

Managing EPS Through Low-Margin Transactions . Leveraging

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So here's the play.

I've got ROE problems: shareholders who expect some signs that intelligent life exists as management; more capital than I can deploy quickly and safely in the retail markets; potential acquirers singing lullabies outside my boardroom window; directors who keep asking, "What's the name of that tune we keep hearing?" and a spouse who checks the buckles on my golden parachute every morning before I leave for the office.

What I need are a few wholesale leveraging strategies to pump up my ROE without scaring the dickens out of my directors or getting visited by a regulatory SWAT team.

In the last newsletter, managing the challenge of improving ROE by focusing on steadily improving quarterly earnings per share was discussed. Since most of our employees work at retail banking functions and all of our customers get served by the retail bank, it was the retail bank which needed to bear the brunt of EPS improvement.

At the same time, recognition was given to the important role that wholesale leveraging strategies which use securities funded by borrowings might play in helping an institution reach its EPS goals. Since yield- cost spreads are generally narrower in the wholesale markets than in the retail markets, wholesale leveraging techniques usually depress the institution's ROA. Therefore, in order to boost ROE, these transactions must be carried out at a high enough volume to overcome any decline in ROA.

Leveraging-Size Versus Risk

Figure 7 shows the tradeoff between the size of the leveraging transaction and the spread! Risk required of the transaction to produce an earnings target. The pre-tax earnings target in the FKS&K case of \$40,000 can be earned by leveraging \$2 million at a net spread of 2%, \$4 million at a spread of 1%, or \$8 million at a spread of 50 basis points.

Most directors will perceive greater risk from transactions involving larger dollar volumes, preferring to leverage \$2 million at a spread of 2% than leverage \$8 million for 50 basis points. Size scares people.

It's true, more capital is risked to support \$8 million in assets than \$2 million in assets. But the true index of risk, spread, tells you that the lower volume transaction carries more risk per dollar of committed capital. Of course, the larger transaction still requires a larger commitment of capital. One lesson from this example is that leveraging transactions carry their own peculiar psychology.. .a psychology which must be understood if it is to be managed.

The investment transactions that we are about to review may not help manage this psychology. One might expect that the high volume/lower risk transactions, while committing larger amounts of capital, might only require commitment for shorter periods of time. But alas, short holding period/low risk transactions simply may not be on the menu.

Usually you must get enough spread on the transaction to cover a borrowing cost of 30-40 basis points over the treasury yield curve. And yet, you must earn a high enough spread to justify the use of the capital in the first place.

For instance, earning 10 basis points after-tax for leveraging \$1 million in capital 15 times (to purchase \$15 million in assets), would earn \$15,000. This results in an ROE of 1.5%. Heck, you might as well dividend the capital to your shareholders if that's the best you are going to earn by investing it!

Depending on the tax profile of your average investor, an after-tax ROE of at least 6 to 7% on the leveraged capital would be needed to keep peace and tranquility. Forty to 50 basis points of after-tax spread are necessary to economically justify this transaction.

Since the proof of the pudding is in the eating, let's look at several types of transactions. Need I mention that I am not recommending purchases of specific investment securities? Rather, I am examining the types of risk that you should consider for leveraging transactions. The risks associated with each transaction are summarized in Figure 8.



1.) A Simple One-Year Mismatch, One-Year Forward

The first strategy is a straightforward yield curve play. A two year treasury note yielding 6.15% will be purchased, funded with a one year FHLB advance priced 40 basis points over the one year Treasury bill at

5.88%. 27 basis points will result from this trade for at least one year. Of course, this transaction is all interest rate risk. If the cost of funding increases at the end of one year to 6.42% (an increase of 54 basis points) over two years the transaction will just break even. That is, I'd have earned 27 basis points in year one and lost 27 basis points in year two.

Hmmm! I say, Hmmm! After recently surviving a 200 basis points rise in rates you'd have to be pretty bullish to make this play. And it doesn't offer the required 40-50 bp after tax spread either.

2.) Adding On A Little Credit Risk

What if the same one-year mismatch one year forward was kept but we added a little credit risk by purchasing a two year A2/A Ford Capital corporate note yielding 6.65%. This picks up an additional 50 basis points in credit risk, increasing the total spread on the transaction to 77 basis points. The break-even financing rate at the end of the year one increases to 7.42%, giving me 154 basis points before my play goes negative.

Ahh! That's better.

Of course, if the note is sold before its maturity, a ratings change on the corporate note would result in additional price risk. Holders of corporate debt will also need to consider the loans to one borrower limit of 15% of capital.

I like the risk-reward tradeoff on short-term, bullet corporate notes, if I can hold them to maturity.

Some of you may still be wary of the clear interest rate risk inherent in either of these transactions. Might matching floating rate assets with floating rate borrowings be a less risky proposition?

The following cases will analyze transactions that match floating rate Libor FHLB advances with either an ARM security or a Libor-floater CMO. The Portfolio Strategies Group at Shay Financial Services must be credited for the following discussion on structured debt transactions. These types of transactions blink in and out of the realm of practicality, depending on market availability and price. But these examples do raise issues to be considered when planning such leveraging transactions.

Remember that leveraged transactions funding a floating-rate asset with a floating rate liability must include one or more of the following risks in order to generate positive returns:

- (a) Mismatch the liability index and the asset index,
- (b) Mismatch the liability pricing period and the asset pricing period,
- (c) Asset coupons subject to a series of periodic caps while the liability coupon rates are uncapped, (d) Asset coupons are subject to life caps while the liability coupon rates are uncapped.

3.) Floating Rate Advance Versus A Floating Rate CMO

The LIBOR-indexed CMO market features securities which enable a leveraged investor to avert the first 3 risks, allowing him to manage only the last, the life cap risk. Several securities were identified that would deliver a spread of about 120 basis points over Libor. They are funded by taking down a floating rate FHLB advance flat to Libor.

Funding a capped asset with an uncapped liability allows for the possibility of negative spread funding, if the rate index moves through the cap. Additionally, if the threat, or reality, of negative spread funding forces a sale, the execution price will likely be lower than the purchase price and therefore may result in a loss for the holding period of the transaction. Of course one could always buy a cap on the FHLB advance, The difficulty in pinning a cost on this liability cap is that it will vary based on how far out of the money you are willing to set it, how long you want protection, and the current volatility of the index. (But I don't eat my hat if a cap doesn't cost you at least 20 basis points per year, even if you start 4% out of the money.)

Some regulatory/accounting risk may also exist if the asset is held to maturity and eventually caps out. At that point it is likely that the bond will fail the FFIEC test. I wonder whether the investors' auditors will demand a reclassification of the asset even if the examiners do not require divestiture.

I like the 120 basis points spread on this transaction, but I don't like the potential deep-ocean dive that the price of the Libor-floater is likely to take if it gets close to its life cap. Not to mention that securities dealers are notoriously reluctant to rescue submariners from the bottom of the ocean. Sorry folks, I was scarred for life in 1982.

4.) Floating Rate Advance Versus ARMs

Of the array of defensive securities available in the fixed-income market, non-agency, AAA-rated and AA-rated adjustable-rate mortgages are cheap. Prices have retreated over the last several weeks (June 1994) due to the lag between the coupon resets on the securities and the rapid

increases in the underlying indices. As coupons begin to be reset at the higher levels implied by those indices, bond prices should firm and improve. Furthermore, the supply/demand balance is tilting in favor of price appreciation.

Demand has remained fairly constant for adjustable rate securities and will likely increase as the recent bearish interest rate sentiment becomes pervasive. On the other hand, supply is declining as prepayments continue to redeem bonds and new issuance is anemic. The result is that price volatility is likely to be limited in these securities. Gee! Does that sound like a rate forecast at a point in time or what! Sony. Timing, the yield curve, and rate expectations determine the relative value of securities, folks. Nevertheless, we identified some 6-month Libor Agency ARM securities priced to yield about 100 basis points over 6-month Libor. We match-funded them with FHLB 6-month Libor advances priced flat to Libor.

Risk in this transaction can be summarized in two closely related categories- rate and spread risk.

Rate Risk: Because the coupons of adjustable rate mortgage securities do not contemporaneously reset with movements in their respective indices, a lag period exists between movements in the index and the subsequent coupon adjustment. In periods of rapid and substantial rate changes this lag can create significant, although temporary, changes in the spread between the financing rate and the bond's coupon. This risk can be reduced by choosing a funding source whose index (LIBOR, CMT) and term (3 mos., 6 mos.) will closely match that of the investment (6 mos. LIBOR or 6 mos. CD or 1 yr. CMT). The closer the correlation between the rate action of the funding source and the coupon action of the adjustable rate security, the lower the possibility of sustained periods of narrow or negative spreads.

Adjustable-rate mortgage-backed securities have both periodic and life caps on their coupons. These caps limit the readjustments to certain predefined parameters. Typically, a bond that resets its coupon on a semi-annual basis will be limited to a 1% maximum increase or decrease from the previous rate. This limit is referred to as a periodic cap. Additionally, the coupon cannot reset above an absolute level referred to as the life cap. A rapid and substantial rise in the underlying indices risks coupon resets that will be limited by the respective caps. At current rate levels the periodic caps are the most restrictive. As coupons approach their respective caps, bond prices will drop. If indices exceed the caps, financing rates can exceed coupon income.

Spread Risk: Adjustable rate securities are priced as a function of spread to the index. If spreads change due to market forces, the prices of the securities will change accordingly. The magnitude of the price correction is dependent on the average life of the bond. Spread changes are affected by supply and demand factors, index volatility, and credit reviews.

If you think the price risk from the life-cap on the floating-rate CMO had me concerned, you can compound that with my concern with the risk associated with blowing through the periodic cap on the ARM security. True, there's no regulatory risk or FFIEC test risk with an ARM security that would force liquidation. But just because the regulator's stupid doesn't mean I have to be stupid. But maybe I'm just prejudiced. I never have liked ARMs. Perhaps I should be a little more open minded, or just find a security that is priced right.

There, I've done it. By narrowing down the other options, I've introduced a %BAC CMO+into our discussion. Horrors! Maybe, there are CMO structures in which cash flows are engineered to reduce risk acceptable level for a leveraging transaction.

5.) A “Matched-Funded” Whole Loan PAC Bond

The recent dramatic rise in interest rates is beginning to be manifest in slower, more stable mortgage prepayments. This stability is especially evident in the lower coupon mortgages which now are at significant discounts to par. Consequently, these loans have been effectively disqualified as refinancing candidates even if rates were to decline by a magnitude of 150 basis points. When these loans are used to collateralize CMO PAC bonds, this Inherent prepayment stability is translated into highly certain cash flows. A security with such features can be matched-funded with significantly less risk than most other mortgage-backed securities.

We were able to identify a whole loan, 4-year PAC structure priced about 100 basis points over the 4-year Treasury. Since it was funded with a 4-year FHLB advance, we were only able to squeeze out a 60 basis point spread on the transaction. The risk in the transaction is as follows:

(a) A very significant rally in the bond market can accelerate prepayments to the point that the deal structure will no longer support the security's planned amortization schedule. This event will destabilize the principal flows and likely result in the bond being redeemed earlier than was anticipated. The initial matched state of the asset and liability will be disrupted.

(b) In the event that mortgage prepayments sustain a slip significantly below the lower bands of the PAC bond, the investor risks some extension in the average life of the security. Such an extension will mismatch the transaction because the liability will mature prior to the asset.

I must say, however, the band over which a stable cash flow could be expected was pretty darn wide, from a 3% CPR to a 25% CPR. And since the underlying mortgages carried low coupons (discount collateral), the 4-year projected life looks pretty solid. That's why the spread is relatively narrow.

I kind of like this trade, but I'd probably need to hold it to maturity. If held AFS, the asset would be marked to market. The funding wouldn't. Ouch! It's a pretty conservative transaction because of the structure of the CMO.

Of course, if the spread is too narrow I could either underfund the asset or mismatch the funding maturity. Hmmm, let's try it.

6.) A Two-Year Mismatch, Three Years Forward

We identified a 5-year Agency PAC bond and funded it with a 3-year FHLB advance, picking up 77 basis points in spread for the first three years of the transaction.

Optimally deployed, this simple term-mismatch seeks to optimize the trade-off between the spread and the incumbent tail-risk. The risk in the transaction is as follows:

(a) A significant rally may accelerate mortgage prepayments to a level that redeems the asset before the liability is due to mature. The investor would be forced to reinvest the amortization proceeds in a lower interest rate environment and the possibility of a negative spread.

(b) Since the asset is longer than the liability, the transaction exposes the investor to refinancing risk related to funding the remaining principal in the security. If rates are high enough at that time the funding cost may wipe out the accrued profit in the transaction and also create a loss for the term of the investment. Similarly, if the investment is held as available for sale, a divestiture of the residual portion of the asset may be executed at a price below the break-even level for the transaction.

Have we identified a security with a wide enough band of prepayment protection to mitigate risk (a)? And, of course this is always the key, over what range of prepayment speeds are your cash flows protected? Risk (b), however, is still inherent in this transaction.

This is not meant to be an exhaustive discussion of all leveraging transactions but it does illustrate two facts:

1. You're going to have to take on and manage risk if you're going to leverage capital at a sufficient spread to generate an adequate ROE and to cover funding costs that are 40 basis points over the treasury curve.
2. The structured debt markets may provide an array of risk/reward opportunities that justifies learning about these markets.

Oh and remember; do not be greedy and don't forget your policies, documentation, policies, documentation, policies.