



# TDCC NEWSLETTER

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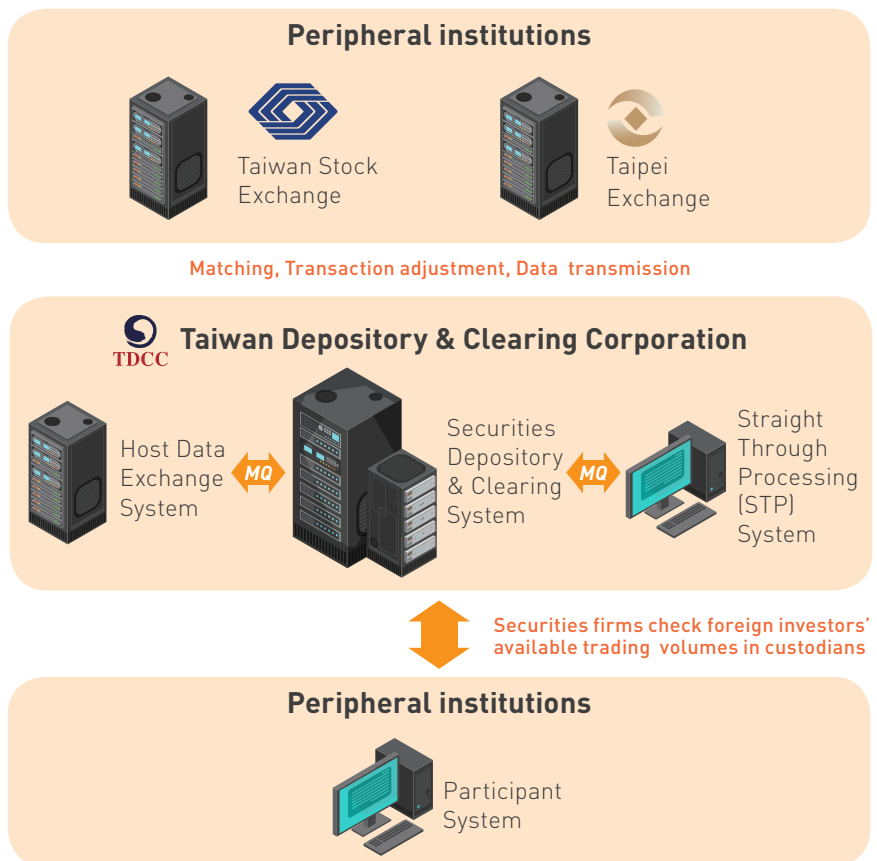
## OUTLOOK

### TDCC Deploys Resources to Support New Continuous Trading System in Securities Markets

The securities markets in Taiwan officially adopted continuous trading on March 23, 2020. The new mechanism was established after studying the trading landscape of the global securities markets. The goal was to improve information transparency as well as increasing the speed and efficiency of the transactions that brought about the change-over.

In light of the increased workload of processing and transferring transaction data, and the subsequent demands for faster and greater data processing, it has been a challenging task for Taiwan Depository & Clearing Corporation (TDCC) to ensure a stable operation since continuous trading went online.

The main structure of the TDCC system:



The functions and adjustments of the central TDCC system:

The Host Data Exchange System, connected to the core Securities Depository & Clearing System, helps speed up the transmission of data exchange between TDCC and peripheral institutions such as Taiwan Stock Exchange (TWSE) and Taipei Exchange (TPEX). The data transfer process was upgraded in order to handle large dataset transmissions. Parameterized functions are producing more efficient multitasking and better fault tolerance.

## OUTLOOK

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### **TDCC Deploys Resources to Support New Continuous Trading System in Securities Markets**

In order to improve performance, accelerate matching data processing, and expedite transaction adjustments, the central Securities Depository & Clearing System has simultaneously added additional system resources such as CPU and Memory, extended drive volume for databases and file disks, and expanded processing channels.

Due to this continuous trading, the Host Data Exchange System was forced to handle a huge increase in the inflow of trading from foreign investors. In response to this rapid growth in transactions, TDCC expanded our hardware and optimized the procedures of the Straight Through Processing (STP) System.

The new framework has met, or exceeded, all expectations since the commencement of continuous trading, even though the market peaked at over 3 million matching data transactions per day, With the aim of providing the best quality services to the markets, we will continue to fine-tune the system so as to elevate its performance and optimize operations.



## SPECIAL REPORT

### Securities Firms and Custodians Fully Adopt TDCC VMU Service to Process Transaction and Settlement Data

Taiwan Depository & Clearing Corporation (TDCC) has been providing Virtual Matching Utility (VMU) to process transaction and settlement data of securities firms and custodians since July 2004. The new mechanism was targeted to effectively reduce the costs incurred by securities firms in sending trade confirmation slips by post or by courier to custodians. It would be more convenient for custodians to verify and confirm their trading records. For years, TDCC has been encouraging the use of VMU. Now, the custodians of domestic institutional investors and the securities firms they work with have developed information systems to fully adopt VMU. However, some global custodians and their securities firms haven't developed such systems compatible with VMU, so most of their custodians and securities firms are still transferring transaction and settlement data in the traditional manner.

To narrow the discrepancy, the American Chamber of Commerce in Taipei (AmCham Taipei) suggested that securities firms and custodians fully adopt the TDCC VMU system as the platform to check and confirm transactions. To take things one step forward, the competent authorities invited all the parties concerned for a meeting on January 17, 2020. The resolution is that all securities firms and custodians will have to fully adopt the TDCC VMU system to check their transactions starting from October 1, 2020.

TDCC has been helping the competent authorities implement the policy that all securities firms and custodians thoroughly adopt the VMU system by October 1, 2020. The new approach is expected to produce a synergy that simplifies transaction and settlement data reconciliation for all securities firms and custodians.



## BUSINESS HIGHLIGHTS

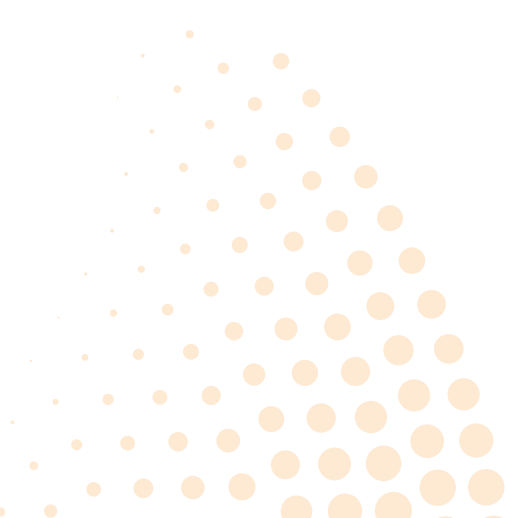
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### **FSC's SupTech Upgrade: TDCC to Establish the SupTech Platform for Bills**

The Covid-19 pandemic is having an enormous impact on every industry in the world. In light of the pandemic, digital transformation in Taiwan's financial sector is on the rise. As the trend towards digitalization is reinforcing, the competent authorities is making strides in enhancing the digital transformation of regulatory supervision of financial institutions. The goal is to spark innovation in the financial industry via digital tools. Hence, supervisory technology (SupTech) has become an important issue in the eye of the financial regulatory agency in Taiwan. To formally launch the digital regulatory framework, the Financial Supervisory Commission (FSC) has announced that FSC is entrusting Taiwan Depository & Clearing Corporation (TDCC) with an integrated digital regulatory reporting and supervision analysis system (the SupTech Platform) for Bills Finance Companies on August 13.

As the one and only Central Depository and Clearing House for short-term bills in Taiwan, TDCC has been offering issuance, transaction, clearing, and settlement services of short-term bills for over ten years. By building up the SupTech Platform for bills, TDCC will serve as the fast link between the competent authorities and bills finance companies. The SupTech Platform will introduce the new digital regulatory reporting mechanism through application programming interfaces (APIs) and relative measures to automate reporting obligations for bills finance companies. In addition, TDCC will take further steps to consolidate bills finance companies' reporting data with granular data from other systems of different financial institutions governed by the FSC, e.g., TDCC's short-term bills transaction data, Taipei Exchange's (TPEX) bond issuance data, and Joint Credit Information Center's (JCIC) credit limit data. The authorities will be able to achieve the goal of "precise supervision" by monitoring the market with the SupTech-based supervisory tools such as interactive dashboards, data visualization tools and other big data analytics solutions. The SupTech Platform is expected to be in place in Q2 2021.

"TDCC is the biggest back-office service provider in Taiwan's capital market. We have the most diverse, most comprehensive market data. Our mission and vision have always been to put the data to effective use and improve Taiwan's financial ecosystem. At the end of last year, we went to Europe to learn from their experience in SupTech. We did some research and paid some visits



## BUSINESS HIGHLIGHTS

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### FSC's SupTech Upgrade: TDCC to Establish the SupTech Platform for Bills

to learn sophisticated SupTech applications from other countries. We've also cooperated with expert to map out a localized SupTech blueprint for Taiwan after reviewing international trends. We hope to implement SupTech solutions and introduce international experience into the Taiwanese context to help the competent authorities and financial firms create more value," said Sherman Lin, TDCC Chairman & CEO.

In the past two years, TDCC has been responding to the needs of the competent authorities and participants by using big data to provide analytics services. For example, regulatory data like investments of the insurance industry, data of Taiwan's fund market and bill market are generated for the FSC and Central Bank of the Republic of China (Taiwan) to conduct regulatory analyses. The said data are also available to participants for other data applications, so businesses can aim for precision marketing and management. Early this year, TDCC partnered with the Bills Finance Association of the Republic of China to build the Bill Market Management Information System as a customer relationship management (CRM) platform. The system, scheduled to be online in Q4 2020, will be ready to offer data analytics of all kinds in the bill market to bills finance companies. As these companies expand their business, the bill market will also become more prosperous.

In the post-pandemic era, TDCC will stand with the competent authorities and financial firms to keep providing comprehensive data analytics services. These services will not only increase business efficiency, but will also be very helpful for detecting black swans and grey rhinos in the market. Thus, society can stay more financially healthy, and enhance peace of mind and sense of trust in the financial market.



## BUSINESS HIGHLIGHTS

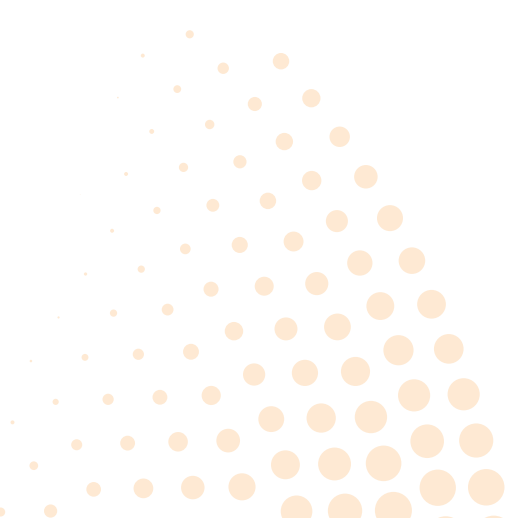
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### **The First Milestone in Transformation to a Data Company: TDCC Provides Financial Sector with Digital Data Services on Fund Clear**

TDCC has been dedicated to the fund industry for more than a decade. Facing the constantly changing market, the company has been adhering to the principle of facilitating digital transformation through financial innovation. With this digital mindset, the company puts itself in the customers' shoes, providing solutions and creating values. To further promote fund industry development, TDCC has cooperated with FundRich and other fund distributors for the first time. Drawing on its solid basis, the long-established fund market back-office system, TDCC has successfully consolidated enormous onshore and offshore fund data through "FundClear." The company has also offered fund distributors value-added data services through digital connections. This achievement marks a significant step for TDCC towards positioning itself as a "Data Company" in the market.

In the future, fund distributors can use the digital data services provided by TDCC on their own platforms as assistive tools for investors. The data services include monthly statistics on the amount of onshore and offshore fund subscriptions, redemptions, and net redemptions and subscriptions; and month-end statistics on onshore and offshore fund scale and amount held by local investors. In addition, the data can be further analyzed and presented in a more intuitive, visualized, and graphic way, which makes investing more user-friendly and straightforward. Therefore, customer retention will be enhanced, and financial education will be improved through multiple channels.

According to TDCC Chairman & CEO Sherman Lin, TDCC has been dedicated to serving the market for more than ten years, promoting the value of cooperating with the fund industry for common good and prosperity. Following the trend of Fintech development, TDCC has proposed the vision of working as a "Financial Big Data Center," introducing cutting-edge technology and implementing data integration to generate maximum value of its data application. With the drastic change in the market, TDCC will keep Fintech as a core value. Through crossover, cross-industry, and cross-border cooperation, the company will implement financial value-added data services covering a variety of industries, including the fund industry. The company will work hand in hand with the market to create a win-win situation and help achieve its ideal of financial inclusion for the general public.





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## Promising Trends in FinTech: TDCC Cooperates with Bursa Malaysia to Explore e-Account APP Services

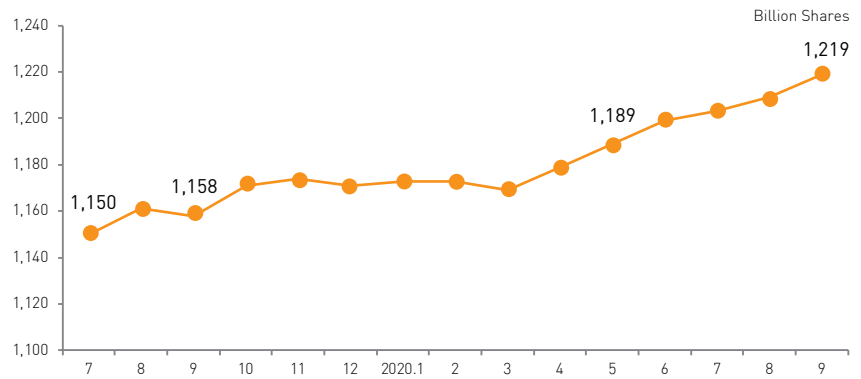
TDCC, which has been developing FinTech applications in line with international trends and continuously improving its investor services, released the ePASSBOOK in March, 2017 and hit a record of one million user accounts this February. To continue innovating and show the world Taiwan's soft power, TDCC cooperated with Bursa Malaysia Depository Sdn. Bhd. (Bursa Malaysia) to hold an e-Account APP Service Workshop on August 19th, 2020. The goal of the workshop was to explore digital trends in e-Account services, building a cross-industry ecosystem and potential opportunities. As the market infrastructure, TDCC and Bursa Malaysia are both leaders in developing e-Account APP services in their respective regions of North-east and South-east Asia. This workshop was beneficial for developing investor services in both capital markets.

Mr. Kuang-Hui Chen, Executive Vice President of Fund & Global Services Department, TDCC, said, "ePASSBOOK from its early developments integrating multiple securities accounts into one APP service, has progressed to integrating multiple assets including equities, bonds, mutual funds and gold. Moreover, TDCC has innovated beyond the ePASSBOOK framework towards including visualized market information and customized corporate action push notifications. Our accomplishments with ePASSBOOK have been a popular topic of discussion among Asia-Pacific CSDs Group (ACG) members. This workshop has shown that Central Securities Depository (CSD) organizations around the world are all dedicated to developing FinTech to lower costs and consistently provide highly efficient services for investors. Through active participation in international workshops, CSDs share their experiences, learn about global trends and explore possibilities for future developments."

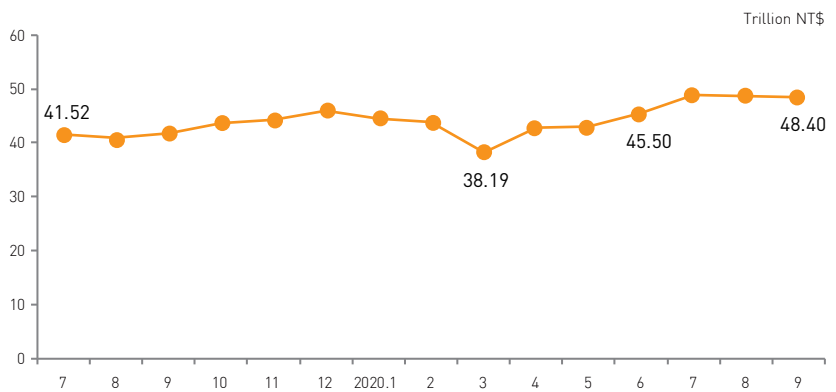
TDCC launched the ePASSBOOK in 2017 and has improved its features and services with the customers' best interest, by looking from an investor's point of view and analyzing big data. Investors can not only search market information but also directly connect to TDCC's e-Voting service. Last year, Bursa Malaysia Depository also released an e-Account APP called Bursa Anywhere, and this year added new features to allow investors to transfer stocks among their own accounts and set up dividend disbursement through the APP. During the global COVID-19 pandemic, ePASSBOOK and Bursa Anywhere are great tools to help investors avoid physical contact while protecting their rights and access to vital investor services.

## STATISTICS

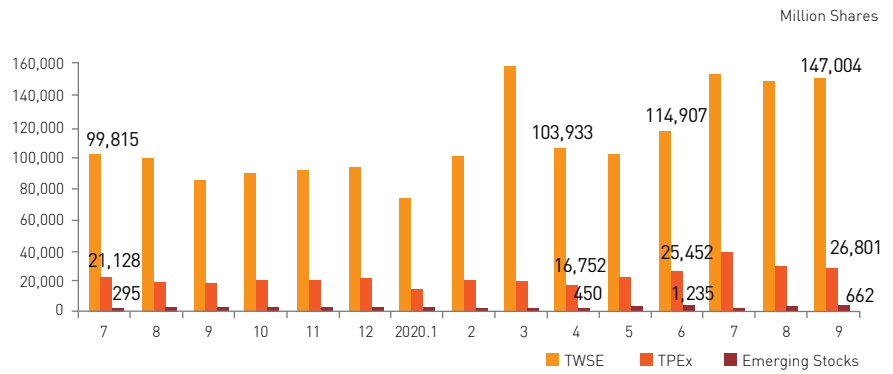
### Equities in Custody (Shares)



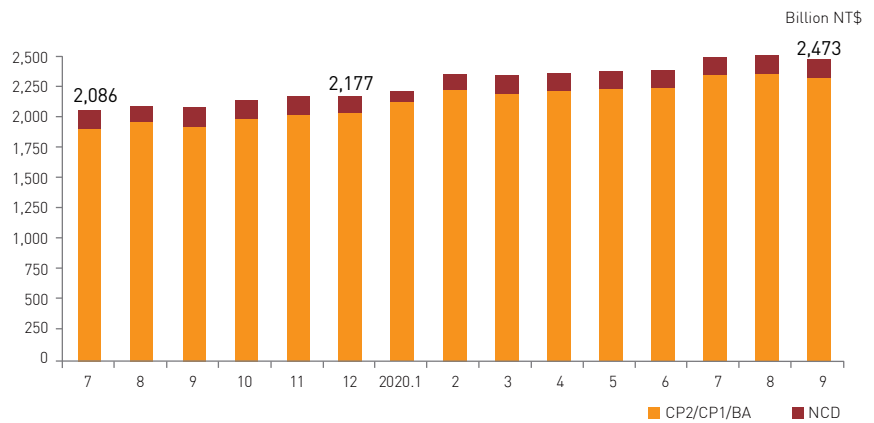
### Equities in Custody (Market Capitalization)



### Book-Entry Operations (Shares)

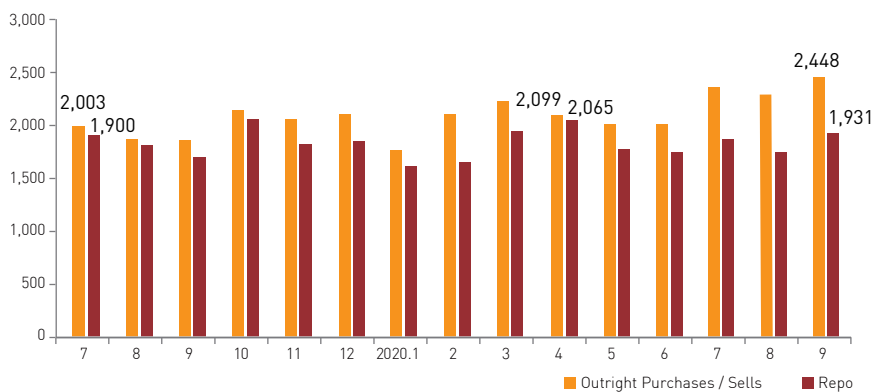


### Short-Term Bills in Custody

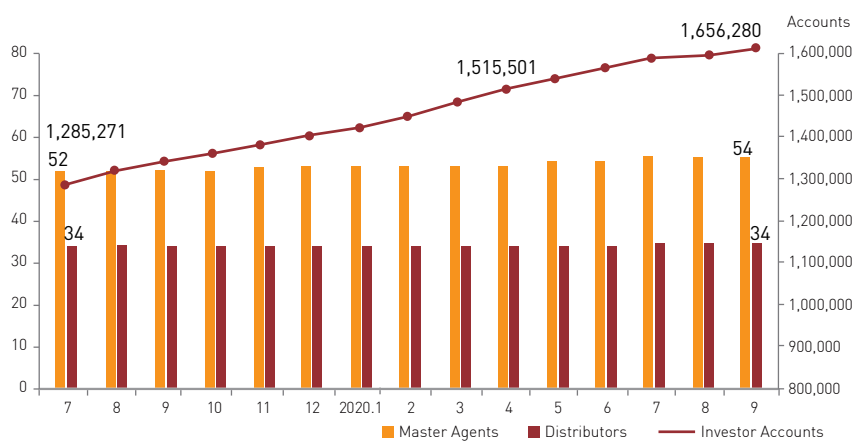


# STATISTICS

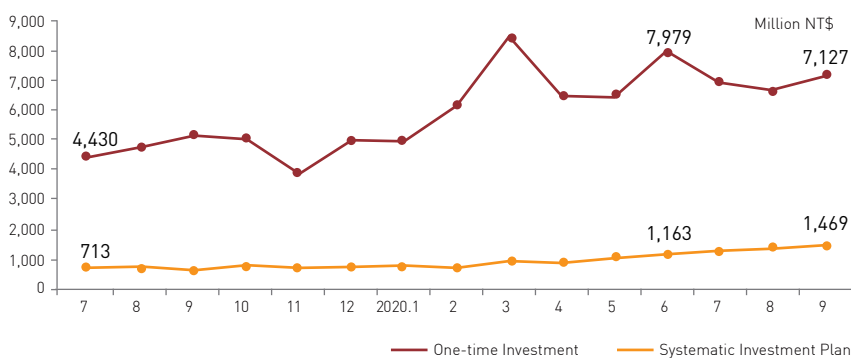
## Secondary Market Clearing & Settlement of Short-Term Bills



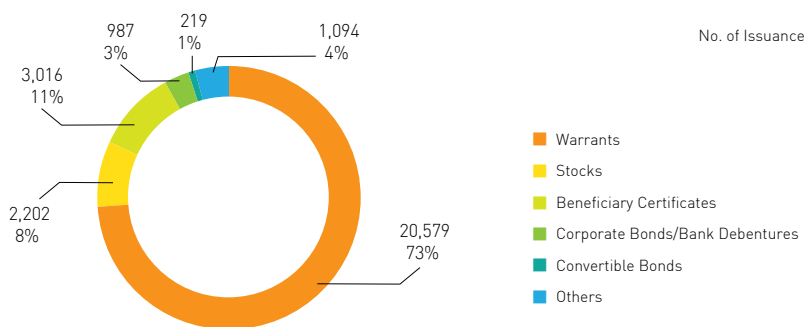
## Offshore Fund Operations



## Offshore Fund Subscriptions



## Registration of Dematerialized Securities



## STOCK MUSEUM

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### Taiwan Stock Museum Exhibit Updated

To improve the viewing experience, especially younger students, the Taiwan Stock Museum recently cooperated with professional designers and use innovative concepts and a creative touch in order to redesign the exhibit walls for the “Dematerialized Securities Exhibit” and the “Four Corporations’ Stock Exhibit”. Fascinating new illustrations have been added to the “Dematerialized Securities Exhibit” to introduce the history of the securities dematerialization in Taiwan.

The “Four Corporations’ Stock Exhibit” was also improved by adding explanatory icons. These help to better introduce four corporations: Taiwan Cement Corporation, Taiwan Pulp & Paper Corporation, Taiwan Tea Corporation, and Taiwan Industrial Development Corporation. These four corporations were province-owned and their stocks were used to compensate the landowners in the government’s 1953 “Land-to-the-Tiller Program” . The Taiwan Stock Museum welcome all members of the public and is sure that everyone will love the updated exhibits.

In order to comply with the authority’s Bilingual Nation Policy, and better meet our overseas visitors’ needs, the Taiwan Stock Museum includes English translation in all exhibition displays, in addition to the existing Chinese text. This new measure will allow visitors to have a better understanding even if they do not have a museum guide with them.



## GALLERY



Aug.10

TDCC cooperated with the SITCA and SFI to actively promote the ReLife Project. The project has been run for one year, and a mid-term report press conference has been held.



Sep.19

TDCC launched the Pre-Employment Financial Charity Program 2020 for University Students.



Sep.23

TDCC won the Asia Responsible Enterprise Awards 2020 (AREA 2020) under the Social Empowerment category for its program, "Pre-Employment Financial Charity Program for University Students."



Aug.19

TDCC cooperated with Bursa Malaysia to hold the e-Account APP Services Virtual Workshop.



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EPOSITORY &  
**CC**LEARING  
CORP.