THC Financial Engineering
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Weekly Post: Liability Strategy

Dear Clients:

Challenge

Last week's Post addressed the recovery of the loan market. Again today, Bloomberg News confirms our expectation: " Housing Starts in US Surge to 7 year high…". My Post last week also discussed a strategy to fund loan volume growth by rotating from the investment sector to the loan sector, while maintaining roughly the same EVE duration exposure and EVE ratio. However your liquidity policy limits may create some constraints for you in selling securities. Further, your customers may demand for long duration products such as fixed rate mortgages, 7-1 ARMs, 10-1 ARMs, whose interest rate risk may not be able to be managed by the sector rotation strategy.

- Should we turn down the loan applications?
- How can we fund the loans without increasing interest rate risk exposure?

Solution:

This week, I would like to discuss a liability strategy to fund your loan volume growth. Under your growth plan, you can estimate the loan volume next quarter. You can first use your THC *Gap* report to estimate the projected principal cash flows from these new loans and then construct a portfolio of CD or FHLB bullets that matches the loan portfolio cash flows. This funding strategy would minimize the interest rate, refunding and liquidity risk exposures. You may also seek the lowest cost funding portfolio by evaluating alternatives. Note that, this liability strategy would lower the EVE ratio and is costlier than using cash to fund the loans. A cost/benefit analysis can be conducted in Risk Officer

- A liability strategy can be optimized to manage interest rate and liquidity risks

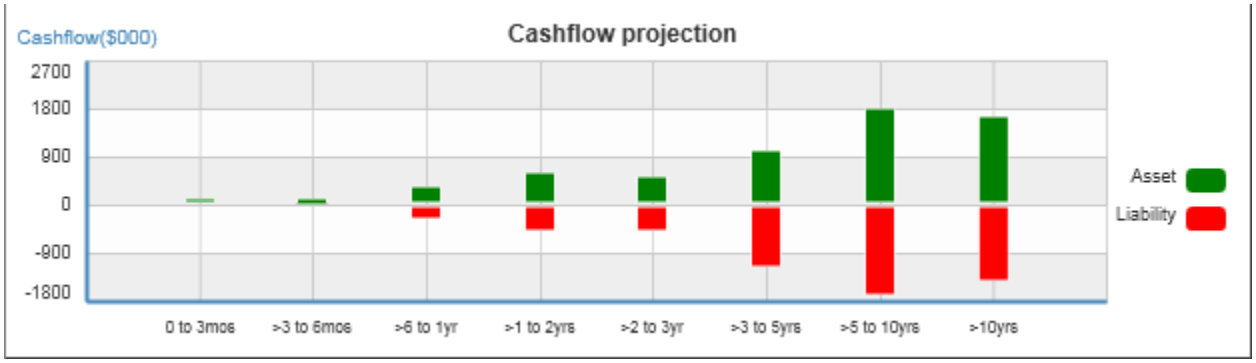
Numerical Example

Consider funding $5 million 30 year fixed rate mortgage recently originated loan pool with interest rate 3.85%, in FICO 750 and LTV 80 range, using broker CDs. The market and CD rates are based on 5/18/2015. The funding portfolio is described below with a blended funding rate of 1.904% and duration of 5.22 years.

CD Funding

Tenor	6m	1 year	2 year	3 year	7 year	10 year
rate (%)	0.45	0.55	1	1.3	2.3	3
size ($000)	400	400	400	1,000	1,400	1,400

The margin is 194 bpt (= 3.85% – 1.904%). The loan portfolio duration is 5.75, showing that the durations are approximately matched. The cash flows are quite similar minimizing liquidity risk, as depicted below.



Conclusions

Funding strategy can be used to manage loan volume growth. However, we must evaluate the cost and benefit trade off. THC staff will be delighted to assist you to formulate and discuss your funding strategies, and you can use the Risk Officer Funding Optimizer to seek the most appropriate funding portfolio.

Note: I am pleased to inform you that two of my papers are appearing in the upcoming issue of the Journal of Investment Management, a widely circulated academic publication. They are:

- *A Structural Macro-Financial Model and Macro-Risk Management,*
- *Equity Indices Returns: Contingent Claims on GDP Stochastic Movements,*

These papers relate economic performance to the financial sectors, a topic closely related to banking

Regards

Tom Ho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