March 23, 2015

THC Weekly Post **Risk Adjusted Profitability**

Challenge: We are often confronted with the questions below

- Should we originate fixed rate mortgages and keep them on the book as opposed to selling them?
- Should we lower the FRM rate to be more competitive?
- Are ARMs more profitable than FRMs?

Solution*:* Profitability should be measured adjusted for risks. By identifying the risk costs associated with the loans, you can evaluate merits of alternative strategies and determine the level of risks to take. The numerical example below illustrates the derivation of the income net of all costs.

Numerical Example: Consider a 30 year fixed rate 3.5%, $300,000 amount, single family, FICO 700 and LTV 80%. THC model shows that the loan has 6.69 year duration and weighted average life 8.57 year. The Risk Adjusted Profitability can be calculated as below. The costs are estimated from the THC model. You can adjust those cost numbers accordingly to determine the profitability of your loans.

Items	Yields	Comments
FRM gross income	**3.526%**	annualized yield, not monthly interest
duration funding cost	**1.957%**	funding with equivalent duration off the Treasury rates
extension risk cost	**0.083%**	cost of the extension option, refer to 3/1/2015 Post
allowance for credit loss	**0.427%**	assuming 85% recovery rate
servicing cost	**0.250%**	bank's internal cost
income	**0.809%**	option-adjusted spread net of credit reserve
Total	3.526%	

This calculation can be extended to other loans that you originate and therefore you can determine the relative merits of your products. The risk adjusted profitability is provided in the Mortgage Performance Analytics report.