

AFSF 2018 Report

Asia Fund Standardization Forum



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I. Overview

Asia Fund Standardization Forum (hereinafter “AFSF” or “the Forum”) is a consultative body among Asian CSDs designed to promote the post-trade operational standardization of cross-border fund trading. With its notion first proposed by KSD in 2014, AFSF was officially kick-started in 2015 at the 19th ACG General Meeting. The Forum currently consists of 14 regular participants from 13 economies and six advisory members from global fund service providers.

The Forum is already in its third year and nearly approaching its fourth anniversary in 2019. Thus far, AFSF has proven effective in garnering a wide range of support, enthusiasm, and participation from Asian economies under the banner of post-trade operational standardization. The purpose of this report is to encapsulate the yearly events, activities, and achievements of the Forum in 2018.



II. 2018 AFSF in Retrospect

1. AFSF Activities

1-1. AFSF 2018 Knowledge Sharing Workshop

According to the 2015 collective decision of AFSF to form a regional platform for the exchange of practical knowledge, a physical meeting has been annually held under the name of “Knowledge Sharing Workshop” since the 2016 inaugural workshop in Seoul, the Republic of Korea. Following the second workshop (AFSF 2017 Knowledge Sharing Workshop) hosted by CDSL in Mumbai, India, in September 2017, KSEI volunteered to host the third event in Bali, Indonesia, amid a general consensus that this enchanting Island would be a befitting venue for the workshop.

After months of preparations spearheaded by KSEI and coordinated by KSD and co-facilitators (CDSL, TDCC, and TSD), AFSF 2018 Knowledge Sharing Workshop was successfully held in Bali during September 12th ~ 14th, 2018. For three days, the workshop bustled with seasoned experts from ten regular members, thought leaders from five advisory members, and key influencers from the local fund industry as well as observers such as HKEX.

< AFSF 2018 Workshop Participants >

Regular Member	CDSL, CSDC, CSDI, HKMA, KSD, KSEI, PDTC, TDCC, TSD, VSD
Advisory Member	Clearstream, Deutsche bank, DTCC, Euroclear, SWIFT
Observer	HKEX
Local Market Player	APRDI, ABKI, etc.

The workshop program featured four separate sessions: “AFSF Session” where KSD shared Asian fund market updates and 2018 AFSF survey results, “CSD Session” where regular members introduced their core & value-added services, “Advisory Session” where advisory members offered their expert advice and insights on market integration and harmonization, and “Local Market Session” where major players of the Indonesian fund industry helped the audience gain a better understanding of the local fund landscape.

< AFSF 2018 Workshop Program >

Session	Topic	Presented by
AFSF Session	Asian Fund Market Update, 2018 AFSF Survey Results	KSD
CSD Session	Current Status of the Philippines Fund Market	PDTC
	S-Invest Implementation and Real-time Investor Monitoring	KSEI
	Vietnamese Fund Management & VSD Fund Services	VSD
	Core & Value-added Services	CDSL
	Electronic Contract Service	CSDC
	Value-added Services	TDCC
	Payment & Settlement	TSD
	Joint Venture Fund Registry	CSDI
	PensionClear: Retirement Pension Scheme of Korea	KSD
	Cross-border Fund Trading of Korea in Line with ARFP	KSD
Advisory Session	Global Market Trends in Fund Distribution and Data	Clearstream
	ARFP Challenges, Fintech, and Digitalization Focus	Deutsche bank
	Enhancements in Settlement Practices	DTCC
	MRF: Lessons Learned and What Next?	Euroclear
	ISO20022 for Funds, Funds Standardization, Automation Report	SWIFT
Local Market Session	Integrated Automation: A Staple Towards Faster Industry Growth	APRDI
	Standardization in Indonesian Mutual Fund Industry	ABKI



1-2. 2018 AFSF Survey

The AFSF survey was divided up in two parts: Fund Market Update (Part I) and Fund Trading Data (Part II). The Part I took another present-day snapshot of Asian fund markets in order to see where we were today and forecast how markets would pan out later. Indeed, the *crème de la crème* of the survey was the Part II which explored how differently “fund trading data” were processed per economy.

① Part I. Fund Market Update

- 1) **Objective:** Questions were taken from the 2016 Asian Fund Market Survey in order to track market changes in terms of *legal structure of fund, fund market size, fund type, trading volume, CSD's fund deposit service (or the lack thereof), level of fund code standardization, and use of SWIFT messaging service.*
- 2) **Survey Outline:** Respondents were asked to answer a total of eight questions on their local fund market which compared the end of 2015 with the end of 2017. To avoid confusions, cross-border trading was defined based on “where the fund is sold”, not where the cash flows (e.g. “inbound trading” means a foreign-domiciled fund sold at home while “outbound trading” refers to a home-domiciled fund sold abroad.)
- 3) **Conclusion:** The survey answers offered us a better grasp of each AFSF economy's fund market. The summary table below well illustrates the dynamic developments of Asian fund markets which had went through visible changes especially in terms of market size, trading volume, fund type, and fund platform compared to other criteria. The specific findings from each survey question are fully explained in Appendix A.

< Summary of Part I Survey Results >

[As of End of 2017]

Economy (CSD)	Legal Structure of Fund	AUM-to-GDP Ratio	Fund Type	Overseas Asset Invested by Domestic Fund	Cross-border Fund Trading	CSD's Deposit Service	CSD Platform	Fund Code ISO Standards	SWIFT Message
India (CDSL/NSDL)	Unit trust (100%)	12.81% (▲ 3.8%p)	Equity-oriented (47.3%)	\$ 0 bn	×	△	○	○	×
China (CSDC)	Unit trust (100%)	13.50% (▲ 4.5%p)	Equity-oriented (52%)	\$ 14.04 bn (▲ 4.43 bn)	○ (Two Way)	△	○	×	×
Iran (CSDI)	Unit trust (100%)	7.50% (▲ 4%p)	Bond-oriented (98.8%)	\$ 0 bn	×	×	×	×	×
Hong Kong (HKMA)	Unit trust (100%)	487% (▲ 37%p)	Equity-oriented (46%)	\$ 748 bn	○ (Two Way)	×	○	○	○
Japan (JASDEC)	Units trusts (95%) Company (5%)	37.90% (▲ 11%p)	Data Unavailable	Data Unavailable	○ (One Way)	○	○	○	○
Korea (KSD)	Units trusts (97.7%) Company (2.3%)	29.40% (▲ 5.4%p)	Bond-oriented (18.8%)	\$ 38.2 bn (▲ 10.3 bn)	○ (One Way)	○	○	×	△
Indonesia (KSEI)	Units trusts (98%) Company (2%)	3.25% (▲ 1.2%p)	Equity-oriented (29%)	Data Unavailable	×	○	○	○	×
Taiwan (TDCC)	Unit trust (100%)	34% (▲ 6%p)	Bond-oriented (35%)	\$ 32.09 bn (▲ 20.59 bn)	○ (One Way)	○	○	○	×
Thailand (TSD)	Units trusts (2.7%) Company (97.3%)	31% (▲ 3%p)	Bond-oriented (35%)	\$ 49.1 bn (▲ 22.44 bn)	○ (One Way)	△	○	○	×
Vietnam (VSD)	Unit trust (100%)	4.48% (▲ 1.5%p)	Equity-oriented (41.67%)	\$ 0 bn	×	△	○	○	×

② Part II. Fund Trading Data

The devils are in the details. Let's consider an analogy with ocean. On the surface, oceans may look alike. But what happens below water may be a whole different story. When attempting to dock at a port in another country, a ship must know the exact location of jagged rocks possibly hidden below the water in advance lest it end up in a shipwreck.

The same goes true for cross-border fund trading. To distribute a fund in another economy, it is a must to identify hidden obstacles that may slow, hinder, or even paralyze the flow of funds crossing the border. For this, we closely examined “fund trading data” in the fund market of AFSF economies.

- 1) **Objective:** The Part II compared and contrasted how fund trading data were processed per economy in order to find out differences and commonalities of post-trade operations. By definition, “fund trading data” herein refer to the information exchanged between fund market players for back-office operations.
- 2) **Survey Outline:** Respondents were asked to answer 44 questions containing both multiple-choice and open-ended response types regarding domestic post-trade operations in their respective fund markets.
- 3) **Conclusion:** The answers from Part II helped us unravel the mysteries behind the curtain in the back-office world of Asian fund markets. The following table well summarizes the how post-trade operations are processed by whom in what manner (e.g. account opening, subscription, redemption, NAV calculation, settlement, or others). The specific findings are explained in detail in Appendix B.

< Summary of Part II Survey Results >

Economy		CN	HK	ID	IN	IR	JP	KR	TH	TW	VN
Account Opening	Opened by	Distributor	Distributor	Distributor (For Demat)	Distributor / AMC	Distributor	Distributor	Distributor	Distributor	Distributor	Distributor
	Online Opening	O	O	O (For Demat)	O	O	O	O	X (Planned in Dec. 2018)	O	X
Subscription & Redemption	Process	Investor → Distributor -CSD→ TA → AMC	Investor → Distributor -CSD→ TA → AMC	Investor → (Distributor) -CSD/Stock Exchange→ AMC → TA	Investor → Distributor -CSD→ AMC	Investor → Distributor -CSD→ TA → AMC	Investor → Distributor -Priv. Vendor→ AMC	Investor→ Distributor -CSD→ AMC	Investor → Distributor -CSD→ AMC	Investor → Distributor -CSD→ AMC	Investor → Distributor -CSD→ AMC
	Order Transmitted by	CSD (mandatory) / TA	CSD (optional) / TA	CSD (optional) / Stock Exchange (optional) / TA	CSD (mandatory)	TA	AMC's Private Vendor Network	CSD (mandatory)	CSD (optional)	CSD (optional)	CSD (optional)
NAV	Calculated by	Administrator	Administrator	Administrator/ AMC/ Custodian	Administrator	Administrator	Trustee	Administrator	Administrator	Administrator	Administrator
	Shared By	CSD	CSD/TA/AMC	AMC/TA/AMFI	CSD	Administrator	TA	CSD	CSD	CSD	CSD
Settlement	Trade Confirmed by	TA	CSD/TA	TA	Custodian	Administrator	Distributor ↔ AMC	CSD	TA	CSD	CSD
	Settled by			CSD/TA		TA			Distributor ↔ AMC	CSD / Distributor	
	Method	FOP Gross & Net	FOP Gross & Net	FOP Gross	FOP Net	DVP Net	DVP Net	DVP Net	DVP Gross	DVP Gross	DVP Net

Economy		CN	HK	ID	IN	IR	JP	KR	TH	TW	VN
Registration of Beneficiary	Registered by	TA	TA	TA	CSD	TA	CSD / Direct AMI	CSD	TA	TA / AMC	CSD
	Frequency	Daily	Daily	Irregular	Irregular	Daily	Daily	Irregular	Irregular	Daily	Irregular
	Meeting Held by	AMC	AMC	Trustee	AMC	Administrator	AMC	AMC	TA	AMC	AMC
Tax	Withheld by	0%	0%	TA	Custodian	0%	Distributor	Distributor	Distributor / TA	0%	AMC
	Tax rate			0% (Non-resident Investor: 20%)	Div.: 15% Sales: 0.1% Coupon Interest: 5% Capital Gain: 5%		Nat'l. Tax: 15% Local Tax: 5%	Div : 15.4%	Div.: 10%		Dividend Tax: 5% Others: 10%
Profit Distribution	Distributed by	Distributor	Distributor	TA	Custodian	Distributor	Distributor	Distributor	TA / Distributor	CSD / Distributor	CSD
	Frequency	Depending on fund	Depending on fund	Depending on fund	Depending on fund	Depending on fund	Depending on fund	Yearly	Depending on fund	Depending on Fund	Yearly
CSD Platform	User Authentication	ID & PW	ID & PW	ID & PW	ID & PW / OTP	N/A	ID & PW / AC	ID & PW / AC / OTP	ID & PW	ID & PW / AC	ID & PW / AC

1-3. 2018 CSD Milestones

This section of the report provides the highlights of CSD activities in which news, data, statements, or other references are arranged in a chronological and names are listed in an alphabetical order.

① Central Depository Services (India) Ltd. [CDSL]

As the only depository to be listed in India, CDSL has completed one year of listing. CDSL is currently working towards publishing Business Responsibility Report (BRR) and Integrated Reporting in line with best industry practices.

In addition, in India, there have been some regulatory changes with respect to unlisted companies where the issuance of further shares and the transfer of all shares by unlisted public companies shall be in a dematerialised form only—a measure intended for the further enhancement of transparency, investor protection and governance in the corporate sector. The major benefits of securities dematerialization, which is now available to unlisted public companies, include:

- 1) Elimination of risks associated with physical certificates (e.g. loss, theft, mutilation, fraud, etc.),
- 2) Improvement of corporate governance system by boosting transparency and preventing malpractices (e.g. benami shareholding, back dated issuance of shares, etc.),
- 3) Exemption from payment of stamp duty on transfer,
- 4) And ease in transfer, pledge, etc. of securities.

In line with this directive, CDSL has started providing Registrar and Transfer Agent (RTA) facilities through its fully-owned subsidiary. Unlisted companies have started getting admitted on the depository and the additional RTA services provide the companies with the convenience of availing both the services under the same roof.

② Central Securities Depository of Iran (CSDI)

As one of the numerous financial instruments available in Iran's capital market, investment funds started their activity in early 2007, and have now grown significantly both in number and value in response to the rising demands of investors. Currently, there are 213 mutual funds registered and supervised by Securities and Exchange Organization of Iran (SEO) which can be divided into fixed income type, equity type, and mixed type. All these mutual funds have been operating via Transfer Agent Model causing alarming difficulties not only in registration and corporate actions but also in supervision by SEO.

CSDI plans to replace Transfer Agent Model with CSD Model in Fund Registry in order to address the lack of centralization, provide excellence in client services, and ensure sustainable productivity consistent with international standards and market infrastructure requirements. With this new model currently being customized to comply with Iran's capital market infrastructure, CSDI will be able to effectively provide various services—registry, settlement, depository to fund beneficiaries, namely.

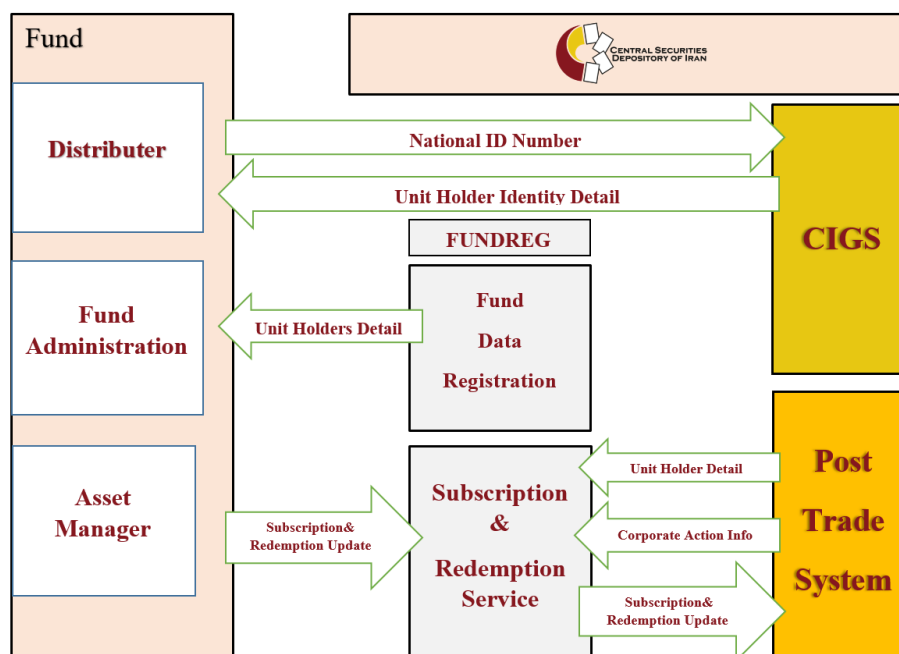
Both quantitative and qualitative aspects of the mutual funds in the Iranian capital market can be summarized as follows:

Types of mutual funds	Type	Number of mutual funds	AUM (M\$)
Fixed Income	ETF	14	265
	Non ETF	62	49285
	Total	76	49550
Mixed	ETF	4	16
	Non ETF	12	221
	Total	16	237
Equity	ETF	9	18
	Non ETF	111	395
	Total	120	413
Total Assets		213	51115

Specifically designed for CSDI, the system aims to cut costs, bolster security and expedite delivery. This model has been modified in a way to adapt to varied electronic client systems and enhance CSDI's fund registry method.

In the initial phase, it is going to be integrated with CSDI's newly-launched e-KYC system—Comprehensive Information Gathering System (CIGS) which records the information of entire market players (e.g. identification, bank account, contact, etc.). It literally means that all unit holders should initially register in CIGS before being officially recognized as verified market players. The second phase of the project is to design and execute FundReg system as a back-office infrastructure for fund registry and fund subscription & redemption in post-trade system. The last phase of the project is to make funds registered in CIGS and link FundReg system to CSDI's post-trade system so as to accomplish the whole process of fund registry and settlement.

CSDI is expected to make a full shift from Transfer Agent Model to CSD Model by the third quarter of the coming fiscal year in Iran which coincides with the end of 2019.



③ Korea Securities Depository [KSD]

Before long, securities in paper forms will become a thing of the past. The Electronic Securities Development Task Force of KSD remains firmly committed to gearing up for the official launch of electronic securities which is slated for September 16th 2019. The task force was established in August 2016 after the bill on the enactment of the Electronic Securities Act had been passed by the Korean National Assembly. From late 2019 onwards, the securities in Korea, including beneficiary certificates, will be fully dematerialized on a phased-out basis.

Plus, KSD is eager to embrace disruptive technologies such as distributed ledger, smart contract, etc. The sole state-run depository in Korea has gone through an ideation phase where it thoroughly reviewed the feasibility of blockchain technology in regards to its core and value-added services before coming up with a plan to develop a DLT-powered platform for venture capital. Expectations are high that the new platform will greatly boost the post-trade operational efficiency and security of venture capital asset management in Korea—a welcoming news for cash-strapped small and medium-sized enterprises (SMEs) and start-up ventures.

④ Philippine Depository & Trust Corp. [PDTC]

With an aim to bolster transparency and investor protection in the Philippine securities market, PDTC offers “Name on Central Depository (NoCD)” facility to depository participants, primarily to broker intermediaries, which allows the participants to maintain the client holdings held under their omnibus account in a segregated sub-account set-up. Each of its clients shall have its own sub-account NoCD ID, which shall generate its own reports reflecting the consolidated holdings of the client. The NoCD facility has been expanded to cater to fixed-income and equity asset classes, accepting both types of assets in foreign currency and local currency denominations from offshore and onshore holders.

Driving efficiency and advancing technology platforms, PDTC has commenced a migration of system to a more resilient upgraded version. Given the scope and breadth of the services being provided, the migration has been carried out on a per-module basis; to date, transfer and payment services (2013-2014), fixed-income depository system (mid 2016), and recently, fixed-income registry system (Dec 2018) have been migrated to the upgraded version. The last in the pipeline is the upgrade of equities depository system. As an ISO 20022-ready infrastructure, the upgraded systems provide for a more resilient financial infrastructure with a higher level of system availability, disaster recovery, and system performance.

⑤ PT Kustodian Sentral Efek Indonesia [KSEI]

In April 2018, Bank Indonesia's account in KSEI was opened to accommodate the collateral administration of the short-term liquidity loan facility.

In July 2018, C-BEST Next-G was launched and demonstrated a significant enhancement of capacity and performance amid heightened anticipation that it will potentially increase the number of transactions and investors and support the capital market developments in Indonesia. C-BEST Next-G is an upgrade from C-BEST (Central Depository & Book Entry Settlement System), the prior version for equities and debt instruments.

In November 2018, T+2 settlement cycle for Stock Exchange transactions was initiated to increase market efficiency and liquidity and minimize operational risks.

In December 2018, AKSes Next-G was placed into service in the Indonesia capital market. AKSes Next-G, a major upgrade from its previous version, serves as infrastructure that enables investors to better monitor their portfolio with varied features based on a seamless access and high tech-driven updates. AKSes Next-G enables investors to monitor their securities portfolio and movements regarding equities and debt instruments kept in C-BEST, ownership of mutual fund units recorded in S-INVEST, and/or the cash balance recorded in investor cash account in banks.

⑥ Singapore Exchange Ltd. [SGX]

Singapore Exchange Limited (SGX) will be launching a new securities settlement and depository framework and system on 10 December 2018, enabling a shorter securities settlement cycle of two days (T+2) and simultaneous settlement of money and securities.

"Come 10 December, we will align our securities clearing and settlement processes with global standards, strengthening Singapore's position as an international financial centre. With the new settlement and depository framework, securities and funds will be made available to investors earlier, while reducing risks across systems and markets. Our new system will also enable us and our securities members to enhance services for the market," said Chew Sutat, Executive Vice President and Head of Equities and Fixed Income, SGX.

Moving from a T+3 to a T+2 settlement cycle will harmonise Singapore's stock market with that of global markets including Australia, the European Union, Hong Kong and the US. Other improvements that investors can expect include the simultaneous settlement of securities and money, and the streamlining of Central Depository Pte Ltd (CDP) notifications.

In addition, the new settlement and depository system will allow a broker-linked balance functionality to be made available to investors. This functionality allows investors to give their chosen brokers visibility over specific securities. This will provide brokers the ability to offer more personalised products and services to their clients.

⑦ Thailand Securities Depository [TSD]

In 2018, FundConnex has been enhanced on various fronts. Fund settlement is a case in point. FundConnex has been linked with payment service for settlement between distributor and asset manager and also with the payment service for cash/credit card settlement between client and distributor.

As for market share, the number of transactions has increased by approx. 300% compared to the end of 2017. As for market share by user, 16 out of 24 asset managers (AMCs) have joined FundConnex while 19 out of 43 distributors have joined FundConnex, (eight of which are new comers in market such as limited-licensed distributors, insurance companies, and commercial banks).

- ※ Note 1) FundConnex is optional, not mandated by law.
- 2) As of the end of 2017, three AMCs and five distributors joined FundConnex.

Furthermore, FundConnex have integrated system with National Digital ID* to support electronic account opening which will be launched with National Digital ID in the year 2019. Also, distributor system has significantly improved in terms of account structure, confirmation report.

- ※ Note: National digital ID is a flexible and highly secured method of self-identification for any Thai citizens. The tentative live date is scheduled in the year 2019.

⑧ Vietnam Securities Depository [VSD]

On August 1st 2017, VSD smoothly coordinated with State Bank of Vietnam (SBV) to shift the cash payment function for government bonds from commercial banks to SBV as planned by regulators. The shift of payment function from commercial banks (multilateral netting) to SBV (trade-by-trade) is a significant advancement in that Vietnam's payment system for government bonds has become on a par with international practices.

After 17 years of development, a derivatives market was officially kick-started on August 10th 2017—a crucial milestone in the history of Vietnam securities market. In line with the market launch, VSD successfully initiated services for clearing and settlement of derivatives trading on the same date.

VSD has replaced its legacy fund processing system with a brand-new version—the service scope of which includes transfer agent system (TA), fund administration system (FA), and pension fund system (TPA). After the completion of data migration and TA software testing, the new TA function went live on September 10th 2018. FA and TPA functions are expected to be put into service in 2019.

Furthermore, VSD has refined the draft of the 2nd generation securities law with regard to VSD-related contents and also refined, revised and issued new regulations and guidelines in response to new services and products and market changes.

2. External collaboration

2-1. ARFP Joint Committee

① Overview of ARFP Joint Committee

The Joint Committee on Asia Region Funds Passport (JC) is a working group established under the MoC signed in June 2016 by five ARFP members (state regulators from Australia, Japan, New Zealand, the Republic of Korea, and Thailand) with an aim to ensure the smooth implementation of ARFP. The 1st JC Meeting was held in Kuala Lumpur, Malaysia, in November 2016.

② JC Meetings of 2018

The 4th and 5th JC meetings were held respectively in Sydney, Australia, during April 25th ~ 26th, 2018, and in Auckland, New Zealand during September 19th ~ 20th, 2018. As for ARFP updates, Australia, Japan, and Thailand completed necessary preparations for implementation while the Republic of Korea and New Zealand were well advanced in setting up legal & regulatory arrangements in their respective jurisdictions.

One of the key decisions made in the meetings was to confirm the official date of ARFP launch to be February 1st, 2019, in the run up to which collective investment scheme operators and financial regulators of each signatory economy will work together to complete the groundwork for ARFP fund registration and actual transaction.

Also, the participants of the JC meetings shared the understanding that the post-trade operational harmonization among participating economies is as much as important as ARFP-friendly legal and tax environments and that AFSF had served and would continue to function as a viable consultative body among Asian CSDs for back-office standardization in line with ARFP implementation.

III. 2019 Plans

1. 2019 Workshop

The 4th AFSF knowledge-sharing workshop will be hosted by TSD in Thailand. Although the exact date and venue are yet to be decided, the workshop is likely to be held in the fourth quarter of 2019. In addition to conventional sessions such as CSD Session, Advisory Session, or Local Market Session, a new session will be added to the workshop under the name of *Investor Services Session* which will serve as a platform of dialogue to expand our horizons beyond fund investments. The overarching topic will be “e-voting” and the entire session will be organized and presided over by TDCC in collaboration with TSD.

2. Research and the Way Forward

Lately, AFSF has built up a solid momentum by achieving its short-to-mid-term goals of conducting extensive research and surveys on “fund basic data” in 2017 and “fund trading data” in 2018. Now is the time to aim at the Forum’s ultimate objective: development of an optimal post-trade fund processing model. In 2019, the Forum is likely to gather varied opinions from its members in order to define, construct, and suggest an ideal model (e.g. inter-CSD model) which proves effective in reducing operational inefficiencies and maximizing cost-effectiveness and suffices to be benchmarked across Asian fund markets.

As a special note, in the run up to the launch of ARFP in early 2019, KSD plans to initiate a research project to delve into the back-office workflow of ARFP per participating economy with an aim to clarify the roles of CSD and other market players during the course of post-trade operations (e.g. ARFP fund registration, entry in host economy, distribution channel, cash settlement, beneficiary registration, tax withholding, etc.). The results of the project will be shared during the next knowledge sharing workshop in Thailand.

Still, be mindful that the objective, direction, content, or form of research is subject to changes and will be further specified in early 2019.

3. Networking and Collaboration

AFSF plans to engage in numerous initiatives associated with the promotion of cross-border fund trading and the harmonization of post-trade operations. Especially, once the ARFP scheme comes into effect, the Forum will constantly monitor the cross-border transactions of AFRP funds so as to ensure that the transactions seamlessly flow with little or no frictions. The working-level impacts and implications derived from such observation will be further discussed with concerned market players in the coming knowledge-sharing workshop in Thailand and through other big and small gathering opportunities.

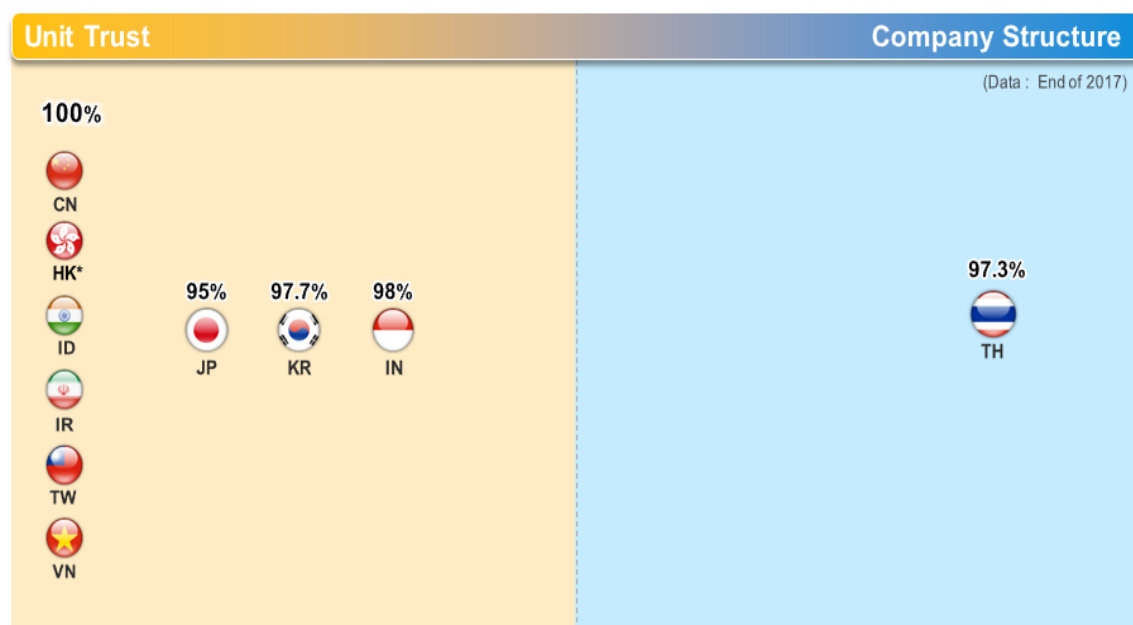
Part 1. Fund Market Update: Survey Results

1_Legal Structure of Fund

Definition: In general, funds are legally structured as unit trust or investment company, which are herein termed as “unit trust structure” and “company structure”.

Key Findings: The general picture did not change much since unit trusts still dominated most of the fund markets in Asia. Like in the end of 2015, however, Thailand stood out as a market heavily oriented to company-structured funds (taking up 97.3% of market share).

< Predominance of Unit Trust in AFSF Economies >

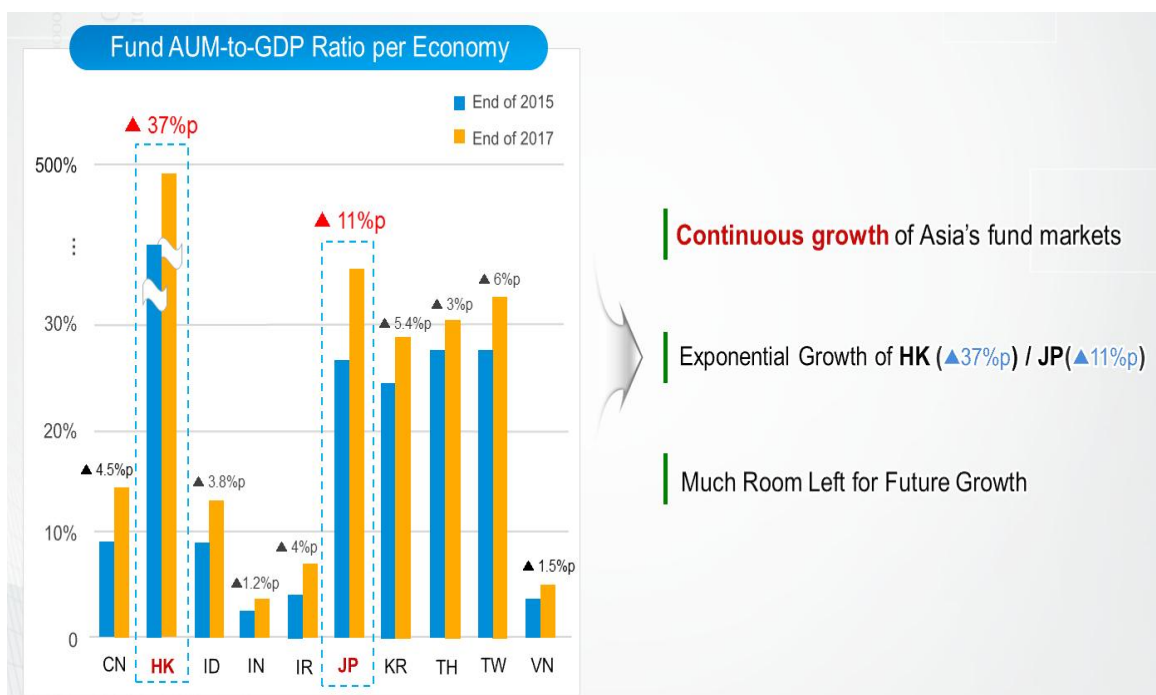


2_Fund Market Size

Definition: The survey measures the size of fund market with the ratio of asset under management (AUM) to gross domestic product (GDP), or “AUM-to-GDP ratio”.

Key Findings: The AUM-to-GDP ratio indicated that Asian fund markets continued to grow in size in comparison with the end of 2015 and still had much room to grow even further. In particular, the regional growth was strongly driven by Hong Kong and Japan where the figure expanded by 37%p and 11%p respectively.

< Fund Market Size Measured by AUM-to-GDP Ratio >



3_Fund Type

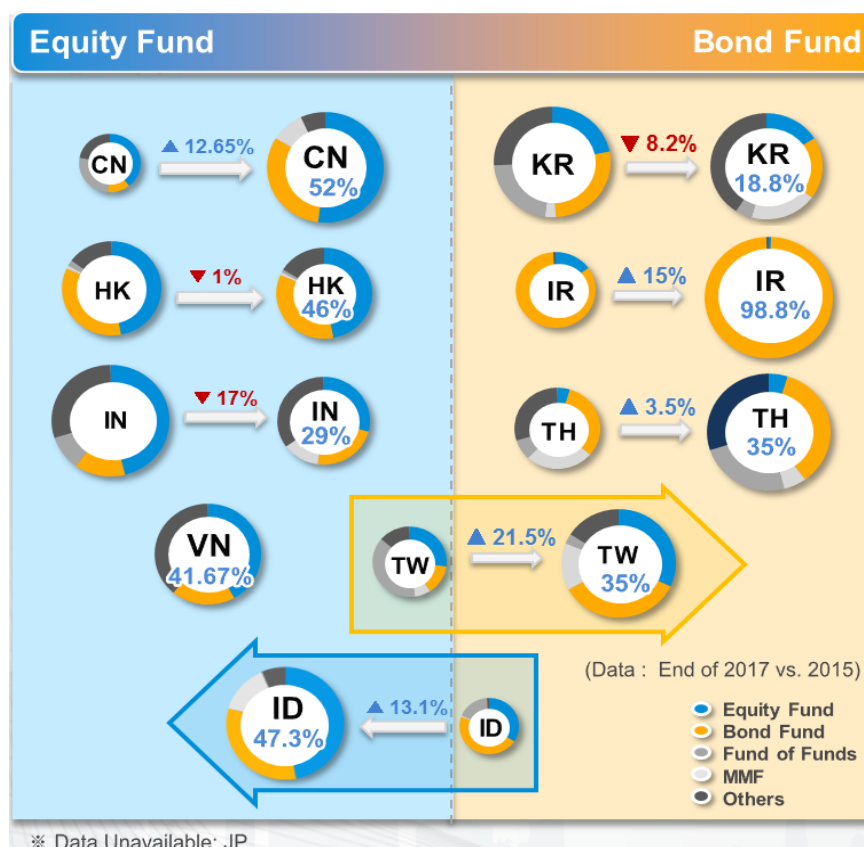
Definition: Funds are generally categorized as *equity fund*, *bond fund*, *fund of funds*, *money market fund (MMF)*, or *others*.

Key Findings: The general trend at the end of 2017 was that the funds of five Asian economies (China, Hong Kong, India, Indonesia, and Vietnam) leaned toward equities while those of four others (Iran, Korea, Taiwan, and Thailand) became more bond-oriented.

Compared to the end of 2015, the most dramatic change was the investment movements of India, which was shifted more towards equity funds (▲13.1%p), and Taiwan, which gravitated much more to bond funds (▲21.5%p).

Nevertheless, these findings need to be taken with a grain of salt since the survey merely took the snapshot of the market at the end of 2017 and things may have or will be changed much for the past and next few months.

< Investment Movements between Fund Types >

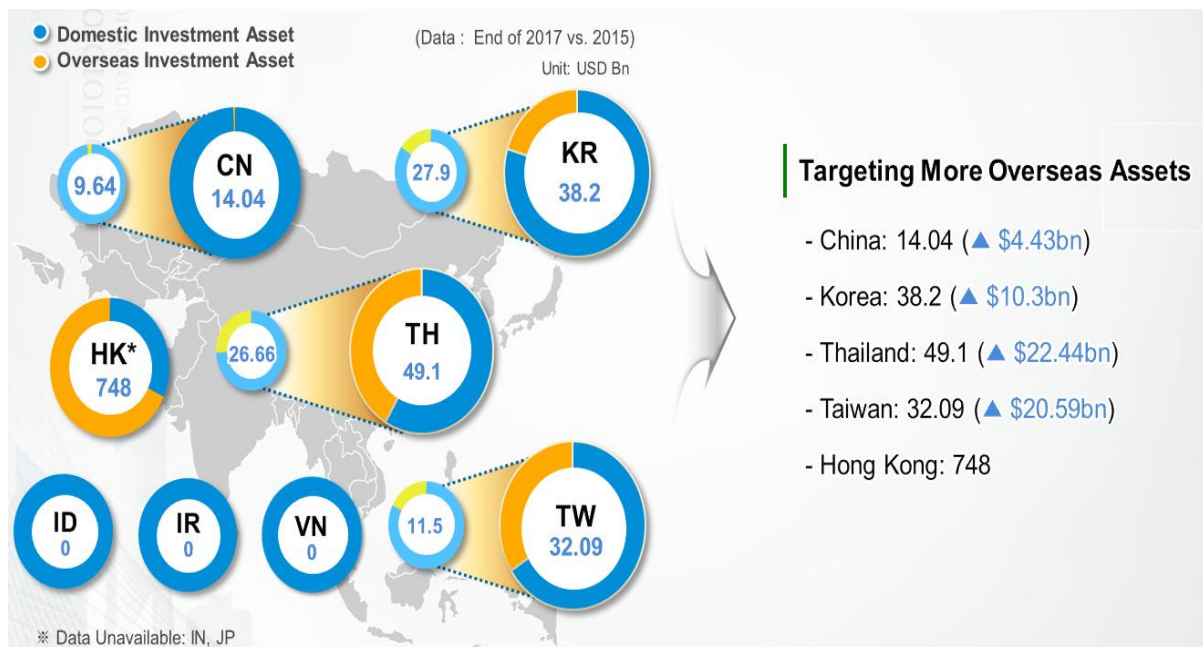


4_Trading Volume: Domestic Fund

Definition: The investment direction of domestic funds moves either inwardly or outwardly depending on the assets placed in the fund basket. The pie graphs below illustrates the portion of domestic assets (blue) and overseas assets (orange) invested by domestic funds per economy.

Key Findings: Domestic assets still took up a large portion (or sometimes the entirety) of domestic funds in general. However, in economies like China, Korea, Hong Kong, Taiwan, and Thailand, a growing number of overseas assets were targeted by domestic funds unlike the end of 2015. In the 2018 survey, the data of Hong Kong were newly added and the trading volume figure was found to be \$748 bn.

< Growing Presence of Overseas Assets in Domestic Fund Basket >



5_Trading Volume: Cross-border Trading

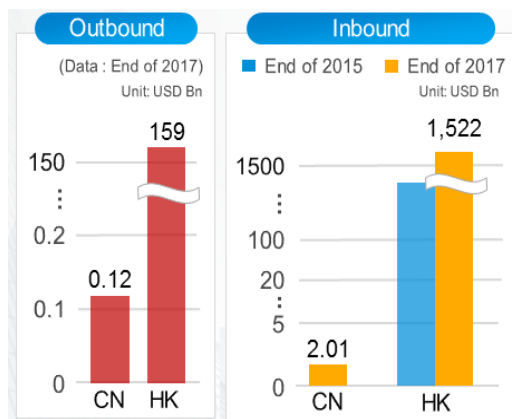
Definition: Cross-border fund transactions flow in two opposite directions: *inbound* (foreign-domiciled funds sold at home) and *outbound* (home-domiciled funds sold abroad).

Key Findings: Cross-border fund trading steadily increased on the back of passport schemes such as the *Mutual Recognition of Funds between China and Hong Kong* (MRF) or the *ASEAN Collective Investment Scheme* (CIS). In the foreseeable future, the cross-border trading in Asia will be strongly accelerated by *APEC Asia Region Funds Passport* (ARFP), the official launch of which is slated for February 1st, 2019.

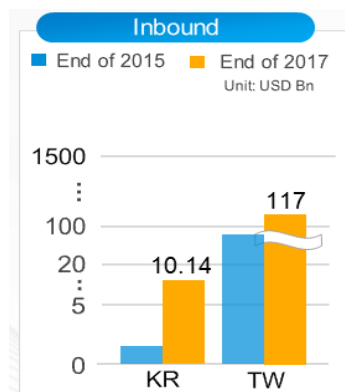
< Cross-border Trading per Economy >

Two Way	HK CN MRF
One Way	JP KR TW TH* CIS
None	ID IN IR VN

※ Trading data of CIS Members (incl. TH) are unavailable.



- MRF drove up the cross-border trading volume between China and Hong Kong where the outbound transactions were found to be \$120 million and \$159 billion respectively.
- Plus, the inbound transactions stood at around \$2 billion in China and about \$1.5 trillion in Hong Kong.



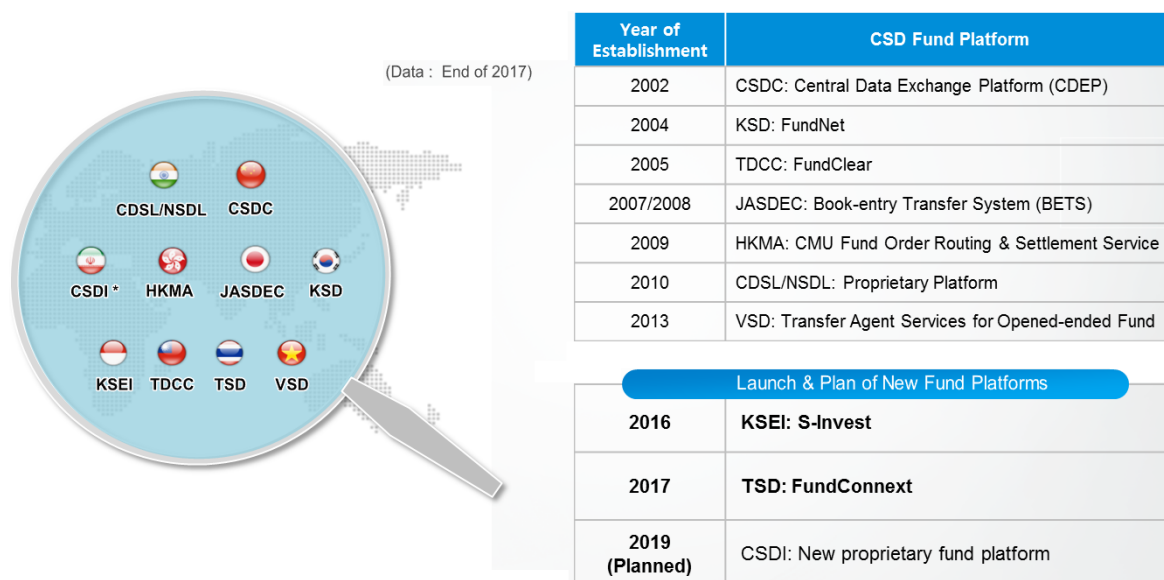
- It was not possible to glean sufficient CIS data. Although the cross-border trading in Thailand has been largely triggered by CIS, more time is needed to gather statistically significant data.
- Compared to the end of 2015, inbound trades registered a solid growth (e.g. Korea: about \$10 billion, Taiwan: \$117 billion, etc.).

6_Fund Platform of CSD

Definition: CSDs often set up a central fund platform in order to enhance the efficiency of post-trade operations. In fact, a fund platform serves as a back-office hub that enables CSDs to effectively execute its various core and value-added services.

Key Findings: In the end of 2015, there were seven platforms in Asia. Two years later, two more platforms were added: *S-INVEST* of KSEI (2016) and *FundConnex* of TSD (2017). Plus, CSDI responded during the survey that a new platform will be developed in 2019.

< Nine Platforms in Total and One More to Go >



7_Fund Code Standardization

Definition: For the sake of transactional accuracy and transparency, it is highly recommendable to identify funds with codes that are commonly used among fund market participants.

Key Findings: All in all, the level of fund code standardization barely changed. As discovered in the end of 2015, the majority of AFSF respondents used local common codes which were in compliance with ISO standards.

< Level of Fund Code Standardization among AFSF Economies >

Common Fund Identifier Code in Compliance with ISO Standard (ISIN) (Data : End of 2017)



Common Fund Identifier Code

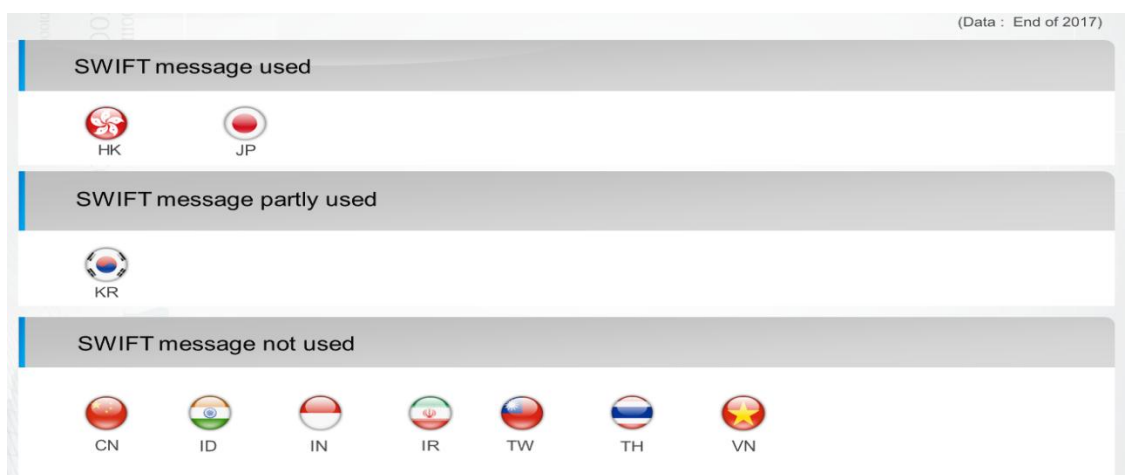


8_SWIFT Messaging

Definition: SWIFT messages are designed to facilitate the straight-through processing of post-trade operations.

Key Findings: The status quo remained the same. As in the end of 2015, most of the AFSF economies did not use SWIFT messages (except Hong Kong, Japan, and Korea).

< Lacking Standardization of SWIFT Message among AFSF Economies >



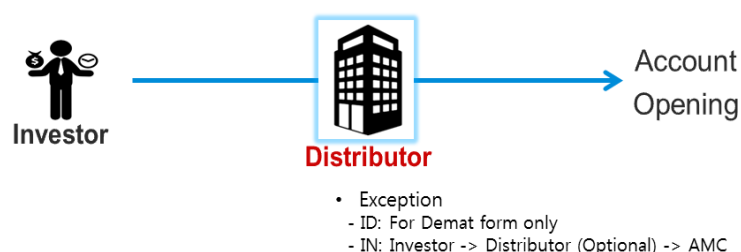
Part 2. Fund Trading Data: Survey Results

1_Account Opening

Focus: If an investor wants to spend their surplus money on a fund, the obvious first step is to open an account. The survey examined who is in charge of account opening and whether it is possible to open an account online in the respondent's economy.

Key Findings: In most of the AFSF economies, retail investors should go to a distributor to open an account. A few exceptions would be India where it only applies to "demat-type" funds and Indonesia where investors can open an account either directly with an asset manager or indirectly through a distributor.

< Account Opening via Distributor >



Account opening is not confined to an offline channel. In most of the AFSF economies, it is possible to open an account through online channels in a non-face-to-face manner. Thailand plans to start an online account opening service at the end of 2019.

< Availability of Online Account Opening Service >

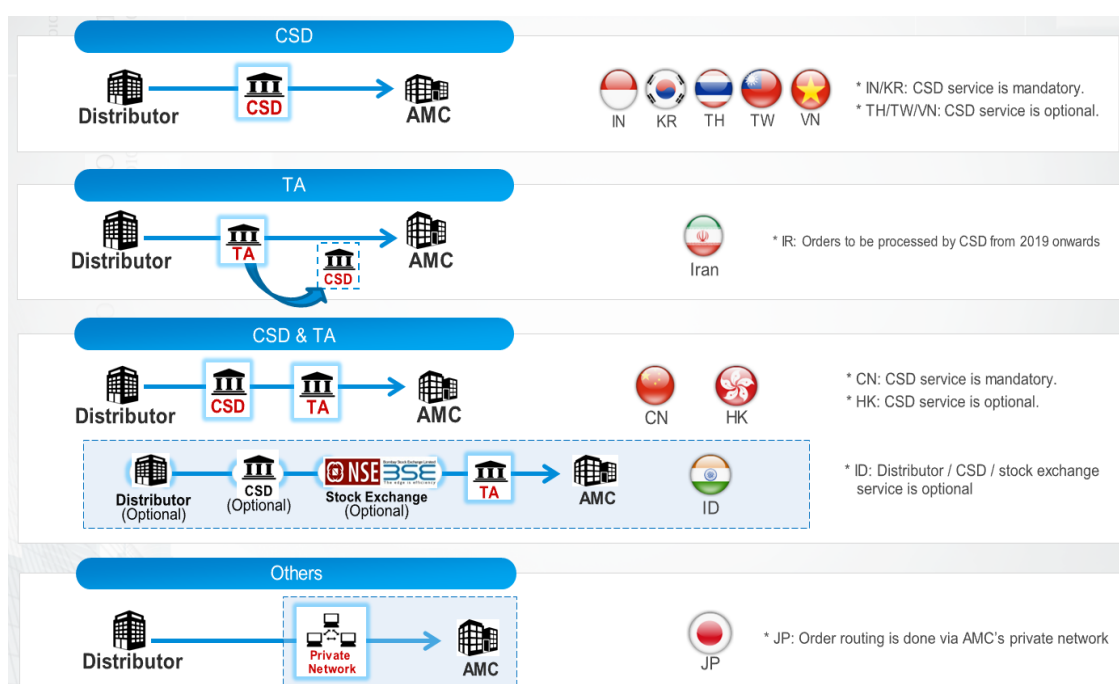


2_Subscription and Redemption

Focus: Once an account is opened, investors would like to subscribe to a fund, and perhaps after a while, they may partially or fully redeem their units or shares. Once placed by investors, subscription/redemption orders will be transmitted by CSD, TA, or other handling agents.

Key Findings: The back-office operation for subscription or redemption defies a simple description or overgeneralization since the handling agent varies depending on economies.

< Post-trade Handling Agent for Subscription & Redemption per Economy >

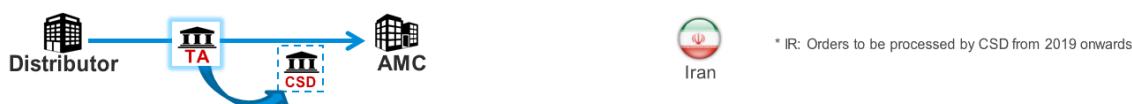


Indonesia, Korea, Taiwan, Thailand, Taiwan, and Vietnam: CSD is the handling agent that transmits an order between distributors and asset managers. The slight difference is that:

- It is mandated by law to use the CSD service in Indonesia and Korea while it is optional to do so in Taiwan, Thailand, and Vietnam. Yet, in reality, subscription/redemption orders are mainly processed by CSDs in all of these five economies.



Iran: Although currently a TA-dominated market where TAs handle order routing operations, Iran will switch to a CSD model in 2019 by establishing its own fund platform.

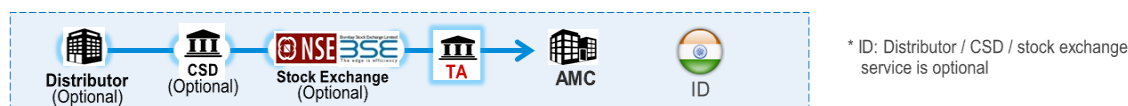


China, Hong Kong, and India: CSD, TA, and/or other handling agents sit between distributors and asset managers. The main differences between these economies are as follows:

- In China, it is mandatory that trade orders must go through CSD's platform before reaching TAs and asset managers while the use of HKMA's platform service is optional in Hong Kong.



- In India, investors may place an order to TAs directly, or transmit the order through a distributor, CSD, or a stock exchange platform run by National Stock Exchange (NSE) or Bombay Stock Exchange (BSE).



Japan: On appearance, there seems to be no particular intermediary sitting in between distributors and asset managers because the orders are directly transmitted through a private vendor's network which is built by large-sized asset managers such as Nomura, Daiwa, etc.



3_Net Asset Value (NAV)

Focus: Prior to settlement, it is critical to make valuation data readily available to concerned stakeholders in the market such as asset managers, distributors, etc.

Key Findings: The handling agent responsible for calculating and sharing NAV information varies depending on economy.
























- **China, Indonesia, Korea, Taiwan, and Vietnam:** NAV is calculated by administrator and shared by CSD.
- **Thailand:** TA performs both calculation and sharing of NAV information.
- **Japan:** NAV is both calculated and shared by trustee.
- **Iran:** NAV is both calculated and shared by administrator.
- **Hong Kong:** NAV is calculated by administrator and shared by CSD, TA, or asset manager.
- **India:** NAV is calculated by administrator, asset manager, or custodian and shared by either asset manager, TA, or an industry body called AMFI (Association of Mutual Funds of India).

Calculated by	Shared by	AFSF Economies
 Administrator	 CSD	 CN  IN  KR  TW  VN
 TA		 TH
 Trustee		 JP
 Administrator		 IR
 Administrator	 CSD / TA / AMC	 HK
 Administrator / AMC / Custodian	 AMC / TA / AMFI	 ID

4_Settlement











Focus: Trade orders are finalized via confirmation and settlement by completing delivery of securities and payment of cash either in a deliver-versus-payment (DVP) or free-of-payment (FOP) manner based on gross or net amounts.

Key Findings: This section probably presents the most fragmented picture of all. Settlement is processed by different handling agents depending on economy as follows:

Trade Confirmed by	Settled by	AFSF Economies
 CSD		 
 TA		
 CSD / TA		
 TA	 CSD / TA	
 Administrator	 TA	
 TA	 Distributor ↔ AMC	
 CSD	 CSD / Distributor	
 Custodian		
 Distributor ↔ AMC		

- **Korea and Vietnam:** Orders are confirmed and settled by CSD.
- **China:** Orders are confirmed and settled by TA.
- **Hong Kong:** Orders are confirmed and settled by either CSD or TA.
- **India:** Orders are confirmed by TA and settled by either CSD or TA.
- **Iran:** Orders are confirmed by administrator and settled by TA.
- **Thailand:** Orders are confirmed by TA and settled between distributor and asset manager.
- **Taiwan:** Orders are confirmed by CSD and settled by either CSD or distributor.
- **Indonesia:** Orders are confirmed and settled by custodian.
- **Japan:** Orders are confirmed and settled between distributor and asset manager.

Plus, trade orders are settled in a DVP and/or FOP style with the amount of securities and cash calculated through a grossing or netting procedure.











Method of Settlement		
	DVP	FOP
Gross		
		
Net		 
		
		
		

- **Thailand and Taiwan:** Gross amounts are settled in a DVP style.
- **India:** Gross amounts are settled in a FOP manner.
- **Japan, Korea, Iran, and Vietnam:** Net amounts are settled in a DVP style.
- **Indonesia:** Net amounts are settled in a DVP fashion.
- **China and Hong Kong:** Either gross or net amounts can be settled in a FOP manner.











5_Beneficiary Management

Focus: Accurate registration and record-keeping of fund beneficiaries are no less important than any other post-trade operations for the sake of investor protection (e.g. the right to claim dividends, etc.).

Key Findings: Beneficiaries are registered by CSD, TA, or other handling agents on a daily or an irregular basis as follows:









Registration of Beneficiaries	
Registered by	AFSF Economies
 CSD	  
 TA	    
Others	<ul style="list-style-type: none"> • JP: CSD / Distributor (Direct AMI) • TW: TA / AMC

- **Indonesia, Korea, and Vietnam:** CSD is the handling agent for beneficiary management.
- **China, Hong Kong, India, Iran, and Thailand:** The main handling agent for beneficiary management is TA.
- **Japan:** CSD and distributor are the handling agents for beneficiary management.
- **Taiwan:** TA and asset manager are responsible for beneficiary management.

Frequency of Beneficiary Registration	
Daily	    
Irregular	    

- **China, Hong Kong, Iran, Japan, and Taiwan:** In terms of frequency, beneficiaries are registered on a daily basis.
- **India, Indonesia, Korea, Thailand, and Vietnam:** Beneficiaries are registered on an irregular basis.

The meeting of beneficiaries is usually held by asset manager in most of the AFSF economies. Nevertheless, there are exceptions as follows:








Meeting of Beneficiaries	
Held by	AFSF Economies
 AMC	      
Others	<ul style="list-style-type: none"> • TH: TA • IR: Administrator (Preferred unit holder only) • ID: Trustee






- **Thailand:** TAs hold beneficiary meetings.
- **Iran:** Administrators hold beneficiary meetings.
- **India:** Trustees hold beneficiary meetings.

6_Tax Withholding

Focus: Among AFSF economies, when part of fund profits should be deducted before being distributed to beneficiaries, it has been unclear how much tax is withheld by which handling agent.






Key Findings: In general, tax withholding is performed by either distributor, TA, asset manager, or custodian. Dividend tax rate ranges between 5 and 15.4% while there is no tax in five economies (China, Hong Kong, India, Iran, and Taiwan).

Withholding Agent	
Withheld by	AFSF Economies
 Distributor	 
 TA / Distributor	
 AMC	
 Custodian	
 TA	

Tax Type & Rate		
	Dividend Tax	Other Taxes
	15%	Sales Tax: 0.1% Coupon Interest Tax: 5.0% Capital Gain Tax: 5.0%
	National Tax: approx. 15% Local Tax: approx. 5%	
	15.4%	-
	10%	-
	5%	Redemption Tax: 10%

* KR: 20% for non-resident investors

VN: Redemption tax applies to individual investors only.

No Tax				
				

* HK: For funds invested in HK only


















* ID: 20% for non-resident investors

- **Japan and Korea:** Tax withholding agent is distributor.
- **Thailand:** Tax withholding agent is TA or distributor.
- **Vietnam:** Tax withholding agent is asset manager.
- **Indonesia:** Tax withholding agent is custodian.
- **Iran:** Tax withholding agent is TA.
- **Indonesia:** Dividend tax rate is 15%.
 - Other taxes include sales tax (0.1%), coupon interest tax (5%), and capital gain tax (5%).
- **Japan:** There are two types of taxes—national tax (15%) and local tax (5%).
- **Korea:** Dividend tax is 15.4% and there is 20% tax withholding applied to non-resident investors.
- **Thailand:** Dividend tax rate is 10%.
- **Vietnam:** Dividend tax rate is 5% and there is redemption tax of 10% which is applicable to individual investors only.
- **China, Hong Kong, India, Iran, and Taiwan:** There is no tax withholding required.
- **Other Particularities:** In addition, in India, a tax deduction rate of 20% applies to non-resident investors. And in Hong Kong, the no-tax rule applies to the funds invested in Hong Kong only.











7_Profit Distribution

Focus: Among AFSF economies, there has always been a need to clarify who handles profit distribution and how frequently profits are distributed to beneficiaries.

Key Findings: Fund profits are distributed by distributor, CSD, TA, asset manager, or custodian on a yearly basis or as frequently as required by the terms and conditions of fund.

Distribution of Fund Profits	
Distributed by	AFSF Economies
 Distributor	   
 CSD	
 TA	
 AMC	
 CSD / Distributor	
 TA / Distributor	
 Custodian	

- **China, Hong Kong, Japan, and Korea:** Fund profits are handed out to beneficiaries by distributor.
- **Vietnam:** CSD handles profit distribution.
- **India:** TA handles profit distribution.
- **Taiwan:** Either CSD or distributor handles profit distribution.
- **Thailand:** Either TA or distributor handles profit distribution.
- **Indonesia:** Custodian handles profit distribution.

Frequency of Profit Distribution	
Frequency	AFSF Economies
Yearly	 
Depending on Fund	       










- **Korea and Vietnam:** Fund profits are distributed on a yearly basis.
- **China, Hong Kong, India, Indonesia, Iran, Japan, Thailand, and Taiwan:** Fund profits are distributed as frequently as required by the terms and conditions of fund.

8_CSD Platform

Focus: The survey also investigated how fund market players access their CSD platform.

Key Findings: As for authentication, users are required to key-in ID & password, OTP, or AC when logging into CSD platform.

- **China, Hong Kong, India, and Thailand:** Only ID and password are required for the log in.
- **Indonesia:** One-time password (OTP) is needed in addition to ID and password.
- **Japan, Taiwan, and Vietnam:** Authorization certificate (AC) is needed in addition to ID and password. As a note, in Japan, AC is only required once when connecting to the central platform for the first time. 21
- **Korea:** Both OTP and AC are needed in addition to ID and password.

User Authentication					
	Frequency of Beneficiary Registration				Note
ID & PW	 CN	 HK	 ID	 TH	<ul style="list-style-type: none">• ID&PW: ID and Password• OTP: One-Time Password• AC: Authorization
ID & PW OTP		 IN			
ID & PW AC	 JP	 TW	 VN		
ID & PW AC OTP	 KR				

• **Exception**

- JP: AC is required for initial connection to platform only.

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Contact

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