Model Status / To –Do

Patricia 3/2014

(unordered list)

* Non-zero loss at default
* Check/debut current LLR implementation and opportunity cost
  + \*\* make opportunity cost only apply to unused LLR funds (?)
* Implement abilty to make LLR 2-3x the size of expected losses, and/or allow for a difference between expected losses and actual losses in the portfolio
  + Opp cost only calculated on unused portion of LLR funds
* Post github reference for model and this to-do list on jive
* Plug zimring’s numbers into the model, see if it results in the same terms for the user
  + Probably a problem if it does
  + Could attempt to address mathematically if a 100% LLR would cost the same as an IRB for the same user terms.
  + Would the balancing-out of LSR and LPCR result in the same size reserve for a given set of user terms?
* Figure out how to implement bank risk preferences and/or value the uncertainty in default rate
  + May be necessary for differentiating IRB from LLR
* \*\*\* Figure out how to calculate and/or graph the “break even” point for a LLR – when (at what gvt cost of capital) the cost to gvt for the LLR is the same as the cost to gvt for an IRB, delivering the same terms to the user.
  + Plot gvt ‘break even’ cost of capital against (LLR/expected loss)

**Fix the broken things**

* Figure out how to make LLR and IRB play out correctly
  + Make bank.NPV calculation correct
  + Incorporate ev.pmt into bank.NPV calculation
* Figure out how to separate out the IRB payment from the user payments for the purposes of applying the expected chance of default, and for the bank.
* Should the more certain nature of the IRB payment affect the loan payment required by the bank?
* Is expectred chance of default being correctly factored into loan payment?
  + i.e. why is the outputted interest rate consistently the bank’s hurdle rate?
* Why does the government have a huge cost when there is no LLR, IRB or rebate? That cost depends on chance.full.loss in some way.

**QUESTIONS**

Am I calculating EV.NPV.factor & loan.payment correctly?

Why are loan.payment and loan.payment.user different in the absence of an IRB??

Why is government NPV nonzero without any interventions in play?

Why are interest rates insensitive to risk of default?

*It appears that they are not! Interest.rate changes from the bank.hurdle, but the interest rate we’re putting in the output matrix is different (though it shouldn’t be)*

*Loan.payment appears to be the same as loan.payment.user*

*Gvt.cost.NPV is almost zero when running line by line from bank\_hurdle… even though it isn’t in the results output!!!*

*SOMEHOW I CHANGED SOOMETHING THAT FIXED EVERYTHING WITHOUT KNOWING IT! Just re-ran modelinit and it gave an almost* ***(BUT NOT QUITE)*** *zero cost of government and a different interest.user from the bank.hurdle. Although it looks like the loan.payment and loan.payment.user are different for the chance.full.loss=.99 scenario…*