Below is my submission for the IARIW Thirty-First General Conference. I appreciate your consideration.

(i).   Parallel Session 4A: Financial Services: Measurement and Impact
(ii).   Title: Measuring Default in Implicitly Priced Bank Services: The Insurance Approach
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(vi)   Abstract:

The literature and ongoing debate concerning measurement of implicitly priced bank services–-and how to divide this measure between services to borrowers and depositors–-have largely centered on the appropriate choice of reference rate, and whether to use different reference rates for borrowers and for lenders. However, there are large sources of variation in imputed banking output as it is currently measured that have little to do with the choice of reference rate. This paper argues that the manner in which default is currently accounted for can have substantial, spurious impacts on the level and variability of imputed bank output. Results will suggest that a careful consideration of default can improve the quality of estimated implicit bank services output by reducing variations in this quantity that are not driven by variations in production of banking services. The specific proposal that is considered treats the premium that banks charge for default risk in the same way that insurance premia are treated, removing unexpected gains and losses from the measure of output.

The manner in which implicitly priced bank service output varies suggests that its estimates are noisy. Real explicitly priced bank services–-hopefully, having levels of measurement error no more substantial than most other industries–-are strongly procyclical. The same is true of total real bank services. On the other hand, both the real and nominal implicit measures that are reported in the U.S. National Income and Product Accounts are not strongly procyclical, during the time period following the adoption of the current method of computing these measures. Although it is not infeasible that provision of implicitly priced bank services may vary with the business cycle in a way that is different from the way in which explicitly priced bank services do, this observation suggests that there is room for improvement in how precisely this measure is computed.

Default rates present an excellent candidate for improvement of the implicit measure. It should be noted that the imputed measure of banking service output is actually a measure of a certain kind of bank income. Banks do not necessarily expect the timing of income that they receive for their services to match up perfectly with the timing of services provided—they just need to match up in the long run. Thus, the fact that banks' customer relationships may last for decades suggests that bank income on a quarterly or yearly basis may not match up precisely with the value of output. Default rates, which affect the realized interest income that banks receive, can vary unpredictably at yearly and quarterly frequencies. For example, they ranged on the aggregate from around 8% per year to 4% per year for personal credit cards, from 2002 to 2006. Banks realize that there will be year-to-year variation in defaults that cannot be diversified away, and thus charge interest rates that include a premium for the average rate of default. The yearly and quarterly variation in these default rates is, however, picked up in the implicit measure of bank service output that is currently employed. It is argued that this source of variation in the banks' interest income does not correspond to variation in the nominal value of services provided. Altering the way that defaults are accounted for may have a substantial affect on how imputed bank services vary over time.

Two changes to the way in which banking services are computed are explored. The first is to remove the variation in default rates by considering default rates that are different from the average rates to be holding gains or losses, and to subtract the average long-run default rate from the pre-default interest rate spread. This is similar to the way in which insurance services are computed, with unexpected experiences being counted as holding gains or losses. This will remove variation in imputed bank services that is due solely to year-to-year variation in default experience. The second change that is explored involves a consideration of the magnitude of mismeasurement of default, because of the timing with which it is reported. Specifically, charge-offs of bad loans occur only after the loans have continued to accrue interest for several months. Recoveries can occur months or even years after this. At the commercial bank level, the total value of its charge-offs in one quarter are highly correlated with lagged quantities of late and non-accrual loans. By removing a proportion of late and non-accrual loans from banks' books based on the proportion that are expected to be charged off in the next year, the resulting interest rates can be computed with a greater degree of accuracy. A careful treatment of default rates, as well as a philosophical shift in how they are accounted for, will bring measured implicit bank services more closely in line with what are thought to be the true fluctuations in imputed bank services.