



September 8, 2016

Weekly Post: Quarterly Planning and Optimizations

Dear Clients-

Labor Day has passed and planning for Q4 2016 has started. ALCO should review the estimated net inflows of funds and an optimal way to adjust and manage the balance sheet. In this quarterly planning, ALCO must take many considerations into account. There are the balance sheet needs: liquidity, loan commitments and balance sheet sensitivity to asset or liabilities. There are also the market opportunities. Quarterly planning should optimize market opportunities while meeting the balance sheet requirements.

Last week, I discussed an investment strategy using structured agency bonds. Such market opportunity can only be exploited by meeting the balance sheet requirements. This Post describes a systematic planning process for your quarterly planning.

Challenges

- The *Need* to Invest: How much free cash flows I will generate over the next 3 months?
- *Optimize* Strategy: How can I optimally deploy the free cash flows?

Solution

Interest Rate Base Case			
Primary Liquidity Projection (EQUIVALENT) & NET Fed	1 Month	2 Month	3 Month
Sources of Funds			
Investment Maturities	0	222	496
Loans Reductions	3,278	3,311	2,874
Deposit Growth	7,759	8,893	9,469
Change in Equity	26	32	32
Total Sources of Funds	24,649	26,071	26,515
Uses of Funds			
Investment Purchases	0	222	496
Loan Growth/Funded Comm	3,351	3,386	2,944
Deposit Reduction	7,759	8,893	9,469
Adjustment for Accounting	-74	-74	-70
Total Uses of Funds	11,036	12,426	12,839
Project Cash Flow*	13,612	13,644	13,677
Liquidity Coverage Ratio	1.81	1.91	1.94

Quarterly planning often begins with an estimate of the net inflows and outflows of funds in the coming three months. THC sources and uses of funds report enables you to estimate the needs.

Consider a hypothetical bank's 3 month cash flow projections. The first row shows the cash and cash equivalent assets and the net Fed

Funds sold and purchased. Based on your back testing results, the THC model projects your loan scheduled and unscheduled (prepayments) reductions. The THC model also projects the investment reductions (including bonds called or MBS prepaid) and the draw down of your time/core deposits.

Market Wisdom - Art Hilliard*

The TRID Trap

An article today said that loan defects are "skyrocketing". The reason? The CFPBs new TILA-RESPA Integrated Disclosure rule - TRID. What to do about it?

- Some bankers are proactively scrubbing their loan portfolios to identify problem loans
- Outsource underwriting and QC review to a reputable and experienced third party
- Perform pre-closing reviews to identify issues while they can still be corrected.
- Ensure internal compliance personnel are trained and up to date
- Review underwriting deficiency reports weekly and take steps to resolve origination and underwriting issues

TRID loans are a large part of scratch and dent portfolios the are issued today:

- Loans with TRID issues are candidates for S&D sales
- Use TFO to market TRID loans and use THC to model the best use of funds received from loan sales

Art Hilliard has been in the mortgage industry for 29 years. He has originated, managed secondary marketing, securitizations and settlements, provided mortgage financial advisory and performed multiple mortgage portfolio sales and acquisitions. He was past president of the Illinois Mortgage Bankers Association.



Based on your loan commitments, you can estimate the loan growth and the net position change in deposits (both item highlighted in yellow). Based on these estimates, the sources, uses and the liquidity coverage ratio (LCR) are determined. In many cases, I suggest targeting LCR to be a multiple of 2, and using this target you can determine the free cash flows in coming three months available for investments.

Numerical Example

Many of our clients are familiar with using Trade Simulations and Financial Simulations to evaluate efficacy of investments in deploying funds or disinvesting to generate liquidity. These applications are useful when you have formulated particular strategies. But these strategies should exploit market opportunities such as the changing of bond pricing, yield curve shape and capital market liquidity spreads. To attain this goal, THC has 4 types of Optimizers which can suggest to you optimal strategies. They are: Balance Sheet Optimization, Optimal Funding, Heat Map Optimization and Strategies Analyzer, available as Apps on the left panel of the Homepage. These optimizers follow the 3 basic steps:

Step 1: Select assets, fundings and constraints

1. Select Investment	2. Select Funding	3. Optimization	Optimize ROE
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Optimize Investment and Funding ▾

Maximize investments yield strategies Find the largest investment yield for: <input type="text" value="25,000"/> ,000 Max <input type="text" value="5"/> instruments <input checked="" type="checkbox"/> allow for exceeding the size limits <input checked="" type="checkbox"/> Investments: <input checked="" type="checkbox"/> Agency <input checked="" type="checkbox"/> Munis <input checked="" type="checkbox"/> Corp <input checked="" type="checkbox"/> MBS <input checked="" type="checkbox"/> ABS/CMO <input type="checkbox"/> Loans:	Minimize funding cost strategies Find the lowest cost funding for: <input type="text" value="25,000"/> ,000 in originations Max <input type="text" value="5"/> instruments <input checked="" type="checkbox"/> allow for exceeding the size limits <input checked="" type="checkbox"/> CD <input checked="" type="checkbox"/> FHLB
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THC prices are updated daily. These prices are THC model prices benchmarked off market prices. Therefore, they are only Indicative Prices. You can ask your brokers to provide you the bid prices for any set of securities in an Excel file. THC Risk Officer™ PATH input data file can update these bonds' prices and their maximum size for your optimization. Each optimizer provides you a different set of constraints, as illustrated above in the Heat Map.

Step 2. Generate Prioritized Optimized Results

	Gap			Barbell			Ladder					Gap			Barbell			Ladder			
WAL	1-3	>3		1-2	2-4	>4	1-2	2-3	3-5	>5	Term	1-3	>3		1-2	2-4	>4	1-2	2-3	3-5	>5
Max%	<input type="text" value="70"/>	<input type="text" value="70"/>		<input type="text" value="50"/>	<input type="text" value="20"/>	<input type="text" value="50"/>	<input type="text" value="30"/>	<input type="text" value="30"/>	<input type="text" value="30"/>	<input type="text" value="30"/>	Max%	<input type="text" value="70"/>	<input type="text" value="70"/>		<input type="text" value="50"/>	<input type="text" value="20"/>	<input type="text" value="50"/>	<input type="text" value="30"/>	<input type="text" value="30"/>	<input type="text" value="30"/>	<input type="text" value="30"/>
Duration	Investment Yields in bpts (EVE ratio% chg, Duration chg)										Duration	Funding Cost in bpts (EVE ratio% chg, Duration chg)									
1	120(0.00 1.66↑)			113(0.00 1.10↑)			100(0.00 2.06↑)				1	167(-3.19↓ -2.21↑)			96(-3.19↓ -2.44↑)			108(-3.19↓ -1.86↑)			
2	153(0.00 3.47↑)			119(0.00 2.81↑)			105(0.00 3.53↑)				2	169(-3.19↓ -3.75↑)			113(-3.19↓ -3.67↑)			183(-3.19↓ -3.12↑)			
3	157(0.00 5.69↑)			156(0.00 5.18↑)			133(0.00 4.68↑)				3	132(-3.19↓ -4.67↑)			118(-3.19↓ -5.34↑)			133(-3.19↓ -5.32↑)			
4	144(0.00 6.76↑)			190(0.00 7.13↑)			198(0.00 6.90↑)				4	186(-3.19↓ -6.68↑)			166(-3.19↓ -6.93↑)			163(-3.19↓ -7.26↑)			
5	182(0.00 8.79↑)			200(0.00 8.86↑)			191(0.00 9.35↑)				5	188(-3.04↓ -9.02↑)			184(-3.19↓ -9.03↑)			197(-3.19↓ -9.09↑)			

• Click on a cell in the heat map to see the transaction in the below. • Click on a cell in the heat map to see the transaction in the below.

Often, "optimization" seems to suggest erroneously that there is a single best solution, not so in balance sheet management. The optimal solution involves your judgement on risk and return tradeoffs. Therefore, the Heat Map provides you the optimal combinations of investments and fundings. Strategy Analyzer ranks a list of 30 strategies to meet your balance sheet needs – some THC artificial intelligence involved taking your performance dashboard into consideration.

Step 3. Review the Proposed Strategy

After you have selected your strategy, you can then review the asset portfolio and the fundings of the strategy.



Optimization Result (Click simulate to simulate it as pre-trade)

Buy									Funding								
ID	Des...	Trad...	Yiel...	Boo...	Yiel...	OA...	Eff...	Size	ID	Des...	Trad...	Yiel...	Boo...	Yiel...	OA...	Eff...	Size
3128S5D2	FH...	106.44	0.21	0.21	0.38	-0.6...	-1.22	600,000	084FJ	AR...	97.30	2.16	2.16	2.52	0.000	0.02	400,000
31294PKF0	FG...	105.08	1.66	1.66	1.72	0.414	2.69	17,210,000	012FJ	AR...	100.00	0.92	0.92	0.74	0.224	0.08	2,330,000
13032UDT2	CA...	111.31	3.33	3.33	2.72	0.784	11.31	2,070,000	P THC Bullet\$...	1y...	100.00	0.43	0.43	0.85	0.260	0.99	10,980,000
70914PF49	PA...	99.00	3.07	3.07	3.07	0.943	12.40	4,000,000	036FM149LK012	FR...	99.88	1.56	1.56	1.55	0.378	1.78	8,950,000
Total		104.64	2.00	2.00	1.99	0.505	4.93	23,880,000	P THC Bullet\$...	3y...	100.00	1.08	1.08	1.30	0.381	2.94	2,340,000
									Total		99.91	0.97	0.97	1.16	0.306	1.36	25,000,000

You can then click on “simulate” to generate Trade Simulation results. As discussed previously, Trade Simulation enables you to generate regulatory reports, bond swap reports including cash flow analysis, and many other applications, including adjusting the proposed strategies as the market condition changes.

Conclusion:

Quarterly planning is important in ALCO meetings as you prepare for Q4 performance. THC Risk Officer™ adheres to regulatory guidelines ensuring that ALCO planning incorporates risk analysis and measurements. This Post’s Quarterly Planning process describes a systematic approach can enhance value and management efficiency.

If you have any questions regarding using Optimizations in your Quarterly Planning, please do not hesitate to contact THC.

Regards,
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