



**BOARD OF GOVERNORS**  
OF THE  
**FEDERAL RESERVE SYSTEM**

WASHINGTON, D.C. 20551

DIVISION OF BANKING  
SUPERVISION AND REGULATION

**SR 16-3**

**March 1, 2016**

**TO THE OFFICER IN CHARGE OF SUPERVISION AT EACH RESERVE BANK AND  
TO DOMESTIC AND FOREIGN LARGE FINANCIAL INSTITUTIONS**

**SUBJECT: Interagency Guidance on Funds Transfer Pricing Related to Funding and  
Contingent Liquidity Risks**

**Applicability:** This guidance applies to large financial institutions that are domestic bank holding companies, savings and loan holding companies, and state member banks with consolidated assets of \$250 billion or more or foreign exposure of \$10 billion or more, and to the U.S. operations of foreign banking organizations with combined U.S. assets of \$250 billion or more.

The Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, and the Office of the Comptroller of the Currency are issuing the attached guidance to address weaknesses observed in large financial institutions' funds transfer pricing (FTP) practices related to funding risk (including interest rate and liquidity components) and contingent liquidity risk.<sup>1</sup> The guidance builds on the principles of sound liquidity risk management described in SR letter 10-6, "Interagency Policy Statement on Funding and Liquidity Risk Management,"<sup>2</sup> and incorporates elements of the international statement issued by the Basel Committee on Banking Supervision titled "Principles for Sound Liquidity Risk Management and Supervision."<sup>3</sup>

FTP is an important tool for managing a firm's balance sheet structure and measuring risk-adjusted profitability. By allocating funding and contingent liquidity risks to business lines, products, and activities within a firm, FTP influences the volume and terms of new business and

<sup>1</sup> While the guidance specifically addresses supervisory expectations for FTP practices related to funding and contingent liquidity risks, firms may incorporate other risks, such as compliance risk, in their overall FTP frameworks.

<sup>2</sup> SR letter 10-6, "Interagency Policy Statement on Funding and Liquidity Risk Management" is available at <http://www.federalreserve.gov/boarddocs/srletters/2010/sr1006.htm>.

<sup>3</sup> The Basel Committee on Banking Supervision statement on "Principles for Sound Liquidity Risk Management and Supervision" (September 2008) is available at <http://www.bis.org/publ/bcbs144.htm>.

ongoing portfolio composition. If done effectively, FTP promotes more resilient, sustainable business models. Conversely, failure to consistently and effectively apply FTP can misalign the risk-taking incentives of individual business lines with the firm's risk appetite, resulting in a misallocation of financial resources. This misallocation can arise in new business and ongoing portfolio composition where the business metrics do not reflect risks taken, thereby undermining the business model. Examples include entering into excessive off-balance sheet commitments and on-balance sheet asset growth because of mispriced funding and contingent liquidity risks.

FTP is also an important tool for centralizing the management of funding and contingent liquidity risks for all exposures. Through FTP, a firm can transfer these risks to a central management function that can take advantage of natural offsets, centralized hedging activities, and a broader view of the firm.

A firm should use the principles laid out in the guidance to develop, implement, and maintain an effective FTP framework. In doing so, a firm's risk-taking incentives should better align with its risk management and strategic objectives. The framework should be adequately tailored to a firm's size, complexity, business activities, and overall risk profile.

Reserve Banks are asked to distribute this letter to financial institutions in their district that are domestic bank and savings and loan holding companies and state member banks with consolidated assets of \$250 billion or more or foreign exposure of \$10 billion or more, and foreign banking organizations with combined U.S. assets of \$250 billion or more and to appropriate supervisory staff. Questions regarding this letter should be directed to staff in the Risk Policy section: Adam Trost, Senior Supervisory Financial Analyst, at (202) 452-3814. In addition, questions may be sent via the Board's public website.<sup>4</sup>

Michael S. Gibson  
Director

**Attachment:**

- *Interagency Guidance on Funds Transfer Pricing Related to Funding and Contingent Liquidity Risks*

**Cross References to:**

- SR letter 11-7, "Guidance on Model Risk Management"
- SR letter 10-6, "Interagency Policy Statement on Funding and Liquidity Risk Management"

---

<sup>4</sup> <http://www.federalreserve.gov/apps/contactus/feedback.aspx>

**Interagency Guidance on Funds Transfer Pricing  
Related to Funding and Contingent Liquidity Risks**

**March 1, 2016**

The Board of Governors of the Federal Reserve System (FRB), the Federal Deposit Insurance Corporation (FDIC), and the Office of the Comptroller of the Currency (OCC) are issuing this guidance on funds transfer pricing (FTP) practices related to funding risk (including interest rate and liquidity components) and contingent liquidity risk at large financial institutions (hereafter referred to as “firms”) to address weaknesses observed in some firms’ FTP practices.<sup>1</sup> The guidance builds on the principles of sound liquidity risk management described in the “Interagency Policy Statement on Funding and Liquidity Risk Management,”<sup>2</sup> and incorporates elements of the international statement issued by the Basel Committee on Banking Supervision titled “Principles for Sound Liquidity Risk Management and Supervision.”<sup>3</sup>

**Background**

For purposes of this guidance, FTP refers to a process performed by a firm’s central management function that allocates costs and benefits associated with funding and contingent liquidity risks (FTP costs and benefits), as measured at transaction or trade inception, to a firm’s business lines, products, and activities. While this guidance specifically addresses FTP practices related to funding and contingent liquidity risks, firms may incorporate other risks in their overall FTP frameworks.

FTP is an important tool for managing a firm’s balance sheet structure and measuring risk-adjusted profitability. By allocating funding and contingent liquidity risks to business lines, products, and activities within a firm, FTP influences the volume and terms of new business and ongoing portfolio composition. This process helps align a firm’s funding and contingent liquidity risk profile and risk appetite and complements, but does not replace, broader liquidity and interest rate risk management programs (for example, stress testing) that a firm uses to capture certain risks (for example, basis risk). If done effectively, FTP promotes more resilient, sustainable business models. FTP is also an important tool for centralizing the management of

---

<sup>1</sup> For purposes of this guidance, large financial institutions includes: national banks, federal savings associations and state-chartered banks with consolidated assets of \$250 billion or more, domestic bank and savings and loan holding companies with consolidated assets of \$250 billion or more or foreign exposure of \$10 billion or more, and foreign banking organizations with combined U.S. assets of \$250 billion or more.

<sup>2</sup> Refer to: FRB’s SR letter 10-6, “Interagency Policy Statement on Funding and Liquidity Risk Management”; FDIC’s FIL-13-2010, “Funding and Liquidity Risk Management Interagency Guidance”; and OCC Bulletin 2010-13, “Final Policy Statement: Interagency Policy Statement on Funding and Liquidity Management.”

<sup>3</sup> The Basel Committee on Banking Supervision statement on “Principles for Sound Liquidity Risk Management and Supervision” (September 2008) is available at <http://www.bis.org/publ/bcbs144.htm>.

funding and contingent liquidity risks for all exposures. Through FTP, a firm can transfer these risks to a central management function that can take advantage of natural offsets, centralized hedging activities, and a broader view of the firm.

Failure to consistently and effectively apply FTP can misalign the risk-taking incentives of individual business lines with the firm's risk appetite, resulting in a misallocation of financial resources. This misallocation can arise in new business and ongoing portfolio composition where the business metrics do not reflect risks taken, thereby undermining the business model. Examples include entering into excessive off-balance sheet commitments and on-balance sheet asset growth because of mispriced funding and contingent liquidity risks.

The 2008 financial crisis exposed weak risk management practices for allocating liquidity costs and benefits across business lines. Several firms “acknowledged that if robust FTP practices had been in place earlier, and if the systems had charged not just for funding but for liquidity risks, they would not have carried the significant levels of illiquid assets and the significant risks that were held off-balance sheet that ultimately led to sizable losses.”<sup>4</sup>

### **Funds Transfer Pricing Principles**

A firm should have an FTP framework to support its broader risk management and governance processes that incorporates the general principles described in this section and is commensurate with its size, complexity, business activities, and overall risk profile. The framework should incorporate FTP costs and benefits into product pricing, business metrics, and new product approval for all material business lines, products, and activities to align risk-taking incentives with the firm's risk appetite.

*Principle 1: A firm should allocate FTP costs and benefits based on funding risk and contingent liquidity risk.*

A firm should have an FTP framework that allocates costs and benefits based on the following risks.

- *Funding risk*, measured as the cost or benefit (including liquidity and interest rate components) of raising funds to finance ongoing business operations, should be allocated based on the characteristics of the business lines, products, and activities that give rise to those costs or benefits (for example, higher costs allocated to assets that will be held over a longer time horizon and greater benefits allocated to stable sources of funding).
- *Contingent liquidity risk*, measured as the cost of holding standby liquidity composed of unencumbered, highly liquid assets, should be allocated to the business lines, products, and activities that pose risk of contingent funding needs during a stress event (for example, draws on credit commitments, collateral calls, deposit run-off, and increasing haircuts on secured funding).

---

<sup>4</sup> Senior Supervisors Group report on “Risk Management Lessons from the Global Financial Crisis of 2008” (October 21, 2009) is available at [https://www.newyorkfed.org/medialibrary/media/newsevents/news/banking/2009/SSG\\_report.pdf](https://www.newyorkfed.org/medialibrary/media/newsevents/news/banking/2009/SSG_report.pdf).

*Principle 2: A firm should have a consistent and transparent FTP framework for identifying and allocating FTP costs and benefits on a timely basis and at a sufficiently granular level, commensurate with the firm's size, complexity, business activities, and overall risk profile.*

FTP costs and benefits should be allocated based on methodologies that are set forth by a firm's FTP framework. The methodologies should be transparent, repeatable, and sufficiently granular such that they align business decisions with the firm's desired funding and contingent liquidity risk appetite. To the extent a firm applies FTP at an aggregated level to similar products and activities, the firm should include the aggregating criteria in the report on FTP.<sup>5</sup> Additionally, the senior management group that oversees FTP should review the basis for the FTP methodologies. The attachment to this guidance describes illustrative FTP methodologies that a firm may consider when implementing its FTP framework.<sup>6</sup>

A firm should allocate FTP costs and benefits, as measured at transaction or trade inception, to the appropriate business line, product, or activity. If a firm retains any FTP costs or benefits in a centrally managed pool pursuant to its FTP framework, it should analyze the implications of such decisions on business line incentives and the firm's overall risk profile. The firm customarily would include its findings in the report on FTP.

The FTP framework should be implemented consistently across the firm to appropriately align risk-taking incentives. While it is possible to apply different FTP methodologies within a firm due to, among other things, legal entity type or specific jurisdictional circumstances, a firm should generally implement the FTP framework in a consistent manner across its corporate structure to reduce the likelihood of misaligned incentives. If there are implementation differences across the firm, management should analyze the implications of such differences on business line incentives and the firm's overall funding and contingent liquidity risk profile. The firm customarily would include its findings in the report on FTP.

A firm should allocate, report, and update data on FTP costs and benefits at a frequency that is appropriate for the business line, product, or activity. Allocating, reporting, and updating of data should occur more frequently for trading exposures (for example, on a daily basis). Infrequent allocation, reporting, or updating of data for trading exposures (for example, based on month-end positions) may not fully capture a firm's day-to-day funding and contingent liquidity risks. For example, a firm should monitor the age of its trading exposures, and those held longer than originally intended should be reassessed and FTP costs and benefits should be reallocated based on the modified holding period.

A firm's FTP framework should address derivative activities commensurate with the size and complexity of those activities. The FTP framework may consider the fair value of current positions, the rights of rehypothecation for collateral received, and contingent outflows that may occur during a stress event.

---

<sup>5</sup> See Principle 3 for a discussion of the report on FTP.

<sup>6</sup> The FRB, the FDIC, and the OCC will monitor evolving FTP practices in the market and may update or add to the illustrative methodologies in the attachment.

To avoid a misalignment of risk-taking incentives, a firm should adjust its FTP costs and benefits as appropriate based on both market-wide and idiosyncratic conditions, such as trapped liquidity, reserve requirements, regulatory requirements, illiquid currencies, and settlement or clearing costs. These idiosyncratic conditions should be contemplated in the FTP framework, and the firm customarily would include a discussion of the implications in the report on FTP.

*Principle 3: A firm should have a robust governance structure for FTP, including the production of a report on FTP and oversight from a senior management group and central management function.*

A firm should have a senior management group that oversees FTP, which should include a broad range of stakeholders, such as representatives from the firm's asset-liability committee (if separate from the senior management group), the treasury function, and business line and risk management functions. This group should develop the policy underlying the FTP framework, which should identify assumptions, responsibilities, procedures, and authorities for FTP. The policy should be reviewed and updated on a regular basis or when the firm's asset-liability structure or scope of activities undergoes a material change. Further, senior management with oversight responsibility for FTP should periodically, but no less frequently than quarterly, review the report on FTP to ensure that the established FTP framework is being properly implemented.

A firm should also establish a central management function tasked with implementing the FTP framework. The central management function should have visibility over the entire firm's on- and off-balance sheet exposures. Among its responsibilities, the central management function should regularly produce and analyze a report on FTP generated from accurate and reliable management information systems. The report on FTP should be at a sufficiently granular level to enable the senior management group and central management function to effectively monitor the FTP framework (for example, at the business line, product, or activity level, as appropriate). Among other items, all material approvals, such as those related to any exception to the FTP framework, including the reason for the exception, would customarily be documented in the report on FTP. The report on FTP may be standalone or included within a broader risk management report.

Independent risk and control functions and internal audit should provide oversight of the FTP process and assess the report on FTP, which should be reviewed as appropriate to reflect changing business and financial market conditions and to maintain the appropriate alignment of incentives. Lastly, consistent with existing supervisory guidance on model risk management,<sup>7</sup> models used in FTP implementation should be independently validated and regularly reviewed to ensure that the models continue to perform as expected, that all assumptions remain appropriate, and that limitations are understood and appropriately mitigated.

*Principle 4: A firm should align business incentives with risk management and strategic objectives by incorporating FTP costs and benefits into product pricing, business metrics, and new product approval.*

---

<sup>7</sup> Refer to: FRB's SR letter 11-7, "Guidance on Model Risk Management"; OCC Bulletin 2011-12, "Supervisory Guidance on Model Risk Management."

Through its FTP framework, a firm should incorporate FTP costs and benefits into product pricing, business metrics, and new product approval for all material business lines, products, and activities (both on- and off-balance sheet). The framework, the report on FTP, and any associated management information systems should be designed to provide decision makers sufficient and timely information about FTP costs and benefits so that risk-taking incentives align with the firm's strategic objectives.

The information may be either at the transaction level or, if the transactions have homogenous funding and contingent liquidity risk characteristics, at an aggregated level. In deciding whether to allocate FTP costs and benefits at the transaction or aggregated level, firms should consider advantages and disadvantages of both approaches when developing the FTP framework. Although transaction-level FTP allocations may add complexity and involve higher implementation and maintenance costs, such allocations may provide a more accurate measure of risk-adjusted profitability. A firm assigning FTP allocations at an aggregated level should have aggregation criteria based on funding and contingent liquidity risk characteristics that are transparent.

There should be ongoing dialogue between the business lines and the central function responsible for allocating FTP costs and benefits to ensure that funding and contingent liquidity risks are being captured and are well-understood for product pricing, business metrics, and new product approval. The business lines should understand the rationale for the FTP costs and benefits, and the central function should understand the funding and contingent liquidity risks implicated by the business lines' transactions. Decisions by senior management to incentivize certain behaviors through FTP costs and benefits customarily would be documented and included in the report on FTP.

## **Conclusion**

A firm should use the principles laid out in this guidance to develop, implement, and maintain an effective FTP framework. In doing so, a firm's risk-taking incentives should better align with its risk management and strategic objectives. The framework should be adequately tailored to a firm's size, complexity, business activities, and overall risk profile.

**Attachment**  
**Illustrative Funds Transfer Pricing Methodologies**

**March 1, 2016**

The Funds Transfer Pricing (FTP) methodologies described below are intended for illustrative purposes only and provide examples for addressing principles set forth in the guidance. A firm's FTP framework should be commensurate with its size, complexity, business activities, and overall risk profile. In designing its FTP framework, a firm may utilize other methodologies that are consistent with the principles set forth in the guidance. Therefore, these illustrative methodologies should not be interpreted as directives for implementing any particular FTP methodology.

***Non-Trading Exposures***

For non-trading exposures, a firm's FTP methodology may vary based on its business activities and specific exposures. For example, certain firms may have higher concentrations of exposures that have less predictable time horizons, such as non-maturity loans and non-maturity deposits.

***Matched-Maturity Marginal Cost of Funding***

Matched-maturity marginal cost of funding is a commonly used methodology for non-trading exposures. Under this methodology, FTP costs and benefits are based on a firm's market cost of funds across the term structure (for example, wholesale long-term debt curve adjusted based on the composition of the firm's alternate sources of funding such as Federal Home Loan Bank advances and customer deposits). This methodology incentivizes business lines to generate stable funding (for example, core deposits) by crediting them the benefit or premium associated with such funding. It also ensures that business lines are appropriately charged the cost of funding for the life of longer-dated assets (for example, a five-year commercial loan). Given that funding costs can change over time, the market cost of funds across the term structure should be derived from reliable and readily available data sources and be well understood by FTP users.

FTP rates should, as closely as possible, match the characteristics of the transaction or the aggregated transactions to which they are applied. In determining the appropriate point on the derived FTP curve for a transaction or pool of transactions, a firm could consider a variety of characteristics, including the holding period, cash flow, re-pricing, prepayments, and expected life of the transaction or pool. For example, for a five-year commercial loan that has a rate that resets every three months and will be held to maturity, the interest rate component of the funding risk could be based on a three-month horizon for determining the FTP cost, and the liquidity component of the funding risk could be based on a five-year horizon for determining the FTP cost. Thus, the total FTP cost for holding the five-year commercial loan would be the combination of these two components.



### *Contingent Liquidity Risk*

A firm may calculate the FTP cost related to non-trading exposure contingent liquidity risk using models based on behavioral assumptions. For example, charges for contingent commitments could be based on their modeled likelihood of drawdown, considering customer drawdown history, credit quality, and other factors; whereas, credits applied to deposits could be based on volatility and modeled behavioral maturity. A firm should document and include all modeling analyses and assumptions in the report on FTP. If behavioral assumptions used in a firm's FTP framework do not align with behavioral assumptions used in its internal stress test for similar types of non-trading exposures, the firm should document and include in the report on FTP these inconsistencies.

### *Trading Exposures*

For trading exposures, a firm could consider a variety of factors, including the type of funding source (for example, secured or unsecured), the market liquidity of the exposure (for example, the size of the haircut relative to the overall exposure), the holding period of the position, the prevailing market conditions, and any potential impact the chosen approach could have on firm incentives and overall risk profile. If a firm's trading activities are not material, its FTP framework may require a less complex methodology for trading exposures. The following FTP methodologies have been observed for allocating FTP costs for trading exposures.

#### *Weighted Average Cost of Debt (WACD)*

WACD is the weighted average cost of outstanding firm debt, usually expressed as a spread over an index. Some firms' practices apply this rate to the amount of an asset expected to be funded unsecured (repurchase agreement market haircuts may be used to delineate between the amount being funded secured and the amount being funded unsecured). A firm using WACD should analyze whether the methodology misaligns risk-taking incentives and document such analyses in the report on FTP.

#### *Marginal Cost of Funding*

Marginal cost of funding sets the FTP costs at the appropriate incremental borrowing rate of a firm. Some firms' practices apply a marginal secured borrowing rate to the amount of an asset expected to be funded secured and a marginal unsecured borrowing rate to the amount of an asset expected to be funded unsecured (repurchase agreement market haircuts may be used to delineate between the amount being funded secured and the amount being funded unsecured). A firm using marginal cost of funding should analyze whether the methodology misaligns risk-taking incentives, considering current market rates compared to historical rates, and document such analyses in the report on FTP.

### *Contingent Liquidity Risk*

A firm may calculate the FTP costs related to contingent liquidity risk from trading exposures by considering the unencumbered liquid assets that are held to cover the potential for widening

haircuts of trading exposures that are funded secured. If haircuts used in a firm's FTP framework do not align with haircuts used in its internal stress test for similar types of trading exposures, the firm should document and include in the report on FTP these inconsistencies. Haircuts should be updated at a frequency that is appropriate for a firm's trading activities and market conditions.

A firm may also include the FTP costs related to contingent liquidity risk from potential derivative outflows in stressed market conditions, which may be due to, for example, credit rating downgrades, additional termination rights, or market shocks and volatility.