



# Use Derivatives to Reduce Risk and Avoid the Accounting Headaches

*Learn why embedded caps and floors  
may be your best option.*

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For many years, banks have viewed interest rate derivatives as a valuable means to effectively manage interest rate risk. More recently however, an ever increasing number of banks have shied away from the use of derivatives. The main reason: complicated, confusing and expensive accounting costs associated with the application of Financial Accounting Standards Board (FASB) Statement 133.

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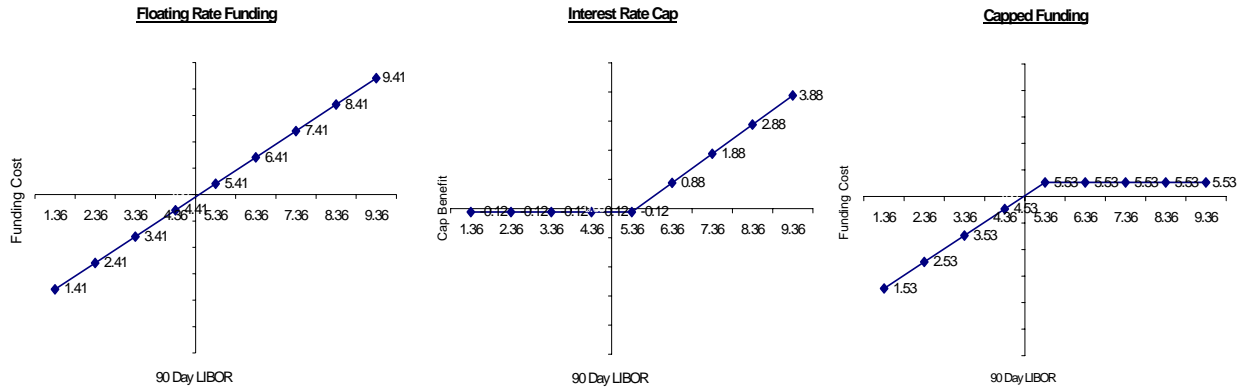
Unfortunately, the reduced use of derivatives to manage risk is occurring at a time when the complexities of managing a bank's balance sheet are increasing. Today's environment of more educated customers; intense competitive pressures; more volatile markets and the flat/inverted yield curve make the management of interest rate risk more difficult.

To manage interest rate risk and avoid the complexities and costs of FASB 133, many bankers have begun using variable rate funding structures that have embedded derivatives. Examples of derivatives include interest rate caps, floors and/or corridors. Currently, these funding structures are exempt from FASB 133 accounting rules because the derivatives are contractually "clearly and closely" related to the rates paid on the borrowing.

In almost all cases, the variable rate index used on these borrowings will be 90 day LIBOR. The cost of the embedded derivative will be added to the funding rate and will be quoted as LIBOR plus a spread that will reset/reprice every 90 days. Examples of each structure and how they might be used to reduce interest rate risk are discussed below.

Variable Rate Borrowings with Embedded Caps – This type of borrowing would be tied to 90 day LIBOR and would be capped when LIBOR exceeds a predetermined threshold. These borrowings are usually for two to five years and are quoted at LIBOR plus a spread. For example, in today's environment 90 day LIBOR is 5.36%. A floating rate borrowing with a 5.36% embedded cap on LIBOR will cost LIBOR (5.36%) plus 17 basis points (bps) for two years. If rates rise from current levels, the rate on this borrowing will not exceed the current rate (5.53%) for two years. If rates fall, the cost of this borrowing will fall with LIBOR.

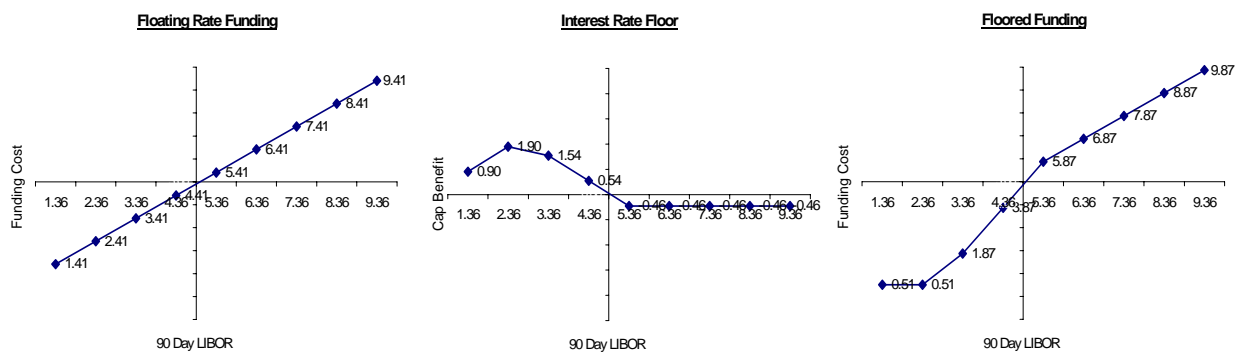
Banks might consider this funding structure if (1) their balance sheet is exposed to both rising and falling rates or (2) if bank management does not think that rates will rise further but can not afford the risk if they do.



Variable Rate Borrowings with Embedded Floors - This type of borrowing would also be tied to 90-day LIBOR and would have an interest rate floor embedded in the funding that would pay the borrower if LIBOR fell below a specified rate level. The payment to the borrower would be recognized in the form of a lower interest rate on the borrowing. For example, a three year variable rate borrowing with an embedded floor at today's 90-day LIBOR rate of 5.36% would cost LIBOR plus 51bps (5.87%). This means that if LIBOR goes below the current rate of 5.36%, the borrower will immediately receive a payment on the floor equal to the prevailing LIBOR rate less the 5.37% strike rate. NOTE: This payment would be in addition to the benefit realized from having floating rate funding as rates move lower.

If LIBOR were to increase by 2% (i.e. 200 basis points), the cost of this funding would increase to 7.87%. However, if rates were to fall 200BP, the cost of this borrowing would fall to 1.87% (the market change of -200BP plus a 200BP payment on the embedded floor).

Banks that might consider using this funding structure will have exposure to a falling interest rate environment.



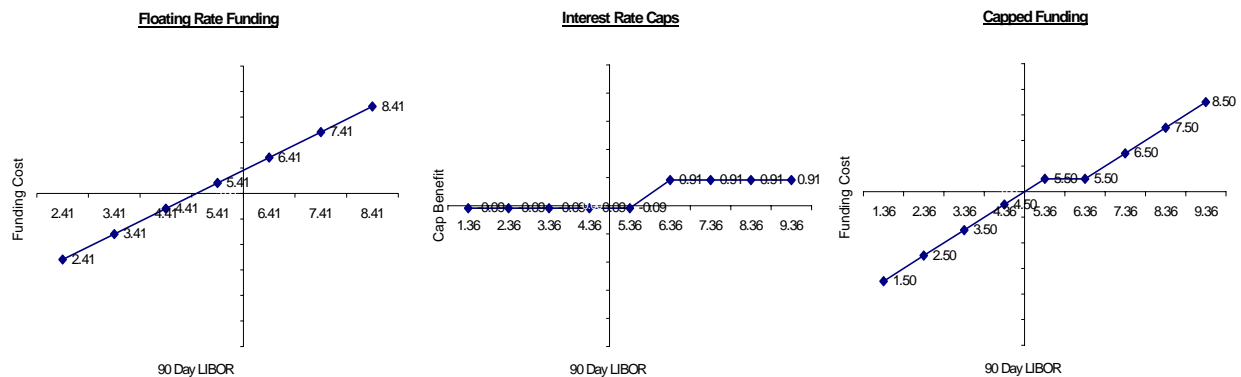
Variable Rate Funding with an Embedded Corridor – This type of borrowing would also be indexed to 90-day LIBOR. Unlike the *Variable Rate Funding with an Embedded Cap* (discussed above), this funding structure would only provide rate protection while LIBOR is within a specific range. For example, a Bank might use 2-year borrowings with a 5.36%/6.36% embedded corridor (i.e. the Bank gets paid if LIBOR is between 5.36% and 6.36%). This structure would currently cost 90-day LIBOR (5.36%) plus 14BP or 5.50%.

If 90-day LIBOR were to increase by 100BP, then the cost of funding would remain at 5.50% (6.50% less the 1.00% corridor benefit equals 5.50%).

If 90-day LIBOR were to increase by 200BP, this funding cost would increase to 6.50% (7.50% less the 1.00% corridor benefit equals 6.50%).

If rates were to fall 200BP, then the funding cost would drop to 3.50%.

This structure is often attractive to banks when the balance sheet is exposed to rising rates but the bankers believe that rates are near their peak or are likely to only move in a narrow range.



## Conclusion

The need to protect net interest income - from either normal interest rate cycles and/or disadvantageous customer behaviors is not likely to go away any time soon. Unfortunately, hedging with the use of caps and floors has been made very difficult and complex as a result of recent FASB pronouncements and auditor scrutiny. The least risky and most pragmatic way to employ these instruments and avoid the accounting headaches is to use funding structures with embedded derivatives.

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Darnell Canada is a managing director at Darling Consulting Group, Inc., the nation's premier ALM solutions provider. DCG's services include consulting, education, core deposit studies, process reviews, model audits, and ALM/budgeting software.

Darnell has over 10 years of experience working directly with community banks to help them improve overall performance through proactive management of liquidity, interest rate risk and capital, and by developing strategies that best fit the risk/return dynamic of their balance sheets. Additionally, he counsels institutions that seek advice on enhancing the overall effectiveness of their ALM processes. Darnell is a frequent contributor to professional publications, and has participated in a wide range of educational programs for the banking industry, including the ABA's *Stonier School of Banking*.

Prior to joining DCG, Darnell was a field office examiner with the Federal Deposit Insurance Corporation (FDIC) in the department of Safety and Soundness. He has received a B.S. in finance from Bentley College and a M.S. in finance from Boston College. Darnell lives in Massachusetts with his wife and twin sons.

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