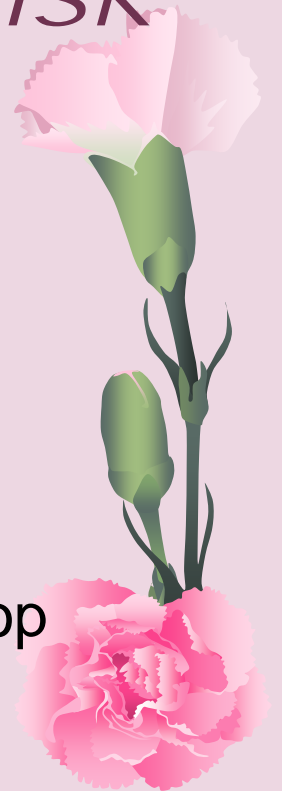


External Data Challenges

--- A Missing Element ? of Op Risk Management in Japan

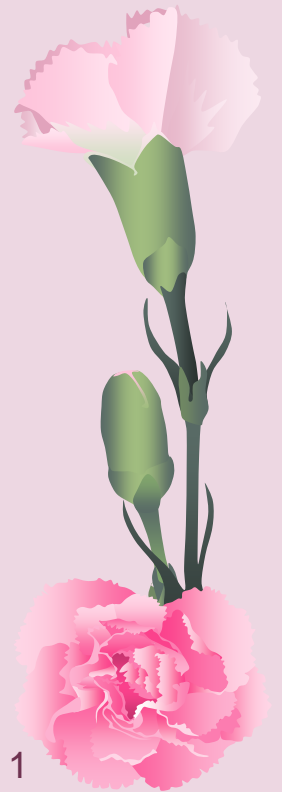
Tsuyoshi Oyama
Bank of Japan

Use of External Data for Op Risk Management Workshop
Tokyo, March 2008



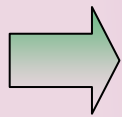
Agenda

- Four Elements of AMA
- Scarcity of Data
- Use of External/Pooling Data
- Challenges for Using External/Pooling Data
- Required Elements for Successful Data Pooling



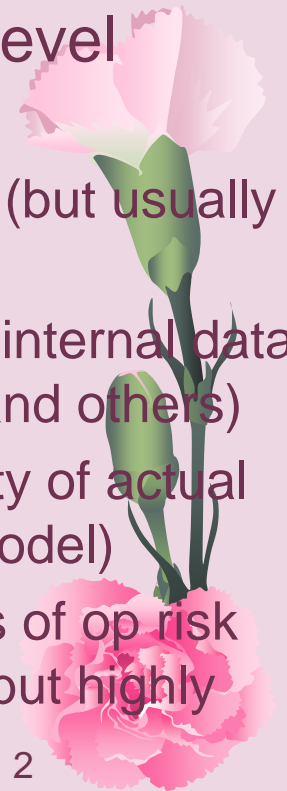
Four Elements of AMA

- Internal Data
- External Data
- Scenario Analysis
- Business Environment and Internal Control Factors (BEICFs)



How to strike the right balance between the above four elements when estimating the risk with 99.9 percent confidence level

- Internal data: Most required for capturing the risk profile of a bank (but usually not sufficiently accumulated)
- External data: Important information to supplement the scarcity of internal data (but need for considering various differences between own bank and others)
- Scenario analysis: Important information to supplement the scarcity of actual data (but lacking objectivity as an input to the risk quantification model)
- BEICFs: Important information to factor in certain unique elements of op risk such as variable external environments and controllability of risk (but highly difficult to be transformed into a data input to the model)



Scarcity of Data

- The number of op risk losses incurred by Japanese banks tend to be very small → this result itself should be highly evaluated as a sign of good risk management → this, however, leads to challenges in conducting statistical analysis
 - The following are annualized numbers of op risk losses over ¥ 1 million (or US\$ 10 thousand) incurred by all LDCE participating banks (14 Japanese and 23 US banks)

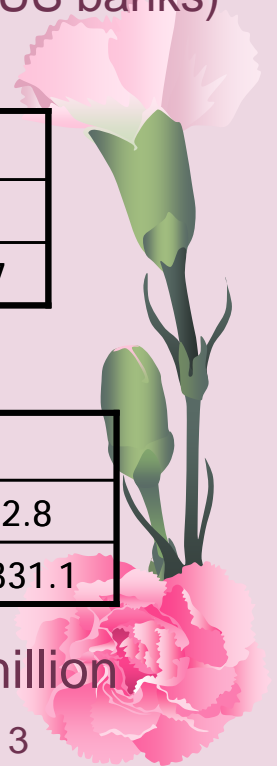
Number of Losses by Event type

	IF	EF	EPWS	CPBP	DPA	BDSF	EDPM
Japanese	16.6	343.2	14.0	82.7	18.2	102.7	363.2
US	619.2	7,164.9	1,397.7	1,693.2	136.5	135.6	6,489.7

Number of Losses by Business line

	CF	TS	RBa	CB	PS	AS	AM	RBr
Japanese	4.5	43.9	537.9	242.0	5.8	49.7	20.0	32.8
US	59.1	1,334.9	11,049.1	934.9	820.3	928.7	449.3	1,331.1

- Total loss events could be 30 times more than the ones over ¥ 1 million
- Each measurement unit needs at least 30 or more data?



Use of External/Pooling Data

- Op risk loss events that occurred to other banks could equally occur to your bank if it shares similar internal and external conditions
- Given the scarcity of internal data, other banks' data could be highly useful (in particular, for the purpose of risk quantification)
- Some analyses indicate the possibility that op risk profile of banks which share similar size and businesses could look quite similar
- External/pooling data is indispensable to gain a rough idea of risk amount corresponding to 99.9 percent confidence level → Given the characteristic of “pooling” data, this rough idea is naturally shared by other banks and hence provides a level playing field
- External/pooling data is also useful for capturing a sign of qualitative change in tail part risk as well as the characteristics of body part risk
- Major foreign banks tend to use external/pooling data in a more proactive way than the case of Japanese banks

Challenges for Using External/Pooling Data

- For what purposes do banks use external/pooling data?
 - To supplement the internal data
 - To validate the integrity of internal data
 - To support the scenario making process
- How should banks consider the difference in data quality between own and other banks?
- How should banks consider the difference in internal control and in businesses between own and other banks?
- What kind of indicator should banks use to scale external data to their own?
 - ➡ All the above critically depend on the analysis of external/pooling data
 - ➡ This analysis should be initiated by the data pooling entities that have full access to the data



Required Elements for Successful Data Pooling

- The system which ensures the quality of data provided by participating banks
- The system which guarantees confidentiality and anonymity of data
- The system which has an incentive mechanism where banks with large as well as small amounts of data are equally motivated to participate
- The system which provides data not significantly influenced by idiosyncratic factors
- The system which provides various information enabling banks to use the pooling data as a reliable supplement to their internal data
 - Analysis of indicators for difference in data quality among banks
 - Analysis of adequate scaling indicators
 - Analysis of indicators for difference in internal control among banks
- Why is external/pooling data currently not available in Japan?

