

# **Governmental Accounting Standards Board**

## **Derivative Instruments: A Plain-Language Summary of GASB Statement No. 53**

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## OVERVIEW

Governmental Accounting Standards Board (GASB) Statement No. 53, *Accounting and Financial Reporting for Derivative Instruments*, requires that the fair value of financial arrangements called “derivatives” or “derivative instruments” be reported in the financial statements of state and local governments. If a derivative effectively hedges (significantly reduces) an identified risk of rising or falling cash flows or fair values, then its annual fair value changes are deferred until the hedged transaction occurs or the derivative ceases to be effective. On the other hand, the annual change in the fair value of *other* derivatives is reported immediately as investment income or loss. Additional information about derivatives is disclosed in the notes to the financial statements, including identification of the risks to which hedging derivative instruments themselves expose a government. Governments are required to implement Statement 53 no later than the first fiscal year beginning after June 15, 2009 (for most governments that would be fiscal year 2010). Governments are encouraged, however, to implement the standard sooner.

## WHAT IS A DERIVATIVE?

A derivative is a unique and often complex financial arrangement that a government may enter into with another party, typically a private-sector financial firm. The value of a derivative or the cash it provides to a government (or that it requires a government to pay) is based on changes in the market prices of an item that is being hedged, such as interest rates on long term bonds or commodity prices. In other words, the value or cash flows of a derivative are derived from (are determined by) how the market prices of the hedged item change.

Governments enter into derivatives for at least four reasons:

- Governments often intend derivatives to be *hedges*. This type of derivative is an attempt to significantly reduce a specific financial risk that a government identifies, such as the risk of increasing commodity costs.
- Some governments find that they can *lower their borrowing costs* by entering into a derivative in connection with debt they issue.
- Some governments engage in derivatives that are investments—governments are trying to *generate income*, as they would by buying other financial instruments.
- Some governments enter into derivatives to *manage their cash flows*. These derivatives may include an up-front cash payment to the government from the other party. The payment arrangements or terms of the derivative agreement essentially provide for the repayment of the up-front cash.

## What Are Examples of Derivatives?

A simple example of a derivative is an *interest rate lock*—an agreement between a government and a lender that ensures the government will get a specific interest rate when it ultimately issues bonds or another form of debt. It is essentially the same as the rate lock that a person might obtain on a home mortgage. A government might enter into such an agreement if it believes interest rates will rise before it is ready to issue its debt.

Another example found in practice is a government that purchases significant quantities of a commodity, such as gasoline or heating oil, and which enters into a derivative called a *futures contract* in order to protect itself against increases in the price of the commodity. Futures contracts are agreements to buy or sell a product for a specific price on a specific future date; they are traded actively in futures exchanges. A transit authority that needs to purchase fuel for its buses throughout the year, for example, might be concerned that fuel prices are going to rise. In June, the authority might purchase a futures contract for 420,000 gallons in September at \$4.60 per gallon, the price the market expects the fuel to command in that month. The authority does not plan to buy the fuel covered by the contract (though it is entitled to do so). Rather, it plans to use the contract to offset the higher prices when it actually does buy fuel in the future. If the price of fuel rises above \$4.60 per gallon, the futures contract provides cash payments to the authority, offsetting the higher fuel price the authority has to pay. Essentially, the authority has converted the variable, uncertain price of fuel into a fixed, known price.

## Interest Rate Swaps

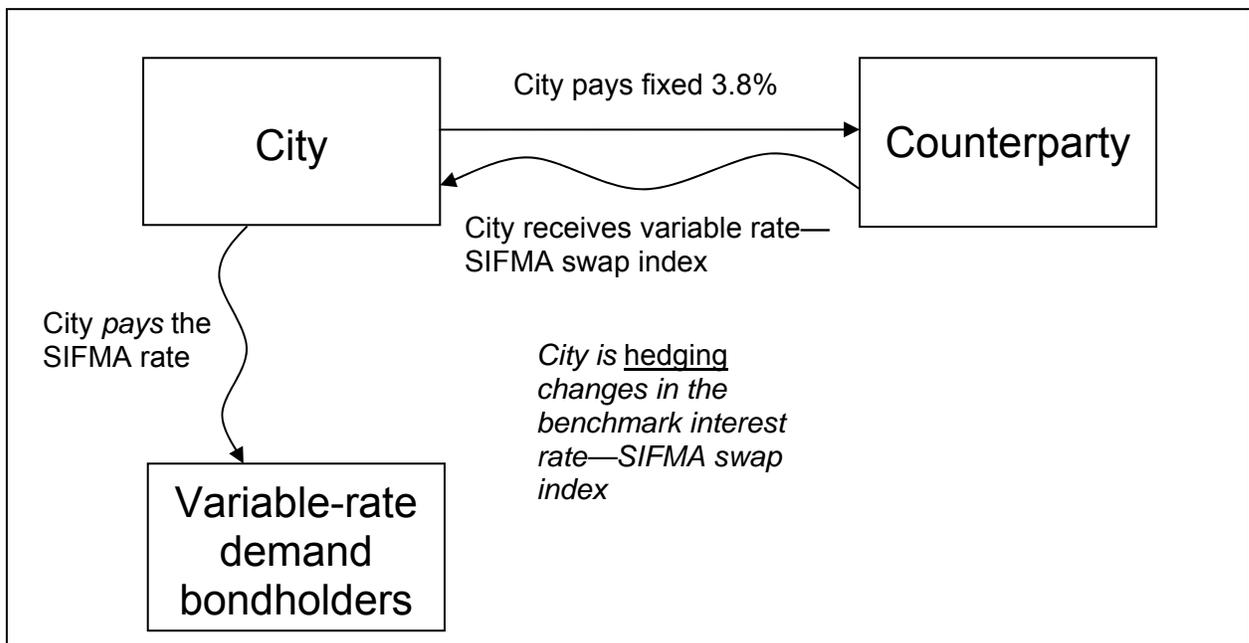
One of the most common examples of a derivative entered into by a government—an interest rate swap—is related to debt issued by the government. Some governments have found that issuing variable-rate debt (bonds with an interest rate that rises and falls as market interest rates change) and entering into an interest rate swap results in lower borrowing costs than if they had issued debt with a fixed interest rate without a derivative. A government issues variable-rate debt, for example, and also enters into a swap in which it agrees to pay a fixed interest rate to a financial firm, usually larger than the interest it currently pays on the variable-rate debt. In return, the firm agrees to pay the government an amount that is expected to offset the government's interest payments to the owners of the bonds—an amount that changes as market interest rates change.

Consider a government that issues \$100 million of variable-rate debt. At the same time, the government also enters into an interest rate swap in which it agrees to pay a fixed rate of 3.8 percent to a firm, in return for receiving a variable payment from the firm that is based on the Securities Industry and Financial Markets Association (SIFMA) swap index. (The SIFMA swap index tracks the prevailing rates on variable-rate debt issued by state and local governments.) The SIFMA-based payment from the firm is expected to roughly equal the interest payment the government is required to make to the bondholders. (See Exhibit 1.)

The ultimate effect of the swap is to “fix” much of the government’s interest payment at 3.8 percent. This rate is intended to be a lower interest rate than the government could have obtained by issuing fixed-rate debt.

The payments on the derivative do not actually change hands—only the difference between the variable rate (the SIFMA swap index in the example above) and the fixed rate (3.8 percent) is paid. As long as the variable rate remains below 3.8 percent, the government’s required payment is larger than the firm’s, and the government pays the firm the difference. If interest rates rise above 3.8 percent, on the other hand, then the firm’s required payment is larger than the government’s, and the firm pays the difference to the government.

**Exhibit 1. Graphical Representation of an Interest Rate Swap and its Hedged Bonds**



This kind of derivative is known as a “pay-fixed, receive-variable” swap. Governments sometimes enter into “pay-variable, receive-fixed” swaps in which they pay the firm an amount that varies with interest rates, while receiving a consistent amount from the firm. The side of a swap a government takes depends on what the government is trying to achieve; in this way, swaps offer significant flexibility.

Not only are the cash flows of an interest rate swap (payments to and from a government) determined by changes in the market interest rates but also the *value* of the derivative. Unless cash changes hands when the hedge is first entered into, it begins with a zero fair value. The value of the swap changes as interest rates rise or fall. If interest rates were to drop after a government entered into a swap like the one described above, then the value of the swap would grow. In fact, the swap would have a growing *negative* value from the government’s perspective, representing a liability—an amount the government would have had

to pay the firm if the swap had been terminated at that time. If the SIFMA swap index had risen, the swap's value also would have grown, but *positively* from the government's perspective, representing an asset—an amount the government would have been paid by the firm if the swap had been terminated at that point.

### **What Does the GASB Consider to Be a Derivative?**

The definition of what constitutes a derivative may vary depending upon whom you ask. Statement 53 defines derivatives as *financial arrangements with values or cash payments that are based on what happens in separate transactions, agreements, or rates*, and that have these characteristics:

- *The financial arrangements are leveraged.* This means they require minimal or no initial investment on the part of a government but nevertheless achieve changes in fair value that would have required a far larger initial investment.
- *The financial arrangements can be settled early* with a cash payment or the transfer of an equivalent asset.

### **Financial Instruments Not Covered by Statement 53**

Statement 53 specifically identifies several kinds of instruments to which its requirements *do not* apply:

- Normal purchases and sales contracts—typical transactions in which it is probable that a government will receive or deliver the purchased commodity, such as electricity or natural gas; in other words, the transaction takes place with an expectation that the commodity will actually be used by the purchaser (this contrasts with the futures contract discussed above, in which there is no expectation that the commodity covered by the contract will actually be purchased and received)
- Insurance contracts that are accounted for under GASB Statement No. 10, *Accounting and Financial Reporting for Risk Financing and Related Insurance Issues*
- Financial guarantee contracts under which the holder is reimbursed when a specified debtor fails to make required payments
- Contracts that are not traded on an exchange and have rates based on (a) climate, geological, or other physical attribute, or (b) the price or value of an asset that cannot be readily converted to cash
- Loan commitments, such as to first-time home buyers for mortgages.

### **WHY DID THE GASB ISSUE STATEMENT 53?**

The number and dollar amount of derivatives entered into by governments is substantial and until recently has grown rapidly. The complexity and variety of derivatives also are increasing significantly.

## Risks Posed by Derivatives

Although a government may enter into a derivative in order to minimize an identified risk, the derivative itself could expose a government to risks it otherwise would not have faced. *Credit risk*, for instance, is the chance that the firm (the counterparty) will not make good on its promise to pay the government. The longer a derivative lasts, the greater the risk to a government that changes in interest rates could reduce the value of the transaction to the government; this is called *interest rate risk*.

The possibility that a derivative may end earlier than expected, thus depriving a government of the protection from risk and potentially requiring it to make a significant termination payment, is known as *termination risk*. This could occur if the credit rating of either the government or the counterparty falls below an agreed upon level.

In some derivatives, the amount received by the government from the firm is based on one market rate and the amount the government pays to its bondholders is based on a different rate. For instance, one may be based on the SIFMA swap index, while the other may be based on a percentage of the London Interbank Offered Rate (LIBOR). If the rate determining the firm's payments to the government decreases more than the rate determining the government's payments to the bondholders, then the government will receive less from the firm than it has to pay out to the bondholders. The possibility that this may occur is *basis risk*.

*Rollover risk* exists when the derivative does not last as long as the associated debt is outstanding. For instance, an interest rate swap might have a 10-year term, but the variable-rate debt matures in 30 years. Consequently, after the derivative ends, the government no longer is protected against rising interest rates and may not be able to enter into a new derivative with similar terms.

*Market-access risk* is the chance that a government will not be able to issue debt (for example, in a bond refunding) or that doing so will become more expensive. Finally, *foreign currency risk* is the possibility that changes in foreign exchange rates will adversely affect the value of a derivative if it is denominated in a foreign currency.

## The Need for Information about Derivatives

The GASB worked for several years to set standards for the accounting and reporting of derivatives because the public needs more information about these transactions. The risk of the loss of cash flows, for instance, is important to a state legislator or city council member trying to identify what resources will be available to fund programs, or to a taxpayer association concerned that taxes would have to be raised to cover the loss, or to a municipal bond analyst evaluating a government's ability to make its debt service payments when they come due.

To evaluate the risks that derivatives potentially pose to the financial health of governments, the public needs to better understand the nature of these transactions, how their values and cash flows change over time, and their

inherent risks. Although prior standards required governments to disclose information about their derivatives in the notes to the financial statements, few derivatives were reported on the face of the financial statements.

## **WHAT DOES STATEMENT 53 REQUIRE?**

Statement 53 requires that the fair value of derivatives be reported in the financial statements. Fair value is either the price an item is expected to garner if sold on the open market between two unrelated willing parties or the value of future cash flows in today's dollars. One type of derivative, a synthetic guaranteed investment contract, is reported at contract value instead of fair value. Contract value is the amount that contract holders would receive in a permitted participant-initiated transaction. Governments also will disclose information about their derivatives in the notes to the financial statements.

### **What Information Will Be Reported about Derivatives in the Financial Statements?**

In general, the fair value of a derivative as of the end of the fiscal year covered by the financial statements will be reported in the full accrual-based balance sheets.<sup>1</sup> However, the annual changes in the fair value of a *hedging derivative instrument* are required to be *deferred*—reported as deferred inflows and deferred outflows on the balance sheets. A hedging derivative instrument significantly reduces financial risk by substantially offsetting the changes in cash flows or fair values of the item the derivative is associated with. (For more about the characteristics of a hedging derivative instrument, see the section on page 11 about how a hedging derivative instrument is identified.)

Deferral of changes in fair value generally will last until the transaction involving the hedged item ends. However, if something happens prior to the expected conclusion of the hedged transaction to cause the derivative agreement to be terminated, or if the hedge ceases to be effective (that is, it no longer significantly reduces risk), then the accumulated gains or losses, if any, will be reported as investment income or loss in the full accrual-based flows of resources statements.<sup>2</sup> For other derivatives, the increase or decrease in fair value will be reported immediately as investment income or loss, respectively.

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<sup>1</sup> In this document, “balance sheets” refers to the government-wide statement of net assets, proprietary funds statement of net assets, and fiduciary funds statement of fiduciary net assets, as appropriate. Statement 53 does not apply to the governmental funds balance sheet for derivative transactions.

<sup>2</sup> In this document, “flows of resources statements” refers to the government-wide statement of activities, proprietary funds statement of revenues, expenses, and changes in fund net assets, and fiduciary funds statement of changes in fiduciary net assets. Statement 53 does not apply to the governmental funds statement of revenues, expenditures, and changes in fund balance for derivative transactions.

## What Information Will Be Disclosed about Derivatives in the Notes to the Financial Statements?

Statement 53 requires a note disclosure that includes summary information about a government's derivatives. The government's derivatives will be divided among those related to the government's governmental activities, its business-type activities, and its fiduciary funds. Within each of those three groups, the derivatives will be sorted into (1) hedging derivative instruments (distinguishing between fair value hedges and cash flow hedges) and (2) investment derivative instruments. Individual derivative instruments will be totaled by type under those categories, and the following information presented about them (see Exhibit 2):

### Exhibit 2. Illustrative Summary Note Disclosure of Derivatives

	Changes in Fair Value		Fair Value at June 30, 20X0		Notional
	Classification	Amount	Classification	Amount	
<b>Governmental activities</b>					
Fair value hedges:					
Receive-fixed interest rate swap	Deferred inflow	\$ (277)	Debt	\$ 1,572	\$30,000
Cash flow hedges:					
Pay-fixed interest rate swaps	Deferred outflow	\$ (143)	Debt	\$ (1,330)	\$84,000
Rate cap	Deferred inflow	\$ 28	Debt	\$ 377	\$10,000
Investment derivatives:					
Pay-fixed interest rate swap	Investment revenue	\$ 1,277	Investment	\$ (1,277)	\$18,000
<b>Business-type activities</b>					
Cash flow hedges:					
Pay-fixed interest rate swap	Deferred inflow	\$ (548)	Debt	\$ 4,236	\$37,000
Commodity forward	Deferred inflow	\$ (111)	Derivative Instruments	\$ 111	1,000 MMBTUs
<b>Fiduciary funds</b>					
Investment derivatives:					
Foreign currency forward	Investment revenue	\$ 721	Investment	\$ (721)	£20,000

- Notional amount (that is, the amount—stated in dollars, shares, gallons, and so on—on which payments depend)
- Fair value as of the date of the financial statements and the locations in the financial statements where it is reported (this disclosure will be helpful because the amounts disclosed in the notes are aggregated in the financial statements)

- Changes in fair value during the year and the locations in the financial statements where those changes are reported
- The fair value of derivatives that were reclassified from a hedging derivative instrument to an investment derivative instrument during the year because they no longer substantially offset changes in cash flows or fair values
- The amount removed from the deferred inflows and outflows in the balance sheets and reported as investment income or loss during the year (for instance, because a derivative ended).

### **Information about Hedging Derivative Instruments**

Governments will provide additional information about their hedging derivative instruments. Although governments will be allowed to aggregate their hedging derivative instruments, the differences in the terms of the derivatives may lead to this information being disclosed individually for many of them. The information includes:

- An explanation of a government's objective for entering into the hedging derivative instrument and how it plans to achieve that objective
- Significant terms of the derivative, such as:
  - Notional amount
  - The indexes or interest rates it is based on, including any limitations on the impact that changes in the indexes or rates can have on the derivative
  - Options embedded in the derivative
  - Starting and ending dates
  - The amount of cash that changed hands, if any, when the derivative was initiated
- If the item being hedged is debt, then the government will disclose the net cash flows of the hedging derivative (see Exhibit 3)
- The risks to which the derivative exposes the government (see the example in the appendix to this document):
  - Termination risk—a government discloses any terminations that occurred during the year, dates that its remaining derivatives may be terminated, and unusual provisions for termination
  - Credit risk—if a derivative exposes it to credit risk, a government reports:
    - The credit quality rating of the firm
    - The maximum potential loss if the firm fails to fulfill its obligations
    - The collateral or other security supporting the derivatives
    - Significant concentrations of credit risk with a particular firm or group of firms
  - Interest rate risk—a government describes the terms of its derivatives that increase its exposure to interest rate risk
  - Basis risk—a government discloses the derivative's payment terms and any payment terms of the associated debt
  - Rollover risk—a government discloses the maturity of the derivative and the subsequent maturity of the associated debt

- Market-access risk—a government indicates if it is exposed to the risk of being unable to borrow
- Foreign currency risk—a government discloses the U.S. dollar balances of derivatives that expose it to foreign currency risk, organized by type of currency and type of derivative.

### Disclosures for Investment Derivative Instruments

For derivatives that are investments, governments will disclose the credit risk information described above (as well as include those derivatives in the summary information disclosure). Otherwise, governments will apply the disclosure requirements for investments set forth in GASB Statement No. 40, *Deposit and Investment Risk Disclosures*. Hedging derivative instruments that no longer substantially offset changes in cash flows or fair values also will be disclosed following the provisions of Statement 40.

### Contingent Liabilities

Governments also will disclose any contingent liabilities included in their derivatives. A contingent liability is a possible future liability that would arise if certain conditions occur. An example is a requirement that a government post collateral if its credit rating declines. A government with a derivative containing a contingent liability will present a note disclosure including:

- A description of the contingency and the circumstances that would trigger it
- The total fair value of all derivatives containing contingent liabilities
- The total amount the government would have to post as collateral if the triggering circumstances occurred
- Any amounts posted as collateral by the government during the year.

### Exhibit 3. Illustrative Disclosure of Net Cash Flows of a Derivative Hedging Debt

Fiscal Year Ending June 30	Principal	Interest	Hedging Derivatives, Net	Total
20X1	\$ 6,000	\$ 7,786	\$ (1,253)	\$ 12,533
20X2	10,000	7,525	(1,211)	16,314
20X3	27,000	7,090	(1,141)	32,949
20X4	33,000	5,916	(952)	37,964
20X5	15,000	4,480	(721)	18,759
20X6–20Y0	29,000	19,140	(3,080)	45,060
20Y1–20Y5	15,000	12,385	1,475	28,860
20Y6–20Z0	14,000	9,570	(528)	23,042
20Z1–20Z3	30,000	6,310	(300)	36,010
Total	<u>\$179,000</u>	<u>\$80,202</u>	<u>\$ (7,711)</u>	<u>\$251,491</u>

## How Will a Government Identify and Report a Hedging Derivative Instrument?

Derivatives that are (1) associated with an item that is eligible to be hedged and (2) determined to be *effective* are considered a hedging derivative instruments. Governments are required to report their hedging derivative instruments using hedge accounting provisions.

Items eligible to be hedged are reported in the financial statements using a measurement other than fair value. They could be a single asset or liability, a group of similar assets or liabilities, or a specific expected exchange of resources in the future that exposes a government to a risk of losing cash flows or fair value. An example of a “hedgeable” item is variable-rate debt, which exposes a government to the risk of increasing interest rates and therefore larger interest payments to the bondholders. On the other hand, investments generally are not considered hedgeable for financial reporting purposes because they are already reported at fair value in the financial statements, and changes in their fair value already run through the change statements. For the purposes of these standards, a derivative associated with a hedgeable item is known as a *potential hedging derivative instrument*.

A hedging derivative instrument is a potential hedging derivative instrument that is effective. *Effective* means that the derivative significantly reduces an identified financial risk by providing changes in fair values or cash flows that substantially offset the changes in fair values or cash flows of the associated item being hedged. As noted above, the changes in fair value of a hedging derivative instrument would be reported in the balance sheets as deferred inflows (accumulated increases in fair value) or deferred outflows (accumulated decreases in fair value), rather than being reported as investment income or loss in a government’s flows of resources statements. Each year’s change in fair value would be added to the deferrals in the balance sheets. If the hedging derivative instrument remains effective and continues until its planned conclusion, the deferrals will balance out the fair value of the derivative until that value declines to zero when it concludes.

### **Example**

Consider a government that enters into an interest rate swap with a financial firm in 2010. No money changes hands when the derivative is initiated, so it has no initial fair value. By the end of 2010, the swap’s fair value declines to \$2,900,000. The government will report that fair value on the liability side of the balance sheets, and the decrease in fair value will be reported as a deferred outflow of \$2,900,000 on the asset side.

The amount by which the government’s payment exceeded the firm’s—let’s say, \$2,500,000—is reported as interest expense, in addition to the interest paid or due to the holders of the variable-rate debt. (If the firm’s required payment exceeded that of the government’s, however, the difference would have *offset* a portion of the interest expense related to the variable-rate debt.)

In the following year, 2011, the fair value of the derivative declines an additional \$1,800,000. In the financial statements for fiscal year 2011, the financial statements include the swap at a fair value of negative \$4,700,000 (that is, the negative \$2,900,000 value at the end of 2010 plus the additional negative \$1,800,000 decrease in 2011). The decrease in fair value of \$1,800,000 is added to the deferred outflow account (for a total of \$4,700,000).

The derivative agreement with the firm ends in 2012 as planned. The derivative now has no value, and therefore no amount will be reported in the balance sheets for that year. All changes in fair value were deferred during the life of the derivative and never were reported as investment losses in the flows of resources statements.

### **Accounting for a Hedge That Ceases to Be Effective or Terminates Early**

Many hedges remain effective through the term of the derivative agreement—the derivative begins with a zero fair value, the annual changes in its fair value are deferred, and it ultimately concludes as planned and returns to zero fair value. However, there are situations in which the hedge does not last as long as expected:

- The hedging derivative instrument is terminated prior to its expected ending date
- The hedging derivative instrument ceases to be effective
- It is no longer probable that a hedged expected transaction will occur
- The hedged asset or liability is sold or retired, except for current or advance refundings.

In those circumstances, the deferred amounts are removed from the balance sheets and reported as investment income or loss in the flows of resources statements.

However, if the hedging derivative instrument hedges a liability that is reported as a current refunding (outstanding bonds are paid off immediately from the proceeds of newly issued bonds) or an advance refunding resulting in a defeasance of debt (the proceeds are not used to repay the outstanding bonds immediately, but are set aside with an escrow agent and invested to finance the regular debt service payments), then the deferred amounts are included in the amortization associated with the refunding. In other words, the deferred amounts are spread over the remaining term of the refunding and reported in the flows of resources statements in annual installments.

The swap in the example above ends when planned and remains effective throughout the period of the hedging derivative instrument. The value of the swap declines to zero when it concludes and there is no income or loss. However, when a hedging derivative instrument ends early or ceases to be effective, the accumulated deferrals from prior years would be reported as investment income or loss, plus or minus the changes in fair value for that year.

Imagine that, at the end of 2011, the government evaluated its swap and found that it was no longer effective. Instead of reporting the fair value of the

derivative in the statement of net assets, offset by a deferred outflow, the entire negative \$4,700,000 would have been reported as investment loss and netted against the amount reported as investment income

Once a hedging derivative instrument is no longer effective (that is, when it no longer falls within the parameters described below and therefore is no longer substantially offsetting changes in fair values or cash flows), the deferral of fair value changes would cease. Thereafter, annual changes in fair value would be reported in the flows of resources statements as investment income or loss. For instance, if the fair value of the swap increases by \$1,000,000 in 2012 before ending as planned, then the government would report an investment gain of \$1,000,000 as part of investment income.

### **How Will the Effectiveness of a Potential Hedging Derivative Instrument Be Evaluated?**

As of the end of each period for which governments prepare financial statements (typically, the end of the fiscal year), they will evaluate the effectiveness of each potential hedging derivative instrument established during the period. Effective hedging derivatives will be reevaluated as of the end of each succeeding fiscal year to determine if they remain effective. Governments are allowed to use two types of approaches to evaluating effectiveness—consistent critical terms or quantitative methods.

#### **Consistent Critical Terms**

If the critical terms of the potential hedging derivative instrument and the terms of the item it is hedging are the same—for instance, the ending date of an interest rate swap is the same as the maturity date of the bonds, both are based on the SIFMA swap index, and so on—then the potential hedging derivative instrument is presumed to be effective. Under such circumstances, any change in the cash flows or fair value of the item being hedged is offset by changes in the cash flows or fair value of the potential hedging derivative. If a government uses the consistent critical terms method and finds that the potential hedging derivative instrument does not have critical terms that are consistent with the hedged item, then it will evaluate it again using one or more quantitative methods.

#### **Quantitative Methods**

Three quantitative methods specifically identified that may be used for evaluating effectiveness—synthetic instruments, dollar-offset, and regression analysis. These methods measure the degree to which the changes in the fair value or cash flows of the potential hedging derivative instrument offset those of the item being hedged. Statement 53 also allows for other acceptable quantitative methods that meet certain qualifying criteria. A potential hedging derivative that is not determined to be effective using one of the quantitative methods may be reevaluated using another method.

### ***Synthetic Instrument Method***

A synthetic instrument is the combination of an item being hedged and a potential hedging derivative instrument to create a theoretical instrument. The synthetic instrument method involves the calculation of an interest rate (or commodity rate, as appropriate) for the synthetic instrument based on the actual experience following the start of the hedge. The synthetic rate is then compared with the fixed-rate portion of the derivative. For example, a government issues variable rate debt and enters into an interest rate swap to convert the variable debt payments to fixed payments. The swap accomplishes that task by providing the government variable payments that offset the variable debt payments. Frequently, however, the two variable payments do not exactly offset. The synthetic instrument addresses that possibility by considering how exact the two payments offset. A perfect offset would yield a synthetic rate that is 100 percent of the swap's fixed rate.

If the synthetic rate is no less than 90 percent and no greater than 111 percent of the fixed rate as of the date of the financial statements, then the fair values or cash flows of the potential hedging derivative instrument substantially offset those of the item being hedged. Therefore, the potential hedging derivative instrument is considered effective for financial reporting purposes and is treated as a hedging derivative instrument.

If the synthetic rate is outside that range, a government would examine the rates over the life of the derivative thus far. If the synthetic rate over that period falls within the 90 to 111 percent range, then the potential hedging derivative instrument is considered effective for financial reporting purposes.

However, even if the synthetic rate as of the date of the financial statements falls within the range, a government may yet determine that the hedge is not effective for financial reporting purposes because new conditions in the market, such as a change in tax rates, make it unlikely that the hedging derivative instrument will remain effective going forward.

### ***Dollar-Offset Method***

The dollar-offset method divides changes in the fair values or cash flows of the hedged item with those of the potential hedging derivative instrument, or vice versa. As long as the result of this calculation falls within a range of 80 to 125 percent, the changes in fair values or cash flows substantially offset and the potential hedging derivative instrument is considered effective for financial reporting purposes. Like the synthetic instrument method, the dollar-offset method can be applied to the period covered by the financial statements or over the life of the derivative.

### ***Regression Analysis***

Regression analysis examines the statistical relationship between changes in the fair values or cash flows of a hedged item and its associated potential hedging derivative. For a potential hedging derivative instrument evaluated using

regression analysis to be considered effective for financial reporting purposes, the analysis should produce:

- An R-squared of at least 0.80
- An F-statistic that indicates statistical significance at the 95 percent confidence level
- A regression coefficient for the slope between  $-1.25$  and  $-0.80$ .

### ***Other Quantitative Methods***

As previously noted, governments are allowed to employ other generally utilized quantitative methods for evaluating effectiveness that are based on established principles of financial economic theory. Those methods also have to be able to demonstrate that the changes in cash flows or fair values of a potential hedging derivative instrument substantially offset the changes in cash flows or fair values of the hedged item.

### **How Will Derivatives with Up-Front Payments Be Reported?**

When a firm makes a cash payment to a government at the start of a derivative, it expects to recoup that payment—it is essentially a loan. The terms of the derivative will incorporate the repayment of the up-front cash payment, perhaps by requiring payments to the firm based on a fixed rate that is greater than prevailing market rates (referred to as “off-market” rates). Such a derivative is a *hybrid instrument*—the combination of a derivative and a “companion” instrument that is not reported at fair value in the financial statements, such as a debt issuance.

Governments are required to report the derivative portion of a hybrid instrument separately from the companion instrument in the financial statements. Therefore, governments receiving cash from a firm when entering into a derivative will report a liability on the balance sheets equal to the cash they received; the remainder of the transaction—the actual derivative—is subject to the reporting requirements discussed above. Each year while the derivative is in place, a portion of the government’s payments to the firm will be reported in the financial statements as a repayment that reduces the outstanding liability in the balance sheets.

### **HOW IS STATEMENT 53 DIFFERENT FROM THE VERSIONS THE GASB EXPOSED FOR PUBLIC COMMENT?**

In April 2006, the GASB issued a Preliminary Views document that laid out initial ideas about how to account for and report derivatives, identified related issues, and sought public feedback. In addition to receiving over 90 comment letters in response to the Preliminary Views, the GASB conducted two public hearings, two panel discussions that brought together constituents from different perspectives, and a forum discussion for external financial statement users. After

reviewing the input it received, the GASB issued an Exposure Draft of proposed standards in June 2007. More than 50 additional comment letters were received, and the GASB held another public hearing and user forum. In addition, the GASB conducted a field test in which governments went through the process of implementing the proposed standards. After carefully considering all of the feedback received in response to both documents, the GASB issued Statement 53 in June 2008.

Throughout the due process activities, there has been one important constant—derivatives will be reported at fair value in the balance sheets, and the change in fair value will be reported as investment income or loss in the flows of resources statements, except for hedging derivative instruments, in which case fair value changes will be deferred. However, the GASB did make several notable changes to its original proposals based on the public feedback it received and further study.

- The proposed standards would have resulted in derivatives being reported at fair value in both the full accrual-based statements and the modified accrual-based governmental fund statements. *The GASB ultimately decided not to require fair value reporting of derivatives in the general fund and other governmental funds*, pending work on another GASB project. That project addresses the criteria for recognizing and measuring assets, liabilities, and other financial statement elements under various measurement focuses and bases of accounting.
- In the Preliminary Views, for a derivative to be considered a hedging derivative instrument, a government's declared objective for entering into the derivative would have had to be hedging a specific risk. Because of difficulties that could be encountered in documenting a government's objective—and therefore the possibility that otherwise eligible derivatives would be disqualified because proper documentation was not available—*that requirement was dropped*. However, the disclosure of the government's objective for entering into the derivative was retained.
- *The GASB agreed to allow governments to use other quantitative methods* that meet certain qualifying criteria for evaluating the effectiveness of potential hedging derivative instruments, in addition to the three quantitative methods specifically identified.
- One type of derivative—*synthetic guaranteed instrument contracts (SGICs)*—*will be reported at contract value, rather than fair value*. This is consistent with the fact that annual gains and losses on SGICs are not immediately recognized but are spread over the remaining life of the investments that underlie them.
- Rather than applying a single set of disclosure requirements to all derivatives, *governments will instead disclose investment derivatives following the same standards applied to other investments*.
- *The note disclosure of basic summary information was simplified*. Statement 53 allows governments to aggregate derivatives by type, though it also

requires that they be divided among categories of derivatives—cash flow hedges, fair value hedges, and investments—and presented according to whether they are associated with governmental activities, business-type activities, or fiduciary funds.

- *Proposed disclosures of information about the methods a government used to evaluate the effectiveness of its potential hedging derivative instruments and the results of the evaluation were eliminated.* (Governments that use a qualifying method other than those specifically identified in Statement 53 will, however, disclose the identity and characteristics of that method and the results of evaluations using it.) Also eliminated was a proposed requirement to calculate and disclose the amount of ineffectiveness in hedging derivatives that are determined to be effective using one of the quantitative methods.
- *Disclosures were added relating to SGICs and contingent liabilities contained in derivatives.*

## **WHAT IS THE GASB?**

The GASB is the private, nonpartisan, nonprofit organization that is recognized as the setter of the standards that U.S. state and local governments follow when accounting for their finances and reporting them to the public. The GASB was founded in 1984 under the auspices of the Financial Accounting Foundation (FAF), which appoints the GASB's Board, raises its funds, and oversees its activities. The FAF also oversees the Financial Accounting Standards Board, which establishes standards for the private sector and not-for-profit organizations. The mission of the GASB is to establish and improve standards of state and local governmental accounting and financial reporting that will:

- Result in useful information for users of financial reports, and
- Guide and educate the public, including issuers, auditors, and users of those financial reports.

Although the GASB does not have the power to enforce compliance with the standards it promulgates, the authority for its standards is recognized under the Code of Professional Conduct of the American Institute of Certified Public Accountants. The Code requires auditors to note any departures from GASB standards when they express an opinion on financial reports that are presented in conformity with generally accepted accounting principles. Also, legislation in many states requires compliance with GASB standards, and governments usually are expected to prepare financial statements according to those standards when they issue bonds or notes or otherwise borrow from public credit markets.

The GASB is composed of a full-time chair and six part-time members drawn from various parts of the GASB's constituency—state and local government finance officers, auditors, the accounting profession, academia, and persons who use financial statement information. The GASB has a professional staff drawn from similar constituencies as the Board. The staff works directly with the Board

and its task forces, conducts research, analyzes oral and written comments received from the public, and drafts documents for consideration by the Board.

## **HOW DOES THE GASB SET STANDARDS?**

The GASB follows the set of “due process” activities enumerated in its published rules of procedure before issuing its standards. Due process is stringent and is designed to permit timely, thorough, and open study of financial accounting and reporting issues by the preparers, attestors, and users of financial reports in order to encourage broad public participation in the standards-setting process.

For many issues it addresses, the GASB:

- Appoints an advisory task force of outside experts
- Studies existing literature on the subject and conducts or commissions additional research if necessary
- Publishes for public comment a discussion document setting forth the issues and possible solutions
- Conducts public hearings and forums
- Broadly distributes an Exposure Draft of a proposed standard for public comment.

Significant steps in the process are announced publicly. The GASB’s meetings are open to public observation and a public record is maintained. The GASB also is advised by the Governmental Accounting Standards Advisory Council, a 30-member group appointed by the FAF and representing a wide range of the GASB’s constituents.

Additional information about the GASB and its activities may be found at [www.gasb.org](http://www.gasb.org).

## Appendix: Illustrative Note Disclosure of Derivative Instrument Risks

### *Risks*

*Credit risk.* The city is exposed to credit risk on hedging derivative instruments that are in asset positions. To minimize its exposure to loss related to credit risk, it is the city's policy to require counterparty collateral posting provisions in its non-exchange-traded hedging derivative instruments. These terms require full collateralization of the fair value of hedging derivative instruments in asset positions (net of the effect of applicable netting arrangements) should the counterparty's credit rating fall below AA as issued by Fitch Ratings and Standard & Poor's or Aa as issued by Moody's Investors Service. Collateral posted is to be in the form of U.S. Treasury securities held by a third-party custodian. The city has never failed to access collateral when required.

It is the city's policy to enter into netting arrangements whenever it has entered into more than one derivative instrument transaction with a counterparty. Under the terms of these arrangements, should one party become insolvent or otherwise default on its obligations, close-out netting provisions permit the nondefaulting party to accelerate and terminate all outstanding transactions and net the transactions' fair values so that a single sum will be owed by, or owed to, the nondefaulting party.

The aggregate fair value of hedging derivative instruments in asset positions at June 30, 20X0, was \$7,308,000. This represents the maximum loss that would be recognized at the reporting date if all counterparties failed to perform as contracted. This maximum exposure is reduced by \$1,572,000 of collateral held and \$2,342,000 of liabilities included in netting arrangements with those counterparties, resulting in a net exposure to credit risk of \$3,394,000.

Although the city executes hedging derivative instruments with various counterparties, three contracts, comprising approximately 86 percent of the net exposure to credit risk, are held with one counterparty. That counterparty is rated AAA/Aaa.

*Interest rate risk.* The city is exposed to interest rate risk on its interest rate swap. On its pay-variable, received-fixed interest rate swap, as LIBOR increases, the city's net payment on the swap increases. Alternatively, on its pay-fixed, receive-variable interest rate swap, as LIBOR or the SIFMA swap index decreases, the city's net payment on the swap increases.

*Basis risk.* The city is exposed to basis risk on its pay-fixed interest rate swap and rate cap hedging derivative instruments because the variable-rate payments received by the city on these hedging derivative instruments are based on a rate or index other than interest rates the city pays on its hedged variable-rate debt, which is remarketed every 30 days. As of June 30, 20X0, the weighted-average interest rate on the city's hedged variable-rate debt is 4.35 percent, while the SIFMA swap index rate is 4.2 percent and 67 percent of LIBOR is 4.5 percent.

The city is exposed to basis risk on its commodity forward contract because the expected commodity purchase being hedged will price based on a pricing point (Texas Trunk) different than the pricing point at which the forward contract is expected to settle (Henry Hub). At June 30, 20X0, the Texas Trunk price is \$7.58 per MMBTU and the Henry Hub price is \$7.63 per MMBTU.

*Termination risk.* The city or its counterparties may terminate a derivative instrument if the other party fails to perform under the terms of the contract. In addition, the city is exposed to termination risk on its receive-fixed interest rate swap scheduled to mature in September 20Z1 because the contract provides the counterparty with the option to terminate the contract each September 30, commencing September 30, 20Y6. The city is exposed to termination risk on its rate cap because the counterparty has the option to terminate the contract if the SIFMA swap index exceeds 12 percent. If at the time of termination, a hedging derivative instrument is in a liability position, the city would be liable to the counterparty for a payment equal to the liability, subject to netting arrangements.

*Rollover risk.* The city is exposed to rollover risk on hedging derivative instruments that are hedges of debt that mature or may be terminated prior to the maturity of the hedged debt. When these hedging derivative instruments terminate, or in the case of a termination option, if the counterparty exercises its option, the city will be re-exposed to the risks being hedged by the hedging derivative instrument. The city is exposed to rollover risk on the pay-variable, receive-fixed interest rate swap scheduled to mature in September 20Z1. With this swap, the counterparty has the option to terminate the contract each September 30, commencing September 30, 20Y6, while the hedged debt matures in September 20Z1. The city also is exposed to rollover risk on the pay-fixed, receive-variable interest rate swap scheduled to mature in February 20Y8 because the hedged debt is scheduled to mature in February 20Z3.