Banking system risk – controlled transparently

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Submission: To the Financial System Inquiry led by David Murray.

Author: Ralph McKay – pioneered the successful manufacture of synthetic foreign currency options as risk management instruments in the 80's. Saved many offshore borrowers from financial disaster at a time when banks notoriously failed their clients. In the 90's published the book "*Risk Mechanics – Financial derivatives, finding and fixing risk holes*". Created sophisticated market risk reshaping technologies. 35 years experience in the development of complex innovative software. Among the first to warn of the foreign loan debacle of the 80's with a feature letter published in the Australian Financial Review in 1986. Among the first to warn of a systemic global banking crisis due to market acceptance and reliance on ill-founded probability-based risk measures in a report published in Euromoney's Corporate Finance in 1996. Founder of an online voting company, a global leader in its field. Well qualified to know that the idea presented in this submission is technically feasible and cost effective.

Background

This submission presents the idea of a genuine risk window into the banking system. It will immunise the banking system against dangerous market risk in the most effective and efficient way possible. The idea is not new. It has been mentioned in the Australian Financial Review letters section many times since late 2008. There has never been an argument presented for why it should not be embraced – with one exception. In April 2009, Nick Sherry, then Minister for Superannuation and Corporate Law, stated "*To require daily reporting as proposed in your email (to the Treasurer) would impose significant additional costs. These costs would ultimately be paid by the bank customers.*" The Minister was poorly advised. The cost of implementing this idea is far less than the now feared cost of additional equity capital.

The APRA model

APRA's SOARS publication states, "*Entities categorised as Normal are not expected to fail in any reasonably foreseeable circumstance."* Prudent risk management does not rely on *"reasonable foreseeable circumstances".* Skillful risk management expects the unexpected in continuous readiness. A bank's entire equity can be lost in a flash. Market shocks are normal. Future shocks are not constrained by previous records. There are no laws of physics constraining market volatility or price gaps. Occasional, partial and opaque risk measures define a banking system exposed to unknown risks most of the time. The single most effective tool for protecting the banking system from systemic failure is a continuous, comprehensive and transparent market risk stress test. The current APRA PAIRS risk assessment and SOARS response tools fall well short on market risk – not continuous, comprehensive or transparent.

Stress testing

A comprehensive stress test demonstrates at a glance present value sensitivity to wide ranging movements in all significant economic variables impacting a bank or financial institution. The obvious economic variables include the term structure of interest rates in various currencies, exchange rates, derivatives and asset prices such as property, equities and commodities and volatility measures impacting *a*symmetric instruments.

Risk exposures on matching assets add linearly. This means a highly complex portfolio of exposures can be expressed in a relatively small and manageable set of risk numbers. It also means that systemic exposure can be expressed by adding like-risk measures across all banks in the system.

Obviously bankers do already have the means to produce daily, if not near continuous, risk measures in all risky portfolios – if not, the current equity requirements are obviously far too low.

A continuous, comprehensive and transparent stress test allows the market place to control risk automatically in the most efficient manner possible.

The Universal Banking System Risk Manager

The Universal Banking System Risk Manager begins with each bank consolidating, automatically and electronically, the like-risk measures from all its portfolios – producing a single matrix of current risk measures for the bank. This risk matrix is then transmitted electronically and automatically to a central banking system server which holds the risk data for each bank and also produces a single consolidated risk matrix for the entire banking system. This system-wide risk matrix and the individual bank risk matrices are published live on a bank risk watch website. At this point market risk for the defined banking system is transparent to the market. The risks are managed naturally, incrementally by market pressure in the most effective manner possible. Every banking system in all countries are invited to join aiming for a global banking system risk watch website.

A market that observes itself continuously is perpetually in its most resilient state. Unacceptable and unexplained risk is seen immediately it exists. There are no growing dark risk holes. Threatening risk is continuously reshaped by market forces. Market pressures act like a shield protecting the integrity of the system.

There are many levels of sophistication which can be added after a basic version of the technology is operating. For example the zero sum nature of risk means a closed risk system is invariant to economic change. It is possible that some aspects of the system-wide risk matrix represent a closed system. For example this is true for any instrument class where all counterparties are included in the risk matrix. In this case any apparent systemic exposure to economic variables in the relevant risk measures represent hidden or dark risk due to error or fraud – an early warning that something is wrong.

Conclusion

Continuous, comprehensive and transparent stress testing is the sensible way to risk manage a complex banking system. The Universal Banking System Risk Manager is the big data project with the biggest payoff – a secure banking system.

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