BALANCING DIGITAL ASPIRATIONS WHILE ADDRESSING RISK MANAGEMENT FUNDAMENTALS

Observations from Citi Treasury Diagnostics

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CITI TREASURY DIAGNOSTICS

The findings presented in this study are based on a comprehensive review of survey results gathered from over 475 Citi Treasury Diagnostics participants. The respondents come from organizations representing a diverse range of sizes, industries, and geographies. Participant companies varied in turnover size – ranging from less than 2 billion USD to greater than 25 billion USD – and represented all sectors of the economy and all regions across the globe.

Citi Treasury Diagnostics Measures Company's Performance Relative to Peers in Six Critical Treasury Operations Areas

- Policy and Governance
- Liquidity
- Working Capital
- Subsidiary Funding and Repatriation
- Risk Management
- Systems and Technology

Citi Treasury Diagnostics is an award-winning benchmarking tool designed to help companies assess the effectiveness of their treasury, working capital, and risk management practices against industry peers and best-in-class companies. It equips treasury departments to identify opportunities to deliver more value to their firms.

Monarch Innovation Awards
Winner
Innovative Product

Celent Model Bank
Winner
Model Bank Award

Treasury & Risk Alexander Hamilton Awards
Silver Winner
Solution of the Year

INTRODUCTION

As we emerge from the global pandemic, many corporate treasuries have established greater resilience across their operation with many now commencing the journey away from the manual processes of the past to adopting new techniques and digital solutions to make ready for the future. Given the increased pace of change in the world — and its interconnectedness — balancing the aspirations of Treasury with better utilization of data and data insights while addressing broken risk management fundamentals, there is much to consider.

For some, future proofing treasury through Intelligent automation - initially based on rules and then extending to algorithmic techniques to augment human decision making. For most, addressing the basic building blocks of data, process and people to best measure and manage objectives.

In this study, we review the treasury policies and practices for over 475 corporate treasury practitioners captured through the Citi Treasury Diagnostic with respondents from organizations representing a diverse range of sizes, industries and geographies.

We present our findings in 3 sections.

- Operational and Risk Management Observations and Insights
- Data, Technology and Digital Aspirations of Treasury
- Emerging Playbooks for Treasury

KEY FINDINGS AND INSIGHTS

The advent of new digital technologies and the evolution of financial services has prompted corporate treasury to rethink the techniques deployed to manage risk and how, with treasury's broad access to company data, it may best utilize emerging solutions to offer business insights. Effective treasury policies, delivered through processes and procedures, managed through key performance indicators is arguably the foundation for achieving financial risk management objectives and a best-in-class treasury function.

Chapter 1: Operational and Financial Risk Management Observations

While Treasury objectives remain constant and digital opportunities exist in how those objectives may be delivered, for most treasuries, fundamentals need to be addressed to lay the foundation (and data layer) for realization of future aspirations.

Digitalization opportunities exist but for many companies, the prerequisite is to address legacy infrastructure challenges, disconnected processes and fractured data-sets.

Policy/Process disconnects exist. For example, 84% of those surveyed have either a formal policy in place or require formal loan agreements executed by policy. However, only 52% always link the funding requests with the financial plan forecast.

Treasury Policies, delivered through the effective deployment of Treasury KPIs to measure and manage outcomes strongly correlates with high performing treasury teams. Companies with KPI's in place and measuring/managing to those KPIs are displaying best-in-class practices and achieving best outcomes.

Centralization of Cash and Risk remains the mantra with 63% of companies concentrating Cash at Global or Regional level with 80% of those companies concentrating on a daily basis. We also see that Company Size matters when setting up cash concentration structures and In-House Banks – As companies get bigger (revenue) they are more likely to have Global and Regional concentration structures in place.

KEY FINDINGS AND INSIGHTS (cont.)

While the transition to digital treasury through process automation and deployment of emerging techniques to utilize data and data insights is underway, challenges remain. Establishing Data Veracity is fundamental to realizing opportunities and partnerships are increasing in importance.

Chapter 2: Data, Technology and Digital Aspirations

Corporate treasury for many traditional companies remains burdened with legacy fractured infrastructural and data challenges causing a drag to adoption of innovative techniques.

Opportunities are emerging through automation of routine repetitive tasks and while data challenges exist there are aspirations for the more mature/sophisticated treasuries to transition to predictive and decision support tools.

Many corporate treasuries consider cost and integration of new technologies within existing platforms as a barrier to their treasury transformation.

Low levels of automation and connectivity with Bank Systems currently exists. Despite 68% having TMS in place, only one-third of companies (36%) have fully automated interface between their Treasury System and ERP/GL and only 21% have their TMS fully integrated with Bank Systems. While 90% of companies with revenues greater than 25bn USD have deployed Treasury Management Systems, 62% of those under 2bn USD in size have not.

The threat of Cyber attack is now well recognized at C-suite with 98% of companies stating that Cybersecurity is a key concern at Board or C-suite Level. However, 60% are either unclear or don't have a risk-based assessment process in place.

KEY FINDINGS AND INSIGHTS (cont.)

There is broad client interest in "all things digital" in treasury and finance, including automation, emerging technologies, and data-led insights. However, as this study will show, we should not lose sight that many companies still need to progress fundamentals in Treasury and their broader Finance organization. Depending on factors such as treasury maturity, legacy infrastructure, appetite to automate and aspirations for the role in which treasury will play, new playbooks for treasury are emerging.

Chapter 3: Emerging Playbooks for Treasury

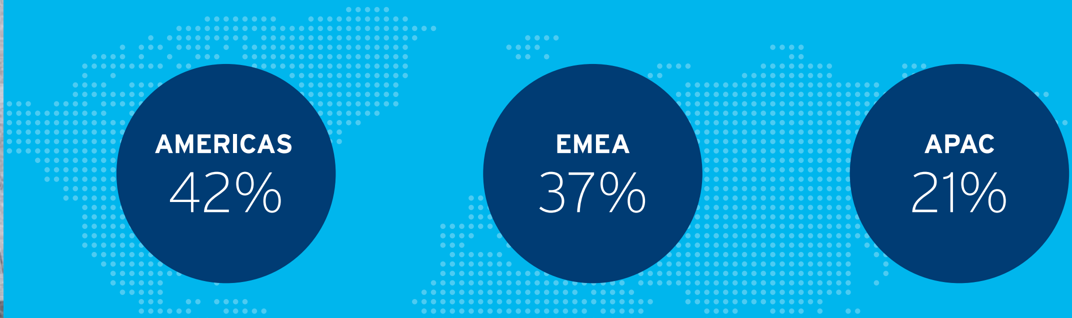
We introduce the Citi Digital Treasury Index for companies based on our Citi Treasury Diagnostics responses to provide tangible guidance to help clients in their journey to digitalization. Offering playbooks for treasury, dependant on current treasury maturity level and future digital aspirations.

- **Playbook One: Best Practices Treasury: Strengthening Fundamentals.** At many companies, shoring up fundamentals remains the core focus for Treasury – advancing the centralization journey, becoming more effective at managing cash and risk, and extracting operational and financial efficiency.
  - Moving from people-dependent processes and dispersed accountability to centralized remit, process-based function, and core automation deployed.
- **Playbook Two: Digitalizing Treasury: Advancing Data & Digitalization.** Companies that are advancing the data and digitalization journey tend to be those that have already meaningfully progressed on fundamentals, as that helps provide opportunity, internal credibility, and funding.
  - Building data and talent core, further digitalizing processes, transitioning to utilizing data insights to augment decision-making.
- **Playbook Three: Growth Enabling Treasury: Value-Added Business Partnership.** Those seeking to better understand their future digital destination for Treasury and the transition journey; Shift in focus from measuring the past to deduce/infer what is most likely to happen in the future.
  - Prediction of future outcomes enabling provision of business insights to support growth and creation of value.

PARTICIPANT DEMOGRAPHICS

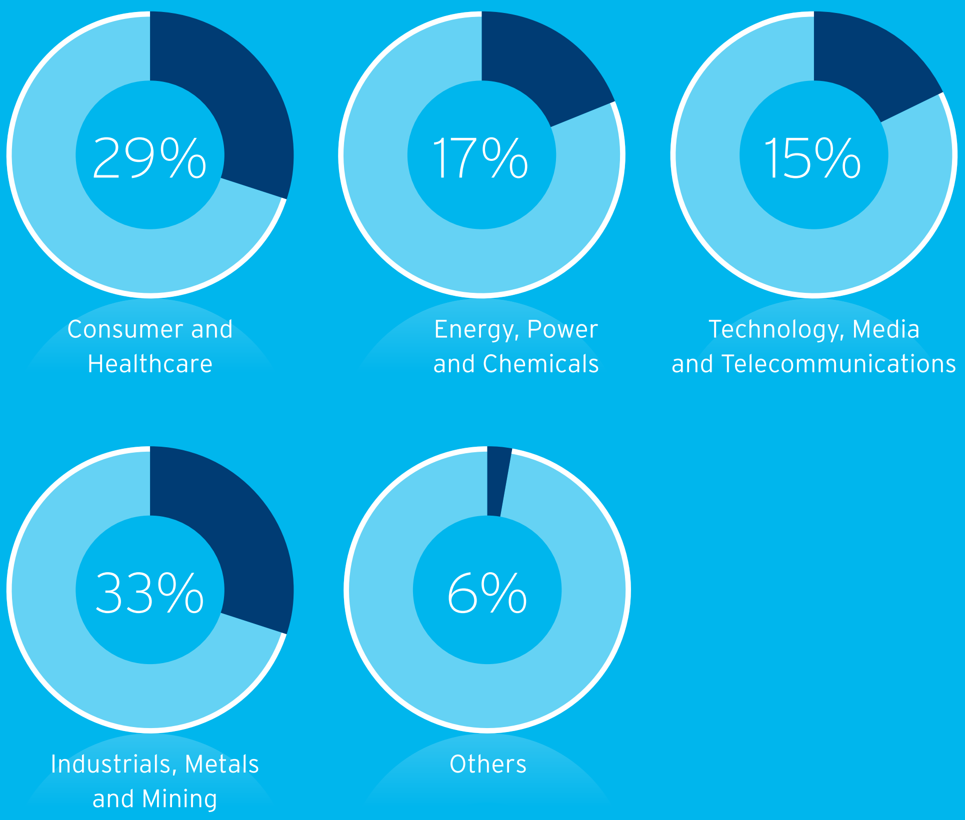
476 Survey Participants representing a diverse range of sizes, industries and geographies across the period from January 2015 to December 2020

Geographic Disbursement

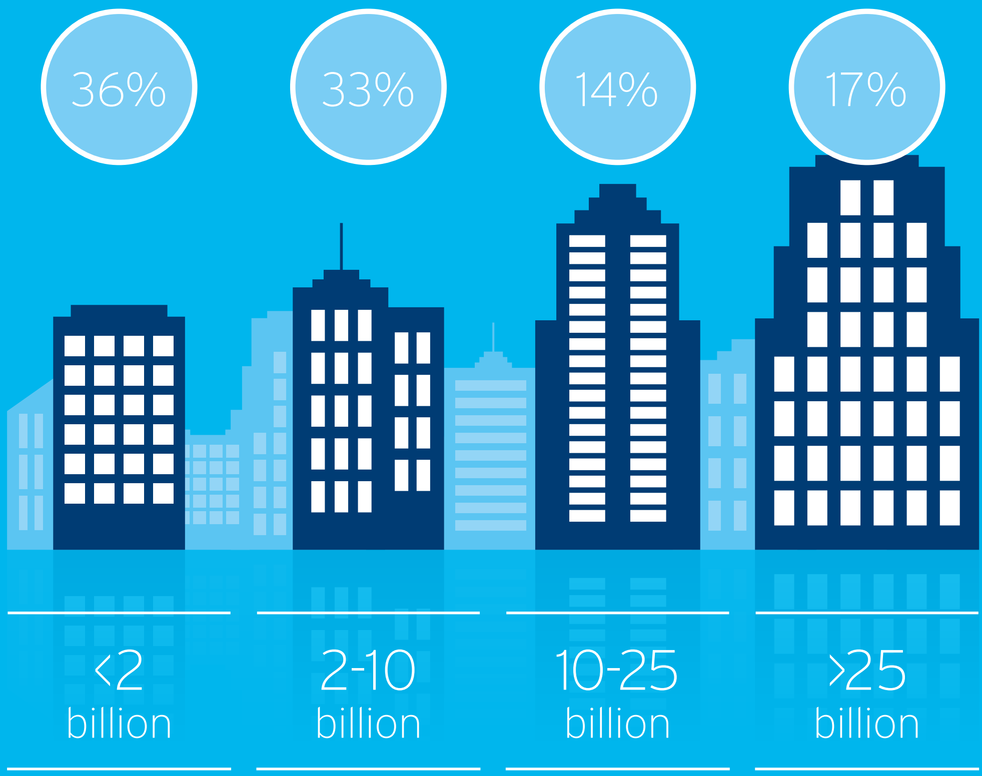


Scope of Responses

Industry Breakdown



Company Size by Revenue (USD)



CHAPTER 1: OPERATIONAL AND FINANCIAL RISK MANAGEMENT OBSERVATIONS AND INSIGHTS

- *Treasury Policy*
- *Risk Management Constructs*
- *Liquidity Management*
- *Forecasting Currency Exposure*
- *Working Capital Management*
- *FX Risk Management*

INTRODUCTION

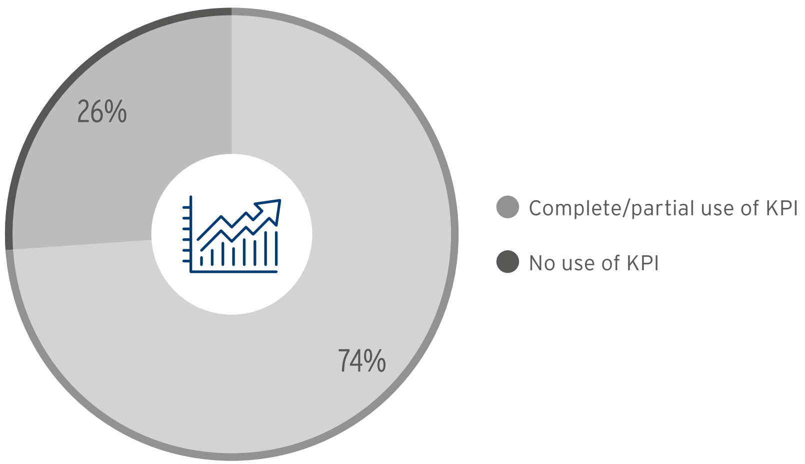
Effective treasury policies, delivered through processes and procedures, managed through key performance indicators is arguably the foundation for achieving financial risk management objectives and a best-in-class treasury function.

Digitalization opportunities through process automation and data driven insights exist today but, for many companies, the prerequisite is to address legacy infrastructural challenges, disconnected processes and fractured data-sets often brought about through acquisition and inherited technologies.

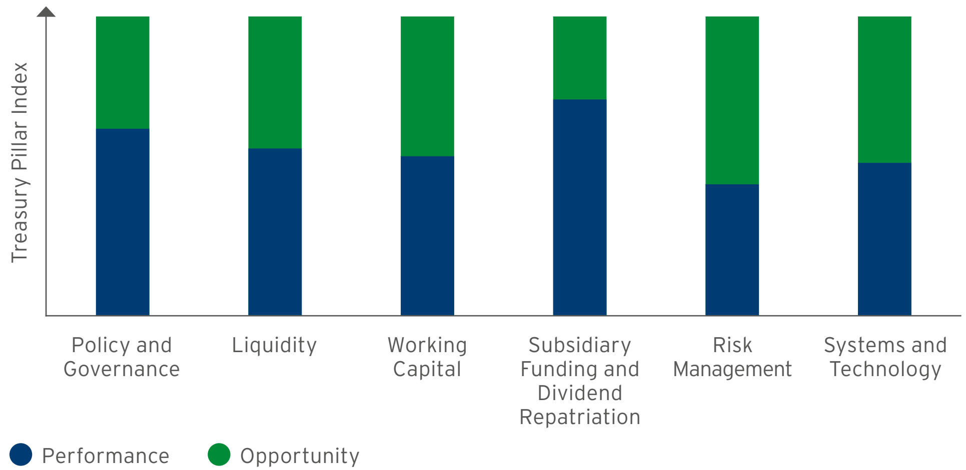
In this section we discuss:

- Treasury Risk Management Policies adopted
- Risk Management Constructs, Liquidity Management and Forecasting Currency Exposure
- Working Capital Management
- FX Risk Management

Key Performance Indicator Utilization



Areas of Treasury Performance and Opportunity



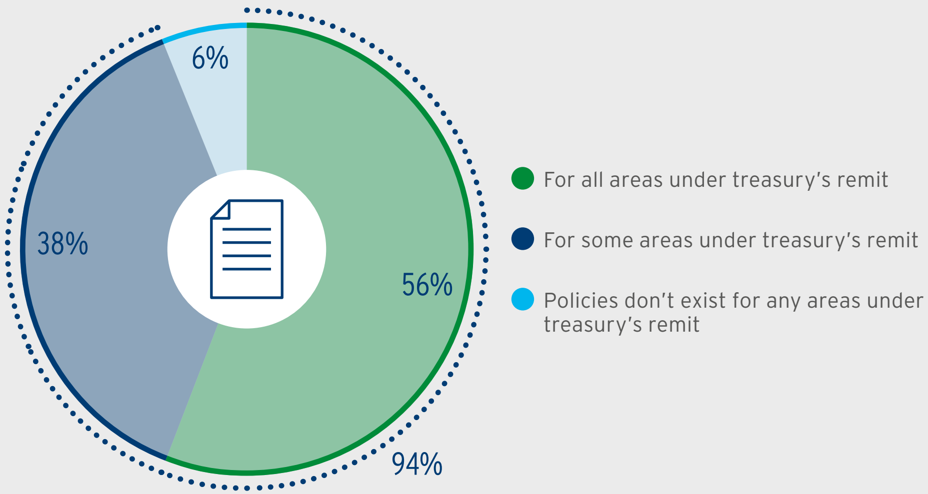
TREASURY POLICY: MANAGEMENT THROUGH KPI

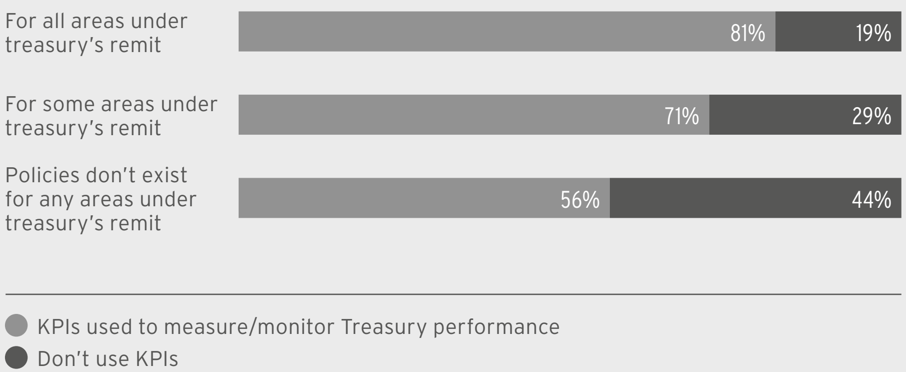
We see correlation between those who have policies in place and the use of KPI to measure and manage treasury performance.

94% of companies surveyed have treasury policies for most areas of responsibility with 56% policy led across all areas of their remit.

81% of those that have policy covering all areas use KPI to measure and monitor performance.

Existence of Documented Policies

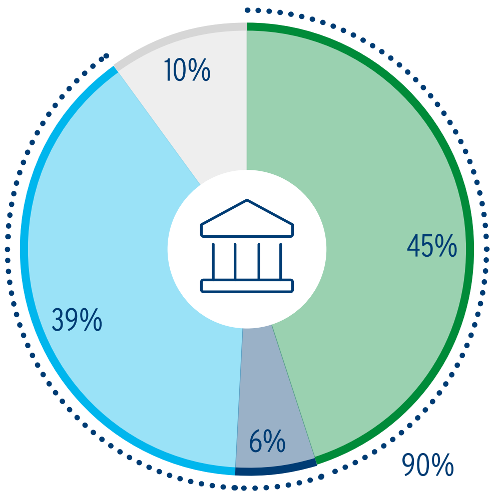




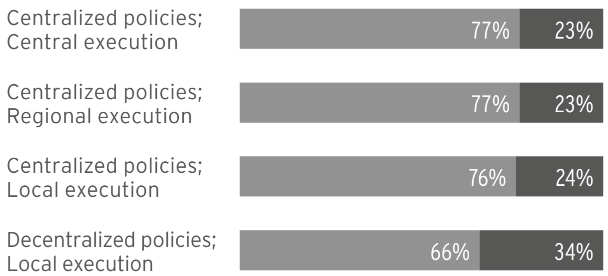
"Policy review is a priority now for treasury to ensure alignment with the firms broader risk management objectives following our Covid response and to consider any adjustments needed for the new digital opportunities we are considering." ***– European Treasurer***

TREASURY POLICY: LEVEL OF CENTRALIZATION

Centralization of Policies and Execution



- Centralized policies; Central execution
- Centralized policies; Regional execution
- Centralized policies; Local execution
- Decentralized policies; Local execution



- KPIs used to measure/monitor Treasury performance
- Don't use KPIs

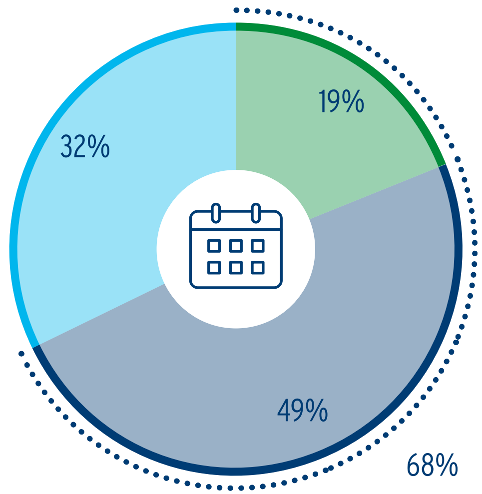
90% of companies have Centralized Policies with 51% also reporting either central and regional treasury execution of those policies. 49% of those surveyed exhibit local execution of policy.

77% of companies exhibiting Centralized Policy creation and either central or regional execution utilize KPI to measure and manage performance.

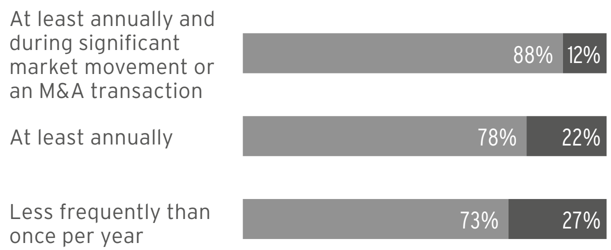
Only 66% of those with decentralized policies utilize KPI to manage performance.

68% now review treasury policy at least annually and/or during market movement. Those that do, correlate well with utilization of KPI.

Treasury Policy Review Frequency



- At least annually and during significant market movement or an M&A transaction
- At least annually
- Less frequently than once per year



- KPIs used to measure/monitor Treasury performance
- Don't use KPIs

TREASURY POLICY: RISK MANAGEMENT COVERAGE

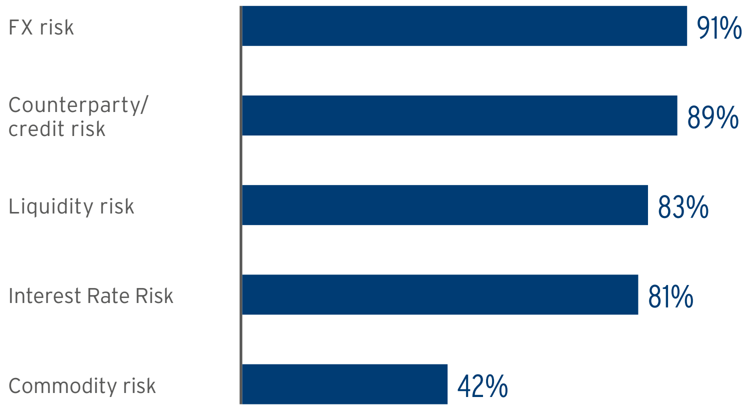
81% of companies surveyed have a treasury policy that encompasses the core areas of market risk with FX risk at 91%.

Nearly two-thirds (64%) report projected liquidity and funding exposures at least on a monthly basis.

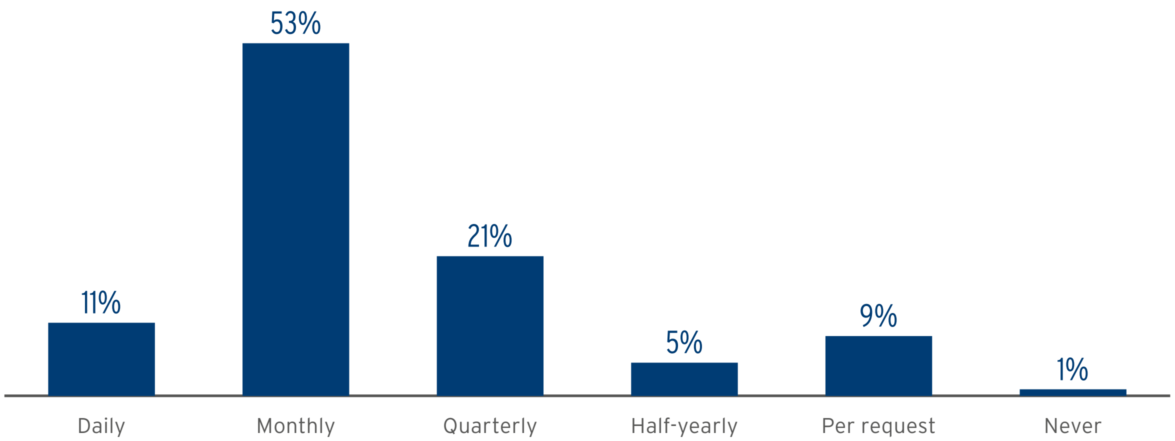
74% of the companies assess and report its notional FX exposures with 44% incorporating a sensitivity analysis.

Treasuries with more complex exposures tend to quantify risk with more advanced tools such as value-at-risk and portfolio analysis. These quantitative modelling techniques and tools can help a corporate treasurer identify main drivers of risk, optimize hedging strategies and formulate a risk management policy.

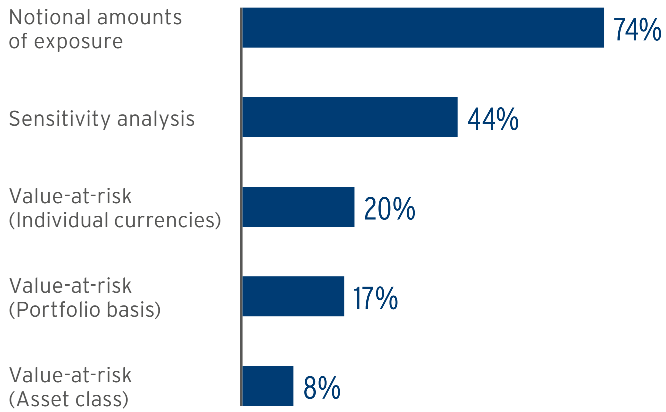
Treasury Policy Coverage



Frequency of reporting projected liquidity/funding exposures

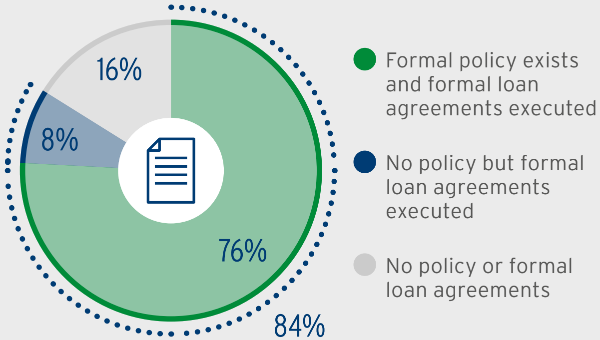


Methodology/Reporting

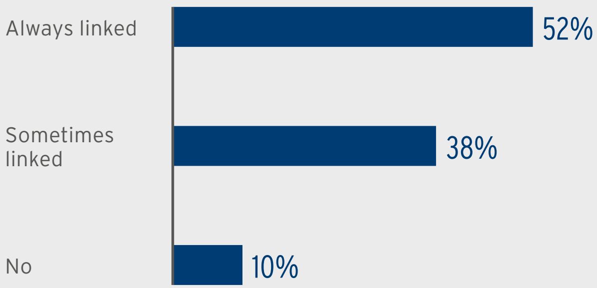


TREASURY POLICY: SUBSIDIARY FUNDING

Subsidiary Funding Policy



Funding/Repatriation Requests Linked with Cash Flow Forecasts

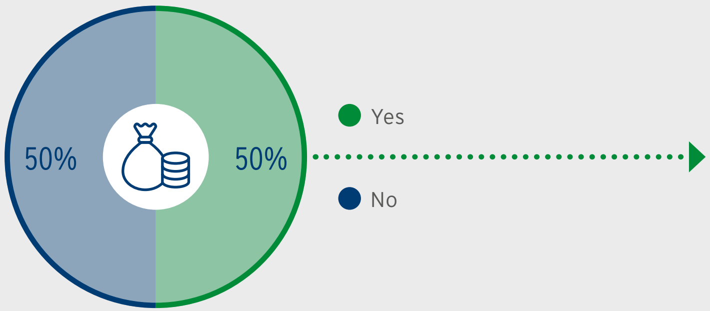


84% have either a formal subsidiary funding policy in place or require formal loan agreements executed by policy. However, only 52% always link the funding requests with the financial plan forecast.

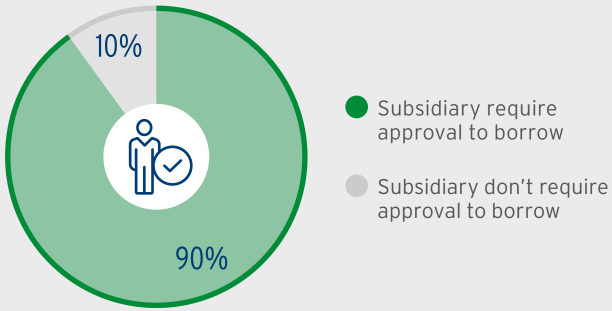
With half those surveyed permitted by policy to borrow locally, 90% of those require central approval to do so. 91% benchmark cost of funds against either panel of local banks and/or compared to the corporate cost of funds from central treasury.

Subsidiary External Financing

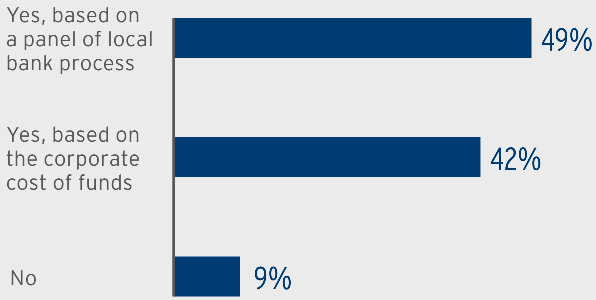
Subsidiaries Permitted to Borrow Locally



Approval Requirement of Subsidiaries to Borrow



Benchmarking of borrowing costs when borrowing at local level



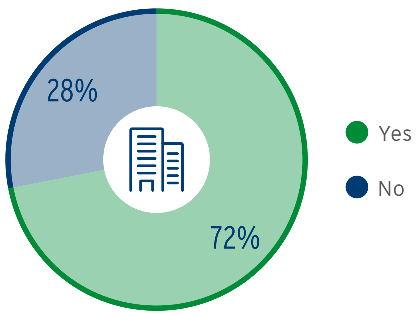
TREASURY POLICY: INTERCOMPANY LENDING

28% of companies surveyed have no intercompany lending process in place.

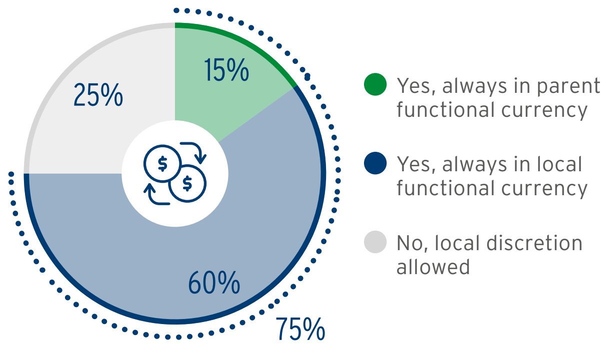
25% of companies surveyed indicate there is no policy but local discretion is allowed in borrowing currency selection with 60% always borrowing in local currency to avoid introducing currency exposure locally.

In determining when a subsidiary will borrow intercompany as opposed to a local third-party bank, multiple factors are considered.

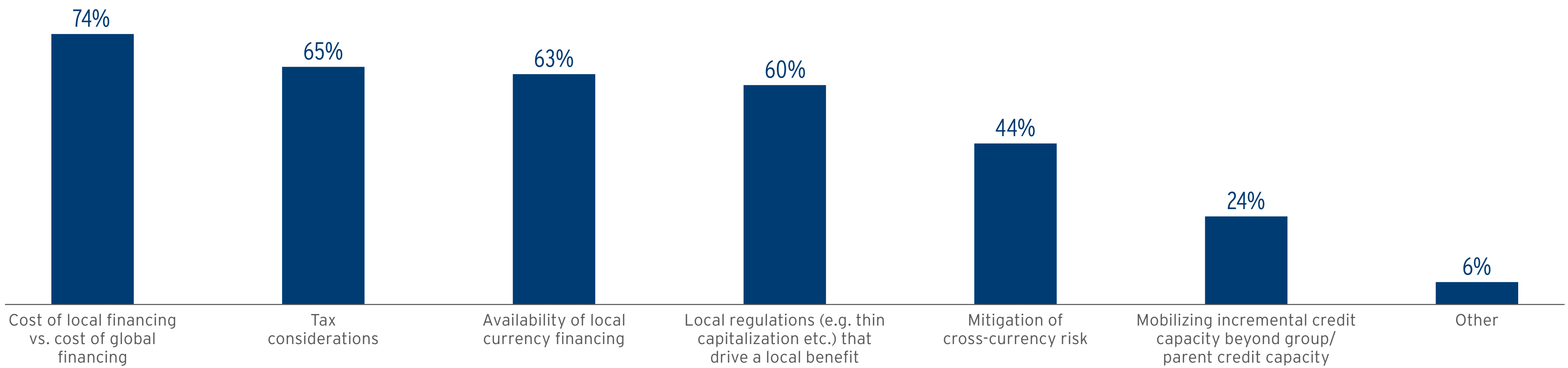
Policy Governing Intercompany Lending Activities



Policy Governing the Borrowing Currency of Subsidiaries

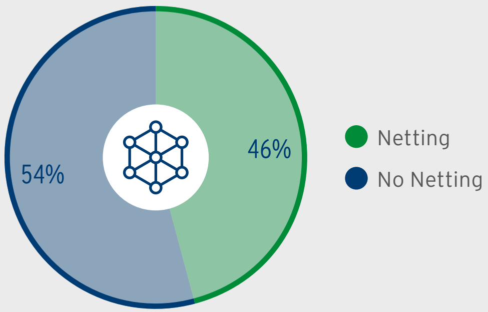


Factors Determining When a Subsidiary Will Borrow Intercompany as Opposed to a Local Third-Party Bank

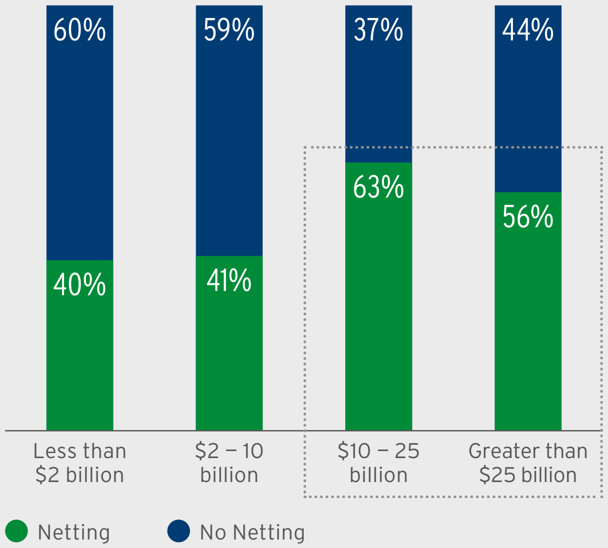


RISK MANAGEMENT CONSTRUCTS: I/C SETTLEMENT NETTING CENTRE

Netting Structure



Revenue Demographics for Netting Clients



Less than half (46%) of those surveyed have a Netting Structure in place, those that do 93% have at least monthly process in place.

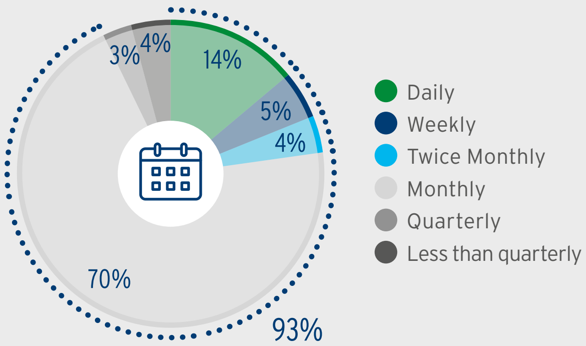
Size Matters. Companies with revenues of more than $10 Billion are more inclined to implement a Netting Structure.

Almost 1 in 3 (32%) operate a Netting Centre without an integrated TMS or ERP module to manage the I/C net obligations.

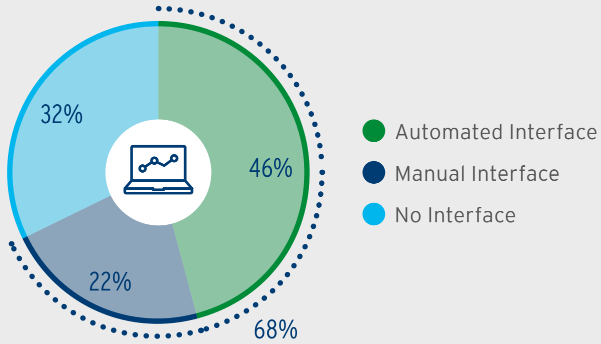
Almost 1 in 3 (31%) have less than 50% of allowable entities participating.

I/C Netting Characteristics

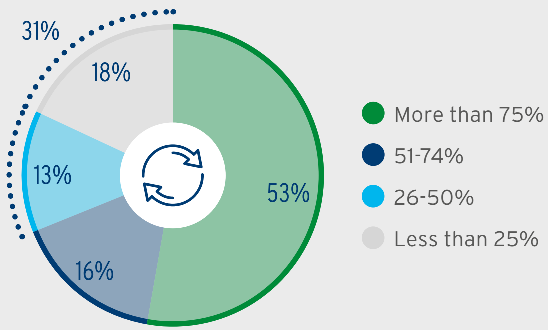
Netting Frequency



Interface with TMS/ERP



Flows Participation



RISK MANAGEMENT CONSTRUCTS: IN-HOUSE BANK

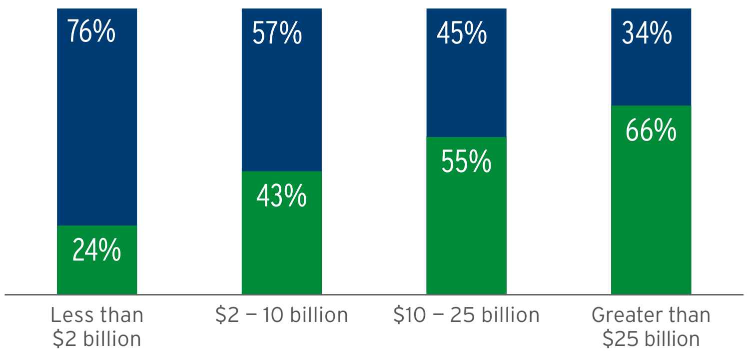
Less than half (43%) of those companies surveyed have deployed an IHB. 79% of those that have an IHB, utilize KPI to manage performance.

Majority concentrating cash and risk through an IHB entity have deployed a Single Global IHB (72%) with more than 50% of flows being accounted in the construct (79%).

81% of those with more than 75% allowable participation manage performance through KPI.

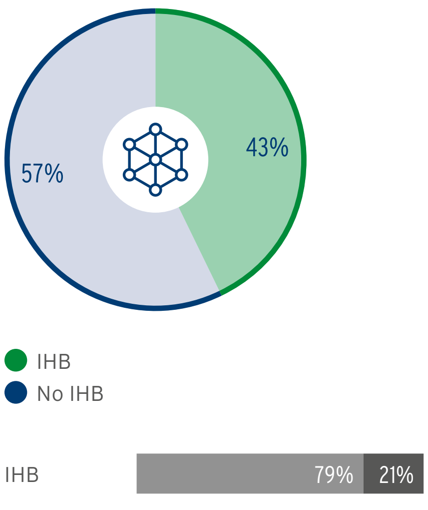
As companies scale (revenue) they are more likely to have an IHB structure in place. 66% of those with revenues greater than $25bn have an IHB in place.

Revenue Demographics for IHB Clients

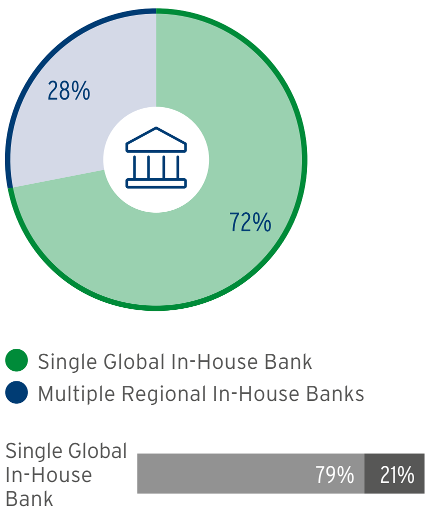


IHB Characteristics

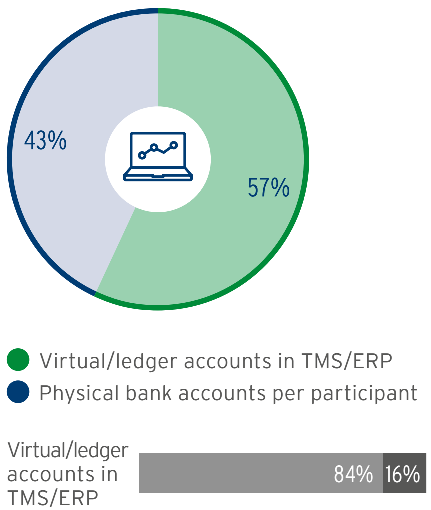
In-House Bank Construct



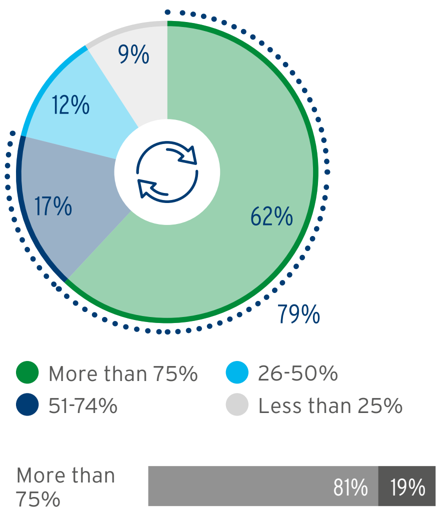
IHB Type



Recording of Participant Positions



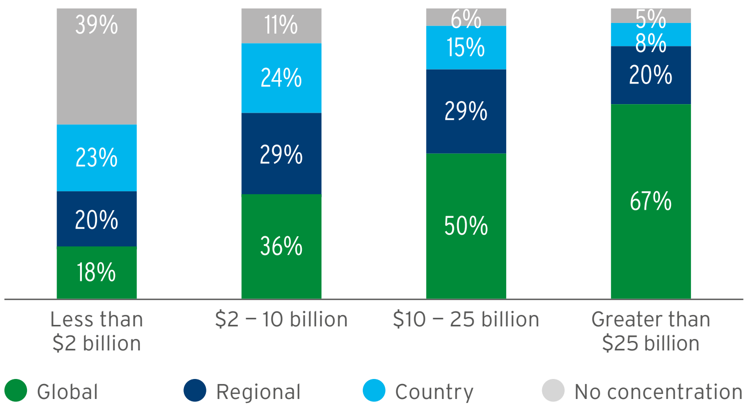
Flows Participation



KPIs used to measure/monitor Treasury performance
Don't use KPIs

LIQUIDITY MANAGEMENT: CASH CONCENTRATION

Revenue Demographics for Cash Concentration Clients



63% of companies have cash pooling in place concentrated at Global or Regional level with 80% of companies concentrating cash on a daily basis.

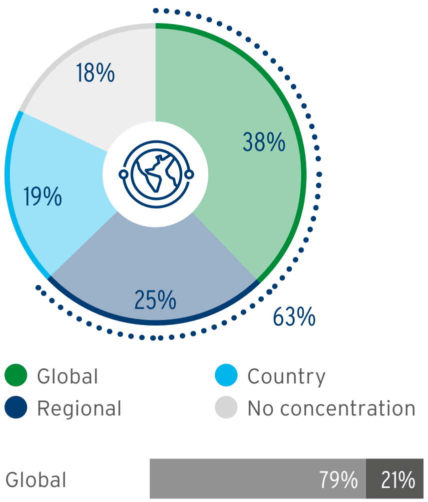
Of those participants exhibiting such best-in-class characteristics, on average 79% have KPIs in place to measure performance.

83% of companies have completely or partially automated their cash concentration and 62% have more than 75% participation where allowable.

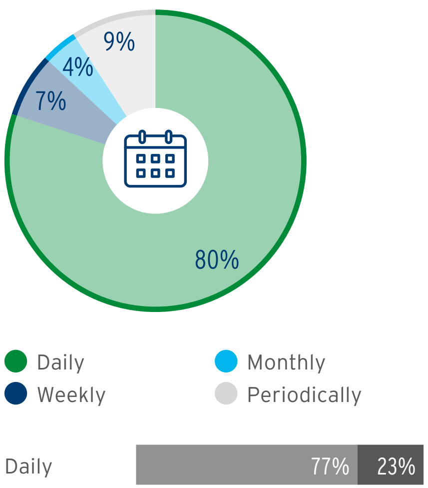
Similar to observations made for IHB adoption, as companies scale (revenue) they are more likely to have Cash Concentration structure in place. 87% of those with revenues greater than $25bn concentrate cash at a global or regional level.

Cash Concentration Characteristics

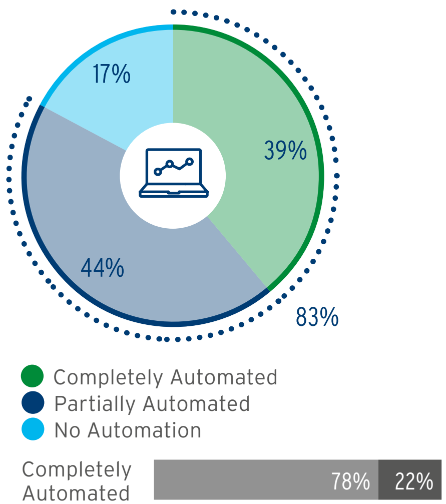
Cash Concentration Level



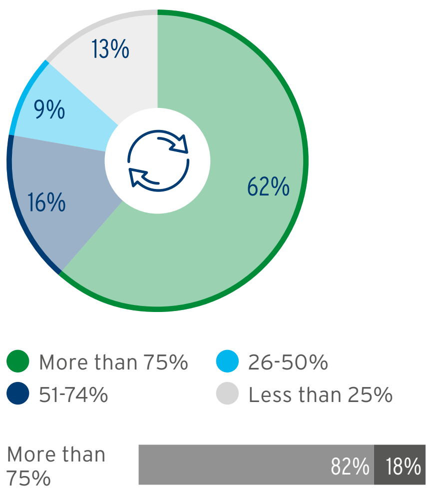
Concentration Frequency



Automation of Concentration



Flows Participation



KPIs used to measure/monitor Treasury performance Don't use KPIs

LIQUIDITY MANAGEMENT: POSITION VISIBILITY

77% of companies report more than 75% daily visibility of their Cash position. 78% of those with this level of visibility have KPIs in place to measure Treasury performance.

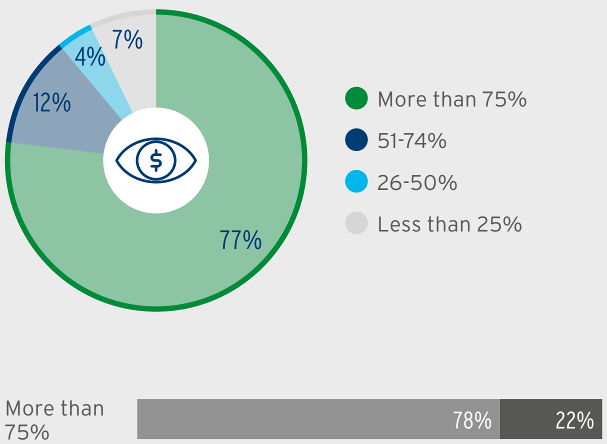
Despite the availability now for auto-matching technologies, only 42% of survey participants report greater than 75% auto reconciliation levels.

82% report more than 75% visibility of their short-term investments.

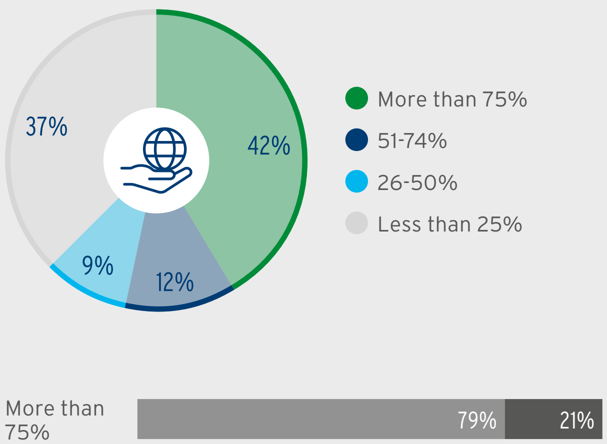
"Budget still remains a constraint for us and has become more of a restriction as we are looking to maintain profitability. Carefully reviewing CapEx, we have postponed certain projects that were initially planned. Team is aware that the focus now needs to be on cash flow forecasting."

– North American Treasurer; Multinational Industrials Manufacturer and Distributor

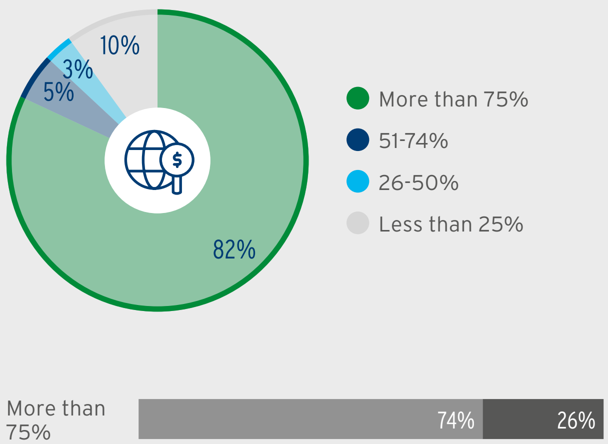
Cash Visibility



Auto-Reconciliation



Short-Term Investments Visibility



KPIs used to measure/monitor Treasury performance

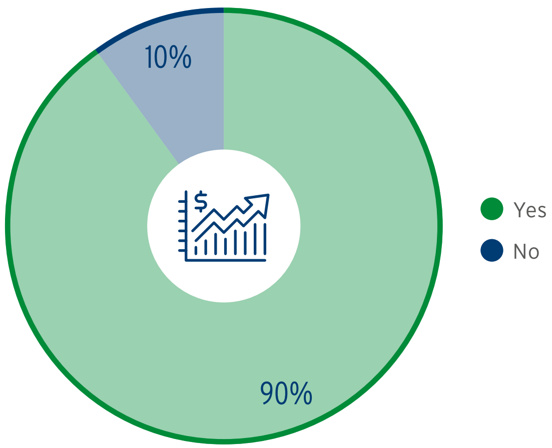
Don't use KPIs

FORECASTING CURRENCY EXPOSURE: METHODOLOGY

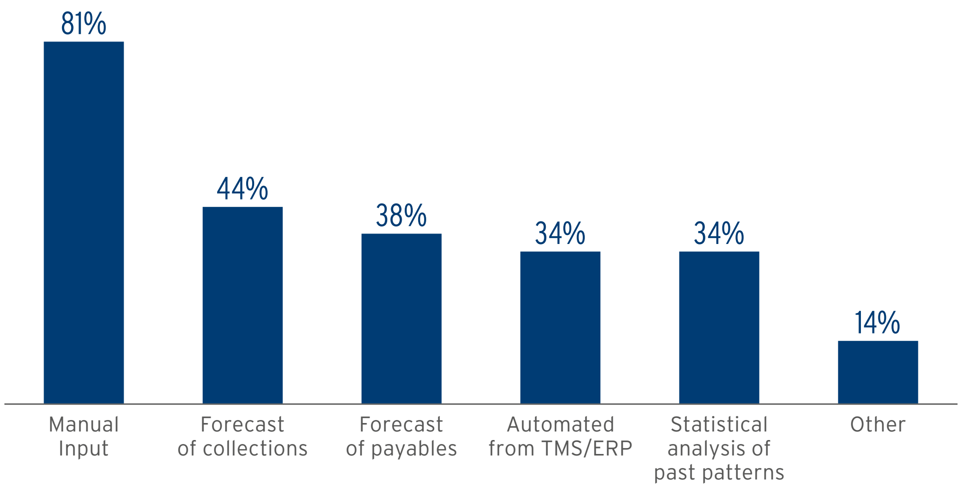
With 90% of companies forecasting cash, it is now a core component of a robust treasury operation, providing visibility into future aggregate cash positions across currencies; invaluable to helping companies identify natural offsets and opportunities for internal hedging. Successful algorithmic forecasting techniques can yield significant reductions in interest expense through better identification and utilisation of surplus cash held across organisations.

Despite the availability of advanced cash forecasting technologies coming on stream, over 80% report that manual input remains part of their forecasting methodology with only 34% utilising statistical analysis over past patterns to predict forward.

Use of Cash Forecasting



Forecasting Methodology



"Covid-19 had raised our awareness for the need to tackle forecasting error. Its source stems both from our business model but also operational and reporting short-comings across the organization."

– European Treasury Manager

FORECASTING CURRENCY EXPOSURE: VARIANCE MEASUREMENT

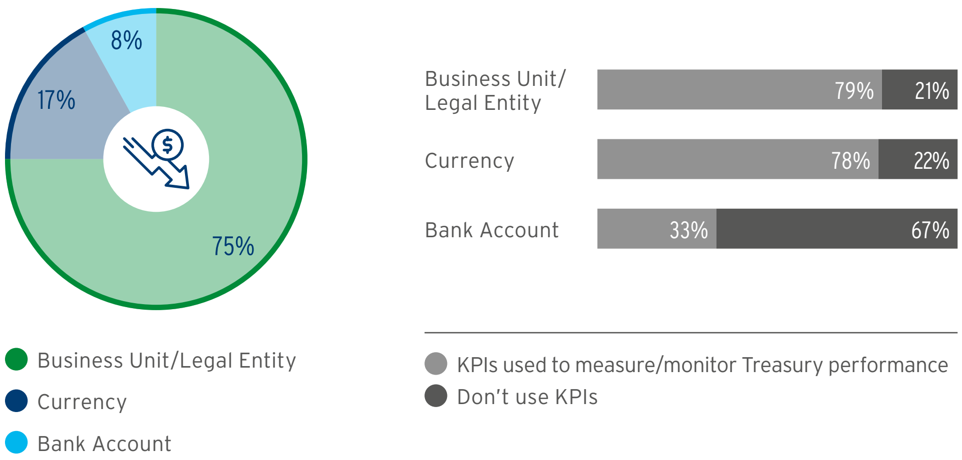
75% of companies measure forecast variance down to the Business Unit/Legal Entity level. Almost 80% of those that do so, have KPI in place to measure performance.

Of the 8% that attempt to measure forecast variance down to the bank account level, 67% do not use KPI.

93% declare an average forecast variance of less than 25% with 42% reporting greater than 90% accuracy in their forecasting.

44% of companies have a forecasting horizon of more than 6 months.

Measuring Forecast Variance (at lowest level)

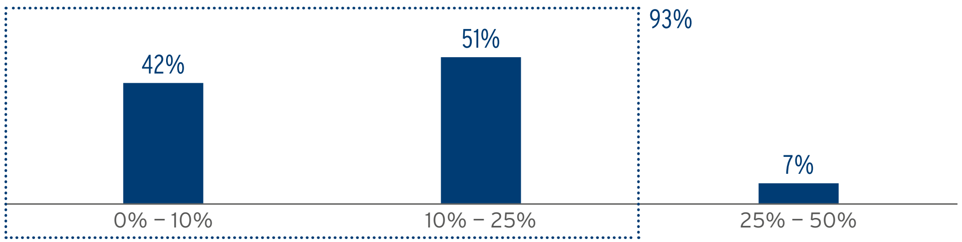


"We have mobilized a project to support more effective cashflow forecasting. This will allow us to better predict funding requirements and ultimately automate FX and investments trading based on prescriptive analytics."

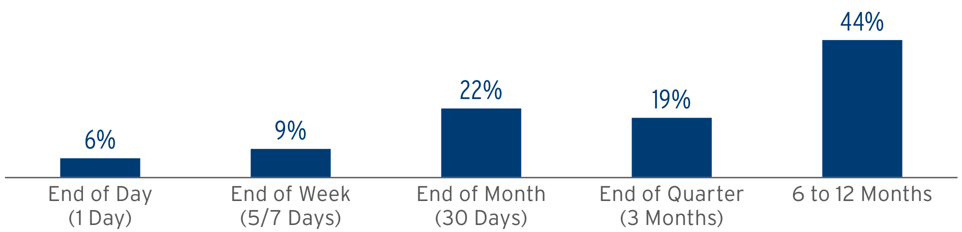
– European multinational consumer goods company

Forecasting Horizons and Average Variance

Average Variance vs. Actual



Cash Forecasting Horizon

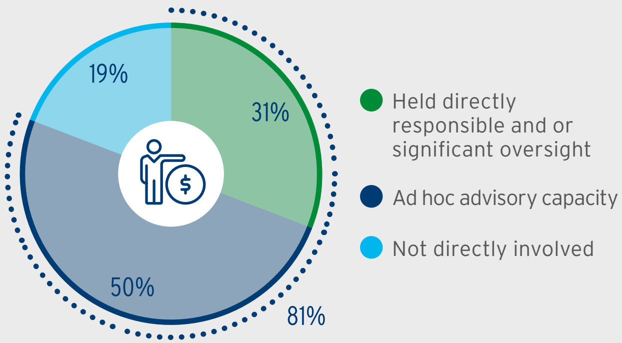


WORKING CAPITAL MANAGEMENT: FINANCING PROGRAMS

While the role of treasury differs by company, more than 80% of treasuries are involved in working capital management to some extent. 31% are held directly responsible requiring full visibility over their commercial business and supply chain dynamics. Only 19% reported that they were not directly involved.

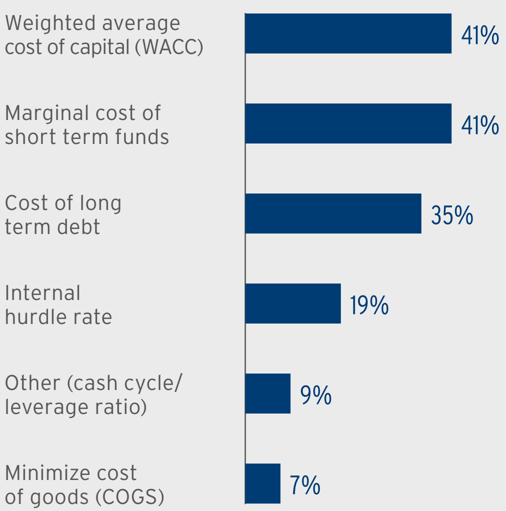
All companies that reported the use of supplier financing exhibited higher average DPO with consumer and healthcare business showing the biggest gains.

Treasury's Role in Working Capital Management

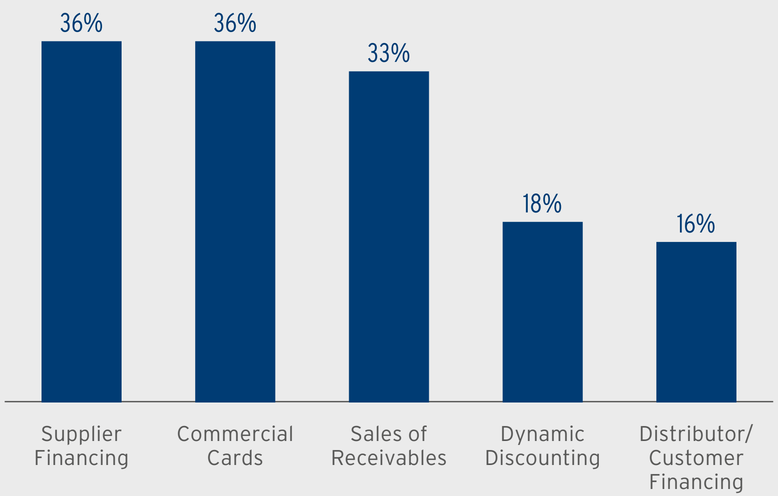


Working Capital Financing: Driving the Benefits

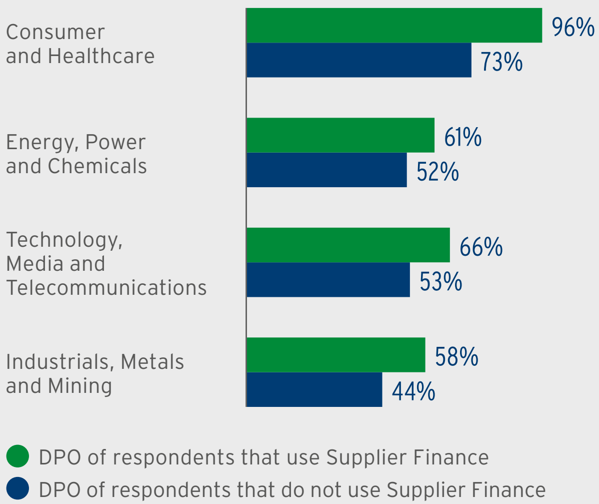
Measures Used to Evaluate Working Capital Improvement Approaches



Use of Working Capital Optimization Programs

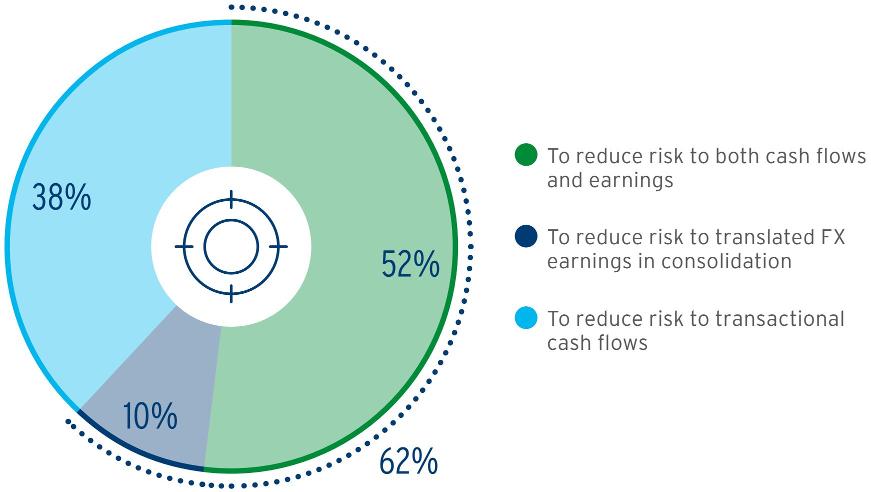


Companies That Adopt Supplier Finance Exhibit Higher Average DPO



FX RISK MANAGEMENT: OBJECTIVES

Risk Management Objectives

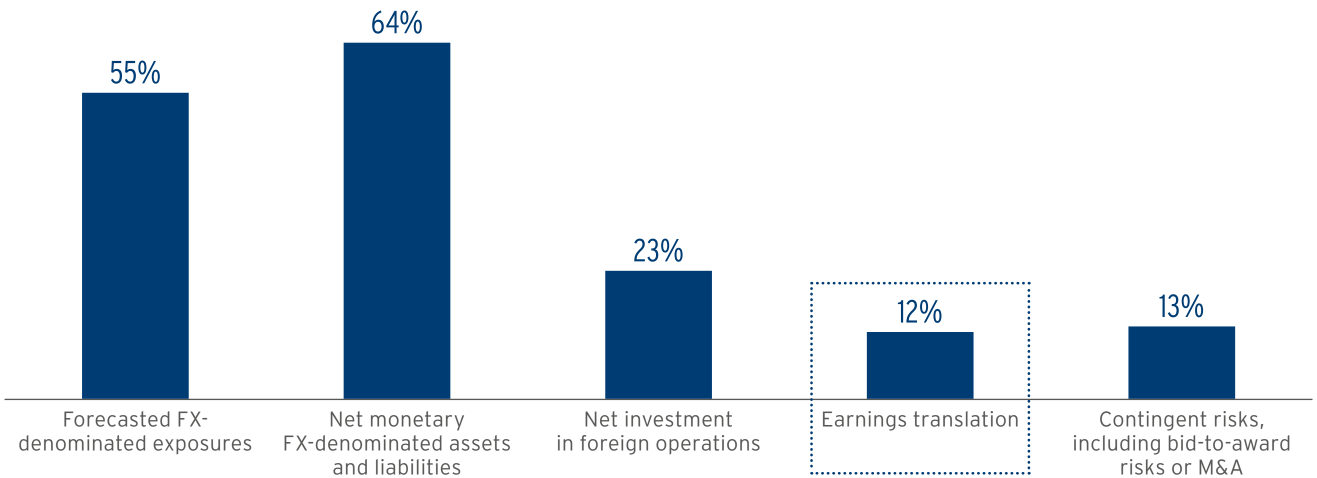


"We acknowledge that FX has a significant impact on our global earnings and KPI's but do not hedge. A policy review is scheduled for this year."

– European Treasurer

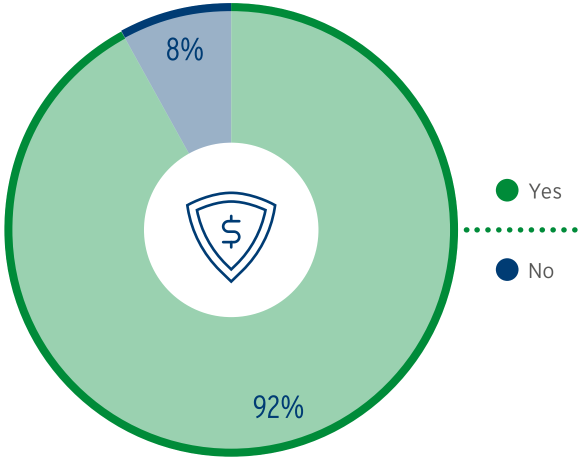
While 62% of companies reported reducing earnings volatility as a key risk management objective, the number of companies that actually directly hedge earnings translation exposures is quite low (12%).

Types of Risks Hedged

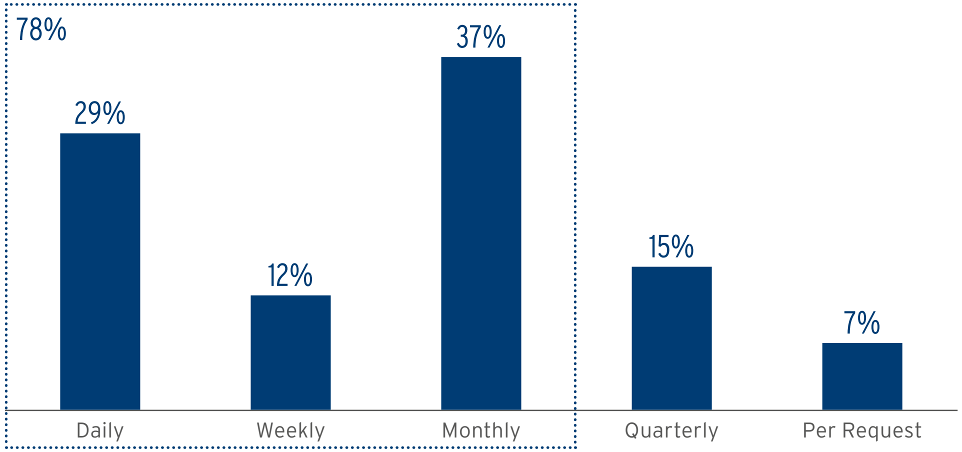


FX RISK MANAGEMENT: ASSESSMENT

Assessment of FX Risk



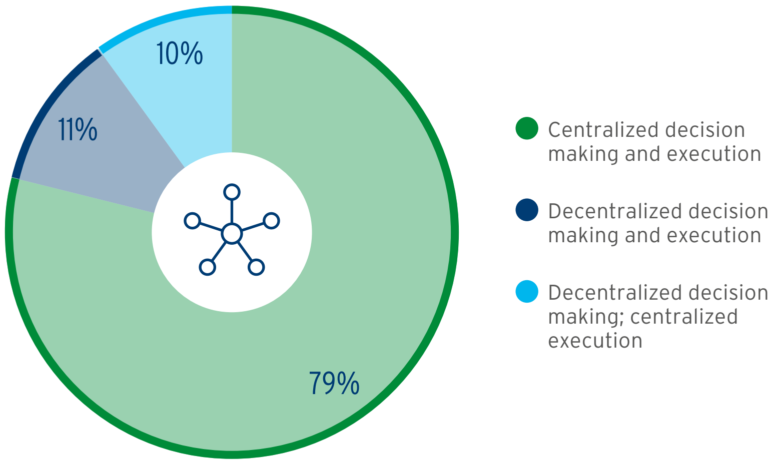
Frequency



92% of companies surveyed reported assessing FX risk, of which 78% indicated doing so at least on a monthly basis.

Over three-quarters (79%) of respondents indicated that FX risk decision-making and execution is centralized.

Centralization of Risk Management

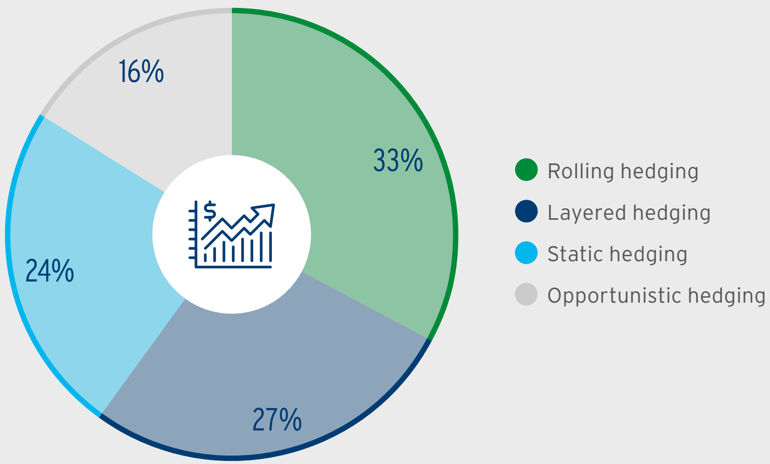


FX RISK MANAGEMENT: TRANSACTION RISK

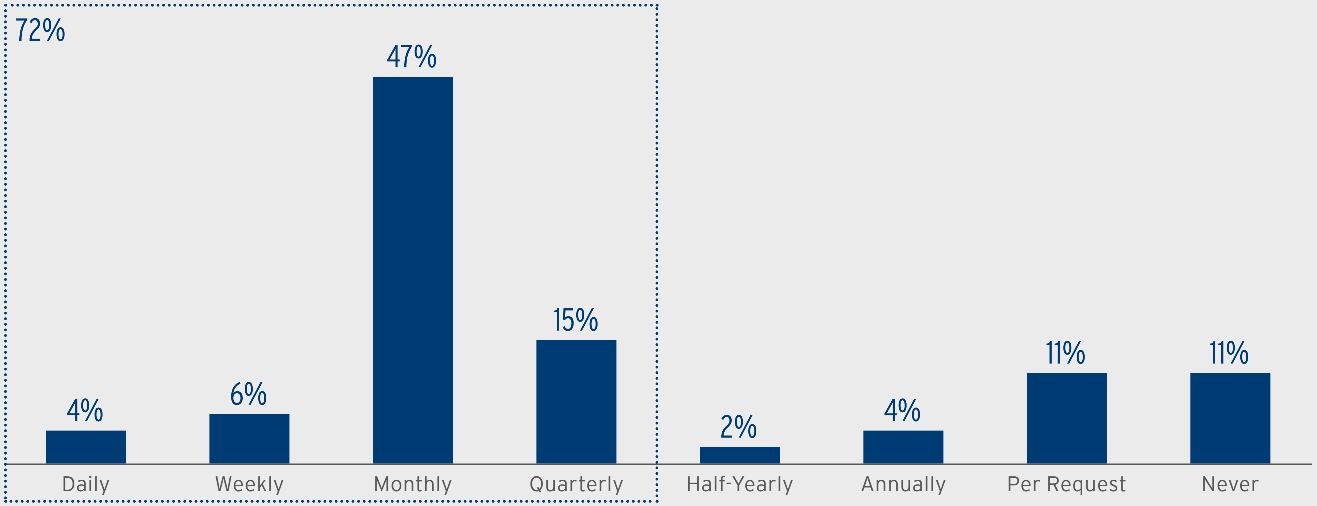
All companies surveyed (100%) follow a rolling, static, layered, or opportunistic approach to hedging forecasted exposures. While there are clear benefits for reducing period-over-period volatility from extending hedge tenor, the short-term hedges revealed by responses may be indicative of continued challenges around forecast error.

More than 70% of the companies surveyed conduct a FX hedging performance analysis at least on a quarterly basis.

Approach to Hedging Forecasted Exposures



Frequency at which Hedging Performance is Analysed



"We have for many years applied the layered hedging program as the main objective of our cash flow hedging program is smooth period-over-period volatility."

– European Treasurer

FX RISK MANAGEMENT: REGIONAL VARIATIONS IN HEDGING

The majority of companies in both NAM (69%) and EMEA (65%) follow either a rolling or layered hedging approach while APAC is slightly less (50%).

In LATAM opportunistic and static strategies (72%) are more prevalent perhaps highlighting regional differences in hedge objectives.

Layered Hedging

NAM
39%

EMEA
24%

APAC
23%

LATAM
7%

Rolling Hedging

NAM
30%

EMEA
41%

APAC
27%

LATAM
21%

Opportunistic Hedging

NAM
15%

EMEA
12%

APAC
17%

LATAM
38%

Static Hedging

NAM
16%

EMEA
23%

APAC
33%

LATAM
34%

FX RISK MANAGEMENT: TRANSACTION RISK HEDGING TENOR

70% of those surveyed hedge out to 1-year, whereas only 45% extend the tenor up to two-years.

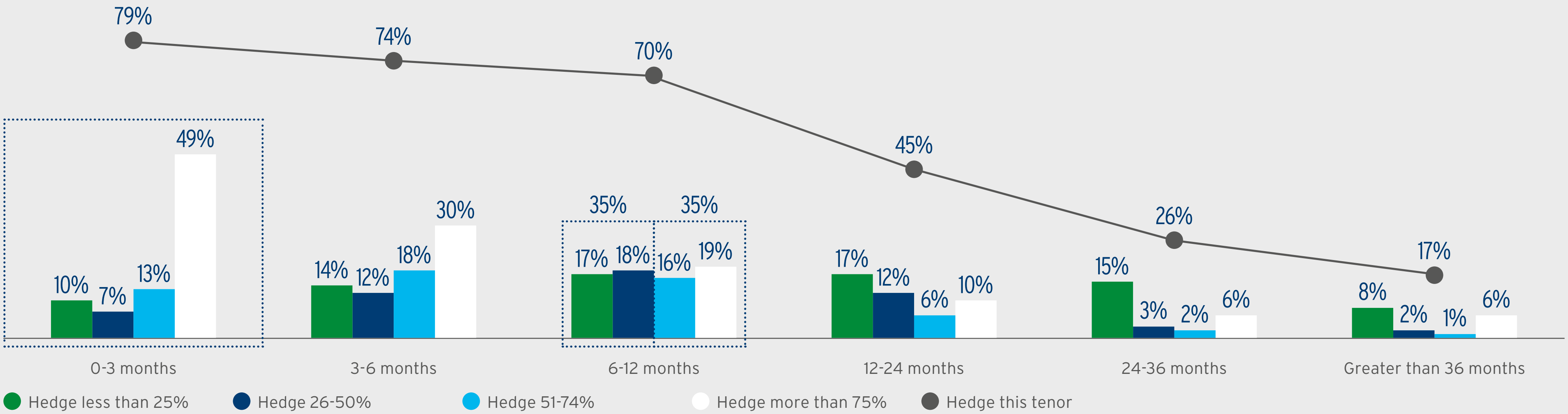
Factors often cited limiting it's hedging tenor include: Unreliable forecasts – leading to potential hedge accounting concerns, cash flow settlement risk, potential credit charges (CVA – Credit valuation adjustment) and Credit line utilisation.

Only 17% hedge longer than 3 years. The hedging ratio is often based on industry specific risk management practices rather than economic, accounting or system related considerations.

Three-quarters hedge out to 6-months with a higher percentage hedged in the shorter tenors 0-3 months. The majority hedging more than 75% of their exposures.

Only 35% surveyed hedge more than half of its exposures between 6-12 months. The same percentage (35%) hedge less than 50%.

Proportion of Forecasted Exposures Hedged



FX RISK MANAGEMENT: INSTRUMENTS

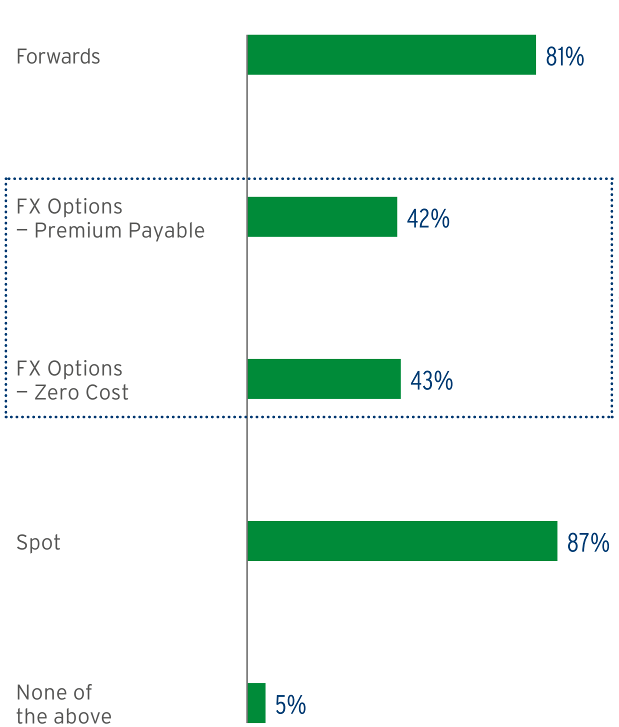
Per corporate risk management policies, spot, forwards, and swaps remain the most commonly permitted financial instruments.

43% of survey participants reported option-based strategies as being permissible with 43% citing exposure uncertainty as the primary reason for their use.

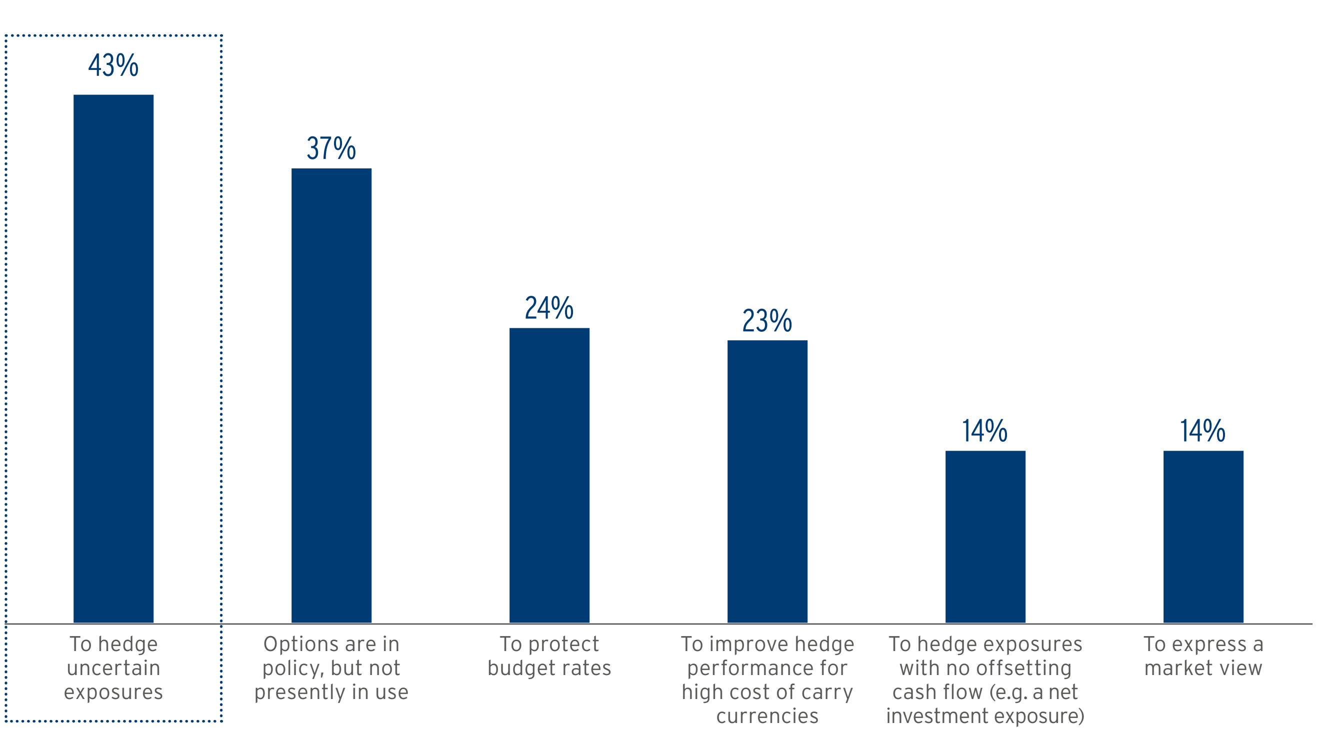
"Options continue to be an important part of our risk management tool-kit. Although FX volatility has fallen back to relatively low levels, the benefit of options was evident as volatility surged in 2020."

– European Treasury Manager

Policy-Permitted Financial Instruments

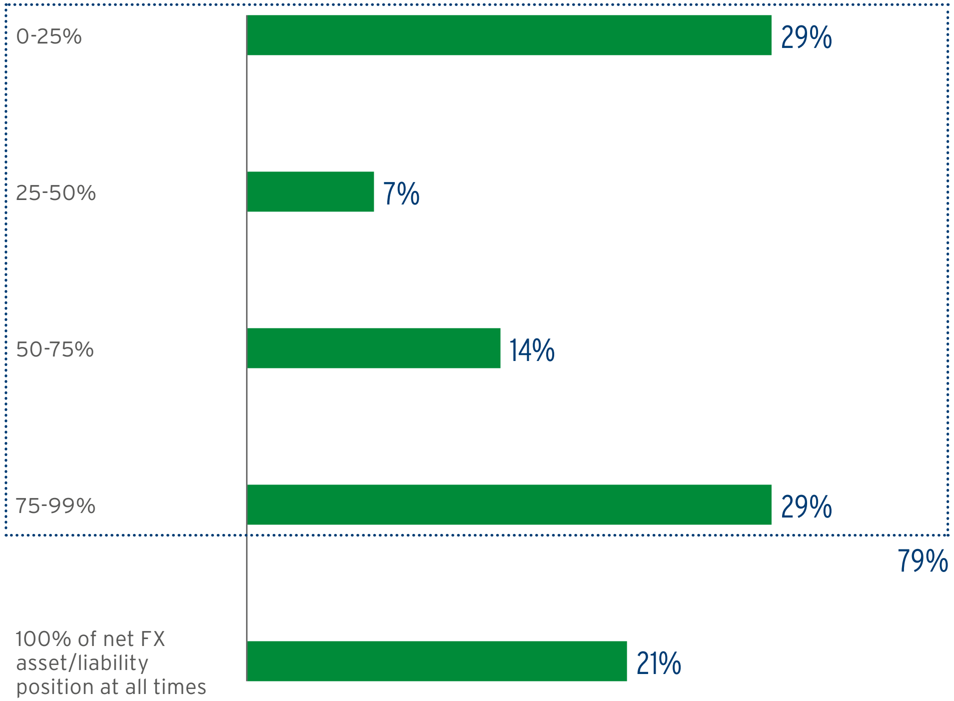


Reasons for Choosing an FX Option Strategy

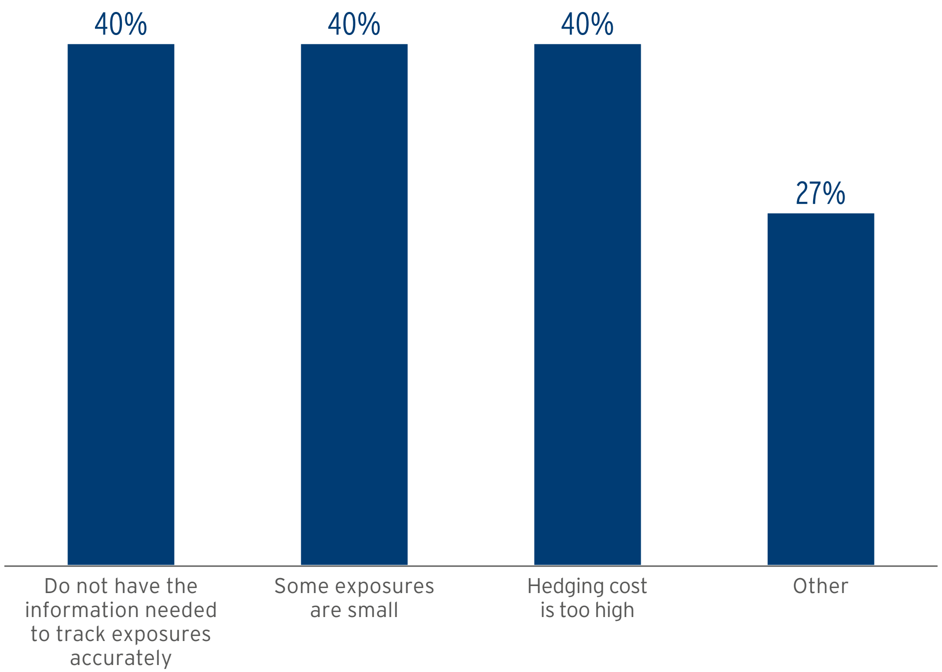


FX RISK MANAGEMENT: TRANSLATION RISK

Percentage of Net Monetary FX-Denominated Assets and Liabilities Hedged



Reasons for Hedging Less Than 100% of Existing FX-Denominated Assets and Liabilities



21% of companies reported hedging 100% of net monetary FX-denominated assets and liabilities with an additional 29% of companies hedging at least 25%.

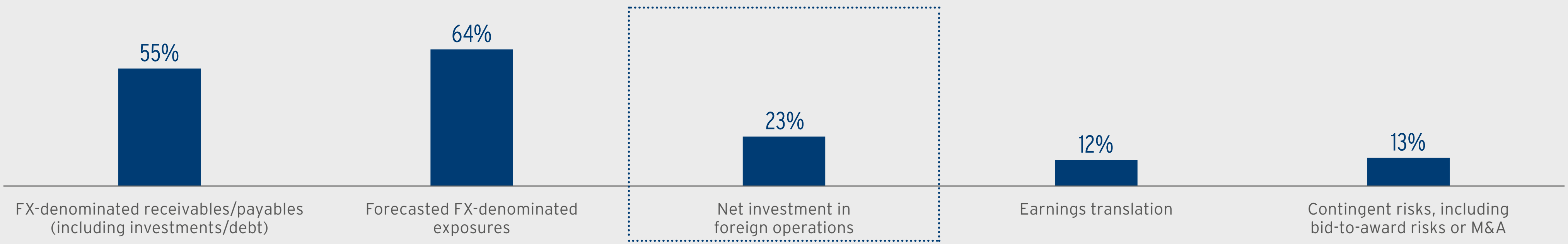
Apart from costs, another commonly cited reason for hedging less than 100% of existing FX-denominated assets and liabilities was the difficulty in accurately tracking exposures.

FX RISK MANAGEMENT: NET INVESTMENT HEDGING

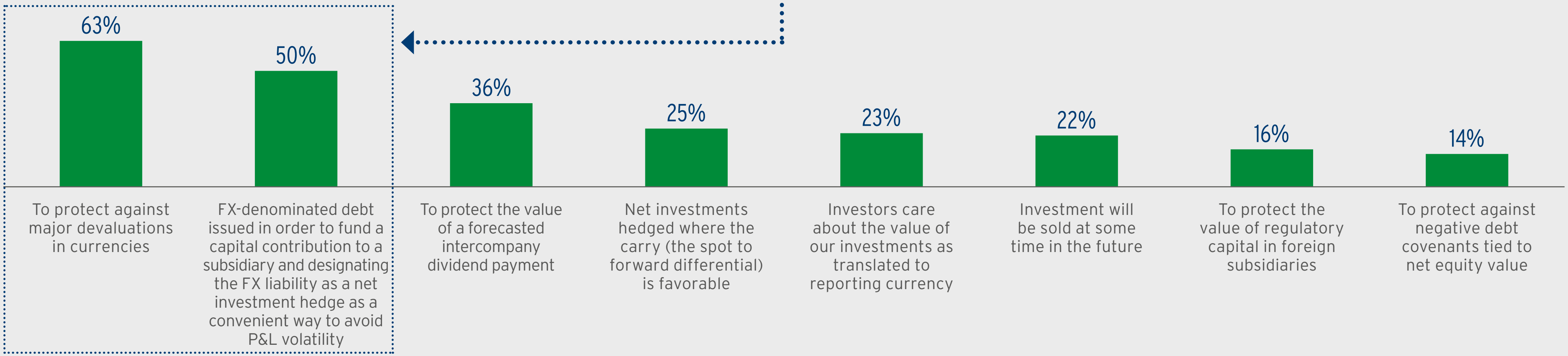
23% of survey respondents reported hedging net investment in foreign operations.

Protecting against currency devaluation (63%) and designating FX debt as a net investment hedge to mitigate P&L volatility (50%) were cited as the two primary reasons.

Types of Risks Hedged

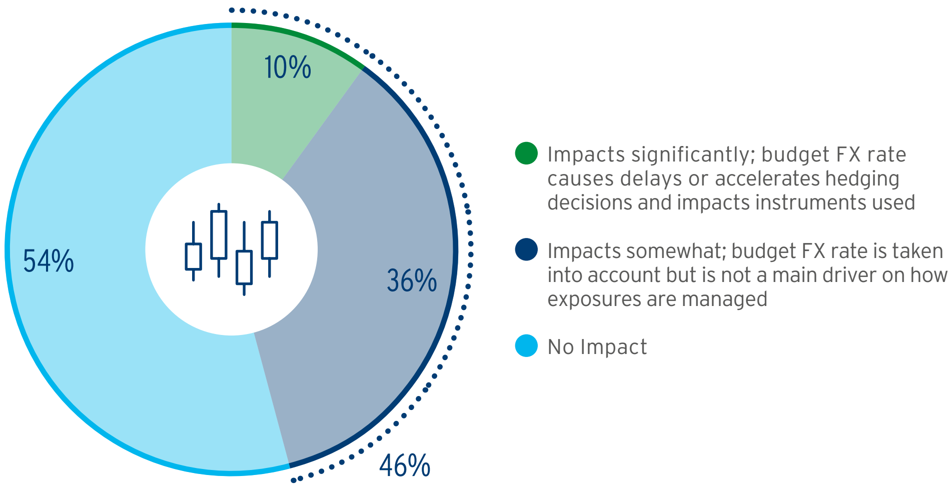


Objectives for Hedging Net Investment in Foreign Operations



FX RISK MANAGEMENT: BUDGET RATES

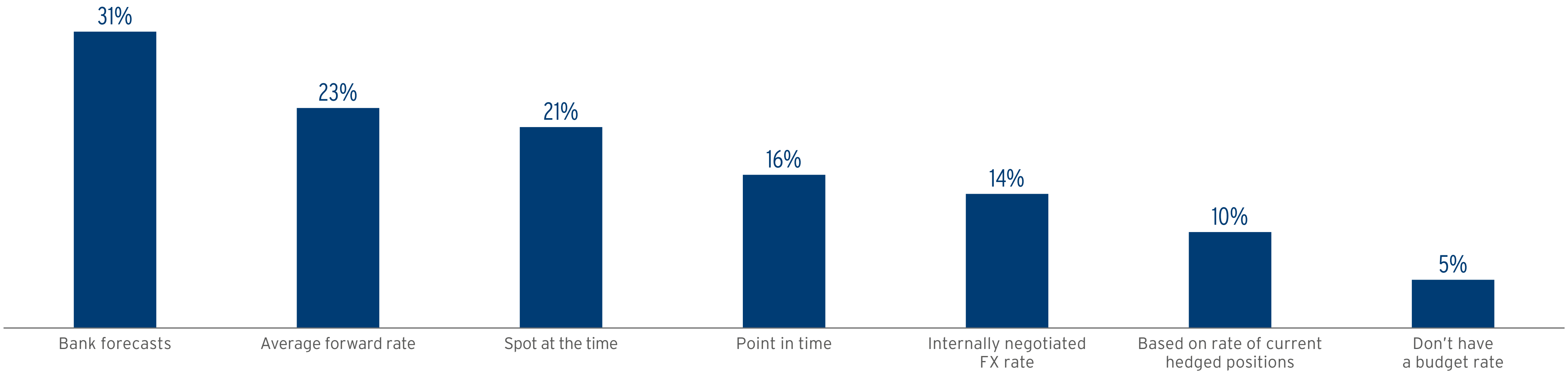
Impact of FX Budget Rate on Hedging Decisions



Nearly half (46%) of companies surveyed reported that FX budget rates impact risk management decision-making.

In determining FX budget rates, multiple data points are utilized, with bank-provided rates (31%) being the most popular. Only 5% reported not having a budget rate objective.

Approach to Determining FX Budget Rates

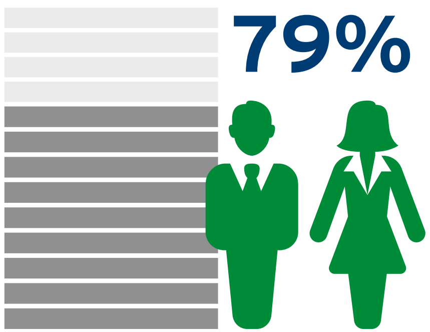


FX RISK MANAGEMENT: EMERGING MARKET RISK

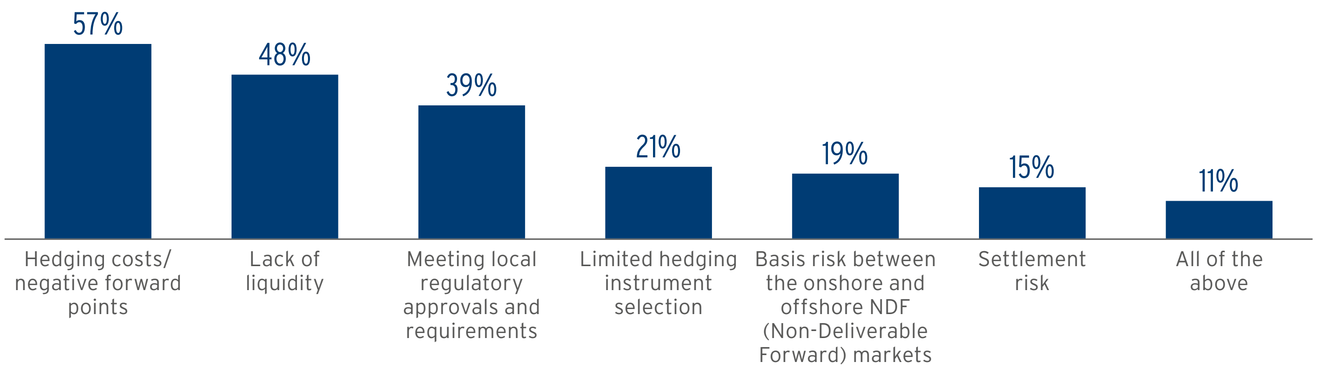
While 79% of respondents reported having exposures to currencies outside the G-10, two-thirds (66%) report either hedging EM and G10 exposures the same, or essentially not hedging EM at all.

Costs, market liquidity, and local regulatory considerations were cited as the primary challenges when managing EM currency risk.

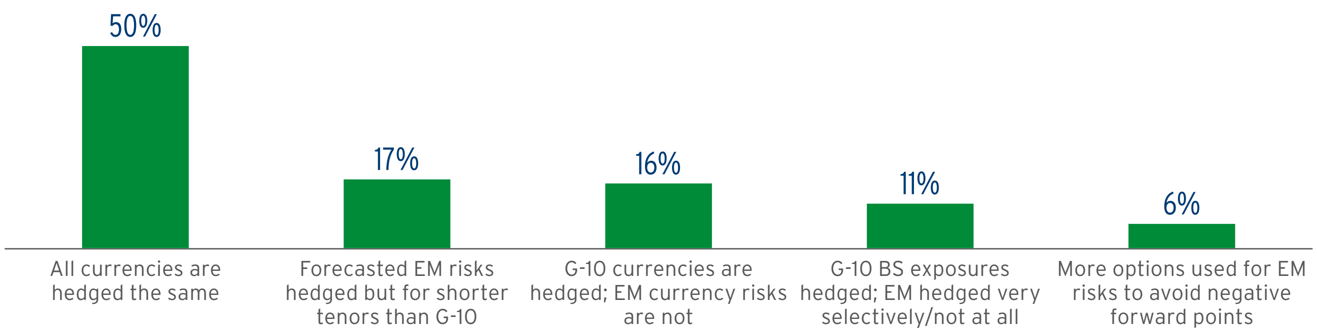
Percent of Respondents with Exposures to Currencies outside G10 Currencies



Emerging Market Currency Risk Management Challenges



Hedging Approach to Managing Emerging Market Currencies



"We recognize the repricing of risk in many EM markets, particularly lower yields and volatility, presents an opportunity to review our EM hedging strategy."

– North America Treasury Manager


18590 (1)
18567 (9)
18560 (5)
18514 (2)
17755 (1)
18440
18357

CHAPTER 2: DATA, TECHNOLOGY AND DIGITAL ASPIRATIONS OF TREASURY

- *Treasury Technology Fundamentals*
- *Digital Treasury Transformation*
- *Cyber Threat Response*

INTRODUCTION

While the transition to digital treasury through process automation and deployment of emerging techniques to utilize data and data insights is underway, challenges remain.

- Shoring up the Fundamentals remain a core focus for treasury; Opportunities exist to attain efficiencies and effectiveness.
- Corporates almost universally have fractured Treasury infrastructure.
- Low levels of automation and connectivity currently exists between client TMS/ERP and Bank Systems.
- Heightened C-suite focus on improving working capital utilization, liquidity planning, and FX risk management. However manual processes abound across Finance and Treasury teams and are ineffective.
- Establishing Data Veracity is the prerequisite first step to the digitalization of treasury; i.e., the transition from people based processing to automation utilizing data insights to inform best next action.

In this section we discuss:

- Utilization and deployment of proven treasury technologies.
- Aspirations for digital treasury.
- Treasury response to the increasing cyber threat associated with enhanced connectivity and digital techniques.

TECHNOLOGY FUNDAMENTALS: USAGE OF TREASURY PLATFORMS

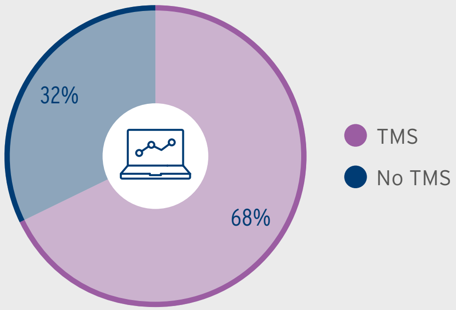
Despite 68% of respondents reporting using a TMS/ERP treasury module, more than half report that their enabling technology does not support financial risk management or cash forecasting.

19% of those surveyed do not have an ERP.

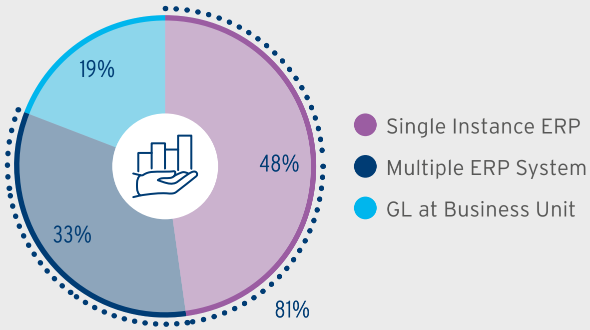
Only 36% report TMS accessed from all locations.

Size Matters: While 90% of companies with revenues greater than 25bn USD have deployed Treasury Management Systems, 62% of those under 2bn in size have not.

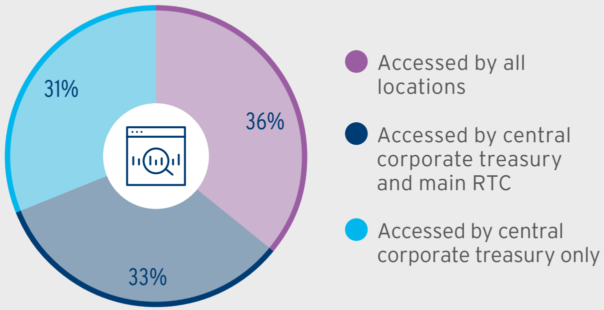
TMS Usage



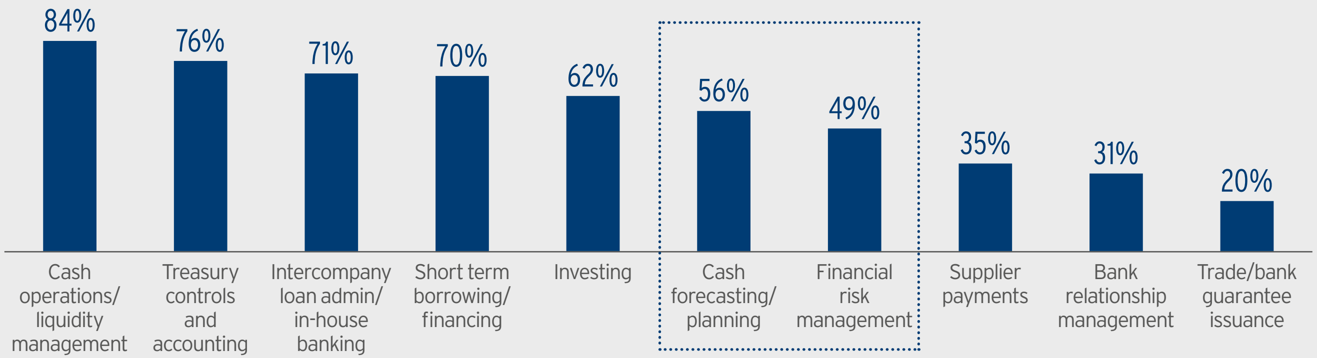
ERP Consolidation



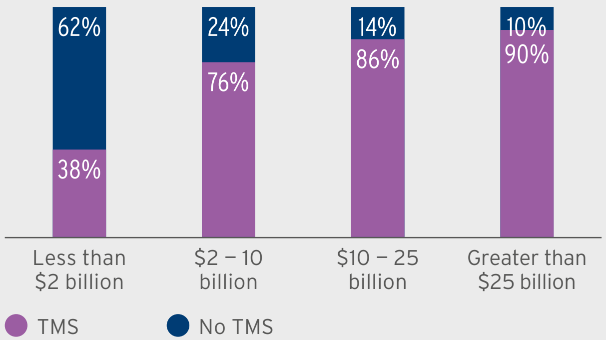
System Access



Processes Supported by TMS or ERP Treasury Module



Treasury Management System Usage by Company Size



TECHNOLOGY FUNDAMENTALS: CONSOLIDATION & INTEGRATION

A continued area of concern has been the inability of some companies to effectively integrate their technology ecosystem.

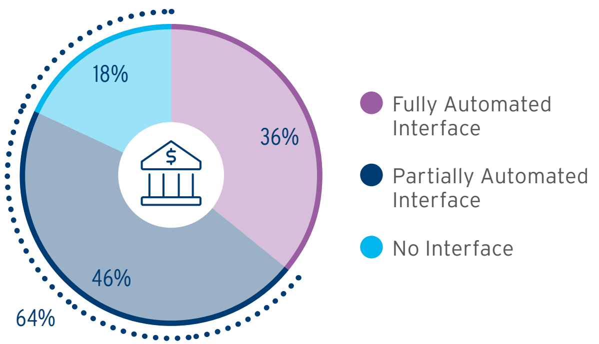
64% report that their TMS is either not integrated or only partially integrated with their ERP, a likely root cause for the significant use of manual processes to support cash flow forecasting.

79% report that they don't have a fully integrated TMS/ERP platform with their Banks, again driving the need for manual reconciliations.

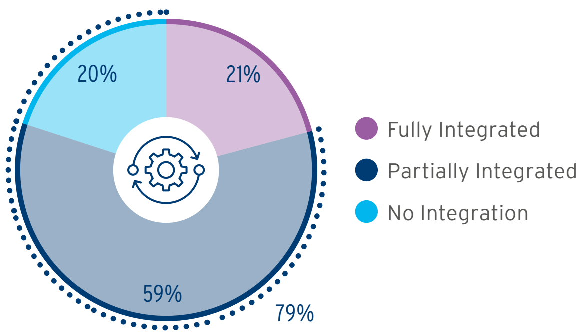
On the plus side, less than half now (49%) report multiple E-Banking platforms at each location which would indicate a shift to Bank data transmission.

"The challenge for us is that our multiyear roadmap is totally dependent on rationalisation of ERP and data strategy so interested to see how we can accelerate and not wait 2 or 3 years. Looking for solutions that can deal with multiple GL formats to aggregate the information together." ***– European Treasury, Multinational Distributor***

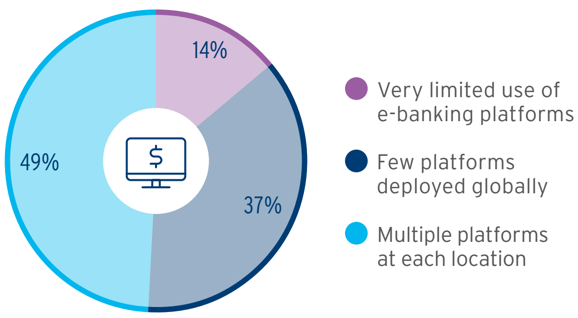
Treasury System Interface with ERP/GL



TMS/ERP Integration with Bank Systems



Usage of E-Banking Platforms



DIGITAL TREASURY TRANSFORMATION: PRIORITY FOCUS FOR MANY...

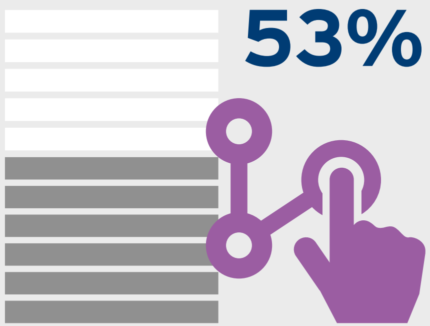
Aspirations are shifting from Descriptive Analytics (looking back, reporting what has happened) to seeking a more forward looking set of insights to better inform what actions to take to manage treasury objectives.

57% of respondents are looking at transformative opportunities across both core business and Treasury function (vs. 49% in 2018).

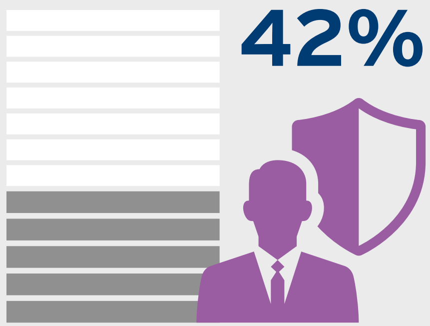
18% are looking at transformative business opportunities that could impact treasury (vs. 8% in 2018).

Only 3% are not considering digital initiatives (vs. 13% in 2018).

Formal Digital Strategy/ Policy in Place



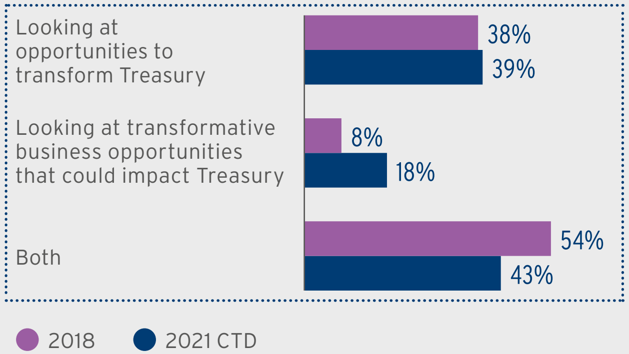
Dedicated Digital Officer in Place



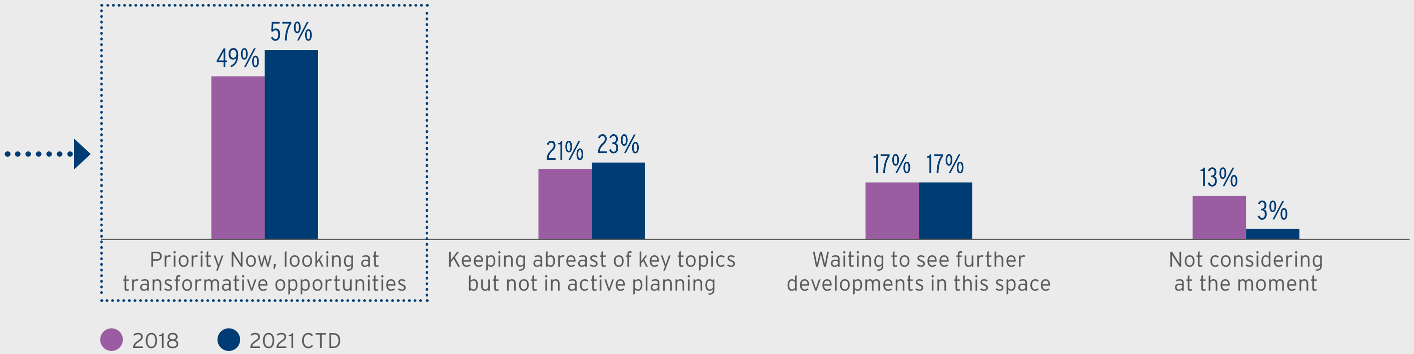
"We have mobilized a project to support more effective cashflow forecasting. This will allow us to better predict funding requirements and ultimately automate FX and investments based on prescriptive analytics."

– European multinational consumer goods company

Priority Now, looking at transformative opportunities

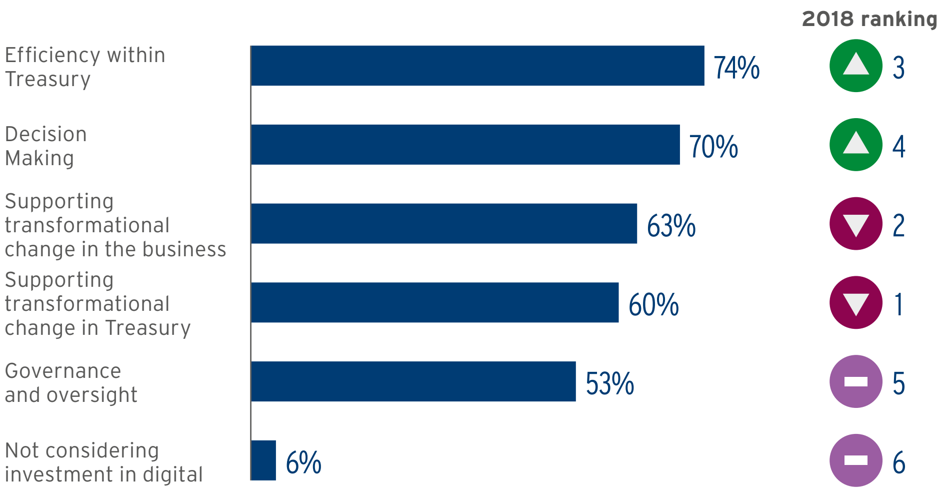


Focus on Digital Themes and Emerging Technologies



…COMPANIES ARE MOBILIZING ON OPPORTUNITIES

Expectation in Investing in Digital/Emerging Technologies

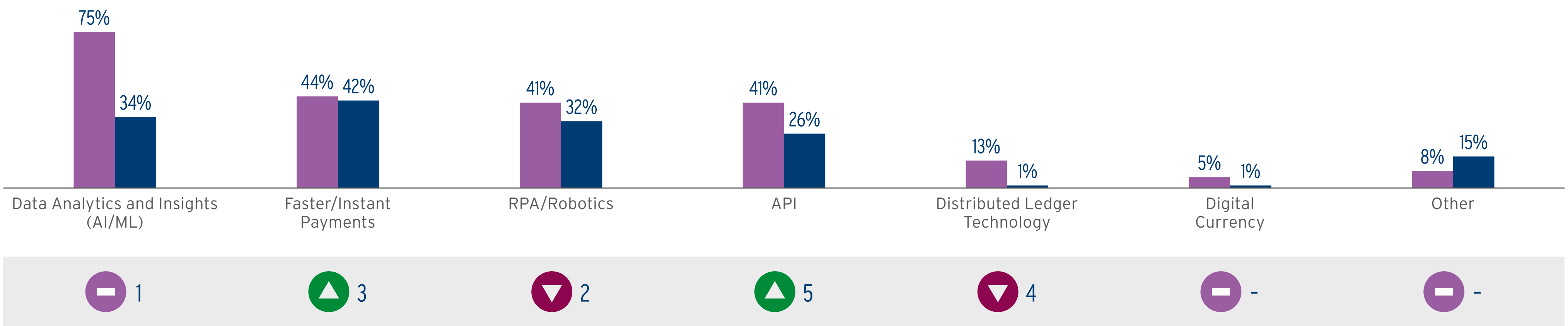


Driving Efficiency within Treasury and augmenting decision making are the top two expectations for investing in emerging technologies.

Biggest area of opportunity reported remains in the provision of data analytics and insights through ML/AI.

Utilization of faster payments has become second biggest area of focus, switching places with Robotic Process Automation.

Areas of Emerging Technologies – Opportunities and Projects Underway

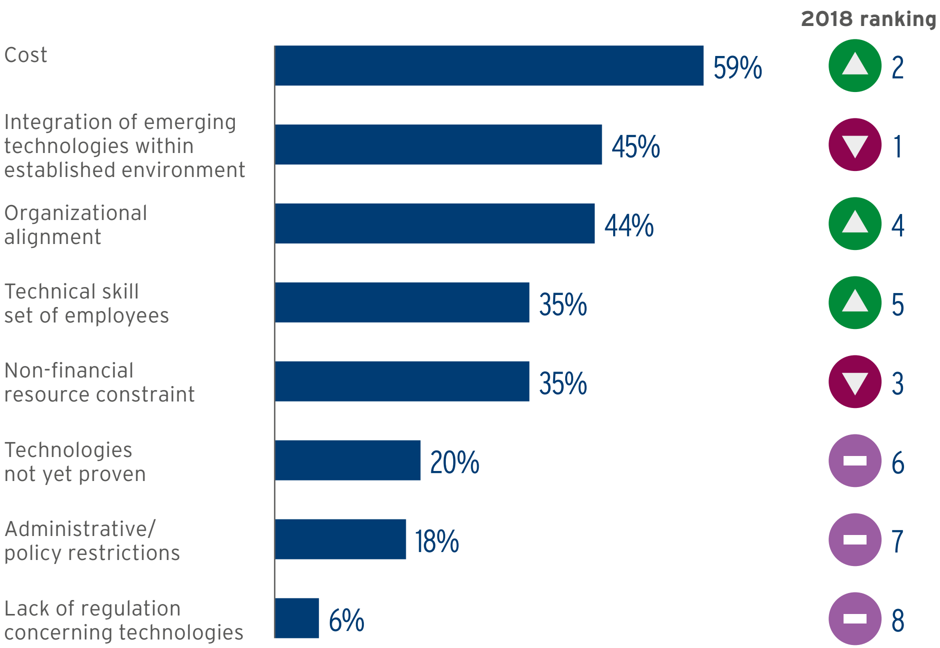


2018 ranking – Technologies under pursue

RPA – Robotic Process Automation API – Application Programming Interface AI - Artificial Intelligence ML – Machine Learning

...BUT CHALLENGES REMAIN. PARTNERSHIPS INCREASINGLY IMPORTANT

Biggest Hurdles to Treasury Transformation



"Despite the hurdles, our Covid-19 response has accelerated automation projects that were planned for the next year and indeed some that were planned to deliver in the next 5 years back into this year. Our priority is now for better data for better decision-making and instant data and decision-making where possible."

– International Treasurer, European multinational consumer goods company

Cost and Integration of emerging technologies within established environments remain the top 2 hurdles that need to be overcome for transformational change to take place.

Organizational alignment, technical skill set of employees and resource constraints are next set of challenges.

Combination suggests that achieving the right balance of people resources within the organisation and choosing the right balance of external partners are core to realizing the benefits of emerging technologies.

CYBER THREAT INCREASING: CORPORATE RESPONSE

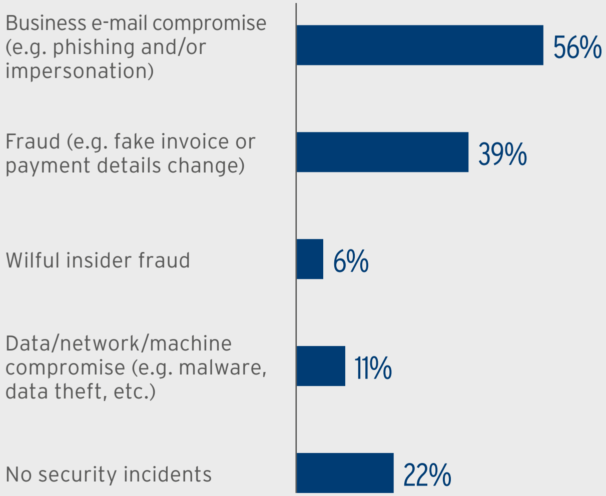
Only 22% of respondents indicate they have not experienced a security incident in the last 24 months.

Despite 98% of companies stating that Cybersecurity is a key concern at Board or C-suite Level, 60% are either unclear or don't have a risk-based assessment process in place.

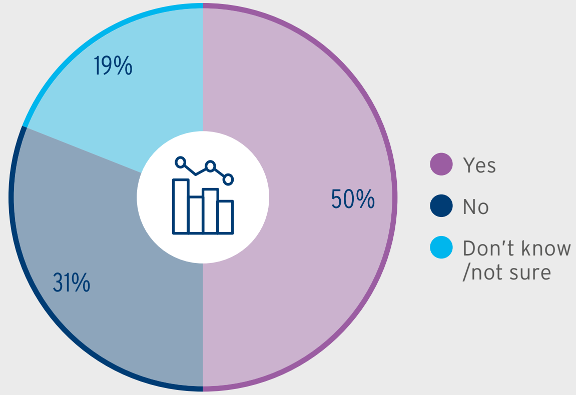
20% don't know or are not aware of a policy in place for secure information management.

43% do have a policy but believe there is room for improvement.

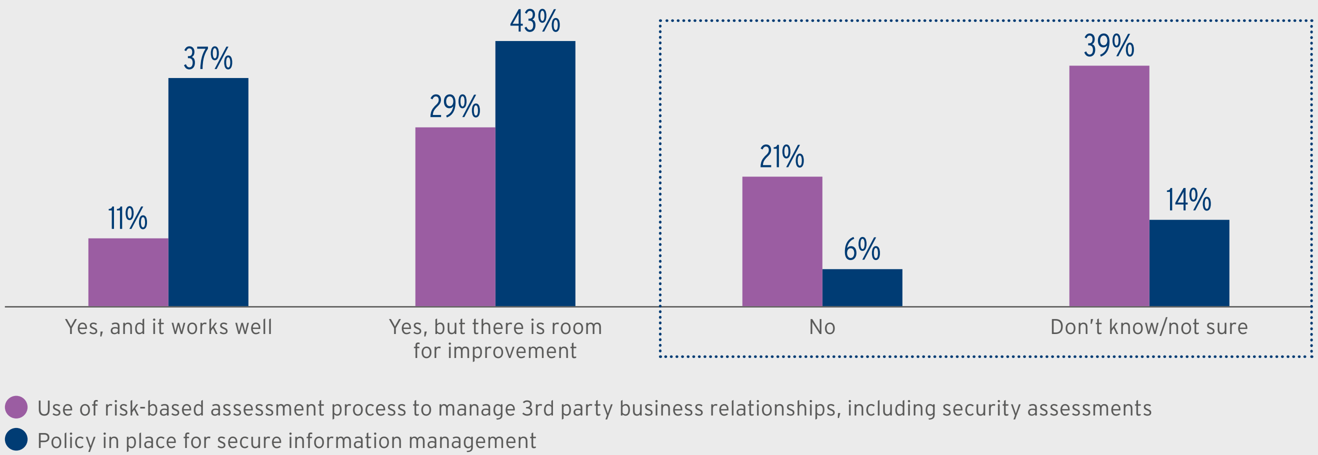
Security incidents in the last 24 months



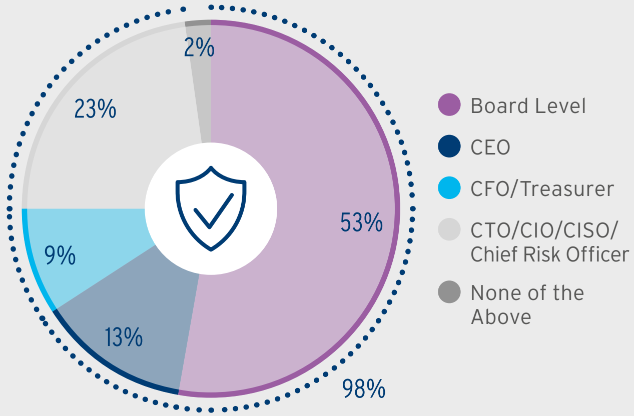
Suffered loss as a result of a fraud and/or security breach in the past 24 months

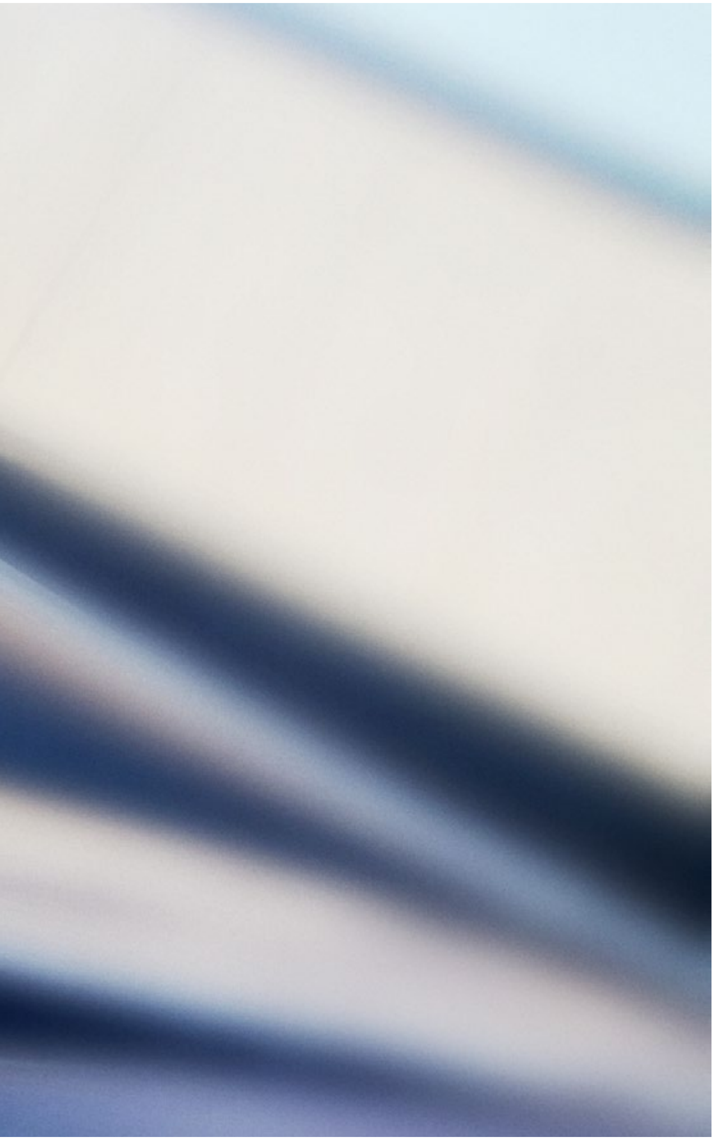


Use of risk-based assessment vs. Policy for secure Information Management



Cybersecurity is a key concern at...





CHAPTER 3: EMERGING PLAYBOOKS FOR TREASURY

- *Citi Digital Treasury Index*
- *Playbooks For Treasury*
- *Key Takeaways*

INTRODUCTION

There is broad client interest in "all things digital" in treasury and finance, including automation, emerging technologies, and data-led insights. However, as this study has shown, we should not lose sight that many clients still need to progress fundamentals in Treasury and their broader Finance organization.

At many companies, **shoring up fundamentals** remains the core focus for Treasury — advancing the centralization journey, becoming more effective at managing cash and risk (the crisis exposed those less prepared… again), and extracting operational and financial efficiency.

- Moving from people-dependent processes and dispersed accountability to centralized remit, process-based function, and core automation deployed.

Companies that are **advancing the data and digitalization journey** tend to be those that have already meaningfully progressed on fundamentals, as that helps provide opportunity, internal credibility, and funding.

- Building data and talent core, further digitalizing processes, transitioning to utilizing data insights to augment decision-making.

We find that those seeking to better understand their future digital destination for Treasury and the transition journey require a **shift in focus from measuring the past to deduce/infer what is most likely to happen in the future**.

- Prediction of future outcomes enabling provision of business insights to support growth and creation of value.

INTRODUCTION *(cont.)*

In this final section we introduce the Citi **Digital Treasury Index** for companies based on our Citi Treasury Diagnostics responses to provide tangible guidance to help clients in their **journey to digitalization**.

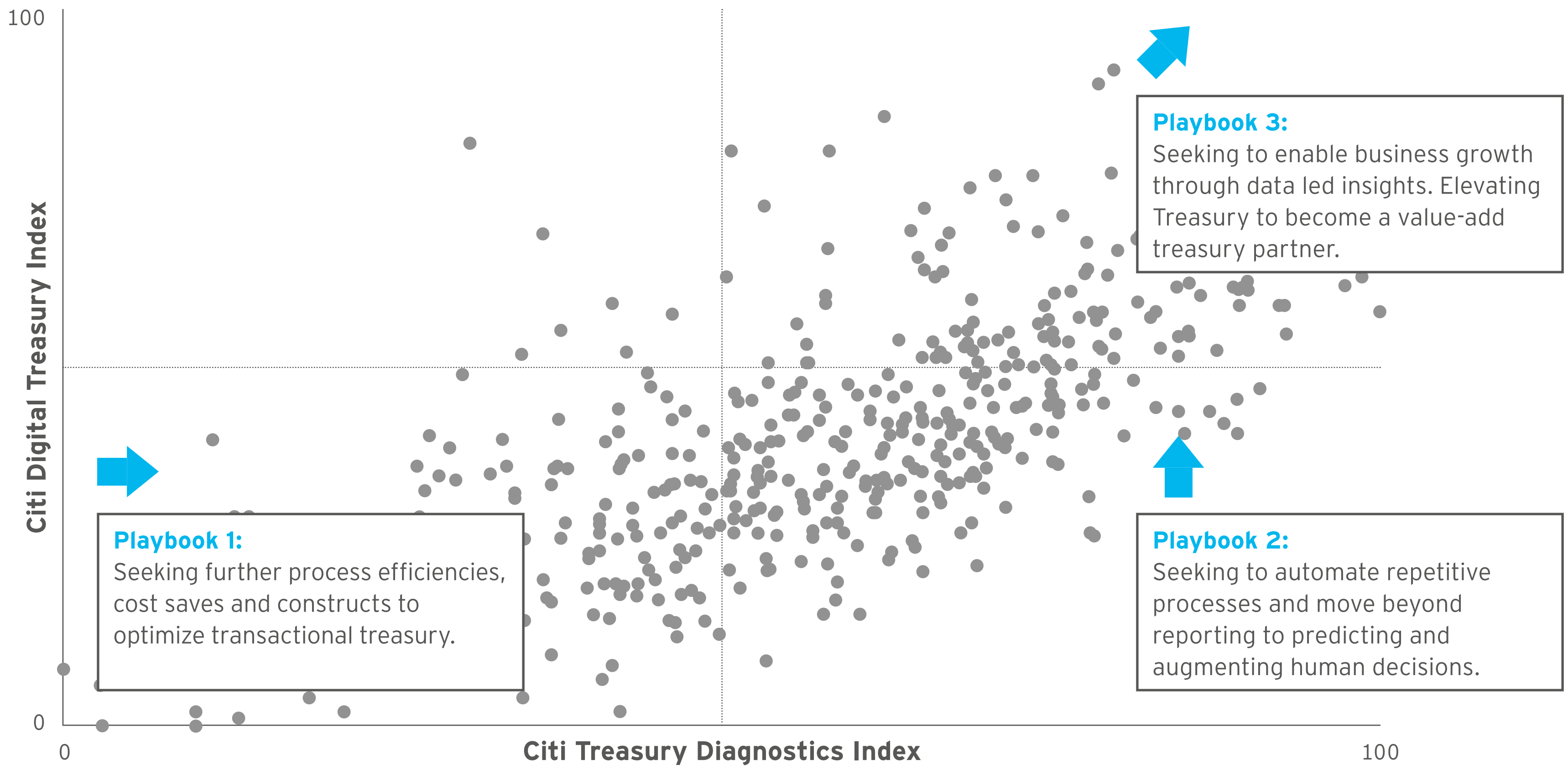
Offering **playbooks for treasury**, dependant on current treasury maturity level and future digital aspirations.

- Best Practices Treasury: Strengthening Fundamentals
- Digitalizing Treasury: Advancing Data & Digitalization
- Growth Enabling Treasury: Value-Added Business Partnership

UTILIZING THE CITI DIGITAL TREASURY INDEX...

The intersection of Digital Treasury Index and Treasury Diagnostics Index axes suggest relevant Playbooks for clients to progress the transition to Digital Treasury: from shoring up fundamentals to process-automation to data-led predictive and prescriptive insights.

Digital Treasury Index vs. Treasury Diagnostics Index



Source: Citi Treasury Diagnostics Data from Jan 2015 – Dec 2020, 476 participants

...TO PROVIDE MULTIPLE "PLAYBOOKS FOR TREASURY"

New digital technologies and the evolution of financial services has prompted corporate treasury to rethink its future. The playbooks help companies focus strategy based on treasury maturity, legacy infrastructure, appetite to digitalize, and aspirations for role of treasury.

Playbook 1

The Best Practices Treasury
Strengthening Fundamentals

- Establish consistent Treasury Policies, Processes and KPIs to manage operational and risk fundamentals.
- Implement functionally centralized organization with remit over all Treasury functions performed globally.
- Centralize management of Cash and Risk through Treasury centralization constructs; deploy an In-House Bank once feasible.
- Be catalyst for organizational deployment of Centres of Scale (e.g. Shared Service Centres) for operations efficiency, control.
- Deploy common backbone infrastructure (e.g. TMS) across all Treasury processes; advance TMS/ERP external integration.
- Partner with commercial business to ensure deep understanding of balance sheet needs, where risk generation occurs.

Playbook 2

The Digitalizing Treasury
Advancing Data & Digitalization

- Establish Digital and Data Strategy for Treasury in context of organizational priorities.
- Assess Processes and Procedures for opportunities to digitalize.
- Assess Data availability, timing and veracity to support digitalization. Assess current technology stack vs. future state.
- Assess Talent needs to deliver digital objectives.
- Use assessments to define Roadmap to deliver on Data and Digital Strategy, balancing opportunities, payoffs, and timing.
- Leverage opportunities to partner with Banks, Technology suppliers and emerging FinTechs to learn, experiment, and progress.

Playbook 3

The Growth Enabling Treasury
Value-Added Business Partnership

- Define future-state for Treasury in context of business strategy, organizational priorities, and appetite for transformation.
- Create new capacity by completing digitalization journey for routine Treasury processes.
- Leverage Data to transition from reporting to analytics, insights, and forecasting to improve decision quality.
- Experiment to establish trust in emerging technologies and algorithmic techniques for "best next action" decision-support recommendations and automation.
- Engage business partners, identify opportunities for Treasury insights to support growth, and deliver.
- Think Data, Think Big, Start Small.

KEY TAKEAWAYS FROM THIS STUDY

The advent of new digital technologies and the evolution of financial services has prompted corporate treasury to rethink the techniques deployed to manage risk and how, with treasury's broad access to company data, it may best utilize emerging solutions to offer business insights. Effective treasury policies, delivered through processes and procedures, managed through key performance indicators is arguably the foundation for achieving financial risk management objectives and a best-in-class treasury function.

While the transition to digital treasury through process automation and deployment of emerging techniques to utilize data and data insights is underway, challenges remain. Establishing Data Veracity is fundamental to realizing opportunities and partnerships are increasing in importance.

Broad client interest in "all things digital" in treasury and finance, including automation, emerging technologies, and data-led insights. However, we should not lose sight that many companies still need to resolve Treasury fundamentals and challenges in their broader Finance organization. Depending on factors such as treasury maturity, legacy infrastructure, appetite to automate and level of aspiration for the role in which treasury will play, new playbooks for treasury are now emerging to achieve the next level of performance.

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