DTCC

2021 PROGRESS

DTCC ANNUAL REPORT

LEADERSHIP IMPACT PARTNERSHIP PURPOSE PERFORMANCE

A MESSAGE FROM MIKE

CEO & PRESIDENT

Dear Stakeholder,

As I look back over 2021, I can't help thinking about our initial expectations and how the year actually played out. We had anticipated that financial markets would stabilize with the rollout of COVID-19 vaccines and a return to normalcy. We also looked forward to the global economy rebounding, unemployment returning to pre-pandemic levels and workers coming back to offices after a year apart.

Once again, unforeseen events overran our expectations, starting with the meme stock event in late January, which produced unprecedented market volumes and volatility – a stark reminder of the importance of resilience as the nature of risk evolves and "black swan" events seem to occur more frequently. The Delta and Omicron variants spread across the globe with ferocity, resulting in a pandemic death toll of more than 6 million people globally. As the year progressed, an economy freed from the constraints of COVID mandates but facing significant supply chain shortages, a historically tight labor market and other factors pushed inflation to levels not seen in decades. And as we entered 2022, Russian threats of war became a reality with the deadly invasion of Ukraine. This unprovoked attack has led to the tragic loss of life and mass destruction of property, upended geopolitical stability and produced volatile financial markets, soaring oil costs and shifting priorities for policymakers and businesses.

For all the uncertainty we have faced over the past two years, the reality is that the future will likely be even more unpredictable as the pace of change continues to accelerate. However, change itself is not inherently positive or negative. What is most important is how you prepare for, react and respond to it. DTCC has always embraced and thrived in a changing environment, and I am proud to report that our company recorded one of our best years ever operationally and financially in 2021.

> ***"Change itself, however, is not inherently positive or negative. What is most important is how you prepare for, react and respond to it."***

We successfully navigated the second year of the pandemic with the agility that you would expect of a highly effective organization and the dexterity that comes from having deep expertise as a critical financial market infrastructure. Regardless of the challenges we faced, our firm provided the global system with continuity, stability and resilience—our hallmarks for nearly 50 years—while creating dynamic new solutions to address our clients' top priorities. At the same time, we continued to develop innovative concepts to address the rapidly changing market environment and help shape the future of the industry.

Clearly, 2021 was a year of progress for our firm on all fronts – built upon foundational pillars that include leadership, financial strength, client impact, partnership and purpose. These pillars have served us well for many years, and they will be even more essential going forward.

PROGRESS THROUGH LEADERSHIP

When Muhammad Ali, the great athlete and humanitarian, once said, "Champions aren't made in the gyms…[they] are made from something they have deep inside them — a desire, a dream, a vision," he was speaking an eternal truth about the power of leadership. In recent years, we have increasingly leveraged our role as the centralized infrastructure for the US capital markets and a premier provider of asset servicing, data management, data reporting and information services across asset classes to drive positive change in market structure and operations. We have honed our leadership skills by thinking broadly about how we can make a bigger impact supporting our clients, regulators and other stakeholders.

A prime example of this was our handling of the meme stock crisis last year. When a cadre of day traders linked through social media drove up the price of certain securities, including GameStop, AMC and others, it set off a chain of events that sparked extreme volume and volatility. In fact, we experienced a new single-day processing record at DTCC of 475 million transactions that eclipsed the previous peak established at the start of the pandemic. As markets roiled and the value of these stocks surged before sliding again in the course of several weeks, we seamlessly processed all trading activity using our rigorous, well-established processes that have provided stability to the global financial system for nearly half a century.

As events unfolded following that intense trading, we proactively engaged the industry and policymakers to share our perspectives on a number of highly relevant issues: accelerating the US settlement cycle, the importance of margin as a primary risk management tool and opportunities to enhance market structure. With interest in these topics heightened, we issued our latest white paper on accelerating settlement, "Advancing Together: Leading the Industry to Accelerated Settlement," to build upon work we had been leading for more than a year with the industry to galvanize support for implementing T+1. We also partnered with SIFMA and ICI – our collaborators on the move to T+2 in 2017 – and industry groups to develop a roadmap for accelerating settlement to T+1 by the first half of 2024. This work is well underway, and we are excited to continue advancing these efforts in 2022.

We demonstrated similar leadership throughout last year, making progress in a number of priority areas, including outlining a path for central clearing for U.S. Treasuries, introducing the first electronic certificate of deposit to help drive full dematerialization – another longstanding initiative whose time has come – and launching our Fixed Income Clearing Corporation's (FICC) new Sponsored General Collateral Service for triparty repo transactions, which reduces operational and counterparty risk, provides potential balance sheet and capital relief as well as access to greater market liquidity.

2021

TOTAL VALUE OF SECURITIES PROCESSED (IN USD)

$2.37 QUADRILLION

2021

TOTAL REVENUE (IN USD)

$2.054 BILLION

PROGRESS THROUGH FINANCIAL STRENGTH

Our ability to drive progress externally and internally requires our firm to have a strong balance sheet, ample capital reserves and the ability to manage any market event that occurs. We have executed a multi-phased strategy over the past decade to improve our financial standing by creating new business lines to generate revenue independent of market volumes, closely managing expenses, maintaining solid credit ratings, raising new capital and refinancing debt to benefit from low interest rates. Today, I am proud to report that DTCC is financially stronger than at any point ever in our history.

All of this work has helped the firm build significant cash and capital, which gives us greater latitude for planning and enables us to develop new products to support clients and grow our business. It also has allowed us to make strategic investments in technology, risk management, cyber defenses, resilience, innovation and other key areas to continue meeting client expectations while seizing opportunities created by the digitalization of the financial markets and positioning DTCC to evolve and adapt to a rapidly changing world.

In a year of market shocks and elevated volumes, we again set a new record by handling transactions worth $2.37 quadrillion in 2021, up almost 2% from $2.33 quadrillion in 2020. We also achieved a new record for full-year revenue, reaching $2 billion for the first time before a $75 million rebate to NSCC participants. Net income was $267 million, and full-year operating expenses were on budget after excluding certain expenses.

PROGRESS THROUGH CLIENT IMPACT

As an industry-owned and governed market infrastructure, our foremost responsibility is to safeguard the integrity of the global financial system. At the same time, our clients expect us to drive innovation by enhancing and expanding our solutions to address their top pain points and growing our abilities to serve new markets and asset classes. We see protecting market stability and leading on innovation as two sides of the same coin because, in our view, innovation is essential to ensuring a safe and efficient marketplace.

In 2021, DTCC continued to play an important role in the digital transformation of the industry – and more importantly, defining our place in it. We envision a future when financial market infrastructures shift from a "cash and security" model to become "asset transfer facilitators" for new digital asset classes. And in a world where new technologies will support the increased decentralization of the financial system and make peer-to-peer interactions routine, trusted financial intermediaries like DTCC will operate differently than they do today, but their presence will be even more critical to providing investor safety and certainty. As I noted earlier, change creates opportunity for those who are prepared.

"In 2021, DTCC continued to play an important role in the digital transformation of the industry – and more importantly, defining our place in it."

While adapting to new models as markets evolve may sound like common sense, history is filled with stories of leading corporations that faded dramatically or disappeared by losing touch with their clients' needs or by failing to keep pace with the changing external environment. In our industry alone, over the last 50 years many financial firms have merged, closed shop or now operate as subsidiaries of larger institutions. The same holds true for a good number of clearinghouses and central securities depositories. I'm very proud that DTCC has continued to thrive into our sixth decade of operation and is consistently recognized as a global leader in post-trade. That endurance doesn't happen by accident. There are many ingredients to our long-time success, but I'm confident that our ability to innovate for our clients is one of the main reasons why our role and influence in the industry continue to grow.

Our strong record of innovation was reflected last year in the significant progress we made to upgrade our infrastructure, introduce additional automation and prepare for the future by advancing efforts to improve end-to-end asset servicing through the use of distributed ledger technology (DLT), cloud computing, artificial intelligence, machine learning and application programming interfaces (APIs). For example, we unveiled plans for our Digital Securities Management (DSM) platform to digitalize and modernize private markets, which will bring significant efficiencies and risk mitigation to this fast-growing segment. Similarly, we are using DLT and the cloud to underpin Project Ion – our alternative settlement platform – which will offer our US clients optionality to settle on a timeframe that meets their unique business needs, including on T+0.

While those initiatives are examples of disruptive innovation, we are also executing adjacent and incremental innovation to deliver more immediate client value. This can be seen in the continued advances we made last year bringing to life our Institutional Trade Processing (ITP) vision for an open, integrated platform that will deliver no-touch processing. It is also apparent in the continued expansion of our API Marketplace for clients, the launch of new data products, including our enhanced Credit Default Swaps (CDS) Kinetics platform, and the growth of our solution to help the industry comply with Securities Financing Transactions Regulation (SFTR). We have also had similar success with new Report Hub® service and growth of DTCC Consulting Services.

PROGRESS THROUGH PARTNERSHIPS

Our ability to deliver innovative solutions to meet industry expectations is underpinned by collaboration with our stakeholders, which includes our Board members, clients, partners, vendors, working groups and associations and, of course, the regulatory community. The information we gather from them, combined with the insights of our own team of experts across the firm, shapes our short-term goals and establishes our long-term product development roadmap. This partnership, which is articulated in our brand positioning line – "Advancing Financial Markets. Together." – is essential to aligning our strategic priorities with the industry's top needs.

> *"Collaboration is deeply etched into the culture of DTCC. It is one of the most defining characteristics of the firm, and its fingerprints are visible on almost every initiative we pursue."*

Collaboration is deeply etched into the culture of DTCC. It is one of the defining characteristics of the firm and is visible on almost every initiative we pursue. Our work last year to forge consensus on global derivatives data harmonization and standardization is just one example among many of how we listen, learn and lead. As the operator of the Global Trade Repository service for the derivatives market, we have deep insights into the needs of our two primary stakeholders: financial firms and regulators. Firms want a simple, efficient and cost-effective way to report their derivatives transactions globally to meet their mandates and avoid compliance risk. Regulators want transparency into the market to perform surveillance and prevent the build-up of exposure and systemic risk.

Because we engage with these groups on a regular basis, we know that current reporting requirements, which were developed over the past decade and vary across jurisdictions, leave both sides somewhat frustrated due to the lack of standardized data fields. In 2021, we worked with the industry and the supervisory community to provide feedback on the proposed rules related to the adoption of CPMI-IOSCO proposals on Critical Data Elements. While some rules are yet to be finalized, we are hopeful that 52 of the most important data elements will be adopted uniformly by all the major regulators. We continue to collaborate with relevant parties on implementation timelines and approach.

Our partnerships also take on many other meaningful forms. For example, we teamed up with the Global Association of Risk Professionals (GARP) last year to expand the reach of our annual Systemic Risk Barometer survey to provide a more comprehensive, forward-looking picture into potential threats to financial stability. Similarly, we continued to engage the industry on priorities like cybersecurity and operational resilience, including leading an initiative with the Analysis and Resilience Center for Systemic Risk (ARC) to explore market impact and remediation scenarios related to settlement risk. We also lent our expertise to the Operational Resilience Symposium for Third-Party Vendors for global financial firms and continued to serve as an important voice within the Financial

INFECTIOUS DISEASE / PANDEMICS (CORONAVIRUS)
IDENTIFIED BY 52% OF RESPONDENTS AS A **TOP 5 RISK**

CYBER RISK
IDENTIFIED BY 59% OF RESPONDENTS AS A **TOP 5 RISK**

INFLATION
34% OF RESPONDENTS RANKED INFLATION AS A **TOP 5 RISK**

PROGRESS THROUGH PURPOSE

One of the most significant changes we have seen in the corporate landscape is the increased sense of responsibility to the world at large, and the need to have a purpose or pursue a public good in addition to the traditional business metrics of profitability, return on investment and shareholder value. Our purpose at DTCC is to safeguard the capital markets and protect the integrity of the financial system. I don't think you will find another organization in our industry with a more compelling purpose than that.

We did, however, pose these questions to ourselves: Can we make a bigger impact beyond our role as a mission-driven organization? And, if so, how?

GOVERNANCE | PEOPLE

ENVIRONMENT | PROSPERITY

An article by George Serafeim, a Harvard professor, that appeared in the Harvard Business Review in 2020 captured the essence of what firms need to do regarding the development and implementation of Environmental, Social, and Governance (ESG) programs. "In a world that increasingly judges [organizations] on their ESG performance, they must look to more fundamental drivers—particularly strategy—to achieve real results and be rewarded for them."

As a global firm and as a global citizen, we are aware of our responsibility to the world around us, and we are very serious about improving the communities where we live and work. While we have always sought to make an impact through our employee and community engagement programs, philanthropy and volunteerism, we also felt we could strengthen those efforts further by developing a cohesive strategy capturing a broader set of actions and metrics. This year, I encourage you to read our first ESG Annual Report, which illustrates our commitment to making a positive impact by tracking, managing and reporting on issues important to our stakeholders and to us. While this work is still in its early stages, I am excited to see our program continue to mature and drive positive change in the coming years.

"Only DTCC has the responsibility for leading initiatives to make the industry more efficient."

THANK YOU

Our firm's progress in 2021 is the culmination of years of hard work by an incredibly dedicated team. I am very grateful for the friendship and counsel of Bob Druskin, our Non-Executive Chairman of the Board, and all of the Board members. They care deeply about our firm and our employees, and their guidance is invaluable. My colleagues on DTCC's Management Committee remain invaluable advisors, leaders and friends. I want to thank them for their partnership in guiding the firm through very difficult times over the last two years.

It is impossible to fully capture in words my gratitude and appreciation for all DTCC employees. They deserve credit and recognition for the progress we made in 2021. We began the year with one set of expectations, finished with another, and once again, our colleagues throughout the firm handled it all with grace, dedication and a commitment to executing flawlessly for our clients and the marketplace.

While we can't predict what tomorrow will bring, we are confident that we have taken the appropriate steps to position DTCC for success. Our preparation, planning and continued evolution as an organization will enable us to continue driving positive change by focusing on the pillars of leadership, financial strength, client impact, partnership and purpose. On behalf of DTCC, I thank you all very much. We value your support and collaboration, and we look forward to achieving even stronger results in 2022.

MIKE BODSON
PRESIDENT & CEO

A MESSAGE FROM ROBERT
NON-EXECUTIVE CHAIRMAN

Dear Stakeholder,

At a time when leaders in many parts of the world struggle to come together to address important issues, financial services has set a strong example on the value of collaboration during the past two years. While our industry remains as competitive as ever, firms also recognized the need during the pandemic to share information on approaches to managing the crisis rather than using it as a means to gain an organizational or business advantage.

This emphasis on teamwork is very common at DTCC, and it has been an essential element of the DTCC Board for many years – not to mention a driver of the organization's success. Since 2020, however, our collaboration has taken on increased importance as member firms and independent directors have actively engaged with management on a broader set of industry topics. While our focus has traditionally been on overseeing the strategic direction of the firm's activities – specifically, its role in safeguarding market stability, bringing greater efficiencies to post-trade processing and reducing costs for the industry – we have dedicated even more time to discussing certain critical matters that could impact the company's future.

The most notable of these is around our people, or more specifically, what is the responsibility of a company to its colleagues in an unprecedented situation like a multi-year pandemic where they are forced to balance professional and personal responsibilities while working remotely? Many organizations like to say that their employees are their most valuable asset. But only the truly special ones, like DTCC, back up those words with actions and policies that support the mental, physical and emotional well-being of their people.

At a time when labor markets were tight and competition for talent was fierce, the Board regularly engaged management on these issues. This give-and-take helped shape the executive team's thinking and, ultimately, led to an expansion of the firm's highly regarded global programs that provide robust resources and tools for colleagues. This was the right thing to do during a very challenging period, and it also enabled employees to focus on their work and help drive DTCC's strong operating and financial performance in 2021.

"While DTCC's role in the industry will continue to evolve, we share a common vision of a vibrant organization that remains at the forefront of protecting the safety and integrity of the global system."

While the long-term course of the pandemic remains uncertain, it's indisputable that our world has changed and expectations have shifted. These moments can either be a blessing or a curse for an organization. In the Board's view, we see this as an opportunity for DTCC to deliver even greater value to our many stakeholders – from expanding into new markets to serve the industry more broadly to innovating products, services and processes to solve client pain points and evolving how we work to deliver greater business value and respond to changes in the labor market.

Towards that end, the Board partnered with management in 2021 to review and validate the firm's long-term strategy – a priority because the pandemic compressed a decade of change into just two years. We considered the many external and internal dynamics that will reshape markets in the coming years and challenged the executive team to lead this transformation. While DTCC's role in the industry will continue to evolve, we share a common vision of a vibrant organization that remains at the forefront of protecting the safety and integrity of the global system. We expect these discussions to continue in 2022 and beyond.

DTCC has been on an upward trajectory for several years now thanks to the strong leadership of Mike Bodson and the management team, and the Board has confidence that the firm is well positioned to continue succeeding in an environment of rapid change and uncertainty. As always, I want to thank my fellow Board members for their ongoing support and partnership. A special note of appreciation to Joe Noto, Paul Simpson and Joe Weinhoffer, who left the Board in 2021, for their many contributions during their tenure. I also want to welcome David Inggs, James Tabacchi, Anthony Miller, Susan Yung and Kevin Kessinger, who joined the Board in 2021 and are already making a positive impact. I look forward to working closely with them, as well as all my colleagues on the Board, in the months ahead.

As the pandemic transforms the industry and reshapes the workforce, success will be owned by companies that can draw on the ingenuity, creativity and inventiveness of diverse colleagues to solve large and small business challenges. There is no force as potent or powerful as a group of people of unique backgrounds, experiences and cultures motivated and united in a shared mission. Our people have done an outstanding job preparing for the future, and they are committed to leading the industry forward. We are excited for what tomorrow holds.

Bob Druskin

ROBERT DRUSKIN
NON-EXECUTIVE CHAIRMAN

WE ARE A GLOBAL ORGANIZATION SERVING THE WORLD'S FINANCIAL MARKETS.

DTCC AT A GLANCE

Founded nearly 50 years ago as a market-neutral industry utility, today DTCC is the premier post-trade infrastructure for the global financial markets. We provide stability, certainty and reliability for the industry and support our clients by mitigating risk, increasing transparency, lowering costs and driving efficiencies by developing innovative solutions to solve complex business challenges.

$2.37 QUADRILLION
Total Value of Securities Processed in 2021

5850
Clients

93
Countries

164
Third-party technology provider partnerships

FIXED INCOME CLEARING
$1.4 QUADRILLION
in government securities and $69 trillion in mortgage-backed securities processed

EQUITIES CLEARING
$2 TRILLION
cleared daily in broker-to-broker transactions for 50+ exchanges and trading venues

21
Office locations in the Americas, EMEA, APAC

5100
Employees

SETTLEMENT & ASSET SERVICES
1.39 TRILLION
World's largest depository of active U.S. issues. 643 million transactions settled last year valued at $152 trillion.

23
Regulators across the globe who govern us

275
Shareholders

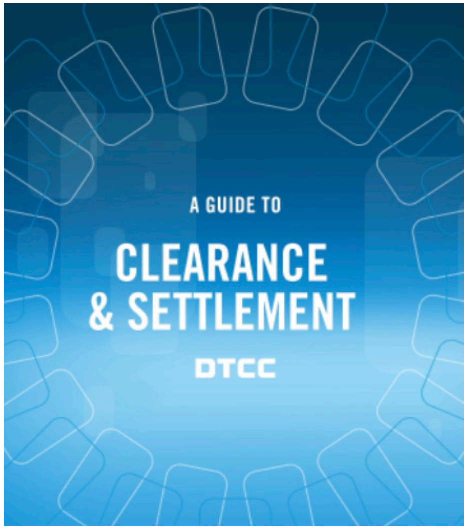
DERIVATIVES TRADE REPORTING
16.5 BILLION
messages annually across 12 trade repositories reporting to 60+ global regulators in 35 countries.

WE PROVIDE INNOVATIVE SOLUTIONS ACROSS THE POST-TRADE ECOSYSTEM

- INSTITUTIONAL TRADE PROCESSING
- CLEARING SERVICES
- SETTLEMENT & ASSET SERVICES
- WEALTH MANAGEMENT SERVICES
- REPOSITORY & DERIVATIVES SERVICES
- DATA SERVICES

A GUIDE TO CLEARANCE & SETTLEMENT

DTCC's post-trade processing services help make the US markets the safest and most resilient in the world. Discover how we operate and keep the financial industry moving forward.



BOARD OF DIRECTORS

ROBERT DRUSKIN
Non-Executive Chairman

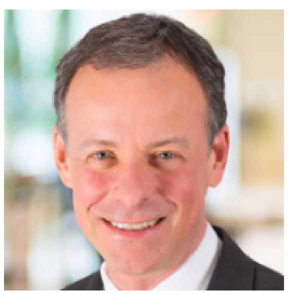
MICHAEL C. BODSON
President and Chief Executive Officer, DTCC; President and Chief Executive Officer of DTC, FICC and NSCC

ROBERT L.D. COLBY
Chief Legal Officer, Financial Industry Regulatory Authority (FINRA)

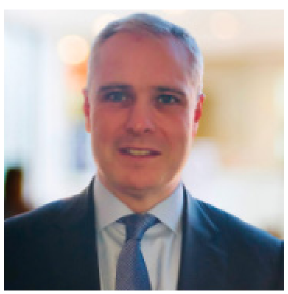
DEBORAH CUNNINGHAM
Chief Investment Officer of Global Liquidity Markets at Federated Hermes, Inc.

SHAWN K. FEENEY
Managing Director and Chief Administrative Officer, North America Markets and Securities Services, Citigroup

CLAUDINE GALLAGHER
Chief Human Resources Officer - Corporate and Institutional Bank, Americas, BNP Paribas



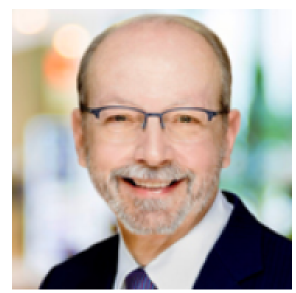
DAVID S. GOONE
Chief Strategy Officer, Intercontinental Exchange (ICE) (Retired March 2022)



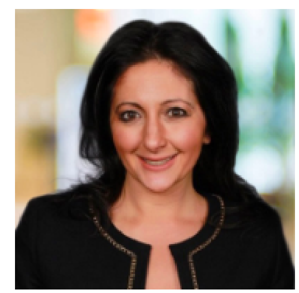
KIERAN HANRAHAN
Managing Director, Corporate and Investment Bank, J.P. Morgan Chase

LORI HRICIK
Former Chief Executive Officer and Head of Treasury Services, J.P. Morgan

DAVID INGGS
Global Head of Operations at Citadel and Citadel Securities



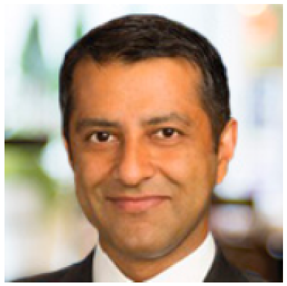
KEVIN KESSINGER
Non-Executive Director DTCC, Advisory Board Member



PINAR KIP
Executive Vice President, Global Head of Transformation and Client Delivery Management, State Street
(Retired March 2022)

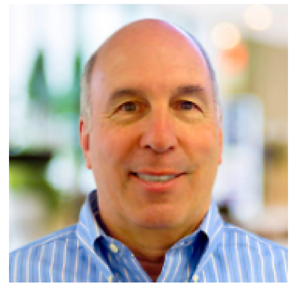
BOARD OF DIRECTORS

KATHLEEN LYNCH
Chief Operating Officer, UBS Americas and Wealth Management Americas (WMA) (Retired March 2022)



RAJ MAHAJAN
Global Head, Systematic Client Franchise, Goldman Sachs

GRAEME MCEVOY
Managing Director, Global Operations Division, Morgan Stanley



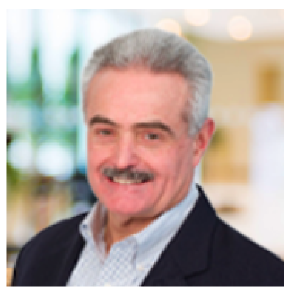
CRAIG MESSINGER
CEO for Virtu Americas LLC

ANTHONY MILLER
Executive Vice President and Chief Administrative Officer at Janney Montgomery Scott, LLC.

ANDREA PFENNING
President and Chief Operating Officer, BNY Mellon Government Securities Services Corp.

ANN N. REESE
Founder and Co-Executive Director, The Center for Adoption Policy

GARY H. STERN
Former President and Chief Executive Officer, Federal Reserve Bank of Minneapolis



JAMES M. TABACCHI
President & Chief Executive Officer at South Street Securities Holdings Inc.

SUSAN YUNG
Managing Director at Bank of America Merrill Lynch

MANAGEMENT COMMITTEE

MICHAEL C. BODSON
President and Chief Executive Officer, DTCC; President and Chief Executive Officer of DTC, FICC and NSCC

LYNN BISHOP
Managing Director, Chief Information Officer (CIO)

SUSAN COSGROVE
Managing Director, Chief Financial Officer

ANDREW GRAY
Managing Director, Group Chief Risk Officer

TIMOTHY KEADY
Managing Director, Chief Client Officer and Head of DTCC Solutions

JENNIFER PEVE
Managing Director, Head of Strategy and Business Development

ANTHONY PORTANNESE
Managing Director, Chief Human Resources Officer

MURRAY C. POZMANTER
Managing Director, Head of Clearing Agency Services and Global Business Operations

ANN SHUMAN
Managing Director, General Counsel

PROGRESS THROUGH IMPACT

Through our subsidiaries, we simplify the complexities of post-trade processing for equities, corporate and municipal bonds, government and mortgage-backed securities, derivatives, money market instruments, syndicated loans, mutual funds, alternative investment products and insurance transactions. Learn more about how our achievements in 2021 have delivered industry-leading solutions that lower costs, improve efficiency and bring stability and certainty to the global markets.

EQUITIES

HAVING AN ION INNOVATION

DTCC's Project Ion, an alternative settlement platform for the U.S. capital markets that leverages DLT, moved into the development phase.

THE BENEFITS OF SHORTENING THE SETTLEMENT CYCLE

DTCC, SIFMA and ICI continued progress around efforts to accelerate the U.S. securities settlement cycle from T+2 to T+1 by the first half of 2024.

FIXED INCOME

AND NOW A WORD FROM OUR SPONSORED SERVICE

DTCC launched the Sponsored General Collateral Service, a new offering from FICC that builds upon the firm's existing Sponsored Service.

CLEAR AS DAY: THE NEED FOR CENTRAL CLEARING

DTCC continued advocating for greater use of central clearing of U.S. Treasuries through FICC with the publication of two white papers.

SETTLEMENT & ASSET SERVICES

WHERE DO I SIGN? BENEFITS OF ELECTRONIC CDS

DTCC advanced efforts to fully dematerialize the securities markets with a new service that further reduces the need for physical certificates.

THE INSTRUCTION PROCESS IS NOW AUTOMATED

DTCC's Corporate Actions Modernization initiatives have reshaped the way the industry processes Announcements and Allocations.

WEALTH MANAGEMENT SERVICES

IIEX TRANSFORMS RAW DATA INTO ACTIONABLE INSIGHTS

DTCC launched Insurance Information Exchange to deliver a transformative, centralized platform that helps clients turn insurance data into actionable insights.

FIRMS, FUNDS ENJOYING EFFICIENCIES OF MF INFO EXCHANGE

DTCC rolled out several enhancements to MF Info Xchange in 2021 to support a wide spectrum of announcements, including API capabilities.

REPOSITORY & DERIVATIVES SERVICES

HERE TO HELP: THE RISE OF CONSULTING SERVICES

In its first full year of operation, DTCC Consulting Services achieved significant momentum by completing multiple engagements with banks and asset managers.

THE PATH TO HARMONY WITH DERIVATIVES REPORTING

DTCC galvanized industry support for harmonizing global derivatives trade reporting requirements in 2021 aimed at standardization across jurisdictions.

PROGRESS **THROUGH IMPACT**

INSTITUTIONAL TRADE PROCESSING

UNITING BEHIND CTM FOR TRADE MATCHING

DTCC achieved a major milestone in establishing a single, global institutional trade matching and confirmation platform in 2021.

LOOMING CSDR REGULATORY CHALLENGES

With CSDR coming into effect in February of 2022, DTCC ITP was focused on helping clients automate their post-trade processes.

DATA SERVICES

MARKETS IN MOTION: SHINING A LIGHT ON REPO ACTIVITY

DTCC finalized its newest data product last year, Treasury Kinetics, a service that provides users across the dealer, hedge fund and asset manager communities with greater transparency into the repo market.

RISK MANAGEMENT

SHORING UP THE CYBER DEFENSES

With cyber threats on the financial industry continuing to accelerate, DTCC completed the rollout of its Client Cybersecurity Program.

STABILITY IN VOLATILITY: TAKING RISK OFF THE TABLE

DTCC secured regulatory approval and implemented several enhancements to its financial risk management framework in 2021.

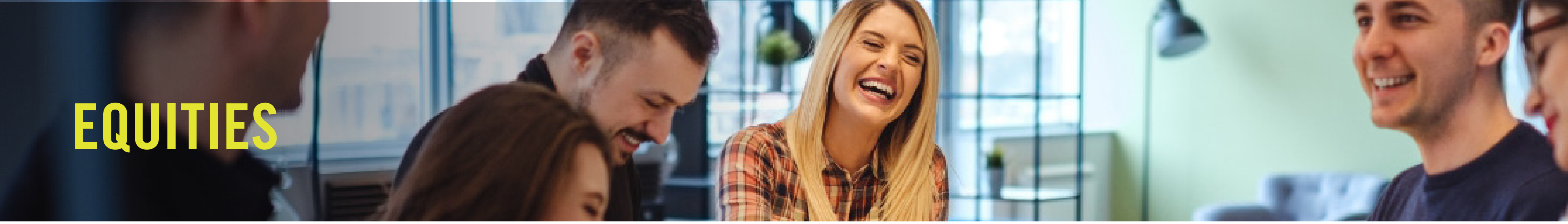
INFORMATION TECHNOLOGY

STAYING AHEAD NO MATTER WHERE THE MARKET TURNS

DTCC accelerated its technology modernization initiatives to increase resilience and more effectively support the business and clients.

INNOVATION TEAMS TRANSFORM IDEAS INTO REALITY

With the pace of technological change accelerating, DTCC enhanced its cloud-based software development ecosystem, called DevX.



EQUITIES

HAVING AN ION INNOVATION

DTCC's Project Ion, an alternative settlement platform for the U.S. capital markets that leverages distributed ledger technology (DLT), moved into the development phase in 2021 following a successful prototype pilot with leading financial firms.

The service is expected to launch in 2022, and in the first interim state will serve as a parallel book and infrastructure for limited bilateral transactions on DLT, with the Depository Trust Company's (DTC) existing systems continuing to remain the authoritative source of transactions. As the service expands, Ion represents an exciting vision for the future of an expanded clearing and settlement platform, offering new processing functionality, sharing information and seamless interoperability as an interface node.

"Cryptocurrency, digitized assets, DLT and other innovations increasingly are integral parts of the evolving financial services industry, and we are excited about the future opportunity in each of these areas. Project Ion has demonstrated that settlement in a T+1 or T+0 environment are effective use cases for DLT, and we look forward to working with our clients and the industry to launch the new platform."

- MURRAY POZMANTER, DTCC HEAD OF CLEARING AGENCY SERVICES AND GLOBAL BUSINESS OPERATIONS

OPTIONALITY IS KEY:

The Project Ion platform is specifically modeled around a netted T+0 settlement cycle, but it is also capable of supporting T+2, T+1 or extended settlement cycles. It will leverage DTCC's core benefits of risk management and volume capacity, including netting and the trade guarantee of the CCP. In addition, it will:

- Provide seamless interoperability to the classic settlement platforms at The Depository Trust Company (DTC).
- Adhere to DTCC's rigorous regulatory standards across resiliency, stability, security, risk and controls.

WHAT'S NEXT:

Project Ion's functionality will be introduced in phases, and, subject to regulatory approval, will include functionality to realize the reconciliation efficiencies offered by DLT, the provision of access through a client-hosted node and expanding the transaction types processed by the platform. The ambitious end state could also see Ion as the replacement for DTCC's existing, "classic" systems – offering new and exciting clearance and settlement functionality and becoming the authoritative source to support all modified clearance and settlement services.

“Ultimately, the industry’s primary goal of enhancing the settlement cycle – be it through modifications to post-trade infrastructure or settlement timelines – should be achieved by creating new efficiencies without introducing additional risk to markets.”

- MICHELE HILLERY, DTCC GENERAL MANAGER OF EQUITY CLEARING AND DTC SETTLEMENT SERVICE

FAST FORWARD:
In addition to Project Ion, DTCC is continuing to explore ways to enhance the current settlement system and existing infrastructure through process optimization and the use of new technologies.

SEIZE THE DAY: THE BENEFITS OF REMOVING A DAY FROM THE SETTLEMENT CYCLE

DTCC, SIFMA and ICI continued progress around efforts to accelerate the US securities settlement cycle from T+2 to T+1 by the first half of 2024, including releasing a detailed roadmap developed in partnership with clients, market participants and other key stakeholders.

“We look forward to continuing to work closely with the industry on this important initiative to modernize market structure, increase the overall efficiency of the securities markets and remove costs and risks.”

– MICHAEL BODSON, DTCC PRESIDENT & CEO

WHY IT’S IMPORTANT:
Time between trade and settlement equals counterparty risk, and margin requirements, which are designed to mitigate those risks, represent cost to members.

- The immediate benefits of moving to a T+1 settlement cycle could mean cost savings, reduced market risk and lower margin requirements.
- Risk model simulations have shown that the volatility component of NSCC’s margin could potentially be reduced by 41% by moving to T+1, assuming current processing and without any other changes in client behavior.

“As we saw during the industry move from T+3 to T+2, shortening the settlement cycle requires a collaborative effort from market participants across the industry, and the development of this report is a key step in making the vision of accelerated settlement a reality.”

– KENNETH E. BENTSEN, SIFMA PRESIDENT & CEO

BEHIND THE SCENES:

Accelerating the U.S. cash market settlement cycle to shorter than T+2 will have both upstream and downstream impacts on other parts of the market structure, such as derivatives, securities lending, financing, foreign clients and foreign exchange, and collateral management.

- SIFMA, ICI and DTCC are targeting the first half of 2024 to allow enough time for firms to assess the changes they need to undertake, for the industry to conduct comprehensive testing, and for regulators to make the necessary regulatory changes.

> *"This report provides a roadmap to help funds and their investors realize the benefits of moving to T+1, and we look forward to working with our members and the SEC on implementing the recommendations."*
>
> – ERIC J. PAN, ICI PRESIDENT & CEO

FAST FORWARD:

The Industry Steering Committee recommends that firms work with their counterparties, custodians, vendors, regulators and clients to better understand internal impacts related to timing requirements and deadlines, system requirements and improvements, and process changes. Firms are also encouraged to continue to engage with the Industry Steering Committee as the initiative progresses.

ETF ENHANCEMENTS: PROVIDING VALUE AMID VOLATILITY

DTCC expanded its Exchange-Traded Fund (ETF) service to support the clearing of certain fixed income ETFs and the exchange of ETF collateral between firms.

A CALL FOR COLLABORATION ON RISK CONTROLS

DTCC's industry report outlined ways to prevent significant incidences from occurring through enhancements to market risk controls.

FIXED INCOME

AND NOW A WORD FROM OUR SPONSORED SERVICE

In 2021, DTCC launched the Sponsored General Collateral (GC) Service, a critical new offering from its Fixed Income Clearing Corporation (FICC) subsidiary that builds upon the firm's existing Sponsored Service.

HOW IT WORKS:
The Sponsored GC Service allows Sponsoring Members and their Sponsored Member Clients to submit tri-party repo transactions executed on a general collateral basis across US Treasury securities, agency debentures and agency mortgage-backed securities collateral to central clearing.

WHY IT'S IMPORTANT:
Increasing central clearing in the US Treasury market will reduce operational and counterparty risk, provide potential balance sheet and capital relief and expand access to greater market liquidity.

"The past 10 years have seen a steady, global movement toward central clearing across markets and asset classes. FICC's Sponsored Service has become an integral part of the US repo market, and the new Sponsored GC Service will enable us to further enhance risk management through broader access to central clearing."

- LAURA KLIMPEL, DTCC GENERAL MANAGER OF FIXED INCOME CLEARING CORPORATION (FICC) & HEAD OF SIFMU BUSINESS DEVELOPMENT

REWIND:
FICC's Sponsored Service originally launched in 2005 and allowed well-capitalized Bank Netting Members to sponsor Registered Investment Companies that met certain requirements into FICC/Government Securities Division (GSD) membership. Since 2017, the service has seen rapid growth driven by several incremental expansions to allow a broader array of market participants to participate in the service as Sponsored Members and as Sponsoring Members.

BEHIND THE SCENES:
The Sponsored GC Service, which went live in September, enables Sponsoring Members and their Sponsored Members to execute repo transactions with each other on a general collateral basis in the same asset classes as are currently eligible for Netting Members to transact in through FICC/GSD's existing GCF Repo® Service. These repo transactions settle on BNY Mellon's tri-party repo platform in a similar manner to the way Sponsoring Members and Sponsored Members settle tri-party repo transactions with each other outside of central clearing today. This not only makes it more operationally efficient to transact repo transactions (in particular, term repo transactions), but also expands the eligible asset classes for the Sponsored Service to US agency mortgage-backed securities.

FAST FORWARD:
FICC has seen a steady increase in the number of Sponsoring Members, in the number of Sponsored Members and in the volume of Sponsored Member trades. As of December 31, 2021, there were 30 Sponsoring Members and more than 1,800 Sponsored Members. In 2021, daily Sponsored volume ranged from approximately $212B to approximately $415B. Balances are expected to increase over the course of 2022 as new Sponsoring Members and Sponsored Members continue to onboard into the new Sponsored GC Service.

CLEAR AS DAY: THE NEED FOR CENTRAL CLEARING

DTCC continued advocating for greater use of central clearing of US Treasuries through DTCC's subsidiary, Fixed Income Clearing Corporation (FICC), in 2021 with the publication of two new white papers.

BUILDING A CASE:
The first paper, published in May, highlighted how central clearing can limit default risk and enable smoother functioning and transparent markets. Following up on that, a second paper in October expanded on how FICC's long-standing "open-access" approach can provide the flexibility necessary to allow a wide variety of market participants access to central clearing — all while also ensuring impartiality and fairness.

WHY IT MATTERS:
The adoption of a centralized clearing model would reduce counterparty credit risk and settlement risk, limit the ability of sudden market movements to cause a default, mitigate the risk of market disorder and fire sales, enhance market access and increase market liquidity.

"The benefits of central clearing are significant, but we need to take into account current market practices and approaches to achieve the risk management objectives as mandates are developed."

- JIM HRASKA, DTCC MANAGING DIRECTOR, CLEARING AGENCIES SERVICES

ENGAGING WITH STAKEHOLDERS:
FICC is in active discussions with regulators, trade associations, as well as individual dealers and buy-side firms regarding a potential regulatory mandate to central clearing US Treasury activity. Considering the increasingly broad consensus on the benefits of increased central clearing, DTCC will focus efforts on the most efficient and seamless way to implement such a mandate.

REWIND:
Central clearing in the US Treasury market evolved organically over the past four decades as the industry sought to improve the safety and soundness of the market, streamline the processes for clearance and settlement of US government securities transactions and mitigate the risks associated with the failure of one or more major firms.

FICC LAUNCHES SPONSORED GENERAL COLLATERAL SERVICE

The Sponsored GC Service allows Sponsoring Members and Sponsored Member Clients to submit tri-party repo transactions executed on a general collateral basis across US Treasury securities, agency debentures and agency mortgage-backed securities collateral to central clearing.

WOMEN IN FINANCE: A Q&A WITH DTCC'S LAURA KLIMPEL

Laura Klimpel, DTCC Head of SIFMU Business Development and General Manager of Fixed Income Clearing Corporation (FICC), was recognized by the industry and her peers for a 2021 Markets Media "Women in Finance" Award for the Excellence in Clearing category.

SETTLEMENT & ASSET SERVICES

WHERE DO I SIGN? THE BENEFITS OF ELECTRONIC CDS

DTCC advanced efforts to fully dematerialize the securities markets by launching a new service in 2021 that further reduces the need for physical certificates.

The Underwriting Central (UWC) platform allows issuers to streamline the underwriting process, seamlessly creating, signing and delivering certificates of deposit (CDs) within hours – instead of days or weeks. It also lowers risks and costs for market participants.

GOING PAPERLESS:
DTCC, in partnership with industry stakeholders, has made steady progress in recent years to reduce – and eventually eliminate – the issuance and handling of physical securities. Through dematerialization, the industry can significantly reduce touchpoints and automate processes, which will result in a more cost-effective, efficient, transparent, secure, competitive and resilient marketplace.

Today, less than 1% of assets serviced through DTCC's depository are still in physical form, but they represent $665B in value.

"The new electronic CD capability reduces the risk of potential disruptions in the physical transport and in-person delivery receipt of CDs, all challenges that were amplified during the shift to remote working as a result of the COVID-19 pandemic. This new paperless process eliminates shipping costs and manual processes and the risk of closing delays for the issuer."

- ANN MARIE BRIA, DTCC EXECUTIVE DIRECTOR, ASSET SERVICES BUSINESS MANAGEMENT

BEHIND THE SCENES:
The launch of the electronic CD platform follows a successful pilot with nearly 30 underwriters, including BNY Mellon Capital Markets, LLC, Fidelity Capital Markets and Multi-Bank Securities, Inc., as well as more than 50 issuers from regional branches across the US, including BLC Community Bank (Little Chute, WI) and Luana Savings Bank (Luana, IA).

FAST FORWARD:
The drive to fully dematerialize US financial markets has lagged behind the rest of the industry's modernization during an era of unprecedented economic and technological growth. DTCC continues working to address other paper-based asset classes at their issuance, such as DTC-eligible equities and corporate debt.

THROW OUT THE MANUAL: THE INSTRUCTION PROCESS IS NOW AUTOMATED

DTCC's Corporate Actions Modernization initiatives have reshaped the way the industry processes Announcements and Allocations. The transition to real-time, standardized ISO 20022 messaging — in place of legacy files and platforms — has enabled our clients to achieve significant advances in automation. This has reduced risks and lowered costs, while at the same time laying the foundation for the adoption of new technologies and modernized processes.

BUILDING A CASE:
With industry support, DTCC has continued to automate the corporate action lifecycle by leveraging these same standards and process solutions to streamline one of the most complex and manual areas of corporate actions processing, voluntary reorganization instructions.

WHY IT'S IMPORTANT:
Voluntary reorganization events are increasingly complex, risky, costly and impact all points in the processing chain. DTCC's initiative to address automating and streamlining the instruction process is designed to reduce client costs and risks that are associated with the non-automated process. Given that over 600,000 reorganization instructions are processed by the Depository Trust Company (DTC) annually, this automation will bring significant efficiency and cost improvements as well as risk reduction.

BEHIND THE SCENES:
In addition to the voluntary reorganization initiative, DTCC is also making sweeping changes and modernizing its DTC Securities Processing business. Securities Processing provides a range of cost-efficient processing offerings for various types of securities through key business services including deposits, withdrawals, non-cede custody, safekeeping and agent fee collection. The Securities Processing system applications, some of which are more than 30 years old, make up the core of DTC's traditional depository services. The modernization of these systems will create a flexible platform that will allow DTC to dematerialize its physical inventory and process all securities and issue types, including digital assets.

FAST FORWARD:
Modernization remains a key focus throughout all DTCC's businesses, but especially within these core Asset Services businesses. DTCC is focused on building resilient and flexible services that are poised for growth opportunities amidst a rapidly changing technology horizon.

For 2022, process reviews will continue to delve into new ways to improve processes and automate workflows, with an eye towards building a range of reusable, foundational technical services that can be utilized throughout the ongoing DTCC modernization journey.

PUERTO RICO BOND RESTRUCTURING

DTCC helped simplify the Puerto Rico Bond Restructuring and set a new standard for managing these complex events.

AUTOMATING AND SIMPLIFYING CLAIM PROCESSING

ClaimConnect™ becomes one of the first services available on DTCC's new API Marketplace and offers automation possibilities along with third-party service provider integration.

WEALTH MANAGEMENT SERVICES

IIEX TRANSFORMS RAW DATA INTO ACTIONABLE INSIGHTS

DTCC launched Insurance Information Exchange (IIEX) in 2021 to deliver a transformative, centralized platform that helps clients turn massive quantities of insurance data across more than 15 million policy records into actionable insights.

WHY IT'S IMPORTANT:
The IIEX platform, offered through DTCC's Insurance & Retirement Services (I&RS), is designed to support the exchange of policy, producer and product data, providing clients with an easy, flexible and secure data hub to support the sourcing and consumption of insurance data.

- Eliminates redundant large batch files and reduces risk with a standardized and secure place for clients' data – all available on-demand.
- Calculates a Data Completeness Score to give firms insight into their data accuracy and completeness.

REWIND:
DTCC's Insurance & Retirement Services (I&RS) conducted an IIEX pilot in 2020 backed by a consortium of industry-leading insurance carriers and distribution partners, including Pacific Life Insurance Company and Edward Jones. The clients in the pilot implemented IIEX into their organizations' environments and actively shared their experiences and ideas with the I&RS team.

"We've been participating in DTCC's Senior Advisory Board (SAB) and Data Advisory Council (DAC) among other groups for years now. At Global Atlantic, we are engaged with — and listened to — by our partners at DTCC. This is fantastic for our organization and the whole industry."

- STEPHEN KILBON, VICE PRESIDENT OF DIGITAL CUSTOMER EXPERIENCE, GLOBAL ATLANTIC FINANCIAL GROUP

INSURANCE INFORMATION EXCHANGE (IIEX) TIMELINE

2018

JUNE

Began Data Strategy Advisory Council (DSAC)

2020

JANUARY

Development Began on IIEX

NOVEMBER

Initial Pilot Launch of IIEX

2021

JANUARY

Full Launch of IIEX

MAY

Added Product & Financial Activity Information

SEPTEMBER

Launch Self Service Administrative Capabilities

NOVEMBER

Add Policy Advanced Search & Performance Enhancements

2022

Support Advanced Access to Data Authorization Capabilities

Launch Support of Life Premium & Event Notifications

Launch Regulatory & Replacement Fulfillment Capabilities

2023

Planned Producer Licensing, Appointment & Training Information

Support of Real Time Data Updates

"We are excited about the capabilities of IIEX and believe this platform has the potential to be a real gamechanger in the insurance industry. We are committed to further evolving the platform based on client insights and feedback."

- ANN BERGIN, DTCC MANAGING DIRECTOR & GENERAL MANAGER, WEALTH MANAGEMENT SERVICES AND ASSET SERVICES

WHAT'S NEXT:
IIEX initiatives planned for 2022 include launching regulatory and replacement fulfillment capabilities. In addition, case studies with several key clients will help source ideas for future releases of IIEX.

MUTUAL FUND: FIRMS, FUNDS ENJOYING EFFICIENCIES OF MF INFO XCHANGE

DTCC rolled out several enhancements to MF Info Xchange in 2021 to support a wide spectrum of announcements, including API capabilities to allow for machine-to-machine ingesting of notifications.

WHY IT'S IMPORTANT:
Expanding communication capabilities for funds and their distribution partners to exchange critical information and data, including consolidated Dividend/Capital Gain schedules, Interval/Tender Fund transaction schedules and Fund Mergers, addresses an industry need to enhance operating efficiencies.

- One of the most highly-anticipated features launched in 2020 supports real-time communication of "Large Trade Notification" event types, which are notices of large trade information from firms to their fund partners.

- The service maintains an intuitive audit trail to reduce risk for firms and enhance efficiencies and uses pre-defined and standardized data elements to eliminate lengthy and complex notifications while delivering consistent information to funds and intermediaries.

- The MF Info Xchange also has the ability to integrate with the MF Profile Service II, allowing clients to import key fund information through automation, minimizing data entry and processing times.

"Standardizing and streamlining communication between funds and firms is a high priority for many of us, and MF Info Xchange is the service that will get us there. It's impressive to see our funds, firms, vendors and DTCC working together to build a solution that addresses these needs. As the adoption of MF Info Xchange becomes more widespread, we expect the service will become the industry standard for mutual fund communications, lowering risk and increasing efficiency."

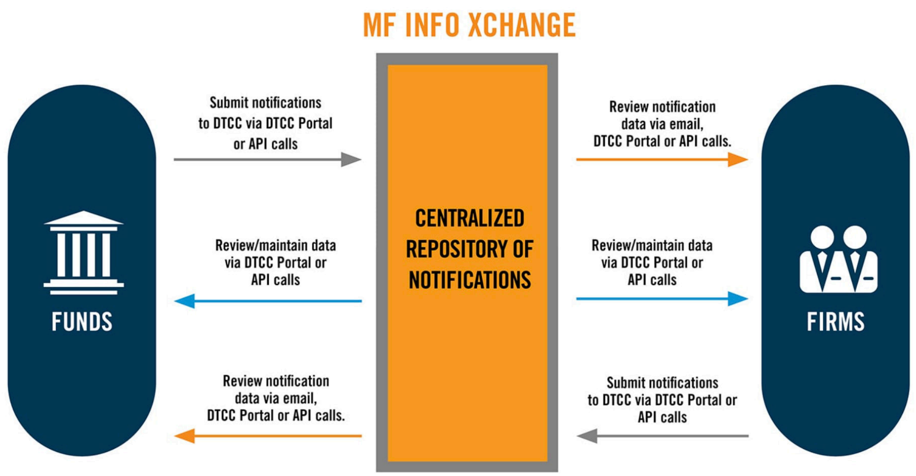
- LISA BORTH, VICE PRESIDENT, DIRECTOR OF ALLIANCEBERNSTEIN TRANSFER AGENCY SERVICES

REWIND:
MF Info Xchange, launched in 2018 and offered through DTCC's Mutual Fund Services, centralizes the delivery and receipt of time-critical notifications and alerts, eliminating error-prone manual processes like fax, email or phone. The platform allows distribution partners to connect with a single click in real time.

BETWEEN THE LINES:
In 2021, MF Info Xchange delivered hundreds of event types to more than 587,400 recipients — an increase of 37% vs 2020 — including consolidated Dividend/Capital Gain schedules, Interval/Tender Fund transaction schedules, Fund Mergers and other critical announcements.

"We are encouraged by the continued adoption of MF Info Xchange and the positive feedback from our clients. The latest enhancements build upon key capabilities to bring greater standardization and streamlined processing to the mutual fund communication process while reducing risk."

- ANN BERGIN, DTCC MANAGING DIRECTOR AND GENERAL MANAGER, WEALTH MANAGEMENT SERVICES



INPUT:
Funds and Firms submit notifications to their partners via MF Info Xchange. DTCC receives and saves notification data into the database. Email communication will be generated and sent to every email address indicated on the sender's distribution list. Email recipients not utilizing / subscribing to MF Info Xchange will receive the same email communication as those contacts that are subscribing to the service.

OUTPUT: The data is sent to receivers via email. The data can also be reviewed in the portal with access to the event calendar and other event information.

ANNUITY INGENUITY

DTCC's Insurance & Retirement Services (I&RS) partnered with Ebix, Inc. to deliver an automated annuity compliance solution to increase efficiency, reduce costs and lower risks associated with certifying agent compliance for annuity sales.

AIP: THE BEST IN THE BUSINESS JUST GOT BETTER

New enhancements to DTCC's Alternative Investment Product Services Web Platform offer streamlined order processing and advances automation for the entire industry.

REPOSITORY & DERIVATIVES SERVICES

HERE TO HELP: THE RISE OF CONSULTING SERVICES

In its first full year of operation, DTCC Consulting Services achieved significant momentum by completing multiple engagements with banks and asset managers, advising them on a broad set of industry topics, including regulatory reporting, market structure changes and securities post-trade optimization.

WHY IT'S IMPORTANT:
Many financial firms are struggling to comply with an array of changing and emerging mandates, in addition to rules already on the books, due to inefficiencies in their current infrastructure. In many cases the inefficiencies stem from being stitched together over the past decade to meet Dodd-Frank, European Market Infrastructure Regulation (EMIR) and other regulations implemented in the wake of the 2008 financial crisis.

REWIND:
DTCC Consulting Services, launched in late 2020, leverages DTCC's nearly 50 years of expertise to help clients navigate the evolving regulatory landscape. The business provides firms with robust action plans for implementing business and technical requirements, testing, end-to-end assessment of control frameworks and governance structure and data processing.

"Our post-trade experts have deep, cross-functional experience and knowledge to inform our clients' decision-making and planning to help them operate more efficiently and reduce compliance risk. The recommendations we provide are designed to create a more resilient, scalable and efficient infrastructure."

- TIM KEADY, DTCC MANAGING DIRECTOR, HEAD OF DTCC SOLUTIONS AND CHIEF CLIENT OFFICER

GOING GLOBAL: THE PATH TO HARMONY WITH DERIVATIVES REPORTING

DTCC galvanized industry support for harmonizing global derivatives trade reporting requirements in 2021 with the publication of a new perspective paper that detailed a three-pronged strategy aimed at achieving standardization across jurisdictions.

BETWEEN THE LINES:
In its paper, DTCC calls for eliminating cross-jurisdictional differences in derivatives trade reporting requirements to help boost transparency and the monitoring of global systemic risk.

BEHIND THE SCENES:
The effort comes at a critical juncture for the industry as several regulatory

bodies have begun adopting critical data elements (CDE) for derivatives trade reporting as identified by the Committee on Payments and Market Infrastructures (CPMI) and the Board of the International Organization of Securities Commissions (IOSCO) working group on harmonization (Harmonization Group). As jurisdictions adopt CDE, universal product identifiers (UPIs), universal transaction identifiers (UTIs), and legal entity identifiers (LEIs) in the coming years, the industry will go through an ongoing cycle of rules updates. Adopting these standards across regulatory reporting regimes is critical to supporting data aggregation and enhancing market transparency and systemic risk monitoring for supervisors.

REWIND:
For the last decade, individual jurisdictions have fallen short of achieving the standardization in trade reporting that would enable regulators to reach the level of transparency and global risk monitoring in the over the-counter (OTC) derivatives markets as originally envisioned by the Group of 20 (G20) at its historic 2009 summit in Pittsburgh.

> *"With several trade reporting rule sets currently under regulatory review, the industry and regulatory community need to coalesce around these objectives and align individual jurisdiction trade reporting rules to facilitate global market transparency."*
>
> - CHRIS CHILDS, DTCC MANAGING DIRECTOR AND HEAD OF REPOSITORY AND DERIVATIVES SERVICES

WHY IT'S IMPORTANT:
While the industry and regulators have greater insight into local market exposure and risk today compared to 2008, misaligned reporting requirements could impede the global aggregation and analysis of OTC derivatives transaction data reported to trade repositories. This could reduce market transparency and hinder the ability of regulators to monitor and mitigate systemic risk.

EASING COMPLIANCE CONCERNS WITH REPORT HUB®

DTCC expanded its Report Hub service in 2021 following its acquisition of Publicis Sapient's Compliance Management Reporting System (CMRS) the previous year, enabling clients to meet their pre- and post-trade reporting needs related to global derivatives regulation across 14 jurisdictions, Markets in Financial Instruments Directive II and Securities Financing Transactions Regulation (SFTR).

LOOKING BACK:
Since the 2008 financial crisis, evolving trade reporting rules have created significant challenges for financial firms, which face increased data management complexities and heightened burdens on internal compliance teams who must continually monitor the landscape for evolving requirements.

WHY IT'S IMPORTANT:
Expected changes to regime-specific derivatives mandates in the coming years, along with ongoing requirements under SFTR, has spurred industry demand for a comprehensive pre- and post-trade reporting solution. Many firms are struggling to comply with the complexities of SFTR reporting and experiencing difficulty managing trade reporting across multiple asset classes and jurisdictions.

LAUNCH OF REPORTING CONTROL FRAMEWORK MODEL & T+1 CONSULTING SERVICES

DTCC Consulting Services' new, proprietary Reporting Control Framework Model, launched in 2021, analyzes and proposes an infrastructure implementation plan to enable firms to enhance their reporting processes.

ADVANCING GLOBAL DATA HARMONIZATION IN DERIVATIVES TRADE REPORTING

Although regulatory mandates have been unable to achieve the transparency and systemic risk monitoring goals originally envisioned by the Group of 20 (G20) at its historic 2009 summit in Pittsburgh, right now represents a unique moment to make progress against this objective.

DISCOVER HOW DTCC REPORT HUB WORKS

DTCC Report Hub can help firms mitigate risk, enhance operational efficiencies and reduce costs associated with regulatory reporting compliance.

INSTITUTIONAL TRADE PROCESSING

MATCHING UP: UNITING BEHIND CTM FOR TRADE MATCHING

DTCC achieved a major milestone in establishing a single, global institutional trade matching and confirmation platform in 2021 with the migration of US domestic transactions to its global Central Trade Manager (CTM) platform and retiring its legacy allocation service, OASYS.

With the transition, DTCC Institutional Trade Processing (ITP) formally decommissioned OASYS, paving the way for a true end-to-end global market utility for its community of more than 1,500 buy- and 1,200 sell-side firms.

BENEFITTING CLIENTS:
Consolidating US trading activity across multiple asset classes onto CTM enables ITP clients to eliminate the number of touches required to settle an institutional trade.

CTM delivers significant operational efficiencies for firms, who will benefit from an enhanced central matching workflow that boasts a 95% average same-day matching rate, provides access to settlement notification functionality, automated trade enrichment from DTCC's ALERT database of more than 12 million SSIs and direct integration with DTC settlement.

"It is exciting and rewarding to see the industry embrace CTM as the highly efficient single global platform for trade matching. The benefits of migrating the US volume from the legacy OASYS service to CTM are being realized based upon the exceptional match rates and reductions in downstream settlement exceptions."

- MATTHEW STAUFFER, DTCC MANAGING DIRECTOR, HEAD OF INSTITUTIONAL TRADE PROCESSING AND PRESIDENT & CEO OF DTCC ITP LLC

THE FUTURE VISION:
The retirement of OASYS supports DTCC's forward-looking platform and technology strategies, according to Behar Cami, DTCC Managing Director of IT Solutions Delivery. "The OASYS retirement program was the culmination of a multi-year effort to migrate clients to ITP's strategic platform for matching, CTM. To accomplish this migration, the technology teams enhanced functional capabilities, addressed capacity and resiliency items to support the additional volume and the automaton and tooling to support clients through the migration. This effort is tightly aligned with our platform and technology strategies and is thus a key pillar in our delivery roadmap."

LOOMING CSDR REGULATORY CHALLENGES: PREVENTION OF PENALTIES WITH ITP

Ensuring regulatory compliance remains a key issue for market participants across the post-trade space, and 2021 was no different. With CSDR coming into effect in February of 2022, DTCC ITP was laser focused on helping clients prepare by automating their post-trade processes to prevent exceptions and failed trades and avoid CSDR penalties. ITP's services help support CSDR compliance, minimizing the risk of trade failure by ensuring that clean and accurate golden source data are used to create an authoritative trade record, automate processing through a no-touch workflow and efficient exception management.

THE BIG PICTURE:
The CSDR's Settlement Discipline Regime (SDR) introduces new measures to mitigate settlement delays and support straight through processing. The SDR will impact all firms, no matter where they are in the world, that trade in securities that will settle at an EU-domiciled central securities depository (CSD) and their participants, including EU based International CSDs, such as Clearstream and Euroclear. Transactions settled in such institutions (including non-EU securities) are in scope of the regulation. The SDR will require firms to put in place measures to mitigate settlement delays and endorses straight through processing to maintain high settlement rates. For trades that do fail, the SDR will impose daily penalties or charges.

DTCC Institutional Trade Processing (ITP) delivers an integrated platform to facilitate the no-touch processing of institutional trades in the post-trade lifecycle. DTCC is the only provider positioned to provide this capability, seamlessly connecting its global community of more than 6,000 clients to an open and integrated ecosystem that services trade enrichment, central matching, settlement management and data analytics.

BEHIND THE SCENES:
DTCC engaged with clients throughout 2021 to highlight the importance of automation in ensuring compliance with CSDR and prevention of penalties. As part of this outreach, DTCC highlighted how ITP services, such as DTCC Exception Manager, can minimize the risk of trade failure by providing clean and accurate golden source data. It also explained other value-added benefits, including creating an authoritative trade record, automating processing through a no-touch workflow and efficient exception management.

"When it comes to SDR preparations, market participants are encouraged to focus on prevention rather than cure by automating as many post-trade processes as possible to support timely settlement. DTCC recommends that market participants adopt post-trade tools which are currently available to make the pre-settlement process as efficient as possible."

- Matt Johnson, DTCC Director, ITP Digital Strategy and Platform Management & Industry Relations

ENABLING ACCELERATED SETTLEMENT

Adopting a common global central matching platform further supports US efforts to accelerate the settlement cycle.

DTCC EXCEPTION MANAGER LAUNCHES OPTIONAL CSDR SERVICE AND NEW LINKS TO CTM DATA

Enhancements to DTCC Exception Manager brought functionality, enabling users to calculate predicted fail penalties for CSDR-eligible transactions, prioritizing settlement exceptions by size of the expected fine and generating claim emails.

DATA SERVICES

MARKETS IN MOTION: SHINING A LIGHT ON REPO ACTIVITY

DTCC finalized its newest data product last year, Treasury Kinetics, a service that provides users across the dealer, hedge fund and asset manager communities with greater transparency into the repo market.

BEHIND THE SCENES:
Leveraging data from DTCC's Fixed Income Clearing Corporation's (FICC) Government Securities Division platform, Treasury Kinetics delivers enhanced market insights, increased market transparency and deep historical perspectives. Currently, on average, FICC matches, nets, settles and risk manages repo transactions valued at more than $3T daily.

HOW THIS BENEFITS CLIENTS:
As the repo market continues to evolve and grow, increased volatility in this sector has underscored the need for market participants to have access to data that enables them to better understand valuation, rates and liquidity and navigate the increasingly complex liquidity challenges in the repo marketplace. Treasury Kinetics provides this access with comprehensive data on FICC-cleared US repo transactions.

"Treasury Kinetics meets a critical industry need: access to a single, comprehensive data source that provides greater insight into the US repo markets. It delivers one of the most comprehensive views of the repo markets available today, providing increased transparency for investors and intermediaries."

- TIM LIND, DTCC MANAGING DIRECTOR, DATA SERVICES

FAST FORWARD:
DTCC is working to expand access to its Kinetics suite of products by making them available on cloud-based marketplaces, beginning with Snowflake, which went live in early 2022.

ENHANCED PLATFORM FOR CDS KINETICS

DTCC rolled out enhancements to the CDS Kinetics platform to support growing demand for more transparency into the credit default swaps (CDS) market.

RISK MANAGEMENT

SHORING UP THE CYBER DEFENSES

With cyber threats on the financial industry continuing to accelerate, DTCC completed the rollout of its Client Cybersecurity Program across its three clearing agency subsidiaries. This was further complemented by incorporating random client testing in 2021.

WHY IT'S IMPORTANT:
The program is designed for DTCC to gain assurance that clients of The Depository Trust Company (DTC), National Securities Clearing Corporation (NSCC) and Fixed Income Clearing Corporation (FICC) are utilizing an industry-accepted cybersecurity risk management framework for the governance and management of their cybersecurity programs.

"The cyber threat environment is evolving rapidly, and as attacks become more frequent, complex and sophisticated, firms need to have robust cyber defenses to reduce the likelihood of a successful large-scale attack. Because the industry is only as strong as its weakest link, this program helps ensure that clients of our core services have implemented effective protocols to protect themselves, their industry partners and the financial system from bad actors."

- ANDREW GRAY, DTCC MANAGING DIRECTOR AND GROUP CHIEF RISK OFFICER

SHARING EXPERTISE:
As part of DTCC's industry engagement activities on cyber, the firm works with multiple associations, regulatory agencies and forums, including the Federal Reserve, Committee on Payments and Market Infrastructures (CPMI) and the Board of the International Organization of Securities Commissions (IOSCO), The Financial Services Information Sharing and Analysis Center (FS-ISAC), the Analysis and Resilience Center (ARC) and the World Economic Forum (WEF). DTCC frequently provides leadership on a diverse set of issues, including cybersecurity, operational resilience, third-party risk management, and financial and systemic risk.

In 2021, DTCC served as a member of an independent Industry Working Group sponsored by the CPMI-IOSCO Working Group on Cyber Resilience (WGCR) that issued a white paper on options that firms should consider as they bolster their cyber capabilities related to data recovery, reconciliation and replay. Joining DTCC on the working group were Euroclear, the Federal Reserve Bank of New York, LCH, TMX Group and the Reserve Bank of Australia.

FAST FORWARD:
According to a recent DTCC survey that forecasts the risk outlook for 2022, 59% of respondents included cyber risk in their top 5, with 24% citing it as the number one risk impacting the global financial system in 2022.

STABILITY IN VOLATILITY: TAKING RISK OFF THE TABLE

DTCC secured regulatory approval and implemented several enhancements to its financial risk management framework in 2021, strengthening the firm's ability to identify, measure, monitor and control market, liquidity and credit risks related to the clearing and settlement process.

WHY IT MATTERS:
The changes, which were designed to help ensure that, among other things, DTCC's clearing agency subsidiaries have sufficient collateral and liquidity on hand to address market activity, reflect the firm's commitment to continue meeting the highest standards for risk management set forth by regulators.

CREATING FLEXIBILITY:
One of the more significant enhancements last year was to NSCC's clearing fund methodology for less liquid securities. The change in methodology will enable NSCC to more effectively mitigate its financial exposure in the event of a clearing member default.

- NSCC also expanded the frequency options for collecting supplemental liquidity deposits from monthly to each business day, which creates more flexibility to bring financial resources in line with liquidity needs if there is sudden increases in clearing member activity.

FOCUS ON MODEL RISK:
DTCC also completed enhancements to its Model Risk Management (MRM) framework last year, including updating all model documentation and model performance plans and improved reporting to align with new Model Risk standards. MRM, which identifies and mitigates potential risks resulting from decisions based on incorrect models, is a key component of DTCC's risk management regime and it contributes to the culture of effective challenge across the company via vigorous examination of its models.

"To fulfill its mandate as a SIFMU, DTCC must heavily rely on the sophistication, flexibility and adaptability of its margin, liquidity, and stress-testing to effectively manage the risks stemming from all fluctuations of the financial markets. That's why MRM embarked on a substantial series of enhancements for model risk practice over the last two years. As a result, the quality of the models has improved, as did all the other aspects within the model life cycle."

- BORIS DEYCHMAN, DTCC MANAGING DIRECTOR, HEAD OF MODEL RISK MANAGEMENT

SUPPORTING CLIENTS:
DTCC launched new tools last year to assist firms in monitoring their exposures and managing their clearing activities, including providing intra-day risk reports, new portals and calculators for clearing activity as well as DTC Settlement insights for access to current and historical settlement and operational data.

- DTCC Risk Management as a Service (RMaaS), which leverages DTCC's risk management capabilities to deliver firm-specific aggregated data to monitor risk exposure, received a number of key enhancements in 2021, including modernizing the interface to be compliant with DTCC's recent risk model changes and added resiliency.

DTCC LEADER RECOGNIZED FOR CYBER CONTRIBUTIONS

Jason Harrell, DTCC Managing Director, Head of External Engagements, Operational and Technology Risk, earned the Golden Quill Award from the Financial Services Sector Coordinating Council (FSSCC) in 2021. Jason plays a leading role internationally in galvanizing industry support to coordinate activities and shape public policy on matters related to critical infrastructure and homeland security within the financial services industry.

PUTTING DATA AT THE CENTER OF TRANSFORMATION

As part of the next phase of its enterprise data management (EDM) program, DTCC certified its ITP and RDS business lines in 2021, focusing on multiple dimensions of data quality for their most critical data. To further support DTCC's strategic transformation initiatives, we launched the Data Management Center of Excellence to provide data expertise and services to all project teams, developed a required checklist of data management activities to be considered by those project teams and established current and target maturity levels for data management capabilities that were prioritized to drive forward strategic transformation initiatives.

The objective of these efforts is to establish a streamlined enterprise data architecture including a foundational data control environment for all DTCC platforms and services, as they are modernized.

INFORMATION TECHNOLOGY

STRATEGIC ROADMAP: STAYING AHEAD NO MATTER WHERE THE MARKET TURNS

As market volatility again surged in 2021, and the external landscape continued to shift in response to the pandemic and other dynamics, DTCC accelerated its technology modernization initiatives to increase resilience and more effectively support both the business and our clients.

A BLEND OF PHYSICAL AND VIRTUAL

DTCC's multi-platform strategy, led by its Information Technology (IT) group, is designed to improve time-to-market and reduce risk for the industry by enhancing the firm's on- and off-premises enterprise infrastructure. This year these efforts included expanding automated capabilities and maturing private cloud features, such as capacity-on-demand, to make additional resources available to rapidly respond to changes in the market, helping to reduce risk for clients and the industry.

- By leveraging on-premises infrastructure and private cloud, as well as container technology and DevSecOps capabilities to enable efficient delivery and reduce risk, DTCC right-sizes the best-fit cases for its business and corporate functions. This blended infrastructure strategy provides the flexibility to shift workloads or increase capacity – on demand – for optimal performance and helps reduce infrastructure costs.

"DTCC is in the midst of a strategic transformation, reimagining technology and processes to respond to the industry's most complex operational challenges. As part of this journey, we're strengthening our product-focused mindset and enabling technology as a service for rapid delivery, leveraging software-driven infrastructure capabilities that enable strategic platform enhancements to meet our clients' needs and protect the industry."

- ANCHAL GUPTA, DTCC MANAGING DIRECTOR, ENTERPRISE PRODUCT & PLATFORM ENGINEERING

SEAMLESS CLIENT EXPERIENCE:

As industry needs continue to evolve in response to technology advancements and changes in the marketplace, DTCC accelerated its refresh strategy last year to stay ahead of market volatility demands, significantly increasing processing power and providing an improved client experience at a lower cost.

FAST FORWARD:

DTCC's long-term strategy is focused on building stability, security and resilience to continually reduce risk and introduce efficiencies for the industry. This includes harnessing automated capabilities and technology-as-a-service concepts to rapidly deliver products and services. DTCC continues the strategic expansion of its public cloud footprint for best-fit business use cases to deliver the most optimal client experience.

DTCC'S INNOVATION TEAMS TRANSFORM IDEAS INTO REALITY

With the pace of technological change accelerating, DTCC enhanced its cloud-based software development ecosystem – called DevX, and extended it enterprise-wide in 2021, enabling the firm to rapidly transform business ideas and concepts into functioning software through innovation and experimentation.

MOVING FAST:
DevX is a flexible 'sandbox' for developers and engineers to evaluate the viability of a concept and quickly spin up an environment to determine if an idea meets a client need and whether the technology is fit for purpose. Technologists leverage a Rapid Proofing Framework and a fail-fast mindset to validate a project's viability and experiment with new technologies and approaches, moving them to coding within just hours or days. The DevX environment has been used to explore more than a dozen ideas to date.

"DevX gives us the ability to rapidly assess potential use cases as teams are iterating and brainstorming solutions to business challenges. We're now able to vet ideas with the speed of a fintech start-up and bring business opportunities to life by understanding what's possible from a technology perspective, what's viable from a business case and what's needed from our clients."

- JENNIFER PEVE, DTCC MANAGING DIRECTOR, HEAD OF STRATEGY AND BUSINESS DEVELOPMENT

DevX IN ACTION:

DTCC built and tested the Project Ion prototype using DevX over a brief six-month period in 2021. Project Ion is the firm's alternative settlement platform for the U.S. capital markets. Internal teams representing Technology Research & Innovation, the business and IT partnered to demonstrate that distributed ledger technology (DLT) is fit-for-purpose to support T+1 settlement, or even a future industry move to T+0, for the U.S. equity markets.

FROM POC TO DEVELOPMENT:
DevX played a similarly important role in advancing DTCC's Digital Securities Management (DSM) platform, which will streamline the issuance, transfer and servicing of private market securities. Production build efforts for DSM kicked off in 2021 after the successful completion of the 'Project Whitney' prototype, built in the DevX ecosystem. DSM is expected to launch in 2022.

"DevX is a powerful tool to drive internal efforts to research, experiment and implement emerging technology such as DLT, cloud, security, artificial intelligence and machine learning. This has the potential to transform how we ideate, develop and launch new products and services in the future and deliver greater value to our clients."

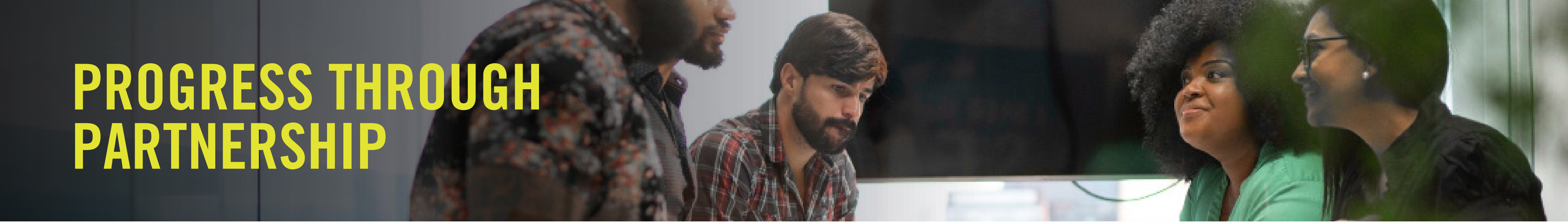
- ROB PALATNICK, DTCC MANAGING DIRECTOR, TECHNOLOGY RESEARCH AND INNOVATION

PUTTING DEVS IN THE DRIVER'S SEAT WITH APIS

DTCC's API Marketplace experienced significant growth in 2021, with traffic increasing 3.5 times and multiple clients on-boarding to connect to DTCC data and services.

IT FLIPS THE SCRIPT: THINKING LIKE A HACKER

DTCC is staying ahead of ever-evolving cyber security risks across the financial services industry.



PROGRESS THROUGH PARTNERSHIP

Explore the videos below to discover how we collaborate with a broad cross-section of market participants to understand trends, gain insight into needs and deliver innovative solutions.

ASSOCIATIONS

Martin Boer, Senior Director, Institute of International Finance, explains how DTCC's partnership with industry associations helps inform public policy on leading regulatory matters.

Building coalitions with leading industry associations is essential to advancing business and public policy priorities. Our partnership with these organizations yields important results that drive positive change.

REGULATORS

Walt Lukken, President & CEO of FIA and former Chairman of the CTFC, discusses how DTCC works collaboratively with global lawmakers and regulators to help shape global legislative and regulatory policies on critical industry issues.

DTCC works collaboratively with lawmakers and regulators in the US, Europe, Asia and Australia to help shape global legislative and regulatory policies on critical industry issues.

BOARD OF DIRECTORS

Shawn Feeney, Managing Director and Chief Administrative Officer, North America Markets and Securities Services, Citigroup, discusses collaborating to increase settlement efficiency.

DTCC's Board of Directors leverage their expertise as market practitioners to guide the firm's strategic direction and share their insights to ensure our priorities are closely aligned to the industry's most important needs.

EMPLOYEES

DTCC's Jim Hraska and Tim Lind reveal how internal collaboration at DTCC identified clients' need for market data to provide heighted transparency for financing transactions.

DTCC employees bring diverse perspectives and expertise to their roles, and their collective ingenuity drives the creative process and produces market-leading solutions across asset classes.

CLIENTS

Lisa L. Borth, Vice President, Director Transfer Agent Services, AllianceBernstein, details how DTCC's customer-first focus is critical to driving solutions that address key industry needs.

Delivering value for clients is our top priority, but achieving this result requires developing deep relationships, understanding their business as well as they do and anticipating operational challenges early on.

VENDORS

Chris Child, Senior Director of Product Management, Snowflake, details how DTCC and Snowflake have transformed how the financial services industry collaborates with data.

We recognize that building strong relationships with vendors is critical to our clients' success. These partnerships are essential to delivering innovative products and services that address the industry's top business challenges.

PROGRESS THROUGH PURPOSE

GOVERNANCE

Our Board plays a critical role in overseeing the strategic direction of DTCC, working closely with the firm’s leadership and advising on topics including risk management, regulatory matters, the development of new products and services, emerging fintech and more.

PEOPLE

The essence of DTCC is comprised of its people, core values and a fundamental belief in inclusion - who we are and how we operate together to support our clients and the industry. We are committed to fostering a thriving internal community and creating a workplace that looks like the world that we serve.

ENVIRONMENT

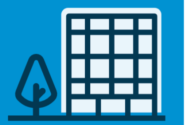
DTCC is a company that recognizes its responsibility to the planet and is committed to taking meaningful steps to reduce our energy footprint.

PROSPERITY

We continued to recruit the best talent despite the volatile market conditions and accelerated several DTCC modernization priorities, ultimately increasing our staffing needs.

GOVERNANCE

Our Board plays a critical role in overseeing the strategic direction of DTCC, working closely with the firm’s leadership and advising on topics including risk management, regulatory matters, the development of new products and services...



PEOPLE

In a year unlike any before, the diversity and broad perspectives of our teammates enabled us to make a positive impact for our clients and communities. We continued to invest heavily in our people — bringing diverse talent to our company, supporting their well-being and giving opportunities to grow and develop...

ENVIRONMENT

DTCC is a company that recognizes its responsibility to the planet and is committed to taking meaningful steps to reduce our energy footprint. When you consider that energy consumption contributes to...

PROSPERITY

We continued to recruit the best talent despite the volatile market conditions and accelerated several DTCC modernization priorities, ultimately increasing our staffing needs. Facing aggressive...

ESG REPORT: GOVERNANCE

A PURPOSE-DRIVEN ORGANIZATION

To learn more about DTCC's mission, vision and strategy, visit our CEO Letter. To learn more about our ESG priorities, click here.

GOVERNANCE BODY COMPOSITION

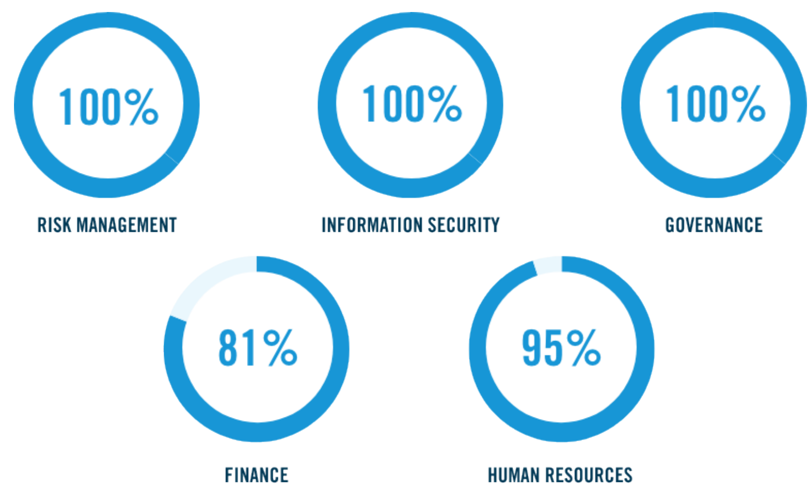
Our Board plays a critical role in overseeing the strategic direction of DTCC, working closely with the firm's leadership and advising on topics including risk management, regulatory matters, the development of new products and services, emerging fintech and more.

Below is information about DTCC's Board of Directors' ESG related competencies, tenure, stakeholder representation, gender and membership of under-represented social groups. For full bios and information about the nomination and election process, mission statement and charter, code of ethics, and DTCC's principles of governance, visit here - https://www.dtcc.com/about/leadership.

DTCC'S BOARD OF DIRECTORS' – CONSTITUENCY, TENURE, GENDER AND RACE/ETHNICITY

11 Sell-Side	**2** Buy-Side	**7** Independent & Directors designated by preferred shareholders
8 YEARS Average tenure* *Independent & directors designated by preferred shareholders	**32%** Women 22 Board members (7 female and 15 male)	**9%** Racially or ethnically diverse * *two Asians

DTCC'S BOARD OF DIRECTORS' ESG COMPETENCIES



ETHICAL BEHAVIOUR

The DTCC Code of Conduct for Employees and Contingent Workers expresses and reinforces our foundational values and demonstrates the commitment of all who work at DTCC to conduct ourselves with the highest integrity. To learn more, visit the DTCC Code of Conduct page — https://www.dtcc.com/code-of-conduct.

Based on the nature of DTCC's business, the company primarily has business relationships and pursues business opportunities with non-governmental entities. DTCC does not use third-party agents, distributors or intermediaries for sales purposes.

ANTI-CORRUPTION

DTCC, DTC, FICC, NSCC, DDR, DTCC ITP LLC and DTCC ITP Matching (US) LLC are subject to the Foreign Corrupt Practices Act (FCPA). Under the FCPA, it is unlawful for U.S. citizens and companies to pay bribes to foreign government officials. DTC, as a state member bank of the U.S Federal Reserve System is also subject to the Bank Bribery Act. DTCC ITP (UK) Limited and DDRL are subject to the UK Bribery Act. DDRJ is subject to the Unfair Competition Prevention Act. For DDRS, the primary legislation regulating corruption/bribery is the Prevention of Corruption Act.

Our Code of Conduct identifies and explains the ethical business practices that DTCC staff must adhere to, such as ensuring fair competition, prohibiting fraudulent behavior, bribery and facilitation payments. The codes explain conflicts of interest and how to disclose potential conflicts and how to comply with DTCC's anti-money laundering and global sanctions programs. Guidance is provided regarding personal political activity. Employees are encouraged to be aware of the dangers of modern slavery in support of the UK Modern Slavery Act. Employees undergo mandatory annual training in the Code of Conduct. Employees are subject to ongoing background and other checks, including monitoring of personal financial transactions.

OUR ACTIONS

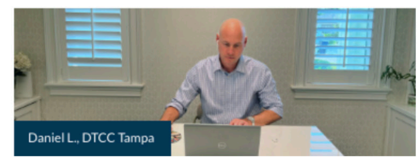
A 2020 Compliance Risk Assessment determined that DTCC's controls are sufficient to address regulatory requirements and identified bribery and corruption risks. Controls are designed to reduce both the impact and likelihood of a risk event. The Compliance Risk Assessments team did not identify any additional material remediation or mitigation that is necessary to reduce residual risk.

All DTCC employees and contingent workers are required to take training on anti-bribery and anti-corruption policies as part of DTCC's Code of Conduct training. In addition, contingent staff who access DTCC's networks are subject to DTCC's Code of Conduct and must complete related training.

Our employees have access to a global ethics hotline and a newly added whistle blower policy – all contained in our Code of Conduct – provides the ability for employees to report. All employees are expected to promptly report any knowledge or information about conduct by anyone in the company that they believe to be a crime or illegal act, a violation of law or regulation or policy including the Code of Conduct, or a dishonest act or unethical act, including misappropriation of funds or anything of value from DTCC or improper recording of company's assets or liabilities. Employees must also report any other circumstances or activities that may conflict with the Code of Conduct. If there are any questions about the Code of Conduct employees can reach out to the Compliance Department or Employee Relations.

Twice annually, DTCC Compliance screens all vendors for relevant adverse news that may indicate participation in modern slavery and would flag participation in bribery or corruption.

Adverse news screening is also carried out for new clients as part of the onboarding process.



Daniel L., DTCC Tampa

PROTECTED ETHICS AND REPORTING MECHANISM

At DTCC, a hotline and online reporting tool provide an avenue for employees or others to seek advice and also report serious concerns or violations, perceived or known in the work environment. Reports may be generated 24 hours a day, 7 days a week, anonymously if elected. Once a report has been completed, all information is forwarded immediately to the company for appropriate follow-up and resolution.

RISK AND OPPORTUNITY OVERSIGHT

Risk management is the primary function of DTCC and has been since the organization's inception nearly 50 years ago. The company's risk management framework includes effective and efficient identification, measurement, monitoring and control of credit, market, liquidity, systemic, operational and other risks for the DTCC enterprise, our members and the marketplace. To learn more, visit our Managing Risk website.

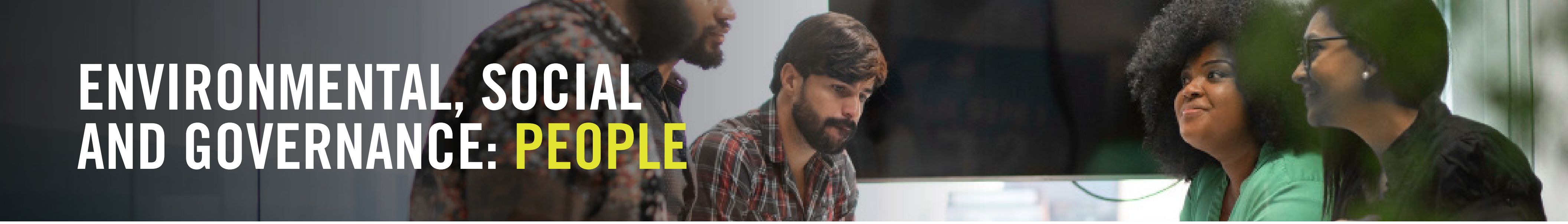
OUR ACTIONS

DTCC has historically maintained robust metrics on financial and operational risk, including coverage for potential risks posed by member firms and other counterparties or third parties. These metrics show that as risks have evolved, DTCC has responded by implementing risk mitigants or increasing resources to be able to absorb these risks. DTCC also maintains risk tolerance plans across risk categories to track the level of risk relative to the company's risk appetite. ESG-related risks are included in the Inventory of Risks that is maintained by DTCC's Systemic Risk Office. These risks are assessed and monitored as part of an internal monthly report that provides ongoing transparency on the overall direction and state of systemic risk as it relates to DTCC's entities and/or its clients.

DTCC recognizes the growing importance of these issues to the firm's long-term risk profile and strategic direction, and we want to ensure that we are assessing the impact of ESG-related risks on our staff, our ownership and the financial industry more broadly, as well as our local communities and our regulatory status.

"As a result, we have also convened a taskforce to develop the first annual ESG report and we have tasked subject matter experts from throughout the company to assess the impact of their respective areas on environmental, social, and governance risk. "

- DANIEL MCELLIGOTT, EXECUTIVE DIRECTOR, COUNTERPARTY CREDIT RISK



ENVIRONMENTAL, SOCIAL AND GOVERNANCE: PEOPLE

STRENGTHENING OUR CULTURE

The essence of DTCC is comprised of its people, core values and a fundamental belief in inclusion — who we are and how we operate together to support our clients and the industry. We are committed to fostering a thriving internal community and creating a workplace that looks like the world that we serve. The diversity and broad perspectives of our teammates enabled us to continue making a positive impact for our clients and communities. We continue to invest heavily in our people — bringing diverse talent to our company, supporting their well-being and giving them opportunities to grow and develop.

OUR DEMOGRAPHICS

Diversity is a top priority at every level of our company, from our Board of Directors to our over 5,000 global employees (as of December 31, 2021). Publishing our demographic diversity data is part of our commitment to increasing representation.

DTCC has an ongoing campaign called 'Count Me In,' which encourages colleagues to self-identify. As of the end of 2021, over 24% of our global staff had participated. Self-Identification is a very important and voluntary tool that will enrich our workforce data with valuable information and help us track the progress and effectiveness of our efforts, ensuring we consider the needs of all our employees.

DIVERSITY AND INCLUSION IN ACTION

ALLYSHIP IN ACTION

We have successfully run 14 'Ally to Upstander' skills training sessions, with more than 1,000 employees. This training provided tools for individuals of all backgrounds, identities and genders to become successful allies at work, empowering participants to engage in discussions about allyship and providing actionable steps to advocate for themselves and others. This has paved the way for us to extend this training and make it available to everyone across the organization.

14 SESSIONS

1,167 ATTENDEES

"I learned discussing a candidate's 'culture add' is much more constructive than whether they are a 'good fit.' I started changing my attitude and wording right away."

"[I learned how to ...] ask for feedback on how I can be an upstander, and more consistently call in individuals when they unintentionally (or intentionally) make comments that are not inclusive."

We know that embracing the unique perspectives of our employees greatly enhances our capacity to be innovative, adaptable and to create effective solutions that meet the evolving needs of our clients. To foster leadership engagement and increase sponsorship in the advancement of women, 250+ DTCC executives of all gender identities participated in an immersive 1.5 day 'Men Advocating for Real Change' (MARC) Leaders Workshop provided by Catalyst in 2019-2020. This unique workshop was focused on empowering men to stand up for gender equity so they could intentionally engage in creating a gender inclusive workplace and become strong advocates, sponsors and allies.

VOICES OF INCLUSION

Our culture is our strength, and our Employee Resource Groups (ERGs) are the "brand and culture carriers" of our organization. As DTCC's workforce becomes more diverse, our ERGs have expanded to include all aspects of diversity — our abilities, differences and similarities — both seen and unseen. It is important that we acknowledge and understand how they impact our work, our culture and feeling of belonging. An invisible aspect of our work is to continually address the topics of unconscious bias, intersectionality, social justice and equity at the organizational level. All the ERGs are overseen by an advisory council and DTCC's Management Committee and plan their work across three areas: Recruitment, Professional Development and Workplace Belonging.

Our ERGs played a key role in addressing social injustice, facilitating open and honest conversation and reacting to what is happening in our communities.

WINS PERSONAL SAFETY SESSION

The Women's Initiative for Networking and Success (WINS) Employee Resource Group (ERG) is a member of Gender Networks, a coalition that brings together the co-chairs of gender-based employee resource groups at firms across various industries to discuss trends and share best practices to better support women in the workplace.

During Women's History Month, a tragic event in the UK led to heightened dialogue on gender-based violence. Gender Networks called an ad hoc meeting for members to brainstorm how we could build awareness, respond and show support within our organizations. As a result, WINS engaged the DTCC Global Security Management team to lead a discussion on personal safety, empowering our employees with knowledge and information to protect themselves.

"DTCC was commended for their awareness of how colleagues may be feeling and for tapping into internal expertise to improve the circumstances of others."

- GEMMA BALASINGHAM, WINS CO-CHAIR, DTCC LONDON

ASIAN AMERICAN PACIFIC ISLANDER (AAPI) EVENT

"The past two years have been difficult for the Asian community, which has faced a dramatic rise in hate crimes. ARISE (Asian Representation in Innovation, Success and Excellence) Employee Resource Group, DTCC's affinity group for AAPI employees, rose to the occasion by serving as a conduit for employees and allies who seek to make the AAPI presence at DTCC more visible and to change the misleading 'model minority' image. A roundtable and subsequent discussions were hosted to share experiences and shape their careers."

- SUNG-HO AHN, ARISE EXECUTIVE SPONSOR, DTCC JERSEY CITY

RE-EMERGING AFTER A CAREER BREAK

The ReEMERGE program is designed for women and men who want to restart their career after a break of two or more years. DTCC offers two programs, one non-technical (HR, Risk, Finance, Operations) and one technical (application development, cyber risk, information technology) that include 12- and 16-week internships respectively. Through this experience, participants get re-oriented to working, learn DTCC's culture and understand how they will fit into the organization.

PAY EQUALITY

Pay equality is essential to retaining and attracting the very best and diverse talent.

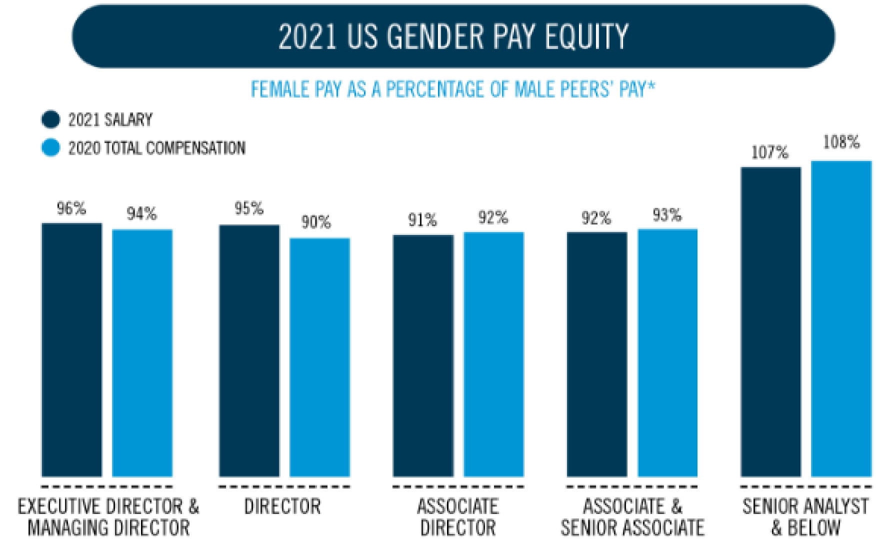
At DTCC, we are committed to paying employees equitably. We conduct pay equality reviews on an annual basis and share high-level results with key stakeholders and employees, in addition to publishing a UK gender pay gap report annually.

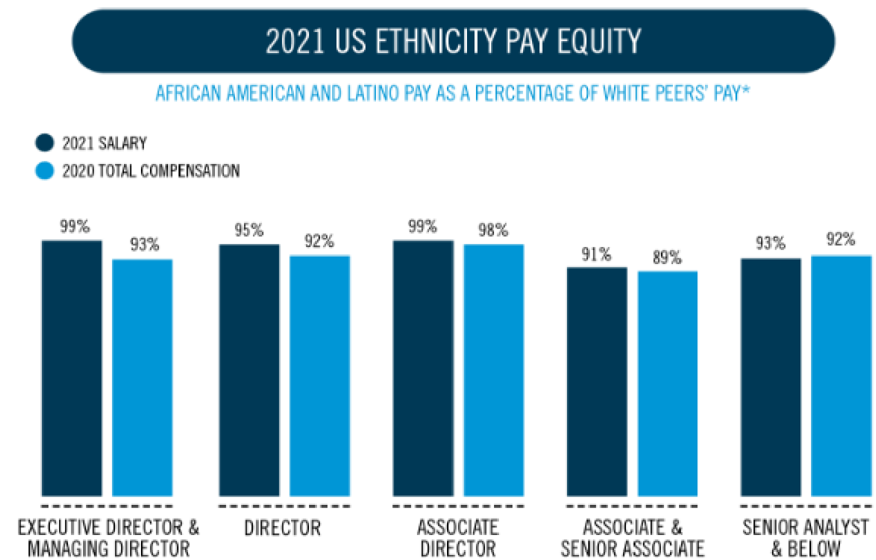
UNITED STATES

Our US gender pay review shows that females are compensated at 90% or greater relative their male peers. Similarly, our ethnicity pay review found that our African American and Latinx employee salaries at all levels are 89% or greater relative to white peers. We continually work with business leaders and hiring managers to ensure pay equality across all employees, regardless of gender or ethnicity – and we are striving to achieve 100% pay equality.

UNITED KINGDOM

Annually, we are required by UK regulation to publish the gender pay gap for DTCC Europe. Unlike the global pay equality review, this review is irrespective of key compensation drivers such as location, role, responsibilities, level in the organization or years of experience. Its focus is an aggregate comparison of all males and females.

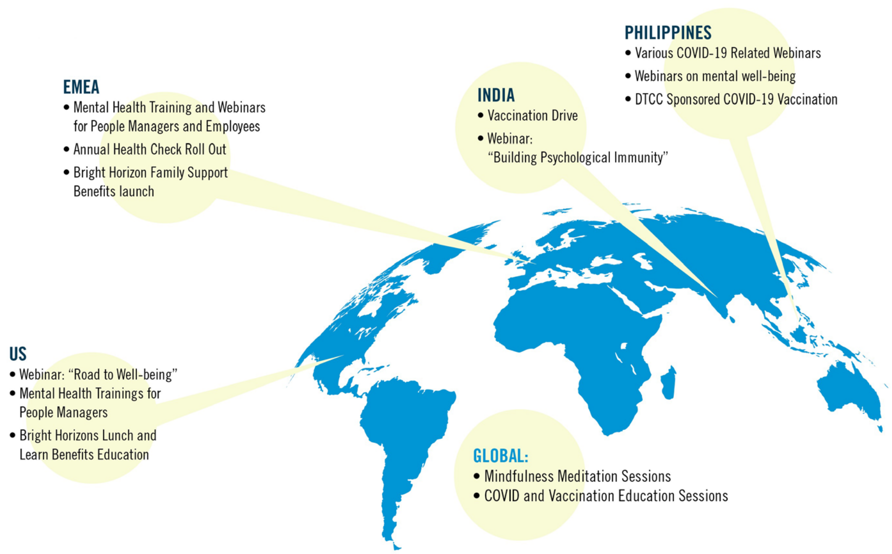




As of September 1, 2021

MAINTAINING OUR EMPLOYEES' WELL-BEING

The COVID-19 pandemic reinforced that emotional wellness and mental health are very important but often overlooked areas. We took extra steps to let our employees know that they, and their loved ones, have our strong support and availability to a wide range of resources to help them. For instance, we enhanced our on-going offerings to include industry-leading flexible programs and resources to help our colleagues and their families manage during these challenging times. Our responses were tailored to the unique conditions in different regions.



BUILDING SKILLS FOR THE FUTURE

We are steadfast in our commitment to helping develop and advance our talent. Because the pandemic challenged us to find creative ways to deliver our training, coaching and mentoring programs, we redesigned our offerings by incorporating a variety of next generation technologies and resources. We continued to expose our teams to prominent speakers on key leadership and business topics.

Drawing from McKinsey's "Women in the Workplace" study, we have worked to reduce the obstacles women face in attaining initial promotion to management levels. Among the steps we have taken was redirecting our Advancing Women Leaders program to the Associate Director level (from the Director level) and the Emerging Women Leaders program to Senior Associates (from Associate Directors). We also placed our first cohort into the McKinsey Black Leadership Academy, which was designed to help organizations enhance networking and development resources for Black professionals.

30-DAY MANAGER CHALLENGE

Our 30-Day Manager challenge received the Gold Level 2021 Brandon Hall Group HCM Excellence Award in Leadership Development for Best Unique and Innovative Leadership Development program. Launched in 2020, this initiative encourages managers to take one new action every day for 30 days to enhance their management and leadership skills.

"This Manager Challenge at DTCC is one of its kind. When we launched it a couple of years back, there was no template to follow, but we knew a pragmatic and actionable approach to developing and practicing leadership skills, especially in a challenging remote work environment, would resonate with our managers. I'm proud of our entire team's effort in incubating this innovative idea and making it a success for our organization."

- KATINA MAGUIRE, EXECUTIVE DIRECTOR, TALENT MANAGEMENT AND DEVELOPMENT

Advancing Women Leaders
13 ASSOCIATE DIRECTORS
(18-month program)

Emerging Women Leaders
25 SENIOR ASSOCIATES
(6-month program)

Accelerating Leaders
77 DIRECTORS and **EXECUTIVE DIRECTORS**
(6-month program)

Black Executive Leadership Program
4 EXECUTIVE DIRECTORS
(3-month program)

Management Accelerator Program
9 ASSOCIATE DIRECTORS and **DIRECTORS**
(6-month program)

RISK OF INCIDENT OF CHILD LABOR

Most of our suppliers are predominantly highly skilled IT professionals, which means that DTCC is at low risk of child labor or modern slavery. Despite this, we recognize the dangers of child labor and modern slavery and support the Modern Slavery Act. This is why DTCC will not offer any employment (such as internships) without compensation, and we closely monitor our vendors and report any suspected non-compliance to our vendor engagement requirements to the DTCC Compliance Hotline.

To learn more, visit our Code of Conduct page.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE: ENVIRONMENT

This Environment section covers information that is recommended under Planet by the World Economic Forum's framework.

REDUCING OUR ENVIRONMENTAL IMPACT

DTCC acknowledges and commits to taking meaningful steps to reduce our energy footprint. Considering that energy consumption contributes nearly 60% of the world's greenhouse gas emissions, this is a priority for us.

- **2016:** Started monitoring energy usage in business centers
- **Energy saving actions:** LED lighting, decommission aging equipment, improved efficiency of equipment in buildings (retro-commissioned)
- **15.1 million kilowatt hours of electricity saved** by improving ventilation systems
- **11% reduction** in electricity consumption due to reduction in building occupancy in 2020
- **30% reduction** in energy consumption compared to 2016
- **ISO 50001:2018 certification*** for Jersey City, Tampa, and Dallas sites

* ISO50001:2018 is the global energy management systems standard that specifies requirements for establishing, implementing, maintaining and improving an energy management system

ISO FRAMEWORK

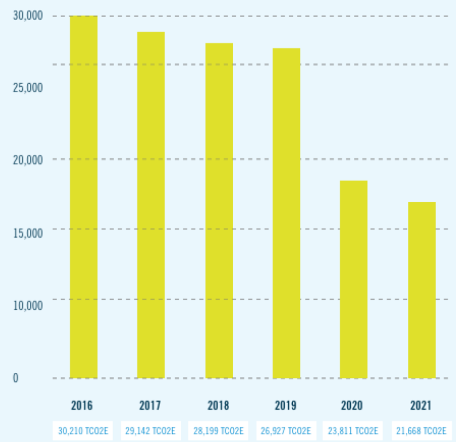
We have begun operating all DTCC sites with the ISO 50001:2018 framework in advance of certification. In addition, we are formally pursuing ISO 50001:2018 certification and ISO 14001 certification for all sites in 2022.

Solar Panels at DTCC Tampa

SOLAR POWER

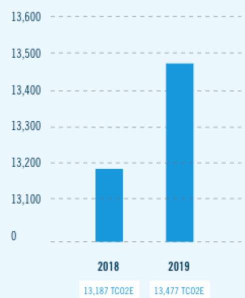
DTCC is generating on-site solar power. As a result, in 2022, we will have offset approximately 4% of our total annual electricity usage with intentions to expand it to a 9% offset by 2023.

CARBON DIOXIDE EQUIVALENT (TCO2E) SCOPE 1 AND SCOPE 2 EMISSIONS



MATERIAL UPSTREAM AND DOWNSTREAM SCOPE 3 EMISSIONS

Where appropriate - boundaries of reporting include global business travel & US commuting estimates.



In 2020 and 2021 there was no significant travel or employee commuting recorded

OUR PLANS FOR THE FUTURE

In 2021 we began developing a net-zero road map. The organization has made a commitment to move towards net zero by 2030, however, we are in the process of refining our science-based targets and determining the resources needed to achieve these targets.

While DTCC has not fully implemented the Task Force on Climate-related Financial Disclosures, we have been focused on reducing our emissions since 2016. To learn more about our emissions reduction efforts, visit the " Reducing Our Environmental Impact" section of the ESG report.

ASSESSED CARBON FOOTPRINT WITH THIRD-PARTY CONSULTANT

OBTAINED ISO 50001 CERTIFICATION FOR EFFICIENT ENERGY MANAGEMENT

REDUCED ENERGY USE BY 9% COMPARED TO 2020 EMISSIONS, FOR A TOTAL OF 30% SINCE 2016

CREATED AN INTERNAL A NET ZERO ROAD MAP INCLUDING SCOPES 1, 2, AND THREE FOR FURTHER DEVELOPMENT

WATER CONSUMPTION AND WITHDRAWAL IN WATER-STRESSED AREAS

The following DTCC sites are located in higher tier water stressed areas, which equate to 22% of our total footprint:

Water consumption was not available in Brooklyn, Chennai and London, but we plan to measure in 2022.

ESG REPORT: PROSPERITY

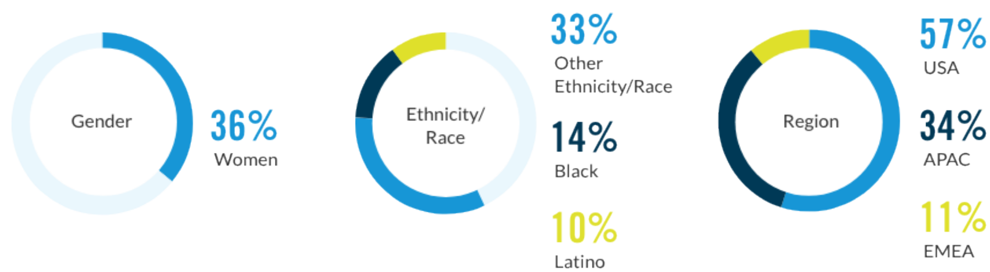
ABSOLUTE NUMBER AND RATE OF EMPLOYMENT

Despite volatile market conditions, DTCC continued to make strategic investments in key priorities in 2021. To ensure we had the resources to advance these initiatives, we continued to recruit the best talent as staffing needs increased. In the face of intense competition for talent, we streamlined our hiring process to identify, recruit and onboard new employees.

- **LAUNCHED CRM/TALENT COMMUNITY**
  30,000+ invitations sent to existing and prior applicants, former employees and prospects
- **NEW SOURCING PARTNERSHIPS**
  Hackerrank, Dice and HandShake
- **DTCC AND HACKERRANK CO-BRANDED CODE-A-THON**
  Over 5,000 prospects and over 2,000 developers participated in this coding competition with the opportunity to discuss career opportunities
- **GREW OUR INTERN AND EDGE POPULATION**
  Condensed hiring timelines and aligned starting pay for this sector in response to emerging market conditions
- **HOSTED NETWORKING AND INFORMATION SESSIONS**
  Continued with recruiter "ask me anything" sessions, virtual open houses and the Community reflection series for potential candidates to speak to DTCC leaders

Our broad strategy combined the targeted use of talent market data, a wide range of recruitment events targeted at diverse audiences, enhanced use of our social media channels to reach prospective candidates across environments and collaboration with a variety of recruiting partners.

EXTERNAL HIRES



TURNOVER

Gender
11% WOMEN

Ethnicity/Race
12% BLACK
10% LATINO
10% OTHER ETHNICITY/RACE

Region
9% USA
12% APAC
11% EMEA

Other Ethnicity/Race includes American Indian or Alaska Native, Asian, Native Hawaiian or other Pacific Islander, and two or more races

ECONOMIC CONTRIBUTION

DTCC created significant economic value by generating healthy returns for employees and shareholders. Full details are available in our Financial Statements and Notes.

The organization paid $86.2 million to governments in the form of income taxes. Refer to the Income Taxes footnote to the financial statements for further details.

THE NEW JERSEY ECONOMIC DEVELOPMENT AUTHORITY

The New Jersey Economic Development Authority (EDA) is an independent State agency that provides financial assistance to qualified organizations for the purpose of maintaining and expanding employment opportunities in the state and increasing tax rates in underserved communities. EDA administers NJ BEIP tax incentive programs that have job creation or retention requirements, provide financing for certain business activities, and revitalize communities through redevelopment initiatives.

During the year ended 12/31/21, DTCC recognized income in the amount of $12.7 million related to the NJ BEIP tax incentive program.

GIVING BACK TO OUR COMMUNITIES

Despite the obvious challenges of organizing in-person volunteer and philanthropy events, fundraising continued throughout the year at most of our sites. In fact, in 2021 our employees raised more funds than in prior years, contributing $670,073 in donations and company matching gifts. The largest employee fundraiser was the relief effort for India's second wave of COVID-19, raising over $120,000 in employee and company match.

$2,602,313
2021 total philanthropic giving

$670,073
Employee donations and company matching gifts

$1,932,240
2021 Total Corporate Contributions

10,000 HOURS
2021 Volunteer Service

OUR EMPLOYEES MAKING AN IMPACT THROUGH GIVING

We apply the same rigor and excellence in delivering on our Corporate Social Responsibility promises as we do in protecting the global financial system.

STEPPING UP FOR FLORIDA STUDENTS

Working with Step Up for Students has enabled us to help over 100 Florida schoolchildren during 2021.

INVESTING IN STEM

Advancing STEM (science, technology, engineering, and mathematics) education and training remained a DTCC priority in 2021.

FINANCIAL INVESTMENT

We invested $155.8 million in capital investments for premises, equipment and intangible assets. Our primary investments are technology focused and involve the purchase of computer equipment and the development of software. These investments improve our core processes, increase the pace of technological innovation and align our services with our clients' needs. For that purpose, we regularly update and upgrade our technology systems to meet industry, regulatory and compliance standards. Additionally, these investments create highly-skilled jobs for our employees and vendors.

Operationally, our systems are fully backed-up at alternate locations for business contingency purposes and are frequently tested to ensure that full capabilities are maintained in the event of an emergency. We also maintain significant excess capacity to manage market volatility and related volume spikes that may require us to process substantially more transactions, which is particularly important during periods of market stress or dislocation. In addition, we play an active role on various securities industry technology committees, which include sub-committees and working groups on major technology issues, such as information security and industry-wide testing for business recovery. During 2021, the organization paid dividends totaling $6.8 million to our series C preferred stock shareholders and $8.7 million to our series D preferred stock shareholders. On June 8, 2021, DTCC issued 2,000 shares of Series D Fixed Rate Reset Non-Cumulative Perpetual Preferred stock, resulting in issuance costs of $9.1 million and net proceeds of $490.9 million. On June 15, 2021, DTCC redeemed all 1,600 shares outstanding related to the Series C Preferred stock totaling $400 million with issuance costs of $9.5 million.

A MESSAGE FROM **SUSAN COSGROVE**

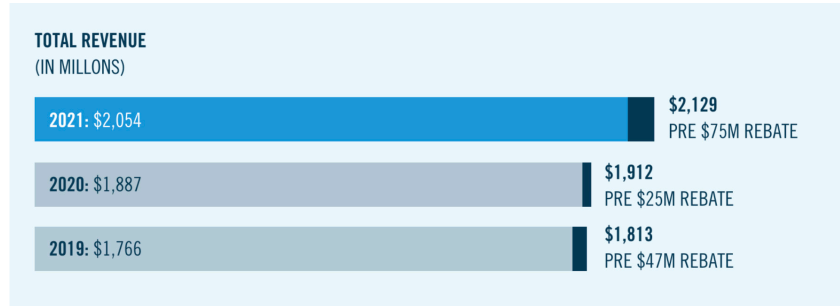
CHIEF FINANCIAL OFFICER

Dear Stakeholder:

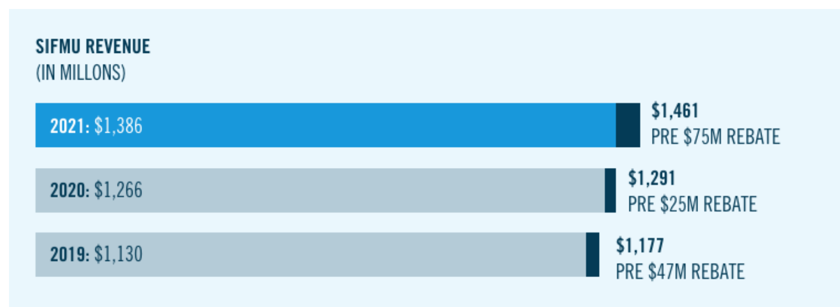
Global financial markets experienced continued volatility in 2021 as the ongoing impact of the pandemic, supply chain disruptions and other economic factors again sparked heightened trading activity across asset classes. The value of critical market infrastructures like DTCC was reinforced time and again as our Systemically Important Financial Market Utilities (SIFMUs) continued to provide safety and stability amidst a dynamic external environment. For DTCC, our long-term financial strategy proved pivotal to delivering an outstanding financial performance last year despite these economic pressures.

In 2021, DTCC achieved record high revenue, reaching over $2 billion after payment of a $75 million rebate to participants of The National Securities Clearing Corporation (NSCC). Our revenue performance represented an increase of nearly 9%, or $166 million, from 2020 and provided additional capacity to fund strategic investments. As a result, we accelerated the modernization of market infrastructure systems, developed a roadmap to achieve T+1 settlement for the US equity markets in 2024 and piloted a new digital infrastructure for a netted T+0 settlement cycle. We also delivered strong net income margin in 2021, which was up 3% to $292 million before payment of our preferred dividend, an increase of $80 million from 2020 despite significant external economic pressures.

Our long-term financial strategy proved pivotal to delivering an outstanding financial performance last year despite these economic pressures.

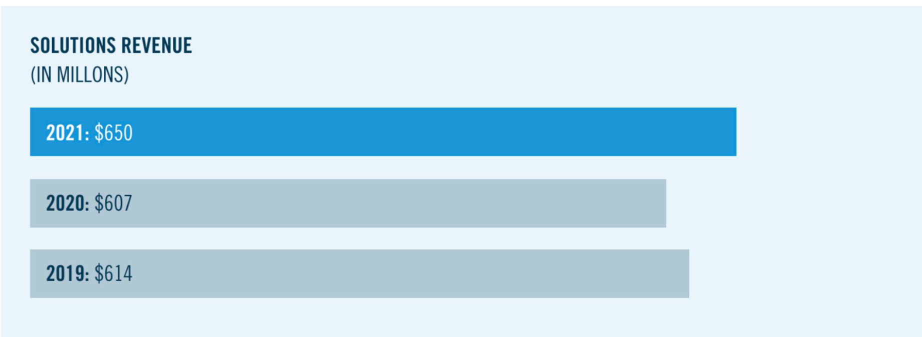


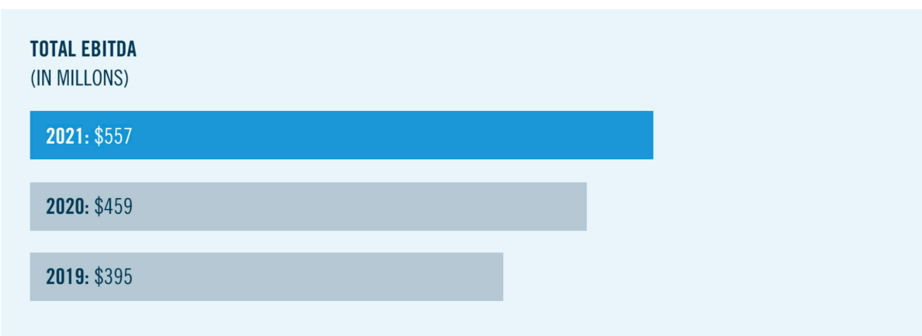
Both the SIFMU and Solutions operating segments realized strong performance in 2021. SIFMU revenue jumped to a record $1.461 billion before payment of the client rebate, up $170 million, or 13%, year-over-year. Solutions revenue hit a peak of $650 million in 2021, an increase of $43 million, or 7%, compared to last year due largely to robust market activity driving volume in our Institutional Trade Processing business, along with the growth of derivatives reporting in our Repository & Derivatives Services business. The continued growth of the Solutions business lines is consistent with DTCC's business strategy to diversify the firm's revenue sources across client segments and asset classes while leveraging our scale to reduce participant costs.



EARNINGS PERFORMANCE

Total EBITDA (earnings before interest, tax, depreciation, and amortization) rose to $557 million, an increase of 21% from the prior year. EBITDA margin also increased to 27% in 2021, up three percentage points from 2020 levels. Our earnings performance is especially notable as we continued to make significant investments to enhance critical systems, strengthen risk management processes and fund our innovation agenda to build the financial infrastructure of the future. As the pandemic entered its second year and markets remained volatile, expenses increased $95 million in 2021 vs. the prior year, driven primarily by costs supporting increased market activity, accelerated investments associated with our modernization program to update our clearing and settlement systems and human capital costs as labor markets began to tighten. Excluding the impact of these items, expenses were at a similar level as in 2020.





SUMMARY BALANCE SHEET

DTCC's balance sheet strength reflects our mission as a critical market infrastructure. Our balance sheet is highly liquid and composed primarily of proprietary cash and cash equivalents, as well as deposits from our member firms to the Participant and Clearing funds to cover market and liquidity risk associated with clearance and settlement. Through 2021, Shareholders' equity increased by nearly $400 million, primarily driven by growth in retained earnings on the back of strong net income, as well as $100 million in additional preferred stock. As part of refinancing the Series C Preferred Stock in June 2021, we increased the size of the new Series D to $500 million to provide additional strategic resources. The Series D issuance is a fixed-rate, non-cumulative, perpetual preferred stock. Our strong balance sheet enhances the firm's financial resilience and enables us to provide continuity of services and stability for our clients and the industry.

The majority of our balance sheet is comprised of default management and liquidity resources, which are available in the event of a clearing member default where the clearinghouse would need to facilitate settlement. These resources include the Participants and Clearing Funds as well as proceeds from the issuance of commercial paper and senior notes. In 2021, we increased our commercial paper issued by nearly $4.5 billion to meet temporary heightened liquidity needs from increased trading activity, particularly from exercised equity options and index rebalancing.

Our strategy is to maintain a robust and diverse default liquidity portfolio consisting of prefunded and committed resources. Reliable access to liquidity in various market conditions is our top priority. To achieve this, our strategy is to diversify the portfolio not only with respect to duration, but also from numerous liquidity providers in different financial and geographical markets. This includes the commercial paper market, investment grade debt capital markets, the syndicated loan market as well as directly from our participants.

$MILLIONS	2021	2020
ASSETS		
CASH & CASH EQUIVALENTS	$14,682	$9,965
PARTICIPANTS' ASSETS	$57,835	$62,717
ALL OTHER ASSETS	$1,538	$1,485
TOTAL ASSETS	**$74,055**	**$74,167**
LIABILITIES		
COMMERCIAL PAPER	$8,292	$3,843
PARTICIPANTS' LIABILITIES	$57,835	$62,717
LONG-TERM DEBT	$3,732	$3,728
ALL OTHER LIABILITIES	$1,116	$1,191
TOTAL LIABILITIES	**$70,975**	**$71,479**
SHAREHOLDERS EQUITY	**$3,080**	**$2,688**

PERFORMANCE DASHBOARD

WE STAND AT THE CENTER OF THE FINANCIAL MARKETPLACES

Check out our financial results and operational processing statistics to learn more about how we're supporting the growth of the global financial markets.

TOTAL VALUE OF SECURITIES PROCESSED (IN USD)

2021
$2.37 QUADRILLION

2020
$2.33 QUADRILLION

2019
$2.15 QUADRILLION

TOTAL REVENUE (USD IN MILLIONS)

2021
$2,054

2020
$1,887

2019
$1,766

TOTAL ASSETS (USD IN MILLIONS)

2021
$74,055

2020
$74,167

2019
$52,137

EQUITIES CLEARING

AVERAGE DAILY VALUE OF EQUITIES TRADES CLEARED
(USD IN TRILLIONS)

$2.029

2021: $2.029
2020: $1.698
2019: $1.181

AVERAGE DAILY VOLUME OF EQUITIES TRADES CLEARED
(IN MILLIONS)

202.0

2021: 202.0
2020: 173.4
2019: 106.2

FIXED INCOME CLEARING: MORTGAGE-BACKED SECURITIES

MBS: PAR VALUE NETTING DESTINED
(IN TRILLIONS)

69

2021: 69
2020: 70
2019: 67

FIXED INCOME CLEARING: GOVERNMENT SECURITIES DIVISION

GSD: DVP TOTAL VALUE IN NET
(USD IN TRILLIONS)

$1,419

2021: $1,419
2020: $1,507
2019: $1,478

GSD: GCF REPO TOTAL VALUE IN NET
(USD IN TRILLIONS)

$251

2021: $251
2020: $319
2019: $300

SETTLEMENT

TOTAL VOLUME OF SECURITIES TRANSACTIONS SETTLED
(IN MILLIONS)

643

- 2021: 643
- 2020: 561
- 2019: 654

TOTAL VALUE OF SECURITIES TRANSACTIONS SETTLED
(IN TRILLIONS)

$152

- 2021: $152
- 2020: $131
- 2019: $121

WEALTH MANAGEMENT SERVICES - MUTUAL FUNDS

MUTUAL FUNDS DEFINED CONTRIBUTION CLEARANCE AND SETTLEMENT
(YEARLY VOLUME IN MILLIONS)

153.9

- 2021: 153.9
- 2020: 151.2
- 2019: 144.4

ASSET SERVICES

NUMBER OF ACTIVE SECURITY ISSUES HELD AT DTCC
(IN MILLIONS)

1.39

- 2021: 1.39
- 2020: 1.37
- 2019: 1.36

TOTAL VALUE OF ACTIVE ISSUES HELD AT DTCC
(USD IN TRILLIONS)

$87.1

- 2021: $87.1
- 2020: $73.5
- 2019: $63.0

WEALTH MANAGEMENT SERVICES

ALTERNATIVE INVESTMENT PRODUCTS

2021	2021
1,636 Clients	7,420 Unique Funds

2020	2020
1,453 Clients	6,503 Unique Funds

INSURANCE & RETIREMENT SERVICES

TOTAL PROCESSED SETTLEMENT VALUE
(USD IN BILLIONS)

$162.8

- 2021: $162.8
- 2020: $136.1
- 2019: $124.3

WEALTH MANAGEMENT SERVICES - MUTUAL FUNDS

VALUE OF FUND/SERV TRANSACTIONS
(USD IN TRILLIONS)

$8.5

- 2021: $8.5
- 2020: $8.6
- 2019: $6.6

VOLUME OF FUND/SERV TRANSACTIONS
(IN MILLIONS)

261

- 2021: 261
- 2020: 263
- 2019: 240

WEALTH MANAGEMENT SERVICES - INSURANCE & RETIREMENT SERVICES

SETTLEMENT VOLUME FOR INSURANCE (STL)
(IN THOUSANDS)

6,120

- 2021: 6,120
- 2020: 5,625
- 2019: 5,084

TOTAL TRANSACTION VOLUME FOR INSURANCE
(IN BILLIONS)

15.0

- 2021: 15.0
- 2020: 14.1
- 2019: 14.5

INSTITUTIONAL TRADE PROCESSING

GMEI LEI EVENTS* BY COUNTRY

91,297	UNITED STATES
31,358	SWEDEN
20,097	DENMARK
18,097	CANADA
14,613	NORWAY
14,412	LUXEMBOURG
14,355	CAYMAN ISLANDS
71,086	OTHER

** LEI events are defined as actions undertaken by the GMEI to facilitate new LEI Issuance, annual renewals, or record data updates.*

The Depository Trust & Clearing Corporation

Consolidated Financial Statements as of and for the Years Ended December 31, 2021 and 2020, and Independent Auditors' Report

THE DEPOSITORY TRUST & CLEARING CORPORATION

TABLE OF CONTENTS

Deloitte.

Deloitte & Touche LLP
30 Rockefeller Plaza
New York, NY 10112-0015
USA

Tel: +1 212 492 4000
Fax: +1 212 489 1687
www.deloitte.com

INDEPENDENT AUDITOR'S REPORT

To the Board of Directors and Shareholders of
The Depository Trust and Clearing Corporation

Opinion

We have audited the consolidated financial statements of The Depository Trust and Clearing Corporation and its subsidiaries (the "Company"), which comprise the consolidated statements of financial condition as of December 31, 2021 and 2020, and the related consolidated statements of income, comprehensive income, changes in shareholders' equity, and cash flows for the years then ended, and the related notes to the consolidated financial statements (collectively referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Company and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for one year after the date that the financial statements are available to be issued.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Deloitte & Touche LLP

March 25, 2022

THE DEPOSITORY TRUST & CLEARING CORPORATION
CONSOLIDATED STATEMENTS OF FINANCIAL CONDITION

(In thousands, except share data)	As of December 31, 2021	As of December 31, 2020
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 14,236,922	$ 9,165,353
Participants' segregated cash	6,078	134
Short-term investments	445,000	800,000
Accounts receivable - net of allowance for credit losses	244,090	217,531
Participants' and Clearing Funds	56,501,935	61,903,522
Other Participants' assets	1,326,873	813,006
Other current assets	176,352	138,265
Total current assets	72,937,250	73,037,811
NON-CURRENT ASSETS:		
Premises and equipment - net of accumulated depreciation	190,326	202,224
Goodwill	57,699	57,699
Intangible assets - net of accumulated amortization	328,635	343,530
Operating lease right-of-use-asset	222,341	220,073
Other non-current assets	318,629	306,088
Total non-current assets	1,117,630	1,129,614
TOTAL ASSETS	$ 74,054,880	$ 74,167,425
LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Commercial paper - net of unamortized discount	$ 8,291,933	$ 3,843,290
Long-term debt	—	3,921
Pension and postretirement benefits	33,981	40,438
Operating lease liability	28,705	27,179
Accounts payable and accrued expenses	100,346	122,021
Participants' and Clearing Funds	56,501,935	61,903,522
Payable to Participants	1,332,951	813,140
Other current liabilities	291,251	285,707
Total current liabilities	66,581,102	67,039,218
NON-CURRENT LIABILITIES:		
Long-term debt	3,731,814	3,723,942
Pension and postretirement benefits	147,919	179,552
Operating lease liability	242,846	245,836
Other non-current liabilities	270,863	290,526
Total non-current liabilities	4,393,442	4,439,856
Total liabilities	70,974,544	71,479,074
COMMITMENTS AND CONTINGENCIES (Note 2)		
SHAREHOLDERS' EQUITY		
Preferred stock:		
Series A, $0.50 par value - 10,000 shares authorized, issued (above par), and outstanding	300	300
Series B, $0.50 par value - 10,000 shares authorized, issued (above par), and outstanding	300	300
Series C, $0.50 par value - 1,600 shares authorized, issued (above par), and outstanding	—	390,516
Series D, $0.50 par value - 2,000 shares authorized, issued (above par), and outstanding	490,900	—
Common stock, $100 par value - 80,000 shares authorized, 50,908 shares issued and outstanding	5,091	5,091
Additional paid-in capital	411,065	411,065
Retained earnings	2,231,213	1,964,412
Accumulated other comprehensive loss, net of tax	(208,533)	(233,333)
Non-controlling interests	150,000	150,000
Total shareholders' equity	3,080,336	2,688,351
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	$ 74,054,880	$ 74,167,425

The Notes to Consolidated Financial Statements are an integral part of these statements.

THE DEPOSITORY TRUST & CLEARING CORPORATION
CONSOLIDATED STATEMENTS OF INCOME

(In thousands)	For the years ended December 31, 2021	2020
REVENUES		
Settlement and asset services	$ 507,315	$ 458,406
Clearing services	767,753	703,098
Matching services	298,025	293,377
Repository and derivatives services	302,696	270,030
Wealth management services	111,864	107,831
Data and other services	48,777	40,477
Investment income, net	17,170	14,184
Total revenues	2,053,600	1,887,403
EXPENSES		
Employee compensation and related benefits	806,075	781,761
Information technology	225,911	192,676
Professional and other services	367,914	352,113
Occupancy	55,180	54,065
Depreciation and amortization	166,523	146,326
General and administrative	44,282	51,093
Impairment of intangible assets	14,467	7,255
Total expenses	1,680,352	1,585,289
Total operating income	373,248	302,114
NON-OPERATING INCOME (EXPENSE)		
Interest income	54,050	136,668
Refunds to Participants	(32,160)	(88,374)
Interest expense	(80,332)	(120,042)
Net income from Equity method investments	—	558
Other non-operating income, net	41,627	44,102
Total non-operating expense	(16,815)	(27,088)
Income before taxes	356,433	275,026
Provision for income taxes	64,532	63,009
Net income	$ 291,901	$ 212,017
Net income attributable to non-controlling interests	135	480
Net income attributable to DTCC	$ 291,766	$ 211,537

The Notes to Consolidated Financial Statements are an integral part of these statements.

THE DEPOSITORY TRUST & CLEARING CORPORATION

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In thousands)	For the years ended December 31, 2021	2020
Net income	$ 291,901	$ 212,017
OTHER COMPREHENSIVE INCOME (LOSS) - Net of tax:		
Defined benefit pension and other plans (1)	28,403	(12,884)
Foreign currency translation	(3,603)	1,483
Other comprehensive income (loss)	24,800	(11,401)
Comprehensive income	316,701	200,616
Comprehensive income attributable to non-controlling interests	135	480
Comprehensive income attributable to DTCC	$ 316,566	$ 200,136

(1) Amounts are net of provision for income taxes of $10,875 and benefit for income taxes of $4,825 for 2021 and 2020, respectively

The Notes to Consolidated Financial Statements are an integral part of these statements.

THE DEPOSITORY TRUST & CLEARING CORPORATION
CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

	Preferred Stock							Accumulated Other Comprehensive Income (Loss), Net of Tax			
(In thousands)	Series A	Series B	Series C	Series D	Common Stock	Additional Paid-In Capital	Retained Earnings	Defined Benefit Pension and Other Plans	Foreign Currency Translation	Non-controlling Interests	Total Shareholders' Equity
BALANCE - January 1, 2020	$ 300	$ 300	$ 390,516	$ —	$ 5,091	$ 411,065	$ 1,769,638	$ (216,758)	$ (5,174)	$ 150,000	$ 2,504,978
Net income	—	—	—	—	—	—	211,537	—	—	480	212,017
Other comprehensive income (loss)	—	—	—	—	—	—	—	(12,884)	1,483	—	(11,401)
Dividend to non-controlling interest	—	—	—	—	—	—	—	—	—	(480)	(480)
Dividends on preferred stock	—	—	—	—	—	—	(16,763)	—	—	—	(16,763)
BALANCE - December 31, 2020	300	300	390,516	—	5,091	411,065	1,964,412	(229,642)	(3,691)	150,000	2,688,351
Net income	—	—	—	—	—	—	291,766	—	—	135	291,901
Other comprehensive income (loss)	—	—	—	—	—	—	—	28,403	(3,603)	—	24,800
Redemption of preferred stock	—	—	(390,516)	—	—	—	(9,484)	—	—	—	(400,000)
Proceeds from issuance of preferred stock, net of issuance costs	—	—	—	490,900	—	—	—	—	—	—	490,900
Dividend to non-controlling interest	—	—	—	—	—	—	—	—	—	(135)	(135)
Dividend on preferred stock	—	—	—	—	—	—	(15,481)	—	—	—	(15,481)
BALANCE - December 31, 2021	$ 300	$ 300	$ —	$ 490,900	$ 5,091	$ 411,065	$ 2,231,213	$ (201,239)	$ (7,294)	$ 150,000	$ 3,080,336

The Notes to Consolidated Financial Statements are an integral part of these statements.

THE DEPOSITORY TRUST & CLEARING CORPORATION

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)	For the years ended December 31, 2021	2020
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income	$ 291,901	$ 212,017
Adjustments to reconcile net income to net cash provided by/(used in) operating activities:		
Depreciation and amortization	166,523	146,326
Impairment of intangible assets	14,467	7,255
Net gain on disposal of Premises and equipment	—	(20)
Deferred income taxes	16,161	4,625
Accretion of discount on Commercial paper, net of associated interest paid	(2,393)	(35,767)
Net income from Equity method investments	—	(558)
Other	11,372	30,330
Net change in:		
Accounts receivable	(25,883)	(41,416)
Other assets	(57,472)	41,714
Accounts payable and accrued expenses	(20,369)	21,293
Pension and postretirement benefits	(23,272)	(5,541)
Operating lease liability	(32,025)	(26,519)
Other liabilities	9,830	45,182
Participants' and Clearing Funds liabilities	(993,661)	12,042,342
Payable to Participants	519,813	294,160
Net cash (used in)/provided by operating activities	(125,008)	12,735,423
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of Short-term investments	(2,046,179)	(2,145,000)
Maturities of Short-term investments	2,401,251	2,245,000
Purchases of Premises and equipment	(37,265)	(34,827)
Capitalized software development costs	(118,497)	(95,248)
Acquisition of Intangible assets	—	(26,434)
Proceeds from sale of Equity method investments	—	9,902
Proceeds from Company owned life insurance policies	4,298	—
Net cash provided by/(used in) investing activities	203,608	(46,607)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from Commercial paper	51,136,107	35,790,441
Repayments of Commercial paper	(46,685,071)	(39,065,601)
Proceeds from issuance of debt, net of debt issuance costs	—	3,721,025
Repayments on long-term debt and other borrowings	(3,921)	(4,101)
Preferred stock dividend payments	(15,481)	(16,763)
Proceeds from issuance of preferred stock, net of issuance costs	490,900	—
Redemption of preferred stock	(400,000)	—
Payment to Non-controlling interests	(480)	(2,640)
Net cash provided by financing activities	4,522,054	422,361
Effect of foreign exchange rate changes on Cash and cash equivalents	(2,919)	3,488
Net increase in Cash and cash equivalents, Participants' segregated cash, Participants' and Clearing Funds cash deposits, Cash in Other Participants' assets, Restricted cash	4,597,735	13,114,665
Cash and cash equivalents, Participants' segregated cash, Participants' and Clearing Funds cash deposits, Cash in Other Participants' assets, Restricted cash - Beginning of year	39,460,290	26,345,625
Cash and cash equivalents, Participants' segregated cash, Participants' and Clearing Funds cash deposits, Cash in Other Participants' assets, Restricted cash - End of year	$ 44,058,025	$ 39,460,290
SUPPLEMENTAL DISCLOSURES:		
Interest paid	$ 50,933	$ 112,967
Income taxes paid - net of refunds	$ 86,205	$ 17,691

The Notes to Consolidated Financial Statements are an integral part of these statements.

1. BUSINESS AND OWNERSHIP

The Depository Trust & Clearing Corporation (DTCC) is the parent company of various operating subsidiaries, including The Depository Trust Company (DTC), National Securities Clearing Corporation (NSCC), Fixed Income Clearing Corporation (FICC), DTCC ITP LLC (ITP), DTCC Deriv/SERV LLC (Deriv/SERV), DTCC Solutions LLC (Solutions (US)), DTCC Solutions (UK) Limited (Solutions (UK)), Business Entity Data, B.V. (BED); collectively, the "Company" or "Companies."

Subsidiaries

DTC is a limited purpose trust company formed under the Banking Law of New York State and supervised by the New York State Department of Financial Services (NYSDFS); a State member bank of the Federal Reserve System (FRS), subject to examination by the Federal Reserve Bank of New York (FRBNY) under delegated authority from the Board of Governors (the FRB) of the FRS; and a clearing agency registered with and under the supervision of the U.S. Securities and Exchange Commission (SEC). DTC provides central securities depository, settlement and related services to members of the securities, banking and other financial industries.

NSCC is organized as a business corporation under New York law, and is a clearing agency registered with the SEC. NSCC provides clearing, settlement, risk management, and central counterparty (CCP) services to its members for broker-to-broker trades involving equities, corporate and municipal debt, exchange-traded funds, and unit investment trusts.

FICC is a clearing agency registered with the SEC that provides CCP services to members that participate in the U.S. government and mortgage-backed securities markets, consisting principally of automated real-time trade comparison, netting, settlement, trade confirmation, clearing, risk management and electronic pool notification. FICC has two divisions, the Government Securities Division (GSD) and the Mortgage-Backed Securities Division (MBSD).

DTC, NSCC and FICC are designated as Systemically Important Financial Market Utilities (SIFMUs) by the U.S. Financial Stability Oversight Council pursuant to Title VIII of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010. This designation subjects the clearing agencies to enhanced standards for risk management, operation and governance, as established by the SEC's Standards for Covered Clearing Agencies (CCAS).

The members of DTCC's clearing agencies are collectively referred to as Participants.

ITP, through itself, its subsidiary and affiliates, provides post-trade matching, processing and other related services, primarily to members of the financial services community. ITP's subsidiary and applicable affiliates are authorized to provide certain post-trade matching services pursuant to certain orders issued by regulatory authorities and may be subject to the supervision and examination by these authorities in the jurisdiction they operate including the SEC, the Financial Conduct Authority in the United Kingdom (FCA), and the Autorité des Marchés Financiers (AMF) and the Ontario Securities Commission (OSC) in Canada.

Deriv/SERV, through its subsidiary and affiliates, enhances transparency and provides operational efficiency for derivatives and securities financing transactions processing and reporting. Deriv/SERV also offers the Trade Information Warehouse asset servicing for credit default swaps. Deriv/SERV's subsidiary and applicable affiliates are registered or recognized trade repositories and may be subject to supervision and examination by regulatory authorities in the jurisdictions they operate including the U.S. Commodity Futures Trading Commission (CFTC), SEC, FCA, thirteen Canadian provincial and territorial regulators, the European Securities and Markets Authority (ESMA), the Swiss Financial Market Supervisory Authority (FINMA), the Monetary Authority of Singapore (MAS), the Financial Services Agency of Japan (JFSA), and the Australian Securities and Investments Commission (ASIC).

Solutions (US) provides information and data related-solutions.

Solutions (UK) offers software solutions and consulting services.

1. BUSINESS AND OWNERSHIP (CONTINUED)

BED owns and operates the GMEI® utility legal entity identifier (LEI) solution in the federated Global LEI System (GLEIS). The GMEI utility is designed to provide a single, universal standard identifier to any organization or firm involved in a financial transaction internationally across all asset classes. LEIs issued by the GMEI utility are ISO 17442 compliant and are recognized by all members of the Regulatory Oversight Committee.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of presentation. The accompanying consolidated financial statements are prepared in accordance with generally accepted accounting principles in the United States of America (U.S. GAAP). The accompanying consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. Intercompany accounts and transactions have been eliminated in consolidation.

Use of estimates. The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements. Management makes estimates regarding, among other things, the collectability of receivables, the outcome of litigation, the realization of deferred taxes, unrecognized tax benefits, impairment of intangible assets, fair value measurements, pension benefit obligation and other matters that affect the reported amounts. Estimates are based on judgment and available information; therefore, actual results could differ materially from those estimates.

Cash and cash equivalents. All highly liquid investments purchased with an original maturity of three months or less at the date of acquisition are classified as Cash and cash equivalents. Cash equivalents consist primarily of highly liquid investments in deposits held in banks.

Participants' segregated cash. Represents cash received from Participants for the exclusive benefit of the Participants' customers in compliance with SEC rule 15c3-3 (customer protection), which requires broker-dealers to segregate a certain amount of cash and securities in specially protected accounts on behalf of their clients.

Short-term investments. Consists of cash invested in bank deposits with original maturities greater than three months and less than one year with various yields carried at amortized cost, which approximates fair value due to their short-term maturities.

Fair value measurements. The Company may be required or permitted to measure and disclose certain financial assets and liabilities using fair value measurements. Fair value is defined as the price that would be received to sell an asset, or paid to transfer a liability, in an orderly transaction between market participants at the measurement date. The Company uses a three-level classification hierarchy of fair value measurements that establishes the quality of inputs used to measure fair value. The fair value of financial instruments is determined using various techniques that involve some level of estimation and judgment, the degree of which is dependent on the price transparency and the complexity of the instruments.

Accounts receivable. Accounts receivable are stated at cost, net of an allowance for credit losses and refunds to Participants. The Company establishes an allowance for estimated losses resulting from uncollectibility. Expected credit losses for newly recognized financial assets and changes to expected credit losses during the period are recognized in General and administrative expenses in the accompanying Consolidated Statements of Income. The Company determines the adequacy of the allowance by estimating the possibility of loss based on a variety of factors, including the length of time receivables are past due, forward looking macroeconomic projections, historical experience and the financial condition of customers and other debtors.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Participants' and Clearing Funds. The rules of DTC, NSCC and FICC require Participants to maintain deposits related to their respective activities based on calculated requirements. The deposits are available to collateralize Participants' obligations and certain liabilities of the Companies. Margin deposits and any additional Participant contributions are maintained within the Participants' and Clearing Funds on the accompanying Consolidated Statements of Financial Condition due to the benefits and risks of ownership incurred by the Company. Deposits and contributions may be in the form of cash and cash equivalents and securities. These deposits and contributions may be applied to satisfy obligations of the depositing Participant, other Participants, or the Company pursuant to the rules of the relevant subsidiaries of the Company.

Cash deposits and Investments in marketable securities. Deposits and contributions received in the form of cash may be invested in bank deposits, reverse repurchase agreements, money market funds and direct obligations of the U.S. Government, pursuant to an investment policy maintained by the Company. Reverse repurchase agreements provide for FICC and NSCC's delivery of cash in exchange for securities having a market value that is at least 102% of the amount of the agreements. Securities purchased under reverse repurchase agreements are typically U.S. Treasury and agency securities. Reverse repurchase agreements are recorded at the contract amounts. All interest earned on investments is accrued and included within Interest income in the accompanying Consolidated Statements of Income. This interest is refunded to Participants and is included in Refunds to Participants in the accompanying Consolidated Statements of Income.

Securities - at fair value. Securities deposited to the Clearing Fund may include U.S. Treasury securities, U.S. agency debt securities and U.S. agency residential mortgage-backed securities, pursuant to the rules.

Securities held in custody. Securities held in custody by DTC for Participants, which are predominantly in electronic book form, but also include physical certificates, are not reported in the accompanying consolidated financial statements. Cash dividends and interest received by DTC or due on such securities and in the process of distribution or awaiting claim, are included in Other Participants' assets with a corresponding liability recorded in Payable to Participants on the accompanying Consolidated Statements of Financial Condition. Short positions occasionally exist in securities balances and are credited to the account of the Participants; such short positions are valued and collateralized daily by 130% of the short position reflected in Other Participants' assets on the accompanying Consolidated Statements of Financial Condition. DTC's obligation to return such cash collateral to Participants is also reflected in Payable to Participants.

Other Participants' assets and Payable to Participants. The Company receives cash and stock dividends, interest, reorganization and redemption proceeds on securities registered in the name of its nominee, Cede and Co., and interest and redemption proceeds on bearer securities, which it distributes to Participants. Balances comprised of cash that represent cash dividends, interest, reorganization, redemptions, and cash collateral received are included in Other Participants' assets, with a corresponding liability recorded in Payable to Participants, on the accompanying Statements of Financial Condition.

Federal reserve stock. DTC is a member of the FRBNY and, as a member, is required to maintain a minimum level of investment in FRB stock based on the Company's capital. The FRB stock is carried at cost, classified as a restricted security and periodically evaluated for impairment. The Company determined there was no impairment as of December 31, 2021 and 2020. The FRB stock, amounting to $6,402,000 at December 31, 2021 and 2020, is included in Other non-current assets on the accompanying Consolidated Statements of Financial Condition.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Premises and equipment. Premises and equipment are stated at cost, net of accumulated depreciation. Routine maintenance, repairs and replacement costs are expensed as incurred, while improvements that extend the useful life of the assets are capitalized. When equipment is sold or otherwise disposed of, the cost and related accumulated depreciation are removed from the accounts and any resulting gain or loss is recognized in the accompanying Consolidated Statements of Income. Premises and equipment are reviewed for impairment whenever events or changes in circumstances indicate the related carrying amount may not be recoverable. The following table summarizes how the Company depreciates Premises and equipment:

Premises and equipment	Depreciation Period	Depreciation Method
Leasehold improvements	Shorter of useful life or remaining term of the lease	Straight-line
Furniture and equipment	5 to 7 years	Straight-line
Building and improvements	39 years	Straight-line

Depreciation expense for leasehold improvements, furniture and equipment, and buildings and improvements is included in Depreciation and amortization in the accompanying Consolidated Statements of Income.

Goodwill and Intangible assets

Goodwill. The Company records Goodwill upon the completion of a business combination as the difference between the purchase price and the fair value of the net assets acquired. Subsequent to initial recognition, Goodwill is not amortized but is tested for impairment annually or more frequently if events occur or circumstances change that indicate an impairment may exist. The Company has the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If after assessing the totality of events or circumstances, the Company determines it is more likely than not that the fair value of a reporting unit is greater than its carrying amount, no further impairment testing is necessary. However, if the Company concludes otherwise, then it is required to perform the quantitative impairment test, whereby a goodwill impairment loss will be measured as the excess of a reporting unit's carrying value over its estimated fair value.

Intangible assets. The Company’s intangible assets include customer relationships and capitalized software.

Capitalized software. The Company capitalizes eligible costs associated with the acquisition or development of internal-use software projects that provide new or significantly improved functionality. The Company capitalizes software costs expected to result in long-term operational benefits, such as replacement systems or new applications that result in significantly increased operational efficiencies or functionality. All other costs incurred in connection with an internal-use software project are expensed as incurred.

The following table summarizes how the Company amortizes and when it tests Intangible assets for impairment:

Intangible Asset	Life/ Amortization Period	Amortization Method	Impairment Testing Frequency
Customer relationships	Finite/ 12 Years	Straight-line	If a triggering event occurs
Capitalized software	Finite/ 3 - 5 Years	Straight-line	If a triggering event occurs

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Equity investments. All investments that represent less than a 20% ownership interest are initially recognized at cost and included in Other non-current assets on the accompanying Consolidated Statements of Financial Condition. Subsequently, these investments are measured at fair value, which represents cost less impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or similar security. Changes in the fair values of these investments are recorded in Other non-operating income, net in the accompanying Consolidated Statements of Income.

Commercial paper. NSCC issues commercial paper with maturities generally less than one year. The proceeds from the issuance of the commercial paper constitute liquid resources of NSCC that, together with other liquid resources of NSCC, are available to enable it to effect the settlement of its payment obligations in the event of the default of any of its Participants pursuant to NSCC's rules. Pending such use by NSCC, the proceeds of the issuance of commercial paper are invested in highly liquid short-term instruments in accordance with NSCC's investment policy.

Debt issuance costs. Debt issuance costs consist of costs incurred in obtaining financing. These costs are generally recorded as a direct deduction from the carrying amount of the related debt liability on the Consolidated Statements of Financial Condition and are amortized over the term of the financing using the straight-line method.

Commitments and contingencies. The Company is involved in legal proceedings and litigation arising in the ordinary course of business. In the opinion of management, the outcome of such proceedings and litigation is not expected to have a material effect on the accompanying Consolidated Statements of Financial Condition, Income or Cash Flows.

From time to time, the Company is also involved in reviews, investigations and proceedings (both formal and informal) by governmental and regulatory agencies regarding the Company's business practices, including, among other matters, accounting and operational matters, which may result in adverse judgments, settlements, fines, penalties, injunctions or other relief.

The Company may contest the liability and/or the amount of damages as appropriate in each pending matter. The Company accrues for the estimated loss where available information indicates that it is probable a liability has been incurred at the date of the consolidated financial statements and the Company can reasonably estimate the amount of that loss.

The Company was fined by the SEC for compliance violations arising from a regulatory examination. Without admitting or denying the findings, the Company consented to pay an $8 million penalty in 2021. The charge for the fine is included in General and administrative in the accompanying Statements of Income of which $5 million was recorded in fourth quarter of 2020 and $3 million was recorded in the third quarter of 2021. The fine was paid in full in the fourth quarter of 2021.

Non-controlling interests. Non-controlling interests represent the ownership of DTC Series A preferred stock. Under a plan adopted by the Board of Directors, each Participant of DTC is required to own shares of DTC Series A preferred stock. Shareholders' equity is adjusted for the income attributable to the non-controlling interest shareholders and any distributions to those shareholders.

Revenue recognition. The Company recognizes revenue to depict the transfer of promised services and related performance obligations to customers in an amount that reflects the consideration to which the Company expects to be entitled, upon satisfaction, in exchange for those services.

The Company derives its revenue from transaction fees, subscription revenue, support services, and usage fees. Revenue from transaction fees is billed monthly and calculated based on the value and volume of executed transactions and the established fee schedules, less any applicable volume discounts. The volume targets or thresholds for the discounts primarily reset monthly. Subscription and support revenues are recognized ratably over the performance period of the relevant contract using a time elapsed measure of progress as the customer receives the benefits of the services throughout the term of the contract. Usage fees are recognized when services are provided based on contractual terms.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Details for each revenue stream presented in the Company's Consolidated Statements of Income follow:

S*ettlement and asset services.* Revenue derived from this revenue stream are in the form of transaction fees that are based on either volume or value of trading activity and subscription revenue. The Company provides settlement services for equity, corporate and municipal debt trades and money market instruments in the United States of America. Asset Servicing includes a broad range of services for underwriting, custody, corporate actions, dividend, proxy and reorganization services, as well as the electronic registration and transfer of securities processing.

Clearing services. Revenue derived from this revenue stream are in the form of transaction fees that are based on either the volume or value of trading activity. Services include the continuous net settlement of equity and corporate bonds, mortgage backed securities clearing, and government securities clearing.

Matching services. Revenue derived from this revenue stream are in the form of transaction fees, subscription revenue and support services. Services include trade enrichment, trade agreement, LEIs and data analytics.

Repository and derivatives services. Revenue derived from this revenue stream may be in the form of transaction fees, subscription revenue and support services. Services support derivatives trade data submissions covering real-time price reporting, transaction details, valuation data to meet clients' reporting obligations in various jurisdictions globally, as well as an asset servicing infrastructure for credit default swaps, matching service for equity derivatives payments and tools to member firms to address the quality of their derivatives trade submissions.

Wealth management services. Revenue derived from this revenue stream is in the form of transaction fees. Services include centralized, automated processing and information services for mutual fund, alternative investment, and insurance and retirement products.

Data and other services. Revenue derived from this revenue stream may be in the form of subscription revenue and usage fees, which include referential and activity-based announcement, security reference, and liquidity data through the DTCC Data Services product. These offerings are delivered in fixed or configurable formats, sourced from the Company's transaction, reference, position and asset servicing data.

Rebates

The Board of Directors approved and the Company paid rebates in the amount of $75 million to NSCC Participants during 2021 and $25 million to DTC Participants during 2020. The amount of the rebates were determined based on a net income targets at the legal entity level. Participants received rebates in proportion to their fees paid in 2021 and 2020, respectively. The rebates are presented net in Clearing services and Settlement and asset services revenues in the accompanying Consolidated Statements of Income.

Details for the rebate amount in the accompanying Consolidated Statements of Income for the years ended December 31, 2021 and 2020 follows (in thousands):

	2021	2020
Settlement and asset services	$ —	$ 25,000
Clearing services	75,000	—
Total	$ 75,000	$ 25,000

Accounts receivable and deferred revenue

The period in which the Company recognizes revenue may differ from the timing of payments received from customers. The Company typically bills its customers up to 30 days in arrears. The Company records a receivable when revenue is recognized prior to payment and there is an unconditional right to payment. See Note 5, Due from Participants and customers for services, net, for the Company's receivables related to revenues from contracts with customers.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Deferred revenue represents the Company's liability to perform services in the future related to payments received in advance of those services. Deferred revenue as of December 31, 2021 and 2020 was $17,413,000 and $17,599,000, respectively, and is included in Other current liabilities and Other non-current liabilities on the accompanying Consolidated Statements of Financial Condition, as disclosed in Note 11. Of the $17,599,000 as of December 31, 2020, $14,190,000 was recognized as revenue during the year ended December 31, 2021.

Investment income, net. Investment income, net represents changes in the fair values of investment assets related to the Company's deferred compensation plan (structured as a Rabbi Trust). All of the marketable securities of the Rabbi Trust are classified as trading securities and are recorded at fair value.

Non-qualified deferred compensation plan. DTCC maintains a self-directed, non-qualified deferred compensation plan structured as a “Rabbi Trust” for certain executives and other highly compensated employees. Under the plan participants may elect to defer receipt of a portion of their annual compensation and invest it in various mutual funds. All such investments are held in the Rabbi Trust and the plan requires settlement in cash. The investment assets of the Rabbi Trust are recorded at fair value and included on the accompanying Consolidated Statements of Financial Condition in Other non-current assets as long-term incentive plan assets. The amount of compensation deferred under the plan is credited to each participant’s deferral account and a deferred compensation liability is recorded in Other non-current liabilities on the accompanying Consolidated Statements of Financial Condition. The investment assets of the Rabbi Trust are classified as trading securities, and accordingly, changes in their fair values are recorded in Investment income, net in the accompanying Consolidated Statements of Income with a corresponding charge recorded in Employee compensation and related benefits in the accompanying Consolidated Statements of Income. The change in fair value of these investments was income of $17,170,000 and $14,184,000 for the years ended December 31, 2021 and 2020, respectively.

Long-term incentive plan. DTCC’s long-term incentive plan is provided to certain designated employees of DTCC to establish retention incentives for certain employees. The performance period is a three-year period commencing January 1 of each calendar year, unless modified, extended or terminated by the Board of Directors and the Compensation and Human Resources Committee. Only those employees specifically designated by the Compensation Committee are eligible to participate in the plan. The associated liabilities for the plan are classified in Other current liabilities and Other non-current liabilities on the accompanying Consolidated Statements of Financial Condition.

Retirement plans

Defined benefit plans. DTCC has a qualified non-contributory defined benefit pension plan (the Pension Plan) in the U.S., under which employees hired or rehired before May 1, 2009 were eligible to participate upon attainment of age 21 and completion of six months of service. The Plan is closed to new participants. The Pension Plan was frozen effective December 31, 2013 and all plan participants no longer accrue any benefits. The Pension Plan is qualified under Section 401(a) of the Internal Revenue Code of 1986, as amended. It is subject to the provisions of ERISA. The Pension Plan provides benefits to eligible retired or vested terminated employees or their beneficiaries. The Pension Benefit Guarantee Corporation, a United States governmental agency, guarantees most vested normal age retirement benefits subject to certain limitations. Pension benefits under the Pension Plan are determined based on an employee’s length of service and earnings. DTCC’s funding policy requires the Company to make contributions to the Pension Plan that meet or exceed the minimum funding standards under the Employee Retirement Income Security Act of 1974 (ERISA) and the Internal Revenue Code. DTCC also has defined benefit pension plans that are offered in certain non-U.S. locations based on factors such as eligible compensation, age and/or years of service. It is the Company’s policy to fund the pension plans in amounts sufficient to meet the requirements under applicable laws.

DTCC provides health care and life insurance benefits to eligible DTCC retired employees and their beneficiaries in the Retiree Medical and Life Insurance Plans. The Retiree Medical Plan was frozen effective January 1, 2002 and is closed to new participants but is still in existence for employees hired prior to this date. In order to be eligible, management employees hired on or before January 1, 2002, upon termination, must meet the Rule of 75 (age plus year of service must equal 75) and must be over the age of 55 at termination. Bargaining unit employees hired on or before January 1, 2002, upon termination, must have at least 20 years of service and be age 55 or older. When an employee is eligible for retiree medical, they are also eligible for retiree life insurance.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

DTCC also sponsors a Supplemental Executive Retirement Plan (SERP) and a Restoration Plan that are non-qualified, non-funded defined benefit plans, which provide additional retirement benefits to certain employees. Benefits paid to retirees are based on age at retirement, years of credited service and average compensation. The cost of non-qualified defined benefits is determined using substantially the same actuarial methods and economic assumptions as those used for the qualified pension plan. The Company maintains certain assets in trust for non-qualified retirement benefit obligations.

The annual measurement date for DTCC's defined benefit plans is December 31. Plan assets are determined based on fair value generally representing observable market prices. The projected benefit obligations are the present values determined by discounting projected benefit distributions using the corresponding spot rates as of the measurement date from yield curves of high-quality corporate bonds available in the marketplace. The net periodic pension expense or income includes service and interest costs determined using the same yield curve spot rates, an expected return on plan assets based on an actuarially derived market-related value and amortization of prior years' actuarial gains and losses and prior service cost (credit). Service costs, interest costs, and all other costs are included in Employee compensation and related benefits, Interest expense, and Other non-operating income, respectively, in the accompanying Consolidated Statements of Income.

Actuarial gains and losses include gains or losses related to changes in the amount of the projected benefit obligations or plan assets resulting from experience different from the assumed rate of return, changes in the discount rate or other assumptions. To the extent an actuarial gain or loss exceeds 10% of the greater of the projected benefit obligation or the market-related value of plan assets, the excess is recognized over the future lifetime of the defined benefit plans.

The expected long-term rate of return on plan assets is based on anticipated returns for each applicable asset class. Anticipated returns are weighted for the expected allocation for each asset class and are based on forecasts for prospective returns in the equity and fixed income markets, which should track the long-term historical returns for these markets. The Company also considers the growth outlook for the U.S. and global economies, as well as current and prospective interest rates.

Market-related value of assets is a balance used to calculate the expected return on plan assets. The market-related value of plan assets is either fair value or a calculated value that recognized changes in fair value in a systematic and rational manner over not more than five years. The difference between actual experience and expected returns on plan assets is included as an adjustment in the market-related value over a 4-year period.

Defined contribution retirement plans. The Company sponsors two defined contribution plans for U.S. employees, The Depository Trust & Clearing Corporation Employee Savings Plan (Employee Savings Plan) and The Depository Trust & Clearing Corporation Operations Level Employee Savings Plan (Operations Level Savings Plan). The plans are overseen by the Company's Employee Benefit Plans Committee, which is appointed by the Board of Directors of the Company and is composed of designated Company officers. The Employee Savings Plan is a single employer plan covering non-bargaining unit employees. The Operations Level Savings Plan is a single employer plan covering bargaining unit employees.

The Company matches 50% of the first 6% of the employee's contributions up to the Internal Revenue Service (IRS) compensation limits. Company matching contributions and employee contributions vest immediately.

In addition to the Company matching contributions, the Company offers a supplemental contribution on behalf of the employees in lieu of the contributions to the Pension Plan, which is now frozen. Employees are able to participate in this Pension Contribution Account (PCA) after six months of service. The Company makes contributions equal to a percentage of base and incentive pay based on years of service (3% for less than five years, 4% for five years but less than ten years, 5% for ten years or more). Company supplemental contributions vest over five years at the rate of 20% for each year of service or upon attaining age 55.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

In addition to the Company matching and PCA contributions, the Company offers a supplemental contribution on behalf of the employees who were hired or rehired on or before May 1, 2001, also in lieu of the contributions to the Pension Plan. The Pension Transition Account (PTA) contribution ranges from 2% to 3% of eligible pay, for employees whose age plus service combination (in whole years) totaled 55 or higher, as of December 31, 2013. Vesting is over five years at a rate of 20% for each year of service or upon attaining age 55.

All investments, except loans receivable, are included in The Depository Trust & Clearing Corporation Master Savings Plan Trust and are administered by the plans' trustee, State Street Bank & Trust Company. Conduent Human Resources Services (Conduent) served as recordkeeper for the plans through June 30, 2020 and effective thereafter, the plan's recordkeeper was changed from Conduent to Alight Solutions. Both plans are subject to the provisions of ERISA.

Income taxes. The Provision for income taxes is computed using the asset and liability method. The tax currently payable is based on taxable income for the year. Taxable income differs from Income before taxes as reported in the accompanying Consolidated Statements of Income because it excludes items of income or expense that are taxable or deductible in other years and it further excludes items that are never taxable or deductible. The Company records a deferred income tax (benefit) provision when there are temporary differences between assets and liabilities measured for financial reporting and for income tax return purposes. These temporary differences result in taxable (deferred tax liability) or deductible (deferred tax asset) amounts in future years and are measured using the tax rates and laws that will be in effect when such differences are expected to reverse. Valuation allowances are recognized if, based on the weight of available evidence, it is more likely than not that some portion of the deferred tax asset will not be realized. Deferred tax assets and liabilities are reported net by jurisdiction in non-current assets or liabilities on the accompanying Consolidated Statements of Financial Condition. It is the Company's policy to provide for uncertain tax positions and the related interest and penalties based upon management's assessment of whether a tax benefit is more likely than not to be sustained upon examination by the tax authorities.

Foreign currency. Assets and liabilities denominated in foreign currencies are translated at rates of exchange prevailing on the dates of the accompanying Consolidated Statements of Financial Condition. Revenues and expenses are translated at average rates of exchange during the year. Gains or losses on foreign currency transactions are included in General and administrative in the accompanying Consolidated Statements of Income. Gains or losses on translation of the financial statements of foreign subsidiaries, when the functional currency is other than the U.S. dollar, are included in the accompanying Consolidated Statements of Comprehensive Income.

Derivatives and hedging. The Company uses forward contracts to hedge net investments in certain foreign subsidiaries whose functional currencies are not the U.S. dollar. The Company formally documents all relationships between the hedging instruments and hedged items, as well as the Company's risk-management objectives and strategy for undertaking various hedging transactions. Hedge accounting is applied when a derivative is highly effective at reducing the risk associated with the hedged exposure and the risk management objective and strategy are documented. Hedge documentation identifies the derivative hedging instrument, the asset or liability and type of risk hedged, and how the effectiveness of the derivative is assessed prospectively and retrospectively. For hedging instruments that qualify for hedge accounting, changes in the fair value of the derivatives are recorded in Other comprehensive (loss) income. If it is determined that a derivative is not highly effective at hedging the designated exposure, the Company discontinues hedge accounting and changes in fair value of the hedging instrument are recorded in earnings.

Reconciliation of Cash and cash equivalents and other limited use cash. When reconciling the beginning and ending total amounts shown in the Consolidated Statements of Cash Flows, the Company includes all cash on the Consolidated Statements of Financial Condition, regardless of which line it is included. The Consolidated Statements of Cash Flows includes Cash and cash equivalents and cash balances that are not available for general corporate purposes due to certain limitations, including - Participants' segregated cash, Participants' and Clearing Funds cash deposits, Cash in Other Participants' assets and Restricted cash.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

A reconciliation of Cash and cash equivalents, Participants' segregated cash, Participants' and Clearing Funds cash deposits, Cash in Other Participants' assets and Restricted cash reported within the accompanying Consolidated Statements of Financial Condition that sum to the total of the same such amounts shown on the accompanying Consolidated Statements of Cash Flows as of December 31, 2021 and 2020 follows (in thousands):

	2021	2020
Cash and cash equivalents	$ 14,236,922	$ 9,165,353
Participants' segregated cash	6,078	134
Participants' and Clearing Funds cash deposits	28,480,163	29,473,824
Cash in Other Participants' assets	1,326,873	813,006
Restricted cash included in Other non-current assets	7,989	7,973
Total Cash and cash equivalents, Participants' segregated cash, Participants' and Clearing Funds cash deposits, Cash in Other Participants' assets and Restricted cash shown on the Consolidated Statements of Cash Flows	$ 44,058,025	$ 39,460,290

3. ACCOUNTING AND REPORTING DEVELOPMENTS

Standard	Description	Impact on the financial statements or other significant matters
Financial Accounting Standards Board Standard Issued, but not yet Adopted		
ASU 2021-10 - Government Assistance (Topic 832): Disclosures by Business Entities about Government Assistance *Issued November 2021*	• Applies to business entities that account for a transaction with a government by applying a grant and accounting model by analogy to other accounting guidance (for example, the grant model within International Accounting Standards (IAS) 20, Accounting for Government Grants). • Requires the following annual disclosures: ◦ Information about the nature of the transaction(s) and the related accounting policy used to account for the transactions. ◦ The line items on the balance sheet and income statement that are affected by the transactions, and the amounts applicable to each financial statement line item. ◦ Significant terms and conditions of the transactions, including commitments and contingencies.	• Effective January 1, 2022. • The Company is evaluating the impact on its consolidated financial statements and related disclosures.
ASU 2021-09 - Leases (Topic 842): Discount rate for Lessees that are not Public Business Entities *Issued November 2021*	• Provides lessees that are not public business entities with the option to elect, as an accounting policy, the use of a risk-free rate as the discount rate by class of underlying asset rather than at the entity-wide level for all leases. • Requires entities that make the risk-free rate election to disclose which asset classes it has elected to apply a risk-free rate.	• Effective January 1, 2022. • The Company is evaluating the impact on its consolidated financial statements and related disclosures.

3. ACCOUNTING AND REPORTING DEVELOPMENTS (CONTINUED)

Standard	Description	Impact on the financial statements or other significant matters
Financial Accounting Standards Board Standard Issued, but not yet Adopted (continued)		
ASU 2021-08 - Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers *Issued October 2021*	• Requires contract assets and contract liabilities (i.e. deferred revenue) acquired in a business combination to be recognized and measured by the acquirer on the acquisition date in accordance with ASC 606, Revenue from Contracts with Customers, which results in the acquirer recognizing contract assets and contract liabilities at the same amounts recorded by the acquiree.	• Effective January 1, 2023. • The Company does not anticipate that the adoption of this standard will have a significant impact on its consolidated financial statements and related disclosures. • The Company will continue to evaluate the impact this standard will have on its consolidated financial statements and related disclosures until the standard is adopted.
ASU 2019-12 Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes *Issued December 2019*	• Clarifies and simplifies aspects of accounting for income taxes. • Eliminates certain exceptions related to the approach for intraperiod tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for basis differences between book and tax.	• Effective January 1, 2022. • The Company does not anticipate that the adoption of this standard will have a significant impact on its consolidated financial statements and related disclosures.

4. PARTICIPANTS' SEGREGATED CASH, OTHER PARTICIPANTS' ASSETS AND PAYABLE TO PARTICIPANTS

Details for Participants' segregated cash, Other Participants' assets and Payable to Participants as of December 31, 2021 and 2020 follow (in thousands):

	2021	2020
Assets:		
Participants' segregated cash	$ 6,078	$ 134
Other Participants' assets	1,326,873	813,006
Total	$ 1,332,951	$ 813,140
Liabilities:		
Payable to Participants	$ 1,332,951	$ 813,140

5. ACCOUNTS RECEIVABLE

Details for Accounts receivable as of December 31, 2021 and 2020 follow (in thousands):

	2021	2020
Due from Participants and customers for services	$ 226,571	$ 204,071
Allowance for credit losses	(253)	(259)
Due from Participants and customers for services, net	226,318	203,812
Other receivables	17,772	13,719
Total	$ 244,090	$ 217,531

Details for allowance for credit losses for the years ended December 31, 2021 and 2020 follow (in thousands):

	2021	2020
Beginning balance of allowance for credit losses	$ 259	$ 614
Provision	566	1,340
Less: Write-offs	(572)	(1,695)
Ending balance of allowance for credit losses	$ 253	$ 259

6. PARTICIPANTS' AND CLEARING FUNDS

Details for the Participants' and Clearing Funds as of December 31, 2021 and 2020 follow (in thousands):

	2021			
	DTC	NSCC	FICC	Total
Total deposits	$ 1,962,667	$ 14,753,453	$ 39,785,815	$ 56,501,935
Less: Required deposits	1,150,000	8,343,253	29,720,679	39,213,932
Excess deposits	$ 812,667	$ 6,410,200	$ 10,065,136	$ 17,288,003

	2020			
	DTC	NSCC	FICC	Total
Total deposits	$ 1,925,137	$ 12,972,776	$ 47,005,609	$ 61,903,522
Less: Required deposits	1,150,000	12,054,357	36,468,478	49,672,835
Excess deposits	$ 775,137	$ 918,419	$ 10,537,131	$ 12,230,687

6. PARTICIPANTS' AND CLEARING FUNDS (CONTINUED)

Cash and Securities. Details for cash and securities of the Participants' and Clearing Funds, which may be applied to satisfy obligations of the depositing Participant, other Participants, or the Company pursuant to the rules of the relevant subsidiaries of the Company, as of December 31, 2021 and 2020 follow (in thousands):

	2021			
	DTC	NSCC	FICC	Total
Cash and cash equivalents	$ 1,962,667	$ 13,941,679	$ 12,575,817	$ 28,480,163
U.S. Treasury Securities	—	811,774	24,200,940	25,012,714
U.S. Agency Issued Debt Securities (Non-Callable)	—	—	129,647	129,647
U.S. Agency Residential Mortgage-Backed Securities	—	—	2,879,411	2,879,411
Total	$ 1,962,667	$ 14,753,453	$ 39,785,815	$ 56,501,935

	2020			
	DTC	NSCC	FICC	Total
Cash and cash equivalents	$ 1,925,137	$ 11,845,743	$ 15,702,944	$ 29,473,824
U.S. Treasury Securities	—	1,127,033	26,685,972	27,813,005
U.S. Agency Issued Debt Securities (Non-Callable)	—	—	347,717	347,717
U.S. Agency Residential Mortgage-Backed Securities	—	—	4,268,976	4,268,976
Total	$ 1,925,137	$ 12,972,776	$ 47,005,609	$ 61,903,522

Details for the Participants' and Clearing Funds cash deposits as of December 31, 2021 and 2020 follow (in thousands):

	2021			
	DTC	NSCC	FICC	Total
Bank deposits	$ 1,962,667	$ 12,197,679	$ 10,662,817	$ 24,823,163
Money market fund investments - at fair value	—	1,744,000	1,913,000	3,657,000
Total	$ 1,962,667	$ 13,941,679	$ 12,575,817	$ 28,480,163

	2020			
	DTC	NSCC	FICC	Total
Bank deposits	$ 1,925,137	$ 9,813,743	$ 12,859,944	$ 24,598,824
Money market fund investments - at fair value	—	1,607,000	2,343,000	3,950,000
Reverse repurchase agreements	—	425,000	500,000	925,000
Total	$ 1,925,137	$ 11,845,743	$ 15,702,944	$ 29,473,824

7. PREMISES AND EQUIPMENT

The cost, accumulated depreciation and net book value of Premises and equipment as of December 31, 2021 and 2020 follow (in thousands):

	2021	2020
Furniture and equipment	$ 247,947	$ 270,209
Leasehold improvements	173,626	171,100
Buildings and improvements	22,722	22,813
Finance leases	212	1,426
Land	4,221	4,221
Total Premises and equipment	448,728	469,769
Less: Accumulated depreciation	(258,402)	(267,545)
Net book value	$ 190,326	$ 202,224

Depreciation expense for premises and equipment for the years ended December 31, 2021 and 2020 was $47,655,000 and $50,252,000, respectively, and is included in Depreciation and amortization in the accompanying Consolidated Statements of Income.

The Company disposed of fully depreciated premises and equipment that resulted in the removal of costs and accumulated depreciation of $56,797,000 and $104,640,000 for the years ended December 31, 2021 and 2020, respectively. Total disposals of premises and equipment resulted in a gain of $0 and $20,000 during the years ended December 31, 2021 and 2020, respectively, and are included in General and administrative in the accompanying Consolidated Statements of Income.

8. GOODWILL AND INTANGIBLE ASSETS

The gross carrying value, accumulated amortization and net book value of Goodwill and Intangible assets as of December 31, 2021 and 2020 follow (in thousands):

	2021	2020
Goodwill:		
Gross carrying value	$ 57,699	$ 57,699
Intangible assets:		
Customer relationships:		
Gross carrying value	231,700	231,700
Accumulated amortization	(159,294)	(139,985)
Net book value	72,406	91,715
Capitalized software:		
Gross carrying value	633,384	773,595
Accumulated amortization	(377,155)	(521,780)
Net book value	256,229	251,815
Total Intangible assets - net of accumulated amortization	$ 328,635	$ 343,530

8. GOODWILL AND INTANGIBLE ASSETS (CONTINUED)

Intangible assets. Amortization expense for intangible assets for the years ended December 31, 2021 and 2020 was $118,868,000 and $96,074,000, respectively, and is included in Depreciation and amortization in the accompanying Consolidated Statements of Income.

Details for estimated amortization expense for each of the next five years and thereafter follow (in thousands):

2022	$	128,202
2023		106,802
2024		65,927
2025		27,704
2026		—
Thereafter		—
Total future estimated amortization	$	328,635

During the years ended December 31, 2021 and 2020, disposals of fully amortized capitalized software resulted in the removal of cost and accumulated amortization of $241,938,000 and $180,333,000, respectively.

In December 2020, the Company purchased the Compliance Management Reporting System (CMRS) platform and certain relationships from Publicis Sapient in an asset transaction for a cash consideration of $26,434,000. The entire purchase was allocated to the platform software asset based on a third party valuation and amortized over four years.

The Company recognized impairment charges of $14,467,000 and $7,255,000 related to capitalized software for the years ended December 31, 2021 and 2020, respectively. The impairment charges are included in Impairment of intangible assets in the accompanying Consolidated Statements of Income.

During the year ended December 31, 2021 the Company recognized the following impairments of internally developed software related to these projects:

The Common Margining project experienced continued delays, the necessity for rewriting portions of the code and changes in legal and regulatory requirements triggering an evaluation for impairment. The evaluation concluded that the $10,446,000 carrying value of its internally developed software was not recoverable and exceeded its fair value.

The Report Hub project experienced a change in strategy which included migration to CMRS triggering an evaluation for impairment. The evaluation concluded that the $2,596,000 carrying value of its internally developed software would no longer be used after the migration is completed.

The Inventory Management System Ingestion project was not performing as intended triggering an evaluation for impairment. The evaluation concluded that the $1,425,000 carrying value of its internally developed software was not recoverable and exceeded its fair value.

During the year ended December 31, 2020 the Company recognized the following impairments of internally developed software related to this project:

The Fundamental Review of Trading Book (FRTB) experienced continued delays in changes of regulatory requirements triggering an evaluation for impairment. The evaluation concluded that the $6,235,000 carrying value of its internally developed software was not recoverable and exceeded its fair value.

Goodwill impairment testing. DTCC completed its annual goodwill impairment test in the fourth quarter of 2021 and concluded that goodwill was not impaired. DTCC performed a qualitative assessment to test the goodwill for impairment and determined it was more likely than not that the fair value of each reporting unit exceeded their carrying value and therefore goodwill was deemed not impaired.

9. LEASES

The Company leases corporate offices, data centers and certain equipment primarily through operating leases. The Company’s leases have remaining lease terms of 1 to 14 years, some of which may include options to extend the lease up to 10 additional years, and some of which may include options to terminate the lease within 1 year.

The Company determines if an arrangement is or contains a lease at contract inception and accounts for lease and non-lease components as a single lease component. Operating leases are included in Operating lease right-of-use (ROU) asset, Current portion of operating lease liability, and Non-current operating lease liability on the Company's Consolidated Statements of Financial Condition.

ROU assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. The ROU assets are measured at the amount equal to the lease liabilities, adjusted for balances of accrued or prepaid rent and unamortized lease incentives provided by lessors.

Operating lease liabilities are recognized based on the present value of the future lease payments over the remaining lease term. The Company uses its incremental borrowing rate, factoring in the lease term, to determine the lease liability. When determining lease term, the Company considers renewal options that the Company is reasonably certain to exercise and termination options that the Company is reasonably certain not to exercise. For operating leases, expense is generally recognized on a straight-line basis over the lease term.

Details for operating lease assets and lease liabilities as of December 31, 2021 and 2020 follow (in thousands):

	2021	2020
Assets		
Operating lease right-of-use-asset	$ 222,341	$ 220,073
Liabilities		
Current portion of operating lease liability	28,705	27,179
Non-current operating lease liability	242,846	245,836
Total lease liabilities	$ 271,551	$ 273,015

Details for the maturity of lease liabilities as of December 31, 2021 for each of the next five years and thereafter follow (in thousands):

2022	$ 35,982
2023	37,023
2024	35,139
2025	31,308
2026	27,452
Thereafter	148,036
Total lease payments	314,940
Less: Imputed interest	(43,389)
Present value of lease liability	$ 271,551

9. LEASES (CONTINUED)

Details for lease expense for the years ended December 31, 2021 and 2020 follow (in thousands):

	2021	2020
Occupancy	$ 28,359	$ 33,336
Information technology	4,982	3,391
Total lease expense	33,341	36,727
Sublease income [1]	(4,894)	(5,513)
Net lease expense	$ 28,447	$ 31,214

(1) Included in Occupancy and Other non-operating income, net in the accompanying Consolidated Statements of Income.

Details for supplemental cash flow information related to lease liabilities for the years ended December 31, 2021 and 2020 follow (in thousands):

	2021	2020
Lease payments included in the measurement of lease liabilities	$ (40,909)	$ (36,060)
Accretion of lease liabilities	8,884	9,541
Net decrease in Operating lease liability[1]	$ (32,025)	$ (26,519)

(1) Included in operating activities in the Consolidated Statements of Cash Flows

Details of the weighted average remaining lease term and weighted average discount rate used to determine the lease liability as of December 31, 2021 and 2020 follow:

	2021	2020
Weighted average remaining lease term (years)	9.3	10.6
Weighted average discount rate	2.85 %	3.27 %

Lease right-of-use assets obtained in exchange for operating lease obligations for new and modified leases were $17,971,000 and $8,232,000 for the years ended December 31, 2021 and 2020, respectively.

10. OTHER ASSETS

Details for Other assets as of December 31, 2021 and 2020 follow (in thousands):

	2021	2020
Prepaids	$ 120,796	$ 99,483
Prepaid taxes	35,316	29,498
Business employment incentive program (1)	18,091	6,794
Interest receivable	1,279	2,053
Other current assets	870	437
Total other current assets	176,352	138,265
Long-term incentive plan assets	159,502	159,865
Cash surrender value on insurance policies	70,411	71,498
Prepaids	34,822	17,512
Pension and postretirement	13,630	—
Equity investments	12,393	12,393
Deferred tax assets	11,183	27,774
Restricted cash	7,989	7,973
Investment in Federal reserve stock	6,402	6,402
Other non-current assets	2,297	2,671
Total other non-current assets	318,629	306,088
Total	$ 494,981	$ 444,353

(1) The Company participates in the New Jersey State Business Employment Incentive Program (BEIP). The intent of this program is to encourage businesses to locate and expand in the State of New Jersey through grants that the Company has elected to convert into refundable tax credits.

11. OTHER LIABILITIES

Details for Other liabilities as of December 31, 2021 and 2020 follow (in thousands):

	2021	2020
Compensation payable	$ 171,975	$ 161,106
Accrued payroll and payroll withholdings	44,247	52,716
Long-term incentive plan liabilities	31,294	29,309
Deferred revenue	16,482	16,502
Deferred sublease income	7,720	9,406
Other current liabilities	19,533	16,668
Total other current liabilities	291,251	285,707
Long-term incentive plan liabilities	245,179	242,344
Unrecognized tax benefits	21,822	43,659
Deferred revenue	931	1,097
Deferred tax liabilities	183	560
Other non-current liabilities	2,748	2,866
Total other non-current liabilities	270,863	290,526
Total	$ 562,114	$ 576,233

12. COMMERCIAL PAPER

Details for Commercial paper as of December 31, 2021 and 2020 follow (in thousands):

	2021	2020
Commercial paper - net of unamortized discount of $1,067 and $1,983 as of December 31, 2021 and 2020, respectively	$ 8,291,933	$ 3,843,290
Weighted-average interest rate	0.13 %	0.28 %

Interest expense on Commercial paper, included in Interest expense in the accompanying Consolidated Statements of Income, was $9,179,000 and $60,988,000 for the years ended December 31, 2021 and 2020, respectively.

13. LONG-TERM DEBT

Details for Long-term debt as of December 31, 2021 and 2020 follow (in thousands):

	2021	2020
Senior notes - net of unamortized discount and debt issuance costs	$ 3,731,814	$ 3,723,942
Information technology financing	—	3,921
Total Long-term debt	3,731,814	3,727,863
Less: Current portion of long-term debt	—	(3,921)
Non-current portion of long-term debt	$ 3,731,814	$ 3,723,942

Details for principal payments due on Long-term debt for each of the next five years and thereafter follow (in thousands):

2022	$ —
2023	2,000,000
2024	—
2025	1,750,000
2026	—
Thereafter	—
Total	$ 3,750,000

Senior notes. On April 23, 2020 and December 7, 2020, NSCC issued three-year and five-year senior unsecured notes for an aggregate total of $3.75 billion. The proceeds from the issuances constitute liquid resources that, together with other liquid resources of the Company, are available to enable NSCC to affect the settlement of its payment obligations in the event of the default of any of its Participants pursuant to NSCC's rules.

Details of the senior notes as of December 31, 2021 follow (in thousands):

Issue Date	Maturity	Rate	Principal Balance	Carrying Value
April 23, 2020	April 23, 2023	1.20%(1)	$ 1,000,000	$ 997,207
April 23, 2020	April 23, 2025	1.50%(1)	1,000,000	994,428
December 7, 2020	December 7, 2023	0.40%(2)	1,000,000	995,817
December 7, 2020	December 7, 2025	0.75%(2)	750,000	744,362
			$ 3,750,000	$ 3,731,814

(1) Interest is payable semi-annually in arrears on April 23 and October 23 of each year, beginning October 23, 2020.
(2) Interest is payable semi-annually in arrears on June 7 and December 7 of each year, beginning June 7, 2021.

13. LONG-TERM DEBT (CONTINUED)

Interest expense and amortization of discount and issuance costs, included in Interest expense in the accompanying Consolidated Statements of Income, were $43,970,000 and $22,169,000 for the years ended December 31, 2021 and 2020, respectively. The weighted-average interest rate was 0.98% as of December 31, 2021 and 2020. The aggregate debt issuance costs and unamortized discount associated with the senior notes were $18,186,000 and $26,058,000, as of December 31, 2021 and 2020, respectively.

Information Technology Financing. On January 1, 2019, the Company obtained three year financing of $14 million from IBM Credit LLC in connection to its software and services purchase agreement with IBM. In October 2021, the Company paid off the loan. Interest expense on the loan included in the accompanying Consolidated Statements of Income was $41,000 and $198,000 for the years ended December 31, 2021 and 2020, respectively.

Lines of credit. DTCC maintains a committed line of credit for general funding purposes while certain of its subsidiaries, DTC and NSCC, also maintain committed lines of credit to support settlement of its payment obligations in the event of the default of any of its Participants pursuant to the rules of the relevant subsidiaries of the Company.

Details for the terms of the outstanding lines of credit as of December 31, 2021 and 2020 follow:

	2021	2020
DTCC		
Committed Amount	$500 million	$500 million
Denomination	USD	USD
Number of Participants/Lenders	10/10	10/10
Borrowing Rate	Either base rate plus 0.25% or eurodollar plus 1.25%	Either base rate plus 0.25% or eurodollar plus 1.25%
Maturity Date	January 2022	January 2022
Annual Facility Fee	0.15%(1)	0.15%(1)
DTC		
Committed Amount	$1.9 billion	$1.9 billion
Denomination	USD	USD
Number of Participants/Lenders	29/35	32/37
Borrowing Rate	The greatest of the FRBNY rate, adjusted LIBOR, or zero, on the day of borrowing, plus 1.40%	
Maturity Date	May 2022	May 2021
Annual Facility Fee	0.10%(1)	0.20%(1)
Uncommitted Amount	C$200 million (2)	C$200 million (2)
Denomination	CAD	CAD
Number of Participants/Lenders	1/1	1/1
Borrowing Rate	A rate per annum equal to the Canadian Prime Rate minus 0.50%	
Maturity Date	On Demand	On Demand
NSCC		
Committed Amount	$9.3 billion	$10.9 billion
Denomination	USD	USD
Number of Participants/Lenders	29/35	32/37
Borrowing Rate	The greatest of the FRBNY rate, adjusted LIBOR, or zero, on the day of borrowing, plus 1.40%	
Maturity Date	May 2022	May 2021
Annual Facility Fee	0.10%(1)	0.20%(1)

(1) The annual facility fee associated with maintaining the line of credit is included in Professional and other services in the accompanying Consolidated Statements of Income.

(2) Used to support Canadian settlement.

13. LONG-TERM DEBT (CONTINUED)

There were no borrowings under the lines of credit during 2021 and 2020.

Details for debt covenants related to the lines of credit as of December 31, 2021 and 2020 follow:

	2021	2020
DTCC		
Minimum Net Worth	$1.25 billion	$1.25 billion
Maximum Priority Debt	$200 million	$200 million
DTC		
Minimum Net Worth	$200 million	$200 million
Minimum Participants' Fund deposits	$750 million	$750 million
NSCC		
Minimum Net Worth	$200 million	$200 million
Minimum Clearing Fund deposits	$1.5 billion	$1.5 billion

As of December 31, 2021 and 2020, the Company was in compliance with its debt covenants.

Credit Ratings. DTCC, DTC, FICC and NSCC are rated by Moody's Investors Service, Inc. (Moody's) and S&P Global Inc. (S&P). Details for issuer credit ratings and ratings outlooks for DTCC and its three clearing agency subsidiaries as of December 31, 2021 follow:

	Moody's (1)			S&P		
	Long-term	**Short-term**	**Outlook**	**Long-term**	**Short-term**	**Outlook**
DTCC	Aa3	N/A	Stable	AA-	A-1+	Stable
DTC	Aaa	P-1	Stable	AA+	A-1+	Stable
FICC	Aaa	P-1	Stable	AA	A-1+	Stable
NSCC	Aaa	P-1	Stable	AA+	A-1+	Stable

(1) Moody's categorizes the long-term issuer ratings of DTC, FICC and NSCC as clearing counterparty ratings (CCR) under the agency's Clearing Houses Rating Methodology.

14. FAIR VALUE MEASUREMENTS

Valuation hierarchy

U.S. GAAP provides for a three-level valuation hierarchy based on the transparency of inputs to the valuation of an asset or liability as of the measurement date. Details for the description of the three levels follow:

◦ Level 1 — Inputs to the valuation methodology are unadjusted quoted market prices for identical assets or liabilities in active markets as of the valuation date.

◦ Level 2 — Inputs to the valuation methodology are quoted market prices for similar assets and liabilities in active markets; quoted market prices for identical or similar assets or liabilities in markets that are not active; inputs other than quoted prices that are observable for the asset or liability; and inputs that are derived principally from or corroborated by observable market data by correlation or other means.

◦ Level 3 — Inputs to the valuation methodology are unobservable and reflect the Company's own assumptions about the estimates market participants would use pricing the asset or liability based on the best information available in the circumstances (e.g., internally derived assumptions surrounding timing and amount of expected cash flows).

A financial asset or liability's categorization within the valuation hierarchy is based on the lowest level of input that is significant to the fair value measurement.

Financial Assets and Liabilities measured at fair value on a recurring basis. For financial assets and liabilities measured at fair value on a recurring basis, the Company applies the following valuation techniques to measure fair value:

Product/ Instrument	Valuation Methodology	Classification in the valuation hierarchy
Assets - Participants' and Clearing Funds - Securities on deposit		
U.S. Treasury Securities U. S. Agency Issued Debt Securities (Non-Callable)	Quoted market price of identical assets obtained from pricing services engaged by the Company.	Level 1
U. S. Agency Issued Debt Securities (Callable) U.S. Agency Residential Mortgage-Backed Securities	Quoted market price of recent trades of similar securities obtained from pricing services engaged by the Company.	Level 2
Assets - Participants' and Clearing Funds - Cash deposits		
Money market fund investments	Quoted market price of identical assets obtained from pricing services engaged by the Company.	Level 1

14. FAIR VALUE MEASUREMENTS (CONTINUED)

Product/ Instrument	Valuation Methodology	Classification in the valuation hierarchy
Non-Current Assets - Other non-current assets		
Long-term incentive plan assets - Mutual fund and Stable value fund investments	Quoted market price of identical assets obtained from pricing services engaged by the Company	Level 1
	Quoted market price of recent trades of similar securities obtained from pricing services engaged by the Company.	Level 2
Liabilities - Participants' and Clearing Funds - Securities on deposit and Cash deposits - Money market fund investments		
Participants' and Clearing Funds liabilities	Derived from the corresponding Participants' and Clearing Funds assets (see above).	Level 1 and Level 2

Fair value measurements of those items measured on a recurring basis as of December 31, 2021 and 2020 follow (in thousands):

	2021			
	Level 1	Level 2	Level 3	Total
Assets:				
Clearing Funds				
U.S. Treasury Securities	$ 25,012,714	$ —	$ —	$ 25,012,714
U.S. Agency Issued Debt Securities (Non-Callable)	129,647	—	—	129,647
U.S. Agency Residential Mortgage-Backed Securities	—	2,879,411	—	2,879,411
Cash deposits - Money market fund investments	3,657,000	—	—	3,657,000
Non-current assets				
Long-term incentive plan assets - Mutual fund and Stable value fund investments	135,525	23,977	—	159,502
Total assets	$ 28,934,886	$ 2,903,388	$ —	$ 31,838,274
Liabilities:				
Clearing Funds				
Securities liabilities	$ 25,142,361	$ 2,879,411	$ —	$ 28,021,772
Money market fund investments liabilities	3,657,000	—	—	3,657,000
Total liabilities	$ 28,799,361	$ 2,879,411	$ —	$ 31,678,772

14. FAIR VALUE MEASUREMENTS (CONTINUED)

	2020			
	Level 1	Level 2	Level 3	Total
Assets:				
Clearing Funds				
U.S. Treasury Securities	$ 27,813,005	$ —	$ —	$ 27,813,005
U.S. Agency Issued Debt Securities (Non-Callable)	347,717	—	—	347,717
U.S. Agency Residential Mortgage-Backed Securities	—	4,268,976	—	4,268,976
Cash deposits - Money market fund investments	3,950,000	—	—	3,950,000
Non-current assets				
Long-term incentive plan assets - Mutual fund and Stable value fund investments	126,165	33,700	—	159,865
Total assets	$ 32,236,887	$ 4,302,676	$ —	$ 36,539,563
Liabilities:				
Clearing Funds				
Securities liabilities	$ 28,160,722	$ 4,268,976	$ —	$ 32,429,698
Money market fund investments liabilities	3,950,000	—	—	3,950,000
Total liabilities	$ 32,110,722	$ 4,268,976	$ —	$ 36,379,698

Financial Assets and Liabilities measured at other than fair value

Financial assets and liabilities whose carrying value approximates fair value. The carrying values of certain financial assets and liabilities approximate their fair values because they are short-term in duration, have no defined maturity or have market-based interest rates. These instruments include Cash and cash equivalents, Participants' segregated cash, Short-term investments, Participants' and Clearing Funds - Cash deposits - Bank deposits, and Reverse repurchase agreements (and corresponding liabilities), Other Participants' assets, Commercial paper, Payable to Participants, and Long-term debt.

The carrying values, fair values and fair value hierarchy levels of all financial instruments measured at other than fair value on the accompanying Consolidated Statements of Financial Condition as of December 31, 2021 and 2020 follow (in thousands):

	2021				
	Carrying Amount	Total Fair Value	Level 1	Level 2	Level 3
Assets:					
Cash and cash equivalents	$ 14,236,922	$ 14,236,922	$ 14,236,922	$ —	$ —
Participants' segregated cash	6,078	6,078	6,078	—	—
Short-term investments	445,000	445,000	—	445,000	—
Participants' and Clearing Funds:					
Cash deposits - Bank deposits	24,823,163	24,823,163	24,823,163	—	—
Other Participants' assets	1,326,873	1,326,873	1,326,873	—	—
Total	$ 40,838,036	$ 40,838,036	$ 40,393,036	$ 445,000	$ —
Liabilities:					
Commercial paper	$ 8,291,933	$ 8,291,933	$ —	$ 8,291,933	$ —
Participants' and Clearing Funds:					
Cash deposits - Bank deposits	24,823,163	24,823,163	24,823,163	—	—
Payable to Participants	1,332,951	1,332,951	1,332,951	—	—
Long-term debt	3,731,814	3,744,935	—	3,744,935	—
Total	$ 38,179,861	$ 38,192,982	$ 26,156,114	$ 12,036,868	$ —

14. FAIR VALUE MEASUREMENTS (CONTINUED)

	2020				
	Carrying Amount	Total Fair Value	Level 1	Level 2	Level 3
Assets:					
Cash and cash equivalents	$ 9,165,353	$ 9,165,353	$ 9,165,353	$ —	$ —
Participants' segregated cash	134	134	134	—	—
Short-term investments	800,000	800,000	—	800,000	—
Participants' and Clearing Funds:					
Cash deposits - Bank deposits	24,598,824	24,598,824	24,598,824	—	—
Cash deposits - Reverse repurchase agreements	925,000	925,000	—	925,000	—
Other Participants' assets	813,006	813,006	813,006	—	—
Total	$36,302,317	$36,302,317	$34,577,317	$ 1,725,000	$ —
Liabilities:					
Commercial paper	$ 3,843,290	$ 3,843,290	$ —	$ 3,843,290	$ —
Participants' and Clearing Funds:					
Cash deposits - Bank deposits	24,598,824	24,598,824	24,598,824	—	—
Cash deposits - Reverse repurchase agreements	925,000	925,000	—	925,000	—
Payable to Participants	813,140	813,140	813,140	—	—
Long-term debt	3,727,863	3,790,077	—	3,790,077	—
Total	$33,908,117	$33,970,331	$25,411,964	$ 8,558,367	$ —

Assets measured at fair value on a non-recurring basis. Certain financial assets are subject to measurement at fair value on a non-recurring basis. For these assets, measurement at fair value in periods subsequent to their initial recognition is applicable if they are determined to be impaired or when an observable event occurs.

Financial assets measured at fair value on a non-recurring basis include equity investments, which are classified as Level 3 instruments. During the year ended December 31, 2021, there was no fair value adjustment required for equity investments without a readily determinable fair value. The carrying amount of the investments were $12,393,000 as of December 31, 2021 and 2020.

15. RETIREMENT PLANS

U.S. defined benefit pension and other postretirement benefit plans.

Benefit obligations. The reconciliation of the beginning and ending balances of the projected benefit obligations for defined benefit plans follow (in thousands):

	Pension Benefits		Other Benefits	
	2021	2020	2021	2020
Benefit obligations, beginning of year:	$ 1,232,651	$ 1,140,118	$ 68,713	$ 66,615
Service cost	1,923	2,144	548	545
Interest cost	23,054	32,187	1,157	1,742
Gross benefits paid	(64,907)	(68,854)	(1,252)	(1,728)
Expenses paid	(1,622)	(1,249)	—	—
Actuarial loss (gain)	(60,120)	128,305	(6,693)	1,539
Total benefit obligations at end of year	$ 1,130,979	$ 1,232,651	$ 62,473	$ 68,713
Total accumulated benefit obligations at end of year	$ 1,128,017	$ 1,228,596	N/A	N/A

The Accumulated Benefit Obligations are defined as the actuarial present value of Pension benefits attributed to employee services rendered before December 31, 2021 and 2020, respectively, and based on employee service and compensation prior to the measurement date.

Funded status. The funded status of the plans, as of December 31, 2021 and 2020, follow (in thousands):

	Pension Benefits				Other Benefits	
	Pension Plan		Other Supplemental Pension Plans		Medical & Life Plans	
	2021	2020	2021	2020	2021	2020
Benefit obligations at end of year:						
Qualified plan	$ 1,013,449	$ 1,110,105	$ —	$ —	$ —	$ —
Other plans	—	—	117,530	122,546	62,473	68,713
Total benefit obligations at end of year	1,013,449	1,110,105	117,530	122,546	62,473	68,713
Total fair value of plan assets at end of year	1,027,140	1,087,848	—	—	—	—
Funded (unfunded) status	$ 13,691	$ (22,257)	$ (117,530)	$ (122,546)	$ (62,473)	$ (68,713)
Amounts recognized in the Consolidated Statements of Financial Condition consist of:						
Non-current assets	$ 13,691	$ —	$ —	$ —	$ —	$ —
Current liability	—	—	(29,939)	(31,740)	(4,006)	(4,047)
Non-current liability	—	(22,257)	(87,591)	(90,806)	(58,467)	(64,666)
Amount recognized, end of year	$ 13,691	$ (22,257)	$ (117,530)	$ (122,546)	$ (62,473)	$ (68,713)

15. RETIREMENT PLANS (CONTINUED)

Plan assets. The summary and reconciliation of the beginning and ending balances of the fair value of the plans' assets follow (in thousands):

	Pension Benefits		Other Benefits	
	2021	2020	2021	2020
Fair value of plan assets, beginning of year	$ 1,087,848	$ 998,442	$ —	$ —
Actual return on plan assets	665	145,014	—	—
Employer contribution	5,157	14,494	1,252	1,728
Gross benefits paid	(64,907)	(68,854)	(1,252)	(1,728)
Expenses paid	(1,623)	(1,248)	—	—
Fair value of plan assets, end of year	$ 1,027,140	$ 1,087,848	$ —	$ —

Investments are classified based on the lowest level of input that is significant to the fair value measurement. Details of the classification of plan assets in accordance with the three-tier fair valuation hierarchy and current asset allocations as of December 31, 2021 and 2020, follow (in thousands, except percentages):

	Target Allocation 2021	Percentage of Plan Assets, December 31, 2021	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Quoted Prices in Active Markets for Similar Assets (Level 2)
Pension assets as of December 31, 2021:					
Short-term investment fund	0.50 %	0.05 %	$ 556	$ —	$ 556
Equity Portfolio:					
Domestic large cap growth			20,043	—	20,043
Domestic large cap value			20,246	—	20,246
Domestic large cap core			40,822	—	40,822
Domestic small core			7,763	3,856	3,907
International core			11,919	11,919	—
International emerging markets			3,769	3,769	—
Total equity securities	9.50 %	10.18 %	104,562	19,544	85,018
Fixed income portfolio:					
Domestic liability driven investment (1)	88.00 %	88.37 %	907,673	—	907,673
Guaranteed insurance contracts:					
Group annuity (2)	2.00 %	1.40 %	14,349	—	—
Total pension assets as of December 31, 2021			$ 1,027,140	$ 19,544	$ 993,247

15. RETIREMENT PLANS (CONTINUED)

	Target Allocation 2020	Percentage of Plan Assets, December 31, 2020	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Quoted Prices in Active Markets for Similar Assets (Level 2)
Pension assets as of December 31, 2020:					
Short-term investment fund	0.50 %	1.02 %	$ 11,110	$ —	$ 11,110
Equity Portfolio:					
Domestic large cap growth			20,569	—	20,569
Domestic large cap value			20,235	—	20,235
Domestic large cap core			41,020	—	41,020
Domestic small core			8,252	4,118	4,134
International core			12,661	12,661	—
International emerging markets			4,258	4,258	—
Total equity securities	9.50 %	9.84 %	106,995	21,037	85,958
Fixed income portfolio:					
Domestic liability driven investment (1)	88.00 %	88.86 %	966,716	—	966,716
Guaranteed insurance contracts:					
Group annuity policies (2)	2.00 %	0.28 %	3,027	—	—
Total pension assets as of December 31, 2020			$ 1,087,848	$ 21,037	$ 1,063,784

(1) Wells Fargo acted as the trustee for the DTCC retirement plan for 2021 and 2020. As of December 31, 2021, the balance included Wells Fargo Liability Driven Solution Collective Investment Trust I of $335 million and Wells Fargo Liability Driven Solution Collective Investment Trust II of $563 million, representing 33% and 55% of total investments, respectively. As of December 31, 2020, the balance included Wells Fargo Liability Driven Solution Collective Investment Trust I of $254 million and Wells Fargo Liability Driven Solution Collective Investment Trust II of $696 million, representing 23% and 64% of total investments, respectively. A significant decline in market value of these investments would significantly affect the plan assets.

(2) As permitted by U.S. GAAP, this group annuity policies is accounted for at contract value, which approximates fair value. This investment is reported at contract value because it is the amount received by participants if they were to initiate permitted transactions under the terms of the pension plan. Contract value as reported represents contributions made under the contract, plus earnings, less participant withdrawals and administrative expenses.

15. RETIREMENT PLANS (CONTINUED)

Net periodic benefit expense (income). Details of the components of net periodic benefit expense (income) for the years ended December 31, 2021 and 2020, follow (in thousands):

	Pension Benefits		Other Benefits	
	2021	2020	2021	2020
Components of net periodic benefit expense (income):				
Expected return on plan assets	$ (37,846)	$ (40,049)	$ —	$ —
Interest cost	23,054	32,187	1,156	1,742
Service cost	1,923	2,144	548	546
Amortizations:				
Prior service cost (credit)	87	829	(5,146)	(5,568)
Actuarial loss	12,563	9,362	1,335	1,039
Settlement loss	403	2,011	—	—
Net periodic benefit expense (income)	$ 184	$ 6,484	$ (2,107)	$ (2,241)

Changes in OCI. Details of the changes in plan assets and benefit obligations recognized in OCI for the years ended December 31, 2021 and 2020, follow (in thousands):

	Pension Benefits		Other Benefits	
	2021	2020	2021	2020
Other changes recognized in OCI:				
Net loss (gain) arising during the period	$ (22,939)	$ 23,340	$ (6,693)	$ 1,539
Amortizations:				
Prior service credit (cost)	(87)	(829)	5,146	5,568
Actuarial and settlement loss	(12,966)	(11,373)	(1,335)	(1,039)
Net other changes in OCI, pre-tax	$ (35,992)	$ 11,138	$ (2,882)	$ 6,068

Details of the net amount recognized in Accumulated other comprehensive loss on the accompanying Consolidated Statements of Financial Condition as of December 31, 2021 and 2020, follow (in thousands):

	Pension Benefits		Other Benefits	
	2021	2020	2021	2020
Amount not reflected in net periodic benefit (cost) and included in Accumulated other comprehensive loss:				
Prior service credit (cost)	$ (1,652)	$ (1,740)	$ 1,040	$ 6,186
Accumulated loss	(249,712)	(285,616)	(8,794)	(16,822)
Accumulated other comprehensive loss, pre-tax	$ (251,364)	$ (287,356)	$ (7,754)	$ (10,636)

15. RETIREMENT PLANS (CONTINUED)

Assumptions for net periodic benefit expense (income). Details for the defined benefit plans assumptions used by actuaries to determine net periodic benefit expense (income) as of December 31, 2021 and 2020 follow:

	Pension Benefits		Other Benefits	
	2021	2020	2021	2020
Weighted-average assumptions used to determine net periodic benefit expense (income) for the years ended December 31:				
Discount rate	2.50%	3.34%	2.38%	3.26%
Expected long-term rate of return on plan assets	4.05%	4.45%	n/a	n/a
Assumed health care cost trend rates as of December 31:				
Health care cost trend rate assumed for next year			5.57%	6.02%
Rate to which the cost trend rate is assumed to decline				
(the ultimate trend rate)			4.46%	4.46%
Year that the rate reaches the ultimate trend rate			2038	2038

The discount rate reflects the rate at which defined benefit plan obligations could be effectively settled. The Company projects the benefits to be paid by each plan for each year in the future, the sum of which is the projected benefit obligations. The benefits are then discounted using the Above Mean Mercer Yield Curve spot rates for the corresponding maturity years.

The total of the present values for the benefit payment years is used to calculate the single rate that discounts the benefit cash flows to the same total present value. The single rate is the basis for the final effective discount rate.

Details for the defined benefit plans assumptions used by actuaries to determine benefit obligations as of December 31, 2021 and 2020 follow:

	Pension Benefits		Other Benefits	
	2021	2020	2021	2020
Weighted-average assumptions used to determine benefit				
obligations as of December 31:				
Discount rate	2.86%	2.46%	2.77%	2.37%
Rate for interest cost	2.03%	2.98%	1.78%	2.83%
Rate for service cost	n/a	n/a	2.60%	3.46%
Rate for interest on service cost	n/a	n/a	2.37%	3.24%
Assumed health care cost trend rates as of December 31:				
Health care cost trend rate assumed for next year			5.81%	5.57%
Rate to which the cost trend rate is assumed to decline				
(the ultimate trend rate)			4.00%	4.46%
Year that the rate reaches the ultimate trend rate			2045	2038

15. RETIREMENT PLANS (CONTINUED)

Assumptions for defined benefit obligations. Mortality is a key assumption used to determine the benefit obligations for the Company's defined benefit plans. The mortality assumption for all plans uses the Pri-2012 mortality tables projected generationally with scale MMP-2019. The mortality tables use a white collar adjustment for the SERP, Restoration Plan and non-union Retiree Medical and Life Insurance Plans and a blue collar adjustment for the union Retiree Medical and Life Insurance Plans. The Pension Plan continues to use no collar adjustment. On a lump sum basis, mortality is based on IRS prescribed tables projected using scale MP-2021, with segmented interest rate adjustments.

Expected cash flows. The Company did not make any contributions to the Pension Plan during 2021 and 2020. Settlement losses relate to early retirement of executives who elected lump-sum and periodic payments. Settlement losses totaled $403,000 and $2,011,000 for the years ended December 31, 2021 and 2020, respectively. There were no participant contributions to the plans in 2021 and 2020.

Details for the benefit payments for the pension plans and other plans for 2021 and 2020 follow (in thousands):

	2021	2020
Pension plans	$ 64,907	$ 68,854
Other plans	1,252	1,723
Total	$ 66,159	$ 70,577

Details for estimated amounts to be paid in each of the next five years and the five year period thereafter follow (in thousands):

	Pension	Employer Benefits Payments	Medicare Subsidy Receipts
2022	$ 91,485	$ 4,006	$ 9
2023	64,993	4,127	8
2024	72,532	4,176	7
2025	66,677	4,208	6
2026	60,852	4,137	6
Thereafter	323,548	18,869	18
Total	$ 680,087	$ 39,523	$ 54

Defined contribution retirement plans. Total expense for the defined contribution retirement plans included in Employee compensation and related benefits in the accompanying Consolidated Statements of Income was $46,933,000 and $44,957,000 for the years ended December 31, 2021 and 2020, respectively.

16. INCOME TAXES

DTCC and its subsidiaries file a consolidated Federal income tax return and various state tax returns. DTCC and its subsidiaries also file other state and non-U.S. jurisdiction income tax returns on a separate company basis.

Details for the components of the Company's Provision for income taxes for the years ended December 31, 2021 and 2020 follow (in thousands):

	2021	2020
Current income tax:		
Federal	$ 29,518	$ 17,725
State and local	3,458	15,301
Foreign	26,372	20,425
Total current income tax	59,348	53,451
Deferred income tax:		
Federal	9,093	5,034
State and local	1,632	5,256
Foreign	(5,541)	(732)
Total deferred income tax	5,184	9,558
Provision for income taxes	$ 64,532	$ 63,009

The 2021 and 2020 effective tax rates differ from the 21% Federal statutory tax rate mainly due to state and local taxes, changes in unrecognized tax benefits, settlements of tax audits, and the effects from U.S. taxes on foreign operations. Details for the reconciliation of the U.S. Federal statutory tax rate to the Company's effective tax rate on Income before taxes for the years ended December 31, 2021 and 2020 follow:

	2021	2020
U.S. statutory tax rate	21.0 %	21.0 %
State and local income taxes, net of Federal income tax benefit	5.5	5.5
Change in unrecognized tax benefits	1.9	0.9
Settlements of tax audits	(5.1)	(0.8)
Research activities	(2.7)	(1.7)
Benefit on foreign operations	(1.3)	(0.9)
Income from foreign operations	(1.1)	(0.6)
DEGCL joint venture	—	(0.4)
Other	(0.1)	(0.1)
Effective tax rate	18.1 %	22.9 %

16. INCOME TAXES (CONTINUED)

Details for the components of deferred tax assets and liabilities as of December 31, 2021 and 2020 follow (in thousands):

	2021	2020
Deferred tax assets:		
Accrued compensation and benefits	$ 110,494	$ 118,257
Operating lease liabilities and deferred rent	63,043	66,132
Other	32,944	33,149
Total deferred tax assets	206,481	217,538
Deferred tax liabilities:		
Capitalized software	64,787	60,916
Lease right-of-use asset	48,632	51,966
Investment tax basis difference	42,126	40,335
Depreciation	39,936	37,107
Total deferred tax liabilities	195,481	190,324
Net deferred tax assets	$ 11,000	$ 27,214

The deferred tax assets are expected to be fully realized and, accordingly, no valuation allowance was established.

Details for unrecognized tax benefits, included in Other non-current liabilities, as of December 31, 2021 and 2020 follow (in thousands):

	2021	2020
Beginning balance	$ 27,267	$ 29,197
Increases:		
Prior period tax positions	5,767	1,727
Current period tax positions	2,905	1,734
Decreases:		
Prior period tax positions	(11,529)	(2,188)
Statute of limitations	(1,164)	(3,090)
Settlements with tax authorities	(3,292)	(113)
Unrecognized tax benefit	19,954	27,267
Accrued interest	1,868	16,392
Ending balance	$ 21,822	$ 43,659

The Company classifies interest and penalties related to unrecognized tax benefits, if incurred, in Provision for income taxes in its accompanying Consolidated Statements of Income. The Company recognized accrued interest of $0 and $2,115,000 for the years ended December 31, 2021 and 2020 respectively.

Unrecognized tax benefits are estimated based on judgment, assessment of relevant risks, facts and circumstances. Actual results could differ materially from those estimates. The Company believes that the liability for unrecognized tax benefits is the best estimate in relation to the potential for additional assessments. Unexpected results from one or more such tax audits could significantly adversely affect the Company's income tax provision and results of operations. On February 1, 2021, the Company and the New York City tax authority reached a settlement agreement related to income tax audits of the 2010-2014 fiscal years. The Company reduced the related unrecognized tax benefit and accrued interest by $11,317,000 and $11,810,000, respectively.

16. INCOME TAXES (CONTINUED)

Details for the periods currently under examination and remaining subject to examination by jurisdiction as of December 31, 2021 follow:

	Tax Years	
Jurisdiction	**Under Examination**	**Subject to Examination**
U.S. Federal - Internal Revenue Service	-	2018 - 2020
New York State	-	2018 - 2020
New York City	2015 - 2017	2018 - 2020
State of Florida	2018 - 2019	2020
California	2017 - 2018	2019 - 2020
Michigan	2016 - 2019	-

17. SHAREHOLDERS' EQUITY

DTCC Series A Preferred stock. All 10,000 shares of DTCC Series A Preferred stock are issued and outstanding and held of record by Stock Clearing Corporation, a wholly owned subsidiary of the New York Stock Exchange LLC, the successor-in-interest to the New York Stock Exchange Inc. In the event of DTCC's voluntary or involuntary liquidation, dissolution or winding-up, the holders of Series A Non-Cumulative Perpetual Preferred stock are entitled to a liquidation preference of $30.00 per share.

DTCC Series B Preferred stock. All 10,000 shares of DTCC Series B Preferred stock are issued and outstanding and held of record by National Clearing Corporation, a wholly owned subsidiary of the Financial Industry Regulatory Authority Inc. ("FINRA"). In the event of DTCC's voluntary or involuntary liquidation, dissolution or winding-up, the holders of Series B Preferred stock are entitled to a liquidation preference of $30.00 per share.

DTCC Series C Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred stock. DTCC issued 1,600 shares of Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred stock, Series C, $0.50 par value per share, with a liquidation preference of $250,000 per share. When declared by DTCC's Board of Directors, in accordance with the Amended Certificate of Incorporation of DTCC, dividends on the Series C Preferred stock were payable in arrears on June 15 and December 15 of each year through June 15, 2020 at a fixed rate of 4.875% per annum. From June 15, 2020 onward, dividends accrued at a floating rate equal to three-month LIBOR plus 3.167% per annum (3.351% at June 15, 2021), and, when declared by DTCC's Board of Directors, dividends on the Series C Preferred stock were payable in arrears on March 15, June 15, December 15 and December 15 of each year beginning on December 15, 2020. On June 15, 2021, DTCC redeemed all 1,600 shares outstanding related to the Series C Preferred stock totaling $400,000,000 for a price equal to $250,000 per share with issuance costs of $9,484,000.

Details of dividends paid to holders of the Series C Preferred Stock during the year ended December 31, 2021 follow (in thousands):

Approved and Declared Date	Record Date	Payment Date	Declared Dividend	Shares Outstanding	Dividend Paid
April 13, 2021	May 25, 2021	June 15, 2021	$2,140.84	1,600	$ 3,425,344
January 14, 2021	February 25, 2021	March 15, 2021	$2,114.69	1,600	$ 3,383,504

17. SHAREHOLDERS' EQUITY (CONTINUED)

Details of dividends paid to holders of the Series C Preferred Stock during the year ended December 31, 2020 follow (in thousands):

Approved and Declared Date	Record Date	Payment Date	Declared Dividend	Shares Outstanding	Dividend Paid
April 7, 2020	May 29, 2020	June 15, 2020	$6,093.75	1,600	$ 9,750,000
July 27, 2020	August 28, 2020	September 15, 2020	$2,223.58	1,600	$ 3,557,722
October 12, 2020	November 25, 2020	December 15, 2020	$2,159.59	1,600	$ 3,455,351

DTCC Series D Fixed Rate Reset Non-Cumulative Perpetual Preferred stock. On June 8, 2021, DTCC issued 2,000 shares of Fixed Rate Reset Non-Cumulative Perpetual Preferred stock, Series D, $0.50 par value per share, with a liquidation preference of $250,000 per share resulting in issuance costs of $9,100,000 and net proceeds of $490,900,000. When declared by DTCC's Board of Directors, dividends on the Series D Preferred stock are payable in arrears on June 20 and December 20 of each year, beginning December 20, 2021 through June 20, 2026, at a fixed rate of 3.375% per annum. From June 20, 2026 onward, dividends will accrue at a rate equal to the five-year U.S. Treasury rate plus 2.606% per annum.

Details of dividends paid to holders of the Series D Preferred Stock during the year ended December 31, 2021 follow (in thousands):

Approved and Declared Date	Record Date	Payment Date	Declared Dividend	Shares Outstanding	Dividend Paid
November 9, 2021	November 30, 2021	December 20, 2021	$4,335.94	2,000	$ 8,671,875

DTC Series A Non-Cumulative Perpetual Preferred stock. Under a plan adopted by the Board of Directors, each Participant of DTC is required to own shares of DTC Series A preferred stock. The ownership of DTC preferred stock is reported as non-controlling interests in the consolidated financial statements. There was $150,000,000 of DTC Series A preferred stock (1,500,000 shares at par value of $100 per share) outstanding as of December 31, 2021 and 2020. Annual dividends are accrued based on the weighted-average rate of interest paid by the Company on required Participants' Fund deposits during the dividend period as disclosed in the DTC's rules. The 2021 annual dividend was approved and declared by the Board of Directors in December 2021 and February 2022 in the amounts of $90,000 and $45,000, respectively. The December 2021 dividend was paid on January 11, 2022 and the February 2022 dividend will be paid in March 2022, to the holders of DTC Series A Preferred stock during 2021. The 2020 annual dividend amount of $480,000 was approved and declared by the Board of Directors in February 2021, and was paid in April 2021, to the holders of DTC Series A Preferred stock during 2020.

18. CAPITAL REQUIREMENTS

As required by Rule 17Ad-22(e)(15) of the CCAS and pursuant to the Clearing Agency Policy on Capital Requirements, the Company must meet its total capital requirement by holding liquid net assets funded by equity. The total capital requirement for each of the clearing agencies is equal to the sum of the general business risk capital requirement and corporate contribution, as described below.

General Business Risk Capital Requirement. This capital requirement is held to cover potential general business losses so that the clearing agencies can continue operations and provide services as a going concern if those losses materialize. It is determined based on the general business risk profile and estimated time to execute a recovery or orderly wind-down of critical operations for each of the clearing agencies and, at a minimum, is equal to six months of operating expenses.

Corporate Contribution. The corporate contribution is applied to losses as provided in each of the respective clearing agencies rules. The amount of the corporate contribution is generally equal to 50% of each clearing agency's general business risk capital requirement.

18. CAPITAL REQUIREMENTS (CONTINUED)

Details of the general business risk capital requirement, corporate contribution and liquid net assets funded by equity for the clearing agencies as of December 31, 2021 and 2020 follow (in thousands):

	2021		
	DTC	NSCC	FICC
General business risk capital requirement	$ 193,270	$ 211,964	$ 133,407
Corporate contribution	96,635	105,982	66,703
Total requirement	289,905	317,946	200,110
Liquid net assets funded by equity	675,456	570,329	328,792
Excess	$ 385,551	$ 252,383	$ 128,682

	2020		
	DTC	NSCC	FICC
General business risk capital requirement	$ 179,187	$ 204,080	$ 130,261
Corporate contribution	89,593	102,040	65,130
Total requirement	268,780	306,120	195,391
Liquid net assets funded by equity	684,377	620,079	300,549
Excess	$ 415,597	$ 313,959	$ 105,158

Regulatory capital. DTCC's regulated subsidiaries maintain and report regulatory capital in accordance with all relevant laws, rules and guidelines. As a multinational enterprise, various DTCC subsidiaries are subject to regulatory capital regimes, as applicable. Certain DTCC subsidiaries submit regulatory capital reports to various regulators, including, but not limited to, FRBNY, the NYSDFS and the Commodity Futures Trading Commission in the United States; European Securities and Markets Authority in Europe; Financial Conduct Authority in the UK; Ontario Securities Commission in Canada; and the Monetary Authority of Singapore in Singapore.

Capital adequacy. DTC is subject to capital guidelines issued by United States federal and state banking regulators.

DTC capital and leverage ratios required by the FRBNY and the NYSDFS as of December 31, 2021 follow:

	Ratio	Minimum Capital Ratio[a]	Well Capitalized Ratio[a]
Tier 1 capital ratio [1]	76.78 %	6.00 %	8.00 %
Total capital ratio [1]	76.78 %	8.00 %	10.00 %
Tier 1 leverage ratio [2]	15.97 %	4.00 %	4.00 %

(a) As defined by the regulations issued by the Federal Reserve, Office of the Comptroller of the Currency and the Federal Deposit Insurance Corporation.

(1) Total capital and Tier 1 capital include common stock, retained earnings and preferred stock. DTC's tier 1 capital and total capital ratios are based on tier 1 capital and total risk-weighted assets.

(2) Tier 1 leverage ratio is based on tier 1 capital and quarterly average total assets.

19. GUARANTEES

Certain DTCC subsidiaries (NSCC and FICC) provide central counterparty (CCP) services, including clearing, settlement and risk management services. Acting as a CCP, NSCC and FICC (through GSD and MBSD) guarantee the settlement of trades in the event one or more of their Participants default. A Participant default is defined in the respective rules of NSCC, GSD and MBSD. In their guarantor role, each clearing subsidiary has equal claims to and from Participants, as applicable, on opposite sides of the netted transactions. To cover their default risk, NSCC and FICC (through GSD and MBSD) use risk-based margining to collect cash and eligible securities collateral to their Clearing Funds.

NSCC is the leading provider of clearance, netting, risk management and settlement for virtually all U.S. broker-to-broker trades involving equities, corporate and municipal debt, exchange traded funds and unit investment trusts. Through its Continuous Net Settlement (CNS) system, NSCC is interposed between Participants in securities clearance and settlement. CNS transactions are generally guaranteed at the point of trade comparison and validation for bilateral submissions or the point of trade validation for locked-in submissions. Since NSCC stands between the Participants delivering and receiving CNS trades, the failure of Participants to deliver securities to NSCC on settlement date, and the corresponding failure of NSCC to redeliver the securities, results in open positions. Open CNS positions are marked-to-market daily. Such marks are debited from or credited to the involved Participants through the settlement process. In addition, a Participant may be subject to an additional collection of margin on an intraday basis through the Clearing Fund.

FICC, through GSD, provides real-time trade matching, clearing, netting, risk management and settlement for trades in U.S. government debt including buy-sell transactions and repurchase agreement ("Repo") transactions, as well as certain Mortgage-Backed Securities in its GCF Repo service. Securities processed by GSD include Treasury bills, bonds, notes, zero-coupon securities, government agency securities and inflation-indexed securities, as well as certain eligible Mortgage-Backed Securities in its GCF Repo service. The U.S. Government securities market is predominantly an over-the-counter market and most buy-sell transactions are settled on trade date plus one day (T+1). Most Repo transactions settle same day, or T+0, via FICC's Same Day Settlement service. Trades are guaranteed and novated upon comparison. The guarantee of GSD net settlement positions may result in a potential liability to FICC. Guaranteed positions that have not yet settled are margined and collateralized twice-daily through the Clearing Fund and marked-to-market twice-daily through the funds-only settlement process. In addition, a Participant may be subject to an additional amount referred to as the intraday supplemental fund deposit, which, if applicable, may be collected on an intraday basis through the Clearing Fund.

MBSD provides real-time trade matching, clearing, netting, risk management and settlement for trades in the U.S. mortgage-backed securities market. Specifically, MBSD processes to-be-announced transactions, specified pool trades and stipulated trades. FICC's guarantee of MBSD transactions may result in potential liability to FICC. Guaranteed positions that have not yet settled are margined and collateralized daily through the Clearing Fund. The daily Clearing Fund includes a mark-to-market component that is calculated using guaranteed positions and prices as of prior end-of-day. In addition, a Participant may become subject to an intraday mark-to-market charge which, if applicable, may be collected on an intraday basis through the Clearing Fund.

If a Participant defaults in either NSCC or FICC, such Participant's deposits to the applicable Clearing Fund is the first source of funds and collateral that the NSCC and FICC would use to cover any losses that may result from the close-out and liquidation of the defaulting Participant's positions. To address potential tail losses, NSCC and FICC each separately maintain additional prefunded resources. These consist of (i) the CCP's Clearing Fund that, in the aggregate, currently serves as the CCP's default fund, and (ii) the CCP's corporate contribution, (see Note 19). If, after closing out and liquidating a defaulting Participant's positions, the CCP were to suffer a loss, such loss would be satisfied as follows: (i) first, applying the defaulter's Clearing Fund deposit, including any amounts available under cross-guaranty agreements to which the CCPs are a party, described below; (ii) next, the CCPs may apply their corporate contribution (or such higher amount as approved by their Board of Directors), and (iii) by allocating any remaining loss to Participants.

19. GUARANTEES (CONTINUED)

For purposes of loss allocation, in connection with defaulting member, Participant defaults are grouped together chronologically into discrete event periods of 10 business days. If there is remaining loss or liability from one or more Participant default events that occurred within the same event period, they will be treated as follows:

NSCC will assess its non-defaulting Participants as provided for in its rules. The process, in general, allocates any remaining losses or liabilities among the Participants of NSCC who were Participants on the first day of the event period ratably in accordance with their respective average daily required deposits to the Clearing Fund over the prior 70 business days.

FICC Participants are grouped into two different tiers for purposes of loss allocation: Tier 1 and Tier 2. GSD and MBSD will divide such obligation between Tier 1 Participants and Tier 2 Participants. Tier 1 Participants will be assessed ratably in accordance with their respective average daily required deposits to the Clearing Fund over the prior 70 business days. Tier 2 Participants will only be subject to such loss or liability to the extent they traded with the defaulting Participant. Sponsored Members are not obligated for loss allocation. If the loss arises in connection with Sponsored Member trades (that is, in connection with the default of a Sponsoring Member), the loss shall be allocated to Tier 1 Participants. If the loss arises in connection with a default other than of the Sponsoring Member, the Sponsoring Member shall be responsible for any loss allocated to the Sponsoring Member Omnibus Account. GSD Participants who act as inter-dealer brokers are limited to a loss allocation of $5 million per event period in respect of their inter-dealer broker activity.

Amounts that may be available under cross-guaranty agreements include, for NSCC, amounts available under the netting contract and limited cross-guaranty between DTC and NSCC relating to collateralization across the DTC-NSCC interface, or for FICC, amounts available under the cross-margining agreements between GSD and the Chicago Mercantile Exchange Inc., which may provide for additional funds if the defaulting member was a cross-margining Participant.

DTC, NSCC, FICC and The Options Clearing Corporation (OCC) have also entered into a multilateral netting contract and limited cross-guaranty agreement. In accordance with this multilateral netting agreement, the clearing agencies have agreed to make payments to each other for any remaining unsatisfied obligations of a common defaulting Participant to the extent that these clearing agencies have excess resources belonging to the defaulting Participant. Under this agreement, no party ever needs to pay out of pocket and no party can receive more than its loss.

Details for open CCP positions for which a trade guaranty applied as of December 31, 2021 and 2020 follow (in billions):

	2021	2020
FICC		
GSD	$ 1,150	$ 1,201
MBSD	434	629
NSCC	185	183

20. OFF BALANCE SHEET AND CONCENTRATION OF CREDIT RISKS

DTCC is exposed to significant credit risk to third parties including its Participants, which extends to companies in the global financial services industry. DTCC's global customer base includes participating brokers, dealers, institutional investors, banks, trust issuers, mutual fund companies, insurance carriers, hedge funds, qualified institutional buyer clients via the sponsored membership service and other financial intermediaries - either directly or through correspondent relationships. Credit risk represents the potential for loss due to the default or deterioration in credit quality of a Participant. The Company's exposure to credit risk is primarily derived from providing clearing and settlement service operations.

Credit risk arises at DTCC should a Participant fail to fulfill its settlement obligation. The Company manages and mitigates this risk by identifying, measuring and responding to these risks in order to protect the safety and soundness of the DTCC clearing and settlement system.

Various tools are utilized to mitigate these risks including, but not limited to: setting capital adequacy standards; assessing new applicants for membership; performing continuous monitoring of Participants' financial condition; reviewing Participants' daily activity and determining appropriate collateral requirements; maintaining its risk-based Participants' Fund and Clearing Fund; netting obligations continuously; marking unsettled obligations to market; and utilizing quantitative analytical tools.

To become a participating member at any of DTCC's clearing agency or registered clearing house subsidiaries, an applicant must meet minimum eligibility criteria that are specified in the subsidiaries' respective rules. All applicants must provide the Company with certain financial and operational information. This information is reviewed to ensure the applicant has sufficient financial resources to make anticipated contributions to the relevant subsidiary's Participants' Fund or Clearing Fund and to meet its obligations to the subsidiary. The credit quality of the Participant is evaluated at the time of application and monitored on an ongoing basis to determine if the Participant continues to be financially stable and able to meet the financial requirements of membership. As part of its review, the Company utilizes an internal credit risk-rating matrix and/or other forms of surveillance to risk-rate or monitor Participants. The resulting rating or degree of surveillance determines the level of financial review to be performed on each Participant and may impact their Participants' Fund and Clearing Fund requirements.

Collateralization controls and net debit caps are employed by DTC to protect Participants against the risk that one or more Participants may fail to pay for their settlement obligations. DTC's collateralization controls prevent a Participant's net debit balance from exceeding the value of collateral in its account. The controls are designed to provide DTC with sufficient collateral to obtain funding for settlement in the event a Participant fails to pay its settlement obligation. DTC's net debit cap controls limit the net settlement debit that each Participant can incur to an amount, based upon activity level, which would be covered by DTC's liquidity resources. The net debit cap requires DTC to maintain sufficient liquidity to complete settlement should any single Participant or Participant family fail to settle.

NSCC and FICC collect Clearing Fund deposits from their Participants using a risk-based margining methodology. The risk-based methodology enables them to identify the risks posed by a Participant's unsettled portfolio and to quickly adjust and collect additional deposits as needed to cover those risks. At multiple times during the day, Clearing Fund requirements are calculated for each Participant based on their then-current unsettled and pending transactions. Security pricing is updated on an intraday basis and additional charges may be collected to cover significant price movements from those Participants with a significant exposure in the identified security. The Company monitors Participants' overall trading activities throughout the trading day to determine whether exposures exist that would require special actions to increase their Clearing Fund deposits.

The Company regularly performs back testing, stress testing and model performance monitoring of the quality and accuracy of its risk management systems to ensure the adequacy of Clearing Fund requirements and to respond to other risk factors the monitoring may reveal.

20. OFF BALANCE SHEET AND CONCENTRATION OF CREDIT RISKS (CONTINUED)

DTC maintains a committed, secured line of credit to support potential liquidity needs in the event of a Participant default. NSCC maintains liquid resources to support potential liquidity needs in the event of a Participant default. In addition to the cash deposits to the Clearing Fund, these resources also include the cash that would be obtained from a committed, secured line of credit, proceeds from issuance of senior notes, and proceeds from a commercial paper and extendable note program. NSCC has the Supplemental Liquidity Deposit ("SLD") - a rules-based funding obligation that requires Members whose activity generate liquidity needs in excess of NSCC's then available liquid resources, to fund such additional amounts. SLD deposits must be in cash and are held and maintained in the same manner as other Clearing Fund deposits. FICC maintains a rules-based, committed liquidity resource (i.e., the capped contingency liquidity facility) for each division to support potential liquidity needs in the event of a Netting Member default.

The Company also limits its exposure to potential losses from default by Participants' through multilateral netting contracts and limited cross-guaranty agreements with other clearing agencies. These arrangements are designed to provide a mechanism for the sharing of excess net resources of a common defaulting Participant held at one clearing agency to cover losses incurred at another clearing agency. NSCC, FICC and DTC have a multilateral netting contract and limited cross-guaranty agreement with each other and with OCC under which these clearing agencies have agreed to make payment to each other for any remaining unsatisfied obligations of a common defaulting Participant to the extent they have excess resources of the defaulting Participant. NSCC and DTC are also party to a netting contract and limited cross-guaranty agreement that includes special cross-guaranties and related arrangements designed to permit transactions to flow smoothly between DTC's system and NSCC's CNS system in a collateralized environment. These guaranties reduce risk at NSCC by ensuring that long allocations, or the approximate value of long allocations, will be made available to NSCC in a default situation.

If a DTC Participant defaults, such Participant's deposits to the Participants' Fund would be used to satisfy an outstanding obligation and/or loss incurred by DTC. If those funds are insufficient to cover the defaulting Participant's outstanding obligations, DTC may use other Participant deposits in the Participants' Fund or apply a portion of its retained earnings to cover the loss.

Credit risk also comes from the investment of financial assets, which consist principally of cash and cash equivalents, investments, accounts receivable and Participants' and Clearing Funds. Concentrations of credit risk may arise due to large connected individual exposures and significant exposures to groups of Participants whose likelihood of default is driven by common underlying factors, including economic conditions affecting financial markets, the securities industry and debt-issuing countries.

Cash and cash equivalents. The Company maintains cash and cash equivalents with various financial institutions including the FRBNY. The Company's investment policy is designed to limit its exposure with any one financial institution. As part of its credit and risk management processes, the Company performs periodic evaluations of the relative credit standing of the financial institutions with whom it places funds. The Company generally makes deposits with financial institutions with a credit rating of at least BBB+/Baa1 or better from recognized rating agencies and that are approved via its internal credit review process. The Company also monitors the credit ratings of the financial institutions with whom it places funds on an ongoing basis to identify any significant change in a financial institution's condition. If such a change takes place, the amounts deposited with such financial institutions may be adjusted.

Marketable securities. In addition to investing in reverse repurchase agreements, money market funds and bank deposits, the Company also directly invests in U.S. Treasury securities and debt obligations of the U.S. government or those U.S. government agencies guaranteed by the U.S. government, pursuant to its investment policy. Credit risk related to investments in marketable securities involves the risk of nonperformance by the counterparty, which could result in a material loss.

Accounts receivable. Credit risk related to accounts receivable involves the risk of non-payment by the counterparty. Credit risk is diversified due to the large number of Participants. The Company also performs ongoing credit evaluations of the financial conditions of its Participants and evaluates the delinquency status of the receivables.

20. OFF BALANCE SHEET AND CONCENTRATION OF CREDIT RISKS (CONTINUED)

Participants' Fund and Clearing Funds. In addition to risk management policies described above for cash and cash equivalents, when Participants provide cash deposits to the Participants' and Clearing Funds, the Company may invest the cash in bank deposits at the FRBNY or reverse repurchase agreements (reverse repos). Reverse repos are collateralized and the collateral must have a market value greater than or equal to 102% of the cash invested. The Company bears credit risk related to reverse repos only to the extent cash advanced to the counterparty exceeds the value of collateral received. Securities purchased under reverse repos are generally U.S. Treasury and Agency securities having minimal credit risk due to low probability of U.S. government default, coupled with the highly liquid nature of these securities. Reverse repos are typically placed with financial institutions with a credit rating of BBB+/Baa1 or better from recognized rating agencies and that are approved through the Company’s credit review process. To avoid concentration of credit risk exposures, the Company sets credit limits for each investment counterparty.

Participants' and Clearing Funds cash deposits may also be invested in money market mutual funds under Rule 2a-7 of the Investment Company Act of 1940 with a credit rating of AAA/Aaa from recognized rating agencies. Credit risk is mitigated by investing in highly rated money market mutual funds with a stable net asset value of $1.00 and having cash returned daily.

21. PARENT COMPANY CONDENSED FINANCIAL STATEMENTS

Condensed financial statements for DTCC (the Parent Company Condensed Financial Statements) that follow should be read in conjunction with the accompanying consolidated financial statements of the Company and its subsidiaries and the notes thereto. The Parent Company Condensed Financial Statements as of December 31, 2021 and 2020 require management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses. Management believes that the estimates utilized in the preparation of the condensed financial statements are reasonable. Actual results could differ materially from these estimates.

The DTCC Parent Company Condensed Statements of Financial Condition follow (in thousands):

	As of December 31,	
	2021	2020
ASSETS:		
Cash and cash equivalents	$ 532,060	$ 507,329
Investments in subsidiaries	1,784,894	1,959,011
Due from subsidiaries	423,437	365,901
Premises, equipment and intangible assets	171,890	167,275
Operating lease right-of-use asset	195,937	187,188
Other assets	448,320	403,223
TOTAL ASSETS	$ 3,556,538	$ 3,589,927
LIABILITIES AND SHAREHOLDERS' EQUITY:		
LIABILITIES:		
Long-term debt and other borrowings	$ —	$ 3,921
Pension and postretirement benefits	180,040	218,198
Operating lease liability	243,081	237,852
Other liabilities	203,081	591,605
Total liabilities	626,202	1,051,576
SHAREHOLDERS' EQUITY:		
Preferred stock	491,500	391,116
Common stock	5,091	5,091
Additional paid-in capital	411,065	411,065
Retained earnings	2,231,213	1,964,412
Accumulated other comprehensive loss, net of tax	(208,533)	(233,333)
Total shareholders' equity	2,930,336	2,538,351
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	$ 3,556,538	$ 3,589,927

21. PARENT COMPANY CONDENSED FINANCIAL STATEMENTS (CONTINUED)

DTCC Parent Company has an agreement with its subsidiaries whereby the DTCC Parent Company pays for substantially all of the expenses for the operations of its subsidiaries. The related expenses are allocated to subsidiaries based upon their estimated use of such goods or services as determined by applicable allocation factors. Further, the agreement provides that the DTCC Parent Company performs credit and quantitative risk services, and certain other services for its subsidiaries, including among other things, administrative, internal audit, finance and legal services. The billing for these services as a percentage of total allocated expenses ranged from 104% to 108% in 2021 and 2020, excluding pass-through charges and the impact of capitalized software. The fee, representing the amount over actual cost, is included in Interest and other income in the Condensed Statements of Income below.

The DTCC Parent Company Condensed Statements of Income follow (in thousands):

	For the years ended December 31,	
	2021	**2020**
REVENUES:		
Equity in earnings of subsidiaries	$ 231,482	$ 183,517
Interest and other income	104,118	97,697
Total revenues	335,600	281,214
OPERATING EXPENSES:		
Professional services	12,707	8,825
Other	25,541	49,180
Total operating expenses	38,248	58,005
Income before taxes	297,352	223,209
Provision for income taxes	5,586	11,672
Net income attributable to DTCC	$ 291,766	$ 211,537

21. PARENT COMPANY CONDENSED FINANCIAL STATEMENTS (CONTINUED)

The DTCC Parent Company Condensed Statements of Cash Flows follow (in thousands):

	For the years ended December 31,	
	2021	2020
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income	$ 291,766	$ 211,537
Adjustments to reconcile net income to net cash provided by/(used in) operating activities:		
Equity in earnings of subsidiaries	(231,482)	(183,517)
Depreciation and amortization	1,837	2,144
Deferred income taxes	26,771	2,583
Other	8,669	19,583
Net change in:		
Due from subsidiaries	(57,536)	(106,268)
Operating lease liability	(12,189)	(19,143)
Other operating assets and liabilities, net	(80,610)	99,238
Net cash (used in)/provided by operating activities	(52,774)	26,157
CASH FLOWS FROM INVESTING ACTIVITIES:		
Distributions from subsidiaries	60,000	91,300
Capitalized software development costs and purchases of Premises and equipment	(53,982)	(27,827)
Net cash provided by investing activities	6,018	63,473
CASH FLOWS FROM FINANCING ACTIVITIES:		
Preferred stock dividend payments	(15,481)	(16,763)
Repayments on long-term debt and other borrowings	(3,921)	(4,101)
Proceeds from issuance of preferred stock, net of issuance costs	490,900	—
Redemption of preferred stock	(400,000)	—
Net cash provided by/(used in) financing activities	71,498	(20,864)
Effect of foreign exchange rate changes on Cash and cash equivalents	(11)	19
Net increase in Cash and cash equivalents	24,731	68,785
Cash and cash equivalents - Beginning of year	507,329	438,544
Cash and cash equivalents - End of year	$ 532,060	$ 507,329
SUPPLEMENTAL DISCLOSURES:		
Interest paid	$ 2,734	$ 2,712
Income taxes paid - net of refunds	$ 27,878	$ —

22. SUBSEQUENT EVENTS

The Company evaluated events and transactions occurring after December 31, 2021 through March 25, 2022, the date these consolidated financial statements were available to be issued, for potential recognition or disclosure. No additional events or transactions, other than as disclosed below and disclosed in Note 17, Shareholders' Equity, occurred during such period that would require recognition or disclosure in these consolidated financial statements.

On January 25, 2022, the Company renewed the annual lines of credit on DTCC for $500 million. This line of credit will mature on January 27, 2025.