FSDC Paper No.28

Optimising Hong Kong's Listed Structured Products Market

April 2017

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1 Foreword

1.1 About the FSDC

The FSDC was established by the Hong Kong Special Administrative Region Government in January 2013 in response to the financial services industry's call for a high-level government advisory body to support the sustained development of Hong Kong's financial services industry. The key functions of the FSDC are to engage the industry, formulate proposals to promote the further development of the industry and map out the strategic direction for the development of Hong Kong as an international financial centre.

The FSDC advises the Hong Kong Government on strategies and measures to enhance the competitiveness of Hong Kong as an international financial centre and to promote Hong Kong as an international financial centre to other parts of the world.

1.2 The Working Group

The Working Group was formed by the FSDC in April 2016 and is constituted by various market participants, including listed structured products issuers, brokers and legal practitioners.

The objectives of the Working Group are to:

(a) undertake a comprehensive review of the existing listed structured products market in Hong Kong, including the regulatory framework, product types and market operations;

(b) compare Hong Kong's listed structured products market with other global markets, in particular, European markets to identify key differences; and

(c) propose recommendations to optimise Hong Kong's listed structured products market and ensure Hong Kong maintains its competitiveness as a world-leading listed structured products marketplace.

The Working Group has received constructive comments from its participants. We thank them for their contribution. In addition, the Working Group thanks Deutsche Boerse (the largest listed structured products market in Europe) for presenting to the Working Group in July 2016 on Germany's market developments, challenges and successes.

1.3 Glossary

Capitalised terms used in this paper have their meanings set out in the glossary in Schedule 1.

1.4 Foreign currency conversion rate

Where amounts are denominated in foreign currencies, an approximate Hong Kong dollar equivalent amounts are provided for the reader's reference using the exchange rate between Hong Kong dollar and the relevant foreign currency as of 4 November 2016 (rounded to the nearest 2 decimal points)[1].

[1] On 4 November 2016, HKD 1 equals EUR 0.12, THB 4.51, MYR 0.54 and SGD 0.18.

2 Executive Summary

2.1 Events leading up to this review

Hong Kong's listed structured products market has historically had some of the highest trading volumes in the world. In 2015, the Exchange had the highest level of structured products turnover globally (HKD 6,340,932 million) based on average daily turnover, greater than 18 other stock exchanges in America, Asia Pacific and Europe[2]. Underlying this achievement is Hong Kong's comprehensive regulatory regime for listed structured products which was last reviewed in 2006.

Comparatively, European markets are characterised by lower trading volumes in their listed structured products, but offer a much wider variety of products to investors.

For this review, the FSDC looked closely at Hong Kong's market, while also reviewing structured products markets in other parts of the world. This effort was undertaken to identify ways to optimise Hong Kong's listed structured products market and to ensure Hong Kong maintains its position as a leading global structured products market.

2.2 Summary of our findings

Our key findings and recommendations are as follows:

(a) Hong Kong's listed structured products market is currently characterised by the following features:

(i) Limited product range despite investor demand for structured investment products

(A) Despite structured investment products being a very popular investment product type among Hong Kong retail investors[3], there are currently only two types of listed structured products – both leveraged – namely vanilla warrants and CBBCs listed on the Exchange (even though the regulatory regime permits a much wider range of products).

(B) The most actively traded warrants and CBBCs are linked to a small number of local Hong Kong blue-chip stocks and the Hang Seng Index (even though the regulatory regime permits a much wider range of underlying asset classes).

(ii) Manual issuance and listing process

2 WFE Annual Statistics Guide.

3 According to the Survey on the Sale of Non-exchange Traded Investment Products published by the SFC in December 2016, structured investment products accounted for 44% of the aggregate transaction amount of investment products sold during the period from 1 April 2015 to 31 March 2016.

The current process is largely manual with a paper-based documentation process and a listing cycle of six business days for a new issue.

(iii) Fixed listing and trading fees

The Exchange and SFC charge a series of fees including listing fees, trading fees and a transaction levy with no discounts or incentive regimes in place to encourage market participants to launch new products.

(iv) Strict liquidity provisioning requirements

Current liquidity requirements apply uniformly across all listed structured product types and issuers with no variance for less liquid investment-type products.

(b) By comparison, European and other exchanges are typically characterised by the following features:

(i) Offer a wide range of listed structured products, including

(A) Capital Protected Products;

(B) Yield Enhancement Products (such as Discount Certificates);

(C) Participation Products (such as Bonus Certificates); and

(D) Leveraged Products.

(ii) Have a short listing cycle and relatively simple listing process

(A) New issues enjoy a listing cycle as short as L+1.

(B) New payoff structures enjoy a streamlined regulatory review and approval process.

(iii) Offer packaged listing fees

Based on issuance volume levels, package listing fees cause overall fees to be low.

(iv) Have different types of liquidity provision mechanisms

The Key European Exchanges allow alternative liquidity mechanisms such as Quote Requests.

(c) The FSDC invites the Exchange and the SFC to consider the following “primary” and “ancillary” recommendations.

The primary recommendations will optimise Hong Kong’s listed structured products market and ensure Hong Kong maintains its position as a global market leader by diversifying the available product range. The “ancillary” recommendations facilitate the implementation of the “primary” recommendations.

Primary recommendations

(i) Expansion of listed structured product types

Hong Kong investors should have easy access to non-leveraged and Investment Type Products through the Exchange platform. The FSDC invites the Exchange and the SFC to consider introducing the following three categories of listed structured products currently available in European markets:

(A) Yield Enhancement Products;

(B) Participation Products; and

(C) Capital Protected Products.

Drawing on the experience with popular structured products listed on the German market, the FSDC invites the Exchange and the SFC to introduce two non-leveraged Investment Type Products. Those products will benefit Hong Kong investors who want a pay-out structure similar to the unlisted structured products already offered to retail investors through retail banks in Hong Kong, namely:

(A) Discount Certificates (a Yield Enhancement Product); and

(B) Bonus Certificates (a Participation Product).

Retail structured products with similar features are available in unlisted form and are popular amongst retail investors.

(ii) Review the Exchange’s naming conventions for stock short names

The FSDC invites the Exchange to review its current naming convention for stock short names applicable to listed structured products and new product types by:

(A) confining the use of “X” in a stock short name to only denote “exotic” products with high risk;

(B) exploring a common naming system for new products that is consistently applied and provides a more accurate description of a new product’s features in both English and Chinese; and

(C) expanding the current 15 character technical limit on its stock short name reference to enhance flexibility.

Ancillary recommendations

The FSDC believes that the following ancillary recommendations will encourage market participants to launch new listed structured product types.

(i) Shorter timeframe and streamlined process to launch a new listed structured product

(A) ***Clear framework and approval timeframe*** - There should be a clear framework and timeframe for processing an application for launching a new listed structured product that identifies the steps required, approval criteria, the persons responsible for vetting the application and the timeframe within which the application will be reviewed. The FSDC suggests that the Exchange make a final ruling on an application for a new product within 3 months.

(B) ***Clear eligibility criteria for underlying assets*** - The SFC has formulated a set of eligibility requirements for the underlying assets of unlisted structured products in the SIPS Code. The FSDC invites the Exchange to consult market participants to formulate similar guidance about the eligibility requirements for underlying asset classes of listed structured products.

(C) ***Designated communication channels with Exchange and the SFC*** - There should be a designated joint communication channel between issuers, the Exchange and the SFC so that issuers have a direct point of contact for issues relating to new product approvals.

(D) ***Review issuance process*** – The FSDC invites the Exchange to consider reviewing the issue process to allow submission of electronic documents to enhance efficiency and shorten the listing cycle in response to fast changing market conditions.

(ii) Incentives to support new structured product types

The FSDC invites the Exchange and the SFC to consider the following incentives for new structured product types:

(A) offering issuance fees which reflect issuance volume or product range;

(B) lowering listing fees for *new* types of listed structured products to encourage market innovation; and

(C) allowing distribution reward schemes for issuers to compensate broker dealers for their costs in promoting new products (provided the level of distribution fees is transparent to investors and is not dependent on trading volumes).

(iii) Allow flexible liquidity provisioning for new products

The Exchange's liquidity system should be sufficiently flexible to facilitate the listing of new products. Consideration should be given to allowing the provision of alternative liquidity support, including a quote request liquidity process for new Investment Type Products. The Active Quotes system applicable to warrants and CBBCs may be neither beneficial nor suitable for Investment Type Products which are generally "hold to maturity" and are likely to be traded less frequently than warrants and CBBCs.

(iv) Support joint market efforts for investor education

The Exchange, the SFC and issuers should cooperate, and leverage off existing investor education channels, to enhance investors' understanding of new structured product types (specifically Investment Type Products).

3 The Listed Structured Products Market In Hong Kong

3.1 Historical developments

Hong Kong's listed structured products market has developed significantly since its establishment nearly three decades ago.

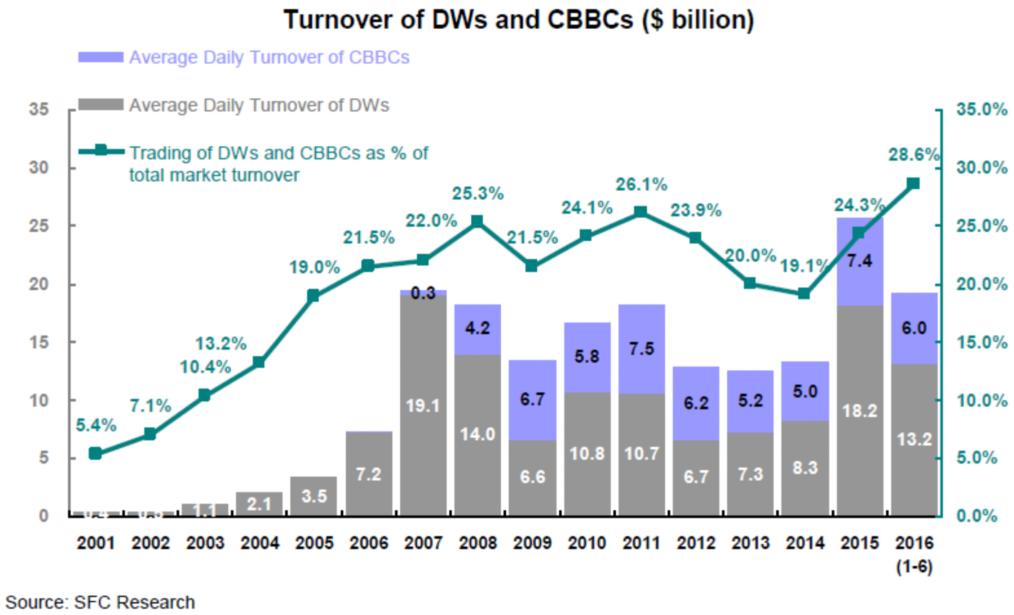
Schedule 2 sets out the historical roadmap of Hong Kong's listed structured products market.

3.2 Current market profile

(a) Significant growth since 2002

As shown in Figure 1, Hong Kong's listed structured products market has grown significantly since 2002 when trading of warrants and CBBCs represented just 7.1% of total market turnover. By 2015, trading of warrants and CBBCs had grown to represent nearly a quarter of total market turnover (24.3%)[4].

Figure 1: Graph illustrating turnover of derivative warrants and CBBCs extracted from Research Paper No. 59 published by the SFC



Hong Kong's listed structured products market has historically had some of the highest trading volumes in the world. In 2015, the Exchange had the highest level of structured products turnover globally (HKD 6,340,932 million) based on average daily turnover, greater than 18 other stock exchanges in America, Asia Pacific and Europe[5]. The FSDC believes the steady success of Hong Kong's listed structured products market may have contributed to there being no incentive for the regulators and/or

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4 Research Paper No.59: Half-yearly Review of the Global and Local Securities Markets, published by the SFC on 15 July 2016, available at: http://www.sfc.hk/web/EN/files/SOM/RS%20Paper/EN/RS%20paper%2059.pdf, p.11

5 WFE Annual Statistics Guide.

market participants to seek changes to the market, for example, increasing available product types.

(b) Limited product range

Prior to 2006, Hong Kong's listed structured products market offered a variety of products including CBBCs, ELIs, vanilla call/put warrants and exotic warrants linked to a broad list of underlying assets (including overseas stocks, currency pairs, commodities and proprietary indices). Although all of these products are eligible for listing under Chapter 15A, only vanilla warrants and CBBCS are currently listed on the Exchange.

Information about historically traded structured products

ELIs – An ELI combines the features of a fixed income instrument and a stock option, the performance of which is linked to the market value of an underlying share. When an investor purchases an ELI, they are indirectly writing an option on the underlying share. Depending upon the type of ELI, (i) if the share price moves in the investor's expected direction, the investor may receive a fixed but capped cash payment and earn a higher return than the rate on an ordinary time deposit derived mainly from the premium received on writing the option; or (ii) if the share price moves against the investor's expected direction, the investor may receive a pre-fixed number of physical shares based on the pre-set strike price on the expiry date that are cumulatively worth less than the initial investment, resulting in the loss of some or all of the investment.

Exotic warrants – Exotic warrants are derivatives warrants with structures and payoffs different from vanilla call/put warrants. For example, dividend accumulator warrants are exotic warrants which provide for a potential periodic distribution of payments as determined by reference to the periodic performance of the underlying asset.

Further information on ELIs and exotic warrants is set out in Schedule 3.

3.3 Key features of Hong Kong's listed structured products market

(a) Underlying assets

Chapter 15A allows structured products to be linked to "a security, index, currency, commodity or other asset", or a combination of such assets[6].

Listing of any structured product linked to a new underlying asset is subject to prior approval by the Exchange in consultation with the SFC.

As of 31 October 2016, the types of underlying assets over which derivative warrants have been issued (that is, to which the return is linked) since January 2009 include:

(i) Hong Kong stocks;

[6] Paragraph 15A.05 of Chapter 15A.

(ii) Hong Kong stock indices (such as Hang Seng Index and Hang Seng China Enterprises Index);

(iii) foreign stocks (such as Google Inc.);

(iv) foreign stock indices (such as Nikkei 225 Stock Average Index);

(v) currency pairs (such as British Pound Sterling / US Dollar); and

(vi) commodities (such as oil futures contracts, gold, platinum and silver)[7].

The structured products currently listed on the Exchange are linked to limited types of underlying assets only (namely Hong Kong stocks, Hong Kong stock indices, overseas stock indices and currency pairs and commodities), despite the regulatory regime supporting a wider coverage of underlying assets[8].

The approach taken in Chapter 15A is very different to the SIPS Code which sets out detailed eligibility requirements for reference assets to which unlisted structured products may be linked.

(b) Issuance and listing process

(i) Listing documentation

Issuers and the Exchange must undertake a largely manual and paper-based documentation process to list a structured product.

Issuers must submit an indicative term sheet to the Exchange for approval, via a web-based system called Structured Products Integrated Transaction System (known as SPRINTS). Upon obtaining the Exchange's clearance on the indicative term sheet, issuers must prepare bilingual versions of the listing documents for publication through the Exchange's e-submission platform.

(ii) Listing cycle

It takes six business days to list a new issue of listed structured products on the Exchange (i.e. launch date + five exchange business days). A shorter timeframe of four business days applies (i.e. launch date + three exchange business days) for further issues of an existing series.

(c) Listing and trading fees

Structured product issuers in Hong Kong are required to pay multiple fees to the Exchange and the SFC. These fees apply uniformly across all

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7 For further information, please see https://www.hkex.com.hk/eng/prod/secprod/dwrc/NonHKUnderlying.htm

8 For derivative warrant, see *Eligible Single Hong Kong Stocks for Derivative Warrant Issuance in Current Quarter* (3rd quarter 2016), available at https://www.hkex.com.hk/eng/prod/secprod/dwrc/latest.htm;
for CBBCs, see the latest list of eligible underlying for CBBC issuance (3rd quarter 2016), available at https://www.hkex.com.hk/eng/prod/secprod/cbbc/underlying_latest.htm

issuers and products. No discounts or package deals are offered to reflect any particular issuance size or product type.

The following fees are payable for each series of listed structured products:

(i) Listing fees

(A) HKD 60,000 (for warrants) or HKD 18,000 (for CBBCs) for the first issuance over a particular underlying in any calendar year; and

(B) HKD 40,000 (for warrants) or HKD 12,000 (for CBBCs) for each subsequent issuance over the same underlying.

(ii) Trading fee, transaction levy and trading tariff

(A) *Exchange trading fee* – The Exchange charges the issuer and the investor a trading fee of 0.005% for each transaction effected on the Exchange calculated on the value of the consideration for the warrants.

(B) *SFC transaction levy* – The SFC charges the issuer and the investor a transaction levy of 0.0027% for each transaction effected on the Exchange calculated on the value of the consideration for the warrants/CBBCs.

(C) *Trading tariff* – A trading tariff of HKD 0.50 is payable to the Exchange on each purchase or sale transaction. The decision on whether or not to pass the trading tariff on to investors is at the discretion of brokers.

(iii) Exemption fee under Part XV of the SFO (disclosure of interests) – the SFC charges HKD 12,000 for a 12-month blanket exemption for disclosure of interest filings by a listed corporation and its connected persons.

(d) Naming conventions

Listed structured products are given a stock short name using the following naming conventions:

For warrants:

ZZQQQQ@ECYYMMA*

ZZ	Issuer's short name
Q	Up to 5 characters representing name of the underlying asset
@	@ = Cash settlement; ＊ = Physical delivery
E	E = European; R = Regional warrants; X = Exotic (non-traditional); No Character = American
C	C = Call; P = Put; No Character = non Call or Put

YYMM	Expiry year and month
A	Serial number for additional issues by the same issuer on same underlying asset with same expiry year and month (A, B, C ...)
*	Indicator for derivative warrants traded in RMB

For CBBCs:

ZZ#QQQQNCYYMMA*

ZZ	Issuer's short name
#	CBBC indicator
Q	Up to 5 characters representing name of the underlying asset
N	N = No residual value; R = With residual value
C	C = Bull contract; P = Bear contract
YYMM	Expiry year and month
A	Serial number for additional issues by the same issuer on same underlying asset with same expiry year and month (A, B, C ...)
*	Indicator for CBBCs traded in RMB

(e) Market participants

(i) ***Investors*** – Listed structured products in Hong Kong are typically traded by retail investors (through banks and brokers), market makers, high frequency traders and financial institutions.

(ii) ***Issuers*** – There are currently 14 eligible issuers, 11 of which have issued warrants and/or CBBCs in 2016[9]. Structured products issuers in Hong Kong are either international financial institutions having an investment grade rating or local financial institutions regulated by the HKMA and/or the SFC.

(f) Current regulatory regime

The primary regulators for listed structured products in Hong Kong are the SFC and the Exchange.

The Exchange is the frontline regulator responsible for the review and approval of the listing documents for listed structured products, as well as regulation of on-going compliance over listed structured products and their issuers.

The Listing Committee of the Exchange is an independent committee delegated with the sole power and authority in relation to approval of all listing matters. The Listing Committee is comprised of representatives of investors, existing listed issuers and market practitioners nominated by members of the boards of the Exchange and of the SFC. In relation to listed structured products, the Listing Committee has arranged for most of

[9] The list of issuers is available on https://www.hkex.com.hk/eng/prod/secprod/dwrc/issuer.htm.

its powers and functions to be discharged by the Listing Division, although it retains the power to approve the admission of any new issuing applicant. Once a financial institution is admitted as an eligible issuer, the Listing Division has the power to approve the listing of its structured products.

The SFC is the statutory regulator that administers the laws which govern the securities and futures markets in Hong Kong, the licensing of financial intermediaries and the supervision of the licensed intermediaries. It therefore supervises and monitors the operations of the Exchange and its subsidiaries.

Although the listing documents of structured products fall under the dual filing regime[10], according to a memorandum of understanding entered into between the SFC and the Exchange in January 2003, the SFC will only review draft listing documents upon request from the Exchange. In practice, the Exchange will only refer listing documents to the SFC in respect of any new or novel types of products and underlying asset classes.

A summary of the rules applicable to listed structured products in Hong Kong as of the date of this paper is set out in Schedule 4.

3.4 Comparison with Hong Kong's unlisted structured products market

Structured products in Hong Kong are either listed on the Exchange or are unlisted. Unlisted structured products are mostly traded over-the-counter by professional investors who trade through private banks and retail investors who trade through banks and securities brokers. According to the Survey on the Sale of Non-exchange Traded Investment Products published by the SFC on 9 December 2016, unlisted structured products in the aggregate transaction amount of HKD167 billion were sold to individual investors in the year ended 31 March 2016[11].

The FSDC suggests some investors prefer listed structured products to unlisted structured products for the following reasons:

(a) Standardised product terms

The Exchange endeavours to ensure that the type, structure and terms and conditions of listed structured products are as standardised as possible[12]. This makes it easier for investors to understand and compare listed structured products of the same type.

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10 Under the dual filing regime, listing documents submitted by listing applicants are passed by Exchange to the SFC, who may object to a listing if the disclosure in the listing documents appears to the SFC to contain false or misleading information.

11 The data was based on the information provided by 44 licensed corporations engaging in the sale of unlisted structured products. This survey focused on the sale and distribution of investment products to individual investors (including investment vehicles of such individuals), and sales to corporate professionals were not included. The survey is available at http://www.sfc.hk/web/EN/files/ER/PDF/Product%20Survey%20report_Mar%202016_Eng.pdf, p. 7.

12 Paragraph 15A.05 of Chapter 15A.

The terms of unlisted structured products (and the liquidity provision services offered, if any) are more likely to vary among issuers and products.

(b) Mandatory liquidity services

Chapter 15A imposes mandatory obligations on issuers to appoint designated liquidity providers to provide liquidity for their listed structured products. Listed structured products therefore have the benefit of an active secondary market to sustain the liquidity of a product during its term[13].

Unlisted structured products are typically held till maturity. Market-making is only required for unlisted structured products with a scheduled tenor of over six months. There is generally a limited secondary market for investors to dispose their unlisted structured products prior to their scheduled expiry date.

(c) Pricing transparency

Pricing information relating to listed structured products is generally much more transparent than unlisted structured products. Investors can easily ascertain the buy and sell price of a listed structured product and compare it against prices of other similar listed products.

(d) Easy access to trading

Investors can access warrants and CBBCs on the Exchange's electronic platform by opening a securities trading account with banks or securities firms in Hong Kong.

Unlisted structured products are less accessible as investors will typically need to place a purchase order with the issuer or a specified distributor.

A detailed comparison of Hong Kong's listed and unlisted structured products market as of the date of this paper is set out in Schedule 5.

[13] Industry Principles on Liquidity Provision for Listed Structured Products, available at https://www.hkex.com.hk/eng/prod/secprod/dwrc/Documents/principle.pdf

4 Comparison To Other Listed Structured Product Markets

4.1 European structured products markets

Listed structured products have been actively traded in Europe for the past decade. Structured products traded on the Key European Exchanges account for approximately 90% of the products and turnover in Europe. Venues include:

(a) Deutsche Boerse (Germany);

(b) Euronext (Paris);

(c) Euronext (Amsterdam);

(d) LSE Borsa Italiana (Italy); and

(e) SIX Swiss Exchange (Switzerland).

Measured by the number of listed product and turnover rates, Germany's Deutsche Boerse is the largest structured products market in Europe. As of September 2016, Deutsche Boerse had approximately 1.5 million products and the highest turnover rates compared to other European exchanges. The table below shows the number of outstanding listed structured products on various exchanges in Asia and Europe, as of September 2016.

	Exchange	**September 2016**
1	Deutsche Boerse	1,576,935
2	Euronext	57,947
3	SIX Swiss Exchange	30,804
4	Taiwan Stock Exchange Corp.	9,843
5	LSE Group	7,153
6	Wiener Borse	6,937
7	Hong Kong Exchanges and Clearing	6,111
8	Nasdaq Nordic Exchanges	5,728
9	BME Spanish Exchanges	3,465
10	Australian Securities Exchange	2,751
11	Korea Exchange	2,530
12	Stock Exchange of Thailand	1,125
13	Bursa Malaysia	471
14	Singapore Exchange	94

(Source: World Federation of Exchanges, September 2016)

There are a variety of product types listed on most of the European exchanges, largely divided between Leveraged Products and Investment Type Products.

4.2 Key differences between Hong Kong and European markets

Below are the key differences between Hong Kong's listed structured products market and each of the Key European Exchanges:

(a) Product types

(i) ***Listed structured product types*** – European Exchanges offer a diverse range of products. In particular, more than one variation of leveraged certificates (similar to CBBCs) and a diverse range of investment products with different pay-off structures are listed on these exchanges.

Listed structured products in most European markets are divided into the following four categories:

(A) Leveraged Products;

(B) Yield Enhancement Products;

(C) Participation Products; and

(D) Capital Protected Products.

Please refer to Schedule 6 for a list of the types of listed structured products traded in the European market.

(ii) ***Underlying assets*** – The types of assets to which structured products are linked include global indices, proprietary indices, regional and global stocks, American Depository Receipts, foreign currencies, commodities, interest rates, fixed income bonds and funds.

Comparison to Hong Kong: The Key European Exchanges have a wider range of listed structured product types and underlying assets compared to Hong Kong. While the existing regulatory framework in Hong Kong caters for the listing of ELIs, no ELI has been listed on the Exchange in the past decade. Issuers argue this is due to perceived high issuance costs and a lengthy time-to-market process.

(b) Issuance

(i) ***Listing fees*** – The nominal listing fees imposed by each of the Key European Exchanges range from approximately EUR 200 to EUR 1000 (HKD 1,721.03 to 8,605.17) per product (although due to discounts offered by these exchanges, the listing fees can be as low as EUR 1 (HKD 8.16) for Deustche Boerse). There is a cap on the maximum amount of listing fees to be charged on each issuer per year. Trading fees range from EUR 0.6 to EUR 1.2 (HKD 5.16 to 10.33) per trade (trading fees may vary depending on the volume traded). All of the Key European Exchanges allow issuers to negotiate a package fee for a certain volume of issuance (which tend to be significantly cheaper than the official listing fees set out in the relevant listing rules).

(ii) ***Timetable*** – The new product application and submission process in Europe facilitates automated and straight-through processing, enabling a short listing cycle. Products can be listed on L+1. New products can be listed in Germany on the same day as the launch date.

Comparison to Hong Kong: The process by which issuers in Europe apply for approval to issue structured products over new types of underlying assets is comparatively simple and quick. The process for product applications and notices to the Key European Exchanges are continuously being streamlined and automated, often via straight-through-processes.

The period between the launch date of a listed structured product and the listing date on the Exchange is five business days. The time to listing in the Key European Exchanges is continuously being shortened (with the German exchange offering a process for same day listing).

Listing fees imposed by the Key European Exchanges are significantly less than those imposed by the Exchange. Most European exchanges offer package fees or fee caps. Listing fees in Hong Kong are non-negotiable, and have not been reviewed since 2002.

The published cost per product for listing on Deustche Boerse is EUR 200 (HKD 1,721.03) per product, but capped at an annual fee of EUR 76,000 (HKD 653,993.00). The leading issuers in Germany issue 300,000 to 400,000 products per year. The listing fees are consequently significantly lower than EUR 1 (HKD 8.61) per product. The Exchange’s minimum listing fee is HKD 40,000 (per warrant) and HKD 12,000 (per CBBC). The low listing fees in Europe encourages issuers to issue high volume of listed structured products with a variety of terms.

Schedule 7 sets out a detailed comparison of the issuance fees charged by the Exchange and the Key European Exchanges as of the date of this paper.

(c) Trading

There are different types of liquidity provision mechanisms in Europe, ranging from the Quote Request model on Germany’s Deutsche Boerse to “binding quotes” on the SIX Swiss Exchange.

There are also varying degrees of liquidity provision obligations across the Key European Exchanges. Whilst issuers listing structured products on Germany’s Deutsche Boerse are required to provide continuous quotes (on an indicative basis only), issuers listing structured products on the SIX Swiss Exchange are not subject to any market making obligations.

Germany’s Deutsche Boerse’s Quote Request model offers a tight bid/ask spread to investors. The Quote Request model is automated as much as possible, allowing trades to be executed on average in 0.8 seconds, which reduces the cost for issuers and improves the quality and pricing of products offered. However, a Quote Request model may limit the turnover of the listed structured products, which may partly explain why turnover on

European markets is lower than that of Hong Kong, despite the large volume of products listed on the Key European Markets.

Comparison to Hong Kong: Trades in Hong Kong's listed structured products are automatically matched on the Exchange's electronic stock trading system, (AMS/3). A liquidity provider must be appointed for each series of structured products to provide liquidity, generally, on a firm basis, to support secondary market trading.

(d) Distribution

It is common for issuers and distributors in Europe to enter into bilateral distribution agreements which include distribution fees and incentives such as commission rebates paid by the issuer.

Comparison to Hong Kong: Most investors in Hong Kong trade warrants and CBBCs through the internet and have minimal interaction with securities brokers. This is similar to the experience in Europe, except that Europe permits the payment of fees for the distribution of Investment Type Products.

(e) Settlement

The German and Swiss markets permit both cash settlement and physical settlement. The Euronext market however (i.e. France and the Netherlands) only offers cash settlement.

On the expiry of a structured product, most investors investing through the Key European Exchanges receive their settlement amount on T+5 (or in France, T+10).

Comparison to Hong Kong: Listed structured products linked to Hong Kong listed shares may be settled by cash or physical delivery (although in practice, all listed structured products currently listed on the Exchange are cash settled). In most cases, investors receive their settlement amount upon expiry of a listed structured product on T+3.

A comparison of the trading features of Hong Kong compared to various European exchanges is set out in Schedule 9.

(f) Regulatory environment

Generally speaking, European regulators:

(i) do not focus on approving different product structures proposed by issuers. As long as the product type is included in the base prospectus, new products can be launched. This allows issuers to innovate new products within the approved product range;

(ii) focus on the transparency of product disclosure, making sure sufficient information is provided to investors; and

(iii) are concerned with regulating distributors selling structured products (rather than approving product structures and/or features).

Comparison to Hong Kong: Whilst Hong Kong regulators are also dedicated to investor protection and transparent disclosure, the regulatory approach is to pre-vet with a focus on approving products based on its product structure and feature, as well as the underlying asset class.

(g) Product innovation

Based on the discussion with Deustche Boerse and other research, the FSDC believes the success of the European structured products market is a result of the following factors:

(i) low listing fees – allows issuers to innovate and experiment;

(ii) competition – a healthy competitive environment across multiple exchanges and issuers drives innovation;

(iii) education – by both the Key European Exchanges and the issuers;

(iv) automated and efficient listing process – facilitates the prompt listing of a large number of products;

(v) new products – are offered quickly in reaction to market changes and investor demands; and

(vi) there is generally no restriction on the underlying assets (except those underlyings that cannot be traded publicly, e.g. hedge funds).

Comparison to Hong Kong: The European listed structured products market offers shorter time to listing and lower listing expenses than Hong Kong. This encourages European issuers to innovate and experiment with new products, leading to a diverse product range.

4.3 Other Asian structured products markets

Below are the key features of other Asian markets in terms of (a) their product types; and (b) their volume of structured products traded and product turnover.

Schedule 8 sets out a table of comparison of the trading features of Hong Kong's listed structured products market compared to other Asian markets.

(a) Product types

Generally speaking, most Asian Exchanges offer limited types of listed structured products, primarily focusing on Leveraged Products. For instance, the Singapore Stock Exchange and the Stock Exchange of Thailand only offer warrants while the Taiwan Stock Exchange offers warrants and CBBCs.

The listed structured product market in Malaysia is relatively limited and currently only offers products linked to certain equity underlyings. In June 2016, the Stock Exchange of Thailand eased its structured notes rule to allow equity-linked products tied to individual foreign companies and notes issued in foreign currencies. The Australian Stock Exchange offers listed structured products with leveraged products and Bonus Certificates.

Comparison to Hong Kong: Other Asian listed structured products markets appear, like Hong Kong, to offer a limited product range compared to the European markets.

(b) Trading volumes and product turnover

In Asia, Singapore and Taiwan have well-established listed structured products markets. While the number of listed structured products traded in Taiwan exceeded those listed on the Exchange in 2014 and 2015, the trading turnover of listed structured products on the Exchange exceeded these two Asian markets[14].

Thailand has been a growing listed structured product market since the launch of its first derivative warrants in 2009. Its monthly trading turnover of derivative warrants increased from THB 9,000 million (HKD 1.99 billion) in August 2012 to THB 72,000 million (HKD 15.98 billion) in August 2016[15].

Comparison to Hong Kong: In comparison with other Asian markets, Hong Kong has the highest turnover volume of listed structured products by global standards, despite its current limited product range.

[14] In September 2016, SGX had a monthly warrant turnover of SGD769 million, increased 147.1% from September 2015. SGX Market Updates, Active Bank Warrants as Singapore Banks averaged 2.6% gain in September, available at http://www.sgx.com/wps/wcm/connect/sgx_en/home/newsflash/mu_05102016_1

[15] The Stock Exchange of Thailand, Derivative Warrants Statistics, available at http://www.set.or.th/en/products/dw/dw_statistics.html

5 Our Recommendations

The FSDC's recommendations are (i) "primary" and (ii) "ancillary".

The "primary" recommendations will optimise Hong Kong's listed structured products market and ensure Hong Kong maintains its position as a global market leader by diversifying its product range. The "ancillary" recommendations facilitate the implementation of the "primary" recommendations.

5.1 Primary recommendation 1: Expansion of listed structured product types

Although Hong Kong's listed structured products market has the highest turnover by global standards, the <u>variety</u> of products offered is limited to vanilla warrants and CBBCs (which are highly leveraged). As a result, Hong Kong investors lack access to a range of Investment Type Products such as Yield Enhancement Products which:

(a) are listed and as a result offer more transparency and liquidity;

(b) are already somewhat familiar to Hong Kong's investors because unlisted products with similar features are already available and understood by investors; and

(c) do not require the investor to pay margin in adverse market conditions, i.e. the investor will not lose more than the amount initially invested.

This currently limited product range may challenge Hong Kong's ability to maintain its position as one of the world's leading structured product markets.

5.1.1 Introduce new categories of listed structured products

The FSDC invites the Exchange and the SFC to consider introducing the following three categories of structured products currently available in European markets:

(a) Yield Enhancement Products;

(b) Participation Products; and

(c) Capital Protected Products.

All three categories of products are offered in Europe and are capable of being listed in Hong Kong under its existing regulatory framework. The FSDC believes there is sufficient investor demand and appetite in Hong Kong for these three product categories.

5.1.2 Introduce Discount Certificates and Bonus Certificates first

As a first step, the FSDC invites the Exchange and the SFC to consider introducing Discount Certificates and Bonus Certificates (categorised respectively as a Yield Enhancement Product and a Participation Product) since:

(a) these products have proven to be popular non-leveraged products with European investors, and have a pay-off mechanism similar to the unlisted structured products currently available to retail investors in Hong Kong – these factors indicate a certain level of popularity and existing investor demand for products of this nature in Hong Kong; and

(b) these products offer an alternative to investors who:

    (i) have a lower risk appetite;

    (ii) are looking for a modest yield at a rate higher than an ordinary time deposit; and

    (iii) have a neutral to slightly bullish view on the underlying asset.

Discount Certificates and Bonus Certificates are therefore good options for investors who wish to acquire *limited* exposure to an underlying asset hoping to earn a higher return than investing directly in the underlying asset.

In comparison, warrants and CBBCs are highly leveraged products that are suitable for investors with a bullish or bearish view on the underlying asset.

Discount Certificates

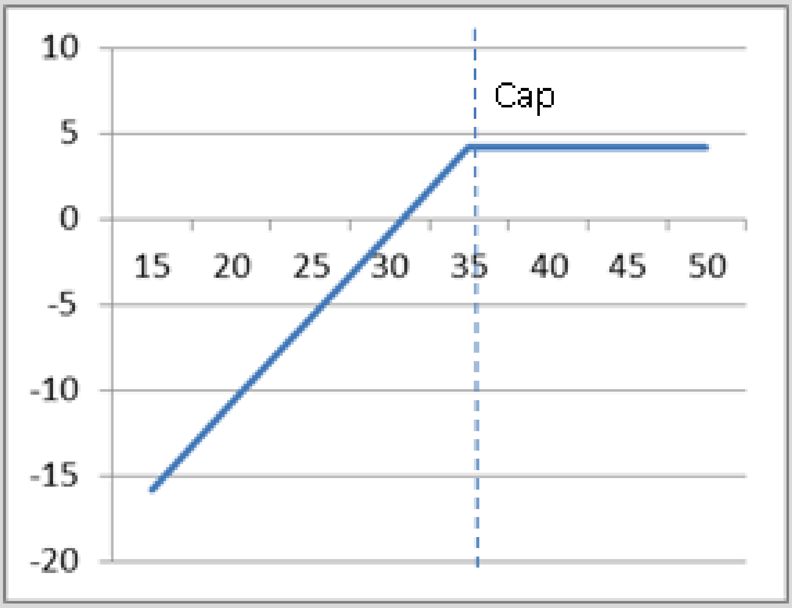
Discount Certificates are suitable for investors who wish to acquire an investment exposure to a pre-fixed amount of an underlying asset (e.g. a listed share) at a price below its current market price. In exchange, the investor's maximum return on a Discount Certificate is limited to a predetermined amount (known as a "cap"). Discount Certificates are therefore suitable for investors that have a neutral to slightly bullish view while market volatility is low for the underlying asset, resulting in a price that stays within a narrow range.

At maturity:

(i) If the price of the underlying asset is at or above the cap level, the investor receives the cap.

    If the price of the underlying asset falls below the cap level, the investor receives a cash amount equal to the prevailing value of the underlying asset.

Scenario analysis



This scenario analysis is based on the following terms:

Underlying:	Stock A
Initial Price of the Underlying	HKD 35
(Being the closing price of Stock A on the trade date):	
Entitlement Ratio	1:1
Time to Maturity	12 months
Purchase Price of the Discount Certificate	HKD 30.8
Cap (Maximum Amount):	HKD 35

Scenario 1 (Closing price of Stock A on valuation date at maturity is at or above the Cap)

The holder will receive a cash amount equal to the Cap (i.e. HKD 35).

The holder therefore makes a gain of HKD 4.2 (being 13.6% of the Purchase Price; the upside participation is capped at HKD 35).

Scenario 2 (Closing price of Stock A on valuation date at maturity is below the Cap)

The holder will receive a cash amount equal to the closing price of Stock A as of the valuation date at maturity.

As long as Stock A's closing price on valuation date is above the Purchase

Price, the holder makes a gain.

If the closing price of Stock A on valuation date falls below the Purchase Price, the investor suffers a loss equal to the difference between the Purchase Price and the closing price of Stock A as of the valuation date.

Bonus Certificates

Bonus Certificates are suitable for investors who do not want to cap their maximum returns but would still like to earn a potentially higher return than investing directly in the underlying asset. They are therefore suitable where market conditions are relatively stable and the price of the underlying asset is not expected to fall significantly.

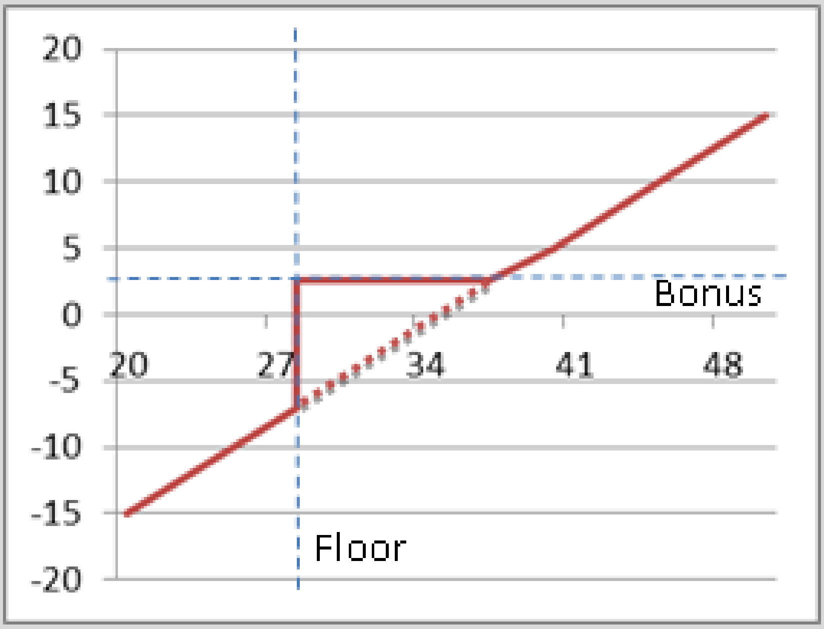
Bonus Certificates offer investors a minimum amount of payout (known as the "bonus level") provided the price of the underlying asset does not fall to a level at or below a pre-set price level. This level is known as the "safety threshold" or "floor level" and is usually slightly below the initial market price of the underlying asset.

At maturity:

(i) If the price of the underlying asset does not fall to or below the floor level during the term of the certificate, the investor receives either the bonus level or the value of the underlying asset at maturity, whichever is higher.

(ii) If the price of the underlying asset falls below the floor level during the term of the certificate, the investor receives the prevailing value of the underlying asset.

<u>Scenario analysis</u>



This scenario analysis is based on the following terms:

Underlying:	Stock A
Initial Price of the Underlying	HKD 35
(Being the Closing Price of Stock A on the Trade Date):	
Entitlement Ratio:	1:1
Time to Maturity:	12 months
Purchase Price of Bonus Certificate:	HKD 35
Bonus Level:	HKD 37.625
Floor Level:	HKD 28

Scenario 1 (Stock A trades at or above the Floor Level during the term of the certificate)

If the price of Stock A never trades below the Floor Level throughout the term of the Bonus Certificate, the holder will receive at maturity a cash amount equal to the higher of the closing price of Stock A as of the valuation date, or the Bonus Level.

(The minimum gain in this scenario is at least 7.5% of the purchased price, whilst the investor's upside participation is not limited)

Scenario 2 (Stock A trades below the Floor Level during the term of the certificate)

If the price of Stock A trades below the Floor Level at any time during the term of the Bonus Certificate, the holder will receive at maturity a cash amount equal to the closing price of Stock A as of the valuation date.

5.2 Primary recommendation 2: Review the Exchange's naming conventions for stock short names

The FSDC invites the Exchange to review the naming system for existing listed structured products and new products. The goal is to assign names that are not misleading, are consistently used amongst issuers and are intuitively descriptive in both English and Chinese. Specifically, the FSDC invites the Exchange to consider:

(a) confining the use of "X" in the stock short name reference to only denote exotic products with high risk, because "X" generally conveys negative connotations associated with very high risk and is not well-understood by Hong Kong investors;

(b) exploring a common naming system for new products that is:

   (i) consistently applied; and

   (ii) provides a more accurate description of a new product in both English and Chinese to reflect the product features; and

(c) expanding the current 15 character technical limit on its stock short name reference to enhance product naming flexibility.

5.3 Ancillary recommendations to achieve primary recommendation 1

The FSDC acknowledges the efforts made by the Exchange, the SFC and market participants to build a robust market and regulatory infrastructure to facilitate the significant developments of the listed structured products market in Hong Kong over the last 16 years.

Nonetheless, the FSDC believes the key to expanding the product range in Hong Kong's listed structured products market is to encourage issuers to launch new products. The FSDC therefore invites the Exchange to consider making the following changes to the current new product approval regime.

(a) **Shorten timeframe and streamlined process to launch new products**

There is currently no clear framework and approval period for new products or a new underlying asset class. It is therefore difficult for market participants to know the likely approval timeframe required for a new product or a new underlying.

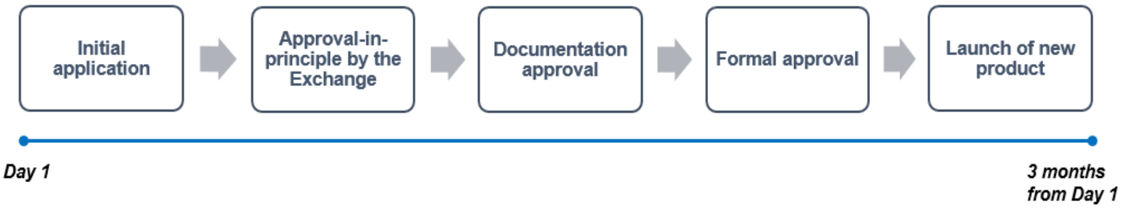
(i) **Implement a clearer framework and approval timeframe**

While the regulatory rules are in place to allow a variety of structured products to be listed, there is no regime that specifically regulates new product applications. The approval regime should clearly set out the steps required to make an application to issue a new product (including the required documentation), the basis upon which the application will be reviewed, the persons responsible for vetting the application and the approval timeframe.

The approval timeframe should provide indicative milestone dates for each step of the application and a target deadline within which the Exchange makes a final ruling on the application. The FSDC suggests the entire process should be no longer than three months. A longer process tests the viability of bringing a new product to market. If necessary, the Exchange could expressly qualify this timing (for example, by listing the factors that could affect this timing). Reference can be taken from the approach taken by the SFC on licensing applications by new industry participants as set out in its Licensing Information Booklet[16].

[16] Paragraphs 7.10 and 7.11 of the SFC Licensing Information Booklet (April 2013 version) available at http://www.sfc.hk/web/EN/assets/components/codes/files-current/web/guidelines/licensing-information-booklet/Licensing%20Information%20Booklet.pdf

The FSDC suggests the new product application framework should, at minimum, guide issuers through the following stages:



(ii) **Establish clear eligibility criteria for underlying assets**

The FSDC invites the Exchange to consult market participants to formulate further guidance about the eligibility requirements of underlying assets for listed structured products.

The FSDC notes that the SFC has formulated a set of rules for eligibility requirements of the underlying assets for unlisted structured products in the SIPS Code as set out in paragraph 3.3(a) above.

(iii) **Enhance communication between the industry, the Exchange and the SFC**

In order to increase transparency for the structured product application process and to provide greater certainty to the industry participants, it is important that market participants have access to information about the authorisation process. Specifically, assessment criteria, review timeframe, and other regulatory requirements should be clearly communicated. To facilitate open and frequent dialogue with market participants, the FSDC invites the Exchange and the SFC to consider establishing communication channels to answer issuer's enquiries regarding new product applications.

Suggested channels include:

(A) ***a hotline*** (with the information of the contact team published on the SFC's website);

(B) ***a specific email address group*** of the SFC and the Exchange; and

(C) ***a panel comprising representatives from the*** Exchange, the SFC and market participants to engage on market development initiatives, new product proposals and the overall regulatory roadmap.

(iv) **Review the issuance process**

The FSDC invites the Exchange to consider:

(A) reviewing the current (largely manual and paper-based) mode for dissemination of information to investors and consider allowing issuers to submit documents in electronic form only. This will reduce the administrative and financial burden on issuers and make it easier for issuers to increase issuance volume and launch new products;

(B) introducing a designated information platform within the Exchange's website which contains only information relating to listed structured products to facilitate an organised way for issuers to upload information and investors to locate relevant product information; and

(C) upgrading or replacing the electronic submission system, which was originally designed for listed companies to publish their announcements, with a new system designed and tailored for a larger volume of issue information for structured products, with the aim of improving investor use and experience.

(b) **Offer fee packages to encourage innovation**

The FSDC invites the Exchange to re-visit its current fee structure to encourage product innovation in light of the European model. The FSDC suggests the following incentives will motivate issuers to launch new products.

(i) **Offer package fees to reflect issuance volume or product range** – This would encourage issuers to launch a larger volume and a greater range of products.

(ii) **Lower fees for *new* products** – Fees should be lower for new products to encourage issuers to listi a new structured product. "New" should be determined in the context of a particular issuer (i.e. a discount could be given to each issuer to launch a product type that they have not launched before). The discount may be offered for a "new product promotion" period only to encourage market participants to invest in investor education.

(iii) **Introduce a distribution reward scheme for broker dealers** – The FSDC is not proposing to re-introduce commission rebates but believes a distribution reward scheme may be appropriate for new products where investor education and new product promotion are critical to generating demand, provided the level of distribution fees is transparent to investors and is not dependent on trading volume. This will also encourage securities brokers to hire specialists for investor education purposes.

(c) **Allow flexible liquidity provisioning for new products**

The FSDC suggests the Exchange's liquidity system should be sufficiently flexible to facilitate the listing of new products. A specific liquidity provision requirement should apply with respect to Leveraged Products (i.e. warrants and CBBCs) and to Investment Type Products (e.g. Discount Certificates and Bonus Certificates) respectively, given the difference in their characteristics and trading patterns.

The Active Quotes system currently imposed on warrants and CBBCs may be neither suitable nor beneficial for Investment Type Products (such as Discount Certificates and Bonus Certificates) because those products are generally “hold to maturity” products and are likely to be traded less frequently than warrants and CBBCs. The FSDC therefore invites the Exchange to consider ways to allow alternative liquidity provisioning, specifically a Quotes Request process for Investment Type Products. Under the additional Quotes Request liquidity process, investors would have transparent, continuous indicative bid/ask quotations offered by liquidity providers. The request-for-quote should be automated as much as possible, aiming for fast and automated execution of trades. This model benefits investors who invest in larger-sized trades and offers them competitive prices.

(d) **Support joint market efforts for investor education**

Investors are unlikely to invest in products they do not understand. Investor education should be a joint effort by the Exchange, issuers and product distributors. Investors should be given sufficient information on the features of new listed structured products, the key risks and a demonstration of how they work (for example, the best and worst case scenarios).

Assistance could be sought from Hong Kong’s Investor Education Centre. Issuers, the Exchange and the SFC could work with the existing investor education channels to build an investor education platform exclusively for new listed structured products setting out information relating to new products offered by issuers from time to time, including a detailed analysis of the mechanics of such products (e.g. different scenario analysis).

6 Benefits to Hong Kong

6.1 Investors

The proposed recommendations offer a range of benefits to investors in the listed structured products market in Hong Kong including:

(a) **Product diversity -** The new initiatives are designed to increase the range of listed structured products, giving investors the opportunity to choose products that suit their individual needs and risk appetite.

(b) **Improved transparency -** The new products will be available on a listed platform, which means investors can reap the benefits of a listed platform (including transparency, price discovery, ability to compare products on a standardised platform and secondary market trading).

(c) **Enhanced investor education -** The new initiatives encourage regulators and issuers to invest in investor education, enabling investors to make more informed decisions.

(d) **Simplify product naming -** The proposed changes to naming conventions reduce potential confusion and allow investors to easily identify the features of a particular product.

6.2 Issuers

The recommendations for the listed structured products market will provide benefits to issuers of structured products including:

(a) **Product diversification** – Issuers are encouraged to offer a wide range of listed structured products to adapt to different market conditions, instead of limiting their focus to warrants and CBBCs.

(b) **Reducing costs and time to market with improved infrastructure for new product issuances** – The recommendations will reduce costs involved in issuing structured products and enhance Hong Kong's market infrastructure, leading to a more efficient market. Lower costs will also mean further potential innovation as issuers are incentivised to evolve their offerings.

(c) **Reducing confusion and barriers through enhanced communication with the Exchange and the SFC** – Better communication between issuers and the regulators increases transparency and certainty in the market, encouraging issuers to launch different product types with adequate support from the regulators.

6.3 Securities brokers

The proposed changes will benefit securities brokers and intermediaries. For example:

(a) **Expanded product range** – The broadening of types of structured products to include Investment Type Products expands the range of wealth management products that can be offered to clients.

(b) **Increased incentive to promote products** – The recommendation to introduce a distribution reward scheme for broker dealers provides an incentive to participate in investor education, increasing a broker's potential client base and revenue streams.

(c) **More jobs created** – Product diversification and improved market infrastructure increases product range and attracts more investors, which in turn creates more job opportunities for intermediaries.

6.4 The Exchange

The Exchange also stands to benefit from the proposed changes to the structured products market as the changes:

(a) **Facilitates more product issues** – Encourages issuers to issue more types of structured products, which will further increase trading on the Exchange.

(b) **Fosters world-class status** – Allows the Exchange to offer products similar to those available on other global exchanges, improving its competitiveness and enhancing its status as a global market leader.

(c) **Opens up opportunities** – Offers a wider range of investment products ranging from conservative (Investment Type Products) to aggressive (Leveraged Products) which will attract investors from jurisdictions with limited product availability, opening up opportunities for future market development and projects with Mainland China and other markets worldwide.

7 Conclusion

The FSDC believes the recommendations set out in this paper will optimise Hong Kong's listed structured products and enable Hong Kong to maintain its status as one of the leading structured products markets in the world by improving the following aspects.

(a) ***Flexibility*** – Offer a range of bespoke products catering to different investment goals and risk appetites and reflect interesting product ideas from time to time in response to evolving market needs;

(b) ***Access and liquidity*** – Provide investors with easy access to products and sufficient liquidity to ensure continuous prices and adherence to standard market maker obligations; and

(c) ***Diversity and competitiveness*** – Provide investors with a platform whereby major investment banks with a global reach can issue a variety of products competitively on a single platform, allowing investors to compare products with ease.

We also encourage an open and frequent dialogue between the listed structured product industry, the Exchange and the SFC on an ongoing basis to ensure future growth of the listed structured products market in Hong Kong.

Schedule 1 Glossary

Term	Definition
2002 Reforms	Regulatory reform of Hong Kong's listed structured products market in 2002
2012 Guide	Guide on Enhancing Regulation of the Listed Structured Products Market issued by the Exchange on 27 July 2012
Active Quotes	A method of providing liquidity for listed structured products by actively inputting firm bid and offer orders into the Exchange's trading system
Capital Protected Products	Non-leveraged products that allow investors to gain some exposure to financial assets whilst protecting their capital invested, in return for surrendering any income related to the underlying asset. Examples of Capital Protected Products include uncapped capital protection certificates, exchangeable certificates, capped capital protected certificates, capital protection products with knockout or coupon.
CBBC	Callable bull/bear contracts
Chapter 15A	Chapter 15A of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited
ELD	Equity-linked deposits
ELI	Equity linked instruments
EUR	EURO
Exchange	The Stock Exchange of Hong Kong Limited
FSDC	Financial Services Development Council
GBP	British Pound
HKD	Hong Kong Dollar
HKMA	Hong Kong Monetary Authority
Industry Principles	The Industry Principles on Liquidity Provision for Listed Structured Products attached to the 2012 Guide
Investment Type Products	Refer to structured products which are generally designed for investors to "hold to maturity" for their maturity payouts. Investment Type Products include Yield Enhancement Products, Capital Protected Products and Participation

	Products
Key European Exchanges	Collectively, Deutsche Boerse (*Germany*), Euronext (*Paris*), Euronext (*Amsterdam*), LSE Borsa Italiana (*Italy*) and SIX Swiss Exchange (*Switzerland*)
L + [*number*]	Launch day plus [*number*] of days
Leveraged Products	Structured products that enable investors to pay only a portion of the value of the underlying asset to acquire certain exposure to such asset. Unlike Capital Protected Products, investors may lose all of their investment. Examples of Leveraged Products include warrants and CBBCs.
MYR	Malaysian Ringgit
Participation Products	Non-leveraged products that provide an investor a minimum fixed return with a participation in potential capital gain if the underlying asset moves in the investor's expected direction. Examples of Participation Products include Bonus Certificates, tracker certificates, outperformance certificates and twin-win certificates.
Quote Request	A method of providing liquidity for structured products by entering orders into the Exchange's trading system, in response to an investor's request
RMB	Renminbi
SFC	Securities and Futures Commission
SFC Marketing Guidelines	The Guidelines on Marketing Materials for Listed Structured Products published by the SFC
SFO	Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong)
SGD	Singapore Dollar
SIPS Code	The Code of Unlisted Structured Investment Products issued by the SFC
T + [*number*]	Trading day plus [*number*] of days
THB	Thai Baht

Working Group	FSDC listed structured products working group
Yield Enhancement Products	Non-leveraged products that offer limited potential gain with a yield which is normally capped in the form of a fixed coupon or discount. The potential gain from investments in Yield Enhancement Products are generally higher than an ordinary time deposit return. Examples of Yield Enhancement Products include Discount Certificates and reverse convertibles.

Schedule 2 Historical development of Hong Kong's listed structured products market

1989	The first derivative warrant was listed on the Exchange. Between 1989 and 2001, derivative warrants were listed pursuant to rules for the listing of shares.
2002	The 2002 Reforms resulted in the introduction of a liquidity provider system and an amended Chapter 15A to provide for a regime for the listing of a wide range of structured products, including ELIs. The first six ELIs were listed on the Exchange on 5 August 2002. As at the end of 2002, there were 11 ELIs listed on the Exchange. The total turnover value of ELIs in 2002 was around HKD334 million[17].
2003 onwards	A wide variety of structured products with different payout structures such as window barrier, dividend accumulator and barrier and underlying assets (categorised by the Exchange as "exotic warrants") traded actively in Hong Kong. In 2003, the trading value of Exotic Warrants represented 20% of the total trading value of derivative warrants[18]. Please refer to Schedule 3 for a list of structured products historically and currently listed in Hong Kong.
2005	The SFC undertook a comprehensive review of the derivative warrants market and published its Report on the Derivative Warrants Market in Hong Kong.
2006	CBBCs commenced trading on the Exchange on 12 June 2006[19]. No ELIs have been listed since 2006.
2012	The Exchange introduced the dual counter model. The dual counter model refers to secondary trading arrangement whereby securities are traded in RMB and HKD. The first RMB-denominated derivative warrant listed on the Exchange on 19 December[20]. On 27 July, the Exchange issued its 2012 Guide to enhance regulation of the listed structured products market[21]. The 2012 Guide recommended a number of enhancement measures including document standardisation, tightening of liquidity provision requirements and introduction of new Active Quote standards.
Today	Hong Kong's listed structured products market has the highest trading volume in the world, despite having a limited product range of warrants

17 HKEx Fact Book 2002, available at https://www.hkex.com.hk/eng/stat/statrpt/factbook2002/FB_2002.pdf

18 "An Overview of Exotic Warrants Listed on the Stock Exchange" published by the Exchange in January 2005.

19 HKEx Fact Book 2006, available at https://www.hkex.com.hk/eng/stat/statrpt/factbook2006/e/11.pdf

20 HKEX 2012 Fact Book.

21 A copy of the guideline is available at http://www.hkex.com.hk/eng/rulesreg/listrules/guidref/documents/guideline0712.pdf.

	and CBBCs only.

Schedule 3 Products historically and currently listed in Hong Kong

	Launch date	Product type	Special feature(s)
1.	February 2008	Warrants	• Low strike level (0.001)
2.	July 2008	Warrants	• Linked to gold
3.	July 2008	Warrants	• Linked to silver
4.	January 2008	Warrants	• Low strike price (0.001) • Linked to silver
5.	January 2008	Warrants	• Low strike price (0.001) • Linked to platinum
6.	March 2008	Warrants	• Commodity Participation Certificates • Low strike price (0.001) • Linked to CBOT Wheat December 2008 Futures Contracts
7.	January 2004	Warrants	• Window barrier (i.e. on expiry the warrants will have value only if the closing price at all times throughout the window period is above the barrier strike price, which is set at a price lower than the exercise price)
8.	January 2004	Warrants	• Maturity knock-in (i.e. on expiry the warrants will have value only if, (i) in respect of call warrants, the closing level is equal to or above the knock-in strike level; and (ii) in respect of put warrants, the closing level is equal to or below the knock-in strike level)
9.	October 2003	Warrants	• Locked-in Return (i.e. the return of the warrant is calculated by reference to the average of the periodic cash settlement amounts)
10.	November 2004	Warrants	• Knock-out call (i.e. the warrants will have value on expiry only if the closing price at all times throughout the knock-out period is above the barrier strike price)
11.	2003	Warrants	• Maturity knock-in call (i.e. the warrants will have value on expiry only if the closing price at or above the knock-in strike Level (which is set at a level higher than the strike level), and in such case, the cash settlement amount at expiry is calculated by reference to the strike level
12.	March 2003	Warrants	• Dividend accumulator (i.e. cash payment for each entitlement of warrants will be made to warrantholders on record date)
13.	November 2003	Warrants	• Distribution (i.e. an amount will be paid to each warrantholder if on the distribution valuation date the distribution price is equal to or greater than the distribution exercise price)

14.	March 2007	Warrants	• Average return (i.e. the return of the warrants is calculated by reference to the average of the periodic reference prices of the shares)
15.	August 2007	Warrants	• Barrier (i.e. the warrants will have value on expiry only if the closing price at all times throughout the barrier period is below the barrier strike price)
16.	March 2005	Warrants	• Straddle (i.e. cash settlement amount is calculated by reference to the difference between the closing level and the strike level)
17.	June 2009	Warrants	• Auto-call (i.e. the warrants will be automatically exercised if an auto-call event occurred)
18.	March 2008	Warrants	• Capped (i.e. the return of the warrants is capped at a certain upper limit)
19.	April 2008	Warrants, CBBCs and ELIs	• Linked to C-Tracks TAIEX Building Material and Construction Sub-Index / TAIEX Electronics Sub-Index / TAIEX Finance Sub-Index
20.	Pre-2002/2003	ELIs (bull, bear and range, wholly cash settled and involving physical delivery)	• Linked to local stock • Bull, bear and range ELI features are described further below
21.	-	Warrants	• Linked to single equities (usually Hong Kong stock)
22.	-	Warrants	• Linked to index (e.g. Hang Seng Index or Hang Seng China Enterprises Index)
23.	-	Warrants	• Linked to single unit trust (e.g. Hang Seng H-Share Index ETF, ChinaAMC CSI 300 Index ETF, iShares FTSE A50 China Index ETF and Tracker Fund of Hong Kong)
24.	-	CBBCs	• Linked to single equities (usually Hong Kong stock)
25.	-	CBBCs	• Linked to index (e.g. Hang Seng Index or Hang Seng China Enterprises Index)
26.	-	CBBCs	• Linked to single unit trust (e.g. Hang Seng H-Share Index ETF, ChinaAMC CSI 300 Index ETF, iShares FTSE A50 China Index ETF and Tracker Fund of Hong Kong)

Schedule 4 Key regulations and rules as of the date of this paper

1 Regulations applicable to listed structured products

1.1 SFO

Advertising of listed structured products in every form, including electronically or by multimedia, will be subject to the SFO and the SFC Marketing Guidelines[22].

1.2 Chapter 15A and other regulations published by the Exchange

Chapter 15A, which was approved by the SFC pursuant to section 24 of the SFO, sets out extensive requirements regarding the listing procedure and the contents of listing documents for listed structured products. An issuer will be bound by Chapter 15A through its execution of a listing agreement during the programme establishment stage.

In 2012, the Exchange published the 2012 Guide[23]. The 2012 Guide applies to all approved structured products issuers in Hong Kong. Failure to follow the 2012 Guide will reflect adversely on the capability and suitability of an issuer to issue and manage listed structured products.

The Industry Principles is attached to the 2012 Guide as an appendix[24]. While issuers should comply with the Industry Principles, these are not intended to be binding commitments or to give rise to enforceable obligations or duties. Occasional failure to comply with the Industry Principles will not in itself render an issuer or its liquidity agent liable to any sanction or enforcement action. However, compliance with the Industry Principles is relevant to the Exchange's assessment of an issuer's suitability to issue and manage listed structured products.

2 Regulatory requirements on listed structured products

Chapter 15A provide a permissive framework for the listing of structured products in Hong Kong with little restriction on the types of structured products that can be listed in Hong Kong.

Chapter 15A imposes the following key requirements on structured products listed in Hong Kong:

2.1 Requirements on product features

(a) *Form* – Any product that provides the holder of that product with an economic, legal or other interest in another asset (referred to as the "underlying asset") (i.e. derives its value by reference to the price or value

22 A full version of the SFC Marketing Guidelines is available at the SFC's website: http://www.sfc.hk/web/EN/assets/components/codes/files-current/web/guidelines/guidelines-on-marketing-materials-for-listed-structured-products/Guidelines%20on%20Marketing%20Materials%20for%20Listed%20Structured%20Products.pdf

23 A full version of the 2012 Guide is available at the Exchange's website: https://www.hkex.com.hk/eng/rulesreg/listrules/guidref/documents/guideline0712.pdf

24 A full version of the Industry Principles is available at the Exchange's website: https://www.hkex.com.hk/eng/rulesreg/listrules/guidref/documents/guideline0712.pdf

of the underlying asset) can constitute a structured product under Chapter 15A[25]. Examples include derivative warrants, CBBCs and ELIs.

(b) *Underlying assets* – The underlying assets may be any type of asset such as shares, index, currency, commodity (or a combination of such assets)[26].

(i) Where the underlying assets are shares, the shares must be:

(A) listed on the Exchange and be either a member of the Hang Seng Index or be eligible for structured products issuance; or

(B) listed on any other stock market recognised by the Exchange and be required by the rules of that market to have a minimum number of shares in the hands of the public and the public float capitalisation of such shares be not less than HKD4 billion[27].

(ii) Where the underlying asset is a basket of shares, each class of shares in the basket must be eligible for the relevant type of structured product and satisfy certain minimum weighting requirements[28]. The basket may comprise unlisted shares, provided certain other requirements are met[29].

(c) *Style* – The product may be American style, European style or any other style approved by the Exchange from time to time.

(d) *Collateral* – The structured product may be collateralised or uncollateralised, although additional requirements apply to collateralised structured products.

(e) *Capital protection* – The structured product may or may not be capital protected.

(f) *Mode of settlement* –

(i) Unless the structured product relates to shares that are not listed on the Exchange, it may be settled by cash or physical delivery.

(ii) The mode of settlement must be specified at the time of launch (for examples, there cannot be options for the issuer to elect a particular mode of settlement upon exercise or maturity of a structured product).

(iii) Where the structured product is traded in Hong Kong dollars, settlement must also be in Hong Kong dollars[30].

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[25] Paragraph 15A.05 of Chapter 15A.

[26] Paragraph 15A.05(1) of Chapter 15A.

[27] Paragraph 15A.30 of Chapter 15A.

[28] Paragraph 15A.32 of Chapter 15A.

[29] Paragraph 15A.33 of Chapter 15A.

[30] Paragraph 15A.45 of Chapter 15A.

(g) *Special feature* – The structured product may have special features such as cap or "knock-in" and "knock-out" features[31].

2.2 Issuer eligibility requirements

(a) *Non-private company* – An issuer (except in the case of a guaranteed issue) must not be a private company within the meaning of section 11 of the Companies Ordinance (Cap 622 of the Laws of Hong Kong).

(b) *Suitability* – An issuer must prove to the Exchange that it is suitable for and capable of managing a structured product issue and listing. The factors that the Exchange will take into account include its previous experience in issuing and managing issues of other similar instruments, any satisfactory experience managing the potential obligations under the structured product issue, and where the listing is non-collateralised, the issuer's risk management systems and procedures[32].

(c) *Asset* – The issuer or any guarantor must maintain a net asset value of not less than HKD2 billion[33].

(d) *Credibility* – The issue or guarantor of non-collateralised structured products must also fulfil certain ratings requirements or be regulated by the HKMA, or be regulated by the SFC for the conduct of the business of dealing in securities in Hong Kong[34].

2.3 Mandatory liquidity provision requirements

Issuers are required to appoint a liquidity provider to provide liquidity for each series of their listed structured products. A liquidity provider can be the issuer itself, another company within its group or an independent third party.

A liquidity provider must be an exchange participant. An issuer is not required to be an exchange participant in its role as the issuer of listed structured products under Chapter 15A. Chapter 15A requires a liquidity provider to[35]:

(a) be a holder of a Stock Exchange Trading Rights. An applicant for the Stock Exchange Trading Right is required to pay a Stock Exchange Trading Right fee and an administration fee (currently being HKD500,000 and HKD50,000 respectively);

(b) be a company limited by shares incorporated in Hong Kong;

(c) be a corporation licensed to carry on Type 1 (dealing in securities) activities under the SFO;

(d) be of good financial standing and integrity;

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[31] Paragraph 15A.05(9) of Chapter 15A.

[32] Paragraph 15A.11 of Chapter 15A.

[33] Paragraph 15A.12 of Chapter 15A.

[34] Paragraphs 15A.13 and 15A.14 of Chapter 15A.

[35] Chapter 3 of the Rules of the Exchange, available at https://www.hkex.com.hk/eng/rulesreg/traderules/sehk/Documents/Chap-3_eng.pdf

(e) comply with the financial resources requirements specified in the Securities and Futures (Financial Resources) Rules and where applicable, such additional financial resources requirements prescribed; and

(f) comply with other requirements as the Exchange may prescribe from time to time.

An issuer will normally enter into a liquidity agreement with its liquidity provider for all products issued and listed under its listed structured products. Most listed structured products in Hong Kong appoint an intra-group entity holding a Type 1 licence with the SFC to be the liquidity provider.

The Exchange will provide each liquidity provider with an open gateway for providing liquidity. Further information relating to the mechanism is set out in the Rules of the Exchange.

An issuer may provide liquidity either by Quote Request or Active Quotes.

The chosen method for providing liquidity, together with the identity and hotline number of the liquidity provider, are required to be disclosed in the relevant listing documents of the listed structured products.

Currently, the majority of the issuers in Hong Kong adopt Quote Requests as the means of liquidity provision in the listing documents. The Industry Principles introduced new Active Quote standards (effective from 31 December 2012) under which liquidity providers provide liquidity for listed structured products with an active underlying under certain market conditions as elaborated in the Industry Principles.

2.4 Authorised representative requirements

Issuers must nominate two authorised representatives in a prescribed form as its principal channel of communication with the Exchange. One of the two authorised representatives must be a senior officer of the compliance department of the issuer or the guarantor. There is no separate licensing requirement for the authorised representatives.

2.5 Other requirements

(a) *Transferability* – The structured product must be freely transferable[36].

(b) *Tenor* – Warrants must normally expire not less 6 months from the date of listing. ELIs must normally expire not less than 28 days from the date of listing[37].

(c) *Issue size* – The expected market capitalization of a structured product issue must normally be at least HKD10 million[38].

[36] Paragraph 15A.37 of Chapter 15A.
[37] Paragraph 15A.38 of Chapter 15A.
[38] Paragraph 15A.39 of Chapter 15A.

(d) *Entitlement ratio* – Structured products relating to shares should normally be issued in the ratio of one, ten or 100 structured product(s) for one share, or one structured product for one, ten or 100 shares[39].

(e) *Board lots* – The trading board lot of structured products relating to an index, currency or a basket of shares must be 10,000[40].

(f) *Minimum issue price* – As a general rule, the minimum issue price of a structured product must not be less than HKD0.25[41].

[39] Paragraph 15A.40 of Chapter 15A.

[40] Paragraph 15A.42 of Chapter 15A.

[41] Paragraph 15A.43 of Chapter 15A.

Schedule 5 Comparison with the unlisted structured products markets

1 Key differences between the listed and unlisted structured products market

The key differences between the unlisted structured products market and the listed structured products market as of the date of this paper are as follows:

1.1 Regulatory body

While listed structured products are jointly regulated by the Exchange and the SFC, unlisted structured products are regulated by the SFC and, for bank issued currency-linked investment products, the HKMA.

1.2 Investors

Certain unlisted structured products are specifically targeted at professional investors only (as defined under the Securities and Futures Ordinance) who will usually be clients of private banks in Hong Kong. Retail investors may also gain access to unlisted structured products (such as equity linked investments) issued under a programme by financial institutions. The offering documents in respect of retail equity linked investment products and programmes must be approved by the SFC.

1.3 Product types

The Exchange maintains a list of eligible underlying assets which can be linked to listed structured products. In comparison, there is little (if any) limitation on the type of underlying asset linked to unlisted structured products offered to "professional investors". In respect of unlisted structured products offered to retail investors, the underlying assets must meet the eligibility criteria prescribed by the SFC (which largely align with the eligibility criteria applicable to listed structured products).

1.4 Market size

According to the SFC's Survey on the Sale of Non-exchange Traded Investment Products, unlisted structured products in the aggregate transaction amount of HKD167 billion were sold to individual investors in the year ended 31 March 2016[42]. As of September 2016, the turnover value of all derivative warrants listed on the Exchange was HKD 188,473.25 million, while CBBCs also account for HKD 121,806.56 million[43]. Whilst there is limited public data in respect of unlisted structured products traded by professional investors (as these trades would be conducted on an over-the-counter basis), the notional value of unlisted structured products traded by retail investors as at 30 September 2016 was over HKD 13,937 million[44].

[42] This represents the volume sold by the 44 licensed corporations which reported that they engaged in the sale of unlisted structured products to individual investors. Survey on the Sale of Non-exchange Traded Investment Products, published by the SFC on 9 December 2016, available at http://www.sfc.hk/web/EN/files/ER/PDF/Product%20Survey%20report_Mar%202016_Eng.pdf, p. 7.

[43] HKEX Monthly Market Highlights - September 2016, available at http://www.hkex.com.hk/eng/stat/statrpt/mkthl/mkthl201609.htm

[44] Data on structured deposits, equity-linked investments and structured notes from the SFC, available at: http://www.sfc.hk/web/EN/files/PCIP/SIP-data/SIP%20data%2009_2016%20(Eng).pdf

1.5 Issuance documentation process

Issuance and offering documents for unlisted structured products offered to professional investors are prepared by the relevant product issuers and intermediaries. The issuance and offering documents for unlisted structured products offered to retail investors are generally subject to prior authorisation requirement by the SFC. The issuance and offering documentation process for listed structured products are standardised into templates for used by all issuers, making it easier for investors to compare trades terms of products with the same product features.

1.6 Trading

While issuers do provide market making arrangements for certain unlisted structured products, such arrangements are limited and for certain products, not subject to mandatory regulatory obligations. In comparison with the limited market making arrangements available for unlisted structured products, investors in listed structured products are generally able to participate in an active secondary market to dispose of their positions prior to the scheduled expiry dates of the products.

1.7 Distribution

Most of the distributors of unlisted structured products are retail banks, and transactions are settled in the banking system, whereas the main distributors for listed structured products are securities brokers. Issuers and distributors enter into bi-lateral distribution agreements setting out details of settlements and distribution fees arrangements by issuers to the distributors. For listed structured products, any licensed securities broker can be a distributor, with the role to educate their clients on the product terms, as well as to facilitate trading on exchange in the same method as securities (cash) trading services they offer.

1.8 Settlement

Unlisted structured products can either be internally settled by the issuing entity or settled through an external clearing system (as opposed to the Exchange securities trading system for listed structured products).

2 Types of unlisted structured products

Offering of unlisted structured products to public in Hong Kong is subject to the SFO and the Code of Unlisted Structured Investment Products published by the SFC from time to time.

The regulatory vetting process for retail offering of unlisted structured products in Hong Kong is relatively streamlined. The types of such products in the market often share similar features. Common features include:

(a) ***Underlying asset*** – The underlying reference asset is equity (a single equity or a basket of equities), currency or paper gold.

(b) ***Mode of settlement*** – The unlisted structured products are either settled by cash or physical delivery.

(c) ***Potential distribution*** – Investors may receive potential distribution (also known as dividend or coupon) which may be of a fixed or variable amount.

(d) ***Non-capital protected*** – The structured products are not capital or principal protected.

(e) ***Special features*** – Some products may have additional features such as auto-call or knock-in (also known as kick-in or air-bag).

Schedule 6 Structured products available in the European market as of the date of this paper

Broadly speaking, there are currently 6 categories of structured products in the European market.

Category	Structured product type	Description
1 Capital protected investment products	***Uncapped Capital Protection Certificates***	The issuer promises to repay the nominal amount to the investor at maturity. In addition, there is the potential for attractive returns depending on the performance of one or several underlying assets.
	Exchangeable Certificates	There is unlimited participation in a positive performance of the underlying above the strike price and any payouts attributable to the underlying are used in favour of the strategy. Coupon payment is possible.
	Capped Capital Protected	The minimum redemption at expiry is equivalent to the capital protection (i.e. a percentage of the nominal amount) but there is limited profit potential (cap).
	Capital Protection with Knock-Out	There is possible payment of a rebate following a knock-out and limited profit potential.
	Capital protection products with Coupon	These are Interest-bearing securities with various additional conditions attached. The amount of interest may depend on the performance of the underlying asset. At final maturity the bonds offer 100% capital protection.
2 Yield enhancement investment products with no capital protection	***Discount Certificates***	Discount Certificates give a discount on the current price of the underlying. This discount provides a cushion against potential falls in the price of the underlying. In return, investors accept a cap on profits from potential price rises, and they do not receive any dividends.
	Barrier Discount Certificates	Barrier Discount Certificates enable investors to acquire the underlying at a lower price. The maximum redemption amount (cap) is paid out if the barrier is never breached. A Barrier Discount Certificate turns into a Discount Certificate after breaching the barrier.
	Barrier Reverse Convertibles	Should the barrier never be breached, the nominal plus coupon is paid at redemption. A

		Barrier Reverse Convertible turns into a Reverse Convertible after breaching the barrier.
	Reverse Convertibles	Interest is paid regardless of the performance of the underlying asset. The type and the amount of the repayment at final maturity depend on whether the value of the underlying asset is equal to, or above or below the strike price on the valuation date.
	Capped Outperformance Certificates	Capped Outperformance Certificates offer investors the opportunity for leveraged profit from a rise in the price of the underlying above the strike price within a specified range. The profit is limited by a cap. With products of this type, the investor's exposure to potential losses below the strike price is limited to any loss in the underlying. There is no entitlement to a dividend.
	Capped Bonus Certificates	The minimum redemption is equal to the strike if the barrier is never breached.
	Express Certificates	Movements in the price of the underlying are monitored at specific intervals (e.g. annually) and compared with the initial price. If, at one of the reference dates, the price is higher than the initial price, the investor receives the nominal value of the certificate plus a predefined additional amount before the end of the term. If the price is not higher than the initial price at the reference date, the process is repeated in the next period taking double the additional amount as a basis, and so on.
	Credit Linked Notes	Credit Linked Notes offer a means of investing in a borrower's credit rating. The amount of interest and the capital repayment are dependent on the borrower's credit rating. As long as the borrower does not experience a credit event, the investor will receive interest payments and, when the note matures, the nominal value. If a credit event does occur, however, the note is repaid early. In this case, interest payments cease, and the amount repaid may be significantly below the nominal value.
3 Participation Products	***Tracker Certificates***	Tracker Certificates offer exposure to the movements in the price of an underlying instrument. This means that with just one

		certificate, investors can put their money into an asset class, sector or region, optimising and diversifying their portfolio.
	Bonus Certificates	Bonus Certificates pay a bonus amount at final maturity if the underlying does not reach or breach the specified barrier in the relevant monitoring period. The investor does not receive any dividend payments.
	Outperformance Certificates	If the price of the underlying asset goes up, investors receive a return equal to a pre-specified multiple of the return on the underlying asset.
	Twin-Win Certificates	There is unlimited participation in the development of the underlying. Minimum redemption is equal to the strike if the barrier is never breached.
	Outperformance Bonus Certificates	There is unlimited participation in the development of the underlying. Minimum redemption is equal to the strike if the barrier is never breached. An Outperformance Bonus Certificate turns into an Outperformance Certificate after breaching the barrier.
4 Leveraged products without knock-out	***Warrants***	Warrants provide leveraged exposure to rising (call) and falling (put) prices in an underlying. The price is influenced not only by movements in the underlying, but also by other factors such as volatility or the (residual) term. If the price of the underlying at maturity is below (call) or above (put) the strike price, investors lose their entire capital.
	Spread Warrants	Features of Spread Warrants include: (i) small investment generating a leveraged performance relative to the underlying, (ii) increased risk of total loss (limited to initial investment), (iii) daily loss of time value (increases as product expiry approaches) and (iv) limited profit potential (cap).
5 Leveraged products with knock-out	***Knock-Out Warrants***	Like Warrants, Knock-Out Warrants also provide leveraged exposure to rising (call) and falling (put) prices in an underlying. Knock-out warrants track the movements of the underlying on a one-to-one basis.
	Open-end Knock-	Features of Open-end Knock-out Warrants

	Out Warrants	include: (i) immediately expires worthless in case the barrier is breached (ii) daily adjustment of the barrier and (iii) Open-End Maturity.
	Mini-Futures	Features of Mini-Futures include: (i) Stop-Loss level differs from strike and (ii) a residual value may be redeemed following a stop loss event.
	Double Knock-Out Warrants	Double Knock-out Warrants include immediately expires worthless in case one of the barriers is breached during product lifetime.
6 Constant leveraged products	***Constant Leveraged Certificate***	Constant Leveraged Certificates have a Stop Loss and/or an automatic reset feature which prevents the value of the instrument to become negative.

Schedule 7 Comparison between issuance fees of different exchanges as of the date of this paper

Name of exchange	Fees and costs
The Exchange[45]	*Warrants and CBBCs* a) *Set up of the programme* The Exchange and/or the SFC do not charge any fee for approving the listing documents. b) *Subsequent issuance* As at the date of this paper, an issuer will be subject to the following fees for each issuance: (i) *Listing fees* - the Exchange charges: - HKD 60,000 (for Warrants) or HKD 18,000 (for CBBCs) for the first issuance over a particular underlying in any calendar year; and - HKD 40,000 (for Warrants) or HKD 12,000 (for CBBCs) for each subsequent issue over the same underlying (ii) *Exemption fee* under Part XV of the SFO (disclosure of interests) - the SFC charges HKD 12,000 for a 12-month blanket exemption
London Stock Exchange	*Structured products*[46] (applies to any securitised derivative as defined in Chapter 19 of the UK Listing Authority's Listing Rules)[47] a) *Admission fees* (i) for any single issuer, instruments issued with 30 days or fewer to expiry within any calendar month will be charged at GBP 150 (HKD 1450.05) per instrument; (ii) for any single issuer, the first 100 instruments issued with more than 30 days to expiry within any calendar month will be charged at GBP 350 (HKD 3383.46) per instrument. Any additional instruments issued with more than 30 days to expiry within that calendar month will be charged at GBP 250

[45] Appendix 8 of the Exchange's Listing Rules, available at : http://en-rules.hkex.com.hk/en/display/display_main.html?rbid=4476&element_id=3783

[46] How to Issue Structured Products – Fees for Issuers available at: http://www.londonstockexchange.com/specialist-issuers/structuredproducts/how-to-issue/sp-fees.pdf.

[47] "Securitised Derivative" is defined as an option or contract for differences which is listed under LR 19 of the listing rules (including such an option or contract for differences which is also a debenture) available at: https://www.handbook.fca.org.uk/handbook/.

	(HKD 2416.75) per instrument. Securities with less than 30 days to expiry are not included within calculating the first 100 instruments issued within any calendar month. b) *Annual fees* No annual fee is payable in respect of covered warrants and other structured products.
Frankfurt Stock Exchange	*Warrants, certificates and reverse convertibles*[48] a) For the first 5,000 products, EUR 200 (HKD 1,722.05) per product, with a maximum cap of EUR 56,000 – effectively EUR 11.20 (HKD 96.43) per product. b) After the first 5,000 products, EUR 200 (HKD 1,722.05) per product, with the maximum cap levied up to EUR 76,000 (HKD 654,379.00) in total. Top issuers issued 300,000 to 400,000 products in 2015, and they paid the maximum of EUR 76,000 (HKD 654,379.00) – so effectively it only costs around EUR 0.20 (approximately HKD 1.72) per product.
Singapore Stock Exchange	*Structured warrants*[49] *Listing fees* - For all new issues listed in a calendar year, listing fees are as follows: (i) SGD 4,000 (HKD 22,391.29 per issue for the first 50 issues; (ii) SGD 800 (HKD 4,478.26 per issue for the next 150 issues; (iii) SGD 100 (HKD 559.78) per issue for any issue thereafter. Issuers to negotiate a package fee with the exchange. Goods and services tax not included.
Malaysia Stock Exchange	(i) *Initial listing fee* - 0.0025% of the total market value of the securities listed, subject to minimum fee of MYR 10,000 (HKD 18,495.46) and maximum fee of MYR 50,000 (HKD 92,477.32) (ii) *Annual listing fee* - MYR 500 (HKD 924.77) per month (iii) *Processing fee* - MYR 2000 (HKD 3,699.09 per structured warrant

48 Fee Regulations for the Frankfurter Wertpapierborse (as of 01.07.2016), available at: http://www.deutsche-boerse-cash-market.com/blob/1187656/eae4fcae0a7b10f7f0f7301d38c01633/data/2016-07-01_Fee-Regulations.pdf.

49 Listing Fees on the Mainboard of the Singapore Stock Exchange, available at: http://www.sgx.com/wps/portal/sgxweb/home/listings/listing_fees.

Thailand Stock Exchange	These fees are cost per issuance and exclude VAT 7% *Securities and Exchange Commission Thailand application fee* = 10,000 THB (HKD 2,216.59) *Stock Exchange of Thailand application fee* = 30,000 THB (HKD 6,649.78 *Stock Exchange of Thailand listing fee* = (issuing value x 0.025%) and 100,000 (HKD 22,165.94) > listing fee > 30,000 (HKD 6,649.78) *Securities and Exchange Commission Thailand annual fee* = (listing fee/365) x (Expiry date - First trading date+1)

Schedule 8 Table of comparison between Hong Kong and the other Asian markets

	Hong Kong	Thailand	Malaysia	Singapore	Taiwan
Approval Process (time to listing)	Launch date + 5 (for new issues) Launch date + 4 (for further issues)	T + 3 (auto approval); or T +7 (manual process)	Submission (T) + 7	Launch date + 4	Launch date + 3
Trading hours	9.30am – 4.00pm	9.30am – 5.00pm	1st Session: - Pre-Open: 8.30am - 9.00am Open: 9.00am - 12.30pm 2nd Session: - Pre-Open: 2.00pm - 2.30pm Open: 2.30pm - 4.45pm Pre-Close: 4.45pm - 4.50pm Close: 4.50pm Last Trade: 4.50pm - 5.00pm *DBT Trade Close: 5.15pm	9.00am - 5.00pm (Follow SGX securities trading hours) Pre-open routine : 8.30am - 9.00am Pre-close routine : 5.00pm - 5.06pm	9.00am - 1.35pm
Settlement (physical/cash)	Both are allowed, but all are cash settled in practice	Cash settled	Cash Settled	Cash settled	Cash or physical settled

	Hong Kong	Thailand	Malaysia	Singapore	Taiwan
Available product type	Call and Put warrants, and Bull and Bear CBBCs	Call and Put warrants / European style	Call and put warrants on foreign and local indices. Calls only, in local stocks ELIs	Call and Put warrants on local and foreign stocks and benchmark indices	Call and Put warrants, and Bull and Bear CBBCs
Tenor	Warrants: not less than 6 months from date of listing; emulation issues not less than three months from date of listing CBBCs: minimum period shall be as agreed by the Exchange	Maturity: not less than 2 months and not more than 2 years	Warrants: min 6 months, max 5 years Bull ELIs: min 28 days and max 2 years CBBC: min 3 months, max 5 years	Average lifespan of 3 to 9 months. Warrants with longer tenure of 1 to 3 years are also available	Average lifespan of 3 to 9 months. Warrants with longer tenure of 1 to 3 years are also available
Minimum issue Size	HKD 10 million	THB 20 million (HKD 4433187.80)	RM 5 million (HKD 9247791.49)	SGD 2 million (HKD 11197950.02)	TWD 5 million (HKD 1231345.53)
Minimum launch price	HKD 0.25 Emulation issues: HKD 0.15	THB1 (HKD 0.22)	RM 0.15 (HKD 0.28)	SGD 0.20 (HKD 1.12)	TWD 0.60 (HKD 0.15)

	Hong Kong	Thailand	Malaysia	Singapore	Taiwan
Underlying assets	Hong Kong stocks, Hong Kong stock indices, foreign stock indices, currency pairs and commodities	Stocks in SET50 Index, ETF listed on SET, Stocks ranked 51-100 in SET100 index which have an average market cap >=THB10,000million for each quarter in the past 4 quarters, Index: SET Index, SET50 Index, SET100 Index, SET high Dividend Index, 8 Industry Group Index & 28 Sector Index Review every quarter	Individual stocks or basket of stocks 1. RM1 billion market cap for the 3 consecutive calendar months prior to issuance date 2. RM3 billion for newly listed corporations or ETF that do not meet 3 months market cap track record	No commodities but most stocks in any major countries	Mainly on local stocks, ETFs and indices (Foreign underlyings are required to package as local, e.g. local ETFs linked with foreign underlyings) Taiwanese enterprises' traded in foreign market are excluded as the eligible underlyings
Issuance fee	Listing fee: (i) HKD 60,000 (for warrants) or HKD 18,000 (for CBBCs) for the first issuance over a particular underlying; and (ii) HKD 40,000 (for warrants) or HKD 12,000 (for CBBCs) for each subsequent issuance. Exchange trading fee: 0.005% for	These fees are cost per issuance and exclude VAT 7% SEC application fee = 10,000 THB (HKD 2216.77) SET application fee = 30,000 THB (HKD 6650.31) SET listing fee = (issuing value x 0.025%) and 100,000 (HKD 22167.70) > listing fee > THB 30,000 (HKD 6650.31) SET annual fee = (listing	(i) Initial listing fee - 0.0025% of the total market value of the securities listed, subject to minimum fee of MYR 10,000 (HKD 18495.46) and maximum fee of MYR 50,000 (HKD 92477.32) (ii) Annual listing fee - MYR 500 (HKD 924.77) per month (iii) Processing fee – MYR 2000 (HKD 3699.09) per structured warrant	Listing fee: (i) SGD 4,000 (HKD 22393.23) per issue for the first 50 issues (ii) SGD 800 (HKD 4478.65per issue for the next 150 issues (iii) SGD 100 (HKD 559.83 per issue for any issue thereafter Issuers to negotiate a package fee with the exchange	

	Hong Kong	Thailand	Malaysia	Singapore	Taiwan
	each transaction calculated on value of consideration. SFC transaction levy: 0.0027% for each transaction calculated on value of consideration. Trading tariff: HKD 0.50 for each purchase or sale transaction.	fee/365) x (Expiry date - First trading date+1)			
Conversion ratio	Normally 1:1, 10:1 or 100:1; or such other ratio as the Exchange may permit, where the number is an integral power of ten, for structured products other than derivative warrants	Not restricted, can be 3:1, 2.02:1, 3.75:1, etc.	1:1 or 10:1, or such other ratio as the exchange may approve, provided it will convert to a whole number of a board lot of the underlying shares or exchange-traded fund units.	Flexible in conversion ratio	No specific requirement
Warrant Style	European	European	European Style Non-Collateralised	American or European	American or European
Settlement (traded via	T+3	T+3	T+4	T+3	T+2

	Hong Kong	Thailand	Malaysia	Singapore	Taiwan
exchange)					
Settlement (after maturity)	T+3	M+5 (payment to investors)	Expiry Date + 7 (within 7 business day)	T+3	T+2

Schedule 9 Table of comparison between Hong Kong and various European listed structured products markets

In the table below: (i) **LP** means liquidity provision; (ii) **L** refers to a launch date; and (iii) **T** refers to a Trade Date.

Exchange		The Exchange	Deutsche Boerse	Euronext - Paris	Euronext - Amsterdam	LSE Borsa Italiana	SIX Swiss Exchange
Product Type	**Leveraged Products**	• Vanilla warrants • CBBCs	• Warrant • Turbo (CBBC with maturity) • Open End Turbo (Constant leveraged CBBC) • Mini Futures • Factor Certificates	• Warrant • Turbo (CBBC with maturity) • Open End Turbo (Constant leveraged CBBC) • Mini Futures • Factor Certificates	• Turbos • Boosters • Limited Turbo • BEST turbo	• Warrant • Stop Loss Bull Bear certificates • Structured / Exotic warrants - Digital - Corridor - Rainbow - Spread - Straddle - Strangle - Knock-out	• Warrant • Warrant with knock-out • Mini Futures • Constant Leveraged Certificates
	Investment Products	NIL	• Discount • Bonus • Reverse Bonus • Capped Bonus • Capped Reverse Bonus • Autocallable • Capital Protected • Index Tracker • Outperformance • Sprint	• Capped Bonus • Capped Reverse Bonus	Certificates	• Benchmark Certificates • Discount Certificates • Equity Protection Certificates	• Tracker • Outperformance • Bonus Certificate • Discount Certificate • Barrier Reverse-Convertible • Multi Barrier Reverse Convertible • Capital Protection
Issuance	**Fee**	For first issuance over a particular underlying:	€300 per product € 100K cap per year.	€ 1,000 per issuance of stock warrants	€ 1,000 per issuance of stock warrants		Basic charge: CHF 2000 Flat charge of

		HKD 60,000 (for warrants) and HKD 18,000 (for CBBCs) For each subsequent issuance: HKD 40,000 (for warrants) and HKD 12,000 (for CBBCs)		(Package fee can be negotiated to reduce fee to € 100 per issuance)	(Package fee can be negotiated to reduce fee to € 100 per issuance)		issuance: CHF 5000 Maintenance of listing: 500 -3000 (Package fee can be negotiated to reduce fee per issuance)
	Time to listing	L+5 (for new issues); L+4 (for further issues)	L+1	L+1	L+1		Each listing package contains T+1 and T+3 listings
	Underlying	• Hong Kong stocks • Hong Kong stock indices • Foreign stock indices • Currency pairs • Commodities	• Index (DAX, DJI, NASDAQ, N225, S&P500) • Stocks (Europe, US, Chinese ADR) • Currency • Commodities	• Index (CAC, DAX, DJI, EX50, NASDQ, S&P500) • Stocks (French, US) • Currency (EURUSD) • Commodities	• Index • Stocks (European, US) • Currency • Commodities	• Index (FTSE MIB, CAC, DAX, DJI, etc.) • Stocks (Italy, Europe, US) • Currency • Commodities • Rates • Basket	• Index • Stocks • Basket • Fixed Income / Bonds • Currency • Commodities • Funds
Trading	**LP Mechanism**	Active Quotes and Quote Request	Quote Request	RFE (Request for Execution) Bulk Quote	RFE (Request for Execution) Bulk Quote	Good for trade	Binding Quote
	LP obligation	Obligation to provide liquidity by means of continuous quotes or quote request	Obligation to provide continuous quotation, however they are indicative quotes (not tradable	Yes, LP contract in place with the exchange	Yes, LP contract in place with the exchange	Advanced Liquidity Provider (AdLP) Partial or total exemption from the trading fee when reached a minimum monthly market	No market making obligation except for AMCs, CLNs, COSI (Collateral Secured Instruments)

			immediately).			share (20%) of total trade value	
	Knock-Out Mechanism	Optional	No limitations	KOBI	KOBI		Intraday on the current level of the underlying
	Trading Fee	Exchange trading fee: 0.005% for each transaction calculated on the value of the consideration SFC transaction levy: 0.0027% for each transaction calculated on the value of the consideration Trading tariff: HKD0.50 is payable to the Exchange on each purchase or sale transaction	Around 0.5bp per trade depending on volume, minimum approx. EUR 0.63 per trade	Order fee of EUR 0.20 per order Trading Fee of EUR0.45 – EUR 1.15 per trade depending on volume	Order fee of EUR 0.20 per order Trading Fee of EUR0.45 – EUR 1.15 per trade depending on volume		CHF 1.5
Distribution	**Broker Type**	Retail (via Broker and Banks)	E-broker	Retail (via Broker and Banks)	Retail (via Broker and Banks)	E - broker	35% from Swissquote, biggest retail broker
	Trading Hours	09:30-16:00	09:00-22:00	09:05-17:30 (08:00-18:30)	09:05-17:30 (08:00-18:30)	09:00-17:30	09:15-17:15
Settlement	**Physical vs Cash**	Both are allowed, but all are cash settled in practice	Both	Cash	Cash		Both
	Time	T+3	T+2 for on exchange deals.	T+3 if the client sells the product	T+5 (although certain broker's		T+5

			Maturity settlements T+5	before maturity, T+10 if product is held until maturity.	offer direct availability to redemption amount (as soon as published on website) for clients		
	Knock-out settlement		T+5	T+3	T+5		T+5

About the Financial Services Development Council

The Hong Kong SAR Government announced in January 2013 the establishment of the Financial Services Development Council (FSDC) as a high-level and cross-sector platform to engage the industry and formulate proposals to promote the further development of Hong Kong's financial services industry and map out the strategic direction for development. The FSDC advises the Government on areas related to diversifying the financial services industry, enhancing Hong Kong's position and functions as an international financial centre of our country and in the region, and further consolidating our competitiveness through leveraging the Mainland to become more global.

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