The asset allocation decision is a complex one involving careful considerations of risk-and-return trade-offs. This balance-sheet structuring question is often posed as “what assets, in what amounts, should we allocate capital to support?” This article focuses on bank-owned life insurance (BOLI) from an asset allocation, or investment, perspective.1

There is also a “where” question related to asset allocation decisions. That is, “Where on my balance sheet should we include a given asset class, such as mortgage assets?” Banks can originate mortgage assets as a loan, or they can purchase securitized mortgages in their investment portfolio. BOLI offers banks another “where” to position favored assets. BOLI, due to its tax-advantaged nature, is an efficient method to incorporate various asset classes into a bank balance sheet. Due to recent innovations in the BOLI market, asset classes such as senior/secured loan funds and hedge funds are newly available within the BOLI structure.

There is also the “why BOLI?” question. Over the past few years, BOLI, on a tax-equivalent basis, has offered yields that are more than 200 basis points (bps) above similar-duration bank investments (Exhibit 1). In part, this explains why more than 80 percent of the largest 100 U.S. banks own BOLI.

This article will, first, describe, from an investment perspective, the asset choices that are currently available within a BOLI structure. Second, it will review analytical methods used to evaluate bond funds available within separate-account BOLI. These methods may be of some value as another tool in the bank portfolio managers’ analytical arsenal.

Insurance and BOLI Basics

BOLI is a life insurance product purchased by a bank on the lives of its executives. Under state insurance law, a bank has an “insurable interest” in its executives as the bank would suffer actual or opportunity costs should the employee die. The executive needs to consent to the insurance, but is not involved after signing his or her consent. The cash values of the insurance accumulate tax-free at the net crediting rate, similar to a zero-coupon municipal bond.

According to the “Interagency Statement on the Purchase and Risk Management of Life Insurance,”2 banks “often use life insurance as a financing or cost recovery vehicle for pre- and post-retirement employee benefits.” While the financing of benefits is the conceptual underpinning for BOLI, it is not necessary to add benefits along with the purchase of BOLI. Rather, the comparison of annual BOLI income to total employee benefits is a filter, or test, per the aforementioned interagency statement, much like the guideline that BOLI can total 25 percent of capital.

From an investment viewpoint, there are three distinct types of BOLI:

- **General account.** The underlying investments that support this type of account are the investments, real estate loans and other assets within the general fund of life insurance companies. These investments need not be bank-eligible.

- **Separate account.** The underlying investments that support this type of account typically are bank-eligible bond funds designed and managed by well-known fund managers.

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Hybrid account. The underlying investments that support this type of account are bank-eligible investment pools designed and managed by the insurance company.

Another distinction among the three types of BOLI, from a bank investor’s perspective, is the amount of transparency in, or disclosure of, product yields and costs. With general-account BOLI (excluding indexed accounts), the yield of the insurance company’s portfolio is indirectly related to the net yield received by the bank. Insurance carriers (again excluding indexed accounts) have the right (or option) to pay any rate they deem appropriate. Only market pressures and the desire to remain competitively priced determine whether a market rate is paid on general-account BOLI. Conceptually, this is similar to the determinants of rates paid by banks to their depositors, where banks hold the option to adjust rates as they choose.

With hybrid and separate-account BOLI, all costs deducted from the underlying investments are disclosed in the appropriate documents and contracts. This move toward greater transparency reflects a macrotrend in the financial marketplace of ever-increasing disclosure.

Some Hallmarks of BOLI

A typical characteristic of insurance costs is that the older the insured individual (or population of insureds), the greater the insurance cost. Viewed from an individual term life insurance perspective, we expect insurance costs to increase as we age. That is not necessarily the case with BOLI. When calculating a long-term internal rate of return for BOLI, increased insurance costs may be offset with insurance receipts when an employee dies.

As an aside, some banks have voiced moral or cultural objections to benefiting from the death of employees. In response, in larger-size BOLI products, insurance companies have devised some creative and specialized solutions. Among these are a “smoothed” mortality feature offered by one insurance carrier. Some insurance carriers offer experience-rated mechanisms with various optional features that may somewhat mitigate this objection. One BOLI consultant offers a patented approach to pooling together bank insureds, thereby spreading insurance costs and benefits over a large industry group.

A key feature of BOLI is that a bank can surrender its policy for cash at any time. While this may have tax consequences, per Statement of Financial Accounting Standards (SFAS) No. 85-4, Accounting for Purchases of Life Insurance, BOLI is carried on the books at its “cash surrender value.” This means that BOLI is customarily carried at book value, rather than at the market value of the underlying investments. This avoids the mark-to-market issue associated with many investments. In an interest-rate-sensitivity or economic value analysis, this results in a stable book value across simulated and actual interest-rate environments, despite price volatility in the underlying investment.

Exhibit 1. Average Annual Yield

2006 is through September 30, 2006.

The Treasury yield is the average of the monthly five-year CMT per the Federal Reserve Board’s H15 release.

The general account (TE) yield is the average of five general-account insurance carriers, assuming constant mortality costs of 75 bps annually.

The separate account (TE) yield is based on the actual yields of a Lehman Aggregate indexed fund, as smoothed by a stable value protection contract, assuming total costs of 90 bps annually.

The TE, or tax equivalent yield calculation, assumes a 40-percent tax rate.
Thus, the appeal of BOLI as a separate asset class is twofold:

1. Attractive yields on a tax-equivalent basis. These returns rank among the highest of business-line risk-adjusted return on capital (RAROCs).
2. The ability to transfer the price or market risk to others. The result is no FAS-115 (Accounting for Certain Investments in Debt and Equity Securities) consequence for accounting purposes and a stable economic value for asset/liability management purposes.

**General-Account BOLI**

Banks purchasing this asset have a preferred claim on general corporate assets. As such, many bankers view the evaluation process of general account as similar to purchasing a 30-year, or longer, corporate bond. As with investments in insurance company bonds, the ability to pay interest and insurance claims rests on the underlying earning assets of the insurance company. Most bank purchasers of general account focus on AA- and AAA-rated insurance companies.

State insurance commissioners, aligned via the National Association of Insurance Commissioners, specify allowable investments for insurance companies. Insurance company assets are similar to banks’ assets, with cash, money market instruments, fixed-income securities and real estate loans predominating. However, insurance company portfolios may also include equities, which are not eligible for banks to hold directly (although they are permissible for bank holding companies). Thus, purchasers of general-account BOLI can gain exposure to non-bank-eligible asset classes. On an annual basis, insurance companies publish their holdings in a format known as “the blue book.” This information is available to prospective purchasers.

General-account BOLI is available in two investment-yield types. The first is called new money product. This refers to an initial yield based on market rates at the time of purchase (as is standard with other bank investments). The second alternative is called a portfolio product, that is, the current yield of the insurance company’s earning-asset portfolio determines, albeit indirectly and undisclosed, the initial yield earned by the BOLI purchaser.

Most insurance companies provide additional information about their investment portfolios and policies:

- Actual and targeted duration
- Actual and targeted credit rating
- Current and historic portfolio yield

**Do Your Homework on General-Account BOLI**

Bank purchasers should document their review of insurance company portfolios and investment policies as part of their prepurchase analysis. Bankers should also consider the interest rate sensitivity of the general-account portfolio yield. For example, an insurance company with three-year duration has a more responsive yield than that of an insurance company with eight-year duration.

During the rapidly falling interest-rate climate of 2003 and 2004, yield for an insurance company with a short-duration portfolio declined with rates and the company offered a near-market rate. In contrast, the insurance company with a longer duration was able to offer above-market rates during a period of historically low rates. The converse was true during the rising interest-rate climate in 2005 and 2006. Banks should back-test the yields versus market rates as part of their due-diligence process and document this review.

The investor in (purchaser of) general-account BOLI has long-term credit exposure to the insurance company and its earning asset portfolio. Under state insurance law, the owner of a life insurance policy is in a first-loss position. Bankers should supplement their internal credit analysis with information available from third parties. Prudent bank purchasers of BOLI review the history of an insurance company’s external credit ratings. Fitch, Moody’s and Standard & Poor’s provide current and historical ratings on insurance companies in the BOLI market. Bank purchasers should also review information from A.M. Best, an insurance industry specialist that rates insurance companies on several measures. Of primary interest to banks is the “claims paying ability” rating.

**Separate-Account BOLI**

It may not be surprising that some banks are hesitant to allocate funds to an insurance company, given the uncertainty of future income returns. For this reason,
Stable Value Protection and Separate Account

Since banks are required to mark investment funds to market per FAS-115, most separate accounts are bundled with a third component, an OTC derivative known as a “stable value protection,” “stable value wrap” or “smoothing instrument.” There are two main features of the stable value product (SVP):

1. To provide for a stable book value/cash surrender value
2. To “smooth” the mark to market for the investment fund

The first feature is a contractual characteristic. The second feature, the earnings “smoothing,” is accomplished by amortizing the gain or loss in market value over the duration of the underlying investment (or the index used to benchmark the fund.) In addition, the stable value contract typically provides a zero-percent floor on the earnings, or crediting, rate. A simplified formula for this is:

\[ CR = (\frac{MV}{SV})^{1/D} \times (1 + Y) - 1 \]

Where:
- \( CR \) is the crediting rate, or investment yield, expressed as a percentage
- \( MV \) is the market value
- \( SV \) is the stable value, or book value
- \( D \), or duration, is the duration of the fund
- \( Y \) is the annualized yield to worst of the benchmark index

The cost of this derivative can vary widely depending on customized contractual features. In this case, the underlying contractual formula becomes more complex.

**Example 1.** Consider an investment fund that comprises a single bond—a zero coupon four-year agency note (duration = 4.0) with a coupon rate of five percent. The day after the purchase, the market experiences a “shock” increase of 100 bps. That means the bond loses four percent of value, so on a total-return basis, the first-year return would be one percent (5% yield – 4% loss). With the SVP, the four-percent loss is amortized over the four-year duration. That creates an annual yield of four percent (5% yield – 4% / 4.0 amortized loss). In this way, earnings volatility in the first year is reduced by 75 percent. Note that this simplified example excludes the favorable effect of an increased reinvestment rate.

**Example 2.** In this example, the investment starts at par, or 1.00. Over time, interest is credited to the account, tax free; thus, the value increases over time. As rates rise and fall, the investment value increases and decreases, respectively. The stable value smoothes the value fluctuations delivering a more stable yield (Exhibit 3).

Since bond funds usually exhibit value volatility, most separate-account transactions include the stable value component. Exceptions are for short-term or money market funds with less inherent volatility; BOLI transactions in privately held banks that save on the OTC derivative cost; and very large banks, typically those with trading accounts, that are familiar with the impact of mark-to-market volatility.

**Exhibit 3. Stable Value Smoothing**
some refer to general-account BOLI as a “black box,” because it is not transparent. In contrast, all costs and returns of separate account are fully disclosed. Separate account has three main building blocks:

- A life insurance component
- An investment fund, typically a bank-eligible fixed-income fund
- An over-the-counter (OTC) derivative known as the stable value protection (SVP) contract (See the “Stable Value Protection and Separate Account” sidebar for additional information.)

Large banks may have an insurance alternative available to them known as “experience rating.” Much like health insurance, the actual costs are based on each institution’s actual experience. Again, like health insurance, a reserve account is established. If costs are greater than the reserve minimum, costs will be increased until the reserve is replenished.

From a credit perspective, banks are the legal owner of separate-account assets via a bankruptcy-remote trust. This theoretically insulates the underlying investments from a credit event at the insurance company, but this concept has not been tested in bankruptcy court proceedings. However, should any of the assets in the separate account default, the bank will suffer the loss. Nonetheless, the bank relies on the creditworthiness of the insurance company to pay claims and other costs.

Since bond funds are included, the insurance product is variable universal life insurance, which is a SEC-registered investment. The investment offering is made through a private placement memorandum (PPM). The PPM can range from 20 pages to more than 250 pages. That wide range depends on the insurance carrier, the amount of fund choices and the complexity of the bundled SVP. Given the complexity of separate account, banks should consult their legal, accounting and/or tax advisors as part of their prepurchase analysis.

Separate-Account Funds Come in Three Flavors

With most separate accounts, a variety of fund choices is available. It is not uncommon for bankers to have a choice of 10 or more funds. Thus, a banker can choose a fund with an investment strategy and duration with which the bank is comfortable and can allocate the bank’s BOLI among several funds to gain the benefits of diversification. With most carriers, a bank can reallocate among the various funds on a quarterly or annual basis. Separate-account BOLI comes in three basic flavors:

1. Indexed funds
2. Actively managed funds
3. Hedge funds (and other funds offering diversification)

As with any fund investment, it is important to do the following:

- Review the fund’s actual and/or pro forma experience.
- Compare the fund’s performance to other funds. Funds usually are compared based on risk (return volatility) and total return.
- Review the fund’s investment policy guidelines.
- Review the fund’s current holdings.
- Consider the fund’s sponsor. Most fund sponsors are well-known Wall Street firms or large domestic banks.
- Review the background of the fund managers.
- Consider the impact of diversifying the bank’s investment among funds, especially those with low or negative correlations to other bank assets.
- Consider reviewing the bank’s investment strategy with an experienced BOLI consultant, the bank’s peers and/or a qualified investment advisor.

One important feature of separate-account BOLI is that it has a risk-weighted “look through” to the underlying fund. Funds are risk-weighted from 20 percent to 100 percent. The minimum weighting is 20 percent, even for a Treasury fund. As of October 2006, indicative separate-account yields ranged from four percent to six percent, or 6.67 percent to 10.00 percent+ on a tax-equivalent basis (assuming marginal taxes of 40 percent). Of course, in the short run, it is possible that total-return funds can provide either negative or double-digit returns, but the SVP contract stabilizes the return volatility.

Separate-Account BOLI with Indexed Funds

As the name suggests, these funds attempt to replicate a fixed-income index. The most frequently chosen indices are the Lehman Aggregate Index, the Lehman MBS Index and the Lehman Securitized Index. Indices chosen range from short Libor-based indices to fixed-income indices with a duration of more than 10 years. These funds are passively managed and are character-
ized by relatively low fees (ranging from five bps to 25 bps). As an example, one insurance carrier offers the following indexed funds:
- Short Treasury indexed fund
- Intermediate Treasury indexed fund
- Long Treasury indexed fund
- Treasury inflation-protected securities (TIPS) indexed fund
- London interbank offered rate (Libor) indexed fund
- Short agency indexed fund
- Intermediate agency indexed fund
- Long agency indexed fund
- Mortgage-backed securities (MBS) indexed fund
- Asset-backed securities (ABS) indexed fund
- Commercial mortgage-backed securities (CMBS) indexed fund
- Composite securitized indexed fund
- Aggregate indexed fund

Separate-Account BOLI with Actively Managed Funds

These funds attempt to outperform an index, typically a fixed-income index, as delineated above. These funds are actively managed and are characterized by somewhat higher fees (15 bps to more than 100 bps).

Some funds contain derivatives and/or leverage that may not be clearly indicated by the fund name, so a thorough review of fund guidelines is imperative. As an example, one MBS fund currently presented to banks in the separate-account BOLI market contains mortgage interest-only strips, principal-only strips, and as much as 15-times leverage. As with any investment, banks should carefully consider whether their boards, shareholders and regulators believe this is a suitable investment and is congruent with their investment policy.

Separate-Account BOLI with Hedge Funds (and Other Funds Offering Diversification)

The latest innovation in the BOLI investment market is funds of hedge funds. While this is not a primer on hedge funds, it is important to understand some hedge fund basics. Originally, hedge funds were devised to attempt to offer returns that “hedged” their underlying market exposure. For example, a hedge can be created by going long one stock, bond, sector or market and short another similar stock, bond, sector or market. The investment is hedged because the loss from one side of the investment is theoretically offset by the profit on the other side. A further refinement occurred by structuring the fund so that it removed market exposure (or beta); thus, only an absolute return, or alpha, remained. Over the past 10 years, there have been many hedge fund successes and a few spectacular failures, notably Long Term Capital Market and the Clinton Group (the later of which was bundled in some BOLI transactions).

The hedge fund of fund investments available in BOLI typically comes with a number of fund covenants and restrictions requiring diversification, liquidity, experience and performance parameters. For example, one fund mandates investments in a minimum of 25 hedge funds. A hedge fund of funds for BOLI might invest in a variety of instruments, such as the following:
- Cash/money market
- Convertible arbitrage
- Credit long/short
- Distressed bonds
- Emerging markets
- Equity long/short
- Event driven
- Fixed income
- Multi-strategy

A BOLI fund of hedge funds can offer diversification to a bank’s typical fixed-income investments found in the investment portfolio and BOLI. For example, a fund of hedge fund correlation of 10 percent to 20 percent with the Lehman Aggregate Index is typical of this asset class.

These funds, if purchased at the bank level, are further structured by wrapping them with a principal protected variable-rate note from a highly rated (AA- or better) international, or Organization for Economic Cooperation and Development (OECD), bank. The notes typically are 10-year to 15-year variable-rate bank notes. Essentially, the OECD bank guarantees that no principal will be lost or guarantees a minimum return (one per-
The actual return varies, based on the return earned by the hedge funds. While this sounds complex, it is quite similar to the concept of equity-indexed CDs offered by many banks.

Under the current Basel II proposal, notes issued by highly rated international OECD banks are risk-weighted at 20 percent. Thus, a fund comprised of noneligible investments and derivatives, laden with complex and potentially unknown (and unknowable future) risks, is risk-weighted the same as a fund comprised of short Treasuries. Banks considering purchases of these funds typically are sophisticated large banks that are prepared for the regulatory scrutiny that may follow related to the complexity of this asset class.

Hedge fund managers target returns that may seem aggressive by bank portfolio managers. Performance targets of 12 percent or more are typical. The management fees also may seem aggressive to bankers, ranging from 100 bps to 200 bps, plus performance incentives of approximately 25 percent of gains (but not losses) up to a preset limit. This "pay for performance" structure is familiar to hedge fund investors but is otherwise rarely seen in the BOLI market.

### Diversification with Other Investment Alternatives

In addition to hedge funds, other investment alternatives are available that offer diversification. One approach focuses on a fund of diversified bank-eligible fixed-income funds. By bundling together various funds, sectors and management approaches, diversification is explicitly provided.

Another approach uses senior loan funds as a low-correlation investment to fixed-income bond funds. In this context, senior loans typically are Libor-based bank loans with a senior/secured structure. The general credit standards are 75 percent loan-to-value (LTV) or better, with an internal mapping to BBB-rating or better. In general, financial institutions originate these loans as a portfolio product or for sale in the syndicated loan market. The senior loan class, over the past six years, as measured by the CSFB Leverage Loan Index, has a negative correlation to the Lehman Aggregate Index, the Lehman Mortgage Index and the Merrill Lynch 1-3 Treasury Index.

### Evaluate the Funds

Bond funds typically are evaluated on a risk-return basis. The return measure is usually an annual, or annualized, total return. There are numerous risk, or return volatility, measures that are found in the managed funds market, such as the Sharpe or information ratios. The simplest may be the standard deviation of annual, or annualized periodic, total returns. In the following, we will focus on this simple measure as a measure of risk and examine the Sharpe ratio as a measure of efficiency.

Exhibit 2 relates annual return to standard deviation for June 2000 to June 2006. Monthly average-annualized total return over that period is used to measure the return. The monthly average standard deviation of returns, annualized, is used as the risk measure. The monthly measures provide a more rigorous statistical analysis with 72 monthly data points, rather than six annual data points. Exhibit 2 compares three indices (12-month Libor, Lehman MBS Index and Lehman Aggregate Index) to comparable funds, including a senior loan fund, plus two funds of hedge funds on a risk-return basis over a six-year period.

In reviewing Exhibit 2, the favored place to be is in the upper-left corner, with high returns and low risk. The Sharpe ratio is designed to illustrate the trade-off between the incremental, or excess, return and the associated risk. The larger the Sharpe ratio, the better, as it is more efficient at delivering returns above the risk-free rate vs. incremental risk.

The Short fund H has both a slightly higher risk and a slightly higher return than the corresponding index, 12-month Libor. In this case, the risk and return of the fund closely tracks the index. In portfolio management terms, the tracking error is low. This is a low-fee fund with a strategy of matching the index, which it accomplishes. The fund has a slightly higher Sharpe ratio than the benchmark, which suggests that it is more efficient than the index.

The aggregate and mortgage funds illustrate two different approaches to outperforming an index, using the Sharpe ratio as a performance metric. Aggregate Fund M has similar return to the Lehman Aggregate Index but has 25 percent less risk as measured by the standard deviation. Since the fund’s objective is to match the index return with less risk, the fund manager has achieved the
objective. Again, this fund has a higher Sharpe ratio than the index.

MBS Fund S has slightly higher risk than the MBS index but has a higher return. Since the fund’s objective is to outperform the index return with similar risk, the fund manager has achieved the objective. Again, this fund has a higher Sharpe ratio than the index.

The Senior Loan Fund V, while not specifically indexed to 12-month LIBOR or the Lehman Aggregate Index, has both a much higher risk and a much higher return than either (its index is in another sector). This is a higher-fee fund with a strategy of outperformance, which it accomplishes. The fund has a slightly higher Sharpe ratio than the benchmarks displayed, suggesting that it is more efficient than the benchmarks.

A fund of hedge funds, Hedge Fund A, while not benchmarked to the Lehman Index (again, its index is in another sector), provides an interesting comparison. This fund of hedge funds provided a 22 percent higher return than the Lehman Aggregate (about 130 bps), with 10 percent less return volatility, or risk. It is important, though, to remember that those numbers are based on past performance, which is no guarantee of future performance. Banks that are looking for an appealing alternative to fixed-income returns with potentially less return volatility may wish to consider investments like Hedge Fund A. In addition, it has a low correlation with the Lehman Aggregate, so it also provides diversification benefits.

Finally, another fund of hedge funds, Hedge Fund P, provides an example of high returns.
coupled with high-return volatility. Over the past six years, most banks would have found a yield of around eight percent, or 13.33 percent on a tax-equivalent basis (assuming marginal taxes of 40 percent), quite attractive. Despite those impressive returns, some banks may not find hedge fund investments suitable, due to the return volatility and lack of transparency.

Hybrid-Account BOLI

Hybrid cars and hybrid bicycles are quite popular these days. They combine the features of two distinct products in a third product, while suggesting that they are the “best of both worlds.” Hybrid BOLI is similar in that it offers features of both general and separate-account BOLI:

- Various investment options, like separate account
- Disclosure of yields and costs, like separate account
- Yields on the invested assets flow through to the bank, like separate account
- Pass-through risk-based capital treatment, like separate account
- Governed by insurance documents, like general and separate account
- No SEC registration required, like general account
- Asset default protection, like general account
- Offers an interest rate floor, like general account, so an SVP contract is not required

Hybrid BOLI, like separate-account BOLI, offers a choice of investment options. These are commingled pools, as are separate-account bond funds. However, rather than the 20 or more choices available in separate-account transactions, a more limited set of choices is available. Current market examples include the following:

- An MBS pool, risk-weighted at 20 percent
- A short-duration Treasury, Agency and MBS pool, risk-weighted at 20 percent
- A longer-duration corporate and loan pool, risk-weighted at 100 percent

The investment pools typically are managed by insurance company fund managers rather than by bond fund managers. Hybrid BOLI can be viewed as similar to a buy-and-hold investment portfolio classified as held to maturity.

From a credit perspective, Hybrid BOLI also has features of both general and separate account. As with separate account, the assets are specifically identified as belonging to the bank. Like separate account, this theoretically insulates the underlying investments from a credit event at the insurance company, but again, this concept has not been tested in bankruptcy court proceedings. Via the guaranteed floor, like general account, the bank is protected from extended market downturns and credit events. For example, in most hybrid-account structures, should any of the assets default, the insurance company, rather than the bank, will bear the loss.

Conclusion

As an asset class, BOLI has evolved to provide many alternatives, ranging from relatively simple money-market funds to complex investment types. As with automobiles, 2007 will likely see even more hybrids in the marketplace, partially due to the financial marketplace trend of ever-increasing disclosure and transparency. Another trend, one of increasingly competitive and efficient pricing, will also continue in the BOLI marketplace. For example, the hybrid and separate-account products previously available to only large banks are now available to all banks of all sizes.

As BOLI investments have become more complex, so has the analytical approach, on both the buy and sell sides. Originally, BOLI was analyzed on a yield basis, much like buy-and-hold bank investments. Increasingly, BOLI investments, especially separate-account BOLI, are evaluated with total-return metrics. In part, this is driven by the supply side of the marketplace, the bond funds.

Many bond funds present their performance in a manner compliant with Global Investment Performance Standards (GIPS®) as suggested by the Chartered Financial Analysts Institute (CFAI®). These standards mandate a consistent approach to presenting risk and total-return metrics across investment classes, including bond, equity and hedge funds. As the BOLI marketplace still is a relatively small one for bond funds, it is logical that fund performance is presented in the same manner as in other market sectors. As noted earlier, the use of these sophisticated risk-and-return investment metrics can supplement existing bank investment analytics like yield tables and rate-shock analyses.
Other advanced portfolio management techniques are being introduced to the BOLI marketplace. These include portfolio management concepts related to diversification, with a focus on low and negative asset-class allocations. The next generation of separate-account BOLI will likely see a portfolio, rather than fund, approach to asset allocation within BOLI. But that topic, as well as other portfolio management approaches, is for the future.

Endnotes

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2 OCC 2004-56.

3 Diversification in this context refers to the Markowitz risk-return efficiency concept.

4 The Sharpe ratio = Excess return/Annualized standard deviation, where Excess return = Annualized return – risk-free return.

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