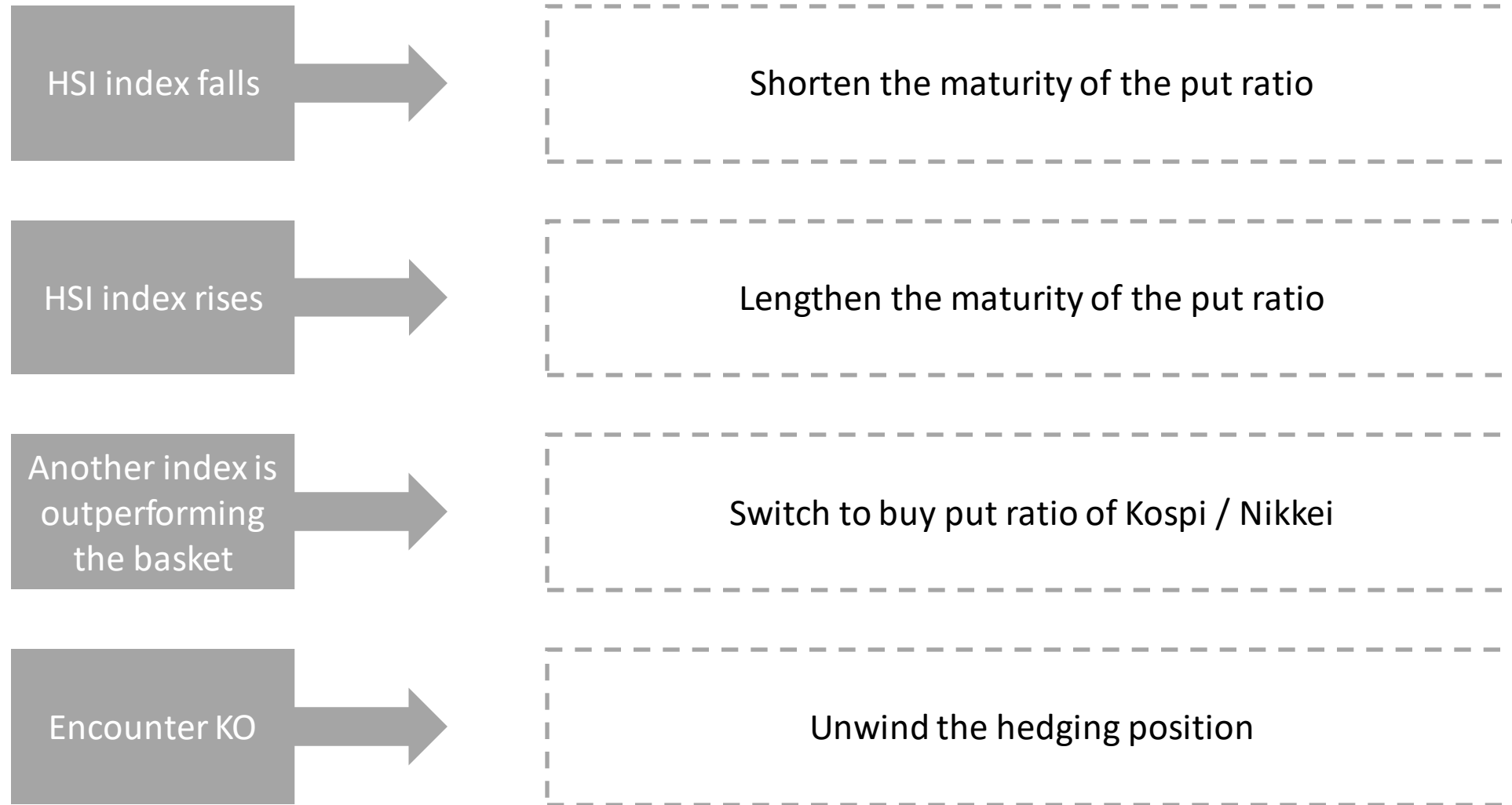
HSI index 1-year historical volatility



Source: Bloomberg

HSI is more likely to be the best performing index in our basket

Hedging Strategy – Dynamic Re-hedging / KO event



Risk Recycling

Cinthia

Risk Recycling – Buy Put Ratio on HSI

Target potential sellers of HSI put ratio:

Insurance Companies e.g. AIA, HSBC Life, Prudential	<ul style="list-style-type: none">• have a large long equity index position• intend to protect unrealized return from short term crash
Investment Banks	<ul style="list-style-type: none">• Sell volatility and skew through structure product issuance• Intend to increase volatility and skew exposure to fulfill hedge needs
Institutional Traders	<ul style="list-style-type: none">• hold a bearish outlook of HSI• intend to benefit from market downside

Opportunities of selling HSI put ratio:

Limited cost but unlimited potential gain If HSI rises, the loss is capped at premium. If HSI falls, the gain is uncapped.	A better alternative of buying a protective put Offers a similar payoff as well as optionality to exercise before maturity.
A more diversified underlying and easy monitoring HSI is more diversified than single stocks. Sellers of HSI put ratio can monitor the option performance on a more macro level instead of company-level. Trading index put is simple and time-saving relative to trading single stock puts.	

Risk Recycling – Buy Put Ratio on HSI

Bearish outlook on HSI indicates the right time to sell put ratio.

The slowdown of Chinese economy could stress HSI performance as the index is dominated by mainland companies.

- Hard-line COVID policy retains.
- Unemployment rate stayed at 18% historical high.
- Real estate and retail sales fall well off trend growth.

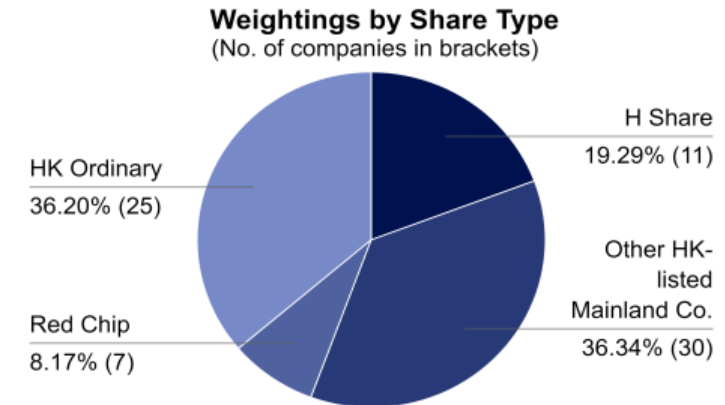
Source: Bloomberg, Bank of America

Uncertainties in the technology industry could weigh negatively on HSI performance as the index focuses on fintech and technology sector.

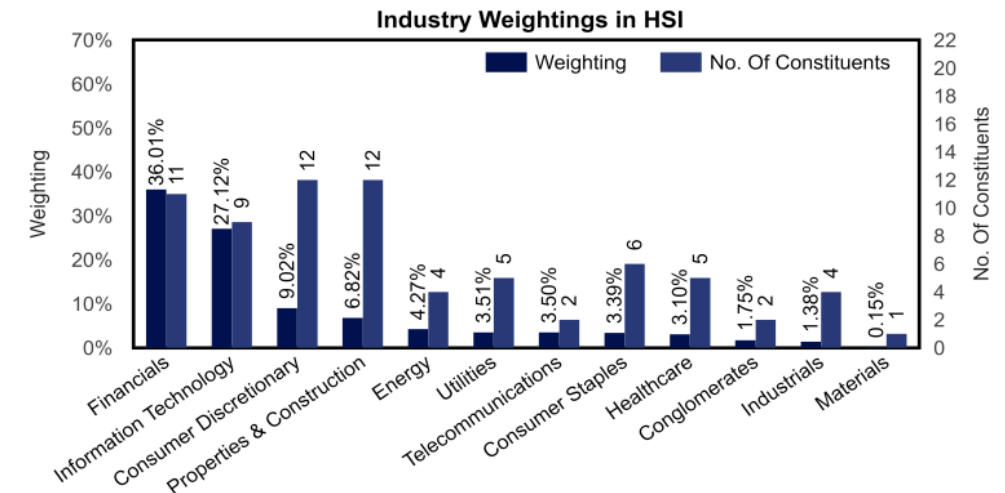
- The collapse of FTX could lead to more conservative regulatory approach on fintech and cryptocurrencies in Hong Kong, adding pressure to growth of fintech companies.
- Chinese tech firms reported losses in 2022 Q3 due to softer demand.
- Chinese tech stock slipped due to anti-trust investigation from Beijing.

Source: SCMP, Bloomberg, CNBC

Source: www.hsi.com.hk



H share, Red chip, mainland companies account for large HSI weighting.



Technology sector (including fintech, IT, consumer electronics, communications) accounts for large HSI weighting.

Takeaways

Our Product:

- Bearish Shark-fin note with best-of put
- HSI, KOSPI 200 and Nikkei 225 as underlyings

You expect

- Capital protection
- A negative performance of the underlyings

We offer

- 100% capital protection at maturity
- Full downside participation on the best-performing underlying
- Rebate if the option is knocked out before expiry

Risks

- The payoff depends on the best-of underlying
- The price can increase to knock-out during the lifetime of the product
- Credit risk of the issuer

More about our structured products?

Feel free to contact our team.

Sales

Yage Yao

Institutional Sales

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Structurer

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Trader

Edward Chen