

The Boston Consulting Group (BCG) is a global management consulting firm and the world's leading advisor on business strategy. We partner with clients from the private, public, and not-forprofit sectors in all regions to identify their highest-value opportunities, address their most critical challenges, and transform their enterprises. Our customized approach combines deep insight into the dynamics of companies and markets with close collaboration at all levels of the client organization. This ensures that our clients achieve sustainable competitive advantage, build more capable organizations, and secure lasting results. Founded in 1963, BCG is a private company with 77 offices in 42 countries. For more information, please visit bcg.com.



In the Center of the Storm

Insights from BCG's Treasury Benchmarking Survey 2012

AT A GLANCE

BCG's second Treasury Benchmarking Survey was aimed at deepening knowledge in critical topic areas and at collecting data to facilitate ongoing discussions among bank treasurers. A total of 25 leading banks across Europe participated in our interviews, which painted a portrait of a rapidly changing domain—one characterized by great concern about the daunting challenges as well as by great enthusiasm for the opportunities to help reshape the industry landscape.

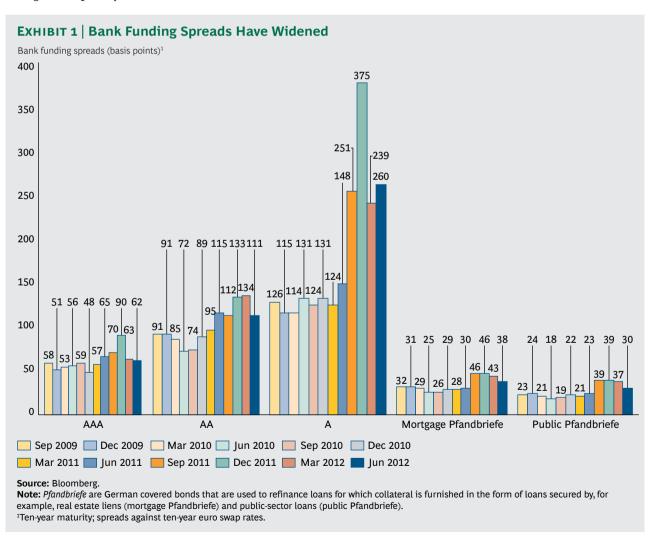
MARKET EVOLUTION HAS BROUGHT SIGNIFICANT CHANGE

The financial crisis, which started as a subprime crisis and developed into a banking-confidence crisis, has now become a full-fledged euro and sovereign crisis. This development had not been anticipated when Basel III liquidity and funding rules were created. Also, bank funding spreads have increased as a result of individual rating downgrades, lower confidence in the interbank market, and underlying country spreads.

THREE THEMES HAVE EMERGED AS TOP PRIORITIES

The treasury operating model, funding and liquidity issues, and funds transfer pricing have been cited as crucial areas for development by bank treasurers.

Two years have passed since The Boston Consulting Group conducted its first Treasury Benchmarking Survey in 2010, and these have not been easy years for bank treasury departments. The financial crisis has evolved into a sovereign and euro crisis, funding spreads have widened, Basel III liquidity rules have been defined, and short-term liquidity costs have hit new plateaus amid low interest rates and wider liquidity spreads. (See Exhibit 1.) The role of central-bank funding has changed completely.



In our discussions with bank treasurers since the 2010 survey, including those at a BCG treasury roundtable held in Frankfurt, three concerns emerged as top priorities:

Over the past two years, there have been significant changes to the market environment.

- The Treasury Operating Model. The key issues are basic governance, the role of the treasury among the bank's steering functions, the required headcounts and capacities, and questions surrounding regionalization and "divisionalization"—the creation of dedicated treasury functions within business units.
- Funding and Liquidity. What is the best way to react to regulatory demands and to the new (and continually changing) market environment, particularly with regard to money market and capital market funding? Key issues include the increasing importance of loan-to-deposit ratios, difficulties in long-term and foreign exchange (FX) funding, and the increasing nationalization of funding strategies.
- Funds Transfer Pricing. This topic has grown in importance because changes to the FTP model can influence the profitability of entire business divisions. Meanwhile, the underlying principles of FTP are the subject of much conjecture. The question of how to select the "right" internal-funding curve (or curves) is seen as critical.

Our second Treasury Benchmarking Survey, conducted in early 2012, was aimed at deepening knowledge in these topic areas and collecting data to facilitate ongoing discussions among bank treasurers. A total of 25 leading banks across Europe participated in our interviews, which painted a portrait of a rapidly changing domain—one characterized by great concern about the daunting challenges as well as by great enthusiasm for the opportunities to help reshape the industry land-scape. Although we cannot capture the full depth and breadth of our findings in this brief paper, our aim is to offer a clear picture—by examining market evolution, operating models, funding and liquidity issues, and FTP—of how bank treasury departments are navigating through turbulent times.

Market Evolution Has Brought Significant Change

Over the past two years, there have been significant changes to the market environment. Many, such as the following, have had considerable impact on how treasury departments operate:

- The financial crisis, which started as a subprime crisis and developed into a banking-confidence crisis, has now become a full-fledged euro and sovereign crisis. This development had not been anticipated when Basel III liquidity and funding rules were created.
- Bank funding spreads have widened as a result of individual rating downgrades, lower confidence in the interbank market, and underlying country spreads.
 While the current general low-interest-rate environment has helped mitigate the impact of this change, liquidity spreads have become a sizable cost component that banks will need to handle skillfully. These wider spreads represent a

significant challenge, as they not only reduce profitability but also endanger parts of bank business models. Indeed, some large corporations have lower funding spreads than the banks that seek to offer them financing products, so there is a clear tendency for companies to eliminate the intermediary and enter the capital markets directly (which at the same time can offer banks other opportunities such as providing advisory services).

- The European Central Bank (ECB) had to enter the picture, offering tender rates ranging from 1 to 2 percent—a level not seen since 1999. (March 2009 was the first time the tender rate dropped below 2 percent.) Furthermore, a new instrument, the three-year long-term refinancing offer (LTRO), was put in place and applied in December 2011 (€489 billion) and February 2012 (€530 billion).¹ In May 2012, the ECB suggested that a third such LTRO might be extended, if needed.² It is worth noting, however, that despite this massive inflow of liquidity into the system, the liquidity has failed to circulate, as is clearly indicated by all-time highs in the use of the ECB overnight facility and the evolution of funding spreads.
- The increasing economic trouble in the euro zone has exacerbated U.S. investors' loss of confidence and encouraged their retreat. As a consequence, European banks now find it difficult to raise U.S. dollar funding on their own and have to rely on FX or cross-currency swaps instead. Given the scarcity of long-term cross-currency swaps and the high cost associated with this form of FX funding, European banks have started to reshape their business models, pulling out of dollar-denominated business.

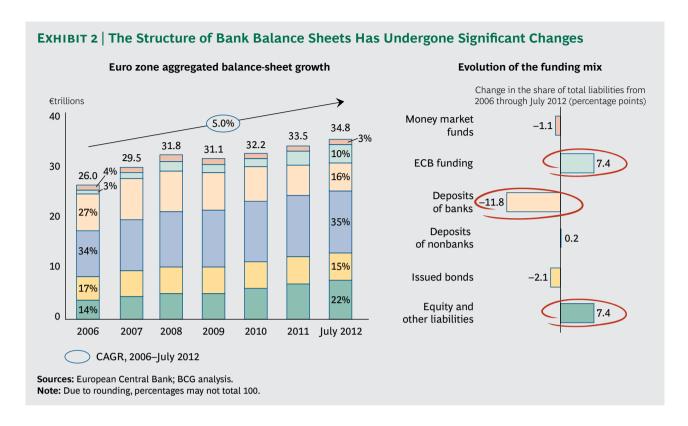
It is worth noting that despite the massive inflow of liquidity into the system, the liquidity has failed to circulate.

At the same time, the regulatory environment has also evolved rapidly. Stricter solvency rules, higher capital requirements, and additional required stress buffers have all put huge pressure on banks to deleverage. The introduction of mandatory liquidity and funding ratios will require banks to hold additional buffers of liquidity and long-term funding—in predefined asset classes (that, ironically, strongly favor government bonds, which were deteriorating in credit quality just as these regulations were being finalized). Taken as a whole, new regulatory changes do not merely create additional compliance obligations and strengthen the influence of risk and liquidity managers—they also call entire business models into question and trigger a potential change to the product landscape. An analysis of balance sheet development in euro zone banks shows the results of these changes. (See Exhibit 2.)

The key elements include the following:

- Interbank deposits decreased by nearly 12 percentage points from the end of 2006 through July 2012.
- Over the same period, ECB funding increased by more than 7 percentage points, as did equity and other liabilities.

The consequence has been an aggregated balance-sheet structure with less than 20 percent of overall funding coming from interbank deposits and money market



funds. This dramatic change in the sourcing structure—and thus the "production cost" of banks—will have a lasting impact on the industry.

The Treasury Operating Model: A CFO Paradigm Is Evolving

The significant changes to the market and regulatory landscape have had a powerful influence on the role of bank treasurers. Today, the treasurer is expected to be more than an administrator of resources or someone who interacts with financial markets on the bank's behalf. The treasurer's tasks have evolved to combine a steering role, through which treasury decisions have an immediate impact on all businesses, and a risk management role, through which treasury is also charged with securing the bank's liquidity health.

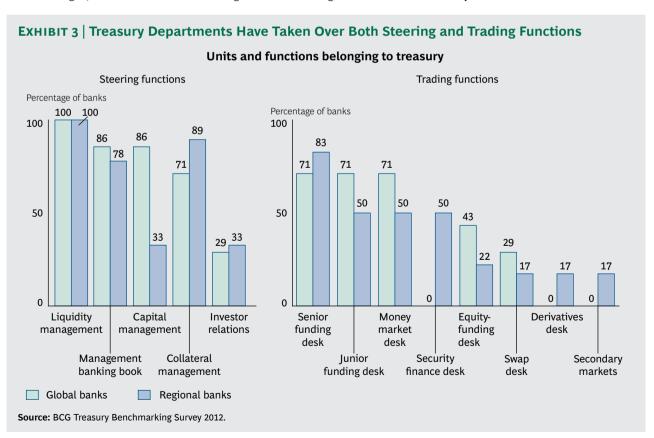
In fact, liquidity risk management has become a core treasury function, joining the more traditional roles of interest-rate risk management (across the banking book) and capital management (which is usually shared across risk, financial-control, and treasury functions). This development is having direct impact on the treasury operating and governance model.

Historically, there have been two broad prototypes for the treasurer role—the market- and the CFO-oriented models—although most banks have customized these to one extent or another. The market-oriented model integrates the treasury function into the bank's financial-markets division, which sets profit targets for treasury and oversees its running of funding, trading, and derivatives desks. Alternatively, under the CFO-oriented model, treasury focuses largely on steering tasks,

reports to the bank's CFO, and does not have direct client or trading responsibility. The extent to which these models are customized varies according to each bank's own choices and capabilities. (See Exhibit 3.)

According to our survey and interviews, broad versions of these two prototypes still exist. And a closer look reveals a pattern: the larger and more complex the bank, the more likely its treasury governance model resembles the CFO-oriented model. Among our survey participants, 70 percent of global players said they follow this model. Conversely, smaller banks have a tendency to integrate treasury operations into their financial-markets divisions. According to our survey, roughly two-thirds of regional banks follow this approach. Clearly, global banks (which we define as those whose balance sheets exceed €500 billion) tend not to organize their treasury functions as profit centers, while regional banks (defined as banks whose balance sheets total less than €500 billion) frequently do so.

Overall, the landscape seems to be shifting toward a standard CFO-oriented model, with a strong liquidity-control function resting with the chief risk officer. Almost all large multinational banks currently operate under such a model. Some of the smaller banks already employ this model, others are considering it or have begun moving in this direction, and still others say that such a model is not currently feasible for them. Banks in the third group cite such factors as a potential lack of credibility for the treasury (if separated from the market function), possible cost disadvantages, and a reluctance to change models amid great market uncertainty.



The shift in the role of the bank treasurer has been driven largely by changes that most banks have undergone over the past two years. According to our survey, four out of five banks have increased the importance of funding planning in the overall planning process, fostered new long-term funding sources, and introduced new structural liquidity-risk ratios. Two out of three banks have actively reduced the amount of liquidity maturity transformation they bear and have tightened existing funding limits. More than half the banks in our survey have carried out a deleveraging program over the past two years.

More than half the banks in our survey have carried out a deleveraging program over the past two years. To be sure, liquidity risk management has become a core treasury function along with interest-rate risk management and capital management responsibilities. Furthermore, in many banks, funding and money market desks are now linked with treasury units. Again, there is an evident difference between large multinational and smaller regional banks. The latter, in most cases, have linked their trading functions to treasury—giving it market access and profit center functions. Within the group of global players, we have observed two models:

- Some banks give the treasury limited trading functions and limited direct market access.
- Others have their treasury function work with their investment-banking division for market access through internal tickets.

Finally, we have observed another impact of crisis-related and regulatory developments: treasury organizations are experiencing increasing nationalization of these functions, along with centralization. Divisional treasuries are decreasing in importance. These tendencies follow regulatory pressures to decrease cross-border complexity and create more self-sustaining national treasury units that oversee liquidity and funding operations in one country only.

Funding and Liquidity: Coping with Dry Markets and Tightening Regulation

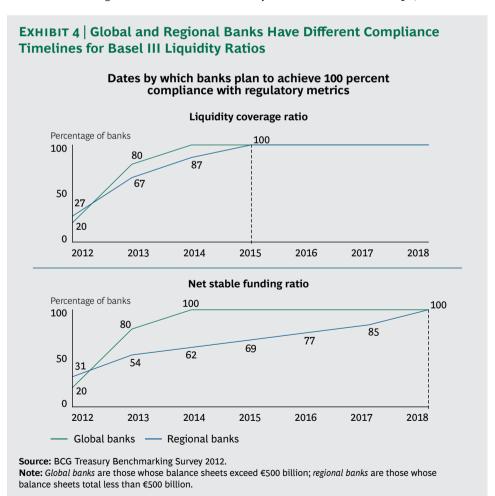
While some details related to the recommendations of the Bank for International Settlements on an "international framework for liquidity risk measurement, standards, and monitoring" are still under discussion, it has become clear that funding and liquidity issues will become part of the overall regulatory framework—with regulators aiming to ensure sufficient liquidity buffers and limited liquidity-maturity-transformation risks.³ Banks have reacted accordingly, and as a result, most are now either technically able to calculate and report the net stable funding ratio (NSFR) and the liquidity coverage ratio (LCR) or are planning to finish their technical-implementation programs by 2013.

Compliance is a key issue, apart from the question of purely technical reporting capabilities. Given that meeting the NSFR and LCR targets of 100 percent not only limits risk but also has severe consequences on profitability (that is, it introduces significant costs), banks are very carefully weighing the pros and cons of early compliance. According to the current discussion papers, banks must achieve an LCR of 100 percent by 2015, while NSFR compliance will not be required before 2018

(and, given the ongoing discussions concerning a "monitoring metric," NSFR compliance may never be required). European banks alone will have to raise approximately €1 trillion in additional highly liquid assets and will require around €2 trillion in additional long-term funding, so the introductory grace time will be badly needed.⁴

Again, our survey revealed different approaches among larger and smaller banks. (See Exhibit 4.) Global banks, which are highly dependent on interbank funding and liquidity, place great value on how they are perceived in the capital markets. They also know that they are under regulators' scrutiny. As a consequence, almost all global banks in our survey stated that they aim to achieve full compliance with both NSFR and LCR by 2013 or 2014 at the latest—well ahead of the official requirement.

Smaller, regional banks are much more varied in their approaches. First, wary of the high cost of full compliance, they are trying to avoid moving earlier than competitors. Furthermore, given recent ECB activity, there is sufficient liquidity in the market. Most banks today are focusing on LCR and planning to address their structural funding situation—as measured by NSFR—in a second step (since there



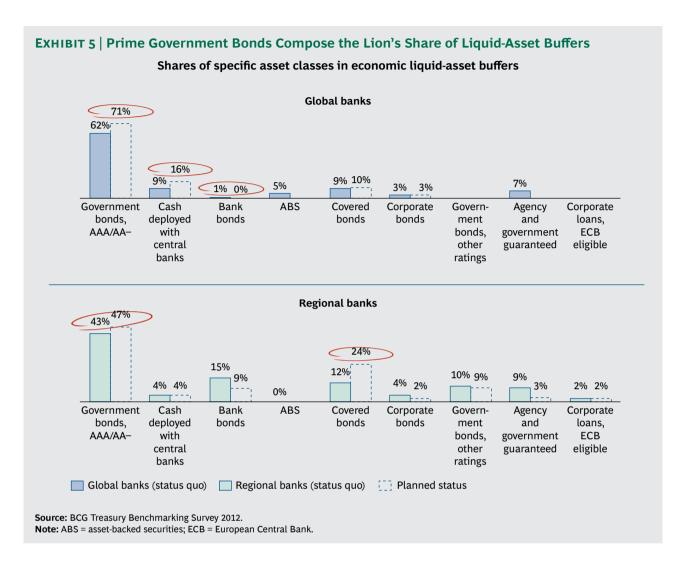
is still uncertainty about the final details of the NSFR regulation). In addition, changing the funding structure is a longer-term move than simply building liquidity buffers. Consequently, small and midsize banks are planning to use the implementation timelines until 2015 and 2018 before aiming to achieve 100 percent LCR and NSFR compliance.

It will be interesting to observe the evolving role of the regulatory funding and liquidity metrics compared with internal (economic) steering tools. Our survey showed that banks see the regulatory metrics playing a significant role in internal steering. (Almost half of our participants believe that these metrics will be as important as economic liquidity ratios.) We fully expect that banks will align their funding and liquidity steering so that LCR and NSFR will be considered strict constraints (even though these regulations ignore a number of important details about the funding and liquidity situation of a bank).

The small and midsize banks in our survey are planning to double the share of covered bonds in their liquid-asset buffers. Our belief in the strong influence of regulatory requirements on real-life funding and liquidity management is supported by analysis of the composition of banks' liquidity buffers. Even in a period of a sovereign crisis—with low returns for prime government bonds and significant risk (or at least, volatility) associated with some sovereigns—government bonds make up half to two-thirds of banks' liquid-asset buffers, followed by central-bank cash and covered bonds. (See Exhibit 5.) All of these asset classes are recognized by the Basel III funding and liquidity rules, and banks are not only holding them now but are also planning to hold more of them in the future. For example, the small and midsize banks in our survey are planning to double the share of covered bonds in their liquid-asset buffers. Our conversations with treasurers further revealed that banks have significantly increased their cash positions despite the related high costs, because the alternative (low-yield government bonds with significant volatility) is equally unattractive.

Our survey also indicated the following current best-practice approaches to liquidity buffer management:

- Ring-Fencing. A significant share (sufficient to withstand a liquidity crisis) of the
 liquid-asset buffer is held as a ring-fenced book within the treasury—beyond the
 reach of the bank's trading units. This reserve ensures rapid access to liquidity if
 need be, avoiding operational risks such as policy breaches or miscalculation
 and misreporting of unencumbered assets.
- Central Overview of Unencumbered Assets. This practice ensures that, beyond the ring-fenced liquidity book, treasury has full transparency regarding all existing unencumbered collateral, which can be used to generate additional liquidity (through internal repo and central-bank access).
- Liquid-Asset Buffer Sizing. A stress scenario is applied to the economic-liquidity-gap model, a discretionary management buffer (for complying with the bank's liquidity-risk appetite) is added, and regulatory requirements are considered.
- Cost of the Liquid-Asset Buffer. The overall cost of holding the liquid-asset buffer is calculated by treasury (for example, as a negative carry on the portfolio) and



broken down to the business units, revealing the underlying liquidity need of each unit under the stress scenario.

Already, these liquidity-buffer best practices have been implemented by most large global banks, while many smaller and midsize banks are still lagging behind (but intend to move in the same direction). That said, not only short-term liquidity management is undergoing massive changes. Structural and FX liquidity management are also being heavily debated.

Most of the banks we surveyed stated that they have improved their funding-planning methodologies, fostered new funding sources, and introduced new funding ratios over the past two years in order to improve their structural-liquidity management. Many banks have also limited new-business initiation, undertaken deleveraging programs, and simply tightened their funding limits. Still, many banks are performing liquidity maturity transformation (which has always been a vital economic function of banks). Global banks will likely allocate the profit (or loss) from this maturity transformation back to the businesses, while smaller and mid-

size banks will likely keep the maturity transformation result as a "treasury result" in the overhead or blend it with the results of the financial-markets division.

There is still methodological room for improvement in FX-funding risk management. Within structural-funding management, foreign-currency management is causing particular problems for many treasurers. With many funding markets (especially interbank) drying up, many banks are facing massive difficulties in generating the amount of (mid- to long-term) FX funding they need. They frequently need to fall back on cross-currency or FX swaps, but these come at high cost, have limited availability, and carry strong implications for P&L and risk-weighted-asset (RWA) volatility. In the case of cross-currency swaps, RWA can rise owing to credit-value adjustment charges. As a consequence, there is an increasing tendency to create more self-sustained units, set loan-to-deposit target ratios, and reduce—as much as possible—the need for cross-border FX funding and risk management.

In our view, there is still methodological room for improvement in FX-funding risk management. One reason is that most banks differentiate their FX positions by currency but not (yet) by country, thus neglecting country-specific risks. However, a number of banks we interviewed are in the process of improving the sophistication of their FX-management capabilities.

Funds Transfer Pricing: Complex Methodologies, Dramatic Impact

Banks need to answer two questions in order to set up an FTP mechanism that allocates liquidity optimally: Which curve should be used for pricing liquidity? And how should the associated behavioral cash flows be modeled? In today's market, the discussion is focused on the first question, because traditional approaches no longer apply.

Over the past few years, the senior unsecured curve has been the standard answer to this question (aside from using a covered-bond curve for covered-bond-eligible assets). Today, the use of separate funding curves for commercial and investment banking is under discussion, driven by business stability and rating considerations. Moreover, the decreasing profitability of deposit investments is placing treasurers at the center of a discussion that is very technical and that also concerns fundamental strategic decisions—and thus needs board-level input.

Clearly, banks are starting to de-average. Many are basing their FTP mechanisms on private-placement curves and applying different curves to different parts of the business, reflecting the inherent risk associated with each. Assets that have stronger self-funding characteristics (such as those eligible for covered-bond pools) are treated differently from those that rely purely on unsecured wholesale funding. The FTP scheme serves as a tool for implementing balance-sheet design strategies, helping to achieve an optimal structure by setting the right incentives. A purely mechanical reflection of current funding costs often fails to achieve this goal.

As for best practices, our survey showed a clear standard model: marginal gross funding cost, which means no netting of funding charges and credits within a business unit and no averaging of the overall funding-cost position. Nonetheless, a

full third of our survey participants are using *actual* cost—not *marginal* cost—as the basic approach to their FTP system.

Today, given the fact that the issue is not only the price of funding but also the sheer *availability* of funding, we expect the discussion around the right funding curve to continue. These discussions will be driven by the business model of the bank and whether it is more a loan-driven or deposit-driven business.

Taking Action

The bank treasury landscape has evolved dramatically since the 2008–2009 financial crisis. We believe there will be additional fundamental changes beyond the current market turmoil. The banking treasury of the future will need to act on the following imperatives:

- Stay closely embedded in the bank's steering and liquidity-risk management processes.
- Assume full oversight concerning regulatory requirements on funding and liquidity and their implications for the bank's steering cycle.
- Take responsibility for the bank's balance-sheet structure, including all existing assets, liabilities, and equity.
- Manage all financial resources in a coherent way—particularly funding and liquidity but also capital (in cooperation with other units of the bank).
- Establish sound methodologies by which to determine and allocate the use and cost of the bank's financial resources.

Ultimately, we believe that market evolution will result in a strengthened role for bank treasury functions. At the same time, we concede that the required developments will pose significant challenges. Especially amid severe cost concerns and P&L pressure, the increased responsibility may be added to existing tasks. However, given the importance of funding and liquidity and the fact that more business markets are being driven by the liabilities side of the balance sheet, there seems to be no alternative to bringing the treasury function closer to the core of the bank's steering.

NOTES

- 1. For information from the European Central Bank on open-market operations, see http://www.ecb.int/mopo/implement/omo/html/index.en.html.
- 2. "ECB official says more LTRO is possible," FT, May 31, 2012, http://www.ft.com/intl/cms/s/0/5ef5a1dc-ab1c-11e1-b675-00144feabdc0.html#axzz1yQdWQwWW.
- 3. The European Union is expected to include the recommendations as part of the Capital Requirements Regulation and Capital Requirements Directive IV, although it is not yet clear which will be regulation and which directive.
- 4. European Banking Authority, Results of the Basel III Monitoring Exercise as of 30 June 2011, April 2012.

About the Authors

Peter Neu is a partner and managing director in the Frankfurt office of The Boston Consulting Group and a BCG Fellow. You may contact him by e-mail at neu.peter@bcg.com.

Pascal Vogt is a principal in the firm's Cologne office and a coleader of the treasury topic. You may contact him by e-mail at vogt.pascal@bcg.com.

Michael Widowitz is a principal in BCG's Vienna office and a coleader of the treasury topic. You may contact him by e-mail at widowitz.michael@bcg.com.

Acknowledgments

This report and the underlying BCG Treasury Benchmarking Survey would not have been possible without the cooperation of the participating banks, as well as the support of the firm's Financial Institutions practice. The authors would especially like to thank all of our survey participants for their time and their trust.

The authors would also like to thank Philip Crawford for his editorial direction, as well as other members of the editorial and production teams, including Katherine Andrews, Gary Callahan, Elyse Friedman, Kim Friedman, and Sara Strassenreiter.

For Further Contact

If you would like to discuss this report, please contact one of the authors.





THE BOSTON CONSULTING GROUP

Abu Dhabi Chicago Amsterdam Cologne Athens Copenhagen Atlanta Dallas Auckland Detroit Bangkok Dubai Barcelona Düsseldorf Beijing Frankfurt Berlin Geneva Hamburg Boston Helsinki Brussels **Budapest** Hong Kong **Buenos Aires** Houston Canberra Istanbul Casablanca Jakarta Chennai Johannesburg

Kiev Kuala Lumpur Lisbon London Los Angeles Madrid Melbourne **Mexico City** Miami Milan Minneapolis Monterrey Montréal Moscow Mumbai Munich

Nagoya New Delhi New Jersey New York Oslo Paris Perth Philadelphia Prague Rio de Janeiro Rome San Francisco Santiago São Paulo Seattle Seoul

Shanghai Singapore Stockholm Stuttgart Sydney Taipei Tel Aviv Tokyo Toronto Vienna Warsaw Washington Zurich

bcg.com