Research Paper No. 64: A Review of the Global and Local Securities Markets in 2018 (Featuring Stock Connect inflows, Closing Auction Session and the rise in index derivatives activities)

25 January 2019

Executive Summary

1. In 2018, the US market was volatile and recorded the first year of declines since 2008. The Dow, S&P 500 (S&P) and Nasdaq fell 5.6%, 6.2% and 3.9% respectively. The market remained resilient for most of the year, supported by strong fundamentals and an influx of liquidity. Major benchmark indices successively hit record highs. Up to the end of November 2018, the US market was the only major market that recorded a gain. However, all its gains were erased in December 2018 due to trade, political and inflation concerns.

2. In Europe, the FTSE, DAX and CAC fell 12.5%, 18.3% and 11.0% respectively. In early 2018, major European markets rose on gains in energy stocks, as well as the weakening Euro and British pound. Markets subsequently fell on political concerns arising from Brexit and Italy's budget deficit. Worries about an economic slowdown and trade tensions with the US affected investor sentiment.

3. With the exception of India, major Asian markets fell, ranging from declines of 2.5% in Indonesia to 17.3% in Korea. Some regional currencies were under pressure amidst a strong US dollar and interest rate hikes in the US, leading to concerns about capital outflows from Asian markets. Geopolitical tensions in North Korea and a slowdown in the Mainland economy weighed on the markets. Lower commodity prices made economies which rely on related exports more vulnerable.

4. The Mainland underperformed major overseas markets. The Shanghai Composite Index (SHCOMP) and the Shenzhen Composite Index (SZCOMP) tumbled 24.6% and 33.2%, respectively. Trade tensions intensified as the US imposed tariffs on Mainland exports and the Mainland retaliated. Concerns about economic growth, corporate defaults and risks from share pledging further affected investor sentiment. The market was volatile, as some losses were trimmed by optimism about the inclusion of A-shares in global indices.

5. In Hong Kong, the Hang Seng Index (HSI) and the Hang Seng China Enterprises Index (HSCEI) dropped 13.6% and 13.5%, respectively, amidst high volatility. The HSI hit a record high in January 2018, due to factors on the Mainland such as upbeat gross domestic product (GDP) data, as well as easing worries about cooling measures in the property sector and tight liquidity conditions. Subsequently, the HSI started to correct and hit a 17-month low in October 2018, as trade tensions between the US and the Mainland escalated. A slowing Mainland economy coupled with a weakening renminbi raised worries about the outlook for corporate earnings. In addition, investors were concerned as Hong Kong's benchmark interest rate rose to catch up with the US.

6. Some of the major risks and uncertainties facing the Hong Kong market include:
   - trade tensions and political uncertainties in the US;
   - interest rate hikes and market correction in the US;
   - concerns about Mainland economic growth and renminbi depreciation; and
   - risks in Europe and emerging markets.

7. The average daily trading in Hong Kong's stock market rose 22% to $107.4 billion[1]. Trading in futures products and options products rose 68% and 22%, respectively.

[1] Unless otherwise stated, $ denotes the Hong Kong dollar.

Performance of stock markets during 2018

8. The US market remained resilient for most of the year amidst strong fundamentals and an influx of liquidity. Other major markets declined due to uncertainty resulting from US-China trade tensions and a slowdown in economic growth. The Mainland market underperformed, compounded by internal factors, such as worries about the impact of deleveraging measures on corporate debt and the risk of margin calls and fire sales due to the prevalence of share pledging practices. The Hong Kong market was volatile given concerns about interest rate hikes and emerging market risks.

The US

9. In the US market, major benchmark indices hit successive record highs in 2018 but later gave up all the gains amidst heightening trade tensions with the Mainland, domestic political uncertainty and renewed rate hike concerns. The Dow, S&P and Nasdaq fell 5.6%, 6.2% and 3.9%, respectively. The US market declined for the first year since 2008.

10. The US market remained resilient until December 2018. Up to the end of November 2018, the US market was the only major market that recorded a gain. Strong fundamentals supported the market. First, corporate earnings continued to beat expectations as a result of fiscal stimulus including tax cuts and government spending increases. Earnings growth of S&P stocks exceeded 25% during Q1-Q3 2018, the fastest pace since 2010. Second, solid economic performance provided support. Real GDP growth hit a four-year high of 4.2% in Q2 2018 before slowing to 3.4% in Q3 2018.

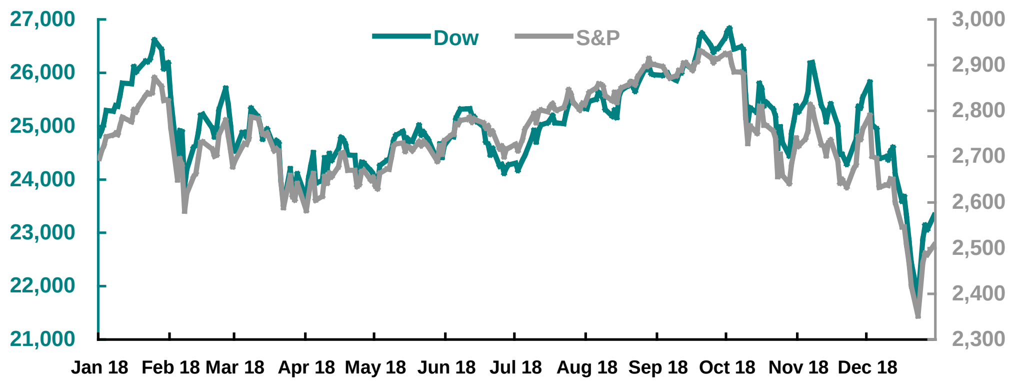
11. In addition, the US market was supported by an influx of liquidity. The US dollar strengthened against major and emerging market currencies. In 2018, the Euro, British pound and Australian dollar fell 4-10% against the US dollar, whilst emerging market currencies such as the renminbi, Korean won and Russian ruble dropped 4-21%. During January-November 2018, capital flows into the US market were an estimated US$36 billion.

12. However, the US market became more volatile during the year. In 2017, the Dow did not experience a daily decline in excess of 2%, but it dropped by 2% or more on 15 occasions in 2018. Amongst other factors, the increase in volatility was due to escalating trade tensions with the Mainland. The International Monetary Fund (IMF) revised down its global growth forecast for 2018 and 2019 from 3.9% to 3.7%. The US and the Mainland agreed to temporarily halt the imposition of new tariffs during the G20 meeting in December 2018, but doubts about a lasting trade agreement remained. The partial government shutdown added further uncertainty to the market.

13. Inflation fears grew as the US 10-year treasury bond yield once exceeded 3.2%, nearly a seven-year high. The Federal Reserve (Fed) raised interest rates four times in 2018 and signaled two more rate hikes in 2019. Investors were worried about the impact of monetary tightening on corporate earnings and economic growth.

14. Following a nine-year market rally, there were increasing concerns that valuations in the US market might be stretched, making any further gains unsustainable. The S&P’s cyclically adjusted price-to-earnings (CAPE) ratio was about 29 times, a level matched or exceeded by only 5% of the CAPE on record.

Performance of Dow and S&P during 2018



Source: Bloomberg

Performance of major stock markets

		End-2018	% change			Price-to-earnings ratios (PE ratios)
		Index level	2018	2017	2016	End-2018
Hong Kong and the Mainland						
HK	-HSI	25,845.7	-13.6%	+36.0%	+0.4%	9.82
	-HSCEI	10,124.8	-13.5%	+24.6%	-2.8%	7.87
Mainland	-Shanghai Comp	2,493.9	-24.6%	+6.6%	-12.3%	11.72
	-Shenzhen Comp	1,267.9	-33.2%	-3.5%	-14.7%	20.45
Asia						
Japan	-Nikkei 225	20,014.8	-12.1%	+19.1%	+0.4%	13.86
Australia	-AOI	5,709.4	-7.4%	+7.8%	+7.0%	16.72
Taiwan	-TWSE	9,727.4	-8.6%	+15.0%	+11.0%	12.53
Korea	-KOSPI	2,041.0	-17.3%	+21.8%	+3.3%	9.84
Singapore	-STI	3,068.8	-9.8%	+18.1%	-0.1%	11.36
Thailand	-SET	1,563.9	-10.8%	+13.7%	+19.8%	14.36
Malaysia	-KLCI	1,690.6	-5.9%	+9.4%	-3.0%	19.13
Indonesia	-JCI	6,194.5	-2.5%	+20.0%	+15.3%	19.72
India	-Nifty	10,862.6	+3.2%	+28.6%	+3.0%	22.15
Philippines	-PCOMP	7,466.0	-12.8%	+25.1%	-1.6%	18.95
Vietnam	-VN	892.5	-9.3%	+48.0%	+14.8%	15.62
US						
US	-Dow	23,327.5	-5.6%	+25.1%	+13.4%	15.54
	-Nasdaq	6,635.3	-3.9%	+28.2%	+7.5%	30.64
	-S&P	2,506.9	-6.2%	+19.4%	+9.5%	17.12
Europe						
UK	-FTSE100	6,728.1	-12.5%	+7.6%	+14.4%	15.47
Germany	-DAX	10,559.0	-18.3%	+12.5%	+6.9%	11.60
France	-CAC	4,730.7	-11.0%	+9.3%	+4.9%	14.62

Source: Bloomberg

Europe

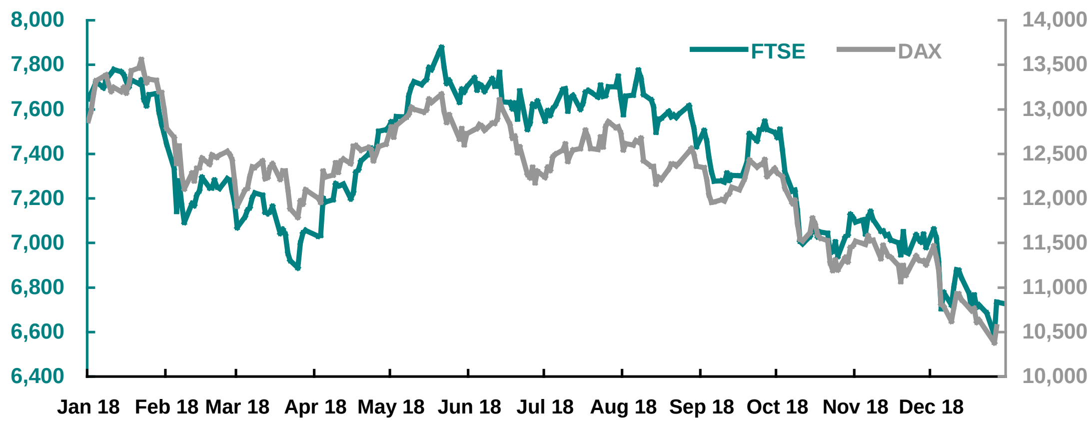
15. In 2018, the FTSE, DAX and CAC declined 12.5%, 18.3% and 11.0%, respectively. After posting solid gains in 2017, major European markets were volatile in 2018. Both the FTSE and DAX hit record highs and the CAC rose to an 11-year high. Market gains were supported by energy stocks. Oil prices once climbed above US$80 per barrel for the first time since November 2014 as the US restored

sanctions on Iran. Exporters also lifted the markets as the Euro and British pound weakened.

16. Markets corrected later in the year due to lingering political uncertainties associated with Brexit negotiations. The UK government and the Bank of England warned that a no-deal Brexit could trigger a recession in the UK and the IMF remarked that it might impose significant costs on the British economy. In Italy, the government's deficit and public debts prompted Moody's to downgrade its credit rating.

17. Growing concerns about slowing economic growth and earnings momentum also hurt the markets. The IMF projected the economic growth in Europe to slow to 2.3% in 2018 and 1.9% in 2019, from 2.8% in 2017. The European Central Bank also expressed deepening concerns about the Eurozone economy and lowered its growth forecast. Eurozone business growth and investor confidence both declined to four-year lows, escalating concerns about an economic slowdown. In Germany, the market underperformed as the country's economy contracted in Q3 2018 for the first time since 2015. Moreover, trade conflicts between the US and the EU remained unresolved.

Performance of FTSE and DAX during 2018



Source: Bloomberg

Asia

18. Major Asian markets fell, with the exception of India, ranging from declines of 2.5% in Indonesia to 17.3% in Korea. Some regional currencies came under pressure amidst a strong US dollar and rate hikes in the US, leading to concerns about capital outflows from Asian markets. Geopolitical tensions in North Korea weighed on market sentiment. In addition, investors were worried that a slowdown in Mainland economic growth might affect the regional trade outlook. Lower commodity prices made economies which rely on related exports more vulnerable.

The Mainland

19. On the Mainland, the SHCOMP and the SZCOMP fell 24.6% and 33.2%, respectively, underperforming other major market indices. In particular, both indices dropped to four-year troughs in October 2018. During the year, the SZSE SME Price Index recorded a substantial decline of 37.7% and the ChiNext Index fell 28.6%. The

average daily turnover in the Mainland market was RMB369.4 billion, 19.5% lower than in 2017.

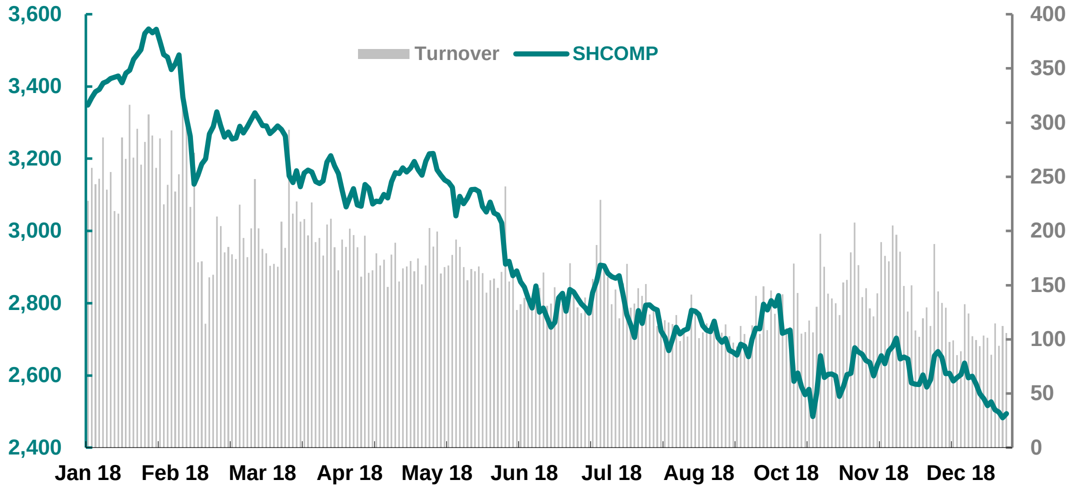
20. Among other factors, investor sentiment was weakened by:

- Rising trade tensions with the US – Tensions intensified as the US imposed tariffs on Mainland exports and the Mainland retaliated. The US-Mexico-Canada Agreement (USMCA) restricted signatories from entering trade deals with non-market countries, raising worries that the Mainland's negotiating power in future trade talks might be affected. In late 2018, it was reported that a senior executive of a major Mainland technology company was arrested in Canada and might face extradition to the US in relation to alleged violations of US sanctions on Iran. Investors were concerned that the incident might derail trade negotiations between the US and the Mainland. There were also reports of a possible ban on US companies using telecommunications equipment made by two major Mainland technology firms. In light of escalating trade tensions, the IMF revised its 2019 growth forecast for the Mainland from 6.4% to 6.2%.
- Worries about economic slowdown – Mainland GDP growth fell to 6.5% in Q3 2018, the weakest pace since 2009. Domestic investment and consumption slowed, reflected in sluggish industrial output, retail sales and manufacturing data. In addition, the renminbi once weakened to a 10-year low, with CNY-USD approaching the key psychological level of 7. These developments weighed on corporate earnings and investor sentiment.
- Concerns about corporate defaults – Mainland authorities introduced deleveraging measures to contain financial risks. However, tightened market liquidity hastened the pace of corporate debt defaults.
- Risks from share pledging – Analysts estimated that shares pledged for loans accounted for about 10% of total A-share market capitalisation. There were worries that declines in share prices might trigger margin calls and force the selling of collateralised shares, exacerbating stock market volatility. Small-cap stocks, as represented by the SZSE SME Price Index, underperformed due to their relatively higher leverage and greater dependence on share pledging for financing.

21. The Mainland market was volatile. After sharp corrections, benchmark indices trimmed some losses on the back of some positive factors, including:

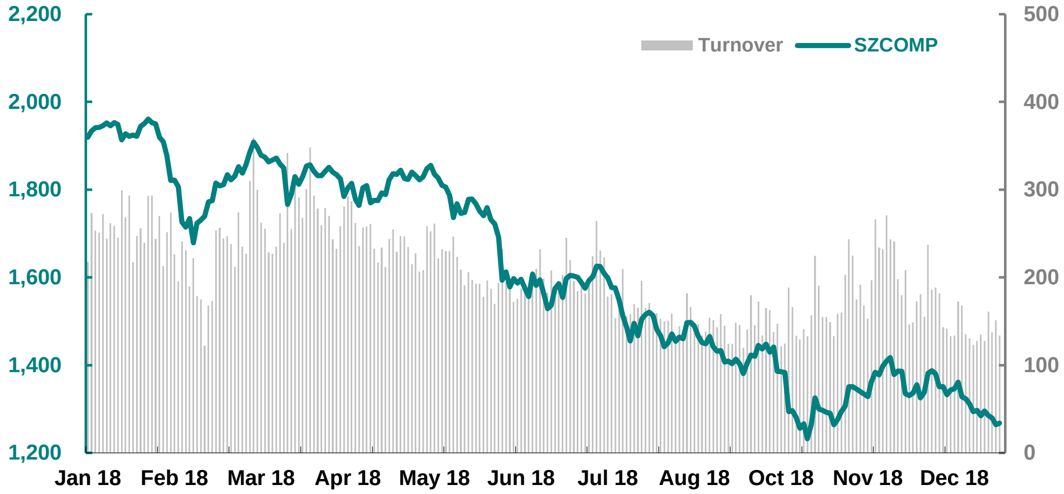
- Optimism about the inclusion of A-shares in global indices – Following the inclusion and increase in the weighting of A-shares in global indices, market sentiment was lifted by expectations of increasing capital inflows from foreign and institutional investors.
- Government supportive measures – Following coordinated statements by top financial officials intended to restore market confidence in October, government-backed funds were established and more financial support was provided to contain risks from share pledging. Long-term measures were also rolled out to support the private sector.

SHCOMP and market turnover (RMB billion) during 2018



Source: Bloomberg

SZCOMP and market turnover (RMB billion) during 2018



Source: Bloomberg

Hong Kong

22. The Hong Kong market was volatile in 2018. After reaching a record high in January 2018, the HSI corrected and hit a 17-month low in October 2018. During the year, the HSI and the HSCEI dropped 13.6% and 13.5% respectively.

23. In the beginning of 2018, market sentiment was very bullish amidst developments on the Mainland such as upbeat GDP data as well as easing worries about cooling measures in the property sector and tight liquidity conditions. The HSI once rose to an all-time high above 33,000 and accumulated gains of over 2,900 points during January 2018. The HSCEI hit a 2.5-year high. Trading of stocks, derivative warrants (DWs) and callable bull/bear contracts (CBBCs) was very active.

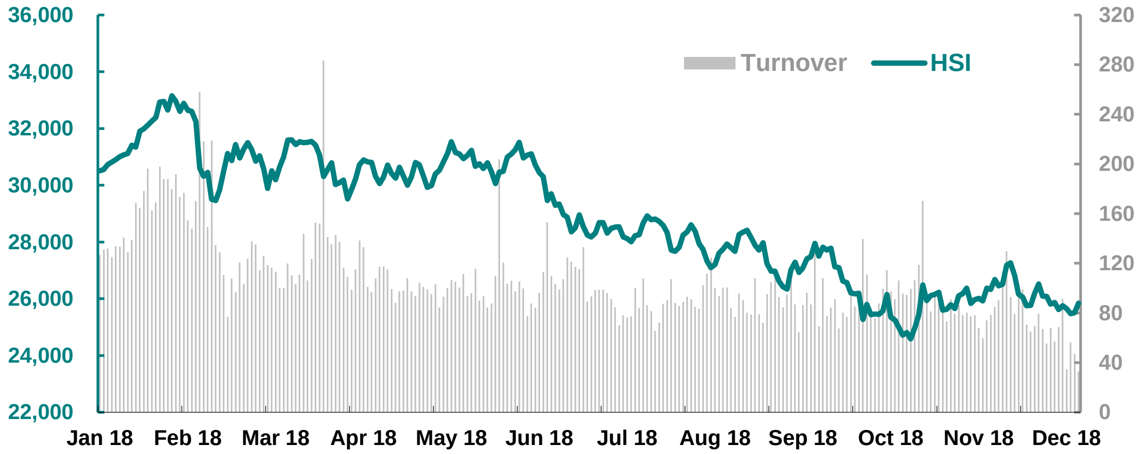
24. The market experienced a sharp correction in February 2018. There were worries about faster-than-expected interest rate hikes in the US amidst inflation concerns. Worries about an economic slowdown and more deleveraging measures on the Mainland as well as geopolitical tensions on the Korean Peninsula also weighed on investor sentiment.

25. Subsequently, the market fluctuated downwards. The weak market sentiment was attributable to:

    - Escalating trade tensions between the US and the Mainland – Trade tensions escalated as the US and the Mainland imposed reciprocal tariffs on each other's exports. Despite the truce after the trade talks during the G20 meeting in early December 2018, investors remained cautious about longer-term negotiations and the impact on global economic growth.
    - Slowing Mainland economy and a weakening renminbi – Amidst the trade conflict with the US and deleveraging measures, concerns about a Mainland economic slowdown were heightened. Retail sales, industrial production as well as trade data were disappointing and weighed on the renminbi. The CNY-USD fell 5.4% in 2018, affecting earnings of Mainland companies in Hong Kong dollar terms.
    - US rate hikes and balance sheet reduction – The US Fed raised interest rates nine times since 2015 and signalled further rate hikes in 2019. Investors were concerned that the rate hikes together with the shrinkage in the Fed balance sheet might increase the risk of market correction and affect the US economy. Under the Linked Exchange Rate System, interest rates in Hong Kong will eventually catch up with those in the US, possibly adding volatility to the stock market. In September 2018, major local banks announced raising the prime rate by 0.125% for the first time in 12 years following the US rate hike.
    - Weaknesses in emerging markets – Since August 2018, the depreciation of the Turkish Lira and Argentine Peso raised concerns about contagion effects on other emerging markets. Investor appetite towards regional markets waned, affecting stocks traded in Hong Kong. There were worries about capital outflows as the US dollar strengthened, particularly for markets with large current account and fiscal deficits as well as high external debts.

26. The price-to-earnings ratio fell to 9.8 times at end-2018, compared to 13.9 times at end-2017. Investors were cautious and trading of stocks declined. Derivatives trading and short selling increased amidst higher market volatility. Stock Connect southbound trading recorded outflows since April 2018.

HSI and market turnover ($ billion) during 2018



Source: Bloomberg

Closing Auction Session (CAS)

Background

1. Closing auction facilitates trade execution at the closing price to meet the needs of market participants such as index fund managers. It is a commonly-used trading mechanism in major exchanges worldwide. After buy and sell orders are submitted during the CAS, a consensus closing price is formed for each stock and orders are executed at that price. The CAS has the following features to reduce the risk of speculation and sharp price fluctuations:
   (a) CAS has at least two minutes of **random closing**. As such, CAS generally lasts for about eight to 10 minutes after the Continuous Trading Session, which ends at 4pm on normal trading days.
   (b) Hong Kong Exchanges and Clearing Limited (HKEX) has imposed a **price limit** of 5% (from the reference price[2] at 4pm).

2. After a period when the CAS was suspended since 2009[3], Phase 1 of CAS was re-introduced on 25 July 2016. This was followed by the launch of CAS Phase 2 on 24 July 2017, which has the following additional features:
   (a) **CAS securities**: In Phase 1, CAS securities comprised about 540 securities, including constituents of Hang Seng Composite LargeCap Index (HSLI), Hang Seng Composite MidCap Index (HSMI), H-shares with A-share counterparts and exchange-traded funds (ETFs). In Phase 2, about 150 Hang Seng Composite SmallCap Index (HSSI) stocks have been added.
   (b) **Short selling**: During Phase 1, existing short selling orders could be carried over to the CAS but short selling orders could not be inputted. After the launch of Phase 2, short selling orders of prices not lower than the CAS reference price can be inputted during the CAS.

[2] The reference price is determined by taking the median of five nominal prices in the last minute of the Continuous Trading Session. The system takes five snapshots of nominal prices at 15-second intervals starting from 15:59:00.

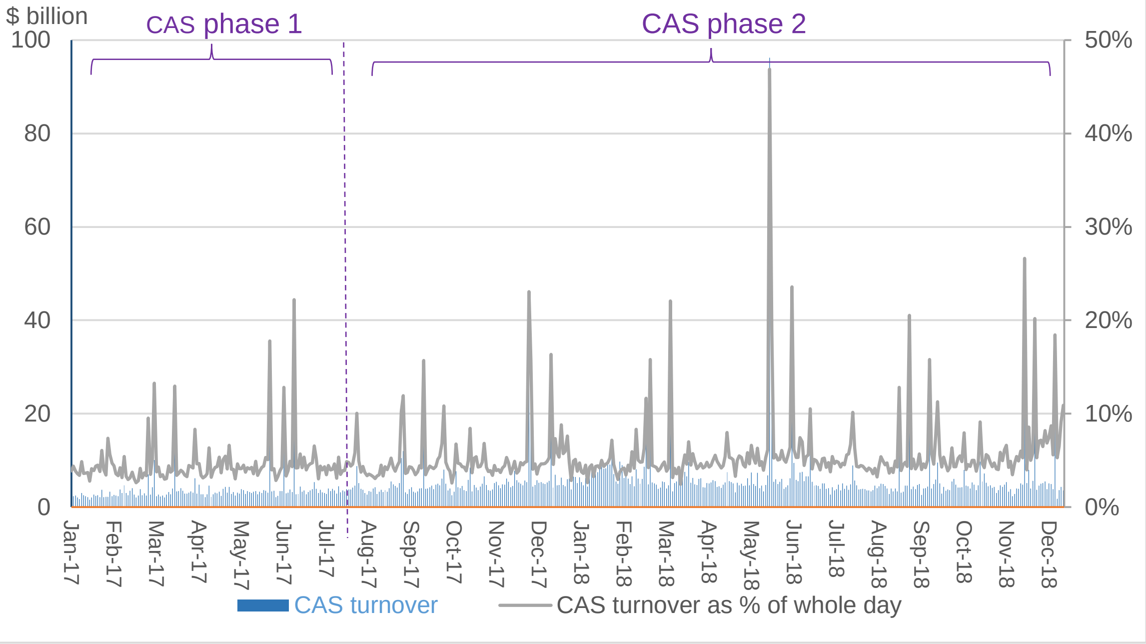
[3] The CAS was suspended in March 2009 as price volatilities during the CAS raised concerns about possible abuses.

Trading and short selling during the CAS

3. During 24 July 2017 – 31 December 2018, daily trading during the CAS averaged $6.1 billion, which was 5.7% of the market turnover. This compares to an average of 4.7% during 3 January – 21 July 2017, before the launch of Phase 2.

4. Short selling during the CAS was modest and averaged $0.7 billion or 11.2% of the total short selling for the whole day. Share prices remained stable during the CAS.

CAS trading during Phase 1 and 2

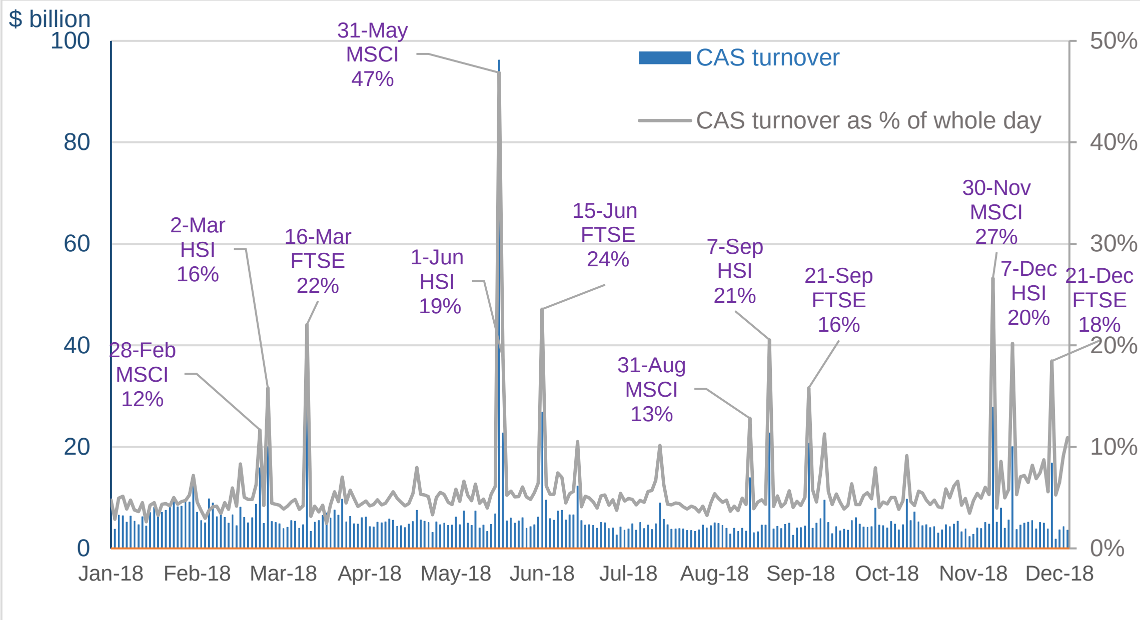


CAS trading on index rebalancing days

5. Market participants have effectively utilised the CAS mechanism on days when index rebalancing was conducted. In 2018, CAS trading accounted for a greater share of market turnover, ranging from 12% to 47%, on days when the MSCI, HSI and FTSE indexes were rebalanced.

6. When MSCI rebalancing took place for A-shares inclusion and an increase in the number of Hong Kong-listed stocks on 31 May 2018, $96.2 billion or 46.8% of trading was transacted during the CAS. This was the highest CAS turnover since its re-launch in 2016 and the market functioned in an orderly manner. The high level of participation in the CAS reflected market confidence in using this mechanism to execute at the closing price.

CAS turnover on index rebalancing days in 2018



Remark: The labels show CAS turnover as percentages of daily turnover on MSCI, FTSE and HSI rebalancing dates.

Trading by type of stock and broker

7. During 24 July 2017 – 31 December 2018, large-cap stocks accounted for a major share of CAS trading, whilst small-cap stocks contributed relatively little.
   (a) HSLI stocks accounted for 79%;
   (b) HSMI stocks made up 16%;
   (c) ETFs accounted for 2%; and
   (d) HSSI stocks made up 3%.

8. Institutional brokers accounted for 94% of the total trading during the CAS.

Assessment

9. So far, the operations of the CAS have been smooth without any irregularities, even during days when the MSCI, HSI and FTSE indexes were rebalanced. Price movements remained modest and share prices of most eligible securities moved by less than 1% during the CAS. The Securities and Futures Commission (SFC) and HKEX have put in place a mechanism to monitor the CAS, with closer monitoring conducted on days with high market volatility and index rebalancing to identify stocks with significant increases in trading or price volatility during the CAS.

Risks and uncertainties facing the Hong Kong market

27. Looking forward, the Hong Kong market may face risks and uncertainties, including:

- Trade tensions and political uncertainties in the US – Trade-war related uncertainties will likely be a major risk factor for Hong Kong and overseas markets. Whilst trade negotiations restarted during the G20 summit in late

2018, some crucial issues remain unresolved. Global economic growth may slow as a result of escalating trade tensions. In the US, the partial suspension of government services may raise uncertainty about the outlook for the US market and make it more volatile, and this could affect the Mainland and Hong Kong markets.

- Interest rate hikes and market correction in the US – Although the US Fed Chairman signalled that US interest rates were close to neutral levels, the pace and timing of future rate hikes remain uncertain. If liquidity tightens amidst continuing interest rate hikes and balance sheet reduction, it would increase the risks of correction in the US stock market, which made substantial gains in recent years. As US stock valuations appear stretched, a further correction in the US market could affect the Hong Kong market as well. In addition, a strengthening US dollar will put downward pressure on the prices of commodities and other assets. All these factors may lead to higher volatility in global markets, including Hong Kong.
- Concerns about Mainland economic growth and renminbi depreciation – Investors are worried about a Mainland economic slowdown amidst a slew of disappointing economic data and lingering trade tensions with the US. Despite the Mainland authorities' pledges to support the economy, these measures may be cautiously managed to preserve the progress of deleveraging and contain financial risks. In addition, slower Mainland economic growth will add pressure to the renminbi, leading to spillover effects on regional equity and currency markets, particularly those in Hong Kong.
- Risks in Europe and emerging markets – In Europe, the outcome of the Brexit negotiations is highly uncertain, and an unsatisfactory deal could have a significant impact on the economy and the markets. In emerging markets, political uncertainties, a strong US dollar and worries about a Mainland economic slowdown may continue to weigh on equity and currency markets. Persistent tensions between the US and Russia, Turkey, Saudi Arabia and Syria may increase volatility.

Major statistics for the Hong Kong securities market during 2018

Trading activity in the local stock market

28. Trading in the local stock market increased in 2018. For the whole year, the average daily turnover was $107.4 billion, 22% higher than the average of $88.2 billion in 2017. Amidst the sharp market correction, the average daily turnover fell from $126.6 billion during the first half of 2018 to $88.8 billion during the second half.

29. Mainland stocks (including H-shares and red chips) remained the most actively traded. Their share of total market turnover was 33% in 2018 (35% in 2017), whilst that of HSI stocks (excluding H-shares and red chips) was about 23% (20% in 2017).

The average daily turnover ($ billion)

	2018		2017		% change over 2017
HSI (ex H-shares & red chips)	25.1	(23%)	17.5	(20%)	+43.4%
Mainland stocks	35.8	(33%)	30.5	(35%)	+17.4%
H-shares	*27.0*	*(25%)*	*22.7*	*(26%)*	*+18.9%*
Red chips	*8.8*	*(8%)*	*7.8*	*(9%)*	*+12.8%*
Derivative warrants	15.7	(15%)	12.2	(14%)	+28.7%
Callable bull/bear contracts	7.5	(7%)	4.8	(5%)	+56.3%
Exchange-traded funds	4.0	(4%)	4.3	(5%)	-7.0%
Others	19.3	(18%)	19.0	(21%)	+1.6%
Market total	**107.4**	**100%**	**88.2**	**100%**	+21.8%

Remark: Percentages in parenthesis denote market share.
Sources: HKEX and SFC

Stock Connect

30. As at end-December 2018, the cumulative net buy was:

- RMB641.7 billion via northbound trading; and
- RMB693.1 billion via southbound trading.

31. On the back of MSCI's A-share inclusion, northbound net buy picked up since March 2018. From March to December 2018, the total northbound net buy amounted to RMB261.7 billion, accounting for 41% of the cumulative northbound net buy since the launch of Stock Connect.

32. During 2018:

- the average daily northbound trading (Shanghai and Shenzhen, including buy and sell trades) was RMB20.4 billion, or 2.8% of trading in the Mainland market (RMB9.6 billion or 1.1% of market trading in 2017).
- the average daily southbound trading (Shanghai and Shenzhen, including buy and sell trades) was RMB10.8 billion, or 5.9% of trading in the Hong Kong market (compared to an average of RMB8.6 billion or 5.6% of market trading in 2017).

Increasing impact of southbound inflows on market performance

1. Since the beginning of 2017, Stock Connect southbound brokers have had a greater impact on market performance in Hong Kong than institutional brokers, whose influence has declined despite their dominance in trading. This can be explained by the growing participation of southbound brokers and their directional trading which results in a larger net buy/sell position compared to institutional brokers, whose trading is more balanced and who therefore have a smaller net position.

Diminishing impact of institutional brokers

2. Trading patterns (total of buy and sell trades) and net inflows/outflows (difference between buy and sell trades) reveal that prior to 2017, institutional brokers accounted for a large share of market trading in Hong Kong and had a large impact on stock market performance. However, since 2017, whilst they continue to dominate trading, their impact on market performance has declined. The net inflows/outflows of institutional brokers have become smaller and occasionally been surpassed by those of southbound brokers.
   (a) In 2015 and 2016, institutional brokers' net inflows/outflows were in line with the performance of the HSI. Very often, they were net buyers (with net inflows) when the market rallied and net sellers (with net outflows) when the market retreated. Their net inflows/outflows moved in the same direction as the market in 23 out of 24 months.
   (b) However, since 2017, this trend has changed as institutional brokers' impact on the HSI started to diminish. From January 2017 to December 2018, their net inflows/outflows moved in the same direction as the market in only 12 out of 24 months.
   (c) Institutional brokers accounted for about 70% of trading in the Hong Kong market from January 2015 to December 2018. However, their net inflows/outflows were smaller than southbound brokers in half of the months since 2017 due to their different trading patterns.

Growing impact of southbound brokers on market performance

3. Southbound brokers only account for a small share of total trading but their influence on stock market performance has increased.
   (a) In 2015 and 2016, net inflows of southbound brokers were seldom in the same direction as the HSI.
   (b) From 2017, their net flows began to have an impact on the performance of the HSI, moving in tandem with it amidst larger net inflows/outflows.
   (c) Southbound brokers accounted for less than 10% of trading in the Hong Kong market during the period from January 2015 to December 2018. However, their net inflows/outflows were comparable to or exceeded those of institutional brokers in most of the months since 2017.

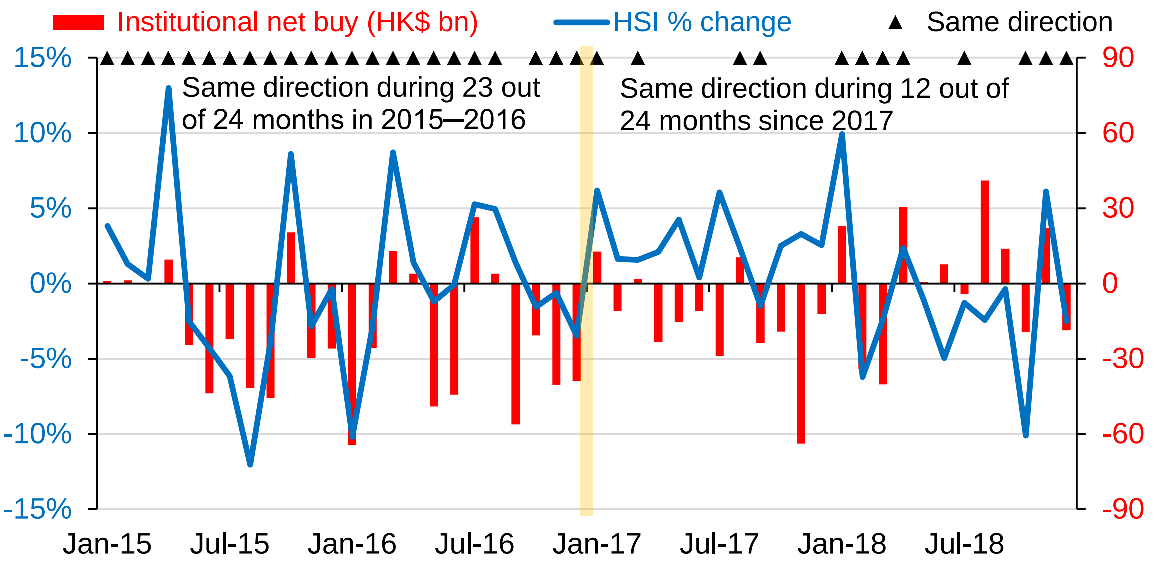
Implications of brokers' changing trading patterns

4. Although institutional brokers dominate trading in the Hong Kong market, their divergent market views often create a situation where their buy and sell trades are largely balanced and, therefore, net inflows/outflows are relatively small. As a result, their impact on the performance of the HSI has been declining.

5. On the other hand, although southbound brokers only account for less than 10% of trading in Hong Kong, many Mainland investors tend to trade in the same direction, resulting in relatively large net inflows/outflows.

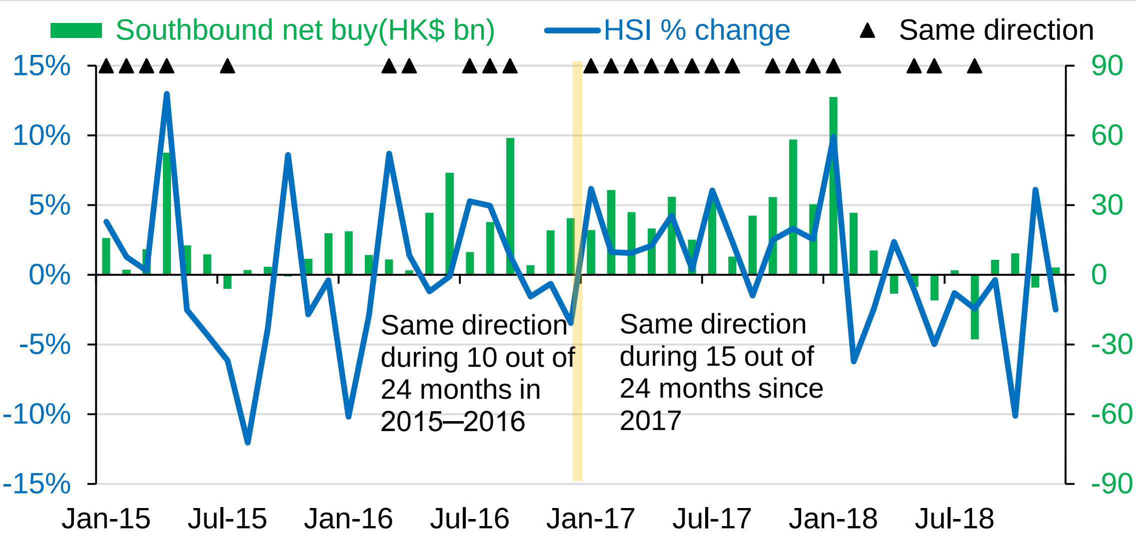
6. If this trend were to continue, and southbound brokers account for a much larger share of trading, there could be implications for the investor structure and trading patterns in Hong Kong.

Monthly net inflows/outflows of institutional brokers vs HSI performance during January 2015 – December 2018



Remark: Net inflows/outflows move in the same direction as the HSI in a given month if there are net inflows during a market rally and net outflows during a market downturn.

Monthly net inflows/outflows of southbound brokers vs HSI performance during January 2015 – December 2018



Remark: Net inflows/outflows move in the same direction as the HSI in a month if there are net inflows during a market rally and net outflows during a market downturn.

Short-selling activity

33. Compared to 2017, short selling in Hong Kong was higher in 2018 both in absolute terms and as a percentage of total market turnover. The average daily short selling amounted to $13.5 billion or 12.6% of total market turnover in 2018, compared to $9.0 billion and 10.3%, respectively, in 2017. The increase in short selling was mainly driven by large-cap stocks and ETFs. Hedging activities increased as investors sought more downside protection during periods of rising uncertainty and market volatility.

34. Despite an increase in short selling, the market value of reportable short positions as a percentage of underlying market capitalisation remained stable. Based on data submitted to the SFC, as at 28 December 2018, aggregated short positions amounted to $407.1 billion or 1.5% of the market capitalisation of the reported stocks.

Initial public offerings (IPOs)

35. Amongst major markets, Hong Kong was ranked the top IPO centre in 2018, with 218 IPOs raising $286.5 billion, up from $128.2 billion (160 IPOs) in 2017. In 2018, IPOs by Mainland companies (including H-shares, red chips and Mainland private enterprises) accounted for 95% of the total amount of funds raised.

Top five stock markets by equity funds raised through IPOs (2018)

Markets	US$ billion
HKEX	36.6
NYSE	28.6
Japan Exchange Group	25.6
Nasdaq	24.5
Deutsche Boerse AG	13.9

ETFs and leveraged and inverse products (L&I Products)

36. The average daily turnover of ETFs in 2018 was $4.0 billion, 7% lower than the $4.3 billion in 2017. ETFs accounted for 4% of the total market turnover in 2018, compared to 5% in 2017. The average daily turnover of A-shares ETFs was $1.7 billion, accounting for 44% of total ETF turnover, compared to $1.4 billion and 33%, respectively, in 2017.

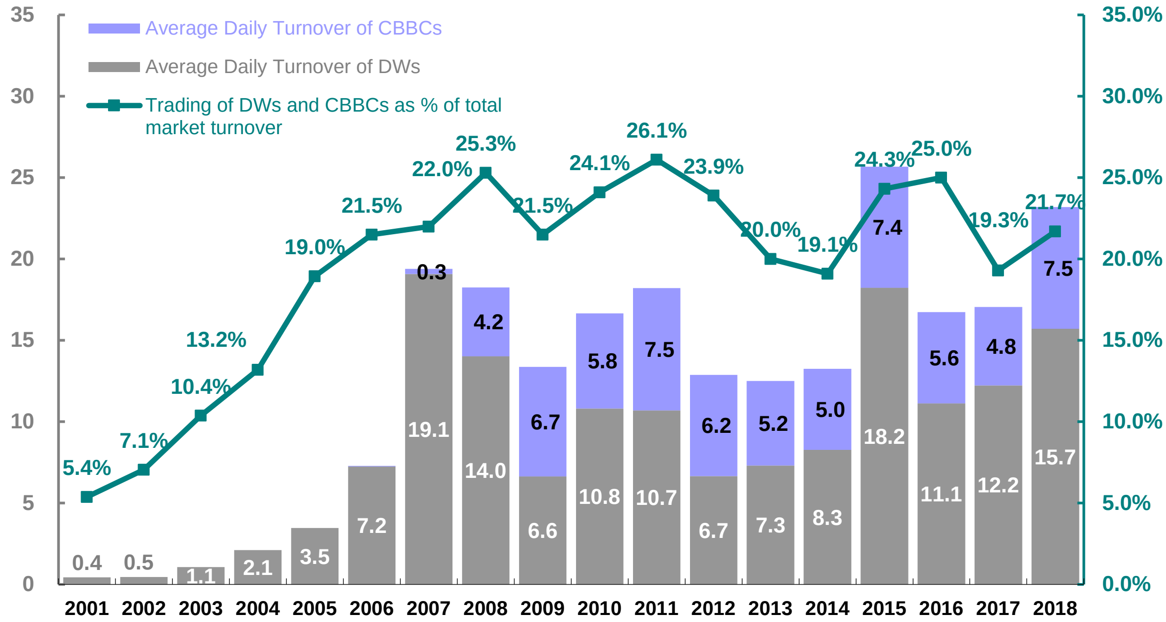
37. There were 18 L&I Products tracking the HSI and the HSCEI and their average daily turnover was $439 million during 2018.

Derivative warrants and callable bull/bear contracts

38. Trading in DWs increased in both absolute terms and as a percentage of total market turnover. The average daily turnover of DWs was $15.7 billion (14.7% of total market turnover), compared to $12.2 billion (13.8% of total market turnover) in 2017.

39. Trading in CBBCs also increased both in absolute terms and as a percentage of total market turnover. The average daily turnover of CBBCs amounted to $7.5 billion (7.0% of total market turnover), compared to $4.8 billion (5.5% of total market turnover) in 2017.

Turnover of DWs and CBBCs ($ billion)



Sources: HKEX and SFC

Exchange-traded derivatives

40. In 2018, the average daily trading in exchange-traded derivatives rose by 38.4%. There was strong demand for hedging instruments given high market volatility and the need to manage the risks of Mainland exposures.

- The average daily trading in futures products rose by 67.9%. Amongst all futures products, HSI futures and HSCEI futures were the most actively traded contracts, each accounting for about 44.8% and 29.1% of all futures trading respectively. The average daily trading volume of HSI and HSCEI futures rose 83.9% and 30.3%, respectively, from 2017.
- The average daily trading in options products rose by 21.9%. Stock options remained the most actively traded options products and their trading volume increased by 20.7% from 2017.

The average daily trading volume of derivatives traded on HKEX by product type (contracts)

		2018	2017	2016
Futures	HSI Futures	234,424	127,478	130,826
	Mini-HSI Futures	100,262	46,507	50,516
	HSCEI Futures	152,241	116,812	133,729
	Mini-HSCEI Futures	22,568	14,823	19,718
	Stock Futures	3,508	492	915
	RMB Currency Futures (USD/CNH)^	7,135	2,966	2,181
	Other futures products^	3,631	2,907	2,601
	Total futures	**523,769**	**311,985**	**340,486**
Options	HSI Options	51,693	41,009	37,869
	Mini-HSI Options	10,005	6,643	5,767
	HSCEI Options	98,610	80,073	78,849
	Mini-HSCEI Options*	2,372	1,527	800
	Stock Options	517,395	428,499	297,903
	Other options products	152	83	69
	Total options	**680,227**	**557,834**	**421,257**
Total futures and options		**1,203,996**	**869,819**	**761,744**

Remarks: The average daily trading volume was based on the number of trading days after the product was launched.
^ The 2017 data was adjusted.
* Trading of Mini-HSCEI Options commenced on 5 September 2016.
Sources: HKEX and SFC

Rise in index derivatives activities

Background

1. The trading and open interest (OI) in major index derivatives recently increased. October 2018 was the most active month on record, with the average daily turnover volume of HSI and HSCEI futures increasing respectively to over 290,000 and 180,000 contracts. In addition, 2018 was the most active year on record, with an average daily volume of 234,000 contracts for HSI futures and 152,000 contracts for HSCEI futures traded.

2. The rise in OI in HSCEI futures started in March, hitting a record high of over 630,000 contracts in late December. OI was 84% higher at end-2018 compared to end-2017.

3. OI in HSCEI options increased 16% and trading increased 23%, both hitting record highs during 2018.

4. Based on discussions with market participants, possible reasons for the recent increase in derivatives activities include:
   (a) **Higher market volatility –** Market volatility was significantly higher across indices in October. The HSI fell 10.1%, the biggest monthly decline since January 2016. The HSCEI dropped 8.0%, whilst the SHCOMP fell 7.7%. These movements prompted volatility trading and increased hedging needs. In this regard, futures are preferred for hedging amidst high market volatility, as they have higher liquidity than options. Moreover, following a correction in the Mainland market, investors may also short HSCEI futures to hedge long portfolios with Mainland exposures.
   (b) **Use of derivatives to hedge A-shares exposures** – Since March, a total of about RMB260 billion has flowed into the A-shares market through Stock Connect, driven partly by MSCI's inclusion of A-shares. The increase in A-shares exposure and much higher volatility in the A-shares market resulted in an increase in hedging, particularly the use of HSCEI futures to hedge A-shares market exposures.
   (c) **Revamp of HSCEI –** In March, 10 red chips and Mainland private enterprises were added to the HSCEI, making it more representative of Mainland stocks. As a result,

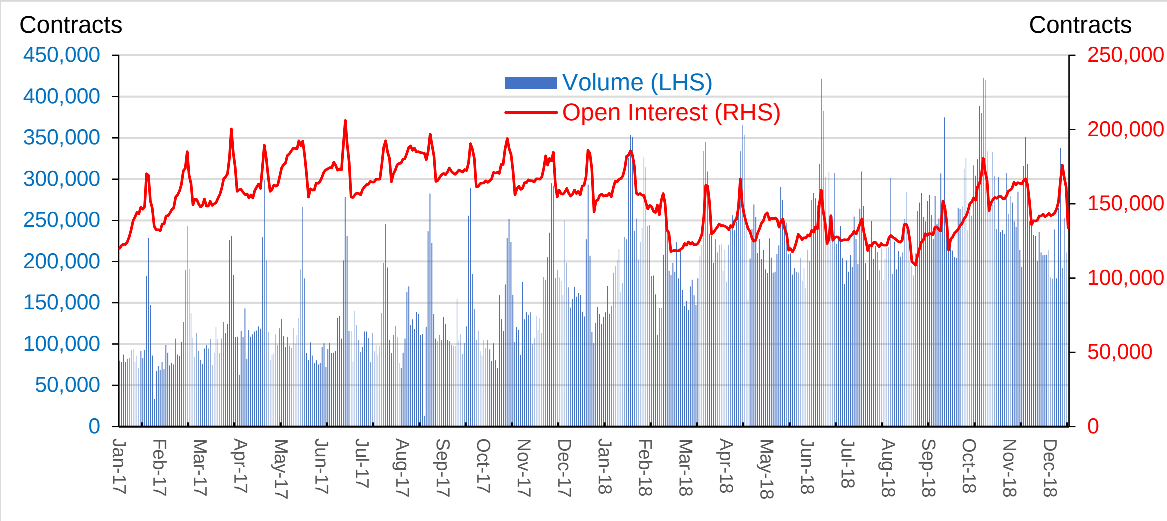
market participants are more willing to use HSCEI futures contracts to hedge Mainland exposures.

(d) **Active new players** – The recent entry of new players trading HSI futures, some of whom are active in day-trading, has boosted trading volumes.

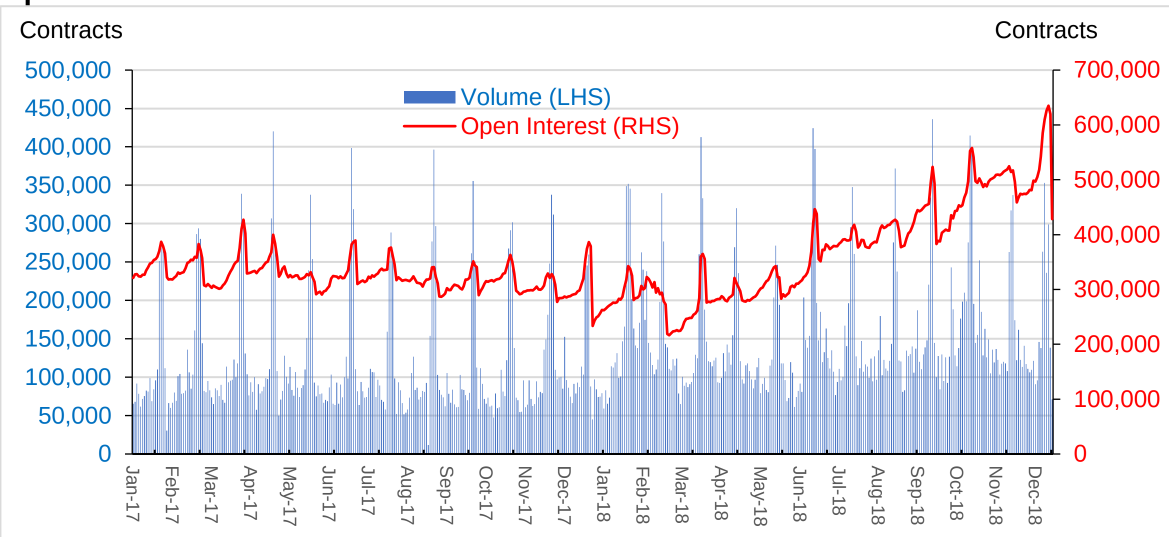
Market situation

5. The more active derivatives market seemed to be in line with activities in the stock market. An analysis of the large open position (LOP)[4] in the derivatives market reveals that despite the increase in OI, most market participants did not hold very large positions and no investors had concentrated positions. The top position holders were mainly investment banks and brokerages, and they related that there were no indications of hedge funds taking aggressive positions in the market.

Open interest and volume of HSI futures



Open interest and volume of HSCEI futures



[4] Market participants holding open positions in derivatives contracts in excess of the specified levels have to report the positions to HKEX.

Open interest and volume of HSCEI options