



Hong Kong Clearing and Settlement System

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Agenda



1 History and current situation

2 Legal framework

3 Risk Management

4 Future Trend

5 International practice

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1 History and current situation

2 Legal framework

3 Risk Management

4 Future Trend

5 International Practice

History - The Time Before CCASS(1986-1992)



Trading

- Executed in The Stock Exchange of Hong Kong (SEHK)



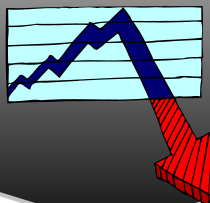
Settlement

- Performed outside SEHK
- Settlement on a trade for trade basis among brokers
- Physical settlement for both securities and cash



Global Market Crash & Review

- Global market crashed in October 1987
- SEHK closed for trading for 4 days due to settlement backlog



In view of the market turmoil, a **Securities Review Committee** was established in November 1987 to review the fundamentals of the Hong Kong securities market. The **Ian Hay Davidson Report** was issued in May 1989 with two major recommendations:

- To establish a Centralised Securities Clearing House
and
- To establish a mechanised Clearing and Settlement system

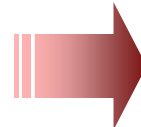
Establishing HKSCC & CCASS



*In response to the recommendations of the Ian Hay Davidson Report, **Hong Kong Securities Clearing Company Limited (HKSCC)** was established in 1989 to develop and operate a **Central Clearing and Settlement System (CCASS)**:*

1989

- **Incorporation of HKSCC:** HKSCC was established in May 1989
- **Purpose of incorporation:** to develop a mechanised clearing and settlement system
- **Holding structure:** a non-profit distributing company with 50% owned by the SEHK and 50% owned by 5 local banks



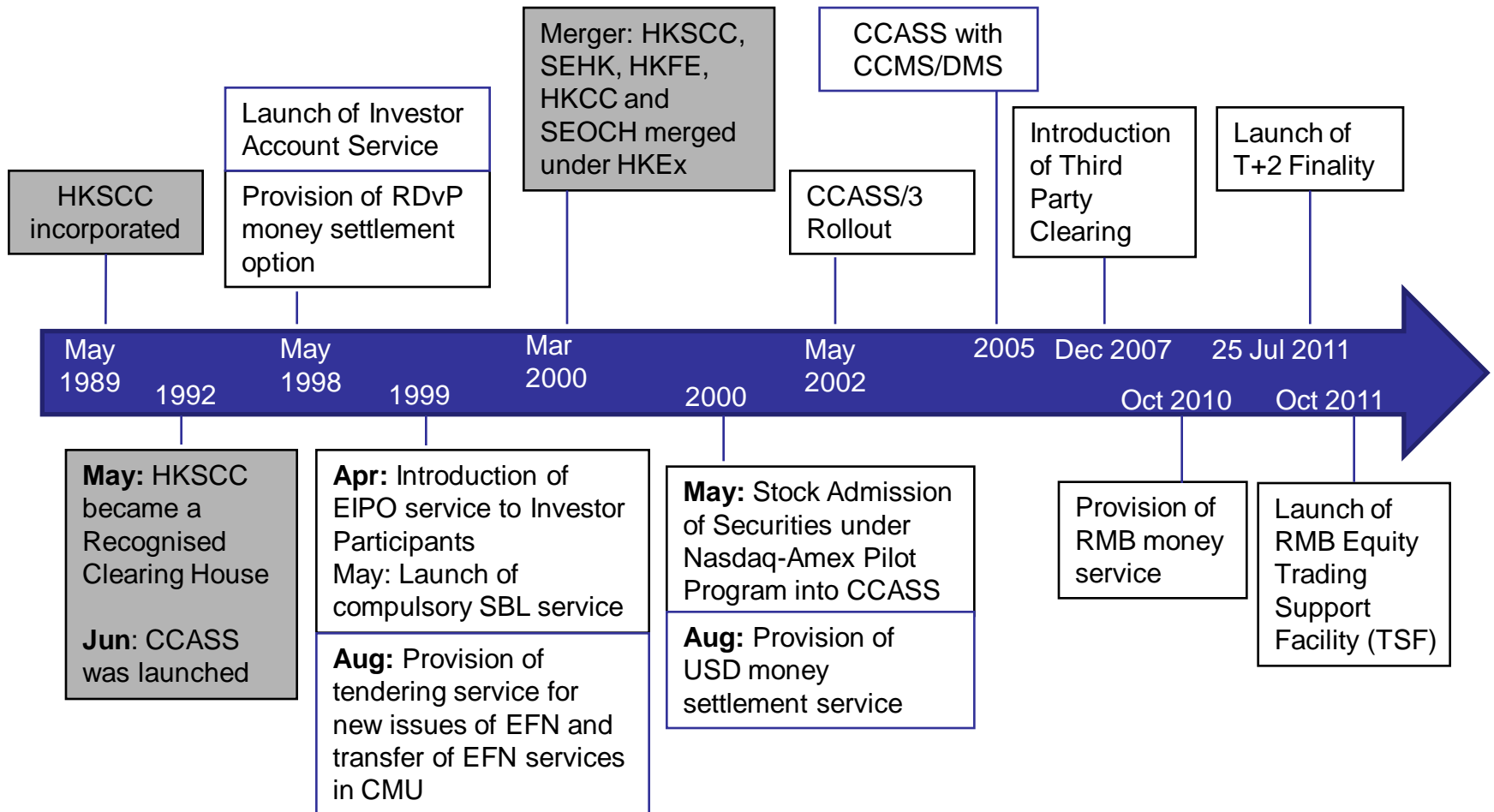
1992

- **Gained regulatory status:** HKSCC became a Recognised Clearing House in May 1992
- **Implemented CCASS:** CCASS, a mechanised clearing and settlement system developed by HKSCC, was launched in June 1992

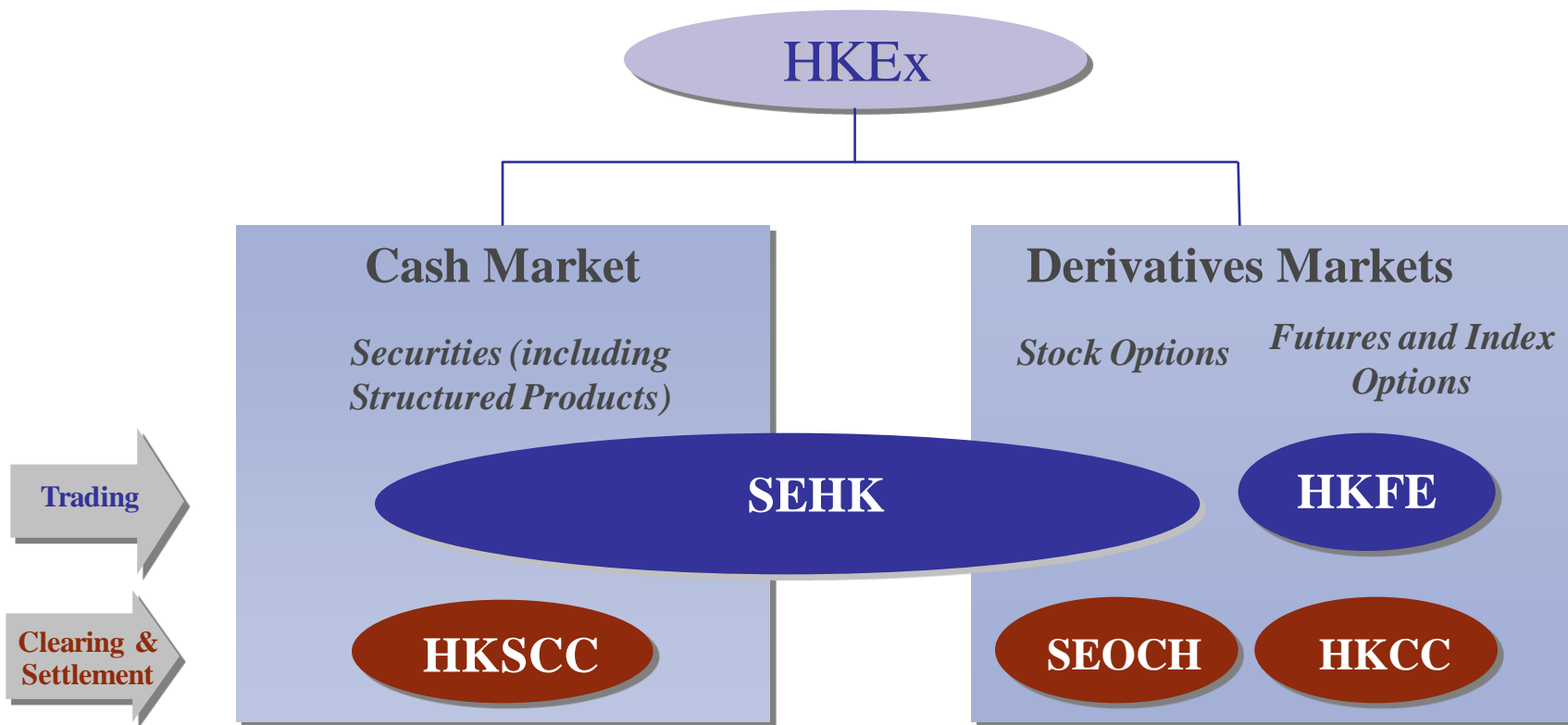
HKSCC development since incorporation



CCASS Major Development



Current HKEx Market Structure



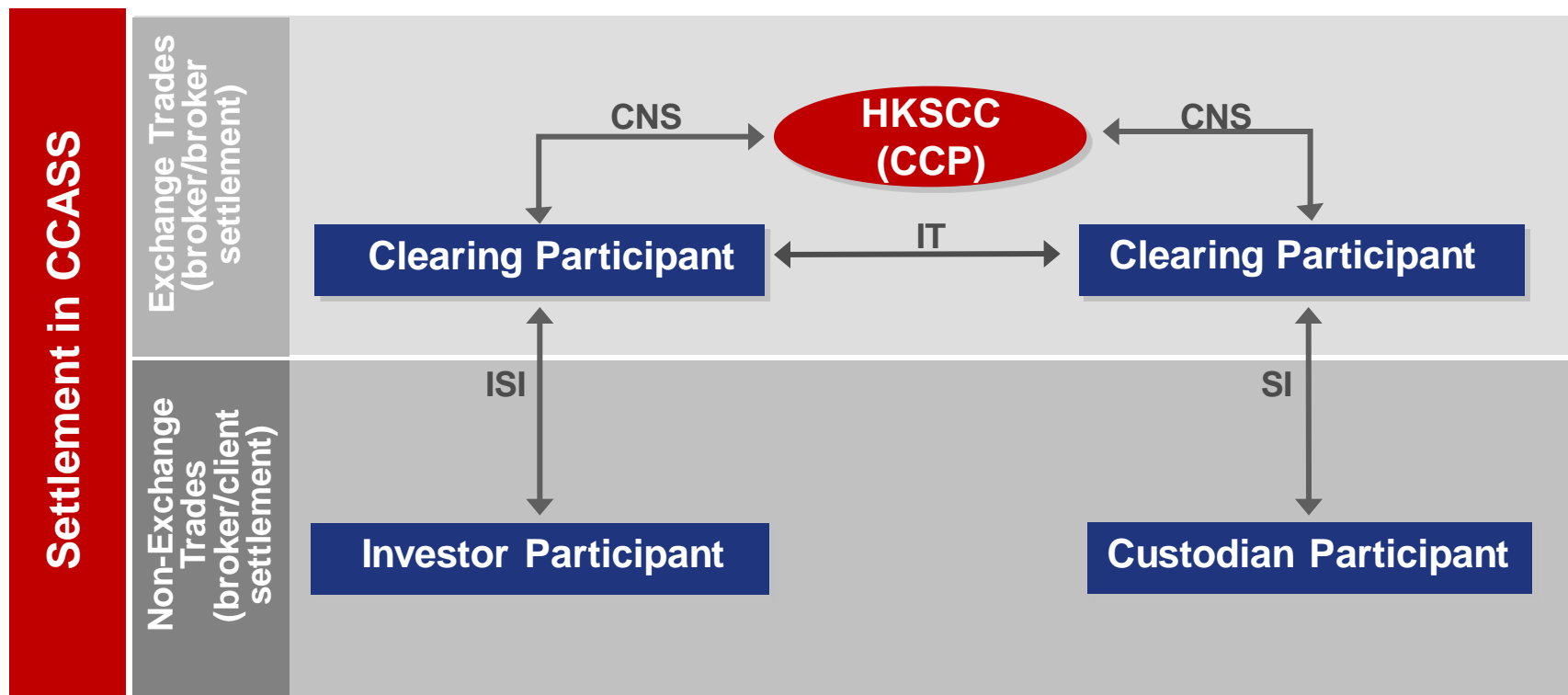
Notes:

- HKCC = HKFE Clearing Corporation Ltd
- HKEx = Hong Kong Exchanges and Clearing Limited
- HKFE = Hong Kong Futures Exchange Limited
- HKSCC = Hong Kong Securities Clearing Company Limited
- SEHK = The Stock Exchange of Hong Kong Limited
- SEOCH = The SEHK Options Clearing House Ltd

Main roles of HKSCC

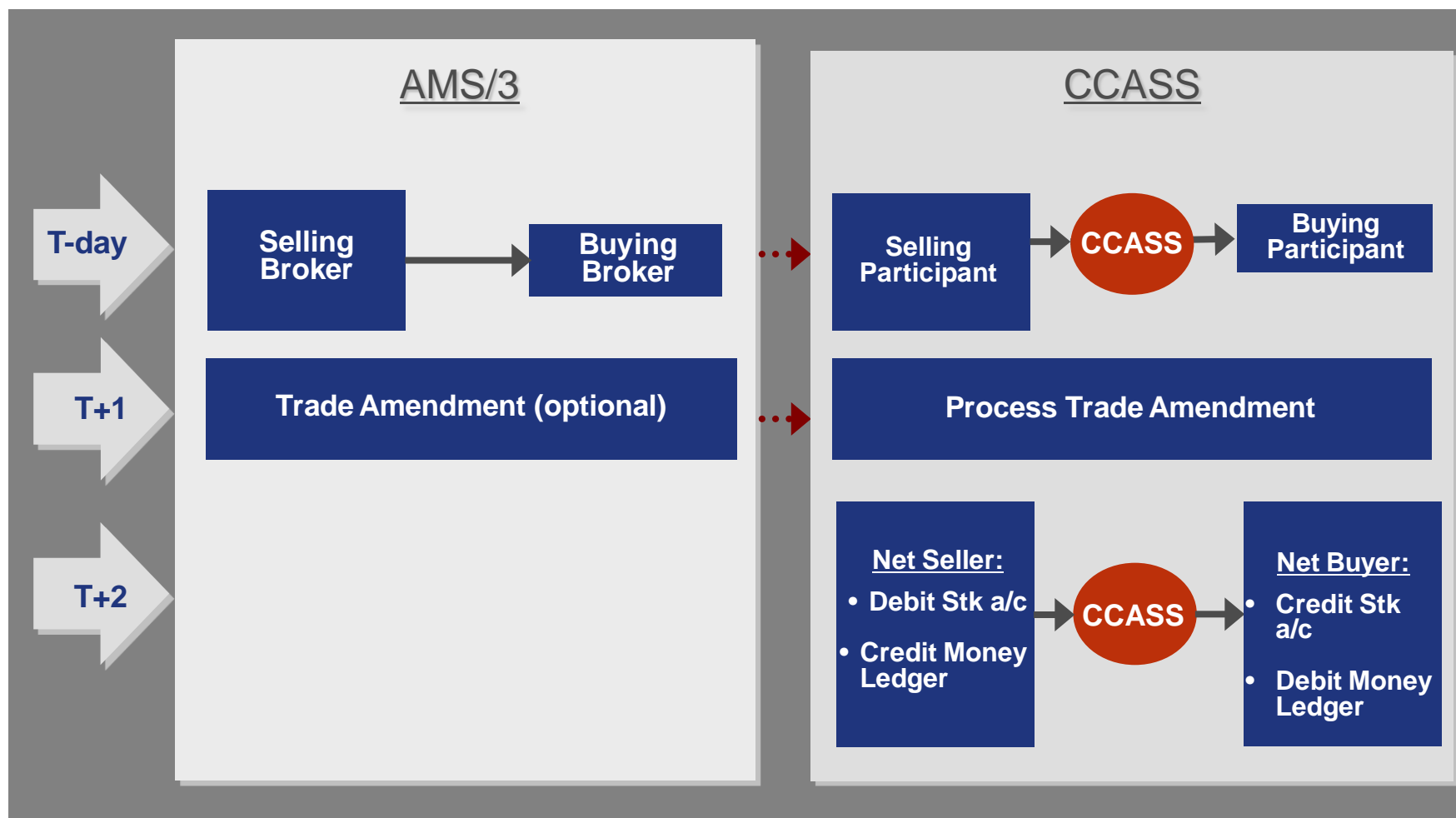


Role as Central Counterparty- Two-tier Settlement Structure

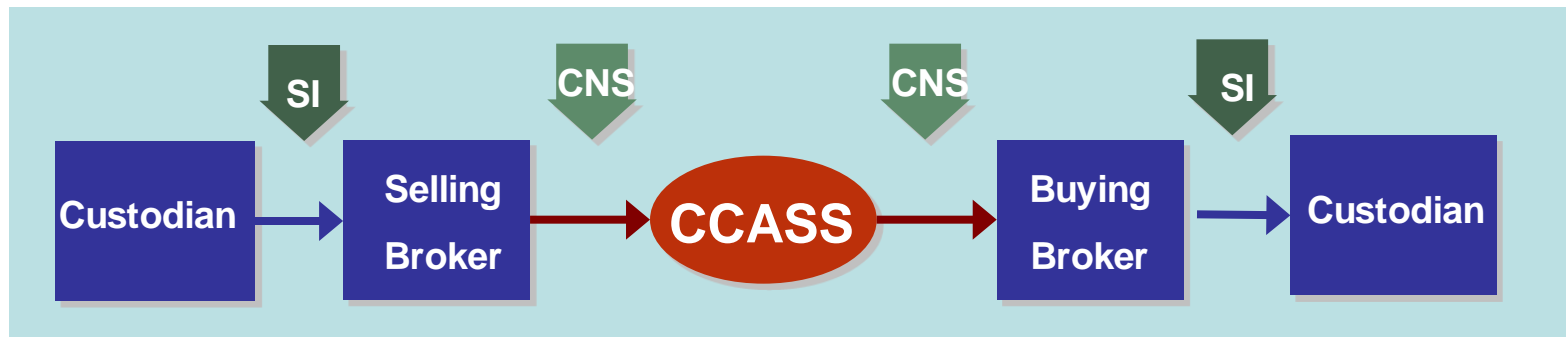


CNS	= Continuous Net Settlement	2012 average daily volume (count)
IT	= Isolated Trades	~ 775,000
SI	= Settlement Instruction	~ 200 (annual)
ISI	= Investor Settlement Instruction	~ 73,000
		~ 340

Central Counterparty - CNS Settlement

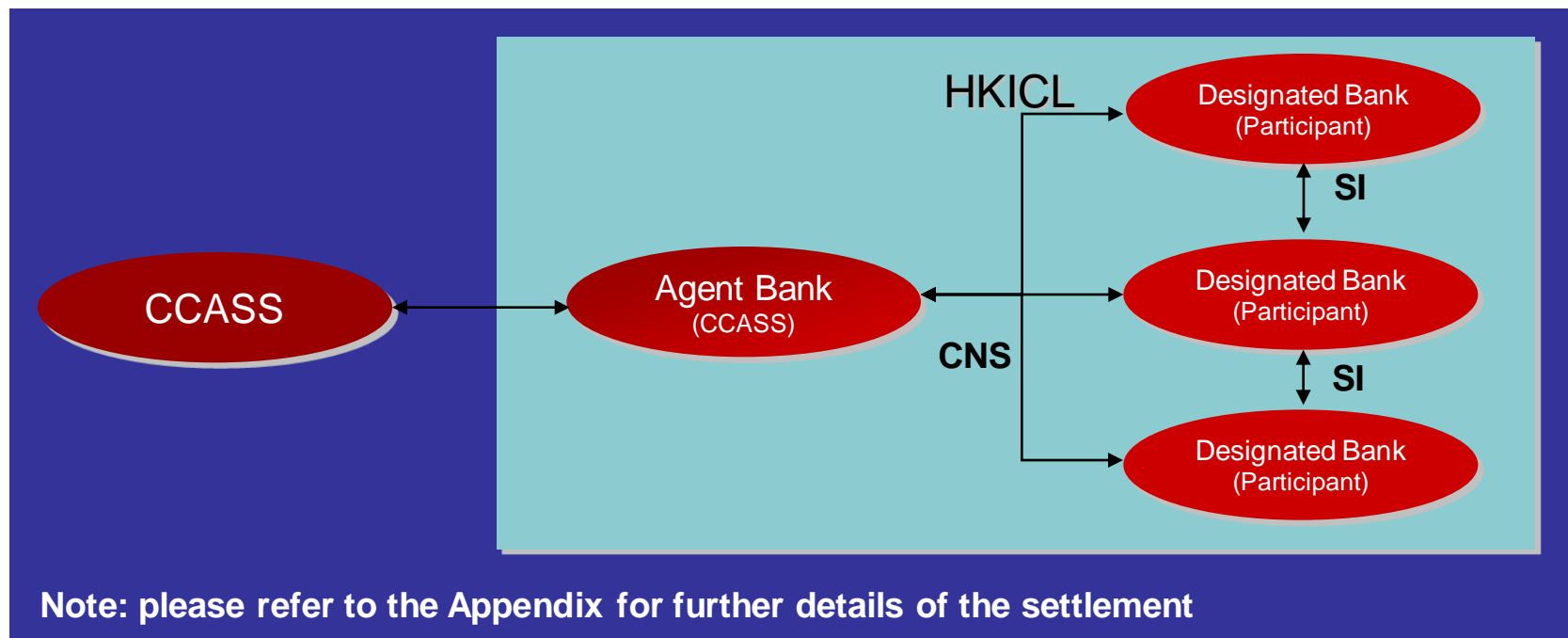


Settlement Instructions (SI)



- SIs are mainly used for broker/client settlement involving institutional investors
- SIs are settlement transactions which settled on a transaction to transaction basis between two non-investor participants in CCASS
- Both Delivering and Receiving parties of an SI need to input the transaction details to CCASS for matching
- The Delivering and Receiving SIs will be matched in CCASS according to prescribed rules, and then settled on specified day as agreed between them
- Participants can choose to settle an SI on a Delivery versus Payment (DVP), Free of Payment (FOP), or Real-time Delivery versus Payment (RDP) basis

Money Settlement



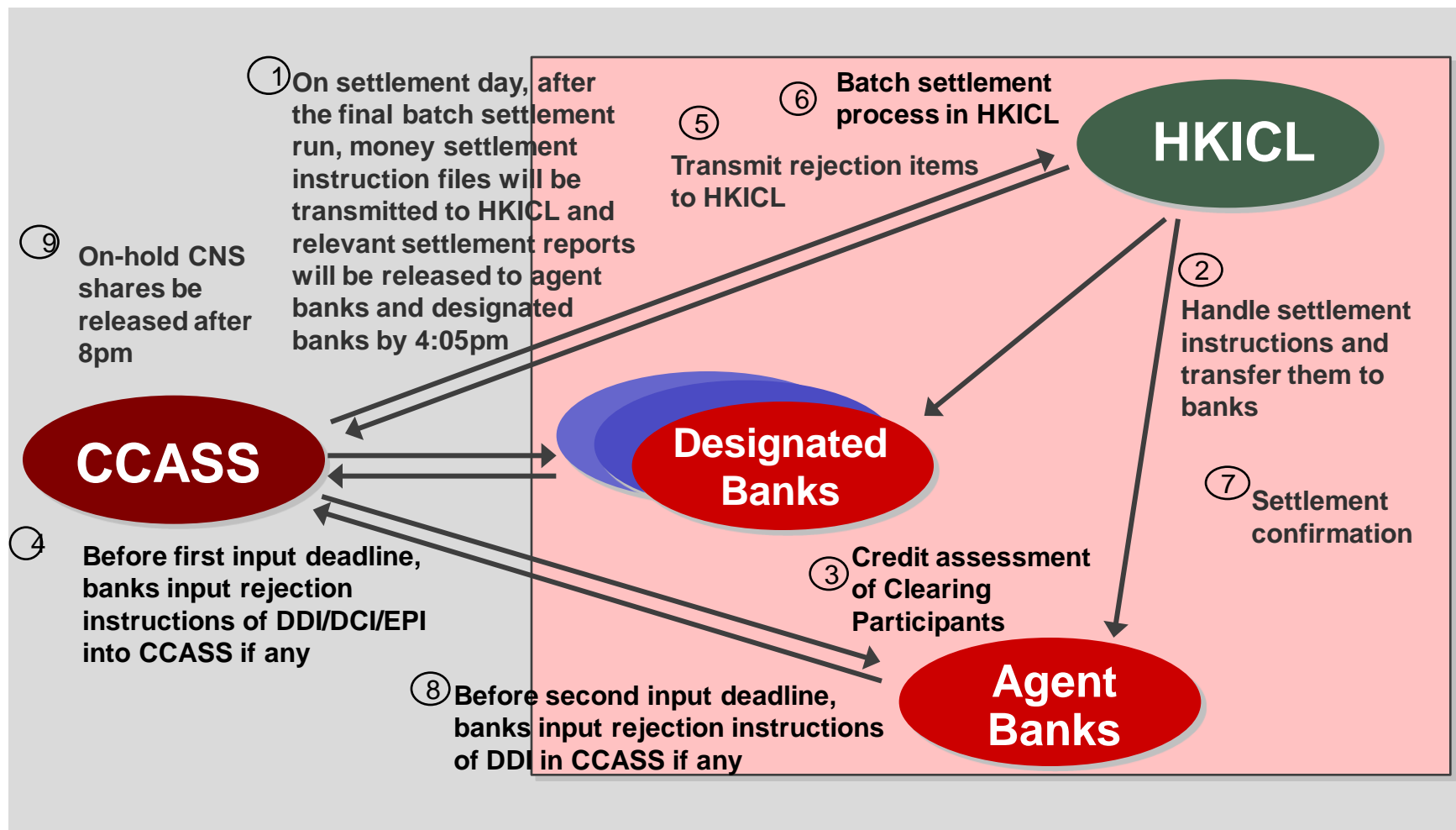
Agent Bank & Designated Banks

- HKSCC does not have banking license and therefore needs to appoint an Agent Bank to process money transactions of CCASS
- Participants are required to appoint their own bankers as Designated Bank to handle CCASS money transactions on their behalf

Two Categories of Money Transactions

- Evening bulk clearing (DVP for CNS and SI)
- Real time settlement (RTGS) (RDP for SI only)

T+2 Finality Settlement Processes



Measures in place to enhance Settlement Efficiency



Role as Central Depository - CCASS Depository



The physical site:

- Facilities include a service counter hall and a vault with capacity for 15 million share certificates;
- Equipped with Burglar Alarm System and guard services around the clock.

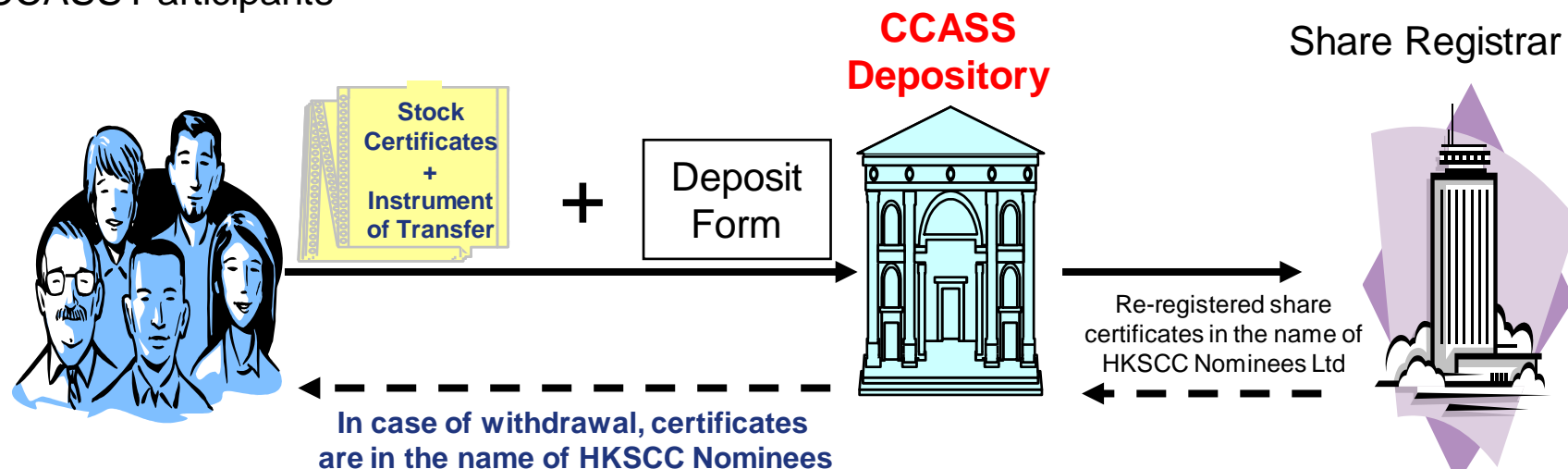


Securities under CCASS Custody (as at August 2013):

– No. of physical certificates (Million) :	7 m
– No. of shares (Billion):	3,777 b
– % of issued shares of admitted securities:	70 %
– Market value (HK\$ Billion):	\$12,239 b
– % of market cap. of admitted securities:	51 %

Immobilized System

CCASS Participants



Re-registration

- Paper certificates deposited into CCASS by participants are sent to the relevant share registrar for re-registration into the name of HKSCC Nominees Ltd.

Immobilization – Key Characteristics



CCASS Eligible Statistics



As at end of August 2013

	SEHK		Foreign Securities	Total
	Main	GEM		
Ordinary Shares *	1,394	183	7	1,584
Preference Shares *	2	0	0	2
Equity Warrants *	10	0	0	10
Structured Products *				
- <i>CBBC</i>	1,442	0	0	1,442
- <i>Derivatives Warrants</i>	4,694	0	0	4,694
Debt Securities	90	0	0	90
Unit Trusts	125	0	2	127
Rights Issue *	1	0	0	1
	7,758	183	9	7,950

* *Physical certificates are issued and registers of holders are maintained*

Measures in place to Minimize Defective Securities Risk



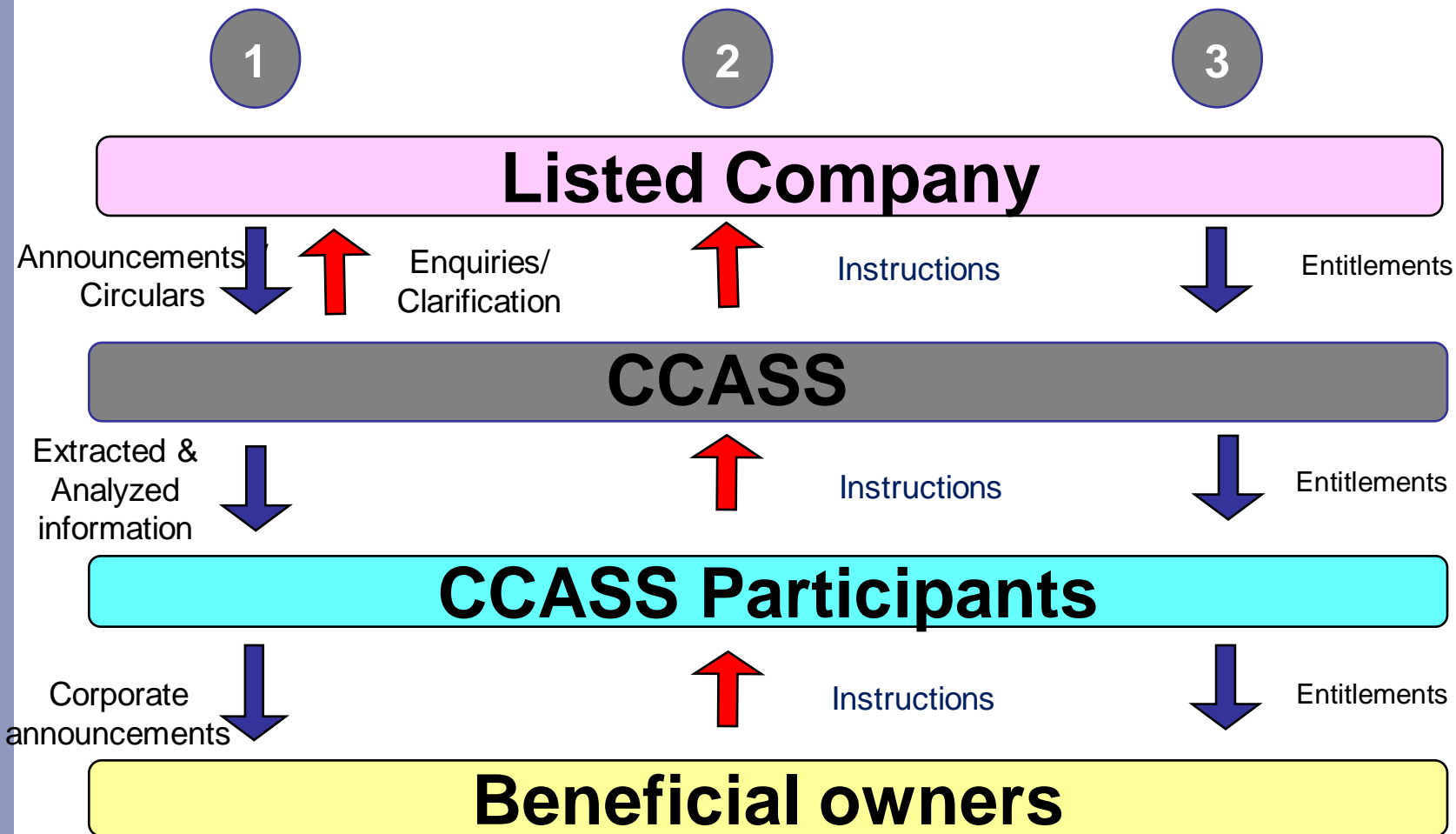
Role as Common Nominee



Role as Common Nominee - Key Corporate Action Processes

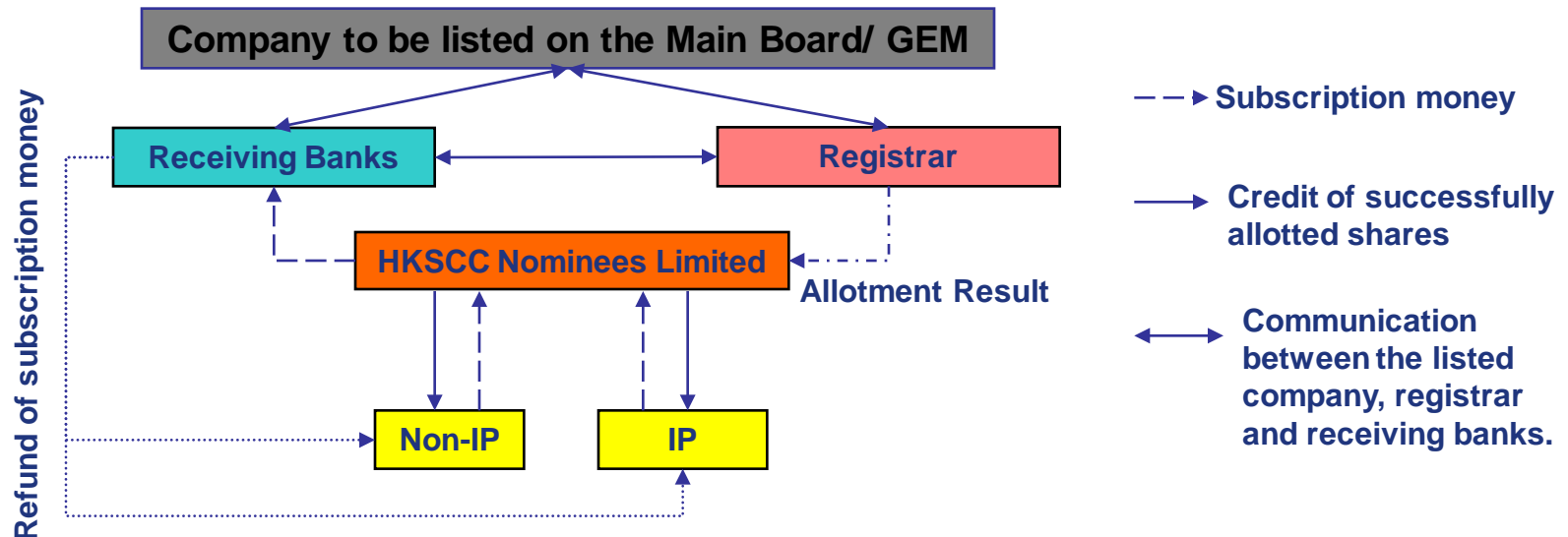


Corporate Actions Processing - Overview



EIPO Applications for Public Offer Shares

- The certificates of the New Issue Shares allotted to Participants are issued in the name of HKSCC Nominees Limited.
- Successfully allotted shares will be credited to the respective Participants' stock accounts in CCASS.
- Refund for unsuccessful portion of the applications and/ or excess application monies as the final offer price is set below the maximum offer price, will also be credited to their respective designated bank accounts.



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Legal Framework / Policy



Legal Framework



Legal Framework



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Risk Management - Major Risks



Risk Management



1. Participant Admission Requirement

Risk Management

2. Credit Risk

Delivery Vs Payment

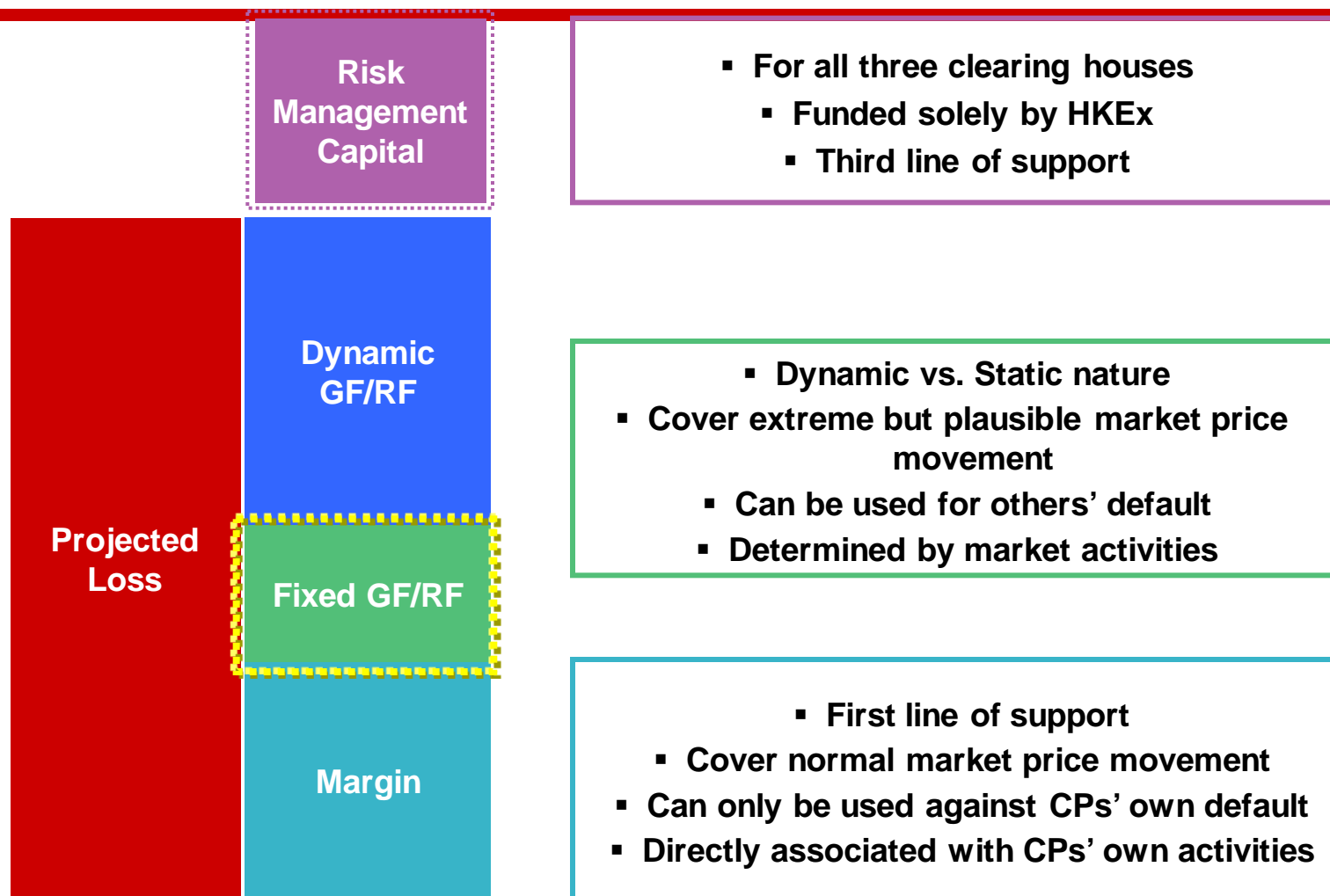


Shares allocated to buying Clearing Participant on T+2 are put on-hold until confirmation of payment and/or covered by bank guarantee / cash prepayment



Selling Clearing Participant will only be paid after delivery of stocks

Conceptual Framework – Projected Loss Supported by Financial Resources



Risk Management

3. Market Risk



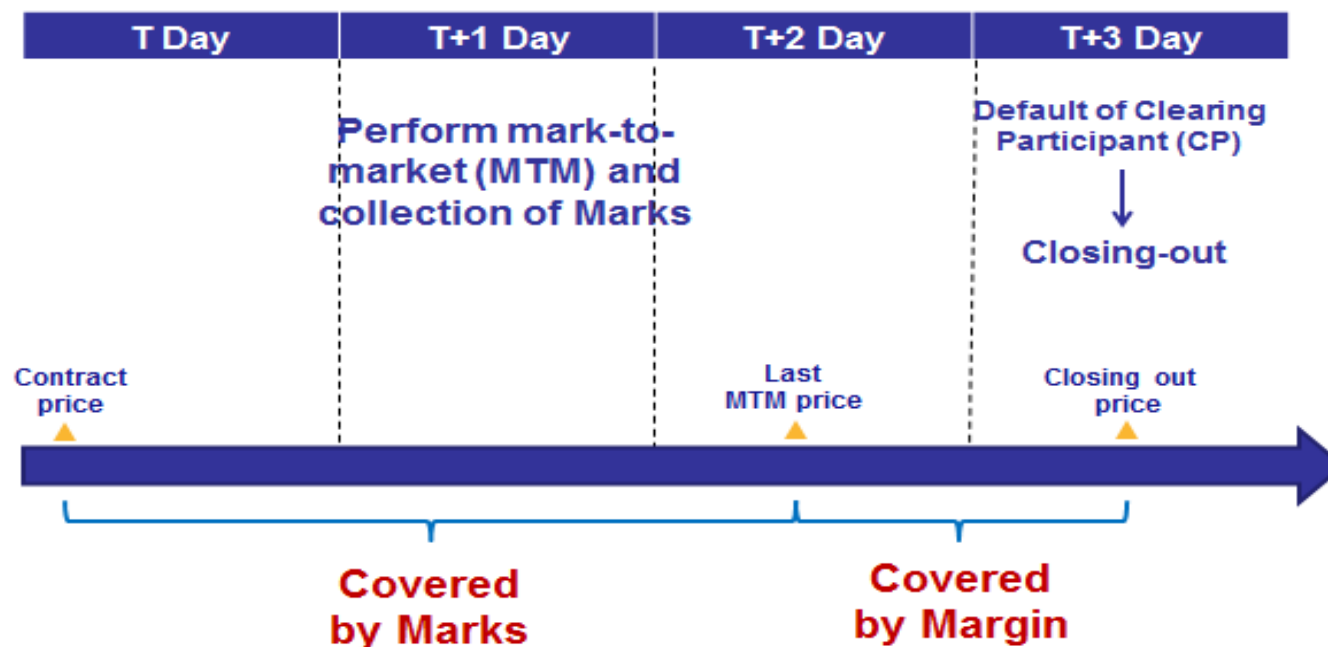
Price fluctuation



Risk Management

3. Market Risk (Cont'd)

Marking-to-market and Margin



Note: Marks calculation and collection is processed twice daily (intra-day: calculated at 11:00 am and paid by 2:00 pm if required; day-end: calculated after market close and paid next morning). It cover overdue, due and pending CNS positions.

Margin cover the potential future exposure between last Marks collection and the projected close out price under normal market conditions.



Risk Management



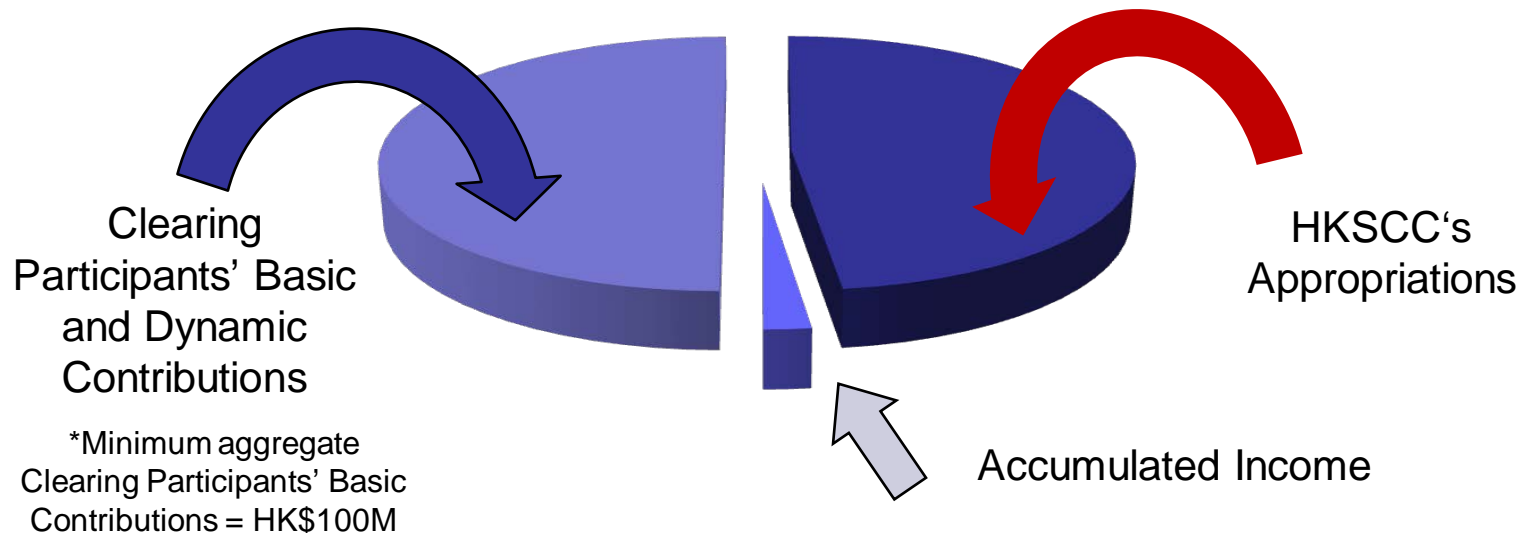
4. Liquidity Risk



Risk Management

4. Liquidity Risk (Cont'd)

Components of Guarantee Fund



Note: Basic Contribution is determined by a clearing participant's share of daily CNS position in the preceding month, subject to a minimum:

- DGP: higher of HK\$50,000 or HK\$50,000 per trading right;
- GCP: higher of HK\$150,000 or HK\$50,000 x (number of trading right + number of NCP)

Dynamic Contribution is determined by a CP's share of risk in the market with reference to its unsettled positions relative to the overall market unsettled positions

Risk Management

4. Liquidity Risk (Cont'd)

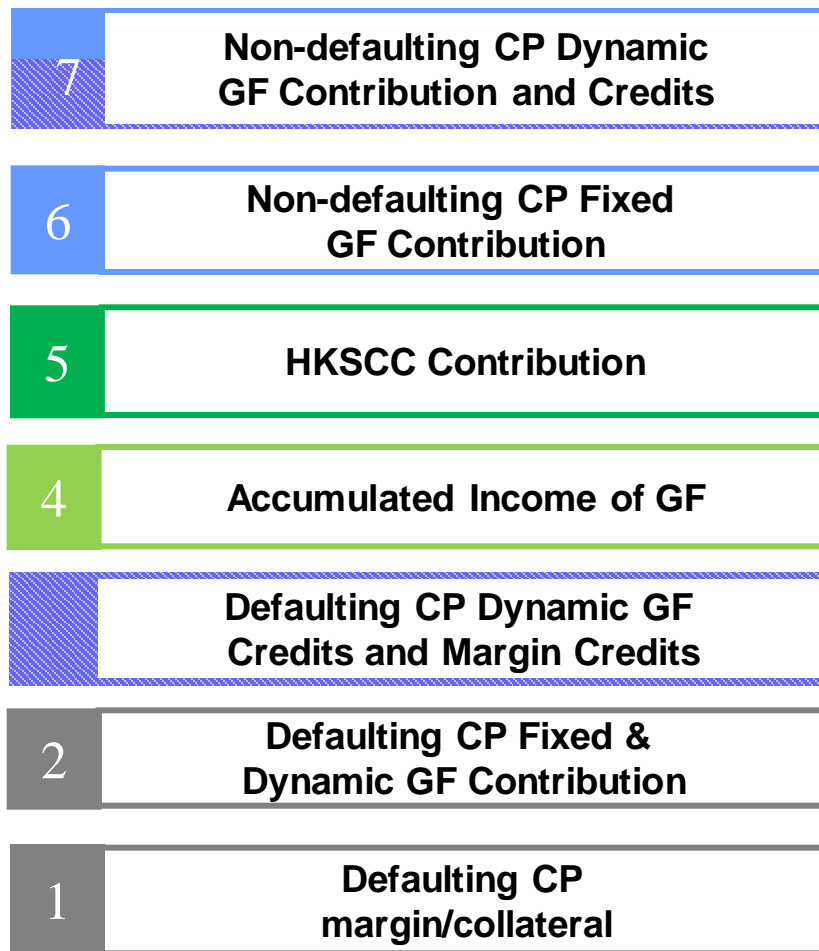


Guarantee Fund

Order of Application of HKSCC Financial Resources



Order of Application



Non-defaulting CPs have five layers of support

Risk Management

5. Trade monitoring & Trade isolation



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HKEx Strategic Plan



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Scripless Securities Market



Scripless Securities Market



First step to legislative amendment

- The Companies (Amendment) Ordinance, No. 12 of 2010 removes or provides exceptions to the existing provisions in the CO that compel the issue or use of paper documents of title and transfer.
- Passed on 7 July 2010 and will only come into effect when, among other things, the market is ready to implement the proposed scripless operational model.

Implication

- Represents an important step in the entire legislative process for implementing the scripless initiative, and
- Signifies the Government's support to take the scripless initiative forward

Tentative Schedule

- 2016

IOSCO Principles for FMIs



CPSS/IOSCO Principles for Financial Market Infrastructures (FMIs)

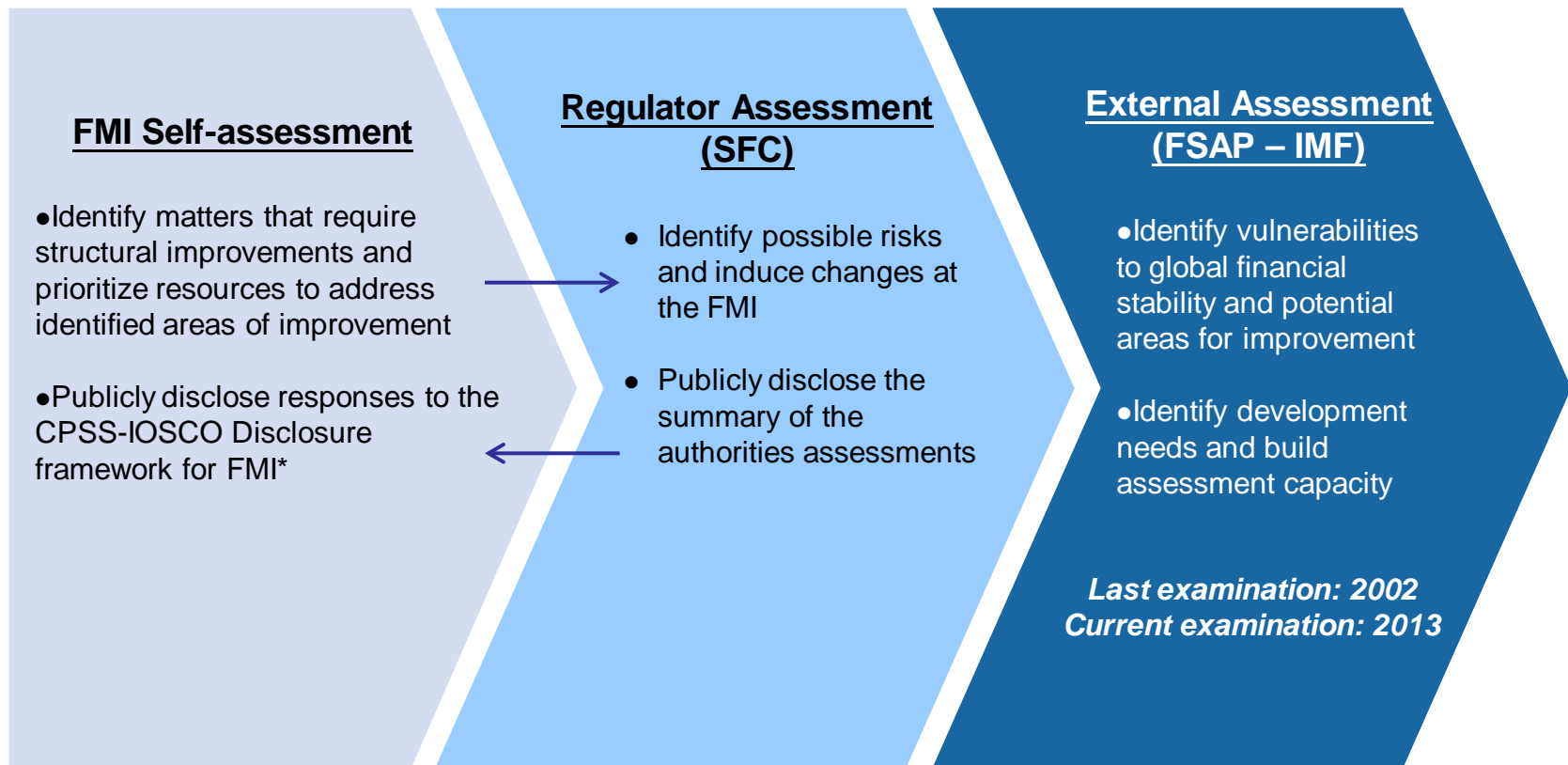
- New standards issued in April 2012
- Members to adopt by end of 2012
- The new standards (called "Principles") replaced the three existing sets of international standards
 - Core principles for systemically important payment systems;
 - Recommendations for securities settlement systems (RSSS); and
 - Recommendations for central counterparties (RCCP)
- FMIs are expected to observe the standards as soon as possible

Financial Sector Assessment Program (FSAP)

- Joint program of IMF - World Bank
- In-depth examinations of members' financial sectors and their compliance with key international standards and codes
- Last assessment on Hong Kong done in 2002
 - A summary report, the Financial System Stability Assessment (FSSA) was published in June 2003
 - Assessment of observance of the RSSS focused on CCASS and CMU
- Assessment to be done in 2013 including: **Hong Kong**, Canada, Italy, Korea, Singapore and Switzerland

- **HKSCC, HKCC and SEOCH completed self-assessments on observance of the principles for FMIs**
- **FSAP examination : 1st round - Aug 2013; 2nd round – Nov 2013**

Assessments of observance of the Principles - Overall Approach



**FMIs to conduct comprehensive review of the responses at least once every two years*

Regulatory Compliance



IOSCO

- Internal self assessment based on PFMI completed in 2013
- FSAP assessment being conducted
- Will identify gaps and plan related enhancement in CCASS and related Rules and Procedures

EMIR

- HKSCC will seek EMIR compliance
- Will identify gaps and plan related enhancement in CCASS and related Rules and Procedures

FATCA

- Will enhance CCASS to facilitate FATCA compliance
- Target completion : mid 2014

Questions & Answers