



財團聯合信用卡處理中心
法人
National Credit Card Center of R.O.C.

2020 ANNUAL REPORT

<https://www.nccc.com.tw>

Contents



02 One. Preface

06 Two. Introduction to National Credit Card Center

- 07 I. Introduction
- 07 II. History
- 10 III. Organization Structure and Employees
 - 10 | (I) Organization Structure
 - 11 | (II) Employees
 - 12 | (III) Executives of NCCC
- 13 IV. Directors/Supervisors

14 Three. Business Operations & Operating Results

- 15 I. Authorization Switching and Settlement Operation
 - 15 | (I) Credit Card Authorization Switching Center Operation
 - 16 | (II) Domestic Credit Card Interchange & Settlement
 - 18 | (III) Domestic and International Transaction Settlement for NCCC Member-issued Credit Cards
- 19 II. Acquiring Operation
 - 20 | (I) NCCC Merchant Categories and Percentage
 - 21 | (II) Distribution of NCCC Merchants
 - 22 | (III) Point of Sale Terminals
- 23 III. NCCC Common Operating Platforms
 - 23 | (I) Credit Card Issuing Business of NCCC Members
 - 24 | (II) Installment Payment Operating Platform

- 25 | (III) Cardholders Online Transaction Authentication Service
- 26 | (IV) Credit Card Purchase Transaction Benefit Platform
- 26 | (V) Credit Card ATM Cash Advance
- 26 | (VI) Bonus Point Accumulation and Redemption Platform
- 26 | (VII) Government Fee Payment
- 27 | (VIII) Electronic Stored Value Card Transaction Operation Platform
- 28 | (IX) Small Ticket Platform
- 29 | (X) Credit Card Holders Auxiliary Authentication Platform
- 30 IV. Fraud Prevention Operation
 - 30 | (I) Risk Merchant Control and Credit Card Confiscation
 - 31 | (II) Analysis on Fraud Transaction Categories Reported by Domestic Card Issuing Institutions

32 Four. Business Performance

- 33 | I. Major Achievements in 2020
- 36 | II. Future Prospects

38 Five. Annual Events

- 39 | I. Major Events in 2020
- 45 | II. Calendar of Events

48 Appendix: Directory of Members





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One

Preface

In 2020, the effects of COVID-19 spread across the globe. Countries adopted measures such as lockdowns, shutting down air systems, and border controls one after another, resulting in the contraction of global economic activities and international trade investments, and further hitting a standstill. In addition, the cross effects arising from macroeconomic factors related to the tech war between the U.S. and China, the U.S. presidential election, and the execution of Regional Comprehensive Economic Partnership (RCEP) gave rise to material impacts on the global economy; the consumption and payment habits and patterns of civilians are also under transformation. According to the "World Economic Outlook" issued by International Monetary Fund (IMF), the global economic growth rate for 2020 was approximately -3.5%. Owing to satisfactory pandemic prevention, Taiwan has recorded an outstanding performance against the trend. According to the Directorate-General of Budget, Accounting and Statistics, the Executive Yuan, the economic growth rate in Taiwan was approximately 2.98% during 2020, which outperformed the 2.71% growth in the previous year. However, the outbreak affected public consumption, and the credit card payment market was also under such influences. In accordance with the statistics of the Financial Supervisory Commission, the total number of cards in force was about 50.12 million, and the amount of the annual transaction volume was approximately NT\$3.01 trillion, representing a reduction of approximately 6.3% as compared to NT\$3.22 trillion in the previous year, which was most likely related to the increase in domestic consumption opportunities by the public due to the inability to head overseas for consumptions. Furthermore, various e-payment methods integrated with citizens' living and consumption habits came out one by one during the period, such as the e-payment application introduced by delivery platforms, the fast-food industry, and government agencies, causing the increase in credit card payment. However, the above transactions were mostly small ticket transactions. Without the effect of scale merits, such transactions offer limited contributions to the overall transaction volume of credit cards; nonetheless, the number of transactions managed to achieve the second-highest record throughout history.

Affected by the outbreak, NCCC established the "COVID-19 Pandemic Prevention Decision-making Team" in response to the policy guidelines of pandemic prevention, burden alleviation, and revitalization and adopted the split operation system to mitigate the clustering risk for its employees. For burden alleviation, NCCC exempted the service charges and equipment handover charges for merchants, suspended the collection of default accounts, and other burden alleviation measures to ride out the storm with the public, and alleviate the operating pressure of different industries. NCCC also served as the data transmission and interface platform between 25 card issuing institutions and the "Triple Stimulus Voucher" platform to shorten the operating time and align with the efficacy and efficiency for the overall payment card industry.

Adapting to the accelerating trend of global digitalization, the level of digitalization of all industries during the Post-Pandemic Era becomes significantly crucial. With the development

of utilizing digital and technological transformation, NCCC continued to promote digital financial innovative services in the hope of developing models that cater to user experiences. In addition, NCCC persisted in implementing its policies on anti-money laundering and countering the financing of terrorism to achieve a complete domestic payment card industry in general.

To lay a solid foundation for the domestic payment industry and accord with the consumption habit of cardholders in Taiwan, NCCC continued planning for the promotion of its domestic payment card brand, the "TWIN Card." Furthermore, to improve the service quality and efficiency for merchants, NCCC developed and launched the "Online Customer Service" APP to provide a convenient digital service channel.

Following through the digital transformation of finance and the development of FinTech, NCCC completed the "EMV 3DS Authentication Service for Online Transaction Security" for international credit card associations such as Visa, Mastercard, and JCB that complied with EMVCo. and introduced the "Risk-Based Authentication (RBA)" function in response to the business requirements of card issuing institutions, providing online transaction authentication services with safety, convenience, and risk assessment. In compliance with the policy of "Reinforcement in Authentication Systems related to Insurance Premium Paid via Credit Cards or Transfers by Financial Institutions for the Insurance Industry," the application scope of NCCC's Credit Card Holders Auxiliary Authentication Platform was expanded to cover insurance companies.

NCCC continued to increase the e-wallet payment scenarios accepted by merchants. In June 2020, the competent authority approved the "Business for Integration and Conveyance of Receipt/Payment Information" and the cooperative planning with third-party payment wallets. Due to the integration of e-payment and electronic stored value card regulations, NCCC will continue providing integrated services with a single gateway and consistent operations for merchants and channels, acquiring institutions for credit cards, e-payment institutions, and the third-party payment service industry.

Due to the booming of information and communication application, NCCC upgraded its level of information security protection through continuous efforts. NCCC replaced its internal firewalls, established the "Monitoring System for Changes in Material Data on the Host," completed the 1st phase replacement of backbone network for merchants across Taiwan and the cloud host equipment transfer, and continued to complete the establishment of 3rd phase-stage 4 for the disaster recovery (DR) center, in order to complete the infrastructure for the payment card industry and achieve its objective of on-going operational management.

In response to the open data policies promulgated by the government, the Big Data analysis system platform of NCCC continuously disclosed credit card open data and enhanced the data application functions. Except for disclosing datasets on NCCC's website and Government Open Data Platform and providing links with external institutions

via API, NCCC also provided the industrial comparison and analytical report related to card issuing, acquiring, consumption pattern, and risk of fraud for the previous year to credit card institutions. By doing so, NCCC may assist credit card institutions in understanding the positions and the overall market so as to offer a reference in establishing their strategies for business development.

Looking ahead 2021, with the emergence of COVID-19 vaccines, the global economy may experience mild recovery, provided that such vaccines are able to effectively control the outbreak. A wide range of emerging technologies and techniques would become closely connected for diverse, innovative applications, and the digital transformation for the financial industry would also accelerate, actively generating opportunities for data sharing and ecosystem. NCCC will adhere to its pursuit for the innovation of the domestic payment card industry, grasp the financial development trend, and introduce emerging technologies and techniques. NCCC is committed to optimize the payment industry infrastructure and provide services of security and convenience. Furthermore, NCCC will continue to implement its social responsibility, provide unceasing care for society, convey new financial knowledge, and actively contribute to public welfare.



National Credit Card Center
Chairman

Teng Cheng Liu



Two

Introduction to
National Credit
Card Center

I. Introduction


NCCC was initially established as the "National Debit Card Center" in 1983. In 1988, responding to the trend of financial liberalization/internationalization, the Ministry of Finance amended the "Regulations Governing Banks Conducting National Debit Card Business" and transformed the "National Debit Card" into "National Credit Card"; therefore, NCCC's name was officially changed to "National Credit Card Center."

NCCC is a non-profit public interest entity and serves as a domestic settlement and authorization switching center for credit cards in accordance with the government policy. Meanwhile, NCCC established a membership system that provides card issuing members with centralized processing services, including international credit card brand licensing and sponsorship, shared information systems, as well as merchant network setup. With the aim to promote the development of the domestic payment card industry and realize the goal of a non-cash society, NCCC also strives to push forward innovative payment businesses for the payment card industry.

History

- 1979 ▼ The Council for Economic Planning and Development, Executive Yuan, approved the "Proposal for Issuance of National Debit Card" in May 1979 and planned the establishment of the "National Debit Card Center" jointly formed by banks and investment & trust companies. And the Ministry of Finance called upon a meeting that gathered all financial institutions to discuss the operating guidelines for the National Debit Card.
- 1981 ▼ The Ministry of Finance promulgated the "Regulations Governing Banks Conducting National Debit Card Business" to adopt the policy of "one person one card/deposit first/consumption afterward." Also, the Ministry of Finance called upon a meeting that gathered 24 financial institutions, including Central Trust of China, to study and negotiate the debit card business.
- 1983 ▼ The "National Debit Card Center" was officially established and the domestic card issuing institutions commenced the debit card business. The Center was responsible for the centralized settlement and was engaged in operating the debit card acquiring business.
- 1988 ▼ To accord with the trend of financial liberalization and internationalization and improve the consumption convenience for citizens in Taiwan, the Ministry of Finance declared to eliminate the limit of "one person one card," added the function of revolving credit, and approved the issuance of "credit card." As such, the Center's name was formally changed to "National Credit Card Center."
- 1989 ▼ NCCC cooperated with Visa International to introduce "Visa Credit Card," and formally launched the domestic settlement business for international credit cards.
- 1989 ▼ NCCC set up the "Kaohsiung Office" in December 1989 as the market business continued expanding.

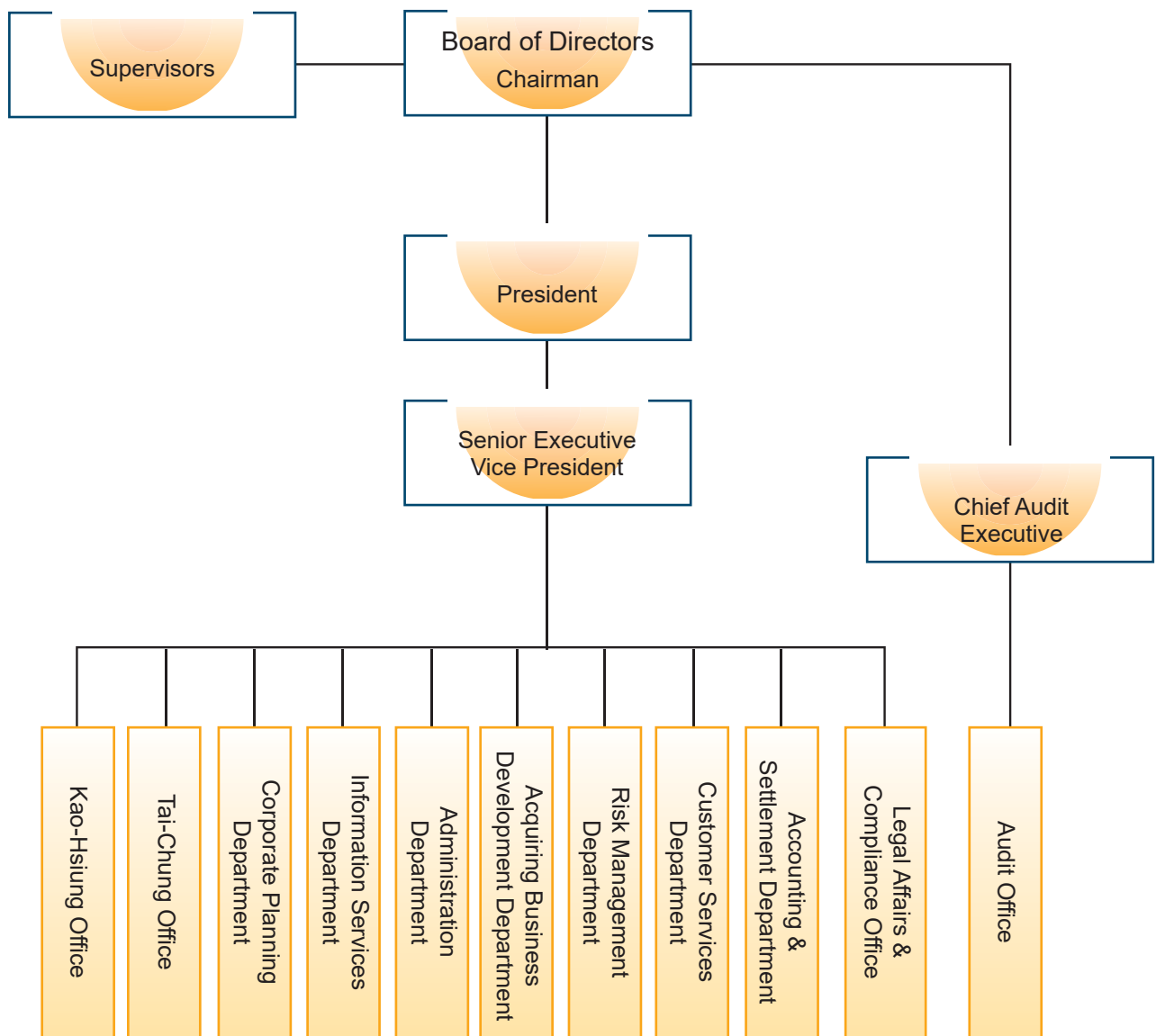
Two. Introduction to National Credit Card Center

- 
- 1991 ▼ NCCC subsequently partnered with Mastercard International and launched “Mastercard Credit Card” in Taiwan as the business continued growing.
 - 1993 ▼ NCCC set up the “Taichung Office” in July 1993 to meet the business expansion need in Central Taiwan.
 - 1994 ▼ NCCC partnered with JCB International and introduced JCB Credit Card, providing another option for the general public in Taiwan; the credit card market has been vigorously growing since then.
 - 1996 ▼ The credit card acquiring market was opened; NCCC member banks were allowed to conduct acquiring business themselves. Also, NCCC accepted the member banks’ outsourcing of acquiring business.
 - 1997 ▼ NCCC cooperated with Visa International to establish the first Internet credit card transaction environment in the Chinese language in the world and set up a “National Credit Card Center Worldwide Information Website” to deliver the latest professional global payment card business knowledge.
 - 2000 ▼ NCCC completed the self-built domestic settlement processing system for credit cards.
 - 2002 ▼ In response to the government policy, NCCC planned and set up various operating systems, including “Individual Income Tax Payment by Credit Card,” “Payments in Taipei e-services Online,” as well as “National Travel Card Payment.”
 - 2004 ▼ In response to the government policy, NCCC set up the “Common Operating Platform for Various Fee Payments in e-government Services.”
 - 2007 ▼ In making utmost efforts for protecting the information security of credit card holders and merchants, NCCC implemented relevant control measures and obtained the ISO 27001 information security certification in 2007.
 - 2009 ▼ In response to the government’s cross-strait financial policy development, NCCC was authorized to engage in the POS payment transaction authorization, settlement services, and acquiring operations of China UnionPay Card (including credit card and debit card) in Taiwan in 2009.
 - 2010 ▼ NCCC was authorized to engage in the authorization and settlement processing services of UnionPay Credit Card ATM cash advance transaction in Taiwan.
 - 2011 ▼ NCCC was the first institution being authorized to engage in the acquiring business for UnionPay Card Online Payment in Taiwan.
 - 2012 ▼ NCCC officially commenced the operation of the professional computer facilities named “Ding Pu Data Center,” which is a development milestone of NCCC’s sustainable operation.
 - 2013 ▼ To comply with the “Personal Data Protection Act,” NCCC established an internal control system for personal data protection. NCCC obtained the BS10012 Personal Information Management System Certification from the British Standards Institution in 2013, by which

- NCCC abides to fully carry out the information security and personal data protection measures.
- 2014 ▼ NCCC cooperated with Financial Information Service Co. (FISC) and Taiwan Clearing House to jointly establish “Taiwan Mobile Payment Company,” opening up the new era for mobile payment in Taiwan.
- 2015 ▼ The “Jhubei backup computer facilities” formally began its operation. In accordance with the government policy, NCCC made donated to the “Financial Technology Development Fund” for supporting the research and development of innovative FinTech service as well as FinTech talent cultivation.
- 2016 ▼ To support the goal of “Double the PCE Percentage of Electronic Payments in 5 Years” set by the competent authorities and to respond to the digital FinTech development trend of integrating virtual and physical applications, NCCC established the “Credit Card Payment Platform for Public Agency Fee.” It created the Credit Card Big Data platform database and committed to promoting mobile payment and Internet payment businesses.
- 2017 ▼ NCCC expanded the application scope of “Credit Card Payment Platform for Public Agency Fee” acceptance channels to public hospital’s medical fees. It provided the Electronic Stored Value Card Transaction Operation Platform services and integrated terminals for share usage by electronic stored value card issuing institutions. NCCC proactively promoted the credit card small ticket platform and supported the domestic and foreign TSP systems switching mechanism to lay a technical foundation for domestic mobile payment.
- 2018 ▼ In response to the electronic payment multiplication policy set by the authorities, NCCC planned to set up its own payment card brand in Taiwan. It signed a cooperation agreement with Discover Financial Services LLC in July. NCCC also proactively introduced the merchant-presented QR Code compliant with EMVCo. Standards. It created the common financial QR Code to further expand the usage of electronic payments.
- 2019 ▼ To increase the e-payment ratio, NCCC planned for the addition of EMVCo 3DS 2.0 online transaction authentication services, and optimized the “Credit Card Holders Auxiliary Authentication Platform.” The “Big Data Analysis System” was launched in June to realize the policy goal of open data set by the government. With the development and progress of digital finance, internet-only banks joined as a member of NCCC. NCCC will provide safer payment services that are more aligned with the market requirements in the upcoming era of 5G and AI to promote the vigorous development of the payment industry in Taiwan.
- 2020 ▼ NCCC continued to cooperate with external institutions for improving the application value of the Credit Card Big Data Platform and realized the practical operations of Open Banking. In response to the “Triple Stimulus Vouchers” policy, NCCC served as the data transmission and interface platform between 25 card issuing institutions and the Triple Stimulus Vouchers platform to shorten the operating time and align with the efficacy and efficiency for the overall payment card industry. NCCC launched the “Online Customer Service” APP to provide a more convenient service channel for merchants and consumers, tapping into the era of mobile merchant services. Upon the COVID-19 outbreak, NCCC enacted burden alleviation measures for cooperating merchants since February to ride out the storm with the public and alleviate the operating pressure of different industries.

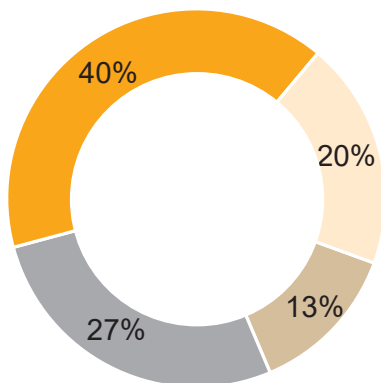
III. Organization Structure and Employees

(I) Organization Structure



(II) Employees

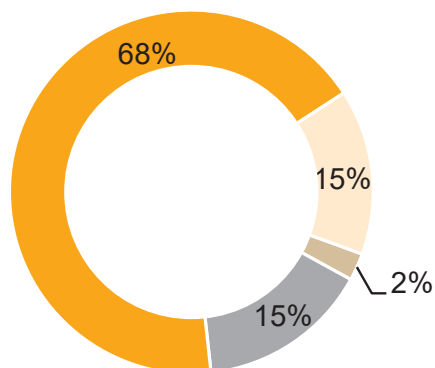
Age Statistic



13%	
20-29	47 people
27%	
30-39	98 people
40%	
40-49	145 people
20%	
50+	77 people

No. of Staff	367
Average age	41.7
Average years of service	14.54

Educational Background Statistic



15%	
Master's Degree	54 people
68%	
Bachelor's Degree	248 people
15%	
Junior College	56 people
2%	
High School	9 people

Two. Introduction to National Credit Card Center

(III) Executives of NCCC

Department	Title	Name
NCCC	President	Mr. Tong Liang Lin
NCCC	Senior Executive Vice President	Mr. Eric Hwang
NCCC	Senior Executive Vice President	Mr. Te-Ho Chen
Audit Office, NCCC	Chief Audit Executive	Mr. Chien-Ching Pan
Corporate Planning Department. NCCC	Senior Executive Vice President	Mr. Te-Ho Chen
Accounting & Settlement Department. NCCC	Executive Vice President	Ms. Carolyn Yao
Information Services Department. NCCC	Executive Vice President	Ms. Christina Wang
Administration Department. NCCC	Executive Vice President	Ms. Carolyn Liu
Risk Management Department. NCCC	Executive Vice President	Mr. Leo Y. Lee
Acquiring Business Development Department. NCCC	Executive Vice President	Mr. Change Tsai
Customer Services Department. NCCC	Executive Vice President	Mr. Ming-Te Wang
Legal Affairs & Compliance Office. NCCC	Chief Compliance Officer	Ms. Angela Hsu
Kaohsiung Office. NCCC	Branch Chief	Mr. Shang-Chin Huang
Taichung Office. NCCC	Branch Chief	Mr. James Hsu

IV. Directors/Supervisors



Group photo of the 13th Board of Directors & Supervisors

Title	Name
Chairman	Teng-Cheng Liu
Director	Wei-Cheng Lee (Alan Lee)
Director	Jung-Chien Lee
Director	Chih-Chi Lin
Director	Tong-Liang Lin
Director	Jeff Lin
Director	Oliver Shang
Director	Ching-Ing Hou
Director	Jia-Wen Chen
Director	Eric Chen
Director	Gary K.L. Tseng
Director	Chao-Shun Chang
Director	Yun-Peng Chang
Director	Cheng -Yun Tsang

Title	Name
Supervisor	Tony Fan
Supervisor	Tsai-Huai Chen
Supervisor	Te-Feng Chen



Three

Business
Operations
& Operating
Results

I. Authorization Switching and Settlement Operation

(I) Credit Card Authorization Switching Center Operation

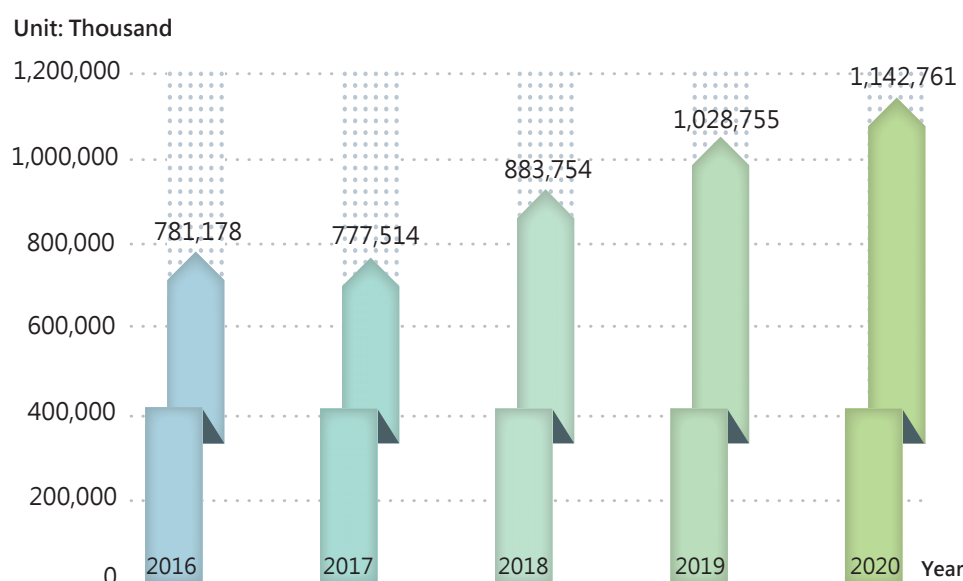
In response to the request from the Ministry of Finance for integrating and establishing a domestic authorization network for credit cards, NCCC and Financial Information Service Co. (FISC) jointly completed the system link in 2002. All the domestic credit card issuing and acquiring institutions may choose to link with either NCCC or FISC to switch and complete the transactions through the center of authorization system link. By doing so, we have achieved the competent authorities' policy goal "Taiwan-issued international credit cards complete transaction authorization processing inside of the country when used in Taiwan." Meanwhile, for the transactions made outside of Taiwan by NCCC member-issued credit cards and the transactions made inside of Taiwan by foreign-issued credit cards acquired by NCCC members, NCCC acts on behalf of members to switch the authorization messages through connecting with the interface of the international credit card associations.

《Business Scope》

1. To handle inter-bank credit card authorization switching transactions through the hub of authorization system link for Taiwan-issued credit cards (including magnetic stripe card and chip card) that are used at domestic merchants (including brick-and-mortar, electronic commerce, mail order, and TV order); the transactions are processed via reading magnetic stripe, chip, or by an RFID reader, or by manual operation.
2. To process authorization transactions made at merchants in foreign countries by Taiwan-issued credit cards and debit cards, as well as transactions made at merchants in Taiwan by foreign-issued credit cards.

《Operating Results》

Number of Transactions: In 2020, NCCC processed 1,142,761 thousand authorization switching transactions, representing an increase of 11.08% as compared to 1,028,755 thousand in 2019. Due to the usage growth of online transactions and small ticket channels, the number of authorized switching transactions recorded a steady increase; as shown in the figure below:



Three. Business Operations & Operating Results

(II) Domestic Credit Card Interchange & Settlement

By obtaining the competent authorities' approval, NCCC engages in processing domestic credit card interchange and settlement operations. NCCC handles the non-on-us transactions acquired by all acquiring institutions, consolidates and generates the settlement sum, and processes settlement funds collecting and sending through the "Central Bank of the Republic of China (Taiwan) Interbank Funds Transfer System." The business aims are as follows:

1. To develop domestic credit card interchange and settlement operating regulations in accordance with the policies.
2. To handle the inter-bank settlement of domestic credit card transactions to enhance transaction data security.
3. To complete the settlement in Taiwan for domestic transactions to increase operating efficiency.

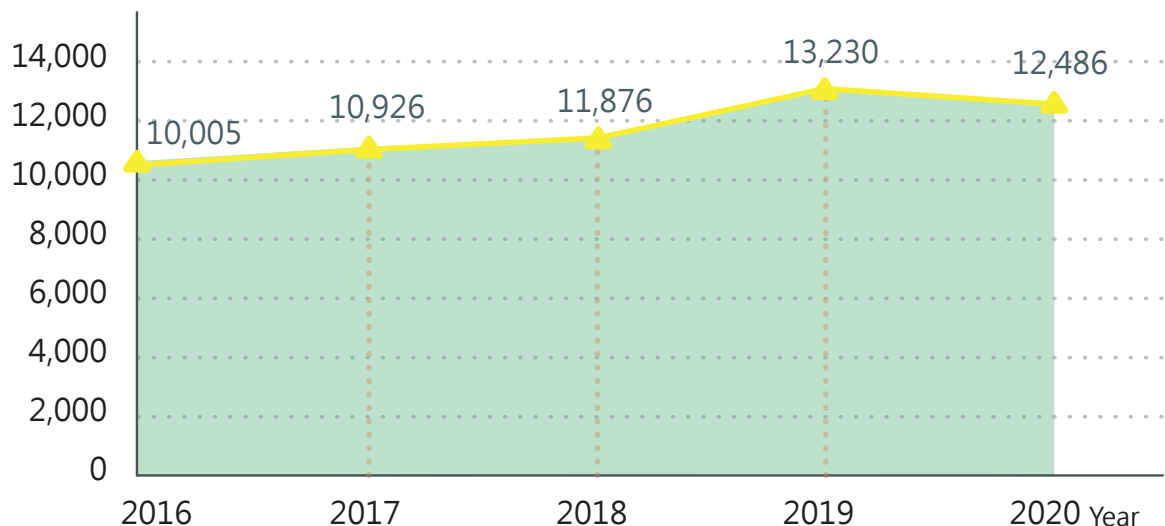
《Business Scope》

Domestic interchange and settlement processing, including credit card and debit card of Visa, Mastercard, and JCB. The number of participating institutions totaled 37.

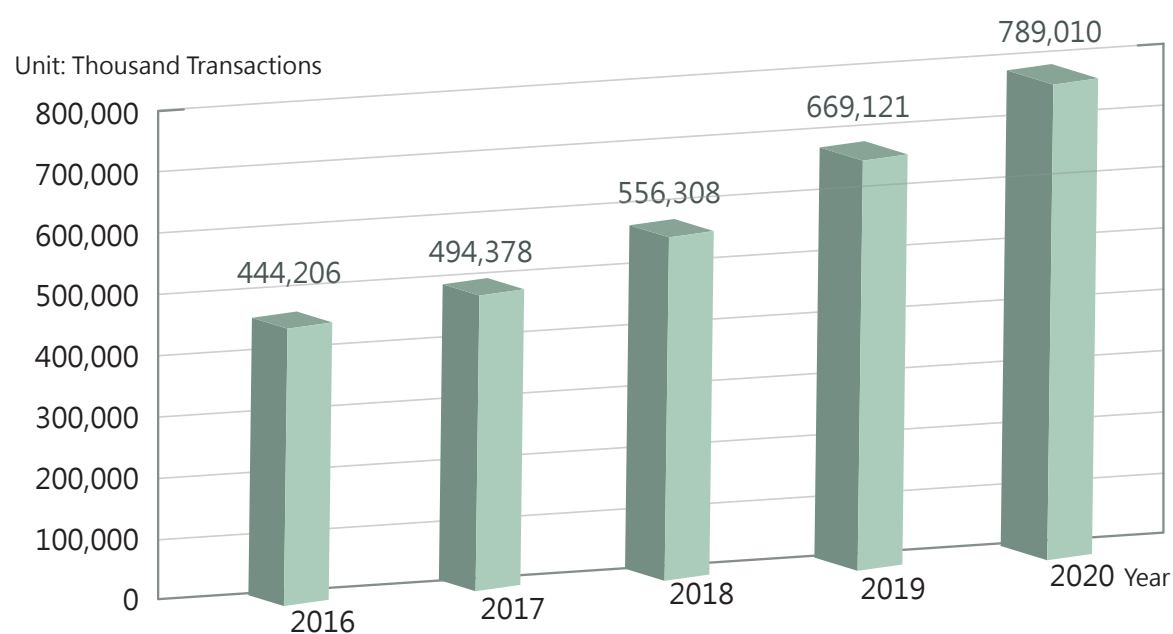
《Operating Results》

1. Transaction Volume: The domestic settlement transaction volume was NT\$1,248,600 million in 2020, representing a decrease of 5.62% as compared to NT\$1,323,000 million in 2019; as shown in the figure below:

Unit: NT\$100 million



2. Number of Transactions: The number of domestic settlement transactions was 789,010 thousand in 2020, representing an increase of 17.92% as compared to 669,121 thousand in 2019; as shown in the figure below:



Three. Business Operations & Operating Results

(III) Domestic and International Transaction Settlement for NCCC Member-issued Credit Cards

NCCC is established as a member organization. To help members reduce operating costs, NCCC consolidates domestic and international transactions made by holders of NCCC member-issued credit cards and handles settlement operations for the members. Operation effectiveness can be summarized as follows:

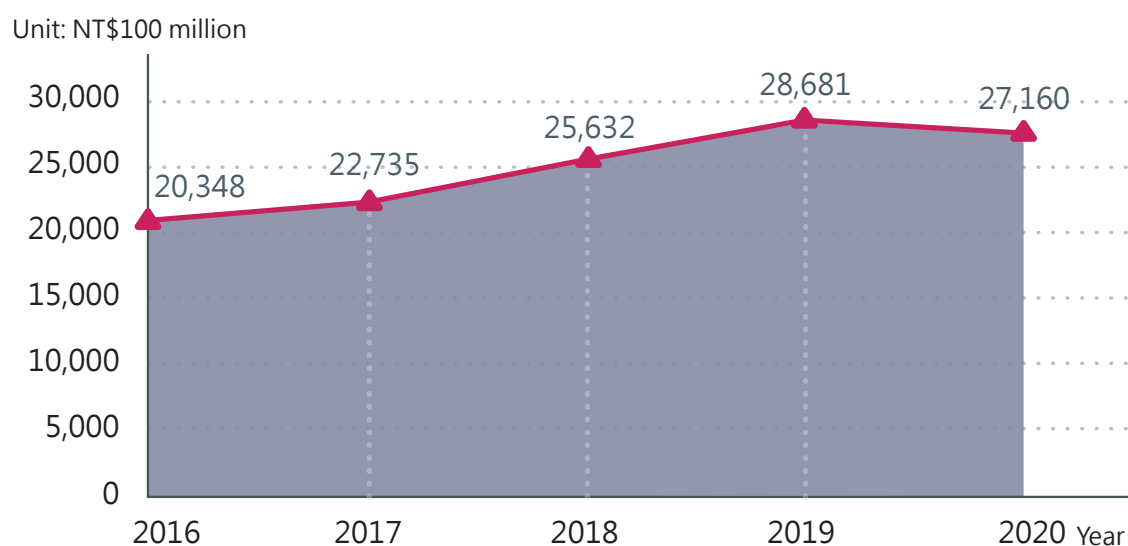
1. To coordinate the establishment of a settlement system linking with the international credit card associations and processing transaction settlement for members.
2. To reduce members' operating costs and improve operating efficiency through centralized processing of transaction data.
3. To periodically provide business statistic data for members' reference in policy-making.

《Business Scope》

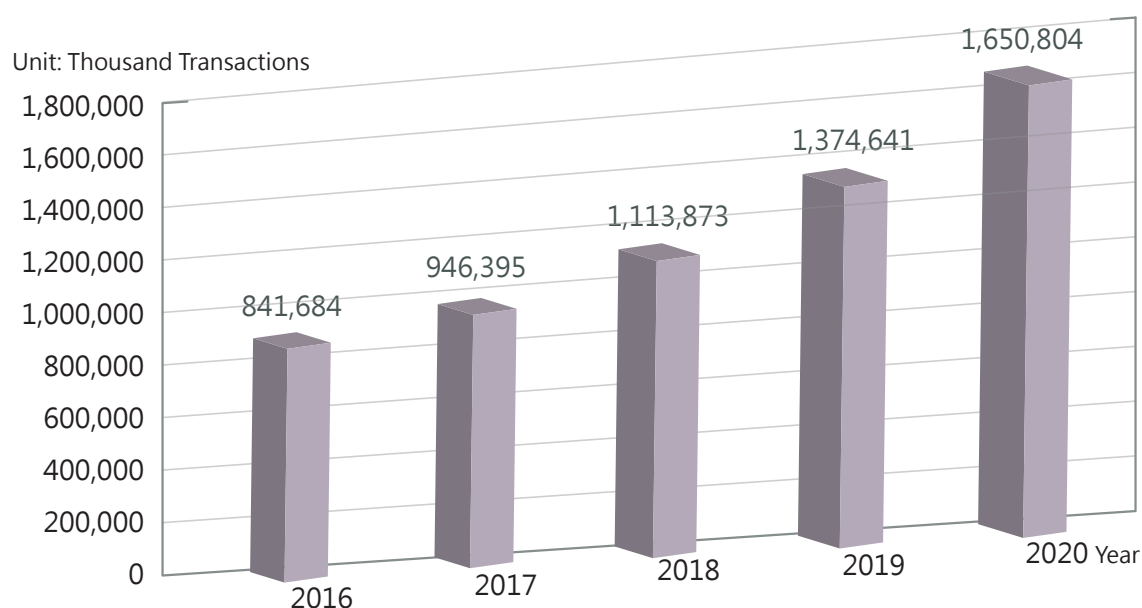
The NCCC member-issued cards include credit card and debit card of Visa, Mastercard, and JCB. The number of participating institutions totaled 25.

《Operating Results》

1. Transaction Volume: The settlement transaction volume was NT\$2,716,000 million in 2020, representing a decrease of 5.30% as compared to NT\$2,868,100 million in 2019; as shown in the figure below:



2. Number of Transactions: The number of transactions was 1,650,804 thousand in 2020, representing an increase of 20.09% as compared to 1,374,641 thousand in 2019; as shown in the figure below:



Regarding domestic credit card interchange and settlement and domestic and international transaction settlement for NCCC member-issued credit cards, the transaction volume for 2020 showed a negative growth as compared to that of 2019 due to the effects of COVID-19. However, the number of transactions maintained its positive growth as the consumption habits of consumers are transforming resulting from the outbreak, where the number of credit card transactions increased with the amount for a single purchase decreased. Therefore, small ticket transactions recorded a significant increase.

II. Acquiring Operation

Except for payment card transaction settlement services for merchants, the acquiring operations also include relevant operations required for providing such services, including but not limited to merchant recruitment, merchant credit evaluation, as well as card acceptance equipment installment.

When cardholders make card consumption at NCCC merchants, NCCC acquires the sales receipts with transaction details from the merchants, makes payment to merchants after deducting handling charges, and processes subsequent payment with each corresponding card issuing bank.

Three. Business Operations & Operating Results

《Business Scope》

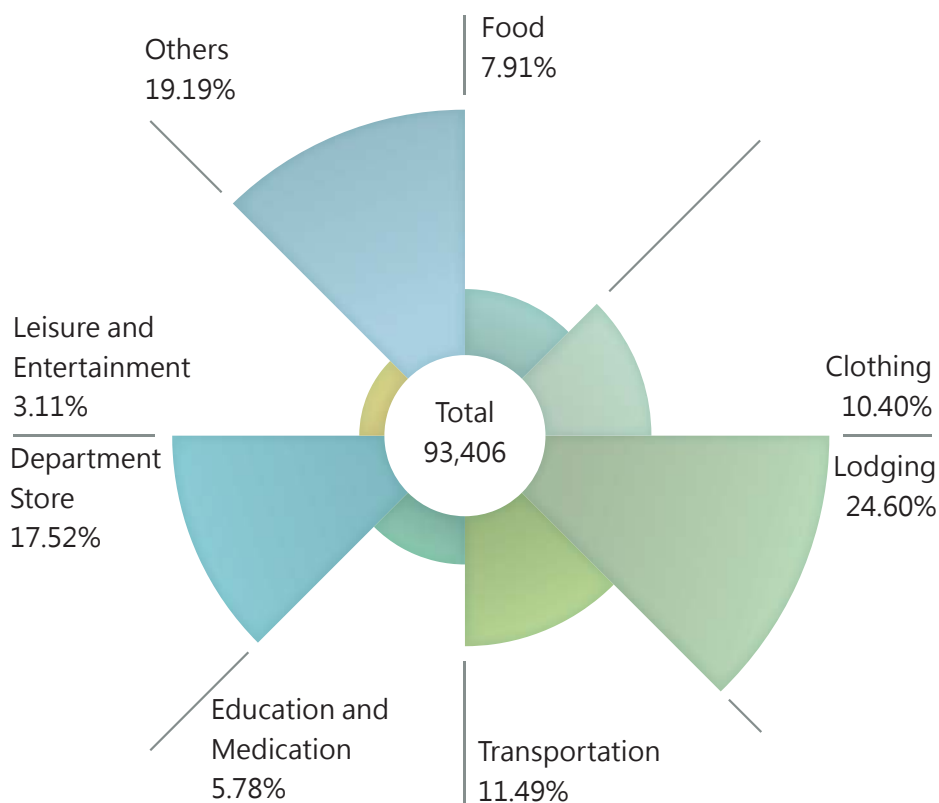
NCCC's acquiring operations include Visa, Mastercard, JCB, DFS (Discover/Diners), UnionPay, and Taiwan Pay (formerly Smart Pay). NCCC has also accepted acquiring service outsourcing from American Express International (Taiwan), Inc. to conduct certain acquiring operation services for American Express Card.

《Operating Results》

As of December 2020, the number of NCCC merchants (including the number of installment payment merchants) was 93,406, representing a decrease of approximately 0.51% as compared to the same period last year (93,886 in December 2019). The decrease in the number of NCCC merchants was primarily due to the impacts of COVID-19. During the outbreak, NCCC spared no effort in securing the credit card acquiring market and committed to expanding the number of merchants accepting e-payment, the small ticket platform, and QR Code, in the hope of stabilizing the acquiring market. However, the impacts of the outbreak resulted in a slight decrease in the number of NCCC's merchants.

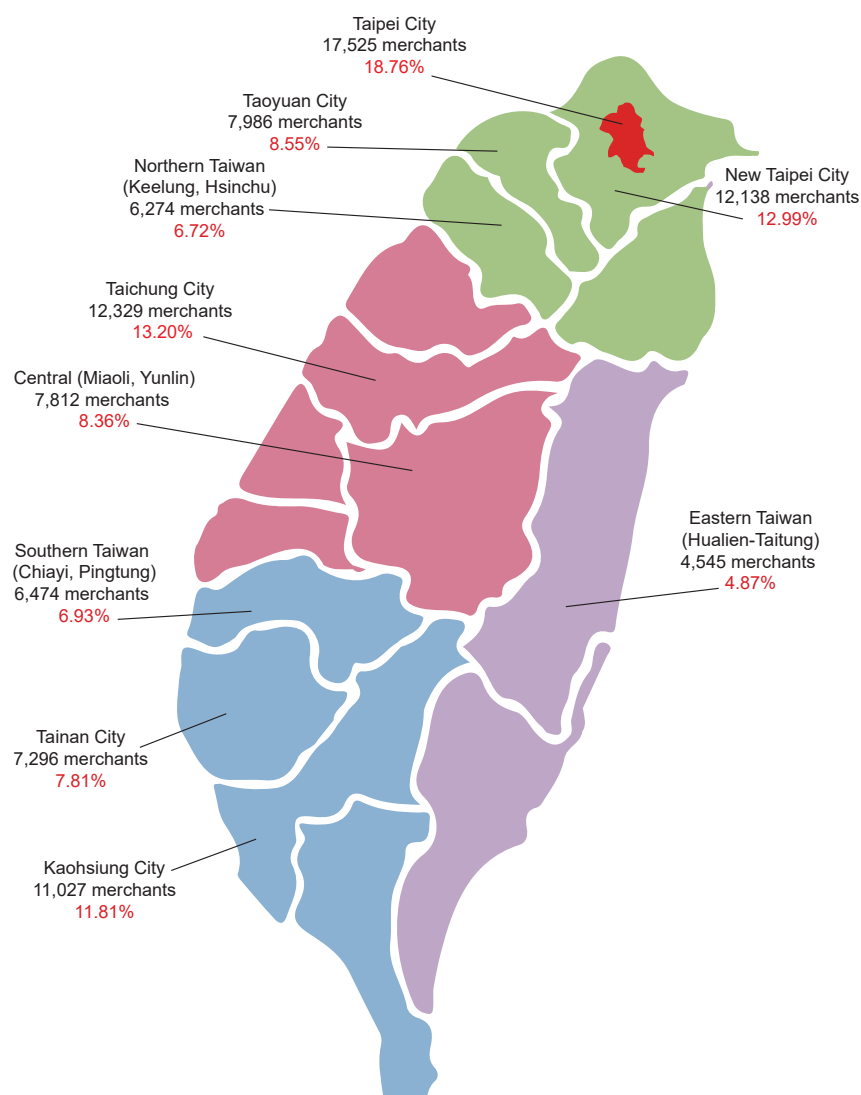
(I) NCCC Merchant Categories and Percentage

There are 7,389 food merchants, 9,716 clothing merchants, 22,975 lodging merchants, 10,736 transportation merchants, 5,401 education and medication merchants, 2,900 leisure and entertainment merchants, 16,361 department store merchants, and 17,928 other merchants. The percentage of each merchant category is shown in the figure below:



(II) Distribution of NCCC Merchants

There are 17,525 merchants in Taipei City, 12,138 merchants in New Taipei City, 7,986 merchants in Taoyuan City, 12,329 merchants in Taichung City, 7,296 merchants in Tainan City, 11,027 merchants in Kaohsiung City, 6,274 merchants in the Northern region, 7,812 merchants in the Central region, 6,474 merchants in the Southern Region, and 4,545 merchants in the Eastern region. The distribution among the municipalities, counties, and cities is shown in the figure below:

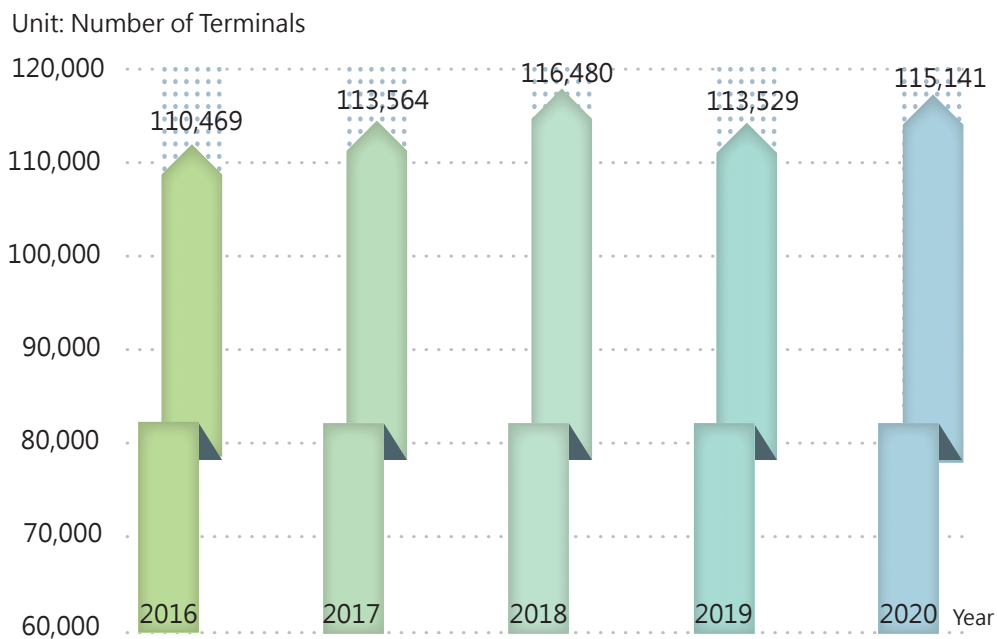


Taipei City 17,525 merchants (18.76%)	Northern Taiwan (Keelung, Hsinchu) 6,274 merchants (6.72%)
New Taipei City 12,138 merchants (12.99%)	Central (Miaoli, Yunlin) 7,812 merchants (8.36%)
Taoyuan City 7,986 merchants (8.55%)	Southern Taiwan (Chiayi, Pingtung) 6,474 merchants (6.93%)
Taichung 12,329 merchants (13.20%)	Eastern Taiwan (Hualien, Taitung) 4,545 merchants (4.87%)
Tainan 7,296 merchants (7.81%)	
Kaohsiung 11,027 merchants (11.81%)	
Total 93,406 (100%)	

Three. Business Operations & Operating Results

(III) Point of Sale Terminals

As of December 2020, the number of NCCC's point of sale terminals (including self-purchased terminals and virtual terminals of NCCC and merchants) was 115,141, representing an increase of approximately 1.42% as compared to the same period last year (December 2019); as shown in the figure below. The increase in the number of NCCC's point of sale terminals as compared to the same period last year was primarily due to the impacts of COVID-19, where merchants were required to introduce value-added functions of accepting electronic stored value cards, mobile payment, and QR Code apart from maintaining the general credit card transactions. Therefore, merchants installed terminals in response to the demand for value-added transactions.



III. NCCC Common Operating Platforms

(I) Credit Card Issuing Business of NCCC Members

NCCC members issue Visa, Mastercard, and JCB cards. The card issuance continued to expand rapidly in the wake of the increasing maturity of consumers' financial environment in Taiwan and the rising demand of citizens, together with marketing and promotions made by the NCCC member institutions. In recent years, the growing trend of card issuance has slowed down, and the number of cards in circulation has been growing at a steady pace.

《Business Scope》

Visa, Mastercard, and JCB Card issued by NCCC members.

《Operating Results》

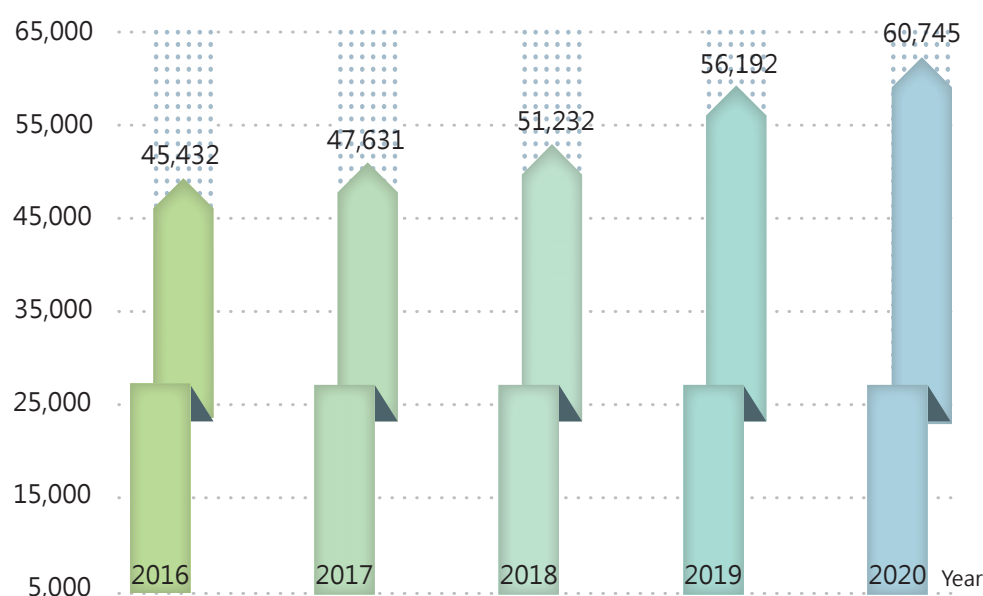
Number of Cards in Circulation: The number of credit cards and debit cards in circulation issued by NCCC members totaled 60,745 thousand in 2020, representing an annual growth rate of 8.10% as compared to 56,192 thousand in 2019. The number of cards in circulation showed a steady growth as NCCC members continued to work with new channels for the launch of credit card products, expanding consumers' choices of use; as shown in the figure below.

【Cards in circulation refers to number of total cards issued less number of total cards cancelled .】

Note: Number of credit cards in circulation issued by NCCC members in 2020: 44,787 thousand.

Number of credit cards in circulation issued by NCCC members in 2019: 42,065 thousand.

Unit: Thousand Cards



Three. Business Operations & Operating Results

(II) Installment Payment Operating Platform

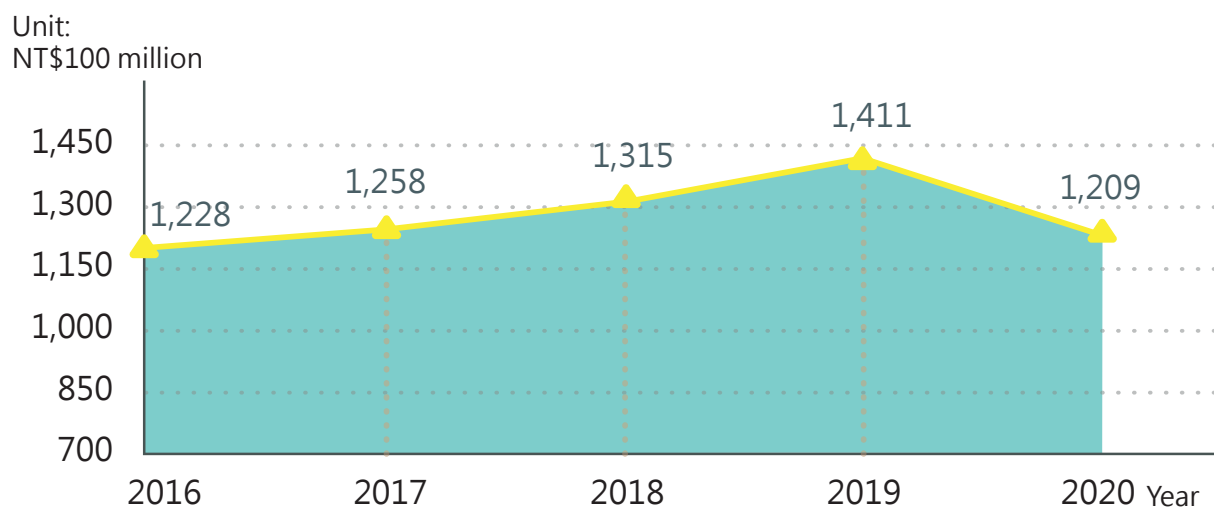
In response to the market needs, NCCC developed and established a common operating platform for both card issuing institutions and their installment payment merchant partners in 2004. The installment payment merchants who link to the NCCC network provide the instant online installment payment function, allowing cardholders to pay the transaction amount of the consumption by making multiple installment payments for amounts recorded on credit card statements afterward.

《Business Scope》

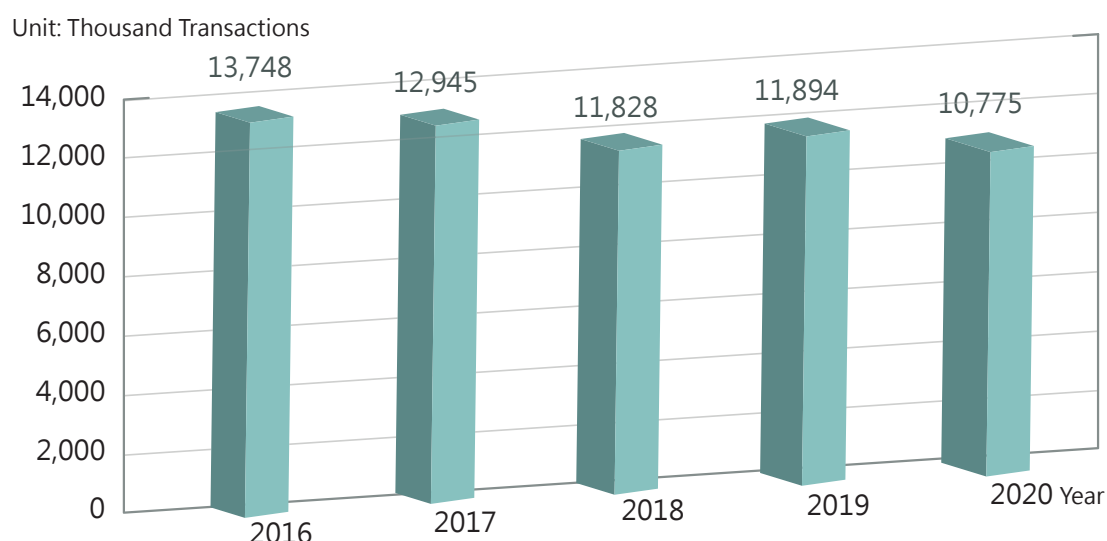
The card issuing institutions and merchants participated in the installment payment operating platform.

《Operating Results》

1. Transaction Volume: The transaction volume for installment payment amounted to NT\$120,900 million in 2020, representing a decrease of approximately 14.4% as compared to NT\$141,100 million in 2019; as shown in the figure below:



2. Number of Transactions: The number of transactions for installment payment was 10,775 thousand in 2020, representing a decrease of approximately 9.40% as compared to 11,894 thousand in 2019; as shown in the figure below:



3. The decrease in transaction volume and number of transaction for installment payment during 2020 as compared to the same period last year was due to the effects of border control and pandemic prevention measures for the access to eight types of public venues implemented for duty-free merchants, the tourism industry, aviation industry, large-scale department stores, and supermarkets. Therefore, the transaction volume for installment payment arising from the five major industries recorded a decrease of 21.03% in aggregate as compared with the same period last year. Even with the increase in the demand of the Stay-at-Home Economy, the overall transaction volume showed a decrease as compared to the same period last year.

(III) Cardholders Online Transaction Authentication Service

To enhance security for credit card online transactions and improve the service quality provided to cardholders by card issuing institutions, NCCC established the “EMV 3DS – ACS (Access Control Server) Authentication Service for Online Transaction Security” for international credit card associations such as Visa, Mastercard, and JCB that complied with EMVCo. and introduced the “Risk-Based Authentication (RBA)” function to provide online transaction authentication services with safety, convenience, and risk assessment to cardholders of card issuing institutions. The service is equipped with comprehensive functions and has passed the audit conducted by the assessment institution that is designated by the Payment Card Industry Data Security Standard Council (PCI SSC). It supports the online transaction authentication for three brands, including Visa Secure (formerly Verified by Visa), Mastercard SecureCode, and JCB J/Secure. Due to the business requirements of card issuing institutions, NCCC introduced safety authentication services such as Visa Secure, Mastercard Identity Check, and JCB J/Secure that comply with EMV 3DS to provide online transaction with security and convenience through the setting of parameters for the RBA system.

Three. Business Operations & Operating Results

(IV) Credit Card Purchase Transaction Benefit Platform

In 2014, to meet the market needs, NCCC created a credit card purchase transaction benefit platform that is provided to the card issuing institutions and merchants for promotion and marketing events. When the credit card purchase transactions are made, the transactions will immediately be verified against the benefit terms and be exchanged for benefits via the platform and point of sale terminal. Such systems simplify the operations of merchants and invigorate marketing resources to increase the number of customers, along with transaction amounts.

《Business Scope》

The platform applies to the card issuing institutions and merchants participated in the credit card purchase transaction benefit platform of NCCC.

《Operating Results》

In 2020, a total of 38 events were held, with a total number of 204 institutions and 9,258 merchants participated.

(V) Credit Card ATM Cash Advance

NCCC established a credit card cash advance network and has partnered with the members engaging in acquiring operations to provide ATM (automatic teller machine) cash advance transaction services to the credit card holders. Cardholders may use Visa, Mastercard, JCB, and AE cards to carry out cash advance transactions by entering passwords, obtained from the card issuing institutions in advance, at ATMs attached with an “NCCNET Plum Blossom” sticker (as the figure below). The business scope includes the following:

1. Domestic ATM cash advance transaction service on the NCCC value-added application platform.
2. ATM transaction switching service for foreign Visa PLUS Card.
3. ATM transaction switching service for foreign Mastercard Cirrus Card.



(VI) Bonus Point Accumulation and Redemption Platform

NCCC provides a channel for bonus points exchange for card issuing institutions. The participating merchants linked to the NCCNET POS network can provide an online redemption function that enables the cardholders to immediately redeem the bonus points accumulated to the transaction amount when paying for the transaction.

(VII) Government Fee Payment

To increase the penetration rate of e-payments and the credit card acceptance channels, NCCC established the "Credit Card Payment Platform for Public Agency Fee" service, allowing the public to pay public agencies related fees and bills over the counters by credit card. The payment platform also applies to medical expenses at public hospitals (excluding items of plastic surgery, postnatal nursing, and physical examination). Meanwhile, the platform system may link with the websites and APPs of public agencies and hospitals, allowing the public to make payments at the websites and APPs of public agencies and hospitals.

To accord with the government policy of bringing greater convenience to citizens, and provide incremental services and functions to the card issuing institutions, NCCC has partnered with Chunghwa Telecom and motor vehicle administration bodies in providing the general public with fee payment services, where citizens can use credit cards to pay school registration fees, public service-related charges, motor vehicle administration fees, and taxes by obtaining the authorization code via phone voice operating system or Internet. The business scope includes the following:

1. E-government service platform: including "school registration & miscellaneous fees" and "on-campus administration affairs fees" charged by all levels of schools as well as public service-related fees charged by all levels of public agencies participated on the e-government service platform.
2. Motor vehicle administration fee: including traffic violation fine, fuel fee, handling fee, license plate fee, license plate number selection charge, etc.
3. Various types of taxes: including payments of Individual Consolidated Income Tax, assessed tax, as well as business tax, etc.

(VIII) Electronic Stored Value Card Transaction Operation Platform

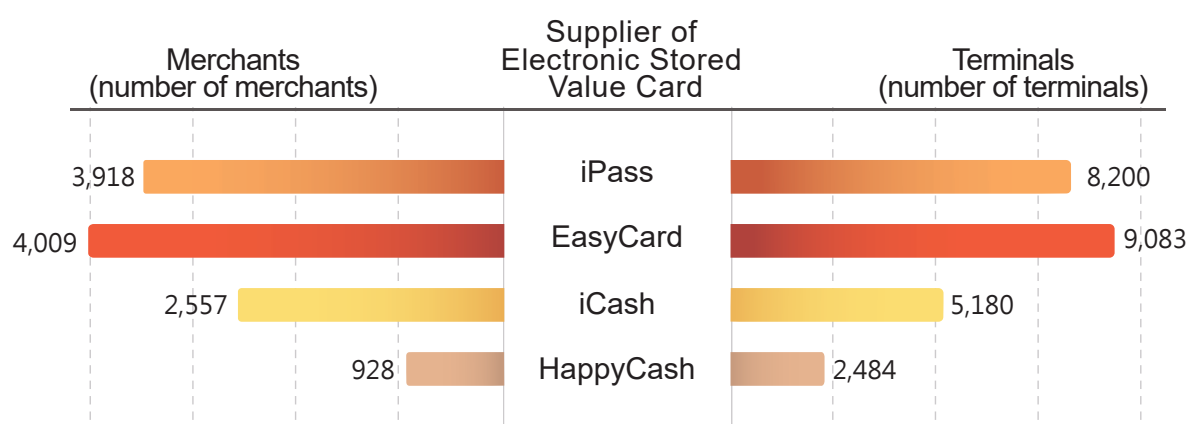
In 2016, to promote the convenience of small ticket service for citizens and accelerate the increase in the domestic electronic payment penetration rate, NCCC established the Electronic Stored Value Card Transaction Operation Platform in accordance with the "Regulations Governing Institutions Engaging In Credit Card Business," "Act Governing Issuance of Electronic Stored Value Cards," "Rules Governing the Business of Electronic Stored Value Card Issuers," and "Regulations Governing the Security of Electronic Stored Value Cards," and other operation specifications for electronic stored value cards to integrate transactions of four domestic electronic stored value cards, reducing the processing costs of small ticket transactions and manifest a favorable business environment.

《Business Scope》

Refer to the merchants that use the Electronic Stored Value Card Transaction Operation Platform of NCCC for electronic stored value card transactions.

《Operating Results》

The number of merchants that use the Electronic Stored Value Card Transaction Operation Platform of NCCC and number of terminals:



Three. Business Operations & Operating Results

(IX) Small Ticket Platform

To provide credit card purchase service with rapid checkout, NCCC provides the “small ticket” function for merchants with low consumption price and high transaction volume (such as industries of convenience store/grocery store, Chinese/Western fast food, parking lot, handmade drinks, breakfast stall, bakery/confectionery, traditional market/ weekend market/night market, and vending machine). No signature is required for the credit card purchase made at the small ticket channels of NCCC with cards issued by card issuing institutions signed up for the operation.

【Identification Mark for the Small Ticket Platform】



【Diversified Payment Sticker for Merchants and Channels Using the Small Ticket Platform】



《Business Scope》

A total of 29 credit card issuing institutions and a total of 18 debit card issuing institutions signed up for the small ticket operation of NCCC.

(the sequence is subject to the code of the financial institutions)

Participating Credit Card Institutions			
Land Bank of Taiwan	Taiwan Cooperative Bank	First Commercial Bank	Hua Nan Commercial Bank
Chang Hwa Commercial Bank	Shanghai Commercial & Savings Bank	Taipei Fubon Commercial Bank	Cathay United Bank
Mega International Commercial Bank	Citibank Taiwan	Taichung Commercial Bank	HSBC Bank (Taiwan)
Hwatai Bank	Taiwan Shin Kong Commercial Bank	Sunny Bank	COTA Commercial Bank
Union Bank of Taiwan	Far Eastern International Bank	Yuanta Commercial Bank	Bank Sinopac
E.Sun Commercial Bank	KGI Bank	DBS Bank (Taiwan)	Taishin International Bank
Jih Sun International Bank	Entie Commercial Bank	CTBC Bank	Taiwan Rakuten Card
American Express			

Participating Debit Card Institutions			
Land Bank of Taiwan	Taiwan Cooperative Bank	First Commercial Bank	Hua Nan Commercial Bank
Chang Hwa Commercial Bank	Shanghai Commercial & Savings Bank	Taipei Fubon Commercial Bank	Cathay United Bank
Mega International Commercial Bank	HSBC Bank (Taiwan)	O-Bank	Taiwan Shin Kong Commercial Bank
Sunny Bank	Union Bank of Taiwan	Bank Sinopac	E.Sun Commercial Bank
Taishin International Bank	CTBC Bank		

《Operating Results》

1. Launch dates for the functions of the small ticket platform:

Function of the Small Ticket Platform	Launch Date
Provides Support non-member banks of participating institutions transactions	September 2017
Provides EC (E-Commerce) online transactions	September 2017
Provides MCP (Mobile Contactless Payment) transactions	January 2018
Provides Kiosk transactions	April 2018
Provides debit card transactions	July 2018
Electronic Stored Value Card Transaction Operation Platform functions-enabled	January 2019
Support Credit Card Purchase Transaction Benefit Platform functions-enabled	April 2019
Stop accepting transactions with less than NT\$1,000 using magnetic stripe cards	July 2020

2. Number of Transactions: The number of transactions was approximately 21.1 million in 2020, representing a growth of 43% as compared to 14.8 million in 2019.
3. Transaction Volume: The transaction volume amounted to approximately NT\$5.3 billion in 2020, representing a growth of 41% as compared to NT\$3.76 billion in 2019.
4. Number of merchants and channels using the small ticket platform: There were approximately 4,720 merchants in total as of December 2020.
5. The reasons for the growth in transaction volumes and number of transactions for the small ticket platform during 2020 are analyzed as below:
 - (1) Increase in the number of merchants: As compared to 2019, the number of merchants using the small ticket platform grew from 3,350 to 4,720.
 - (2) Launch: In response to the development of system modification for small ticket chain stores, functions of the small ticket platform were officially launched one after another in 2020.
 - (3) Marketing activities: In 2020, many merchants using the small ticket platform organized card discount events, which effectively brought forward the growth in small ticket transaction volumes and number of transactions.

(X) Credit Card Holders Auxiliary Authentication Platform

To improve the operating efficiency for financial services, NCCC established the "Credit Card Holders Auxiliary Authentication Platform" in response to the government's policy and in accordance with legal regulations, which allows e-payment institutions and financial institutions to accept the system that citizens using "credit cards" as an auxiliary to cardholder authentication. When citizens register and open type 2 or type 3 e-payment accounts online on the websites of e-payment institutions, or open digital accounts or apply for credit cards online with banks, the verifying institutions would transmit the credit card information to NCCC's authentication platform, and the card issuing institutions would verify whether the credit card payment tools are used by the users to achieve the purpose of digitalization and paper-free. The application scenario was expanded since January 2021, where the platform provides the authentication function for insurance companies regarding the policyholder authorizing paying premium via credit cards or debit cards.

IV. Fraud Prevention Operation

To monitor fraud transactions by merchants, NCCC has utilized prevention systems and statements with parameters preset and expert interpretation as a monitoring tool to identify any abnormal activities and proceed with investigations. For merchants who are verified violating the merchant contract, NCCC will take actions of education, warning, monitoring, or terminating the merchant contract according to the materialness of such violation, to supervise such merchants for improving. Also, as the credit card fraud reporting center, NCCC provides a fraud transaction information reporting platform that consolidates information from international associations and credit card institutions and establishes a joint defense system with an information-sharing mechanism to benefit the effective risk control in the domestic credit card transaction environment.

《Business Scope》

For NCCC merchants, NCCC implements effective monitoring and management system, consolidates and sends analytic fraud information to the credit card institutions for effective information management, so as to jointly create a more secure credit card transaction environment in Taiwan.

《Operating Results》

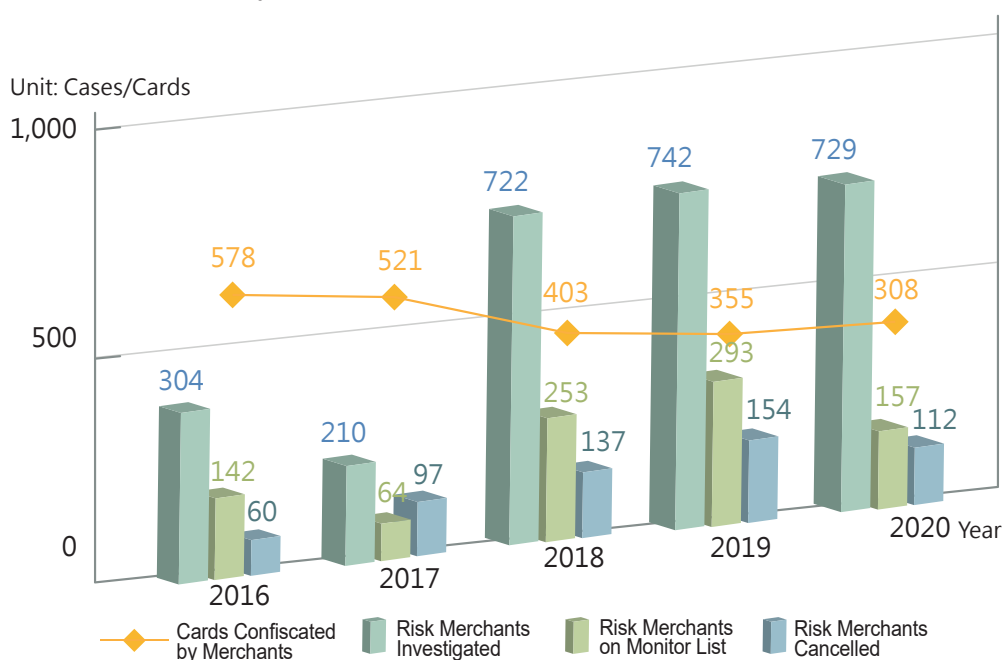
(I) Risk Merchant Control and Credit Card Confiscation

Number of Risk Merchants Investigated: The number of merchants investigated decreased by 13 from 742 in 2019 to 729 in 2020.

Number of Risk Merchants on Monitor List: The number of merchants on the monitor list decreased by 136 from 293 in 2019 to 157 in 2020.

Number of Risk Merchants Cancelled: The number of merchants canceled decreased by 42 from 154 in 2019 to 112 in 2020.

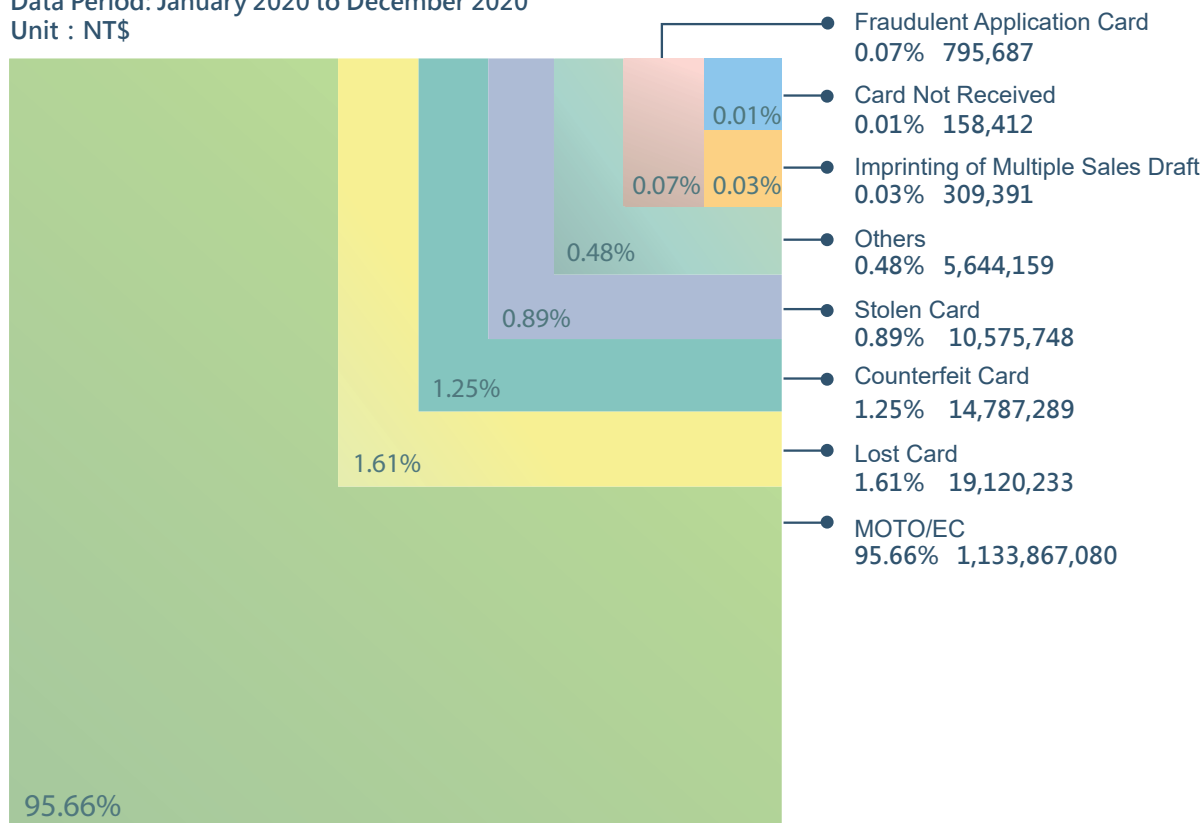
Number of Cards Confiscated by Merchants: The number of cards confiscated by merchants decreased by 47 from 355 in 2019 to 308 in 2020.



(II) Analysis on Fraud Transaction Categories Reported by Domestic Card Issuing Institutions

Data Period: January 2020 to December 2020

Unit : NT\$



Total amount of fraudulent transactions reported by the domestic card issuing institutions NT\$1,185,257,999 (not the actual amount of loss).

Affected by the outbreak of COVID-19, the domestic settlement transaction volume was NT\$1,248.6 billion in 2020, representing a decrease of NT\$74.4 billion (-5.62%) as compared to NT\$1,323 billion in 2019; the amount of fraud reporting by the domestic card issuing institutions was NT\$1.185 billion in 2020, representing a decrease of NT\$0.23 billion (-16.43%) as compared to NT\$1.418 billion in 2019; both amounts showed the same trend. As for the fraud transaction categories, the "card-not-present transactions (CNP)" accounted for 95.66% of the total reported fraud transaction amount; representing a slight increase of 2.28% as compared with the 93.38% for the same period last year, which was due to the significant increase in CNP transactions during the outbreak.

Remarks: (In accordance with the standards of International Card Associations' Fraud Reporting Classification)

- (1) Lost card: Card lost and found used fraudulently.
- (2) Stolen card: Card stolen and used fraudulently.
- (3) Card not received: New/renewed card intercepted during mail and used fraudulently.
- (4) Fraudulent application card: Card applied and used fraudulently without authorization from the genuine cardholder.
- (5) Counterfeit card: Card counterfeited without authorization from the card issuing institution and used fraudulently.
- (6) MOTO/EC: Non-face-to-face transactions made without authorization from the genuine cardholder.
- (7) Imprinting of multiple Sales Drafts: Merchant falsely used cardholder's data such as card number and faked transactions.
- (8) Others: Other types of fraud not listed above.



Four

Business Performance

I. Major Achievements in 2020

(I) Promote digital financial innovative services

1. E-commerce (ACS) security authentication platform:
In response to the trend of overall market development and business requirements of card issuing institutions, NCCC established the “EMV 3DS – ACS (Access Control Server) Authentication Service for Online Transaction Security” for international credit card associations such as Visa, Mastercard, and JCB that complied with EMVCo., which was launched in April 2020. It possesses the “Risk-Based Authentication (RBA)” function and supports 3DS1.0 and EMV 3DS transactions to provide online transaction authentication services with safety, convenience, and risk assessment.
2. Credit Card Holders Auxiliary Authentication Platform:
NCCC established the “Credit Card Holders Auxiliary Authentication Platform” to support e-payment institutions and financial institutions in processing the credit card auxiliary authentication of accepting cardholder's applications for credit card and opening for digital deposit account. To facilitate the authentication services of the insurance industry regarding the policyholder authorizing paying insurance premium via credit cards or transferred by financial institutions, the application scope of NCCC's Credit Card Holders Auxiliary Authentication Platform was extended to insurance companies.
3. Continue the projects to promote a domestic payment card brand:
 - (1) The establishment of the Certification Body (CB) was completed in March 2020, including making certification documents, setting up mechanisms for card personalization and terminal certification. The infrastructure of processing physical card transactions went production in June of the same year. This would ensure the compatibility and accuracy of transactions processed by the domestic card issuing and acquiring institutions.
 - (2) NCCC passed the due diligence performed by Discover Financial Services (DFS) in July 2020.
4. Mobile payment operations:
 - (1) NCCC supports the switching of domestic and international TSP for tokenization and helps institutions to introduce international mobile payment services. In 2020, 19 card issuing institutions had adopted the token service provided by Taiwan Mobile Payment Company, 18 card issuing institutions have adopted the token service provided by Visa and Mastercard to support international mobile payment (Apple Pay, Samsung Pay, and Google Pay). NCCC cooperated with JCB for establishing a token database to support card issuing institutions in issuing JCB mobile credit cards; there are 7 card issuing institutions that adopted and supported international mobile payment (Apple Pay).
 - (2) To increase the e-wallet payment scenarios accepted by NCCC's merchants, the competent authority approved the “Business for Integration and Conveyance of Receipt/Payment Information” in June 2020 and in the process of cooperative planning with third-party payment wallets. Furthermore, due to the integration of e-payment and electronic stored value card regulations, NCCC continued communicating with FISC for the cooperation with regards to the acquiring operations of common QR Code for e-payment, in the hope of providing integrated services with

Four. Business Performance

single gateway and consistent operations for merchants, acquiring institutions for credit cards, e-payment institutions, and the third-party payment service providers.

5. Merchant-Presented QR Code compliant with EMVCo. Standards:

(1) NCCC has been supporting the EMV QR Code domestic transactions since November 2018, and rolling out different application scenarios, including traditional markets, taxi fleets, and the hotel industry, to develop diversified e-payment tools. As of December 2020, 22 card issuing institutions and 14 acquiring institutions support domestic EMV QR Code merchant-presented transactions.

(2) To increase the penetration rate of e-payments in Taiwan and expand the scenario of EMV QR Code usage, the EMV QR Code cross-border transaction processing system for Visa, Mastercard, and UnionPay was launched. As of December 2020, 2 card issuing institutions and 1 acquiring institution support EMV QR Code cross-border transactions for Visa and Mastercard, and 4 acquiring institutions support EMV QR Code cross-border transactions for UnionPay.

6. Establishment of the E-invoice System: In view of environmental protection, energy-saving, and carbon emission reduction, and in response to the government's policy to promote e-invoices, NCCC established an E-invoice System for merchants. From March 2021, the certificate for acquiring service charges shall be changed from issuing the current receipts to e-invoice to reduce the tax costs and improve operating efficiency for merchants.

(II) Continuously disclose credit card open data and enhance the function and value of data application:

1. A total of 2,496 datasets were disclosed on NCCC's website and the open data platform operated by the government; all datasets have received recognition from the Golden Label Award under the "Golden Quality Award of Open Data." In addition, NCCC started to provide access for citizens to acquire datasets (including gender, age, annual income groups, occupation categories, educational background categories, etc.) that are in compliance with the Open API Specification (OAS) standards endorsed by the National Development Council (NDC) from NCCC's website via API links.

2. NCCC provided the industrial comparison and analytical report related to card issuing, acquiring, consumption pattern, and risk of fraud for the previous year to credit card institutions. By doing so, NCCC may assist credit card institutions in understanding the positions and the overall market so as to offer a reference in establishing their strategies for business development. NCCC also collected feedbacks and recommendations from credit card institutions to optimize the content and presentation of the analytical report.

3. To facilitate the use of open data by external parties, NCCC continued to promote the Big Data application analysis for credit cards. For the year ended 31 December 2020, an accumulated number of 19 case research and analytical reports were disclosed and expected to be utilized by industries, the government, and the academic sector regarding industrial analysis and market research, which drew wide attention from various news media, competent authorities, the Directorate-General of Budget, Accounting and Statistics, the Executive Yuan, and the Central Bank.

(III) Strengthen information security and risk control

1. Due to the booming information and communication application, NCCC upgraded its level of information security protection through continuous efforts. NCCC replaced its

internal firewalls, established the “Monitoring System for Changes in Material Data on the Host,” completed the 1st phase replacement of backbone network (adjusting network nodes and communication protocol, replace network equipment, improve network speed, etc.) for merchants across Taiwan to complete the infrastructure for the payment card industry. Moreover, NCCC completed the cloud host equipment transfer to provide large-scale merchants a stable transaction environment and data protection. NCCC continued to complete the establishment of 3rd phase-stage 4 for the disaster recovery (DR) center and carried out DR drills in accordance with the requirements to reinforce its disaster response capacity.

2. NCCC continued improving the coordinating and cooperating relationships with prosecutors, polices, and investigation departments, international card organizations, bank associations, and credit card institutions. It collected, analyzed the latest fraudulence cases and methods of crimes, and kept abreast the latest information regarding losses arising from fraud to provide references to credit card institutions, exerting the effect of its role as the domestic window for credit card fraudulence prevention.
3. NCCC adopted its management by grading and classification for industries with high risks, and it collected risk premium according to industrial features or level of risks. Furthermore, there is dedicated personnel in place to regularly monitor the payment request transactions of industries each month, so as to grasp the industrial changes instantly. Management for merchants of high risks was reinforced by imposing the management system of monthly limits and single transaction limits, for controlling NCCC's risks.

(IV) Persisted in implementing its policies on anti-money laundering and countering the financing of terrorism

1. NCCC continued executing its assessment on anti-money laundering and countering the financing of terrorism and updated the annual risk assessment report of NCCC. In light of laws and regulations as well as the requirements from competent authorities, NCCC revised relevant internal control systems, completed relevant laws and regulations, and persisted in implementing its anti-money laundering and countering the financing of terrorism operations.
2. NCCC examined its policies on risk appetite, revised the qualitative and quantitative compliance indicators and examined risk factors, adjusted risk assessing methods, and improved its customer risk categorization and control measures. NCCC optimized the functions of its information system and integrated customers' basic information and transaction data to reinforce the capacity in transaction monitoring.

(V) Respond to the policy guidelines of pandemic prevention, burden alleviation, and revitalization announced by the government

1. Affected by the outbreak, NCCC established the “COVID-19 Pandemic Prevention Decision-making Team” and adopted the split operation system for employees to work at Fubei Office, Ding Pu Data Center and for employees to work from home on a rotation basis at Taichung and Kaohsiung Offices to mitigate the clustering risk for its employees.
2. NCCC offered 4 burden alleviation measures for merchants, including (1) exemption of merchants' service charges; (2) exemption of MPOS's equipment handover charges

- for merchants; (3) suspension of collecting default accounts from merchants; and (4) suspension of collecting outstanding residual values for terminals from merchants, to assist in reducing the impacts on merchants' businesses due to the outbreak.
3. In response to the "Triple Stimulus Voucher" policy endorsed by the Small and Medium Enterprise Administration, Ministry of Economic Affairs on 1 July 2020, NCCC served as the data transmission and interface platform between 25 card issuing institutions and the Triple Stimulus Voucher platform to process transactions related to Triple Stimulus Voucher, and in turn shortened the operating time and align with the efficacy and efficiency for the overall payment card industry.

(VI) Actively cooperate with various public welfare activities of the competent authorities to fulfill social responsibilities:

1. Participate in digital financial activities and various financial forums:
 - (1) Continued to join as the member institution of "Chung-Hua Financial and Economic Forum" by Chung-Hua Institution for Economic Research and "Bellwether," to keep abreast the development trend of digital financial innovation, gain in-depth knowledge on the latest news of FinTech, and increase the opportunities to communicate with experts of all fields.
 - (2) President Lin participated in the "FinTech Development Forum (Financial Institutions)" held by the FSC on 29 June 2020. The forum focused on various topics related to FinTech. Companies within the financial industry also provided concrete recommendations in the hope of facilitating FinTech development in Taiwan.
 - (3) The Taiwan Academy of Banking and Finance held the "10th Taiwan Banking and Finance Best Practice Awards" election. As NCCC was a joint organizer, Chairman Liu attended and presented awards to outstanding companies within the financial industry to facilitate the observation, learning, and healthy development within the financial sector, and motivate the progress and innovation of the financial industry.
 - (4) As a joint promotor, NCCC cooperated with Business Today to organize the "2020 Taipei FinExpo" from 27 November to 29 November 2020. The event showed the efforts of the government in finance, initiated financial communication with citizens, shared market investment trends, and invigorated the general trend of wealth management.
2. Various social welfare activities and charitable donations: NCCC participated in the "2020 Financial Services Caring Carnival" in Pingtung and Chiayi hosted by Taiwan Financial Services Roundtable and set up a public interactive booth to promote financial knowledge.

II. Future Prospects

- (I) Utilize various innovative digital technologies to develop use cases catering to consumers and create cross-platform, cross-industry, and cross-border service applications.

1. Optimize the Risk-Based Authentication (RBA) function for EMVCo 3DS—ACS (Access Control Server) platform. Utilize Big Data and machine-learning technologies and combine the parameters from participating institutions and NCCC's risk control system to improve the risk detection function.
 2. Organize the "Credit Card Holders Auxiliary Authentication Platform" to support Open API and evaluate to make the services available to third-party service providers (TSP). Evaluate the solutions to introduce the Fast Identity Online (FIDO) standards.
- (II) Continue to promote the e-payment and improve mobile-payment transaction ratios, expand the application channels, and introduce innovative applications.
1. Plan with third-party wallet service providers to jointly launch the polymetric QR Code and authorization processing services, compatible with third-party wallet and EMV standards at the same time to facilitate the implementation of mobile payment by merchants.
 2. Expand the Üny card-on-file function to support card-not-present transaction scenarios, such as MO/TO, BPOS, and VPOS, other than EC, to reduce the potential risks and compliance costs derived from saving credentials by merchants.
 3. Integrate various payment methods (such as Software Contactless, merchant-presented/consumer-presented QR Code) to improve the Business for Integration and Conveyance of Receipt/Payment Information that is jointly launched and promoted by NCCC and e-wallet service providers.
- (III) Improve the richness and diversity of data analysis and introduce data application self-financing program
1. Optimize data quality and introduce open data consistent with the Platinum Data Quality Label endorsed by the NDC.
 2. Extend collaborating partners for Open API to realize the value of sharing regarding the open data of NCCC.
 3. Organize the self-financing solution of "Credit Card Big Data Platform" to deepen the application of structural data and introduce the non-structured data analysis function of text mining, in order to improve the richness and commercial value of data.
- (IV) Continue to promote the domestic payment card brand business of TWIN Card and improve its innovation application.
- (V) Reinforce infrastructure, improve logistic management efficiency and service quality, and strengthen information security and risk control.
- (VI) Continue to implement anti-money laundering and anti-terrorism evaluation operations and risk appetite policies, and improve its information system efficiency.
- (VII) Fulfill social responsibility and engage in social welfare activities such as charity and financial knowledge advocacy.



Five

Annual Events

I. Major Events in 2020

January

- ▶ Jan.16
Convened the 2nd session of the 13th Board of Directors and Supervisors Joint Meeting.

February

- ▶ Feb.21
 - ◆ From February 2020 to 31 July 2020, NCCC offered 4 burden alleviation measures for merchants, including (1) exemption of merchants' service charges; (2) exemption of MPOS' s equipment handover charges for merchants; (3) suspension of collecting default accounts from merchants; and (4) suspension of collecting outstanding residual values for terminals from merchants. The implementation period for alleviation measures (1) and (2) was extended to 31 December 2020.
 - ◆ NCCC established the "COVID-19 Pandemic Prevention Decision-making Team" in response to COVID-19.
- ▶ Feb.26
 - ◆ NCCC completed the annual revisions to the merchants' operating manual and the manual is fully effective for application.
 - ◆ Sunny Bank issued the Visa Debit card and joined the small ticket platform.
- ▶ Feb.27
The upgrade of the international organization module version for NCCC' s authorized switching system "BASE24-eps" was completed.

March

- ▶ Mar.10
NCCC formally introduced EMV QR Code scanned payment to support Visa/Mastercard' s foreign card transactions.
- ▶ Mar.17
NCCC adopted the split operation system for employees to work at Fubei Office, Ding Pu Data Center and for employees to work from home on a rotation basis at Taichung and Kaohsiung Offices.

Five. Annual Events

April

- ▶ Apr.15
NCCC introduced the “EMV 3DS – ACS (Access Control Server) Authentication Service Platform for Online Transaction Security,” where card issuing institutions may determine whether the online transaction requires authentication or is under the transaction model exempted from authentication through the Risk-Based Authentication (RBA) function of the platform, to conduct safe and convenient online purchasing transactions.
- ▶ Apr.18
NCCC passed the annual re-inspection of BS 10012:2017 by BSI for 2020.
- ▶ Apr.23
Convened the 3rd session of the 13th Board of Directors and Supervisors Joint Meeting.
- ▶ Apr.24
NCCC organized the “Friendly Neighbor Mingyao at East District Presents Sweet Treats for You,” a credit card purchase promotion for the district, to provide stimulus for the economy of the business district and achieve an effect of customer referral.

May

- ▶ May 29
Completed the establishment of 3rd phase-stage 4 for the disaster recovery (DR) center (infrastructure for 8 hours of MTPD).

June

- ▶ Jun.1
 - ◆ Assisted major channels such as City Hospitals, Directorate General of Highway, Eden Social Welfare Foundation, and PayNow to implement the self-built “ECNEX Mobile and Digital Wallet Online Payment and Processing System” of NCCC.
 - ◆ Due to the slowdown of COVID-19’s outbreak, NCCC lifted the split operation mechanism (including work from home for Taichung and Kaohsiung Offices).
- ▶ Jun.3
 - ◆ Line Bank officially became a member of NCCC.
 - ◆ Next Bank officially became a member of NCCC.
- ▶ Jun.8
McDonald’s introduced the Üny2.0 card-on-file service to support cross-outlet card-on-file transactions.
- ▶ Jun.11
NCCC allowed citizens to access five open datasets on its website via API, which complied with the Open API Specification (OAS) by the NDC.

- ▶ Jun.12
NCCC received approval from FSC for the "Provision of Business for Integration and Conveyance of Receipt/Payment Information when Engaged by A Third-party E-wallet."
- ▶ Jun.20
NCCC's "Credit Card Big Data Platform" provides the industrial comparison and analytical report related to card issuing, acquiring, consumption pattern, and fraud risk in the previous year to credit card institutions.
- ▶ Jun.24
Entie Commercial Bank participated NCCC's "Credit Card Purchase Transaction Benefit Platform."
- ▶ Jun.30
 - ◆ NCCC provided the system connecting services between card issuing institutions and the Triple Stimulus Voucher platform operated by the Ministry of Economic Affairs assist card issuing institutions in card-binding, inquiry, and data switching/processing.
 - ◆ NCCC cooperated with Visa International to announce and publish the Big Data consumption research and analysis report for cross-border tourism, the "Business Opportunities and Potentials of Taiwan in Developing International Tourism during the Post-Pandemic Era," which analyzed foreign cardholders' card consumption patterns regarding overseas tourists visiting countries such as Taiwan, Singapore, and South Korea.

July

- ▶ Jul.1
NCCC stopped accepting transactions with less than NT\$1,000 (inclusive) using magnetic stripe cards.
- ▶ Jul.3
DBS Bank (Taiwan) participated NCCC's "NCCNET Credit Card Small Ticket Platform."
- ▶ Jul.13
The "Access Control Server (ACS) Authentication Service for Online Transaction Security" has passed the audit conducted by Secure Vectors Information Technologies Inc., an assessment institution designated by PCI SSC, showing that the platform complies with the PCI 3DS security regulations.
- ▶ Jul.23
Convened the 4th session of the 13th Board of Directors and Supervisors Joint Meeting.
- ▶ Jul.27
Books.com joined and provided NCCC's Üny services.
- ▶ Jul.31
Taiwan Shin Kong Commercial Bank's debit cards participated NCCC's "NCCNET Credit Card Small Ticket Platform."

Five. Annual Events

August

- ▶ Aug.1
Taiwan Rakuten Card participated NCCC' s "Credit Card Purchase Transaction Benefit Platform."
- ▶ Aug.14
NCCC introduced the authorized switching function of QUIC Pay from JCB International Card Association, allowing cardholders to conduct cross-border contactless payment transactions via Apple Pay in Japan.
- ▶ Aug.21
NCCC passed the annual data security check certification of the Payment Card Industry Data Security Standard (PCI DSS) for 2020.
- ▶ Aug.24
NCCC assisted UnionPay International to set up the authorization switching services for acquiring member institutions in Taiwan to support EMV 3DS.

September

- ▶ Sep.4
In accordance with the requirements of the competent authority regarding the archive of "NCCC' s Risk Assessment Report regarding Anti-money Laundering and Countering the Financing of Terrorism for 2019," NCCC completed the self-evaluation form for the risk assessment report to comply with relevant laws and regulations.
- ▶ Sep.18
 - ◆ NCCC established the certification rules for the integrated terminals for merchants to comply with.
 - ◆ NCCC cooperated with Shin Kong Mitsukoshi for its self-provided smart POS equipment, which was launched at Shin Kong Mitsukoshi Xingy outlet upon passing the certification of NCCC.
- ▶ Sep.22
Published six case research and analytical reports at "Open Data – Case Studies" on NCCC' s website to provide references for industries, the government, the academic sector and citizens regarding academic research, industrial development, and policy-making.
- ▶ Sep.25
NCCC held the "Transaction Risk Alert & Control Enforcement (TRACE) System Seminar."

October

- ▶ Oct.1
NCCC's Credit Card Big Data Platform announced the "Guidelines for Experimental Application Service and Management regarding Trial Cooperation between NCCC and external institutions." Applications for trials would be accepted from November 2020 and for a period of 6 months.
- ▶ Oct.16
 - ◆ NCCC held the "Seminar for Preventing Risks of Credit Card Fraudulence" to facilitate the experience exchange related to risk prevention.
 - ◆ NCCC convened the 163rd meeting of the Research and Development Committee.
- ▶ Oct.20
 - ◆ Cathay United Bank participated NCCC's "Credit Card Purchase Transaction Benefit Platform."
 - ◆ NCCC launched the "Online Customer Service" APP.
 - ◆ Introduced the Risk-Based Authentication (RBA) function into NCCC's EMV 3DS – ACS platform, where participating institutions may use the system to perform the EMV 3DS risk assessment for determining whether authentication is required for the transactions through the setting of risk control parameters.
- ▶ Oct.22
Convened the 5th session of the 13th Board of Directors and Supervisors Joint Meeting.

November

- ▶ Nov.5
NCCC reinforced the management regarding the safety of credit card transactions by payment service providers.
- ▶ Nov.13
NCCC passed the annual review of ISO/IEC 27001:2013 by the ISMS.
- ▶ Nov.19
The Chairman participated in the opening ceremony and press conference for the "FinTech Co-creation Platform" established by the FSC and the TFSR.
- ▶ Nov.25
NCCC organized the "Card Consumption Promotion for Cross Sales between Channels" for its Credit Card Purchase Transaction Benefit Platform to expand the value of NCCC's merchants.
- ▶ Nov.30
NCCC organized training programs such as credit card identification, card/transaction processing, and transaction risk management to disseminate the security of credit card transaction, so as to facilitate the development of the overall payment card industry.



- ▶ Dec.1
NCCC released the "Self Data Entry for Installment Event by Participating Institutions" operation and value-added service to support Token BIN for installment transactions.
- ▶ Dec.16
NCCC introduced the "text customer service" to provide custom online textual communication with customer service personnel, allowing rapid and continuous services for utmost satisfaction 24/7 for 365 days a year.
- ▶ Dec.22
Engaged by the Directorate-General of Personnel Administration, Executive Yuan, NCCC completed the function development for the "Project of National Travel Card Payment System interfacing with Budget Reimbursement/Request System."
- ▶ Dec.24
In response to the policy enacted, the application scope of NCCC's "Credit Card Holders Auxiliary Authentication Platform" was extended to insurance companies. From 1 January 2021, the system provided the authentication function for the cardholder when paying insurance premium via credit cards or debit cards.
- ▶ Dec.25
NCCC and NCCC's 27 member institutions obtained an approval with undertakings imposed granted by the Fair Trade Commission for extending time limit of concerted action in credit card business.

II. Calendar of Events



NCCC participated in the "10th Taiwan Banking and Finance Best Practice Awards" hosted by the Taiwan Academy of Banking and Finance. The figures in the photo are Chairman Teng Cheng Liu of NCCC (fourth from right), Vice President Ching Te Lai (sixth from left), Minister Jain Rong Su of Ministry of Finance (seventh from left), Chairperson Tien Mu Huang of FSC (fifth from left), Chairman Chung Shu Wu of TABF (fourth from left), and other representatives. (18 December 2020)

Five. Annual Events



NCCC participated in the "2020 Financial Services Caring Carnival" in Pingtung hosted by Taiwan Financial Services Roundtable. The figures in the photo are President Tong Liang Lin of NCCC (fourth from right), Chairperson Tien Mu Huang of FSC (fourth from left), Chairman Jan Yau Hsu of TFSR (third from right), and other representatives. (24 October 2020)



NCCC participated in the "2020 Financial Services Caring Carnival" in Chiayi hosted by Taiwan Financial Services Roundtable. The figures in the photo are Chairman Teng Cheng Liu of NCCC (third from left), Chairperson Tien Mu Huang of FSC (fourth from left), Chairman Jan Yau Hsu of TFSR (second from left), and other representatives. (28 November 2020)



NCCC participated in the "2020 Taipei FinExpo" hosted by Business Today. The figures in the photo are Chairman Teng Cheng Liu of NCCC (second from right, front row), Political Deputy Minister Ching Hwa Juan of the ministry of Finance (seventh from left, front row), Vice Chairperson Jean Chiu of the FSC (sixth from left, front row), Chairman Jin He Xie of Business Today (sixth from right, front row), and Chairman Wu Tian Chou of Taipei Foundation of Finance (first from right, front row), and other representatives. (27 November 2020)

VI.Appendix

Directory of Members

Member	Address	Telephone
CTBC Bank Co., Ltd	11F., No.188, Jingmao 2nd Rd., Nangang Dist., Taipei City 115, Taiwan (R.O.C.)	(02)3327-7777
Mega International Commercial Bank Co., Ltd	4F., No.99, Sec. 3, Chongyang Rd., Sanchong District, New Taipei City 241, Taiwan (R.O.C.)	(02)8982-2222
Cathay United Bank	1F., No.35 South Guangfu Road, Songshan District, Taipei City, Taiwan (R.O.C.)	(02)2171-1788
E. Sun Commercial Bank Ltd	No.10, Alley 17, Lane 42, Jhongsing N. St., Sanchong Dist., New Taipei City 241, Taiwan (R.O.C.)	(02)8512-1313
Union Bank of Taiwan	5F., No.399, Ruiguang Rd., Neihu District, Taipei City 114, Taiwan (R.O.C.)	(02)2719-2233
The Shanghai Commercial Savings Bank Ltd	3F., No.87, Zhengzhou Rd., Datong District, Taipei City 103, Taiwan (R.O.C.)	(02)2558-2111
Bank Sinopac Co., Ltd	6F., No.17, Bo-ai Rd., Zhongzheng District, Taipei City 100, Taiwan (R.O.C.)	(02)2375-2277
Standard Chartered Bank (Taiwan Limited)	B1F., No.168, Dunhua N. Rd., Songshan District, Taipei City 105, Taiwan (R.O.C.)	(02)2547-7888
KGI Bank	3F., No.188, Jingping Rd., Zhonghe Dist., New Taipei City 235, Taiwan (R.O.C.)	(02)8023-9077
Taipei Fubon Commercial Bank Co., Ltd.	6F., No.50, Sec. 2, Zhongshan N. Rd., Zhongshan Dist., Taipei City 104, Taiwan (R.O.C.)	(02)6611-2555
Far Eastern International Bank	No.33, Alley 3, Lane 182, Sec. 2, Wenhua Rd., Banqiao District, New Taipei City 220, Taiwan (R.O.C.)	(02)8073-1166
Jih Sun International Bank	9F., No.85, 87, Sec. 2, Nanjing E. Rd., Zhongshan Dist., Taipei City 104, Taiwan (R.O.C.)	(02)2561-5888
Taishin International Bank	3F., No.207, Sec. 2, Jiuzong Rd., Neihu District, Taipei City 114, Taiwan (R.O.C.)	(02)8798-9999
Entie Commercial Bank	2F., No.36, Sec. 3, Bade Rd., Songshan District, Taipei City 105, Taiwan (R.O.C.)	(02)2577-8577
DBS Bank (Taiwan) Ltd	12F., No.399, Ruiguang Rd., Neihu District, Taipei City 114, Taiwan (R.O.C.)	(02)6612-9889
Taiwan Shin Kong Commercial Bank	8F., No.31, Lane 11, Guangfu N. Rd., Songshan District, Taipei City 105, Taiwan (R.O.C.)	(02)8787-7272
Yuanta Commercial Bank Co., Ltd	6F., No.210, Sec. 3, Chengde Rd., Datong District, Taipei City 103, Taiwan (R.O.C.)	(02)2182-1998
Sunny Bank	No.88, Sec. 1, Shipai Rd., Beitou District, Taipei City 112, Taiwan (R.O.C.)	(02)2820-8166
Hwatai Commercial Bank Co., Ltd	12F., No.33, Jingye 4th Rd., Zhongshan District, Taipei City 104, Taiwan (R.O.C.)	(02)2752-5252
COTA Commercial Bank	2F., No.339, Dazhi Rd., East District, Taichung City 401, Taiwan (R.O.C.)	(04)2280-5288
First Commercial Bank	9F., No.203, Sec. 2, Bade Rd., Zhongshan District, Taipei City 104, Taiwan (R.O.C.)	(02)2173-1988
Hua Nan Bank	12F., No.123, Songren Rd., Xinyi Dist., Taipei City 110, Taiwan (R.O.C.)	(02)2371-3111
Taiwan Rakuten Card Inc.	16F., No.51, Sec. 3, Minsheng E. Rd., Zhongshan Dist., Taipei City 104, Taiwan (R.O.C.)	(02)2516-8328
Taichung Commercial Bank	No.87, Minquan Rd., West District, Taichung City 403, Taiwan (R.O.C.)	(04)2223-6021
O-bank	No.99, Sec. 2, Tiding Blvd., Neihu District, Taipei City 114, Taiwan (R.O.C.)	(02)8752-7000

Note: NCCC has a total of 27 members. During 2020, "Line Bank" and "Next Bank" were not officially opened.



財團聯合信用卡處理中心
法人
National Credit Card Center of R.O.C.

Address: 4F., No.363, Fuxing N. Rd.,
Songshan Dist., Taipei City 105,
Taiwan (R.O.C.)

Tel : 886-2-2719-1919

Fax : 886-2-2546-4475

Website: <https://www.nccc.com.tw>

Customer Service: 886-2-2715-1754