SIFMA Insights

The 2022 Operations Conference & Exhibition Debrief

Perspectives & Key Themes from Market Participants

May 2022

Recently, SIFMA hosted our annual Operations Conference & Exhibition. With three days of presentations and events and over 750 participants, we gained insights into top-of-mind topics for market participants. Inside this note, we recap just some of what was seen and heard, including:

- The Industry Outlook – top sector and industry priorities/themes with survey, new normal for office
- Transition to T+1 Settlement – what is different this time, the playbook for implementation, why not T+0; includes snapshots on the impact heatmap and timelines, as well as survey and audience polling results
- The Regulatory View – remote work supervision, digital assets/cryptocurrency, thoughts from market participants on the aggressive regulatory agenda (>50 rule proposals from the SEC alone)
- The ESG Perspective – SEC climate disclosure, survey on ESG investing and underwriting
- More on Market Themes – digital assets/cryptocurrency, blockchain technology potential use cases, operational resiliency risks identified, cybersecurity, U.S. Treasury markets

To see details from topics SIFMA has covered throughout the year, please see SIFMA Insights at (list of Insights reports in the Appendix of this note): www.sifma.org/insights

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SIFMA is the leading trade association for broker-dealers, investment banks and asset managers operating in the U.S. and global capital markets. On behalf of our industry's nearly 1 million employees, we advocate on legislation, regulation and business policy, affecting retail and institutional investors, equity and fixed income markets and related products and services. We serve as an industry coordinating body to promote fair and orderly markets, informed regulatory compliance, and efficient market operations and resiliency. We also provide a forum for industry policy and professional development. SIFMA, with offices in New York and Washington, D.C., is the U.S. regional member of the Global Financial Markets Association (GFMA). For more information, visit http://www.sifma.org.

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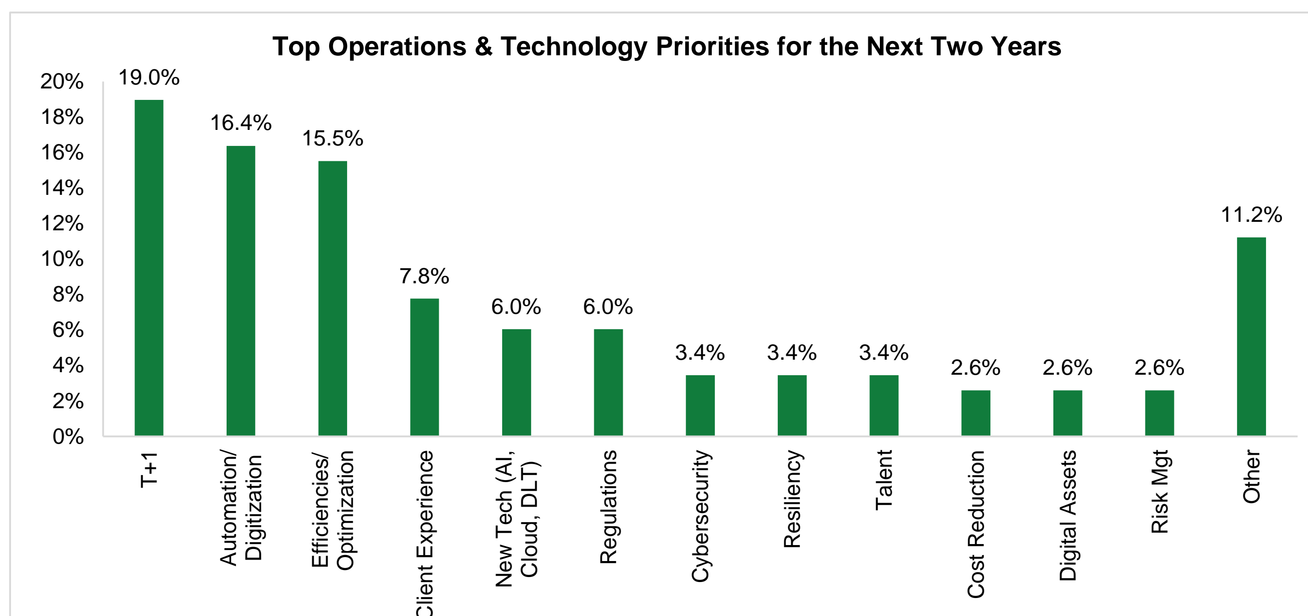
The Industry Outlook

Top Sector Themes

To set the scene of the conference, we surveyed attendees and select SIFMA members on the top member-identified industry priorities for the next two years. As various perspectives arose during the week, it was a reminder of the importance of market participants coming together to discuss best practices as well as pain points that the industry must work together to overcome.

A number of the identified priorities addressed the transition to T+1, automation/digitization, and efficiencies/optimization, as detailed below.

Survey Question: Please list your top three operations & technology priorities for the next two years.



Source: SIFMA Insights pre-conference survey[1]
Note: T+1 refers to the shortening of the settlement cycle; AI = artificial intelligence, DLT = distributed ledger technology; Talent refers to recruiting, retaining, and managing employees; Risk Mgt = risk management

[1] The pre-conference survey was in the field from May 3-13, with over 40 respondents in total

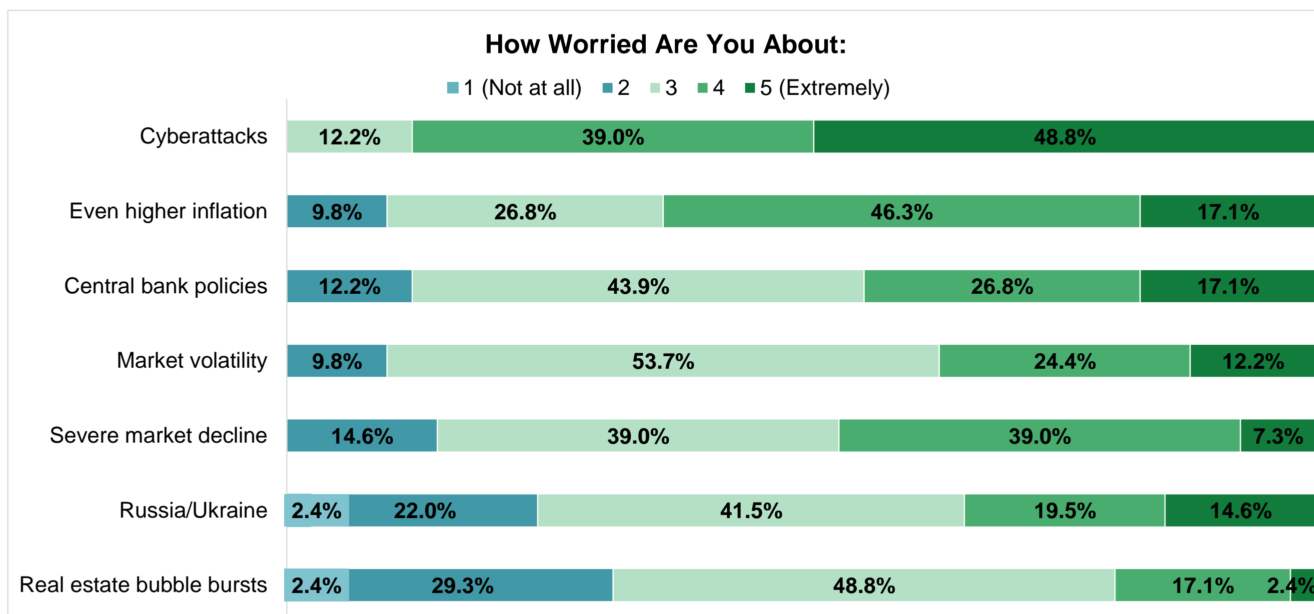
- **T+1** – acceleration of trade settlements; focus on the transition; readiness; supporting the move, updates needed for the move; and general references to T+1
- **Automation/Digitization** – reduce manual tasks/workflows/processes; straight-through processing (STP); Application Programming Interfaces (API); for account opening, alternatives, cashiering, client on boarding/know your customer (KYC), marketing, banking strategies, forms/data transfer, client communications, physical securities
- **Efficiencies/Optimization** – in general for platforms, processes, workflow, controls, and data efficiencies; advisor productivity; architecture alignment to reduce redundancy in tools; build efficient/secure connectivity between asset owners and service providers across multiple operational functions; increased use of data driven solutions; move to hosted solution for back office applications; scale; streamline front to back workflows; transformation, upgrades, replacement; trading platforms
- **Client Experience** – focus on, enhancing; onboarding; expanding offerings, offering more self-service options; improve end investor experience
- **New Tech** (AI, Cloud, DLT) – blockchain/distributed ledger technology (DLT); cloud migration; incorporating artificial intelligence (AI) technology; generally use fintech to create transformational change or find efficiencies in processing
- **Regulations** – in general handling changes, compliance, impacts from reg updates; dealing with Gensler agenda; remote work force supervision
- **Cybersecurity**
- **Resiliency** – infrastructure resiliency and modernization; platform stability
- **Talent** – recruiting, retaining, and managing employees; broadening skillsets of staff to create a more flexible workforce; focus on human capital in post-COVID world
- **Cost Reduction** – cut costs; revenue/cost models in current inflationary and rising rate environment
- **Digital Assets** – asset servicing; crypto
- **Risk Management** – improve risk management, operations risk reduction through technology investment
- **Other** – claims management; create industry working groups at senior levels to help address industry challenges across the operations spectrum; derivatives collateral; develop common operations software for the financial industry; exception minimization; clearing; ISO 20022 migration; LIBOR; OCC Renaissance; private equity and alts; Schwab/TD Ameritrade integration; stock loan reporting; tax withholding due to 1446f

Market Touchpoint: Industry Themes

Our pre-conference survey sought to gauge respondents' concerns around current geopolitical, economic and market events and trends. We highlight the following in respondents perspectives on key concerns:

- Cyberattacks ranked #1, with 48.8% of respondents extremely worried and 39.0% worried
- Even higher inflation #2, with 17.1% of respondents extremely worried and 46.3% worried
- A severe market decline was also a concern, with 39.0% of respondents each ranking it a 4 and 3
- A real estate bubble burst remains one of the least concerning issues, 29.3% of respondents ranking this a 2

Survey Question: How would you rate your level of concern about? (on a scale of 1-5 where 1 = not at all, 5 = extremely worried)



Source: SIFMA Insights pre-conference survey

The New Normal for the Office

Return to Office

The return to office conversation continues. Panelists and senior leaders have laid out a wide spectrum of approaches, ranging from no formally defined requirements to having defined requirements in tiered approaches:

- Fully remote
- Hybrid (2-3 days in the office)
- Fully in the office

All of the approaches appear to work, but many firms and the industry as a whole having not yet landed on the "right" approach. Firms are remaining flexible, and employees have different views on establishing their work schedules. Some employees want to come into the office when they know other people will be there, while others want to spend more time working from home as they do not want to resume commuting for two hours. Firms are hosting corporate events or offering flexible commuting hours (allowing employees to avoid rush hour and then login form home to finish the day) to entice people back into the office.

Panelists also discussed the concept of returning to work with purpose. To drive value from an employee's workday, they need to be synchronous when in the office. This holds true particularly across teams, but across the organization as well (where applicable). While technology enabled employees to get business remotely during COVID, it does not replace a team getting together in a room and mapping out a project on a white board.

In addition to building a resilient workforce, panelists spoke to the need to develop a fair work environment. With hybrid schedules here to stay, firms will have employees with varied work schedules. Those employees working remotely – whether permanently or on a specific day – will miss the water cooler conversations or the tap on the shoulder to work on an important project. Panelists indicated that managers need to ensure all employees feel they are treated fairly and have equal opportunities for development and promotion, regardless of their work schedule.

War for Talent

We have all heard about the Great Resignation, leaving firms fighting to recruit and retain employees. Many in the industry are struggling with talent management – sourcing, acquiring, and retaining. There is a war for talent across all industries, particularly for younger talent, and managers need to shift their thinking. The new generation of professionals do not just automatically expect to be at the same firm for 20+ years, those days are gone. Firms need to find ways to keep talent engaged and motivated if they want to keep them at their firms.

Managers need to raise the skillset and profile of operations careers, as the new generation looks beyond traditional roles. For example, one panelist told the story of his son's college graduation. Not one of his son's friends was heading to a traditional industry, instead opting for careers in startups, sustainability roles, or non-fungible tokens (NFT). The industry cannot afford to lose this new talent, nor lose existing employees.

Panelists noted that we need to look beyond the Great Resignation and turn the lens inward. For a long time, the industry focused on performance metrics and bonus numbers, but the younger generation looks beyond this. They are tech-enabled (almost from birth), well informed, and look beyond compensation when choosing where to work. Panelists indicated that the industry needs to adopt to new ways we work to attract and retain talent.

The Transition to T+1 Settlement

Shortening the settlement cycle can mitigate risk, increase the overall efficiency of securities markets, and allow for better uses of capital. In late summer of 2020, DTCC started analyzing the potential move to T+1 settlement days from T+2. DTCC indicated the move to T+1 from T+2 days in equities could reduce the VaR component of the clearing fund by approximately 40% at NSCC. [2] This would return capital to clearing participants and reduce risk in the system.

While a significant undertaking, this is not the first time the industry has had to work together to transition to a shortened settlement cycle. In 1993, the industry moved to T+3 days from T+5. In 2017, the industry moved to T+2 days from T+3. What is different this time you wonder? The main difference in the move to T+1 from T+2 is that this transition will be require a greater degree of process transformation as time frames are further reduced. Additionally, the SEC appears to be more forward leaning on the transition than when the industry moved from T+3 days to T+2.

The industry has laid out a path to implement the move to T+1 by September 3, 2024.[3] Panelists at our conference indicated that, in reality, this means the build out should largely be finalized by the end of 2023, in order to provide ample time for testing to ensure market stability and resiliency. As such, 2022 has been labeled the year of impact analysis and securing budgets and management buy in. 2023 appears to be the year of building and implementing changes. Finally, 2024 will be the year of testing and then the launch:

[2] DTCC = Depository Trust & Clearing Corporation, a post-trade financial services company providing clearing and settlement services. VaR = Value at risk, quantifies the extent of possible financial losses within a firm, portfolio, or position over a time period. NSCC = National Securities Clearing Corporation, providing clearing, settlement, risk management, central counterparty services for U.S. equities (and more)

[3] The industry has proposed Sept. 3, 2024 as the transition date

What Is Different This Time?

The consensus across the industry is that the transition to T+2 days from T+3 back in 2017 went seamlessly. Looking at the math – once again removing one day in the settlement cycle – may lead some to ask why is the move to T+1 days from T+2 so different. The move to T+2 days from T+3 was viewed as more of a tightening of the belt. However, the move to T+1 days from T+2 is both a market structure and a technology compression event. This transition broadens what and who will be impacted. (Spoiler alert, all market participants will be impacted.) The T+1 transition will fundamentally alter the way the industry does business across many processes and products, not just make basic changes which can be accommodated by an acceleration of work schedules.

As mentioned earlier, the main differences in the move to T+1 days from T+2 can be bucketed as:

- **Behavioral process changes**: Firms will need to look at how their organizational structure is set up. They will need to need to standardize, normalize, and share many of today's manual processes. There will be changes in processes and workflows on a global scale. This will require operations employees to rethink traditional behaviors, for example looking at a piece of the workflow only one time per day. They will need to do an inventory of clients and vendors – are there firms that regularly do not send data in a timely manner? They will need to assess what causes exceptions, in order to eliminate them. They will need to change documentation related to settlement date (replacing T+2 specifically labelled, keeping it more generic for potential future changes). They will need to open up technology support to be closer to 24/7.

- **Buyside involvement**: In terms of communications, retail and institutional investors will be treated differently. While retail investors themselves will need limited preparation, institutional investors need to know now and to begin their own planning. They themselves need to make significant changes in their systems, processes, staffing, documentation, etc. for example, some firms do not currently affirm at all, let alone by 9:00 PM EST on trade date. There are some clients who have not embraced STP[4]. The changes become particularly significant for firms based on the West Coast of the U.S. or internationally, bringing in a time zone component.

- **International participation**: How will the move to T+1 in the U.S. synch up with the rest of the world? When the U.S. moved to T+2 days from T+3, it was joining an earlier move by Europe to T+2. This time, the U.S. would be a first mover, along with Canada which has already indicated it will move in alignment with the U.S. The compression of settlement timeframe will bring time zone complications, as well as FX questions. Firms, particularly those with no U.S. based operations, will need to adjust staffing and processes to match U.S. East Coast timeframes. The industry will also be in dialogue and coordination with other international markets (particularly in the Americas) that have expressed interest in moving in alignment with the US transition.

  Of note, panelists believe that other countries/regions will likely follow, given the size of the U.S. equity markets – the U.S. represents 41.6% or $49 trillion of the $117 trillion global equity market cap and is 3.8x the #2 market, China, and 3.9x the #3 market, the EU. However, moves by other countries/regions are expected to take time, potentially not by 2024.

[4] Straight-through processing is an automated process done purely through electronic transfers with no manual intervention involved

The Playbook for Implementation

Before designing the playbook for the transition to T+1, market participants first developed a heat map for activities and impacts. They assessed areas or topics requiring changes, identifying 24 key areas. These topics incorporate a variety of areas, including: processing timelines, documentation, funding, reference data, instructions, etc. Next, verticals were established in the following categories: process/technology, difficulty/complexity, timing, breadth of impact, dependencies, and costs/benefits. Each topic was then given a rating under each silo/category. Finally, a total impact rating was assigned for each of the 24 topics, ranging from high (orange) to minimal (grey).

This heat map matrix established 144 individual impact ratings (= topic x silo). The first thing one notices when looking at the matrix is that is a lot of orange, or high impact ratings! This visually shows how difficult the operational lift to successfully and safely transition to T+1 will be. Challenging but achievable, according to market participants.

We highlight the following from the matrix (shown on the next page):

- Difficulty/complexity had the most orange ratings (high impact), 15/24, and no grey areas (minimal impact)
- Dependencies was the next highest vertical, with 11/24 oranges (high impact) and 11/24 yellows (moderate impact)
- Costs/benefits had the least oranges (high impact), 7/24, but also no greys (minimal impact)
- The following topics had an aggregate dark orange T+1 rating, identifying them as the areas of highest impact (which does not mean that the other areas are not difficult of impactful)
  - Coordinated processing timeline
  - Institutional trade allocations/affirmation
  - Errors/fails
  - External documentation (ex: 10b-10s)
  - Prime brokerage
  - Securities lending
  - Impacts on derivatives markets
  - Testing and migration (ex: timelines)
  - Time compression on cycles

T+1 Impact Heatmap

Topic	Process / Technology	Difficulty / Complexity	Timing	Breadth of Impact	Dependencies	Costs / Benefits	T+1 Impact Rating
Coordinated processing timeline							
Inst. trade allocations / affirmation							
Errors / fails							
External documentation (e.g., 10b-10s)							
Prime brokerage							
Securities lending							
Impacts on derivatives markets							
Testing and migration (e.g., timelines)							
Time compression on cycles							
Global considerations							
Batch cycle timing							
Migration to trade date matching							
Regulatory rule sets							
Settlement netting							
Funding							
Retail funding acceleration							
ETF creation / redemption							
Corporation actions (dividends)							
Trade systems and reference data							
Liquidity / collateral							
Forex (FX)							
Dematerialization of physicals							
Standard settlement instructions							
Mandated match to settle							

Impact Rating for T+1: Minimal | Low | Moderate | High

3

Looking more closely at the playbook for implementation, market participants have laid out detailed timelines, bucketing tasks across the next three years into:

- **2022, Plan** – the year of impact analysis and securing budgets and management buy in
    - The industry playbook is already in process, with work being driven by SIFMA (led by SIFMA's Operations & Technology Committee), the Investment Company Institute (ICI) and the DTCC, supported by Deloitte
    - Analyze firm's processes, workflows, staffing, etc., including a cost assessment
    - Get buy in from senior management on the project workflow map, employee resources, and budget numbers
    - Meet with business partners to establish prioritization and attain employee resources
    - Set up a project management office to establish a communications infrastructure with senior management and business partners; a two-way street so they can come to the operations team with questions as well
    - Establish ownership and targets
- **2023, Build** – the year of building and implementing changes
    - Set up a project management structure and workflow map, a very detailed business plan – firms cannot report yellows/reds as the year progresses, they need greens across the board
    - Build out system, process, workflow, and staffing changes needed for the transition
    - Build out the test processes
    - Be prepared for things that will go wrong in the system, the unexpected
- **2024, Test/Launch** – the year of testing and then the launch
    - Test time estimated at 6 to 12 months
    - The build will need to be largely done by 2023 in order to test in 2024
    - Launch September 3, 2024

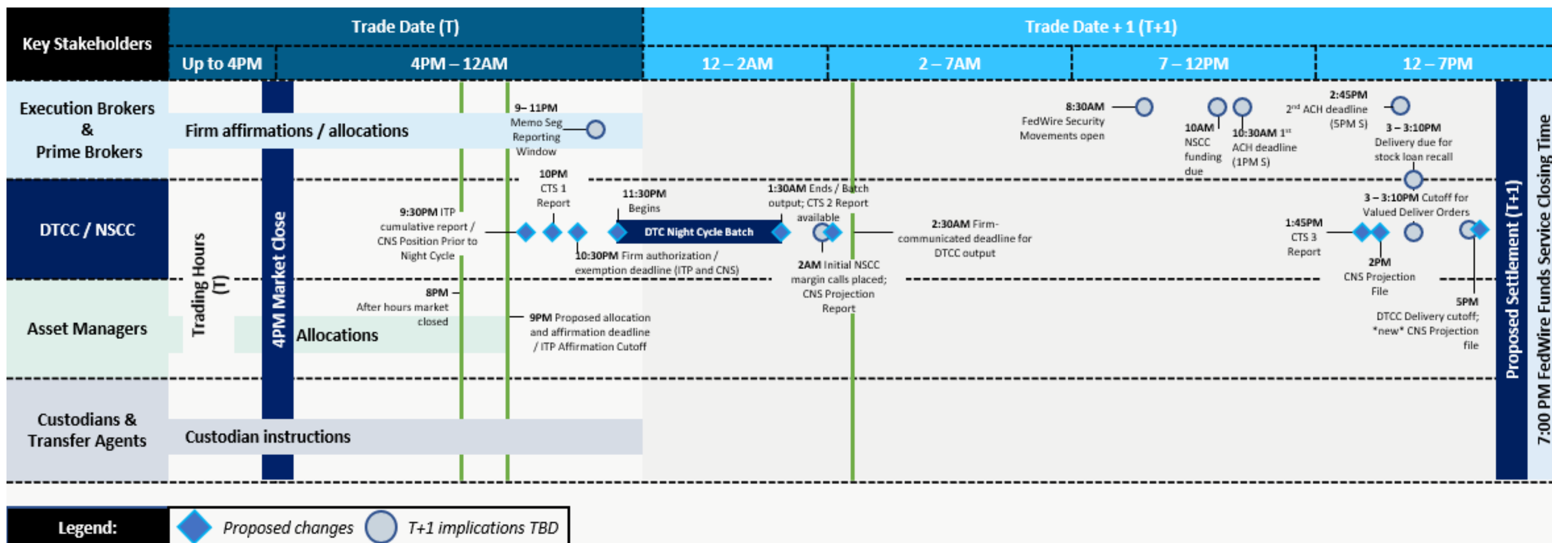
T+1 Transition Timeline

PLAN --->>> BUILD--->>> TEST/LAUNCH

	2022			2023				2024		
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Playbook Development										
Analysis, Book of Work, Budgets										
Design, Development, Build										
Vendor Solution Development & Testing										
Firm Testing and Remediation										
Test Design/Test Cases/Test Environment										
Test Execution										
Industry Testing Window										
Go Live									Go Live*	

** Current Proposed Date*

T+1 Industry Processing Timeline



Why Not T+0?

While focused on the transition to T+1 days, the SEC proposal on shortening the settlement cycle also frequently referenced T+0 or same say settlement, following earlier statements from the Commission and its leadership on the potential for settlement on trade date. In light of this, market participants have analyzed and discussed the potential for a move to T+0. The answer from the industry is that this is not the right time, given the substantial increase in complexity and disruption of products and process were settlement timeframes to move shorter than T+1. While the industry wants to do what is best for markets and their clients, the minimum goal is, and should always be, do no harm.

The questions around T+0 are what problem are we trying to solve, and would we be adding more risk to the system in the process? If the objective is to decrease credit risk, significant changes would need to be made to reach T+0 on an aggregate level (with the acknowledgement that some trades are already settled T+0). Additionally, T+0 settlement could bring increased risks (ex: an increase in fails[5]).

Panelists indicated the move to T+0 at this time would increase operational risk, pointing out (not an inclusive list):

- It would take significant changes to remove all of the manual work currently which is not consistent with T+0, which could force efficiencies to go in the wrong direction
- It is currently hard to get real time data, and therefore real time reconciliation (many firms still use batch processing), given lack of standardization or golden records in reference data
- The move would create major disruptions in the operating model of securities lending, which are crucial to the markets

Market participants believe it would be more prudent at this time to go to T+1 – which is a much heavier lift impacting all market participants compared with the move to T+2 – and learn from this transition. Some panelists noted a comparison to online shopping models such as Amazon. While Amazon can deliver goods same day, it also has a 30% return rate. That does not work for markets. The benefits must outweigh the costs, which includes things like fails and market integrity, not just the speed of settlement.

Interestingly, as DTCC moves through their modernization efforts on their technology and platforms, it is keeping itself open for the option of T+0 in the future. They are building out their underlying technology for future changes, making the technology settlement time agnostic. As they design, develop, and test new technologies and platforms, they are also spending the time to analyze what T+0 could mean and build out accordingly.

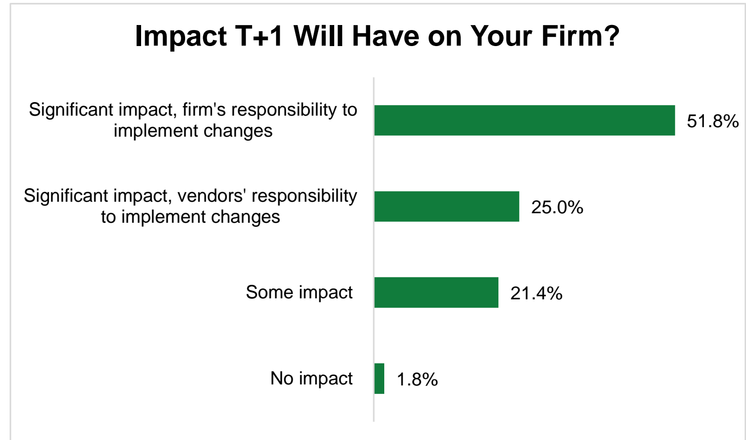
[5] Failed trades occur when the seller/buyer does not meet their obligations on/before settlement date, occurring because: standing settlement instructions are inaccurate/incomplete; securities have been sold but the party does not have them for delivery/want to deliver them; or the trade is not known (DK'd) or matched by the counterparty.

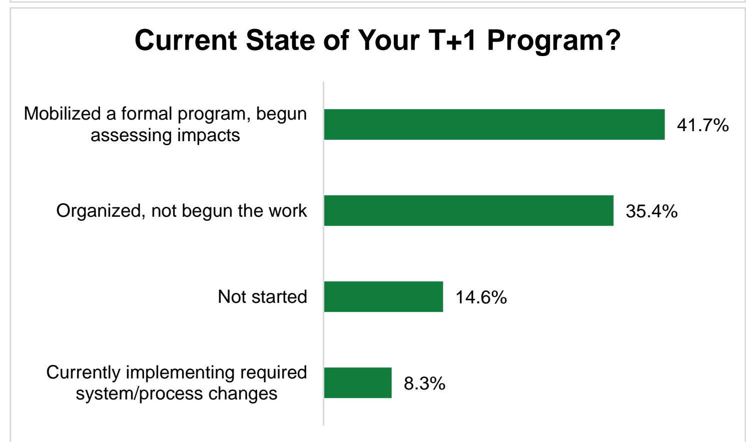
Audience Polling Results

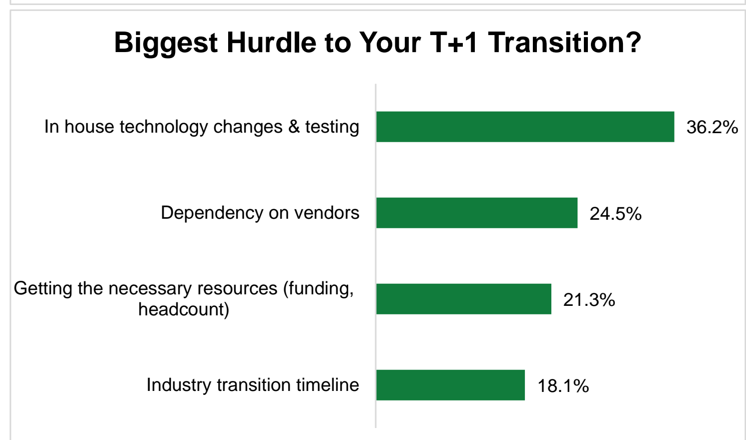
We polled the audience during the main room session on the T+1 transition, gathering thoughts on the impact from the move to T+1, the current state of firm's programs, and audience views on the biggest hurdles to reaching T+1.

We highlight the following results:

- **Impact**
  - 76.8% responded the transition to T+1 would have a significant impact on their firm
  - 51.8% of those responding significant impact indicated it would be the firm's responsibility to implement changes (i.e. not only their vendors' responsibility)
- **Current State**
  - 41.7% of respondents have mobilized a formal program and begun assessing potential impacts
  - Only 14.6% of respondents indicated they have not started working on their T+1 program
- **Biggest Hurdle**
  - 36.2% responded in-house technology changes and testing
  - Followed by 24.5% noting the dependency on vendors





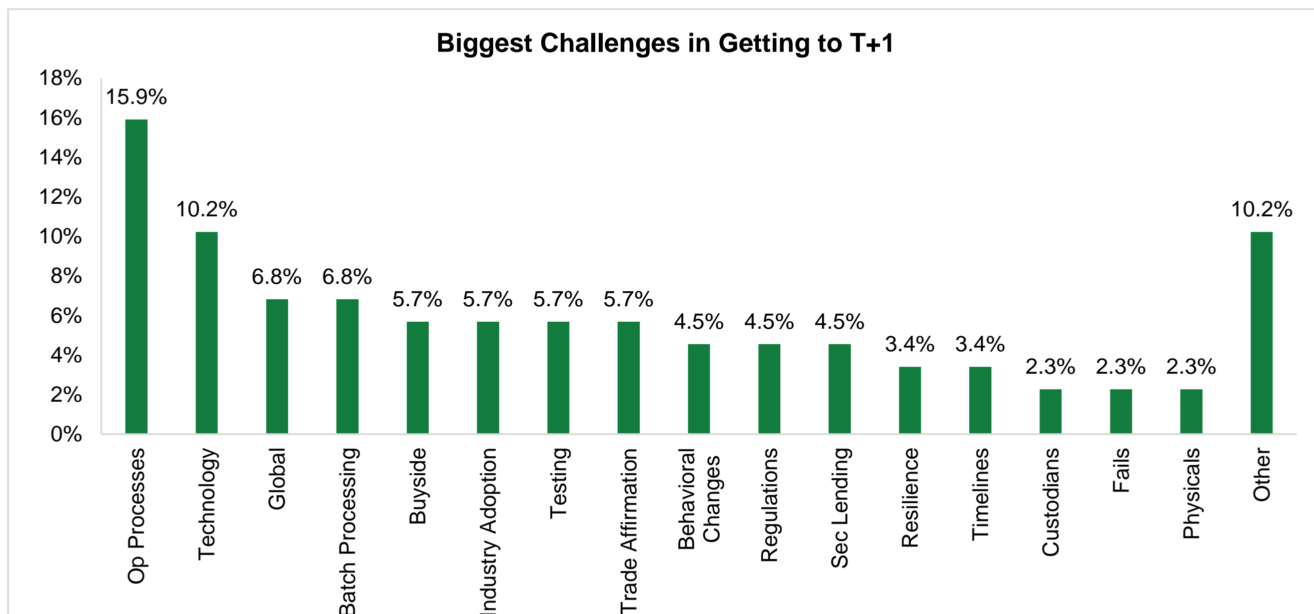


Source: Audience polling
Note: Respondents: 29.9% buyside, 26.0% sellside, 26.0% vendor, 18.2% custodian. # respondents: impact 56, state 48, hurdle 94

Pre-Conference Survey Results

Our pre-conference survey asked respondents to identify challenges around the transition to T+1. Operational processes in general and technology topped the list, as detailed below.

Survey Question: What do you view as the biggest challenge in getting to T+1?



Source: SIFMA Insights pre-conference survey
Note: Op processes = operational processes; sec lending = securities lending

- **Operational Processes** – # of integrations required; achieving increased straight-through processing; change management; client documentation; general impact to operations teams with shortened window (cash management, asset servicing); payments (Automated Clearing House/ACH, wire); postal delivery of client confirmations/prospectuses; process management; resolving manual friction on key processes; resourcing development; staffing (two shifts); T0 trade matching; overall impact of the T+1 changes; trade error/reporting management
- **Technology** – impact on technology requirements; making the required system changes among existing system priorities; system upgrades; capabilities, issues; integration with counterparties; transformation of the processes including enabling technology
- **Global** – difference in settlement between U.S. and Global markets; foreign counterparties; FX; global market interaction; impact to non-U.S. investors investing in the U.S. market; offshore investor community

- **Batch Processing** – being more stringent on batch cycle timings; firms that still use batch processing; legacy batch systems; nightly batch cycles and new deadlines
- **Buyside** – automation; awareness and participation; client adoption; keeping customer service levels high while executing faster
- **Industry Adoption** – acceptance; coordinating all stakeholders; industry-wide adoption; readiness of vendors; communication
- **Testing** – user acceptance testing (UAT); testing time period and resources
- **Trade Affirmation** – agent bank affirmation/confirmation; timely/accurate affirmation of institutional trade activity
- **Behavioral Changes** – education; hearts and minds; industry behavior to adopt to changes in a timely manner
- **Regulations** – new; adapting downstream and regulatory reporting; date ruling; industry mandates (match to settle)
- **Securities Lending** – unknowns/impact associated with this activity; short selling closeouts; stock loan
- **Resilience**
- **Timelines** – compressed time for institutions to settle trades, they are slow today; compression of timelines; matching timelines for institutions
- **Custodians** – custodial capabilities past the top global custodians
- **Fails** – maintaining (ideally decreasing) current fail thresholds; managing the significant growth in dividend and interest claims from fails
- **Physicals** – physical securities
- **Other** – capital needs to cover dk'd (don't know) items; costs; counterparty risk; due bills; errors; EUCTs; happening too quickly; identifying key metrics to identify success or challenges; money manager trade allocations

The Regulatory View

Remote Work Supervision

FINRA noted that prior to COVID, they had already moved to a more electronic environment. For example, all required exam records are now submitted to their secure portal rather than being passed along on paper. This put them in a good position for the new (and go forward) hybrid work environment for exams, rather than starting from scratch. The question now remains what aspects of supervision will still need to be done in person? A risk assessment concept comes into play here, judging whether or not visiting every office in person is still necessary. FINRA indicated that they expect to see an update soon – extending aspects into 2023 and beyond – but noted it is too early to comment on any details.

Digital Assets/Cryptocurrency

Panelists noted that the SEC is doubling its crypto staff for enforcement. The concern by regulators is that retail investors do not understand crypto. They worry that retail investors may not fully grasp what they are investing in, the risks of the investment, or the role of crypto in their overall investment portfolios. Market participants are in agreement around the need for greater investor education – what the assets are and how they trade.

A FINRA representative noted that regulators tend to see the worst of everything, making enforcement top of mind. However, FINRA is focused on how to ensure safe custody of digital assets, ensuring the asset stays under the investors' control. Some of the questions they are pondering include:

- Can someone steal the asset?
- Can someone steal the password?
- What if the investor loses the password?
- What if the network holding the asset has the ability to reverse a transaction? (There is no transfer agent to replace an asset as with traditional securities.)
- In general, how to custody a digital security?

The question of custody was also discussed in connection with the late 2019 SEC framework for a special purpose broker-dealer – a standalone entity to custody digital assets, ringfencing liability from the traditional broker-dealer – was discussed. While people in the industry have been assessing this concept, panelists indicated they have not seen industry adoption of the model, due to a number of challenges as discussed below in the digital assets section of this note.

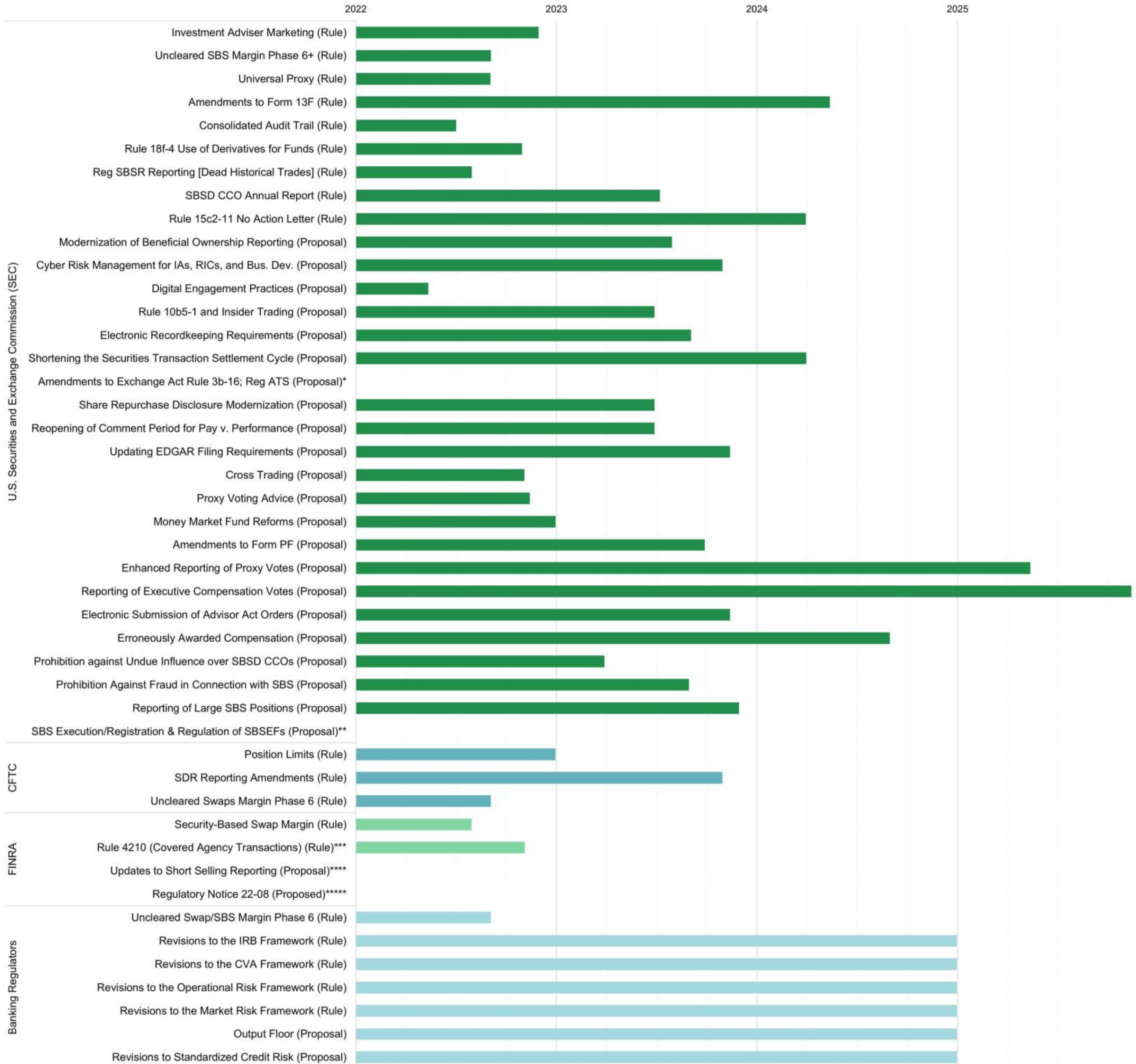
Thoughts from Market Participants

The SEC has a very aggressive agenda. Since 2021, the SEC has released a list of potential proposals for 54 new rules. Since December 2021, it has issued 24 proposals (please see the chart on the next page). Market participants further expect additional proposals for Treasury markets on the fixed income side and potentially a review of Reg NMS in equities. Moreover, the SEC is re-opening prior proposals put out for comment, on top of the new proposals that need to be reviewed. In addition to the volume of proposals, market participants are being provided shorter comment periods, around 30 to 45 days instead of the more typical 60 days. Further, the industry still needs to finish implementing several new regulations already in progress.

These proposals run the gamut of impacted areas in capital markets – ATS, dealers, private client, money markets, climate disclosure, cybersecurity, etc. – marking unprecedented changes to the complex capital markets landscape. To give one a sense of the scope of the proposals, just 12 of them consist of an aggregated 3,500 pages of text and 2,200 questions to be answered. The concern from the industry is that the Commission is moving too fast for people to have time to do any analysis and then comment on the proposals. In fact, the Commission has openly acknowledged that people do not have sufficient time to fully digest the proposals.

On top of the SEC proposals, market participants are still working through 4 proposed rules and implementing 10 new regulations from the CFTC, FINRA, and banking regulators. And, on top of this laundry list for U.S. regulators, firms must analyze and implement new proposals and regulations across the globe.

The regulatory agenda is expansive, much larger than ever faced before. Operations teams are already taxed running day-to-day operations, meetings client needs, and addresses technological changes (not to mention undertaking their impact assessments for the T+1 transition, as discussed in the earlier section). The substantial size of this work – first to analyze and then to implement – places extra strain on staff and systems, which could increase risks to firm operations and markets as a whole. It will take industry collaboration to navigate this landscape and secure results that best serve firms' clients and keep markets functioning efficiently. A more manageable pace of regulation and balanced timelines for regulatory implementation would reduce the operational risks that could arise from an overly concentrated scope of regulatory changes.



Source: SIFMA https://www.sifma.org/explore-issues/sec-rulemaking-agenda/

The ESG Perspective

SEC Climate Risk Disclosure

In March, the SEC released – and held a meeting to discuss – its climate risk disclosure proposal. This rule would require detailed disclosure of climate issues and climate-related risks for public companies in their financial statements. It also requires disclosing whether the board includes a climate expert. As currently proposed, it is slated to go in effect for large companies for fiscal year 2023, meaning reporting would begin in 2024 (smaller companies have until 2025 to comply).

Acknowledging that firms are under pressure from investors and other stakeholders to report ESG metrics, the SEC's goal was to standardize and simplify sustainability reporting for U.S. companies. The U.S. is not the first jurisdiction to attempt to enhance ESG disclosures. Globally, there are multiple standards, recommendations, and regulations in this space. This has created a lack of standardization within sustainability reporting, given the multiple competing frameworks and methodologies, a few of which include:

- **Corporate Reporting Dialogue** (CRD) – A joint project led by the former Carbon Disclosure Project (CDP), the Climate Disclosure Standards Board (CDSB), the Global Reporting Initiative (GRI), the International Integrated Reporting Council (IIRC) and the Sustainability Accounting Standards Board (SASB) with the goal to better align corporate sustainability reporting frameworks to make it easier for companies to prepare effective and coherent disclosures.

- **Task Force on Climate-related Financial Disclosures** (TCFD) – Created in 2017 by the Financial Stability Board to improve and increase reporting of climate-related financial information, it attempts to operationalize for companies the Paris Agreements' target of staying well under 2°C, with the ambition of staying under 1.5°C. It requires disclosures in four areas (supported by 11 recommended disclosures): governance; strategy; risk management; and metrics and targets. The TCFD has ~3,400 supporters across 95 jurisdictions, with over 400 based in the U.S.

- **EU's Sustainable Finance Disclosure Regulation** (SFDR) – Published in 2019 and coming into force in 2021, it is designed to standardize sustainability disclosures for investment funds. It is applicable to all financial advisors and financial institutions constructing financial products or providing investment advice in the European Economic Area. The SFDR's Principal Adverse Impacts (PAIs) – the negative effects from an investment on sustainability factors – consist of 18 indicators for which disclosure is mandatory and 46 voluntary disclosure indicators.

- **EU Taxonomy Regulation** – Published in 2020, it established a framework that states conditions for an economic activity to be considered environmentally sustainable: (a) contribute substantially to at least one of the six environmental objectives; (b) do no significant harm to any of the other environmental objectives; and (c) comply with minimum social and governance safeguards.

- **EU Corporate Sustainability Reporting Directive** (CSRD) – In 2021, the EU adopted the CSRD proposal to amend existing reporting requirements, including: now applicable to all large companies and all companies listed on regulated markets (except listed micro-enterprises); undergo an audit of reported information; requiring more detailed reporting requirements and report according to mandatory EU sustainability reporting standards; and digitally tag the reported information to be machine readable into the European single access point.

For the U.S. firms already following some of the global standards, they will have a leg up under the new SEC reporting requirements. However, the SEC proposal veers from these global standards. For example, the TCFD differs from the current SEC proposal in that the TCFD:

- Recommends disclosures as part of the mainstream financial filings for firms choosing to adhere, versus required disclosures for the SEC proposal, in a standardized format for all sectors and companies

- Established climate change as a board level issue, versus required changes to board composition (adding a climate expert) for the SEC proposal

In addition to adding to the confusion of multiple standards across the globe, market participants have identified several other hurdles to meeting the proposed SEC requirements, including:

- **Definitions** –
    - Climate related – The concept of climate related is loosely defined. There are examples of weather events (ex: hurricanes), or a physical risk[6], but there are not examples of transitional risks (ex: electronic vehicles, energy efficient lightbulbs)

    - Materiality – The concept of materiality is loosely defined; what is financially material to one company or industry may not be to another

- **Reg S-X** – While there are several disclosure presentation and attestation requirements, market participants find the Reg S-X[7] component – provide the mandated climate-related financial statement metrics and related disclosure in a note to its consolidated financial statements – particularly challenging. The proposal adds a bright-line threshold standard for disclosing climate impacts (determined on a net basis) of a 1% impact on financial metrics. Companies would be required to determine climate impacts on each consolidated financial statement line item, disclosing aggregating results on a line-by-line basis for all negative and positive impacts separately. This 1% threshold as a standard for all companies and industries is not typical, and the EU does not have an equivalent rule.

[6] Systemic climate risks to the financial system are broken out into physical risks from inaction on climate change (more frequent or severe weather events; flooding, droughts, and storms) and transitional risks associated with climate action as the world shifts towards a low-carbon economy (policy risks/increased regulations, legal risks/lawsuits, or technology risks/low-carbon innovations disrupting traditional industries and business models).
7 Reg S-X lays out the specific form and content of financial statements of public companies

- **Timing** – Although we do not know when the SEC will promulgate a final disclosure rule, it is possible that such a rule would be published in November or December, leaving firms very limited time to prepare to begin tracking potential disclosure items for fiscal 2023 starting in January.

- **Information overload** – Because of the quantity of information required to be disclosed under the proposal, there is a risk of providing too much information to investors which may not be relevant or material to a particular issuer or industry, thus distracting investors from other potentially important information. Additionally, it could deter companies from going or staying public given the costs of this level of disclosure and reporting.

A stated goal of the SEC is to increase transparency and consistency of sustainability reporting. However, in addition to the ambiguity in definitions above, ESG reporting in general suffers from data issues. Disclosure and data related challenges include:

- Availability of, scarcity
- Lack of consistency, no standardization
- Incomplete data sets, limited historical time series
- Lack of audited data

These data challenges make it hard for investors – and company investor relations departments are frustrated by data challenges as well – to understand the financial impacts and therefore determine what is important in their investment decision. Further, climate risk is not the top risk for all industries or companies, and therefore less relevant to investment decision making.

Additionally, the SEC proposal would require reporting of scope 3 emissions. A reminder on emissions levels:

- Scope 1 = direct emissions from operations owned/controlled by a company
- Scope 2 = indirect emissions from the generation of purchased or acquired electricity, steam, heating, or cooling consumed by the company
- Scope 3 = indirect emissions that occur in the value chain of the company, both upstream (suppliers, inputs) and downstream (purchasers, consumers, users)

Disclosure of Scope 3 emissions often presents challenges to companies. Gauging how end users treat and use their products is difficult to assess. Additionally, companies with operations in different countries, particularly emerging markets, may find it difficult to gather input for their disclosures. As such, as of 2020, MSCI estimates that only 18% of the top 2,000 companies in the world provide scope 3 data. Attempting to gather this data in such a short time frame to meet the fiscal 2023 timeframe would be a gargantuan task.

Finally, market participants are pushing back on the requirement for a so-called climate expert on boards. To begin with, the definition of a climate expert is another loose term. Further, analysts and investors assess board structures for technical expertise, industry experience, tangential industry experience, regional operating experience, value chain expertise, etc. This requirement could force companies to change the composition of boards, either by: (a)

adding an additional board member, rendering an even number of directors which is not suitable to the voting process (odd numbers of directors are preferred in order to avoid ties), or (b) forcing a removal of one member for this climate expert. Market participants view this dictation as to how a company is allowed to structure its board as out of the scope of regulators' objectives and mandates.

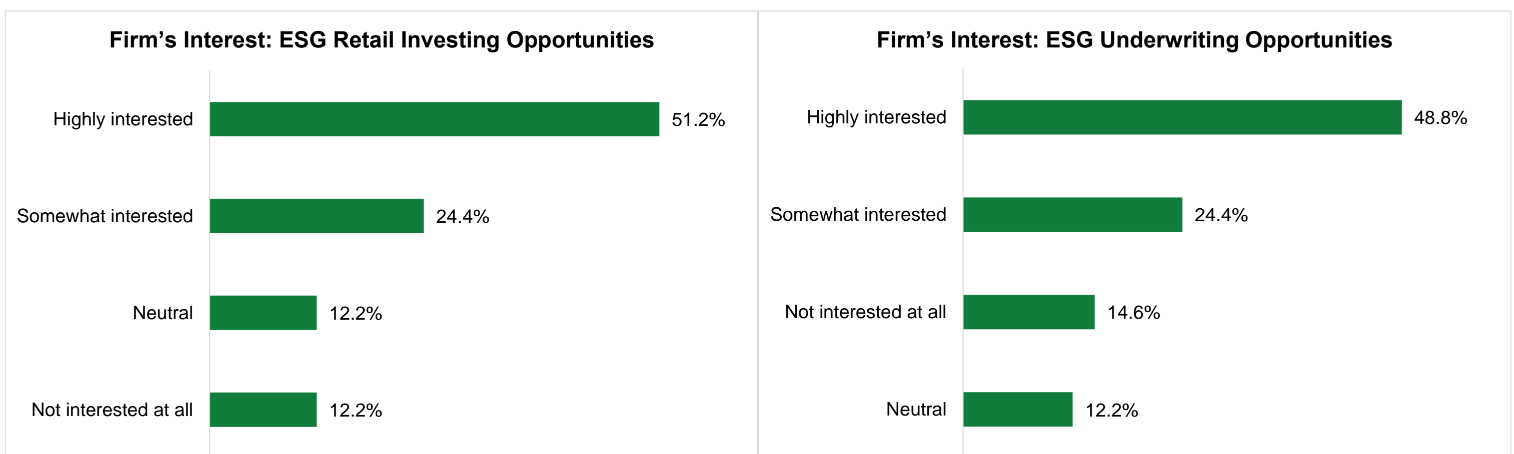
Market Touchpoint: ESG

We used our pre-conference survey to gauge a hot topic for capital markets. We asked survey respondents to indicate their firm's interest for ESG and sustainability services and product offerings, highlighting the following:

- 51.2% of respondents replied their firm is highly interested in ESG retail investment opportunities
  - This was followed by 24.4% responding their firm is somewhat interested
  - 12.2% responded neutral interest, 12.2% not interested at all

- 48.8% of respondents replied their firm is highly interested in ESG underwriting opportunities
  - This was followed by 24.4% responding their firm is somewhat interested
  - 12.2% responded neutral interest, 14.6% not interested at all

Survey Questions: How do you rate your firm's interest in providing ESG/sustainable investing opportunities and products to retail customers? How do you rate your firm's interest in providing ESG/sustainable underwriting opportunities?



Source: SIFMA Insights pre-conference survey

More on Market Themes

Digital Assets/Crypto Currencies

Security/Custody

The security of digital assets is of utmost importance to market participants. This is where the convergence of technology and financial services comes into play. Historically, exchanges in this space focused on services designed around the needs of retail investors, which created challenges for institutional investors, as they have different trading requirements and often different time horizons. Now crypto exchanges are providing a single platform for institutional investors that provide operational controls from trading to custody. For example, Coinbase indicated they began their journey using custody as a differentiator, and custody remains the single most important factor for institutional investors.

Traditional securities have transfer agents (trust banks, etc.) which maintain the financial records of the asset for investors. They record transactions, manage security certificates, process investor notifications/mailings, and undergo other processing duties. Importantly, transfer agents would be responsible for reissuing lost or stolen certificates for securities. Panelists explored how the risk management and transfer function offered by transfer agents and custody services could operate in the digital assets world, and how enabling these features would help allow for digital asset services with the same degree of security as seen in traditional securities markets. Key roles involve delivering safety and managing risks, including the transfer of risk from the customer to the service provider. As a real-world example, panelists discussed abandoned assets – firms would need to transfer digital assets to the party that claims them in cases of a divorce or seizure by the state from bad actors. The alleviation of custody concerns will continue to support broader adoption of digital assets.

On the broker-dealer side, this issue of custody drives key concerns about protecting their clients' assets and data, and in particular adhering to the SEC's Customer Protection Rule, which is in place to protect customer assets (and more) by ensuring broker-dealers keep customer assets segregated from their own, properly labeling and tracking them. To satisfy this rule, broker-dealers typically use DTCC, a clearing firm, or a transfer agent as the custodian for traditional securities. In addition to preventing comingling of client assets, this process eliminates the risk of losing the security and enables the reversal/cancellation of mistaken or unauthorized transactions.

Acknowledging the growth of digital assets and the need for infrastructure to support these assets, the SEC proposed the concept of a special purpose broker-dealer. This would be a standalone entity to custody natively digital registered securities such as security tokens or other types of digital asset securities, ringfencing liability from the traditional broker-dealer. If the entity were to suffer losses as a result of digital assets being lost or mistakenly transferred to a third party, it would only impact holders of these assets, not the holders of traditional securities who would be insulated from the losses by virtue of their assets being held outside the special purpose entity. While interesting, the concept presents a range of challenges –the operational challenges and costs of setting up a new broker dealer make it prohibitively difficult for firms who wish to carry out pilots with only a few digital assets, and it would introduce a range of disruptions to client experiences and the introducing-clearing firm relationship. As a result of these issues, panelists suggested they had not seen adoption of this structure in the industry.

Panelists indicated that they are experiencing less hacks than in the past, given: awareness of activity; greater flexibility on how firms manage the assets; and the technology is significantly better. Loopholes do remain (ex: spoofing emails leading to hacks), but this was attributed to "sloppy" security, which a panelist compared to leaving

the bank vault door open. Current hacking attempts are now more focused on code vulnerabilities, and firms monitor for these and other risks.

Uptake across Groups

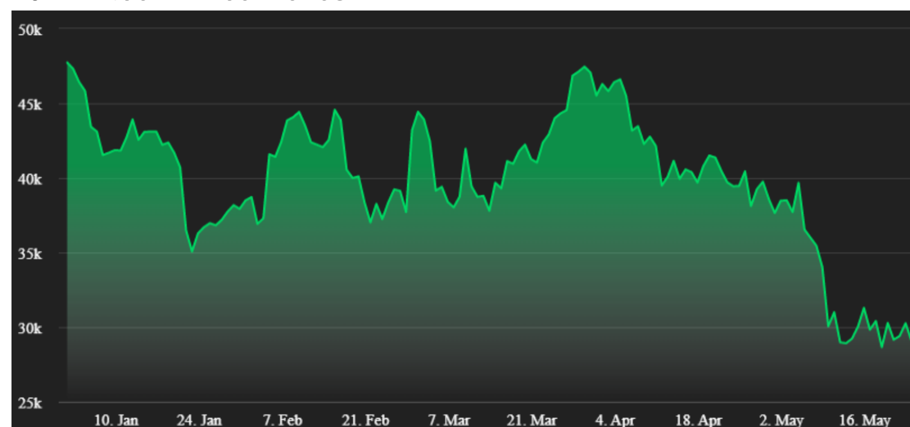
- **Corporations**: While we have seen a few examples of corporations bringing digital assets onto their balance sheets, in general, corporate treasurers have been worried about the safety of digital assets and therefore limited uptake. As of January 2022, 27 U.S. public companies held 217,000 bitcoins ($7.6 billion then; $6.4 billion now, -16%) in their treasuries. Uptake remains limited, with 5% of finance executives indicating they planned to hold bitcoin as a corporate asset.[8] While the technology continues to improve – for example, Paxos secures assets with audits – security remains key. When choosing a platform to service digital assets, firms look at policies and where potential breaches could occur. Security is of such high importance as digital assets are bearer instruments, making the consequences of a breach more negative than with traditional assets. Additionally, panelists noted that clients in this area are looking for more mainstream versus customized solutions.

- **Retail investors**: When looking at trading of crypto currencies, retail originally led the market, trading single transactions (buy or sell) on exchanges offering 24/7 trading. The 2017 bull run in crypto was led mainly by retail investors. At this time, it was viewed as more of a quick trade to book profits and exit. Retail interest picked up again during the COVID era. For 2021, Coinbase indicated retail investors traded $535 billion on their exchange. eToro noted it had 200 thousand new users in the first week of 2021 alone, stating it had a 61%/49% Y/Y increases in unique holders for Bitcoin/Ether.

  The growth of this market also has a generational aspect. Panelists indicated that the younger generations will look to add crypto to their portfolios as we move through the $70 trillion wealth transfer, with ~30% preferring crypto over traditional assets. Others indicated crypto ETFs could help grow retail investment in this area. We will see what the price volatility of late does to retail interest in crypto investing. The price of Bitcoin is down 38% from the start of the year, falling from $47,739.42 to $29,630.97.

[8] Source: tradingplatforms.com; Gartner 2021 survey

2022 Bitcoin Price Moves



Source: CoinDesk

As discussed in the regulatory section, the concerns here are around investor education. Do they understand: the products they are trading? the full risks of these products? The role of these products in their investment portfolio?

- **Institutional investors**: Institutional interest in cryptocurrencies has been a slow burn. During 2018, institutional investors were more interested in investing in companies like Coinbase rather than digital assets themselves. Then the pieces began to fall in line. Now, they are seeing the interest from corporate clients. Additionally, macro hedge funds have begun to show interest in trading cryptocurrency as an asset class. Interest from traditional long only asset managers has also emerged, and these firms began building out the operational and research infrastructure to treat cryptocurrencies as an asset class.

  Comparing to the retail number for Coinbase noted above, institutional trading was $1.1 trillion, >2x retail volumes. An October 2021 State Street survey showed that >80% of institutional investors were now allowed to have exposure to cryptocurrencies, with large funds (assets $500+ billion) more bullish. The survey found that only sovereign wealth funds were not in the market, although this was predicted to change within two years. The growth of institutional investors had been changing the trading landscape of crypto currencies, growing closer to mirroring traditional assets. However, as the price movements of late have shown, this remains a volatile space. Custody remains a key concern for this group as well. Panelists also pointed to the ongoing debate through the Basel process and among U.S. prudential regulators on the capital treatment of crypto-assets as another foundational issue which will need to be resolved for greater institutional participation in these markets. They also noted the challenges created by the recently issued SEC Staff Accounting Bulletin 121, and the challenges it creates for firms who custody digital assets.

In general, the greater clarity market participants have on the regulatory environment around digital assets, the further corporate and institutional investor interest and participation will continue to grow.

Regulatory Environment

The regulatory environment for digital assets continues to evolve, and some positive moves have been made. President Biden signed an Executive Order calling for a coordinated and comprehensive government approach to digital asset policy. The SEC hired an additional 20 people to its crypto staff (and an estimated 8% increase in its budget). FASB has taken up the accounting treatment of digital assets. The U.S. Department of the Treasury announced that the Financial Literacy and Education Commission would form a new subgroup on digital asset financial education.

However, we are still seeing uncertainty over the definition of digital assets and when they can be considered securities as opposed to commodities and the resulting regulatory authority they fall under. More broadly, depending on the type of entity which is engaged in digital asset business, other regulators and supervisors can come into scope as well, with the result that a broad range of agencies are shaping the regulatory framework that governs firms' engagement with these assets. This opens up the space to a host of regulatory bodies, including:

- The CFTC regulates futures and swaps markets and other categories of commodity transactions, therefore crypto futures
- The SEC regulates U.S. capital markets and enforces federal securities laws, therefore publicly registered crypto exchanges and companies
- The Financial Crimes Enforcement Network (FinCEN) oversees money service businesses and enforces anti money laundering laws
- The Office of the Comptroller of the Currency (OCC) regulates national and foreign banks operating in the U.S.
- The Federal Reserve System (the Fed) regulates the payments industry (and more)
- State regulators bring their own approaches
- And of course, there are global regulations to follow

The current landscape leads to more questions than answers on the regulatory requirements for firms as they handle digital assets and is often a deterrent to increased participation in this space, particularly among institutional investors. Panelists were encouraged by the active engagement of some regulators, who are speaking with both large and small companies in the space to educate themselves and ask how they can assist. While excited to start seeing some progress on clarity of regulations, market participants are not sure if this will translate to a harmonized regulatory framework.

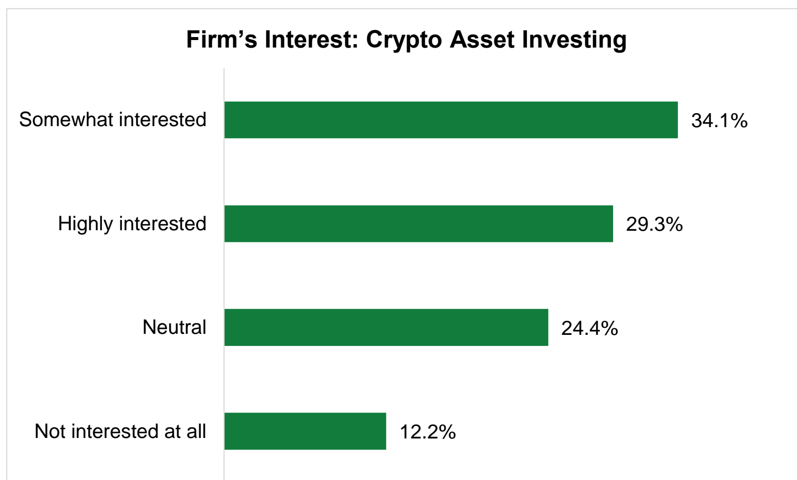
Regulatory uncertainty remains. Panelists indicated that the industry wants regulations, as they want to do things the right way. There are already some good frameworks in place, which they would like regulators to assess. To enable further growth in digital assets, they need a better understanding of the regulatory environment and clear lines to move forward

Market Touchpoint: Crypto

We used our pre-conference survey to gauge a hot topic for capital markets. We asked survey respondents to indicate their firm's interest for crypto asset investing. We highlight the following:

- 34.1% of respondents were somewhat interested
- 29.3% of respondents were highly interested
- Only 12.2% were not interested at all

Survey Question: How do you rate your firm's interest in crypto asset investing?



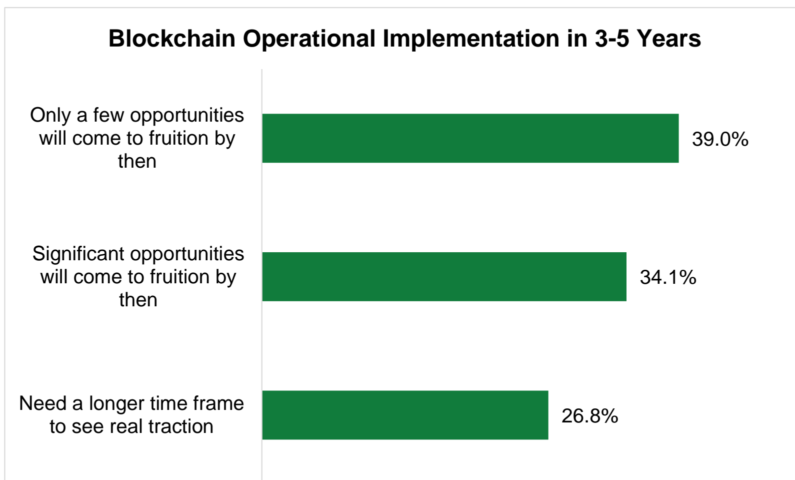
Source: SIFMA Insights pre-conference survey

Market Touchpoint: Blockchain Technology

We used our pre-conference survey to gauge an important topic in the operations and technology sector. We asked survey respondents to indicate their expectations for blockchain technology in the next three to five years, as well as identify potential use cases. We highlight the following:

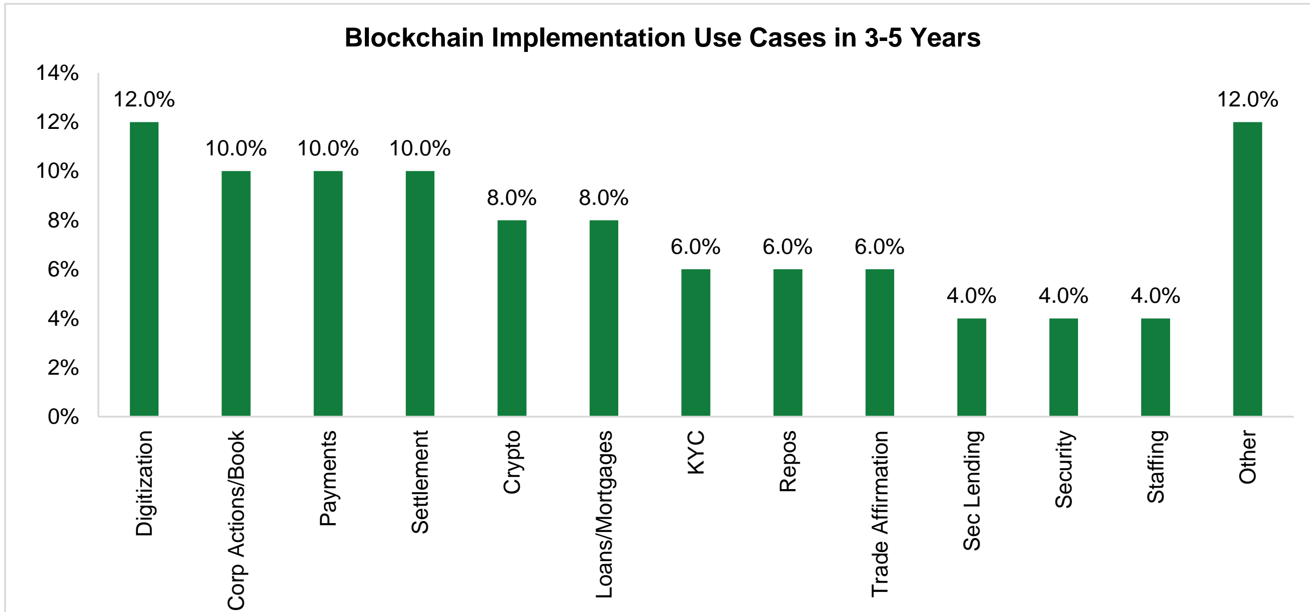
- Respondents were just about split on the level of opportunities coming to fruition by then, with only a few opportunities edging out significant opportunities by 4.9 pps
- Looking at use cases (please see chart on the next page)
  - 12% of respondents indicated for digitization
  - 10% each for corporate actions/bookkeeping, payments, and settlement

Survey Question: How real will blockchain technology be in the next 3-5 years in terms of gaining operational implementation?



Source: SIFMA Insights pre-conference survey

Survey Question: What are some of the likely use cases for implementation?



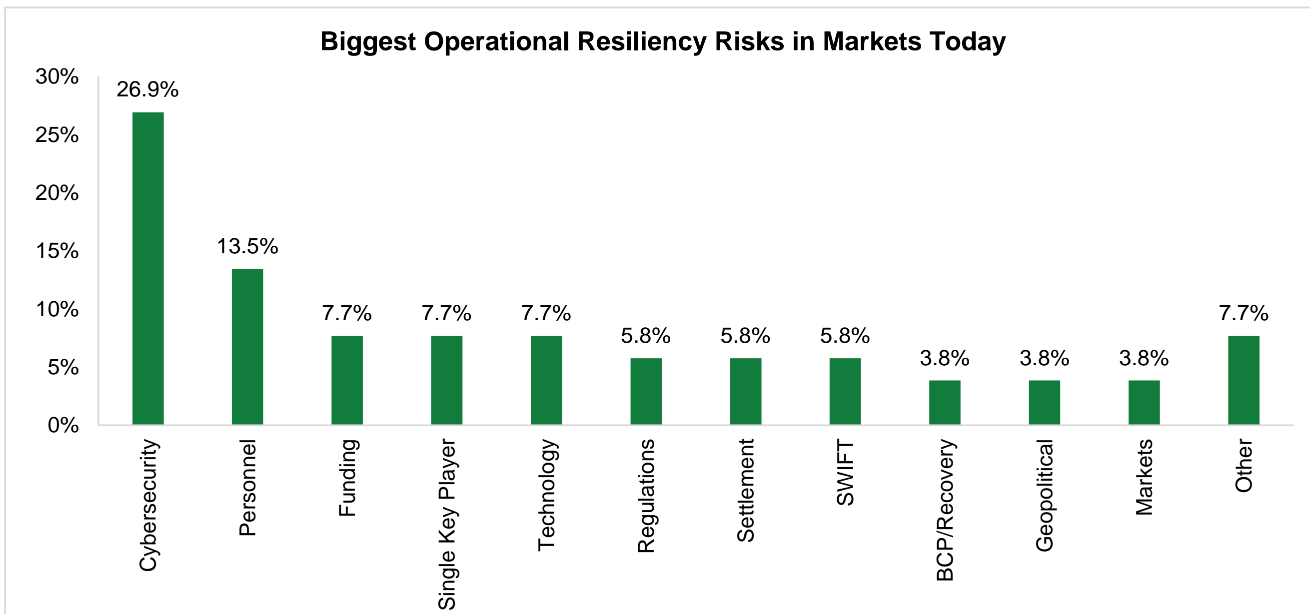
Source: SIFMA Insights pre-conference survey
Note: Corp actions/book = corporate actions and bookkeeping functions; KYC = know your customer; repos = repurchase agreements; sec lending = securities lending

- **Digitization** – improve data storage, efficiencies, and workflow; standardization; digitizing physical securities, tokenization of traditional securities; general ledger functions
- **Corporate Actions/Bookkeeping** – proxy vote confirmation, foreign withholding tax reclaims, statement of holdings, cash statements
- **Payments** – money/fund movement, payment of fees, processing
- **Settlement** – same day, faster; streetside clearing and settlement; securities/asset transfers
- **Crypto** – expanding products, trade/settlement/lifecycle support, coin transactions
- **Loans/Mortgages** – bank loan origination administration support, recording mortgage title information
- **KYC** – authentication of clients, documentation, communications, newer functions alternatives
- **Repos** – tri-party, Broadridge DLR
- **Trade Affirmation** – affirmation, confirmation, and reconciliation
- **Securities Lending** – pledging, general sec lending processes
- **Security** – improvements in corporate security,
- **Staffing** – recruiting, correct staffing
- **Other** – native on-chain issuance, bilateral clearing offerings, fewer banking fees, industry agreement, post-trade risk management

Market Touchpoint: Operational Resiliency

Our pre-conference survey asked respondents to identify what they view as the biggest operational resiliency risks in markets today. Unsurprisingly, cybersecurity topped the list, followed by personnel, as detailed below:

Survey Question: What do you identify as the single biggest operational resiliency risk in the market today?



Source: SIFMA Insights pre-conference survey
Note: SWIFT = Society for Worldwide Interbank Financial Telecommunication, the global provider of secure financial messaging services; BCP = business continuity planning

- **Cybersecurity** – attacks, ransom, threats, large scale attack (Russia, China, etc.); intentional takeover/takedown of central technology infrastructure within firm or locality; keeping information security strong
- **Personnel** – recruiting, retention, lack of talent/head count; lack of SME knowledge; limited population of senior mgt operational professionals that can oversee global support organizations, key person risk
- **Funding** – a downturn reduces funds available to spend on advancement; willingness to fund; heavy dependency on far-shore, low-cost service centers
- **Single Key Player** – concentration in key industry functions at critical third parties
- **Technology** – aging tech, lack standardization, reliance on email, the human element

- **Regulations** – increasing number, new; lack of regulation and oversight for growing products (cryptocurrency, alternative investments)
- **Settlement** – extended settlement timeframe, compression of processing timelines, dependency on technology in shortened settlement lifecycle
- **SWIFT** – messaging, payments hacking
- **BCP/Recovery** – testing; recovery of a major system and the interdependencies the markets have
- **Geopolitical** – general environment, nuclear war
- **Markets** –volatility, rapid market swings
- **Other** – failure of imagination in what can go wrong; fraud; capital risks introduced by firms holding crypto; medallion stamp

Cybersecurity

Cyberattack attempts did not stop during COVID. In fact, they increased. The Russia/Ukraine conflict elevates key cyber risks even higher. Panelists reported they are seeing increased scanning of their networks for weaknesses. While this is not a new cyber risk – this has been a top priority for years – firms indicated they have heightened the alert in this area.

Panelists reiterated that firms continue to focus on cyberattack attempts in order to protect both customer assets and data. There remains heightened vigilance in this area, with collaboration not just across the industry but with regulators and government agencies as well.

US Treasury Markets

After the 2014 flash move, regulators underwent an extensive review of Treasury market structure in order to increase resiliency in these markets. Given the importance of these markets to not just U.S. government funding but also to financial markets (ex: repo and funding markets and benchmarking performance), these markets need to be stable and fit for purpose. Treasury markets experienced two more events which drove volatility and liquidity concerns: the 2019 two-day repo spike in rates and the COVID-driven March 2020 significant price movement. What this brought to light is that Treasury markets are less liquid than in the past. While the size of the market has grown 5x from $4.5T to $22T, the size of dealer balance sheets committed to Treasuries has remained essentially constant.

As such, regulators are looking at reforms to the U.S. Treasury markets, with more rule proposals either out or expected, including changes to: bank regulations, such as the SLR, to increase dealer capacity to allow them to continue making markets during times of stress; moving more transactions to central clearing; and increasing post trade transparency through additional reporting.

From the market participant perspective, panelists commented that the overarching goal for the Treasury markets should be to increase the capacity of dealers to provide liquidity, currently hampered by post financial crisis regulations (GSIB surcharge, SLR, etc.). Changing capital rules will better incentivize dealers to intermediate during times of stress in markets.

Appendix: SIFMA Insights Research Reports

Monthly Market Metrics and Trends: www.sifma.org/insights-market-metrics-and-trends

- Statistics on volatility and equity and listed options volumes
- Also highlights an interesting market trend

Market Structure Primers: www.sifma.org/primers

- Capital Markets Primer Part I: Global Markets & Financial Institutions
- Capital Markets Primer Part II: Primary, Secondary & Post-Trade Markets
- Electronic Trading
- US Capital Formation & Listings Exchanges
- US Equity
- US Multi-Listed Options
- US ETF
- US Fixed Income
- SOFR: The Transition from LIBOR
- The Evolution of the Fintech Narrative

Equity Market Structure Analysis Series

- Analyzing the Meaning Behind the Level of Off-Exchange Trading, Part II
- Analyzing the Meaning Behind the Level of Off-Exchange Trading
- Why Market Structure and Liquidity Matter

Conference Debriefs

- Insights from market participants into top-of-mind topics

SIFMA Insights: www.sifma.org/insights

- Market Structure Thoughts
- Market Structure Compendium
- Inflation 101
- Market Structure Survey: Volatility, Volumes, Market Levels & Retail Investor Participation
- SPACs versus IPOs
- A Look Back at 2020 Market Structure Themes
- US Capital Formation's 2020 Journey
- Market Structure Download: Post-Election Update
- Market Performance Around US Presidential Elections
- Market Volatility Around US Presidential Elections

- Market Structure Download
- A Deeper Look at US Listed Options Volumes
- The Cboe Trading Floor Reopened – Revisiting Volume Data
- NYSE Goes All Electronic – What Does It Mean?
- The NYSE Trading Floor Reopened – Revisiting Market Share Data
- COVID-19 Related Market Turmoil Recap: Part I (Equities, ETFs, Listed Options & Capital Formation)
- COVID-19 Related Market Turmoil Recap: Part II (Fixed Income and Structured Products)
- 2020, the Year of the SPAC
- The 2020 Market Madness
- The VIX's Wild Ride
- The 10th Anniversary of the Flash Crash
- DTCC's Important Role in US Capital Markets
- Building Resilience with a Culture of Cyber Awareness

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