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Investing Excess Cash Reserves

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Many of our clients have told us they continue to hold “excess reserves” due to their belief that interest rates simply have to go higher. As a friendly reminder, higher rates have been predicted for the past four years and rates have done nothing but decline.

Others have said that regulators are advising credit unions to prepare for the onslaught of the “bear market” in bonds. As such, credit unions have become ultra-conservative and continue to maintain excessively high cash levels.

Ironically, many credit unions are well prepared for higher rates. What they may not be prepared for is a continuation of low interest rates. We would once again like to remind our clients that **maintaining high levels of cash is NOT always conservative**. In fact, if the balance sheet does not need excess liquidity, maintaining high cash reserves actually *increases risk*.

Most credit unions are now struggling with how to maximize income from their investments to “keep the lights on” while minimizing potential capital losses should interest rates increase. To help guide our clients through what is unquestionably a difficult interest rate environment, we would suggest the following steps be taken.

- Determine “**optimal**” cash levels for liquidity and loans.
- Establish “**realistic**” or **most probable** interest rate scenarios.
- Quantify “**worst-case**” interest rate, yield curve and spread scenarios.
- Quantify **risk-return or the upside vs. downside** of *all investments*.

When making investment decisions, the objective of these four bullet points is to **determine whether or not you can live with the risk if you are wrong**.

The best way to quantify and identify the most attractive risk-return tradeoff is to run scenario analyses on securities that are being considered for purchase. At the time of this writing (June 3, 2013), we plotted the income, principal and total returns of cash versus three- and five-year Agency bullets, and 10- and 15-year MBS over a 24-month time horizon. The 24-month time horizon is consistent with the consensus forecast of when the Fed will begin to normalize its interest rate policy. In all cases illustrated in the tables on the next two pages, we assume a \$20 million investment.

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Relative Income, Principal and Total Return Analysis
 (As of June 3, 2013 – 24-Month Horizon, \$20 Million Investment)

Cash

Yield Change (bps)	Total Return	Income Return	Price Return	Ending Yield to Worst	Ending Effective Duration	Market Value (USD 000)	Incremental Value (USD 000)
-50	0.019	0.019	0.000	0.000	0.000	20,007	4
0	0.147	0.147	0.000	0.000	0.000	20,033	29
50	0.665	0.665	0.000	0.000	0.000	20,136	133
100	1.186	1.186	0.000	0.000	0.000	20,241	237
150	1.708	1.708	0.000	0.000	0.000	20,345	342
200	2.232	2.232	0.000	0.000	0.000	20,450	446
250	2.757	2.757	0.000	0.000	0.000	20,555	551
300	3.285	3.285	0.000	0.000	0.000	20,660	657

Three-Year Agency Bullet

Yield Change (bps)	Total Return	Income Return	Price Return	Ending Yield to Worst	Ending Effective Duration	Market Value (USD 000)	Incremental Value (USD 000)
-50	2.048	1.190	0.858	-0.296	0.989	21,560	238
0	1.571	1.193	0.378	0.205	0.987	21,459	239
50	1.105	1.203	-0.098	0.706	0.984	21,361	241
100	0.643	1.213	-0.570	1.207	0.982	21,263	243
150	0.185	1.224	-1.039	1.708	0.979	21,166	245
200	-0.270	1.234	-1.505	2.209	0.977	21,070	247
250	-0.722	1.245	-1.967	2.710	0.975	20,975	249
300	-1.170	1.255	-2.425	3.212	0.972	20,880	251

Five-Year Agency Bullet

Yield Change (bps)	Total Return	Income Return	Price Return	Ending Yield to Worst	Ending Effective Duration	Market Value (USD 000)	Incremental Value (USD 000)
-50	5.218	2.312	2.907	0.182	2.942	20,765	462
0	3.711	2.313	1.399	0.682	2.934	20,468	463
50	2.233	2.317	-0.084	1.182	2.927	20,176	463
100	0.780	2.321	-1.541	1.682	2.919	19,889	464
150	-0.649	2.325	-2.973	2.183	2.912	19,608	465
200	-2.053	2.329	-4.381	2.683	2.904	19,330	466
250	-3.433	2.333	-5.765	3.183	2.897	19,058	467
300	-4.790	2.337	-7.126	3.683	2.889	18,790	467

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Relative Income, Principal and Total Return Analysis

(As of June 3, 2013 – 24-Month Horizon)

10-Year Agency MBS

Yield Change (bps)	Total Return	Income Return	Price Return	Ending Yield to Worst	Ending Effective Duration	Market Value (USD 000)	Incremental Value (USD 000)
-50	2.375	1.675	0.700	0.087	2.065	21,586	335
0	1.824	1.824	0.000	0.637	2.308	21,470	365
50	1.207	2.017	-0.811	1.177	2.500	21,340	403
100	0.513	2.222	-1.709	1.710	2.649	21,193	444
150	-0.258	2.400	-2.658	2.239	2.766	21,031	480
200	-1.089	2.556	-3.646	2.765	2.855	20,856	511
250	-1.958	2.703	-4.661	3.285	2.915	20,672	541
300	-2.846	2.845	-5.691	3.802	2.960	20,485	569

15-Year Agency MBS

Yield Change (bps)	Total Return	Income Return	Price Return	Ending Yield to Worst	Ending Effective Duration	Market Value (USD 000)	Incremental Value (USD 000)
-50	4.715	3.609	1.106	1.084	2.731	21,476	722
0	3.738	3.738	0.000	1.723	3.301	21,275	748
50	2.501	3.897	-1.396	2.331	3.741	21,022	779
100	1.060	4.059	-2.999	2.913	4.057	20,726	812
150	-0.497	4.196	-4.693	3.475	4.271	20,407	839
200	-2.115	4.312	-6.427	4.020	4.399	20,075	862
250	-3.754	4.419	-8.172	4.549	4.462	19,739	884
300	-5.399	4.521	-9.920	5.071	4.491	19,401	904

In reviewing the data, a few conclusions can be drawn:

- 1) **Assuming the Fed remains on hold and interest rates remain unchanged**, cash (0.15%) will generate income of only \$60,000 over a two-year period. Income earned from three- and five-year Agency bullets would be \$239,000 and \$439,000, respectively. 10- and 15-year MBS would generate \$365,000 and 748,000, respectively. Thus, in a static rate environment, cash will continue to be in the “house of pain,” inflicting serious pressure on income and margins.
- 2) **What if rates rise?** If the Fed raised rates by 100 basis points over the next two years, the income generated from cash would equal the income earned on the three-year Agency bullet. If yields on cash increased by 200 basis points over a 24-month time horizon, the income would still be less than what would have been earned on a five-year Agency bullet – and significantly less than what would be earned on 10- and 15-year MBS securities.

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- 3) **Can I live with the risk if rates rise?** To answer this question, we plot the principal and total returns of the investment alternatives versus cash. Keep in mind, we are running an “aged” scenario analysis which factors in the aging of securities over the 24-month holding period. This is often referred to as *rolling down the curve*. For example, the three-year Agency bullet that ages over a 24-month time horizon would have an ending duration of less than one year. If rates were to rise by 100 basis points over two years, the price on the three- and five-year Agency bullet would decline by only -0.57% and -1.54%, respectively. The three- and five-year total return would be +0.64% and +0.78%, respectively.

“Now that I’ve located an appropriate investment, what if I am wrong?”

Gauge the strength of your decisions by putting prospective investment purchases through a battery of what-if tests. Comparative analyses can be run on any securities, using the criteria shown in the tables in this article and or others appropriate to your situation.

Some portfolio managers have already moved their excess cash into instruments with suitable risk-return features. For those thinking about taking action, the steps outlined in this article should be useful.

To obtain more information about credit union investment strategy, portfolio allocation and security selection, please contact the author.