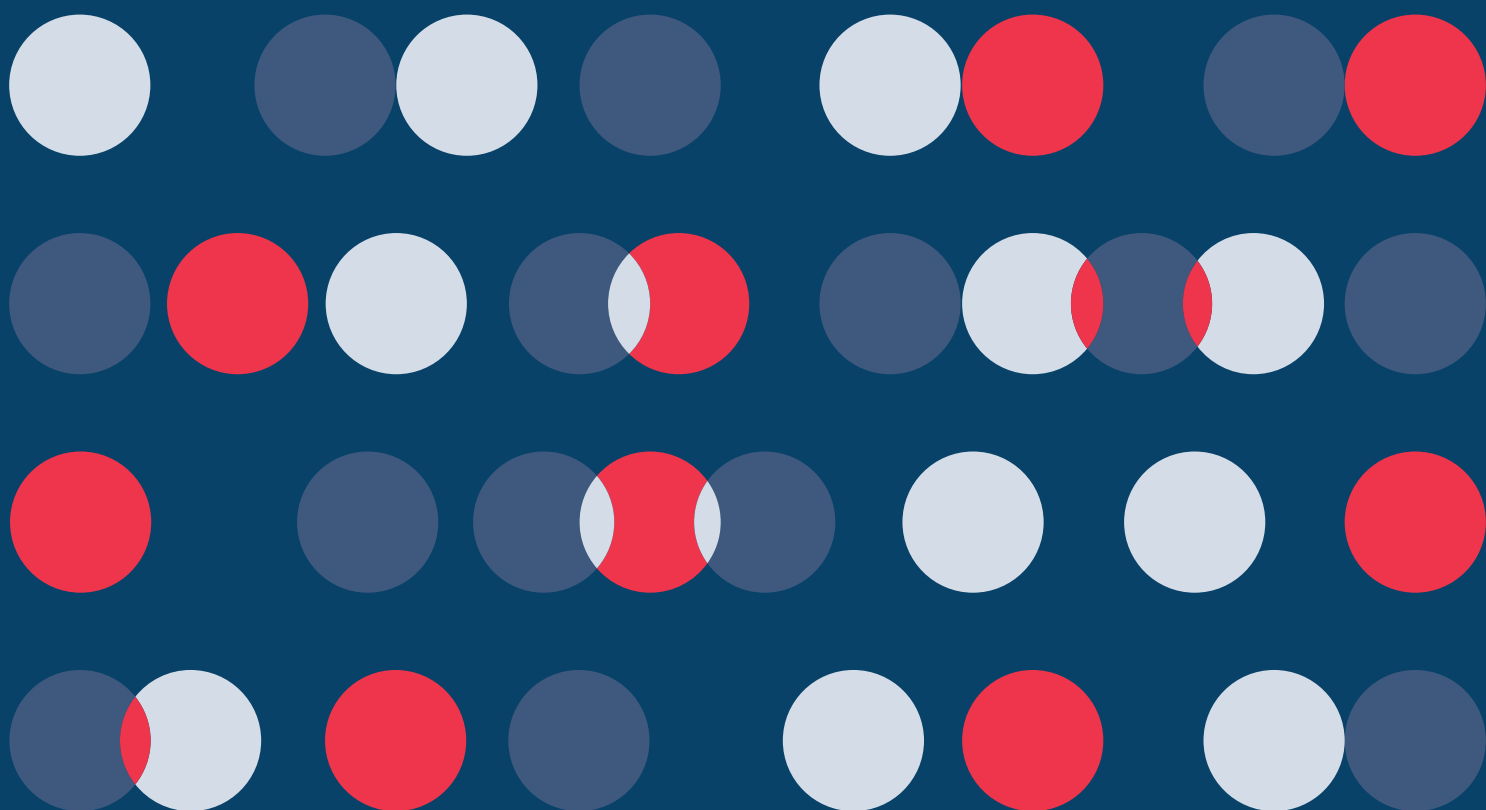


November 2017

RESEARCH REPORT

CES STOCK CONNECT HONG KONG SELECT 100 INDEX —  
A KEY MEASURE OF HONG KONG MARKET INVESTMENT  
UNDER STOCK CONNECT



# CONTENTS

## Page

Summary .....	1
1. Investment opportunities to Mainland investors in the Mainland-Hong Kong Mutual Market.....	2
1.1 Establishment of the Mainland-Hong Kong Mutual Market .....	2
1.2 Value to the Mainland investors .....	2
2. Index services for Mutual Market investment.....	3
2.1 Indexing for the Mainland-Hong Kong Mutual Market.....	3
2.2 The use of CES SCHK100 as a benchmark index .....	4
2.3 Mutual Market index-linked investment vehicles.....	6
3. The CES SCHK100 Index — A tradable index for Southbound investment .....	8
3.1 Coverage of top Southbound stocks .....	8
3.2 Pure Hong Kong concept, with high representativeness .....	9
3.3 Resemblance by industry sector, with more exposure to the New Economy .....	11
3.4 Performance versus key Hong Kong and Mainland indices.....	13
3.5 Opportunities offered by CES SCHK100 for Southbound investment.....	18
4. Conclusion .....	20
Appendix 1. Southbound Trading activities under Stock Connect .....	21
Appendix 2. List of constituent stocks of CES SCHK100 (End-September 2017).....	24

## SUMMARY

The Mainland-Hong Kong Mutual Market was basically established after the launch of the Shanghai-Hong Kong Stock Connect in November 2014 and the Shenzhen-Hong Kong Stock Connect in December 2016 (collectively referred to as the Stock Connect scheme). This has opened up more opportunities for Mainland investors, with fewer restrictions than previous channels like Qualified Domestic Institutional Investors (QDII), for investing in overseas markets. Statistics show that there is a strong and growing interest from the Mainland investors in trading stocks listed in Hong Kong through Southbound Trading under the scheme.

As the Mutual Market attracts increasing investor interest, related index services to support the continuous growth and development of the market have become inevitable. Indices not only serve as benchmark measures to track the performance of domestic/regional/global markets, segments of a market or cross-markets, they are also increasingly used as the underlying benchmarks for passive investment instruments such as exchange-traded funds (ETFs) or derivatives such as index futures and options to gain exposure to, or to hedge against investment in, a market.

CES Stock Connect Hong Kong Select 100 Index (CES SCHK100) is a unique Stock Connect-related index that tracks the Hong Kong stocks available for Southbound Trading (the Southbound Stocks), with the following special characteristics:

- (1) Having a considerably high coverage of Southbound stocks in terms of market capitalisation and turnover value;
- (2) Tracking investment of a pure Hong Kong concept, with a high representativeness of stocks listed in Hong Kong and not in the Mainland market at the same time, therefore representing pure investment opportunities outside Mainland China, with only moderate correlation with movements in the Mainland domestic stock market;
- (3) Having a relatively high coverage of stocks of the growth sectors among Southbound stocks, e.g. Mainland private enterprises and stocks in the New Economy industries;
- (4) Owing to its stock composition, having historically higher PE ratio but lower dividend yield than HSI and HSCEI, and also lower return volatility than the key Hong Kong and Mainland indices, for most of the time since its launch.

Given the index's high representativeness of Southbound eligible stocks and growth-sector stocks in the New Economy, the potential of investment opportunities in its constituent stocks is yet to be exploited further through Southbound Trading. Towards this end, CES SCHK100 is potentially a useful benchmark for developing passive investment instruments like ETFs for Southbound Trading.

## 1. INVESTMENT OPPORTUNITIES TO MAINLAND INVESTORS IN THE MAINLAND-HONG KONG MUTUAL MARKET

### 1.1 Establishment of the Mainland-Hong Kong Mutual Market<sup>1</sup>

The Mutual Market Access pilot programme (the “Pilot Programme”), launched in November 2014 with initially the **Shanghai-Hong Kong Stock Connect (Shanghai Connect)**, opens up a brand new channel for overseas investors to invest in the Mainland stock market and Mainland investors to invest in overseas assets. The Shanghai Connect enables Hong Kong and overseas investors to trade securities listed on the Shanghai Stock Exchange (SSE) in the Mainland (**Northbound Trading**) and Mainland investors to trade securities listed on the Stock Exchange of Hong Kong Limited (SEHK) in Hong Kong (**Southbound Trading**), within the eligible scope of the programme through the trading and clearing infrastructure connections between the two exchanges and between the corresponding clearing houses in the two markets.

Following successful and smooth operation of Shanghai Connect, the **Shenzhen-Hong Kong Stock Connect (Shenzhen Connect)** was subsequently launched in December 2016. Similar to Shanghai Connect, Shenzhen Connect enables Northbound Trading of securities listed on the Shenzhen Stock Exchange (SZSE) by Hong Kong and overseas investors and Southbound Trading of securities listed on the SEHK by Mainland investors through infrastructural connections between the SEHK and SZSE and between their clearing houses. The scope of eligible securities under Shenzhen Connect covers also the smaller sized (“small-cap”) stocks in addition to the “large-cap” and “mid-cap” stocks under the Shanghai Connect<sup>2</sup>. (Hereinafter, Shanghai Connect and Shenzhen Connect are collectively referred to as the “Stock Connect” scheme.)

After the launch of Shenzhen Connect, the basic model of “**Mutual Market**” across Shanghai, Shenzhen and Hong Kong has been established, albeit within the scope of eligible securities. As the mutual stock market access scheme is scalable, this potentially opens up a Mainland-Hong Kong mutual stock market of a combined equity market value of US\$10,514.0 billion (as of end-2016) and an average daily equity turnover of about US\$84.3 billion (2016), ranking 2<sup>nd</sup> by market value (following New York Stock Exchange) and 2<sup>nd</sup> by equity market turnover among world exchanges<sup>3</sup>.

### 1.2 Value to the Mainland investors

Prior to the launch of the Stock Connect scheme, the Qualified Domestic Institutional Investor (QDII) scheme was the only official channel for Mainland investors to invest in overseas markets, subject to investment quota approved by the State Administration of Foreign Exchange (SAFE). While Mainland qualified institutional investors could directly invest overseas after obtaining QDII licences and the authorised quota, Mainland retail investors who would like to invest in overseas markets could do so through available QDII products. However, there has been no increase in the aggregate QDII investment quota since March 2015 up to October 2017, which remained unchanged at US\$89,993 million during the period<sup>4</sup>.

<sup>1</sup> See also the HKEX research report, “*Shanghai and Shenzhen Stock Connect — A “mutual market” for Mainland and global investors*”, 23 March 2017, published on the HKEX website (<http://www.hkex.com.hk>).

<sup>2</sup> See websites of the HKEX, SSE and SZSE for the eligible securities under the Stock Connect scheme.

<sup>3</sup> World Federation of Exchanges (WFE) statistics, from WFE website (20 January 2017 for market value data and 1 March 2017 for trading value data). Average daily turnover was calculated from the combined shares turnover value for 2016 from WFE statistics using the total number of trading days (244 days) for the Mainland market. Ranking was based on 2016 up to December combined trading value.

<sup>4</sup> Source: SAFE website.

Southbound Trading under Stock Connect opens up a new regularised channel for Mainland investors, both individuals and institutions, to directly invest in overseas assets. In contrary to the QDII scheme, no aggregate quota is applied to trading under Stock Connect, which is subject only to a Daily Quota which is applied on a net-buy basis<sup>5</sup>. The channel is a closed-loop system with prudential real-time monitoring of the usage of the Daily Quota, and yet with considerable flexibility in the absence of an aggregate quota. As the Daily Quota applies on a net-buy basis and is reset every day (once it is reached during the day, only cross-border sell orders of eligible securities are accepted), there is virtually no limitation of stock turnover during the day. The Mutual Market under Stock Connect therefore effectively extends the universe of investable assets for Mainland investors which could possibly offer investment opportunities of good potential returns to them.

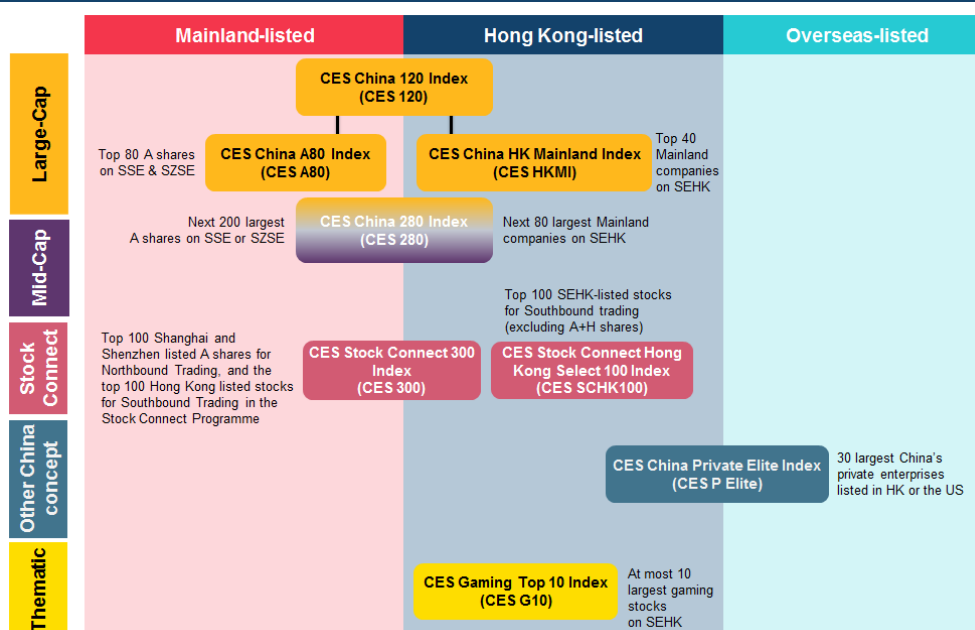
Southbound Trading under Stock Connect has been on a strong rising trend in the recent year, demonstrating **a strong and growing interest from the Mainland investors in trading stocks listed in Hong Kong through this channel**. This would give rise to increasing demand for associated services, including index services and related investment vehicles. (See Appendix 1 for details of Southbound Trading activities under Stock Connect.)

## 2. INDEX SERVICES FOR MUTUAL MARKET INVESTMENT

### 2.1 Indexing for the Mainland-Hong Kong Mutual Market

To better serve the Mainland-Hong Kong Mutual Market with related market services, Hong Kong Exchanges and Clearing Ltd (HKEX), SSE and SZSE jointly established **China Exchanges Services Company Ltd (CESC)** in 2012. CESC's business started with developing cross-border indices covering the Hong Kong, Shanghai and Shenzhen markets. These indices provide the foundations for tradable index products for the benefits of Mainland and global investors for investing in the Mutual Market. Figure 1 below presents the current CESC family of indices.

Figure 1. The CESC family of indices



Source: CESC website.

<sup>5</sup> The Daily Quota limits the maximum net buy value to RMB 13 billion for Northbound stocks and RMB 10.5 billion for Southbound stocks for each of Shanghai Connect and Shenzhen Connect.

The CESC indices serving the Mainland-Hong Kong Mutual Market have two main categories:

- (1) **CES China indices** — Indices comprising Mainland company stocks listed in Mainland China and/or those listed in Hong Kong
  - **CES China 120 Index (CES 120)** — Comprising 120 large-cap companies, with 80 A-share companies on the Mainland exchanges and 40 Mainland companies on SEHK
  - **CES China A80 Index (CES A80)** — Comprising the 80 A-share companies constituting the CES 120
  - **CES China HK Mainland Index (CES HKMI)** — Comprising the 40 Mainland companies constituting the CES 120
  - **CES China 280 Index (CES 280)** — Comprising 280 mid-cap companies with size following the 120 large-cap companies in CES 120, with 200 A shares on the Mainland exchanges and 80 Mainland companies on SEHK
- (2) **CES Stock Connect indices** — Indices comprising eligible stocks under Stock Connect that are listed in Mainland China and/or those listed in Hong Kong
  - **CES Stock Connect 300 Index (CES 300)** — Comprising the top 100 A shares on each of SSE and SZSE for Northbound Trading and top 100 Hong Kong listed stocks for Southbound Trading
  - **CES Stock Connect Hong Kong Select 100 Index (CES SCHK100)** — Comprising the largest 100 stocks on SEHK for Southbound Trading, excluding H shares which have A shares listed in the Mainland (A+H shares)

Other CESC indices include the CES China Private Elite Index and the CES Gaming Top 10 Index. The former tracks the 30 largest China's private-owned enterprises listed on the SEHK, the New York Stock Exchange, the NASDAQ or the NYSE American<sup>6</sup> while the latter tracks the overall performance of the gaming stocks listed in Hong Kong.

In other words, **CES SCHK100 is a unique Stock Connect-related index that tracks the Hong Kong stocks available for Southbound Trading under the Stock Connect scheme.**

## 2.2 The use of CES SCHK100 as a benchmark index

A stock index (or stock market index) is used to measure the performance of a stock market or a segment of it, based on the price movements of the stocks listed and traded on the market. Stock indices are widely used by investors as benchmarks to compare the performance of their own investment portfolios or those of financial managers against the performance of the overall market or the market segment that the stock index measures.

A stock index is created, formulated, produced, maintained and disseminated in response to market needs. Wherever there is investor interest in investing in a market or market segment or across different markets, there will be a need for stock indices to benchmark the performance of their investments. The Dow Jones Industrial Average (DJIA) is known to be the first stock index, which was created in the 19<sup>th</sup> century to measure the performance of the New York stock market. Nowadays, there are different types of stock indices covering different market scopes (see illustration in Table 1).

<sup>6</sup> Formerly known as the American Stock Exchange (AMEX) in the early days and more recently as NYSE MKT.

Table 1. Major types of stock indices		
Type of stock index	Nature	Examples
“National” indices	Measure the performance of the key stock markets (or major stock exchanges) of a given nation or locality	<b>US:</b> DJIA and NASDAQ 100; <b>UK:</b> FTSE 100; <b>Japan:</b> Nikkei 225; <b>Hong Kong:</b> Hang Seng Index (HSI); <b>Shanghai:</b> SSE Composite; <b>Shenzhen:</b> SZSE Composite
“Segment” indices	Measure the performance of a specific segment of an exchange market	<b>Hang Seng Composite Size Indices:</b> HSLI, HSML, HSSI <sup>7</sup> ; <b>SZSE:</b> SME Composite Index, ChiNext Composite Index
“Regional” indices	Measure the performance of stock markets in a specific region defined geographically or by the level of industrialisation or income	EURO STOXX 50 <sup>8</sup> , MSCI Emerging Markets Index <sup>9</sup>
“Sectoral” indices	Measure the performance of a specific industry sector of stocks, which may be within the same market or across different markets	Hang Seng Industry Sub-indexes <sup>10</sup> , STOXX Asia/Pacific 600 industry indices <sup>11</sup>
“World” / “Global” indices	Measure the performance of the stock markets from multiple regions across the world	MSCI World Index <sup>12</sup> , S&P Global 100 <sup>13</sup>
“Thematic” and “Strategy” indices	Indices created on certain investment themes or strategies	Hang Seng China Enterprises Index for listed Chinese companies in Hong Kong (HSCEI) <sup>14</sup> , HSI Volatility Index

Indices can have multiple versions which differ in the calculation methodology. They can differ based on how the index constituents are weighted and on how dividends are accounted for. The common versions include the **price return indices** which only consider the price of the constituents, and the **total return indices** which account for dividend reinvestment. Another dimension of difference lies in the weighting method — price only, full capitalisation or free float-adjusted. DJIA is the best example of a **price-weighted** index<sup>15</sup> while HSI is **free float-adjusted market capitalisation weighted** index with a 10% cap on individual securities<sup>16</sup>, which is the most common index methodology in the stock market.

**The CES SCHK100 is considered a “thematic” benchmark index for measuring the performance of Southbound investment under Stock Connect.**

<sup>7</sup> HSLI is the Hang Seng Composite LargeCap Index; HSML is the Hong Kong Composite MidCap Index; HSSI is the Hang Seng Composite SmallCap Index.

<sup>8</sup> EURO STOXX 50 Index is a blue-chip index for the Eurozone, covering 50 stocks from 11 Eurozone countries (source: STOXX website, <https://www.stoxx.com/>).

<sup>9</sup> The MSCI Emerging Markets Index captures large- and mid-cap representation across 24 emerging market countries, with 843 constituents (source: MSCI website, <https://www.msci.com>).

<sup>10</sup> The Hang Seng Industry Sub-indexes consist of Finance, Utilities, Properties, and Commerce and Industry sub-indices.

<sup>11</sup> The STOXX Asia/Pacific 600 industry index series consists of indices covering respectively 19 industry sectors across multiple Asia/Pacific markets including Japan, Hong Kong, Australia and Singapore (source: STOXX website, <https://www.stoxx.com/>).

<sup>12</sup> The MSCI World Index captures large- and mid-cap representation across 23 developed market countries, with 1,654 constituents (source: MSCI website, <https://www.msci.com>).

<sup>13</sup> The S&P Global 100 Index measures the performance of multi-national, blue-chip companies of major importance in the global equity markets, with 100 highly liquid constituents (source: S&P Dow Jones Indices website, <https://us.spindices.com>).

<sup>14</sup> The HSCEI was initially designed to track H-share companies listed in Hong Kong. The index compiler, Hang Seng Indexes Company Ltd announced in August 2017 the addition of Red Chips (which are state-controlled enterprises incorporated outside Mainland China) and Mainland private enterprises (MPEs or “P-chips”) to the index in five phases from March 2018 to March 2019.

<sup>15</sup> This owes very much to legacy reasons as the DJIA was introduced at a time when automation of index calculation by computer means was not available.

<sup>16</sup> Source: Hang Seng Indexes website, <http://www.hsi.com.hk>.

Apart from being a performance measure, stock indices (or indices in general that apply to asset markets other than stocks, such as property and commodities) are **increasingly used as the underlying assets of passive investment instruments such as exchange-traded funds (ETFs) or derivatives such as index futures and options** to gain exposure to, or to hedge against investment in, a market. ETFs, in particular, have become increasingly popular in the recent years — according to ETFGI<sup>17</sup>, US\$3.548 trillion was invested in the 6,630 ETFs or exchange-traded products (ETPs) listed globally at the end of 2016, with a net inflow of US\$389.34 billion in the year, recording 35 consecutive months of net inflows<sup>18</sup>. According to BlackRock, a net inflow of US\$189.1 billion into the global ETF market was recorded in the first quarter of 2017, the highest record so far; of this, US\$109.1 billion flowed into stock ETFs<sup>19</sup>.

An ETF is a marketable security that tracks an index, a commodity, bonds, or a basket of assets. ETFs trade like common stocks on a stock exchange. Investment in an ETF replicates an investment in its underlying asset(s). For a stock index ETF, the underlying asset composition will be the same as the relative weightings of the constituents in the index. The increasing popularity of ETFs lies in the simple way it offers to investors to gain investment exposure to virtually any asset class, geography or sector, at relatively low costs vis-à-vis active fund management<sup>20</sup>.

Therefore, the availability of a suitable index for a market or an investable segment of an asset group is not only important for market performance measurement, but also helps promoting or facilitating investment, thereby driving up liquidity, in the underlying market or asset group by enabling the creation of ETFs based on the index. For achieving the latter successfully through ETFs, two conditions must be met: (1) the index must be investable, i.e. the components of the index must be tradable in a free and open market; (2) it must be possible to buy all the components of the index in accordance with their respective weightings in the index without incurring very high transaction costs or having market impact.

**For the Mainland-Hong Kong Mutual Market that attracts increasing investor interest, related index services and index-related investment products have become inevitable as a support to the continuous growth and development of the market.**

### 2.3 Mutual Market index-linked investment vehicles

The first cross-border index-linked investment product<sup>21</sup> developed specially for the Mainland-Hong Kong Mutual Market was introduced in 2013 — the CES 120 index futures launched on 12 August 2013 on HKEX's derivatives market. In the same year, three related index ETFs were also listed on HKEX's securities market (see Table 2). These are considered “Mutual Market concept” index-linked products as their underlying indices are members of the cross-border index family, which are different from ETFs based on indices of Hong Kong stocks or Mainland A shares or Mainland companies listed in Hong Kong or overseas that are built independently of the Mutual Market concept.

<sup>17</sup> ETFGI LLP is a wholly independent research and consultancy firm providing services to leading global institutional and professional investors, the global ETF and ETP industry, its regulators and advisers (<http://etfgi.com>).

<sup>18</sup> Source: “*ETF industry grew faster than hedge funds in 2016 – ETFGI*”, International Adviser, 6 March 2017.

<sup>19</sup> Source: 《貝萊德：首季全球ETF吸1.4萬億新高》，Hong Kong Economic Times, 4 May 2017.

<sup>20</sup> For reference, see “*The evolution of the ETF industry*”, Pensions & Investments, 31 January 2017.

<sup>21</sup> “Cross-border” refers specifically to Mainland-Hong Kong cross border. Cross-border investment products mean products that enable Mainland investors to invest in Hong Kong assets and/or vice versa.



Table 2. Mutual Market concept index-linked products in Hong Kong (as of end-Aug 2017)			
Futures product			Launch date
CES China 120 Index Futures			12/08/2013
ETFs (dual-counter stocks)	HKD counter	RMB counter	Listing date
ChinaAMC CES China A80 Index ETF*	3180	83180	26/08/2013
CSOP CES China A80 ETF	3137	83137	23/09/2013
E Fund CES China 120 Index ETF	3120	83120	21/10/2013

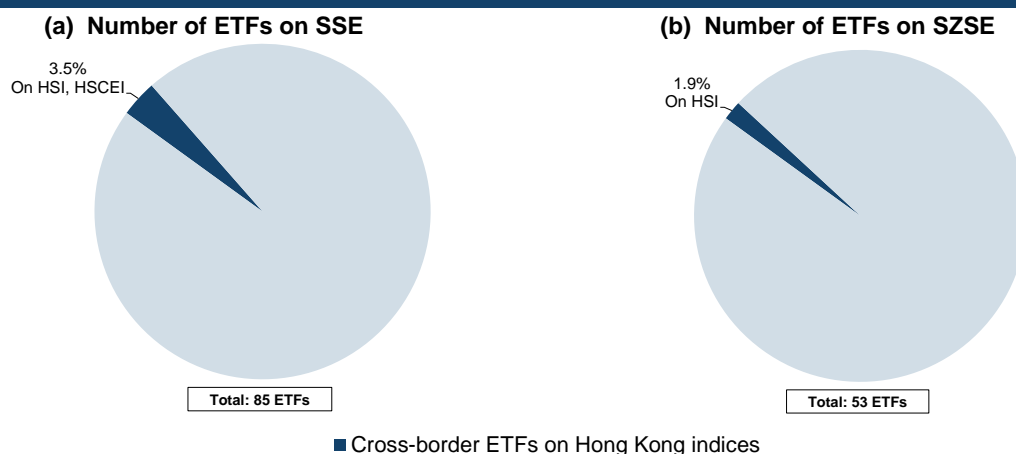
Note: The ETF was delisted on 10 November 2017.

Source: HKEX.

In Hong Kong, cross-border index-linked products have been available for Hong Kong and overseas investors to invest in the Mainland stock market long before the launch of Stock Connect. The first ETF listed on SEHK with Mainland-listed shares included as the underlyings was the iShares MSCI China Index ETF<sup>22</sup> listed on 28 November 2001. This was followed by the iShares FTSE A50 China Index ETF on 18 November 2004. As of end-August 2017, out of a total of 93 physical stock index ETFs listed on the SEHK, there were about 30% ETFs which have Mainland-listed shares included as underlyings<sup>23</sup>. The underlying indices include MSCI China Index, FTSE China A50 Index, SSE 50 Index, CSI indices, CES indices and others. All these ETFs on SEHK constituted 28% of total turnover in ETFs in 2017 up to August<sup>24</sup>.

In the Mainland, there were a total of 85 and 53 ETFs listed respectively on the SSE and the SZSE as at the end of August 2017. Of these, there was only 3 cross-border ETFs on the SSE, which are on the HSI and HSCEI, and only one cross-border ETF on the SZSE, which is on the HSI. Turnover value in the single ETF on HSI ranked 5<sup>th</sup> among all ETFs listed on the SZSE for the period January to August 2017, constituting 1.6% of the total turnover of ETFs on the SZSE during the period (while the top 3 ETFs by turnover value already contributed 87% of total ETF turnover on the SZSE during the period)<sup>25</sup>.

Figure 2. Limited supply of cross-border index-linked products in the Mainland (End-Aug 2017)



Source: Monthly statistics on the SSE and SZSE websites.

<sup>22</sup> The MSCI China Index comprises companies incorporated in the People’s Republic of China (PRC) and listed either on the SSE, the SZSE or the SEHK. Constituents include Mainland-listed B shares, Hong Kong-listed H shares, P-chips and foreign listings (e.g. American Depositary Receipts). MSCI announced in June 2017 the inclusion of China A shares in the MSCI Emerging Markets Index and MSCI ACWI Index series beginning in June 2018. This would include MSCI China Index.

<sup>23</sup> The figures excluded dual counting of dual-counters. Source: HKEX website.

<sup>24</sup> Source: Calculation based on statistics in Trading Summary for ETFs, August 2017, on HKEX website.

<sup>25</sup> Source: Monthly Statistics on the SZSE website.

It is apparent that **there is only a limited supply of cross-border index-linked products in the Mainland to serve investment in the Mutual Market while the potential demand is expected to be strong.**

### 3. THE CES SCHK100 INDEX — A TRADABLE INDEX FOR SOUTHBOUND INVESTMENT

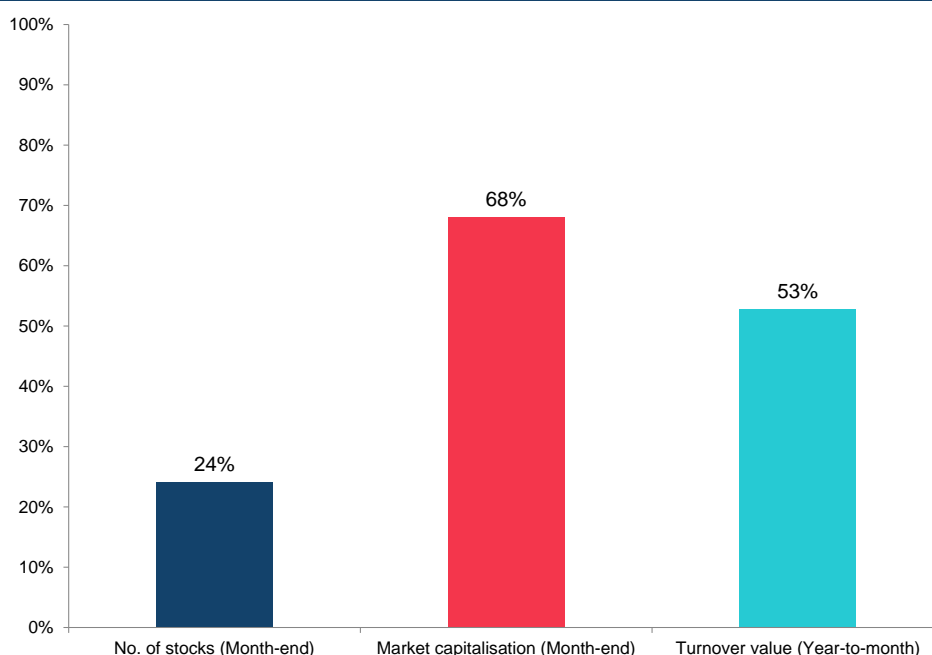
CES SCHK100 was launched on 15 December 2014. It has a base value of 2000 points on the base date of 31 December 2008. The index constituents consist of the top 100 SEHK-listed stocks by market value that are available for Southbound Trading under the Stock Connect scheme, excluding the dual-listed A+H shares. It adopts the common index compilation method of free float-adjusted market capitalisation weighted with a 10% cap. Real-time data of the index is disseminated at 5-second intervals.

The special feature of the index is that it is a unique Stock Connect-related index that tracks the Hong Kong stocks available for Southbound Trading under the Stock Connect scheme. The usefulness of the index in Southbound Trading lies in **its representativeness of Southbound eligible stocks and its different composition vis-à-vis other existing Hong Kong and Mainland market indices for alternative investment opportunities.** This is illustrated in sub-sections below.

#### 3.1 Coverage of top Southbound stocks

Constituents of CES SCHK100 are selected based on their ranking by market capitalisation. These are the largest stocks with considerable liquidity among the Southbound stocks. Although they constituted only 24% in terms of number of stocks as at the end of August 2017, they covered 68% by market capitalisation and 53% by market turnover value<sup>26</sup> of all Southbound stocks (see Figure 3). Except for H shares (bearing in mind that CES SCHK100 excludes A+H stocks), the index has a high degree of representativeness for each other stock type (see Section 3.2).

**Figure 3. Percentage share of CES SCHK100 stocks in all Southbound stocks (Aug 2017)**



Source: Websites of HKEX, SSE, SZSE and CESC for stock lists; HKEX for market data.

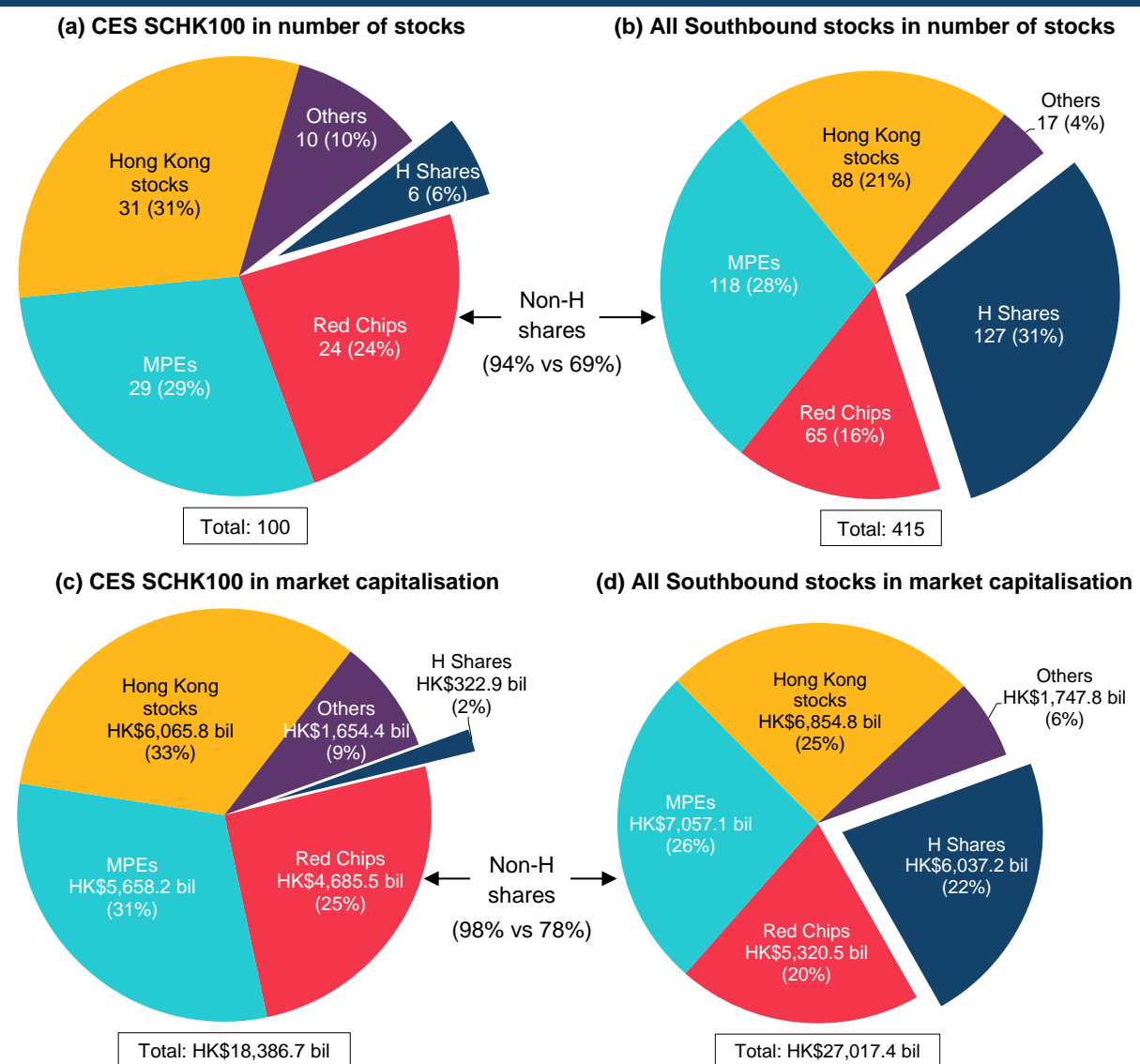
<sup>26</sup> The “market turnover value” refers to the stocks’ total turnover in the market, not just Southbound Trading.

### 3.2 Pure Hong Kong concept, with high representativeness

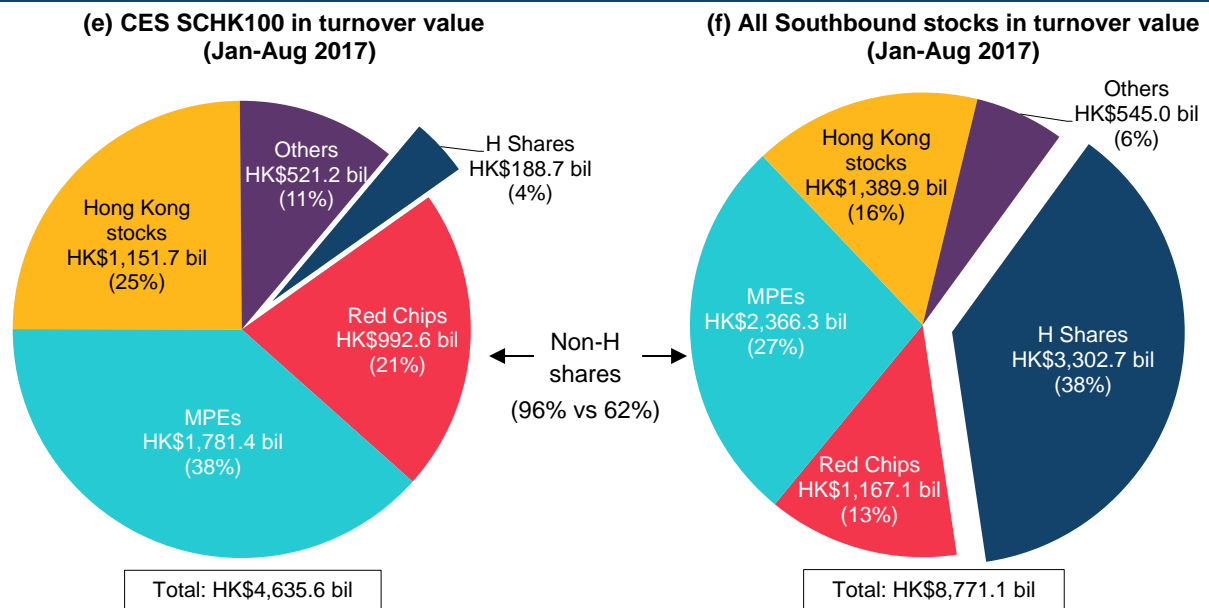
CES SCHK100 consists of stocks listed only in Hong Kong, excluding A+H stocks which already have A shares listed in the Mainland market. The index therefore measures pure exposure to Hong Kong listed stocks, which is a specialised opportunity to the Mainland investors for investing through Stock Connect on top of their domestic stock investments.

Compared to the collection of all Southbound stocks, CES SCHK100 represents more for non-H shares in terms of market capitalisation — 33% vs 25% for Hong Kong stocks, 31% vs 26% for Mainland private enterprises (MPEs) and 25% vs 20% for Red Chips; and in terms of turnover value (for 2017 up to August) — 25% vs 16% for Hong Kong stocks; 38% vs 27% for MPEs and 21% vs 13% for Red Chips (see Figure 4). In particular, MPEs represent the key growth sector in China’s current economic transformation stage into the New Economy.

**Figure 4. Composition of CES SCHK100 vs all Southbound stocks by stock type (End-Aug 2017)**



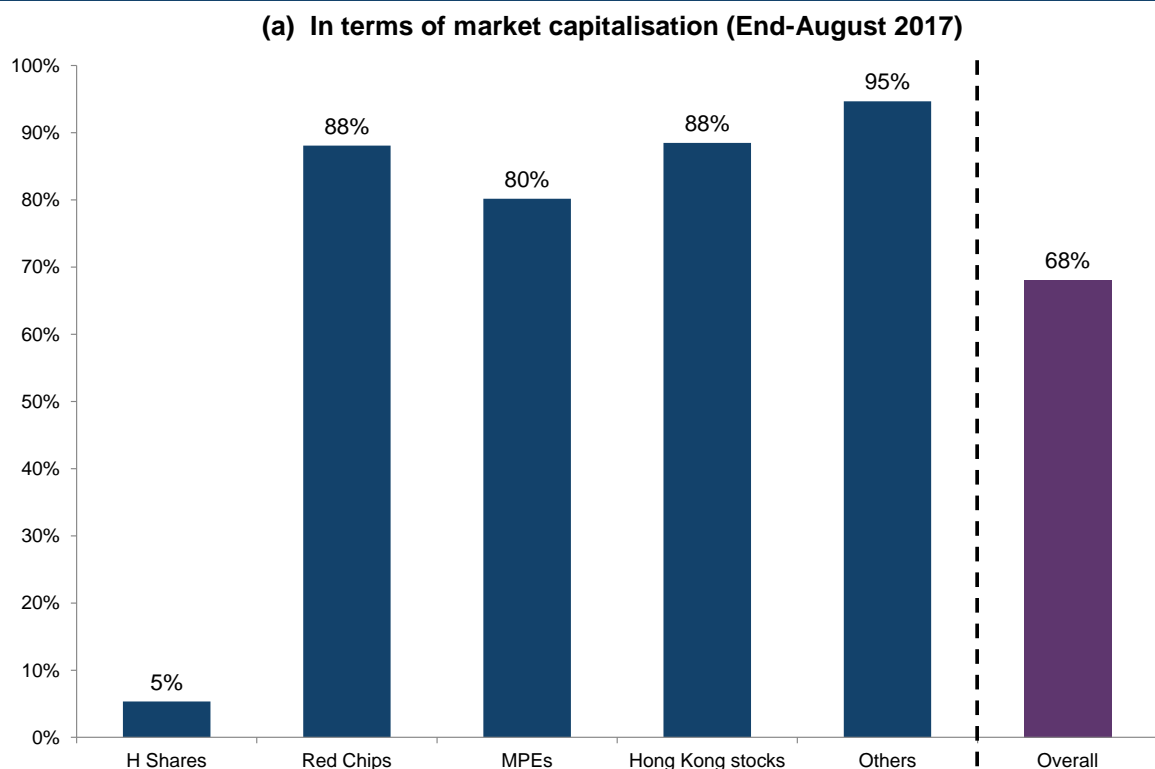
**Figure 4. Composition of CES SCHK100 vs all Southbound stocks by stock type (End-Aug 2017)**



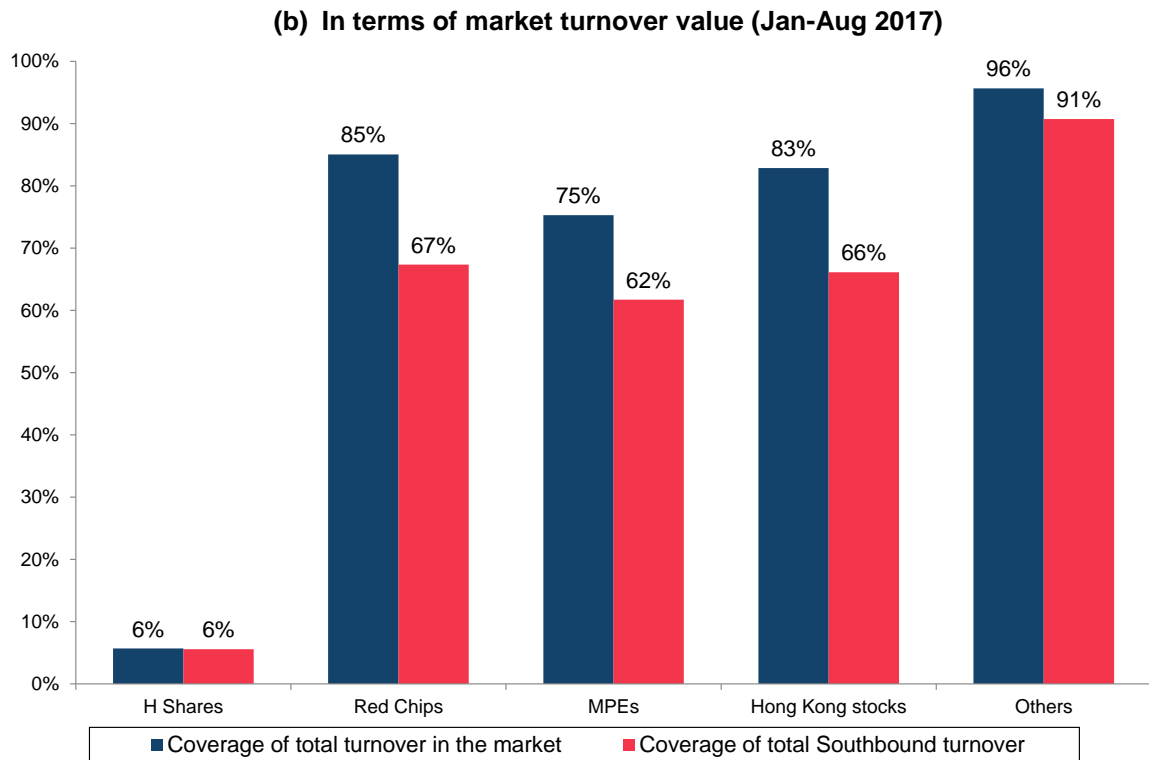
Note: Stock classification by type is done by HKEX based on the listed company's China/non-China origin and in consideration of the origin of establishment and place of incorporation for companies other than H shares, Red Chips and MPEs.  
 Source: Websites of HKEX, SSE, SZSE and CESC for stock lists; HKEX for market data.

Excluding H shares, CES SCHK100's coverage of Southbound stocks by each other stock type is very high in terms of market capitalisation (80%-95%) and market turnover value (75%-96%), albeit to a somewhat lesser degree in terms of Southbound turnover value (62%-91%) (see Figure 5).

**Figure 5. CESC SCHK100 stocks' coverage of all Southbound stocks by stock type (Aug 2017)**



**Figure 5. CESC SCHK100 stocks' coverage of all Southbound stocks by stock type (Aug 2017)**



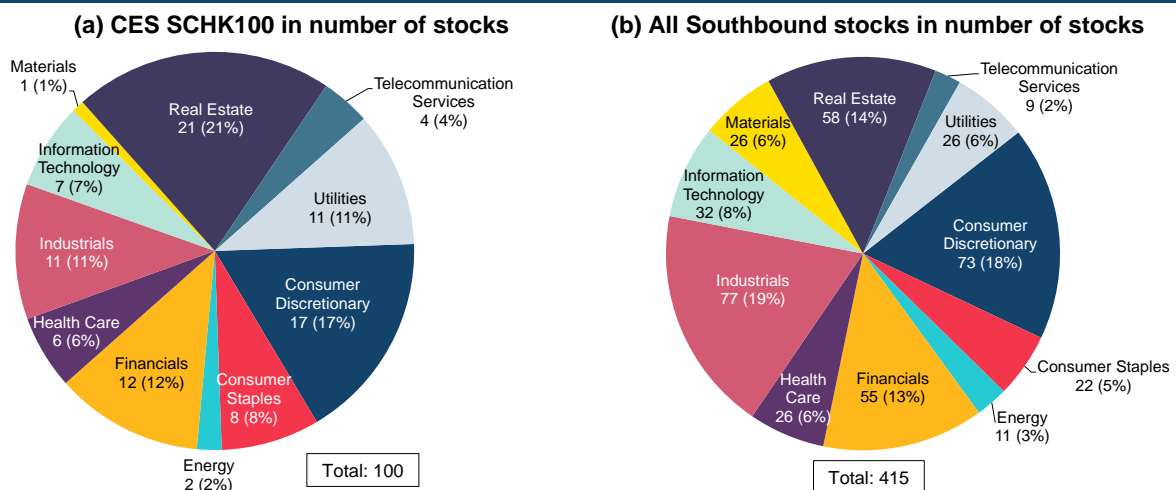
Note: Stock classification by type is done by HKEX based on the listed company's China/non-China origin and in consideration of the origin of establishment and place of incorporation for companies other than H shares, Red Chips and MPEs.

Source: Websites of HKEX, SSE, SZSE and CESC for stock lists; HKEX for market data..

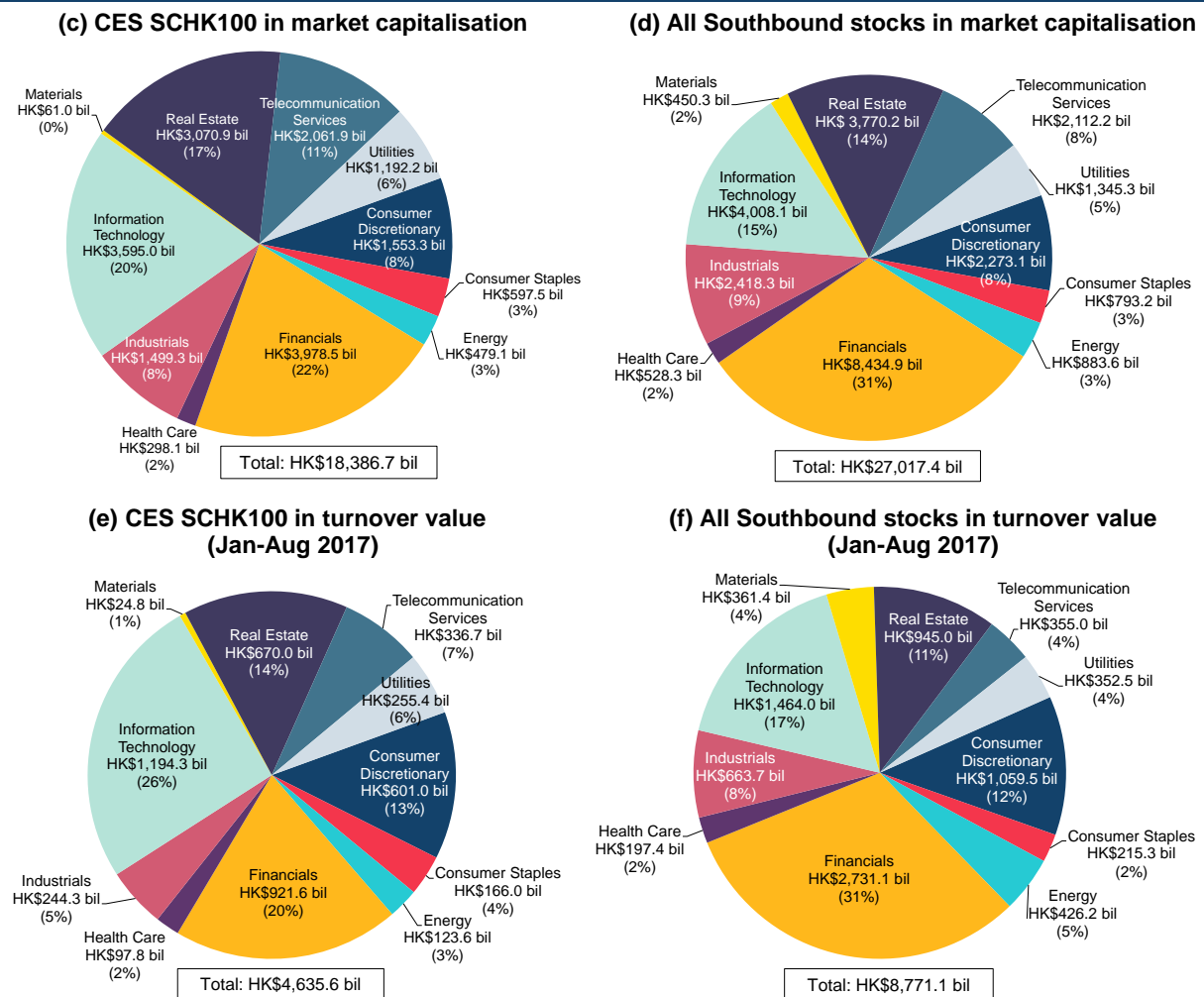
### 3.3 Resemblance by industry sector, with more exposure to the New Economy

CES SCHK100 stocks have a composition by industry sector as diverse as all Southbound stocks, but with a lesser degree of contribution from Financials (22% vs 31% in terms of market capitalisation and 20% vs 31% in terms of market turnover value). Instead, it has heavier weightings by market capitalisation and turnover value on stocks in the Information Technology (IT) sector, the perceived high-growth sector in the New Economy (see Figure 6).

**Figure 6. Composition of CES SCHK100 vs all Southbound stocks by industry sector (End-Aug 2017)**



**Figure 6. Composition of CES SCHK100 vs all Southbound stocks by industry sector (End-Aug 2017)**



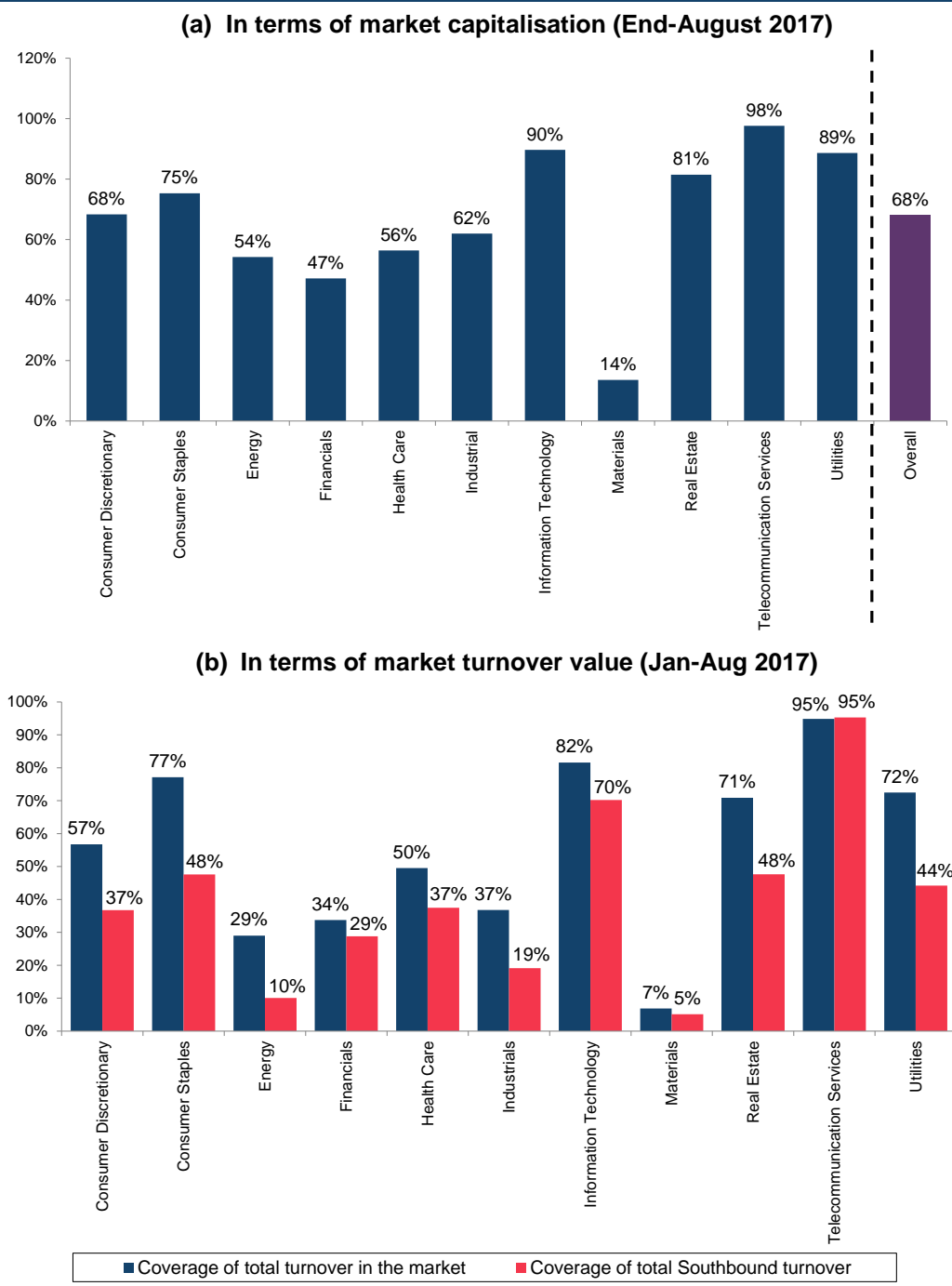
Source: Websites of HKEX, SSE, SZSE and CESC for stock lists; HKEX for market data.

As shown in Figure 7, CES SCHK100 has a relatively high coverage of Southbound stocks in the New Economy sectors<sup>27</sup>:

- IT — 90% by market capitalisation, 82% by market turnover value;
- Consumer Staples — 75% by market capitalisation, 77% by market turnover value;
- Consumer Discretionary — 68% by market capitalisation, 57% by market turnover value;
- Health Care — 56% by market capitalisation, 50% by market turnover value.

<sup>27</sup> The New Economy sectors refer to the sectors included in the CSI MarketGrader China New Economy Index (source: China Securities Index Co., Ltd (CSI) website).

**Figure 7. CES SCHK100 stocks' coverage of all Southbound stocks by industry sector (August 2017)**

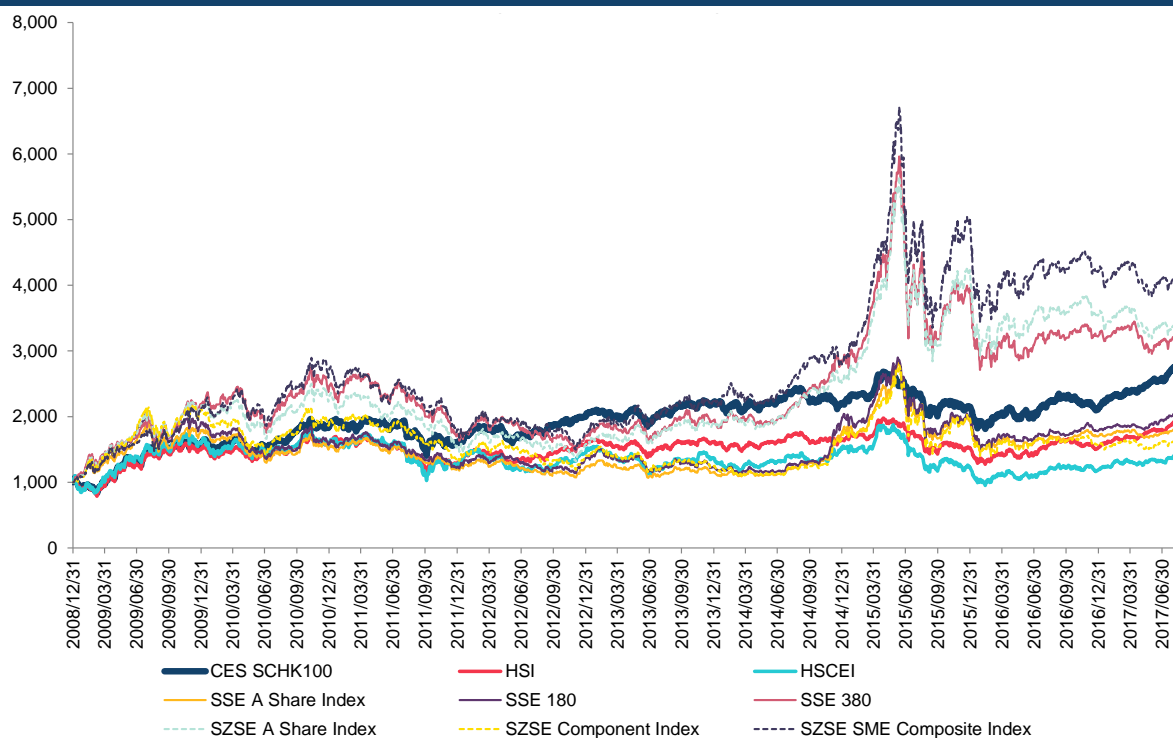


Source: Websites of HKEX, SSE, SZSE and CESC for stock lists; HKEX for market data.

### 3.4 Performance versus key Hong Kong and Mainland indices

Figure 8 shows the daily movements of CES SCHK100 in comparison with the key stock indices in Hong Kong, Shanghai and Shenzhen stock markets. For the past 8+ years since the base date (31 December 2008) of CES SCHK100 up to end-August 2017, the index achieved a cumulative return of 102%. This was unmatched by the key indices of HSI (66%) and HSCEI (36%) in Hong Kong and surpassed only by the SSE 380 (118%), the SZSE A Share Index (125%) and the SZSE SME Composite Index (144%) (see Table 3).

**Figure 8. Daily closings of CES SCHK100 and key Hong Kong and Mainland indices (Rebased on 31 Dec 2008) (31 Dec 2008 – 31 Aug 2017)**



Source: CESC for CES SCHK100, Thomson Reuters for other indices.

**Table 3. Cumulative returns of CES SCHK100 and key Hong Kong and Mainland indices (31 Dec 2008 – 31 Aug 2017)**

Index	Cumulative return
CES SCHK100	102.23%
HSI	66.48%
HSCEI	35.86%
SSE A Share Index	61.03%
SSE 180	72.52%
SSE 380	118.58%
SZSE A share Index	125.23%
SZSE Component Index	51.15%
SZSE SME Composite Index	144.08%
ChiNext Composite Index	74.67%

Note: Returns are natural logarithmic returns.

Source: Calculated from daily closings of indices — CESC for CES SCHK100, Thomson Reuters for other indices.

CES SCHK100 was found to have better historical return performance both in the short term and in the long term than the Hong Kong key indices. On the other hand, Mainland indices showed bigger fluctuation in their return performance over time, especially for the SZSE indices. Their returns fluctuated a lot in the past years and were at a much lower (or negative) level in the recent year compared to the positive return achieved by CES SCHK100. In fact, CES SCHK100 has an annualised volatility of daily returns lower than the key Hong Kong and Mainland indices for most of the years since its launch. (See Table 4 and Figure 9.)



**Table 4. Period returns of CES SCHK100 and key Hong Kong and Mainland indices up to 31 Aug 2017**

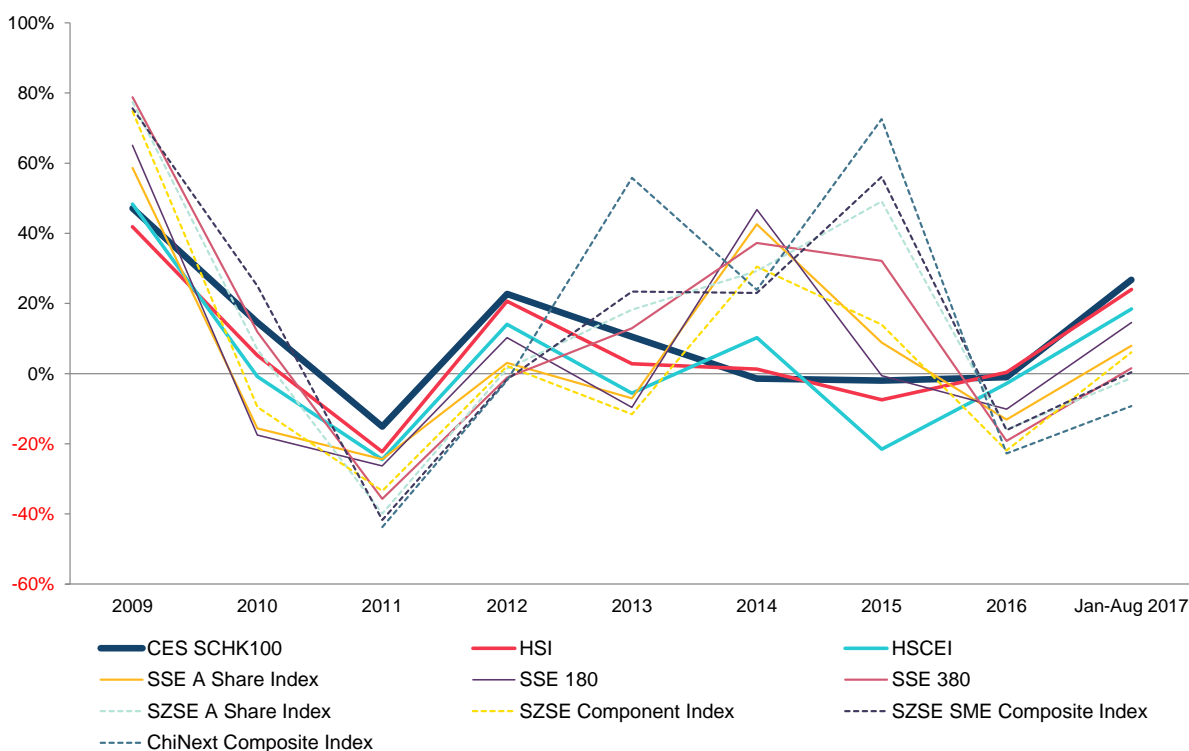
Index	1-year	3-year	5-year	7-year
CES SCHK100	21.41%	15.26%	46.11%	54.55%
HSI	19.67%	12.26%	36.16%	30.89%
HSCEI	16.87%	2.98%	19.65%	-0.95%
SSE A Share Index	8.59%	41.64%	49.56%	24.15%
SSE 180	15.79%	49.27%	56.52%	31.00%
SSE 380	0.01%	41.02%	68.42%	36.73%
SZSE A share Index	-4.44%	47.44%	84.14%	50.93%
SZSE Component Index	0.54%	32.16%	27.56%	-4.71%
SZSE SME Composite Index	-2.35%	48.21%	88.19%	54.82%
ChiNext Composite Index	-16.09%	45.57%	121.22%	83.82%

Note: Returns are natural logarithmic returns.

Source: Calculated from daily closings of indices — CESC for CES SCHK100, Thomson Reuters for other indices.

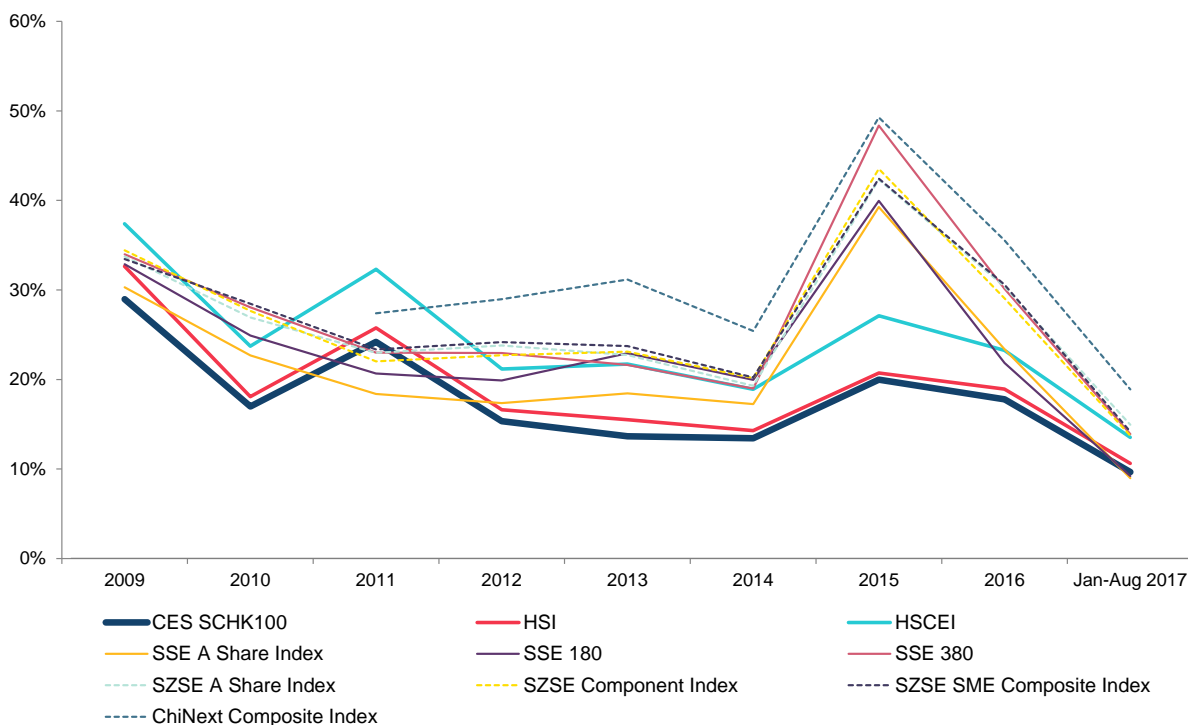
**Figure 9. Return and volatility of CES SCHK100 and key Hong Kong and Mainland indices (2009 – Aug 2017)**

**(a) Annual/period returns**



**Figure 9. Return and volatility of CES SCHK100 and key Hong Kong and Mainland indices (2009 – Aug 2017)**

**(b) Annualised volatility of daily returns**



Note: Returns are natural logarithmic returns. Annualised volatility is the annualised standard deviation of daily returns during the period.

Source: Calculated from daily closings of indices — CESC for CES SCHK100, Thomson Reuters for other indices.

Despite the different return performance, CES SCHK100 had a relatively high correlation of daily returns with the key Hong Kong indices of HSI and HSCEI — correlation coefficients of 0.978 and 0.899 respectively with HSI and HSCEI during the period from January 2009 to August 2017. On the contrary, the correlation of the daily returns of CES SCHK100 with the Mainland key indices was at a moderate, lower level — a correlation coefficient of 0.5 or below (see Table 5).

**Table 5. Correlation coefficients of daily returns of CES SCHK100 with key Hong Kong and Mainland indices (Jan 2009 – Aug 2017)**

Correlation with index	Correlation coefficient
HSI	0.978
HSCEI	0.899
SSE A Share Index	0.507
SSE 180	0.509
SSE 380	0.435
SZSE A share Index	0.437
SZSE Component Index	0.461
SZSE SME Composite Index	0.407
ChiNext Composite Index	0.341

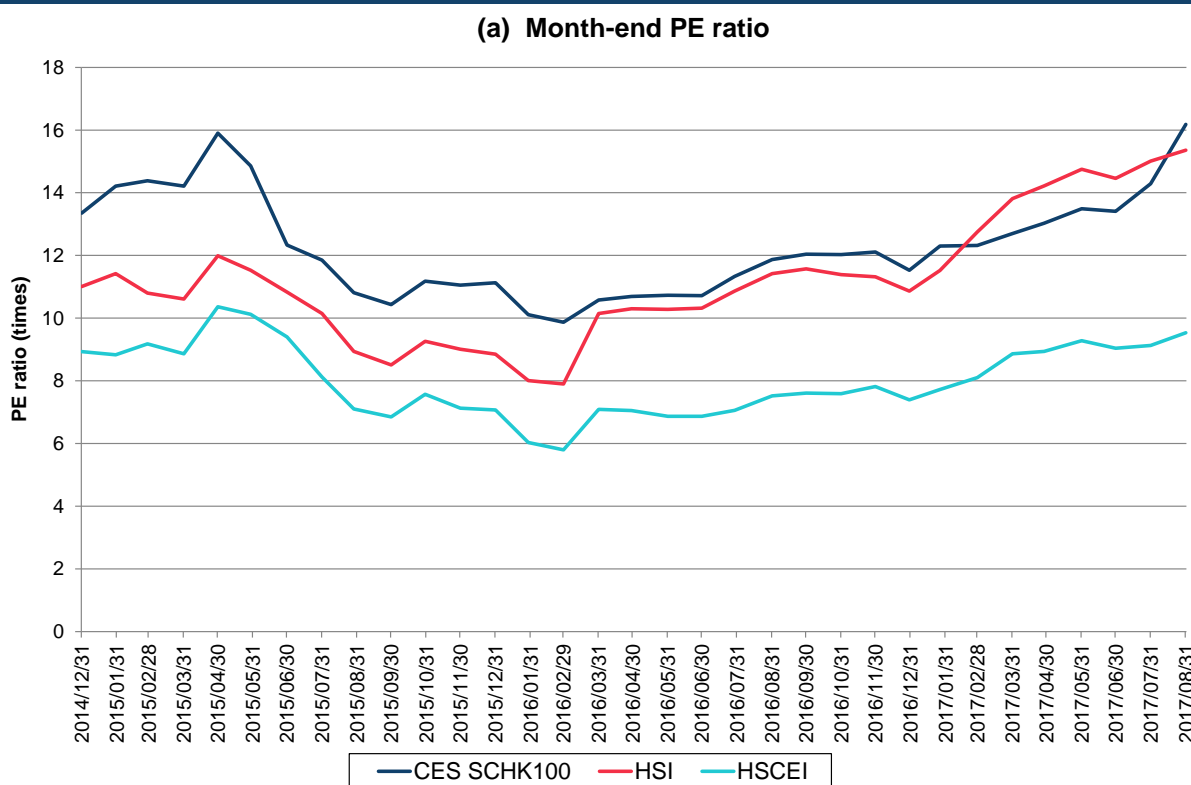
Note: Correlation coefficients are Pearson correlation coefficients; all are statistically significant at 0.1% level.

Source: Calculated from daily closings of indices — CESC for CES SCHK100, Thomson Reuters for other indices.

Among indices tracking Hong Kong stocks only, the month-end price-earnings (PE) ratios of CES SCHK100 was higher than those of HSCEI all the time and also higher than those of HSI for most of the time since December 2014 to August 2017, albeit it had a lower dividend yield than the two indices for most of the time during the same period<sup>28</sup> (see Figure 10). It might reflect that the constituents of CES SCHK100 come more from the growth sector at the current stage of economic development (see Section 3.3 above), generating capital gains from profit re-investment rather than distributing profits as dividends, while many constituents of HSI and HSCEI would be companies in the traditional economy which are at a relatively mature stage of development.

Moreover, compared to the Shenzhen stock market which is generally perceived to comprise of growth stocks, CES SCHK100 has a higher dividend yield (3.08%) than the SZSE Component Index (1.04%), the SME Index (0.84%) and the ChiNext Index (0.69%) as of end-August 2017<sup>29</sup>.

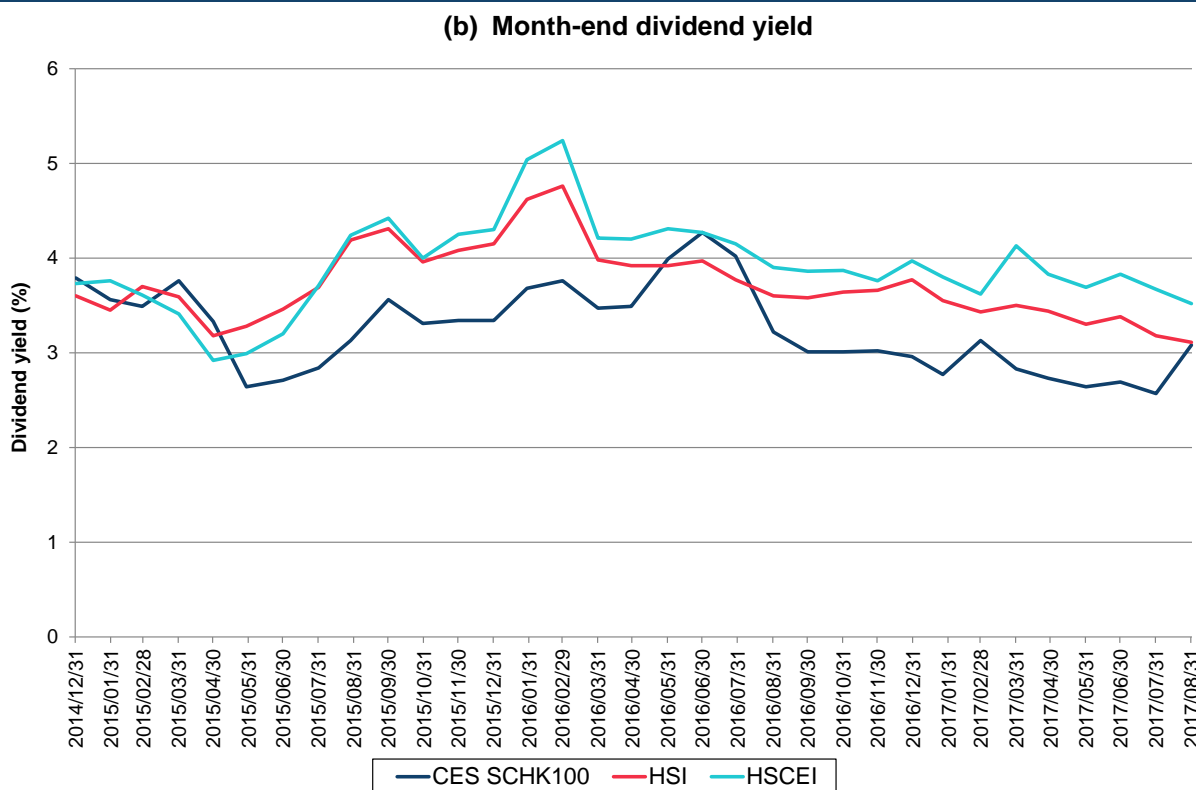
**Figure 10. PE ratios and dividend yields of CES SCHK100 and key Hong Kong indices (Dec 2014 – Aug 2017)**



<sup>28</sup> PE ratios and dividend yields for the indices are weighted average of those of the respective index constituents.

<sup>29</sup> Source of dividend yields of SZSE indices: CNINDEX monthly index report, August 2017 (<http://index.cninfo.com.cn/>).

**Figure 10. PE ratios and dividend yields of CES SCHK100 and key Hong Kong indices (Dec 2014 – Aug 2017)**



Note: The figures are weighted average of those of the respective index constituents.

Source: CESC for CES SCHK100, Hang Seng Indexes website for HSI and HSCEI.

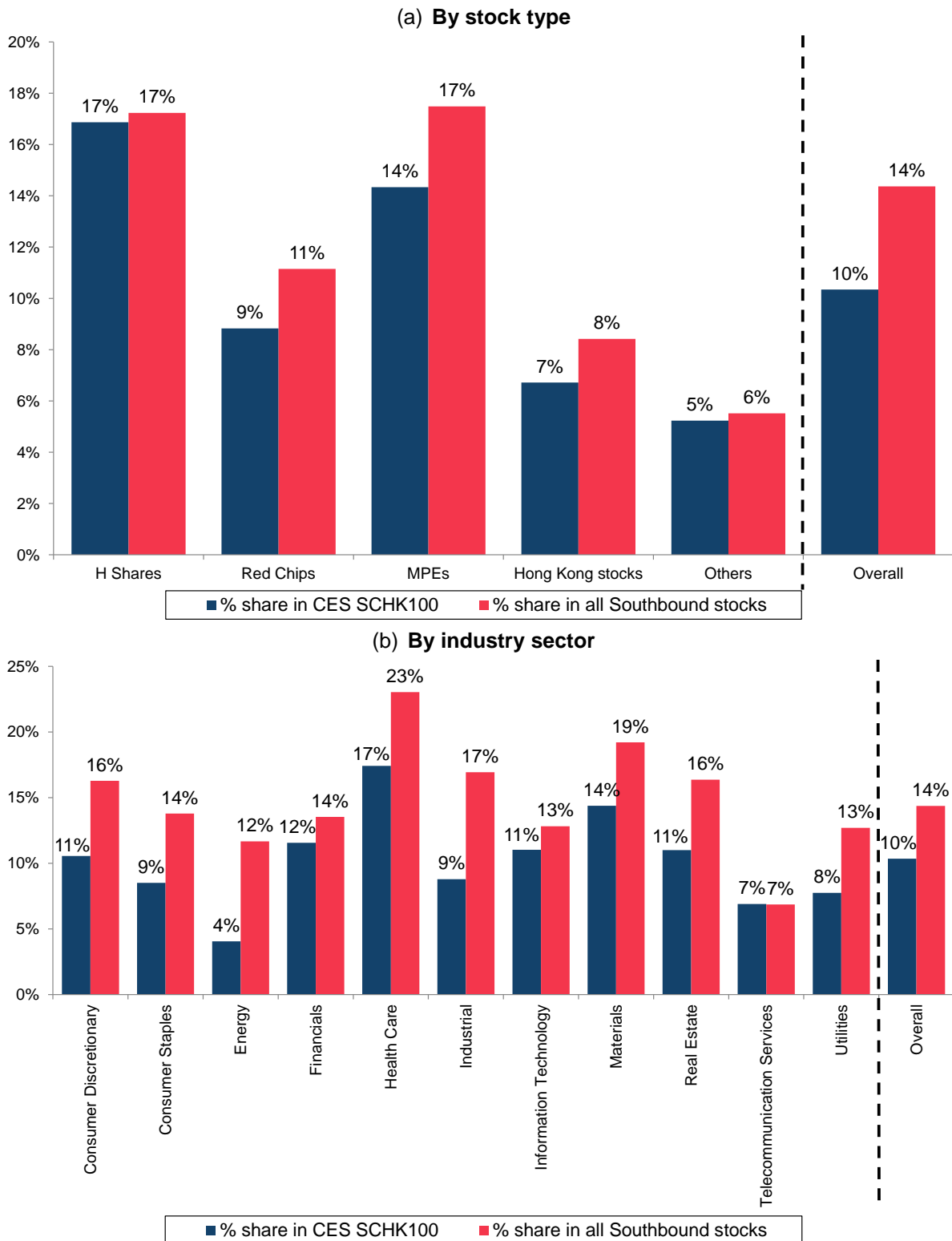
### 3.5 Opportunities offered by CES SCHK100 for Southbound investment

In summary, CES SCHK100 has the following characteristics for tracking investment through Southbound Trading under Stock Connect:

- (1) Having a relatively high coverage of Southbound stocks in terms of market capitalisation and turnover value;
- (2) Tracking investment of a pure Hong Kong concept, with a high representativeness of stocks listed in Hong Kong and not in the Mainland market at the same time, therefore representing pure investment opportunities outside Mainland China, with only moderate correlation with movements in the Mainland domestic stock market;
- (3) Having a relatively high coverage of stocks of the growth sectors among Southbound stocks, e.g. MPEs and stocks in the New Economy industries;
- (4) Owing to its stock composition, having historically higher PE ratio but lower dividend yield than HSI and HSCEI, and also lower return volatility than the key Hong Kong and Mainland indices, for most of the time since its launch.

Interestingly, despite the above facts, it was found that during 2017 up to August the share of Southbound Trading in the total market turnover of constituent stocks of CES SCHK100 (10%) was to a lesser degree than that in the overall market turnover of all Southbound stocks (14%). The same observation was obtained whether in terms of different stock types or in terms of different industry sectors (see Figure 11).

**Figure 11. Percentage share of Southbound Trading in total market turnover of CES SCHK100 and of all Southbound stocks (Jan - Aug 2017)**



Source: Websites of HKEX, SSE, SZSE and CESC for stock lists; HKEX for market data.

In other words, **the potential of investment opportunities in CES SCHK100 stocks is yet to be exploited further through Southbound Trading**. The index fulfills the pre-requisites to support the development of passive investment instruments like ETFs for Southbound Trading — the index constituents are tradable in a free and open market and trading of the constituents is expected to have little market impact as they are the top 100 Southbound stocks by size (see Section 2.2 above on the conditions for the success of ETFs). CES SCHK100 therefore would be a useful benchmark for developing passive investment instruments like ETFs for Southbound Trading.

#### 4. CONCLUSION

The establishment of the Mainland-Hong Kong Mutual Market after the launch of the Stock Connect scheme has opened up more opportunities for Mainland investors, with fewer restrictions than previous channels like QDII, for investing in overseas markets. Statistics show that there is a strong and growing interest from the Mainland investors in trading stocks listed in Hong Kong through Southbound Trading under the scheme.

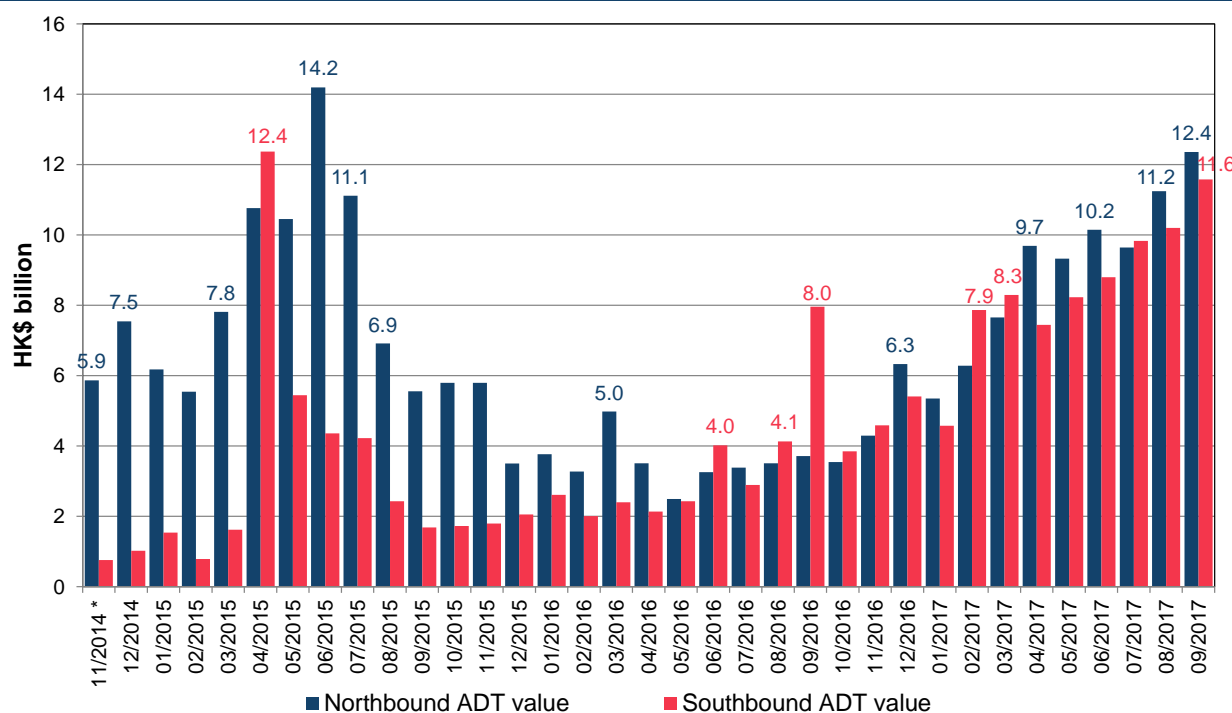
CESC SCHK100 is a unique Stock Connect-related index that tracks the Hong Kong stocks available for Southbound Trading, representing pure investment opportunities outside Mainland China. Given its high representativeness of Southbound eligible stocks and growth-sector stocks in the New Economy, the potential of investment opportunities in its constituent stocks is yet to be exploited further through Southbound Trading. Towards this end, CES SCHK100 is potentially a useful benchmark for developing passive investment instruments like ETFs for Southbound Trading.

## APPENDIX 1. SOUTHBOUND TRADING ACTIVITIES UNDER STOCK CONNECT

Since the launch of Shanghai Connect, Northbound Trading had been much more than Southbound Trading in terms of average daily trading value (ADT) for most of the time before 2016. A rising trend of Southbound Trading was observed since late 2015, slowly at the beginning and in a rapid pace after the launch of Shenzhen Connect in December 2016 (see Figure A1). The ratio of Southbound Trading relative to the SEHK Main Board total market trading rose from 1.0% of the Main Board ADT<sup>30</sup> in September 2015 to the highest level of 6.1% in September 2017. This compared to about 1% for the ADT of Northbound Trading as a percentage of the Mainland total A-share market (see Figure A2). Moreover, Southbound ADT exceeded Northbound ADT time and again in a number of months during the period.

Moreover, Southbound Trading had much higher average daily net buy trade values than Northbound Trading for most of the time since late 2015. Net sell trade value was recorded for Southbound Trading in only two months since launch up to September 2017, vis-à-vis 6 months for Northbound Trading (see Figure A3). Up to September 2017, the cumulative net buy-in value of Hong Kong stocks by Mainland investors through Southbound Trading was HK\$604.0 billion, compared to the cumulative net buy-in value of RMB 314.5 billion (~HK\$372.0 billion) of Mainland stocks by global investors through Northbound Trading.

**Figure A1. Average daily value of Stock Connect total trading (buy and sell) — Northbound and Southbound (Nov 2014 – Sep 2017)**



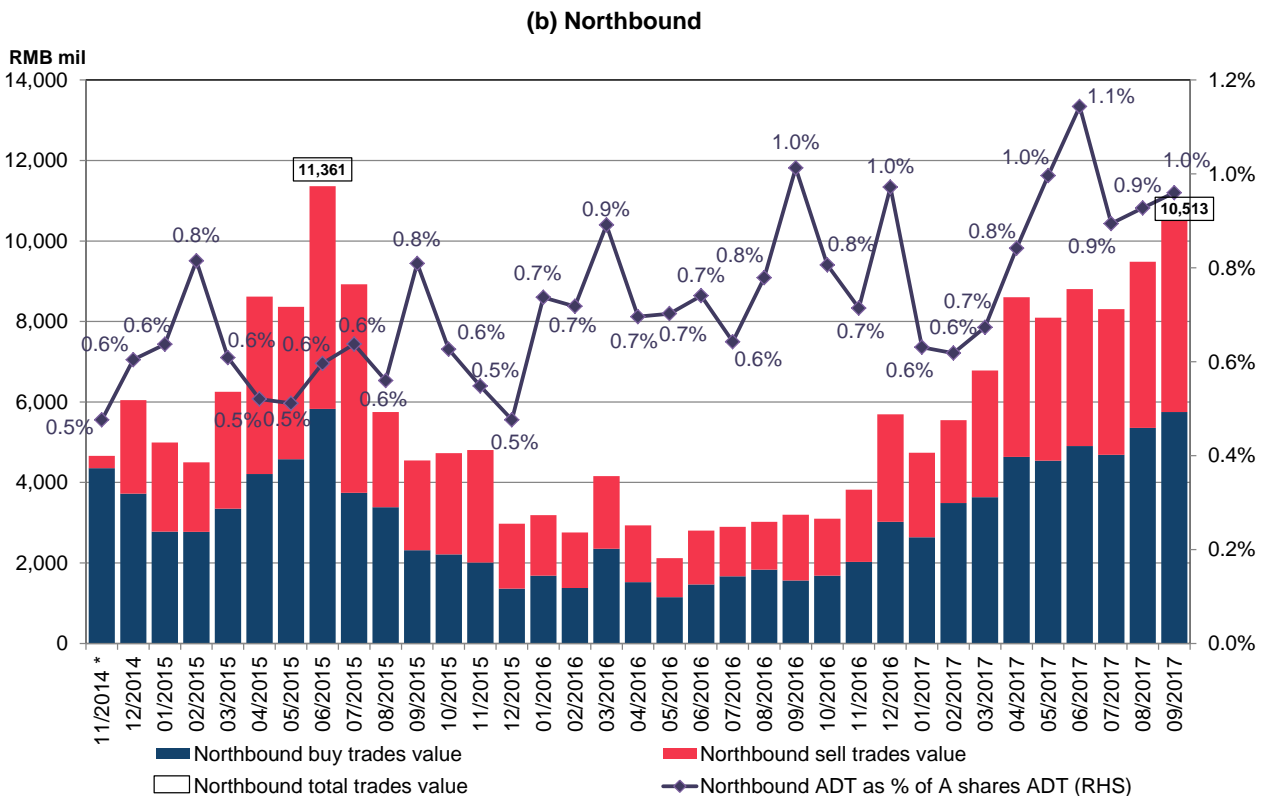
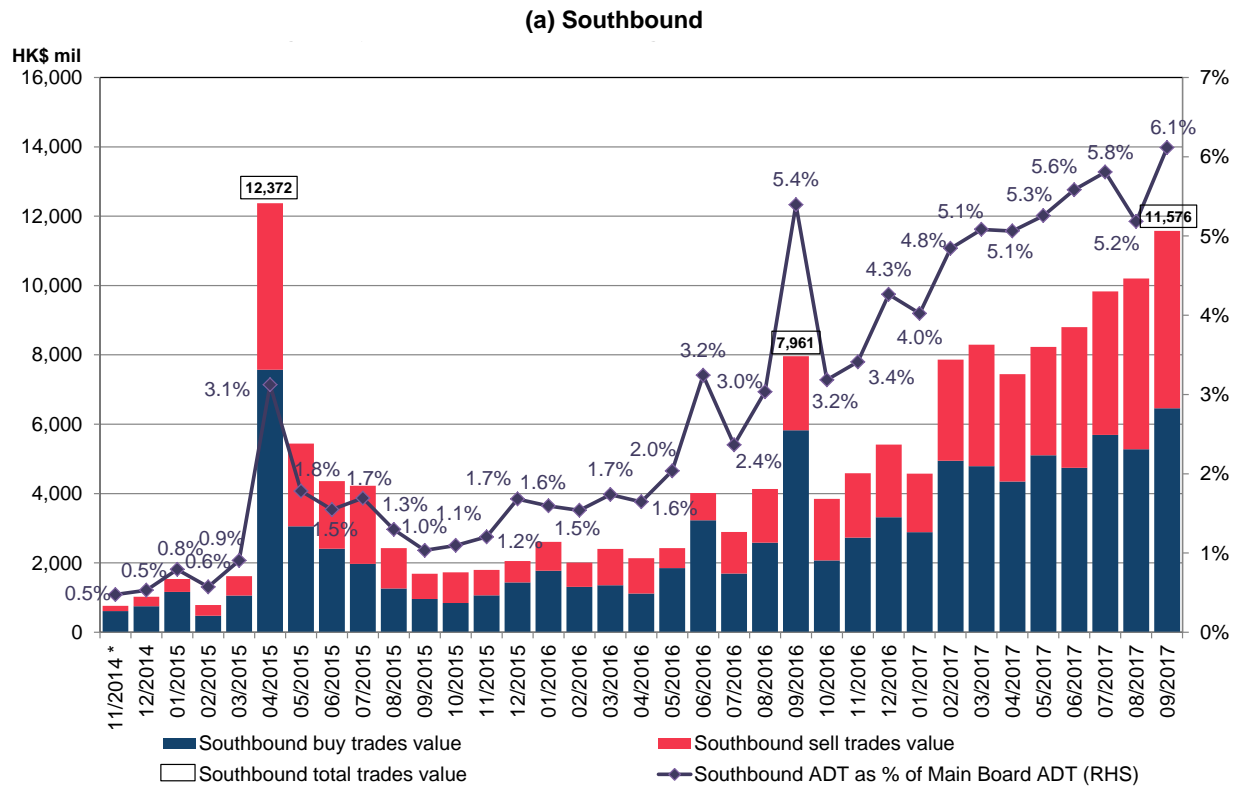
\* Starting from 17 Nov 2014 when Shanghai Connect was launched.

Note: Stock Connect total trading values include buy and sell trades. Northbound Trading values are converted to HKD using month-end exchange rates from Hong Kong Monetary Authority website. Shenzhen Connect data is included since the launch date of Shenzhen Connect (5 Dec 2016).

Source: HKEX

<sup>30</sup> For more appropriate comparison, total Southbound Trading on 2-sided basis (buy and sell) was divided by two to give a figure on one-sided basis for calculating the ratio relative to the SEHK Main Board total turnover value (also on a one-sided basis). The same approach is applied in calculating the ratio of Northbound Trading to the Mainland total A-share market turnover value.

**Figure A2. Stock Connect average daily trading value and percentage share of market total (Nov 2014 – Sep 2017)**



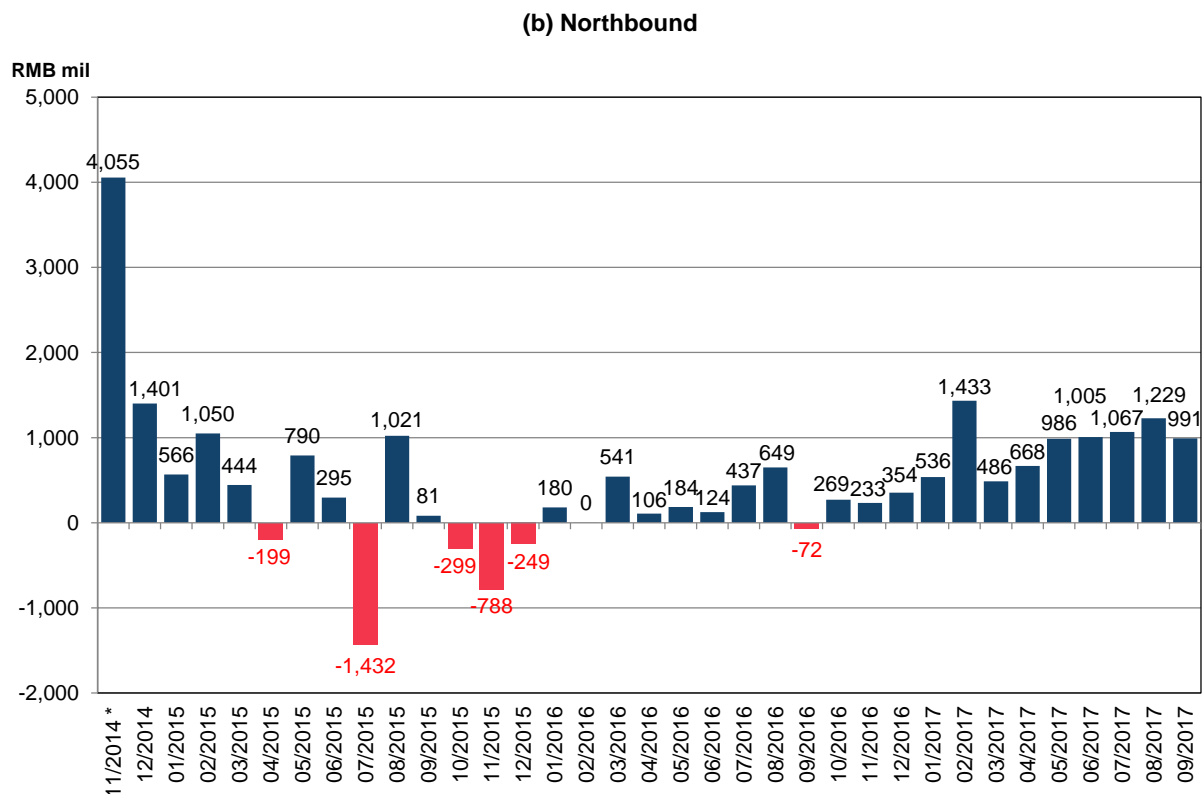
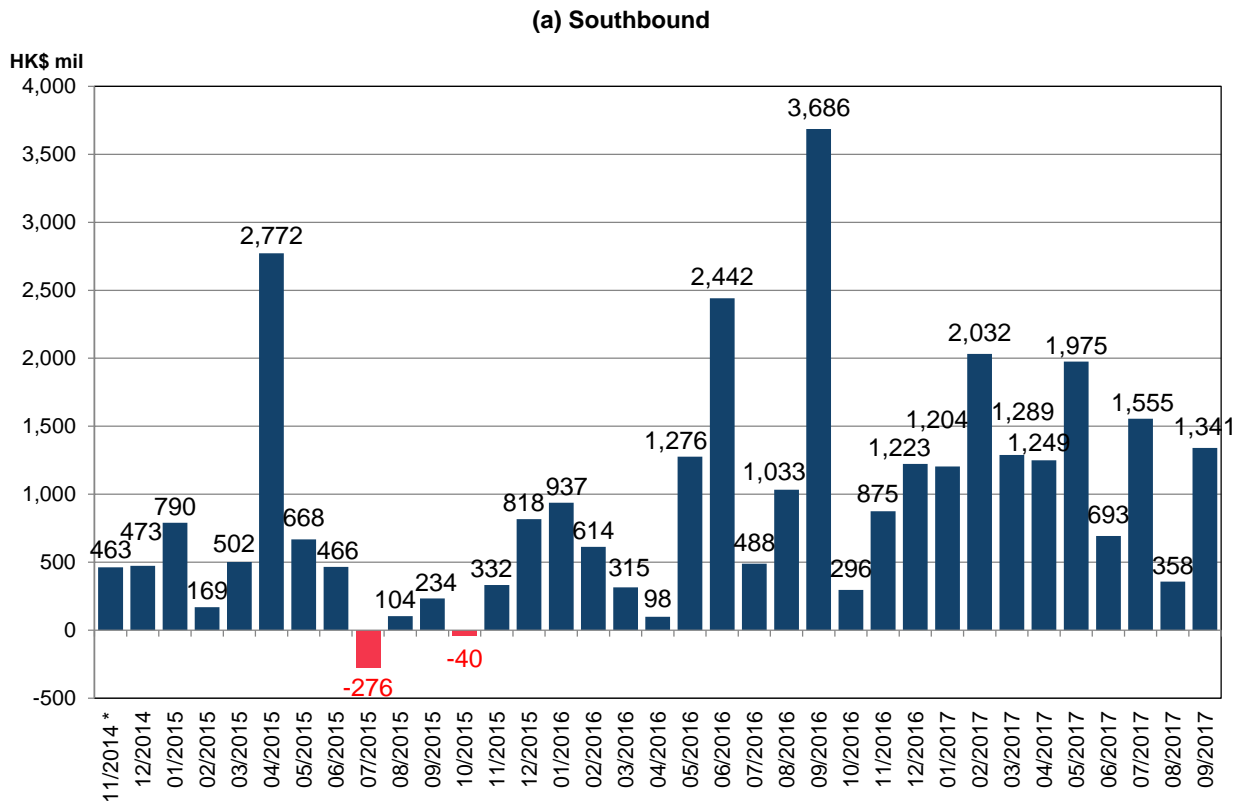
\* Starting from 17 Nov 2014 when Shanghai Connect was launched.

Note: In calculating the ratio to the total market ADT, Northbound/Southbound Trading total value (buy and sell) was divided by two to give one-sided figures before calculating its percentage share of the one-sided total market trading value (buy and sell counted in a single transaction value). Shenzhen Connect data is included since the launch date of Shenzhen Connect (5 Dec 2016). The base reference data of Mainland A-share market includes SZSE A-share market since that date.

Source: HKEX.



**Figure A3. Average daily net buy/sell trade value in Stock Connect Southbound and Northbound Trading (Nov 2014 – Sep 2017)**



\* Starting from 17 Nov 2014 when Shanghai Connect was launched.

Note: Shenzhen Connect data is included since the launch date of Shenzhen Connect (5 Dec 2016).

Source: HKEX.

## APPENDIX 2. LIST OF CONSTITUENT STOCKS OF CES SCHK100 (END-SEPTEMBER 2017)

Stock code	Stock name	Weight (%)
700	Tencent Holdings Limited	11.27
5	HSBC Holdings plc (Hong Kong)	10.21
1299	AIA Group Limited	7.89
941	China Mobile Limited	5.52
1	CK Hutchison Holdings Limited	3.06
388	Hong Kong Exchanges and Clearing Limited	2.93
2888	Standard Chartered PLC	2.87
16	Sun Hung Kai Properties Limited	2.09
883	CNOOC Limited	2.04
1113	CK Asset Holdings Limited	1.91
2388	BOC Hong Kong (Holdings) Limited	1.82
11	Hang Seng Bank	1.65
2	CLP Holdings Limited	1.61
27	Galaxy Entertainment Group Limited	1.60
2007	Country Garden Holdings Company Limited	1.50
3	The Hong Kong and China Gas Company Limited	1.40
175	Geely Automobile Holdings Limited	1.34
688	China Overseas Land & Investment Limited	1.26
3333	China Evergrande Group	1.21
6	Power Assets Holdings Ltd	1.15
1928	Sands China Limited	1.12
2018	AAC Technologies Holdings Inc	1.10
2382	Sunny Optical Technology (Group) Company Limited	1.08
1658	Postal Savings Bank of China Company Limited	1.01
4	Wharf Holdings Limited	0.96
66	MTR Corporation Limited	0.92
762	China Unicom (Hong Kong) Limited	0.89
267	CITIC Limited	0.76
17	New World Development Company Limited	0.75
1109	China Resources Land Limited	0.75
2328	PICC Property & Casualty Company Limited	0.72
12	Henderson Land Development Company Limited	0.71
1114	Brilliance China Automotive Holding Limited	0.71
669	Techtronic Industries Company Limited	0.69
2319	China Mengniu Dairy Company Limited	0.68
728	China Telecom Corporation Limited	0.63
1093	CSPC Pharma Pharmaceutical Group Limited	0.63

**APPENDIX 2. LIST OF CONSTITUENT STOCKS OF CES SCHK100 (END-SEPTEMBER 2017) (CONT'D)**

Stock code	Stock name	Weight (%)
1038	CKI Infrastructure Holdings Limited	0.61
1044	Hengan International Group Company Limited	0.61
288	WH Group Limited	0.55
384	China Gas Holdings Limited	0.53
23	Bank of East Asia Limited	0.52
2313	Shenzhou International Group Holdings Limited	0.52
20	Wheelock and Company Limited	0.51
83	Sino Land Company Limited	0.49
1177	Sino Biopharmaceutical Limited	0.49
2688	ENN Energy Holdings Limited	0.49
656	Fosun International Limited	0.48
19	Swire Pacific Limited	0.47
101	Hang Lung Properties Limited	0.47
151	Want Want China Holdings Limited	0.47
1099	Sinopharm Holdings Company Limited	0.47
1359	China Cinda Asset Management Company Limited	0.44
144	China Merchants Port Holdings Company Limited	0.43
966	China Taiping Insurance Holdings Company Limited	0.43
270	Guangdong Investment Limited	0.41
291	China Resources Beer (Holdings) Company Limited	0.39
960	Longfor Properties Company Limited	0.39
992	Lenovo Group Limited	0.38
371	Beijing Enterprises Water Group Limited	0.37
522	ASM Pacific Technology Limited	0.37
1128	Wynn Macau Limited	0.37
1357	Meitu Inc.	0.37
1972	Swire Properties Limited	0.35
2689	Nine Dragons Paper Holdings Limited	0.33
425	Minth Group Limited	0.32
2282	MGM China Holdings Limited	0.32
586	China Conch Venture Holdings Limited	0.31
836	China Resources Power Holdings Company Limited	0.31
6808	Sun Art Retail Group Limited	0.31
10	Hang Lung Group Limited	0.30
257	China Everbright International Limited	0.30
322	Tingyi (Cayman Islands) Holding Corporation	0.30
607	Fullshare Holdings Limited	0.30
1169	Haier Electronics Group Company Limited	0.30

## APPENDIX 2. LIST OF CONSTITUENT STOCKS OF CES SCHK100 (END-SEPTEMBER 2017) (CONT'D)

Stock code	Stock name	Weight (%)
2020	ANTA Sports Products Limited	0.30
69	Shangri-La Asia Limited	0.29
135	KunLun Energy Company Limited	0.28
551	Yue Yuen Industrial (Holdings) Limited	0.28
981	Semiconductor Manufacturing International	0.28
1193	China Resources Gas Group Limited	0.28
659	NWS Holdings Limited	0.27
683	Kerry Properties Limited	0.27
1816	CGN Power Company Limited	0.27
14	Hysan Development Company Limited	0.26
494	Li & Fung Limited	0.26
813	Shimao Property Holdings Limited	0.26
3311	China State Construction International Holdings	0.26
392	Beijing Enterprises Holdings Limited	0.24
867	China Medical System Holdings	0.23
8	PCCW Limited	0.22
1060	Alibaba Pictures Group Limited	0.22
3377	Sino-Ocean Group Holding Limited	0.22
165	China Everbright Limited	0.21
3320	China Resources Pharmaceutical Group Limited	0.20
880	SJM Holdings Limited	0.18
293	Cathay Pac Airways Limited	0.16
241	Alibaba Health Information Technology Limited	0.13
3799	Dali Foods Group Company Limited	0.13
1929	Chow Tai Fook Jewellery Group Limited	0.12

### **Disclaimer**

All information and views contained in this article are for information only and not for reliance. Nothing in this article constitutes or should be regarded as investment or professional advice. While care has been taken to ensure the accuracy of information contained in this article, neither HKEX nor any of its subsidiaries, directors or employees shall be responsible for any loss or damage arising from any inaccuracy in or omission of any information from this article.

