

Study for the Practical Way to implement the BCP Street-Wide Exercise in the Banking Industry

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Abstract:

The purpose of this paper is to determine the most practical method for implementing the Street-Wide Exercise in Japan for the banking industry. There is another similar BCP exercise occurring in Singapore which is called the Industry-Wide Exercise and is being conducted by the Monetary Authority of Singapore. In this paper, the definition of the Industry-Wide Exercise is the BCP exercise which invites only banks while the Street-Wide Exercise is the one that involves banks, the critical interested parties such as exchanges, the police department, the fire department, lifeline vendors and the government offices. For the past 10 years, the Street-Wide Exercise has been conducted by major international financial centers such as New York, London and Singapore where banks and critical interested parties are invited. But the BCP Exercise of the banking industry in Japan still only involves banks, something which we think should be re-visited. An analysis is conducted from various angles, including the ISO 22398 (ISO's approved frame-work of the BCP exercise) to identify potential solutions. We also introduce a new type of BCP exercise which is a blend between the Industry-Wide Exercise and the Street-Wide Exercise as a step-up solution, named Focused-Street-Wide Exercise that involves limited number of banks and interested parties.

Key word:

Banking Industry, BCP exercise, Street wide exercise

1. Introduction

The purpose of this paper is to analyze and propose potential solutions to implement the Street-Wide Exercise within the banking industry in Japan. Though the major international financial markets such as New York, London and Singapore have kept conducting the Street-Wide Exercise since 2003, the progress in Japan is still behind. Japan Banker's Association (JBA) conducted the BCP exercises on 2010 with the scenario of Pandemic Flu. 144 banks based in Japan, including Bank of Japan (BOJ), took part in this exercise but critical interested parties such as exchanges, the police department, the fire department, lifeline vendors and the government offices were not invited. Generally speaking, the main participants of the international financial market, such as investors, governments and banks have a strong tendency for choosing financial markets primarily on the basis of purely economic opportunities of profit and risk. This means that major international financial markets are direct competitors to each other. As New York, London and Singapore are all conducting the Street-Wide Exercise, Japan should also implement this type of crisis management exercise in order to ensure continued competitiveness.

According to the Natural Hazard Index, a risk assessment conducted by Munich Re Group in 2002, Tokyo has 16.9 times greater risk than New York and 23.7 times greater than London. This is just one of the various measurements of risk but it has the potential to be a negative factor for Japan in the competition among the international financial markets.

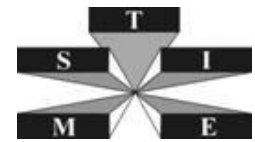
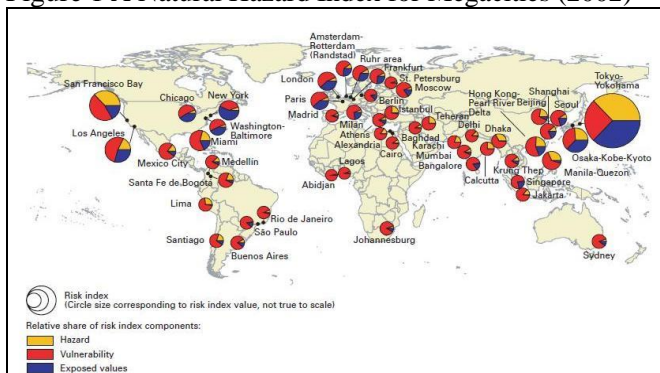


Figure 1 A Natural Hazard Index for Megacities (2002)



2. Meaning of this paper with the banking industry

BOJ stated in “After incident analysis with the Great East Japan Earthquake of 2011(2011)” [1] that the banking industry is one of the most critical life line vendors and should continue their social duties such as cash supply, money transfer and settlement even when a disaster happens. However, banks are sometimes conservative regarding the sharing of disaster related information to other financial institutions, whom are regarded as competitors. While understandable to an extent, this prevents the exchange of critical disaster-related information or know-how among the industry, something that itself can pose a systemic risk to the financial sector if left unaddressed. Also many banks are worried about committing any errors during the exercise because they believe it might result in negative impacts on their reputation or credit with the market and costumers. Thus they sometimes prefer choosing simple and linear scenarios for BCP exercises, something that does very little to enhance real readiness or ensure a coordinated industry-wide response in the event of a major disaster. The criticality of the Street-Wide Exercise has been overlooked in Japan and the country risks becoming less competitive vis-à-vis other major financial centers.

Both of the author and co-author have been working and consulting in/for the banking industry for several decades. Through the utilization of our own experience and relations with the people in the industry, we are analyzing the Street-Wide Exercise in the major international financial market from the banking operational point of view, referring to ISO 22398:2013, Social security – Guideline for exercise and taking examples from other BCP exercises which are conducted by Cabinet office, Government of Japan and National Information Security Center (NISC) in Japan. We intend for this paper to stimulate positive change and to see the Street-Wide Exercise framework implemented in Japan.

3. Previous studies and papers

The most comprehensive paper to analyze the BCP exercise in the international market is “Report of the Street-Wide Exercise in the major financial market in abroad (2010)” [2] made by BOJ. According to the BOJ’s analysis, there are 3 major purposes with this exercise in the major international financial market. Firstly, to check if the each company’s BCP can reflect the state and magnitude of the disaster. Secondary, to check if the each company’s BCP is consistent with the one of the interested parties. Thirdly, to check if the each company can communicate with other banks in the market. The second point is especially important but it is sometimes neglected during the BCP testing because it requires involvement of critical suppliers and lifeline vendors thus making it quite difficult and complicated to conduct testing. The BOJ’s paper highlighted the importance of this component of the BCP exercise several times by introducing the case study of the major international financial market. However, modes of implementation in Japan were out of the scope of the paper.

There are also some post exercise reports. “Market-wide Exercise 2011 report” [3] created by UK FAS, HM Treasury and Bank of England stated many lessons learned and recommendations. The scenario of this testing is simulating an explosion at the station in the morning followed by the DDoS attack with the central banking system during the Olympic Games. This exercise involves banks as well as the interested parties such as the critical vendors and lifeline vendors. This creates multiple operational issues, such as disrupted morning



commutes, network latencies and interbank settlements. Though this report is very useful, the content is very UK-centric and does not provide any key findings or suggestions for emergency preparedness in other markets. JBA produced a BCP exercise report in 2010 about the Pandemic Flu. This is based on a single scenario that involves a rapid spread of the Pandemic flu. However, this exercise did not include any meaningful involvement with the interested parties, namely lifeline providers. After the Pandemic Flu exercise, JBA conducted another exercise with an earthquake scenario but, again, participants were not extended beyond the banking industry. Mainly because of the strict confidentiality in the banking industry, papers or studies that are conducted by other players aside from regulators (FSA and central bank, etc...) and the industry association (JBA), could not be found.

4. Definition of the BCP exercise in this study

BOJ stated in [1] about the definition of the street wide exercise. According to BOJ, Street-Wide Exercise is; 1) to have same scenario of the disaster in the banking industry, 2) each bank to simulate their BCP according to this same scenario and 3) to gather result to identify the issues to improve industry level resiliency. But there is no standard definition in the world with this BCP exercise. In London, they call it Market-wide Exercise, while it was called Street-Wide Exercise in New York and Industry-Wide Exercise in Singapore.

Table 1 Typical BCP exercises and participants in banking industry

The scope of the Exercise	Has it already implemented in banking industry?	Participants					
		A single bank	A few selected banks	Most of the banks in the industry	A few selected interested parties	Most of the critical interested parties	Government, other critical industries and interested parties
In-Company Exercise	Yes	○					
Industry-Wide Exercise	Yes	○	○	○			
Focused-Street-Wide Exercise	Yes	○	○		○		
Street-Wide Exercise	No*1	○	○	○	○	○	
Nation-Wide Exercise	No	○	○	○	○	○	○

*1: only one case could be found with the panel discussion in 2009 which conducted by BOJ but only a few banks are involved with this exercise it didn't meet with the definition of Street-Wide Exercise on this paper

In this paper, in order to have more focus on the participants and scope, BCP exercises to be categorized into 5 groups. The 1st group is "In-Company Exercise". This is an exercise only involves single company or inter group companies which has same board of directors. The 2nd group is "Industry-Wide Exercise". This involves multiple companies in the same industry regulated by the same rules or laws. The 3rd group is "Focused-Street-Wide Exercise". This involves a few banks and interested parties with some limitation or criteria such as in the particular region. The 4th group is "Street-Wide Exercise". This is also based on the Industry-Wide Exercise but involves not only multiple companies in the same industry, but also invites interested parties such as critical suppliers and life line vendors. And the last group is "Nation-Wide Exercise". This is conducted by the government to cover the government offices and various interested parties. Those 5 groups also divided by the exercise types and exercise methods which will be discussed in this paper



5. Exercise types suggested in ISO 22398:2013

5.1 Overview and a gap found

ISO 22398:2013[4], ISO's approved BCP guideline, is the most recent of the BCM global guidelines which cover BCP exercises. The typical BCP exercises and participants stated in [Table 1] are based on the current state of the BCP exercise and common understanding in the banking industry. We would like to introduce ISO 22398:2013 as a common reference. The reason behind selecting ISO's frame work is that it is the agreed one which can be adopted in multiple regions, countries and industries. Thus it can be used if someone tries comparing the study in this paper with other industry's cases etc.

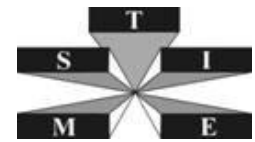
In the ISO 22398:2013, the importance of maintaining the life-cycle of a BCP exercise is thoroughly explained with a special emphasis on the after-action review and methods for improvement. For example, in the introduction it is mentioned that the BCP exercise is a series of the processes among 1) Exercising Programme (Planning, Conducting and Improving) and 2) Continual Improvement (Evaluation, Management Review and Corrective Action). In 3.4, it is explained that Evaluation is "systematic process that compares the result of measurement to recognized criteria to determine the discrepancies between intended and actual performance." Also it is stated about "After -action review" in 5.4.3 that "The organization should conduct an exercise after-action review, considering the validity of the plans, the resources that were available, how the resources were used; and the transfer of behavior learned in training. The same format for the critique of exercises should be used for an actual incident to allow for comparison between simulated to actual events" Though ISO 22398:2013 is a comprehensive guideline, one of the lacing pieces is a detailed guide with the validation process. And without having it, it is very difficult to improve performance.

5.2 Sample descriptions for the exercise types

To categorize BCP exercise, ISO 22398:2013 has more focus on the purpose of the each exercises and methodologies. In this guideline, 9 different types of exercises are introduced. Descriptions are as follows.

Table 2 Sample descriptions for the exercise types of ISO 22398:2013

Exercise type	Description
Alert Exercise	Used to test organization by alerting the involved participants and eliciting a response as well as to test an alert mechanism. While primarily applied to the staff within the organization, it may also be applicable to other contexts.
Start Exercise	A means to test and develop the ability to invoke an appropriate response. It usually builds on the Alert Exercise by testing how fast the organization can be activated and begin carrying out appropriate, assigned tasks.
Staff Exercise	Designed to increase the ability to work with in and among internal processes, staff and in formation routines to create a common situational awareness and suggest decisions.
Decision Exercise	Used to exercise decision making processes within an organization, which may include the ability to make clear and timely decisions and to initiate coordination between those responsible as well as with other interested parties, taking into account time constraints.
Management Exercise	A combination of Alert, Start, Staff and Decision Exercise with a focus in the roles, organization and standard operating procedure.
Cooperation Exercise	Used by different organizations or different parts of the same organization work or act together in order to achieve a common objective. It can be carried out both in large and small scales and may consist of: <ul style="list-style-type: none"> - "vertical" coordination (between national, regional and local levels); - "horizontal" coordination; - Participation in a sector by public and private interested parties; and, - Co-operation among several sectors in the society.
Crisis	Simulates crisis conditions providing an opportunity fro people to practice and begin



Management Exercise	proficiency in their roles described in the crisis management plan.
National Strategic Exercise	Comprehensive exercise activities taking place at a strategic level (e.g. inter-ministerial crisis staff, political-administrative staff, cross-sector and cross-departmental management staff, or corporate crisis management). The general objectives of a National Strategic Exercise include: <ul style="list-style-type: none"> - Improving the integrated response capability in exceptional threat and danger situations (crisis situations); and, - Developing a comprehensive coordination and decision culture in organizations within the public or private sectors.
Exercise campaign	A series of recurrent exercises with a common generic organizational structure.

The first 4 exercises, namely 1) Alert Exercise, 2) Start Exercise, 3) Staff Exercise and 4) Decision Exercise are the component of the Management Exercise. And those 5 exercises are the ones that banks conducted regularly. In many bank, 1) Alert Exercise, 2) Start Exercise, 3) Staff Exercise and 4) Decision Exercise are conducted as a unit test and check those more often than annual base. The Cooperation Exercise is nearly the same type with the Industry-Wide Exercise and the Street-Wide Exercise I stated on Table 01 because it involved multiple banks and the interested parties. The National Strategic Exercise has more broad scope to involve multiple departments in the government but the Crisis Management Exercise is usually organizing as a part of Management Exercise, Cooperation Exercise and National Strategic Exercise while Exercise campaign means a series of recurrent those exercises.

5.3 Reference between ISO 22398:2013 and the scope of the exercise in this paper

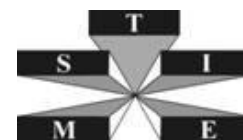
The reference between the scope of the exercise in this paper and this study and Sample descriptions for the exercise types of ISO 22398:2013 is as follows.

Table 3 The reference between the scope of the exercise of this paper and this study and Sample descriptions for the exercise types of ISO 22398:2013

Exercise Types on ISO 22398:2013						
		In-Company Exercise	Industry-Wide Exercise	Focused-Street-Wide Exercise	Street-Wide Exercise	Nation-Wide Exercise
Alert Exercise	○					
Start Exercise	○					
Staff Exercise	○					
Decision Exercise	○					
Management Exercise	○					
Cooperation Exercise		○	○	○	○	
Crisis Management Exercise	○	○	○	○	○	
National Strategic Exercise					○	
Exercise Campaign	○	○	○	○	○	

6. Overview of the BCP exercise in a major international financial market

Please see the overview of the BCP exercise in a major international financial market. This was generated by using data on “Report of the Street-Wide Exercise in the major financial market in abroad (2010)” [2] produced by BOJ. As we can see, the major difference between the BCP exercise in Japan and the other international markets are that 1) Major international markets have conducted the Street-Wide Exercise which involved



multiple interested parties, while the one in Japan are have only been inviting banks. 2) Some of the major international markets take multi-incident scenario such as bombing and cyber attacks, while Japan continues to focus on single-incident scenarios.

In 2009, BOJ conducted the panel-discussion based BCP exercise for pandemic flu in Japan. This exercise was a very good exercise to identify several gaps between banks and interested parties though, due to the nature of the exercise, the number of participants was very limited. In 2013, 3 banks in Iwate prefecture in Tohoku, Japan (an area which suffered severe damage during Great East Japan Earthquake in 2011), jointly conducted a BCP exercise involving a few interested parties. As the number of participants in both banks and interested parties were limited, we categorize it as the Focused-Street-Wide Exercise in this paper. To date this is the only Focused-Street-Wide Exercise in Japan though it was an excellent proof of concept and something which should be scaled up in Tokyo and other major financial hubs in Japan.

Table 4 BCP Street-Wide Exercise in the major global financial market

	When	Scenario	Multi-incident based exercise	Duration	Participants in the banking industry	Interested parties' involvement
UK	2003	Terrorism		Half day	16	○
	2004	Terrorism		Half day	32	○
	2005	Terrorism		Half day	70	○
	2006	Pandemic Flu		6 weeks	70	○
	2009	Severe weather		Half day x 2	76	○
	2011	Olympic game	○	Half day	87	○
Singapore	2005	Terrorism		Half day	12	○
	2006	Terrorism		Half day	100	○
	2008	Pandemic Flu		2 weeks	140	○
USA	2007	Pandemic Flu		3 weeks	2,775	○
	2009	Cyber Terrorism	○	5 days	48	○
Japan	2009	Pandemic Flu		Half day	Panel discussion	*2
	2010	Pandemic Flu		Half day	144	
	2012	Earthquake		Half day	155	
	2012	Earthquake/Tsunami		Half day	3	*3

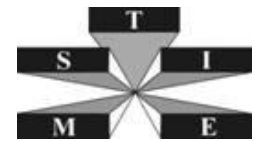
*2: a few interested parties were involved with the panel discussion

*3: This is a category of the Focused-Street-Wide Exercise in this paper because only 3 banks and a few interested parties were invited

7. Current activities with the Street-Wide Exercise in Japan

7.1 Government-led Table-Top Exercise

The authors took part in the Government-led Table-Top Exercise in 2013 where about 200 personnel from about 20 segments from Government and local Government, lifeline vendors, Police and Fire department, and medical organizations took part. Unfortunately, no participants were invited from the banking industry, a major omission. This exercise took place at the back-up office of the Government Japan at Tachikawa, 40km west from the central business district (CBT) Tokyo. In the different room, there were 30-40 personnel to control the exercise and inject several additional incidents. Also there was an independent validation team walking around the room to monitor and assess the strengths and weaknesses of each team. As this is one of the most comprehensive exercises in Japan, the banking industry should utilize the best practices that have come out of it.



7.2 NISC Exercise

National Information Security Center (NISC) of the Government of Japan organizes an annual exercise of information security with 5 ministries, other government offices, critical infrastructures providers such as banking, electricity, telecommunications, medical services, energy suppliers, etc... As this exercise covers various industries and involves multiple ministries, it is a prime example that the banking industry can obtain lessons from.

7.3 Focused-Street-Wide Exercise

3 regional banks in Iwate prefecture Japan, namely Iwate bank, Kitanihon Bank, and Tohoku bank jointly conducted the regional Street-Wide Exercise in 2013 in Tohoku after the Great East Japan Earthquake. This has been introduced by the BOJ on 2013 [5] as one of the role models for the BCP exercise. As this exercise was conducted by 3 regional banks and selected interested parties, according to the definition in this paper, we refer to this as the Focused-Street-Wide Exercise. Despite technically being competitors under normal conditions, these 3 institutions coordinated very closely during the actual disaster of the Great East Japan Earthquake. They further solidified their coordination by conducting the Focused-Street-Wide Exercise and simulating a repeat of the actual disaster situation to find gaps and develop solutions. To date, this is the only Focused-Street-Wide Exercise which has been publicly acknowledged in Japan.

8. Analysis

8.1 Analysis from the scope of the exercise

As the Street-Wide Exercise has to involve many banks and interested parties, it is more difficult to conduct than the In-Company Exercise which involves just one bank. We have conducted research and have developed two basic questions during July 2014 with the person in charge of BCM in the banking industry. 8 people were randomly selected from the banks that have a medium- to large-scale operation in the Tokyo market with 4 providing solid feedback. Ideally, more participants would have participated in this research project but the banking industry is very conservative to disclose information to outside parties. Thus this is the current limitation and anonymities are requested with this research. We hope this research makes more people in the industry be interested in and motivate them to exchange information each other in the future.

The first question of this research project was "Based on your experience with the actual workload to conduct In-Company Exercise etc., please estimate the organizer's workload with the other exercises." Generally speaking, the person in charge of BCM in the medium- to large-scale bank is a professional who has sufficient knowledge and experience to estimate BCM related activities. On the second row from the left in [Table 08], "4/4" stands for 4 of 4 people who answered this question had an experience of this exercise. Actually, this proved to be a very difficult question to answer and was hard to estimate how much workload was needed as many did not have the relevant experience to make that determination.

The purpose of this research is not having an accurate estimation but understanding a trend that the BCM professional person's idea about which exercise is relatively easy and which one is difficult. Interestingly, we could find a very clear trend from this research. Most of the BCM professionals who answered this question think that there are major differences between the required workload with the In-Company Exercise and the Industry-Wide Exercise that they take part in. Some highlighted challenges with Focused-Street-Wide Exercise and believe a large workload is required to organize Street-Wide Exercise and Nation-Wide Exercise.

According to this research, we illustrated an inter-relation between the scope of the exercises and difficulty to conduct with. Of course, the exercise that has wider scope is complex and difficult but we also could see two groupings exist. Group A is consist of the In-Company Exercise, the Industry-Wide Exercise and the Focused-Street-Wide Exercise which can be achievable for the most of the banks in the industry according to the estimation of BCM professionals while they believe the Street-Wide Exercise and the Nation-Wide Exercise as Group B require much more time and resources.

We also asked the second question to them that "Which one is true, 1) you think you need more resources to conduct exercise because you don't have an experience with those ones or 2) you believe the one you have not taken part in should require more resources?". 4 of 4 people answered 2).



Table 5 Average estimation with each exercise (Man-month)

Scope of the exercise	Have you taken part in those exercises?	Workload estimation with BCP exercise life-cycle				Challenge
		Planning	Execution	Validation	Reporting	
In-Company BCP Exercise	4/4	2	1	2	1	Low
Industry-Wide Exercise	4/4	6	3	3	3	Low
Focused-Street-Wide Exercise	0/4	10	5	5	5	Medium
Street-Wide Exercise	0/4	60	10	20	3	High
Nation-Wide Exercise	0/4	120	50	60	3	High

Figure 2 Interrelations between Group A and B

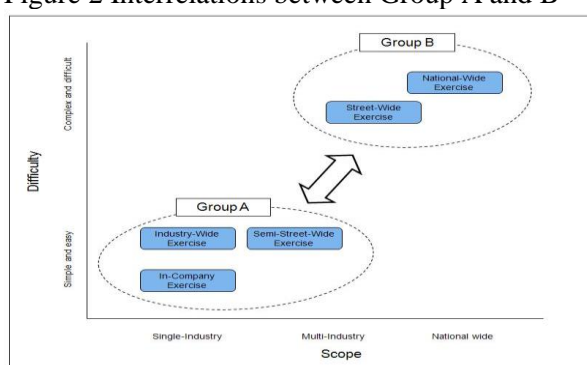
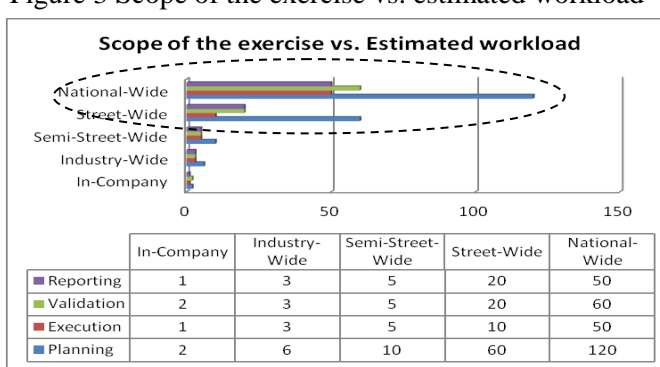


Figure 3 Scope of the exercise vs. estimated workload



8.2 Analysis from the exercise methodology

Another research was made to estimate among the different exercise methodologies with the same BCM professionals. The first question is “Please also estimate the organizer’s workload with the exercises from the exercise methodology’s point of view?” See result on [Table 9]. The second question is as same as 8.1. So on the second row from the left in [Table 9], 4/4 means 4 of 4 people answered “Yes, I took part in this exercise.”

Table 6 Average estimation with the different exercise methodology (Man-month)

Exercise methodology of ISO 22398:2013	Have you taken part in those exercises?	Workload estimation with BCP exercise life-cycle				Challenge
		Planning	Execution	Validation	Reporting	
Alert Exercise	4/4	1	1	1	1	Low
Start Exercise	4/4	2	1	1	1	Low
Staff Exercise	4/4	5	3	2	2	Medium
Decision Exercise	4/4	5	3	3	2	Medium
Management Exercise	4/4	5	3	3	3	Medium
Cooperation Exercise	0/4	50	10	20	20	High
Crisis management Exercise	0/4	100	50	60	50	High
National strategic Exercise	0/4	120	70	80	60	High
Exercise campaign	NA	NA	NA	NA	NA	NA

The same trend can be observed between the exercise methodologies that BCM professionals have taken part in (Group C) and the one they haven’t (Group D). As the last column, the Exercise campaign has a different nature with others, we made it as an out of the scope of this research. This is a reason why it is marked “NA”.

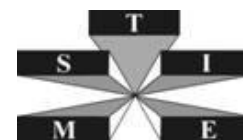


Figure 4 Interrelations between Group C and D

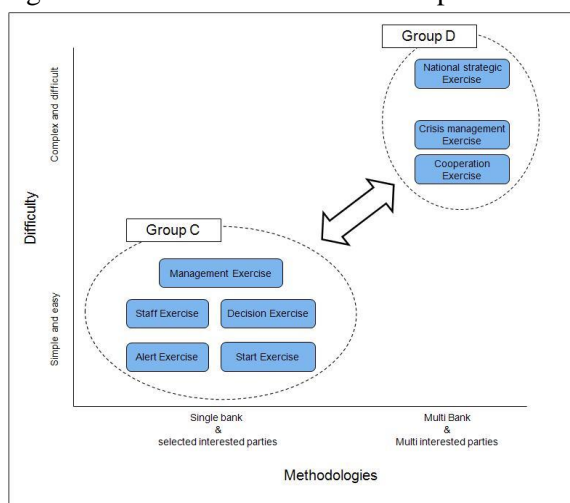
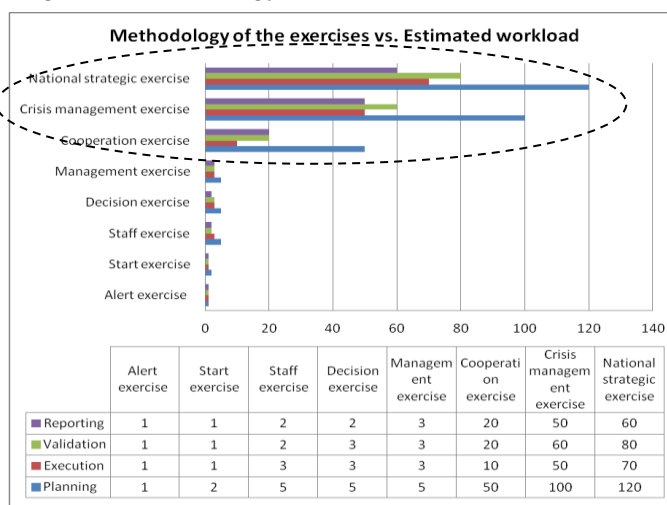


Figure 5 Methodology of the exercise vs. estimated workload



8.3 Observations from these two research projects

From these two researches, we found a couple of trends. Firstly, in line with the exercise scope, there are two groups which BCM professional in banks think is simple and easy to implement (Group A) while the other believes it difficult to organize (Group B). Interestingly, they have taken part in the exercises of Group A but no experiences with the exercise of Group B. Secondly, the same trends are seen with the research regarding to the exercise methodologies. They think Group C is easy while Group D is difficult. They attend Group C exercises but no experiences with Group D. This is a somewhat counter-intuitive finding but highly relevant.

During the post-research discussions with them, we found that one of the potential reasons for those differences is the overall ecosystem of their particular organization. They said it is difficult for them to justify organizing a very complex and wide-reaching BCP exercise which requires a large workload and sometimes difficult-to-get agreement from the company management for pushing forward a BCP exercise that could potentially yield adverse findings.

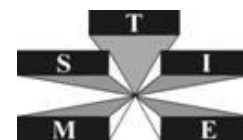
From the bank management-side point of view, BCP exercise is one of the due-diligence they have to compliance with. The result and follow up process have to be reported to the regulators such as FSA, resulting in additional workload to mitigate risks. If the result needs to be public, they think they must have a reputation risk and may be having some impact with their credit rating etc... Thus they are reluctant to take on the challenging BCP exercises until they have a specific enquiry made by the regulators.

Actually, most of the banks continue to conduct Group A and Group C exercises. The quality of those exercises is reasonably high and it is desirable to continue having those but is not sufficient to maintain resiliency of the industry. We refer to this as "Creek syndrome" in the paper. BCP exercise is very similar to jumping over the creek with width. We can clear easily with 1m creek but when we challenge 2m, 3m and 5m ones, we might be getting wet and think twice about challenging it again. For bank management, the Street-Wide Exercise should be 5-6m or sometimes over a 10m creek. But until we get wet, we could not improve our resiliency of the industry.

9. Potential solutions

9.1 Tiered approach

The most straightforward solution is that FAS issues a directive to banks instructing them of the need to conduct the Street-Wide Exercise. But mainly due to the required workload, it is not practical for all banks to be compliant with it in Japan. But there is one important thing the bank might have overlooked about the basic requirements of FSA. FSA clearly states in their "Comprehensive Guidelines for Supervision (CGS)" that the requirements to regulate banks, including BCM, are set according to the idea of the "Tier" considering the market impact, customer impact and other relevant factors of banks. So the basic requirement is different from



the Multinational Banks (also referred to as Mega-Banks) and the Regional Banks. Actually FSA's CGS is divided into three categories of banks and issued deferent versions for those three "Tiers". The first one is for the Mega-bank called "CGS for Major Banks, etc" [6] which applies for the Mega-banks, namely Mizuho Financial Group, Sumitomo-Mitsui Financial Group, Mitsubishi Tokyo UGJ Group and the International banks such as UBS and Barclays. This is the most strict and wide range requirements for banks. The second one is for the Small and Medium banks and Regional-banks called "CBS for Small and Medium banks and Regional-banks, etc" [7]. Mainly due to the asset and trade volume and geographical coverage, this guideline is not so much strict than the one for the Mega-banks. The third one is for the holding company of financial companies called "CBS for Conglomerate of financial companies, etc" [8]. According to the Japanese law, different regulations are applied with Banks, Securities companies and Insurance companies but technically, one holding company can control those three different companies. Considered with the market and customer impact, this guideline is very strict and detailed.

Currently the exercise management office of the Industry Wide Exercise (IWE) for banks in JBA mainly develops a scenario and provides injects. In the exercise, they are not pushing any suggestions for actions or taking a case that FSA places an order to the particular segment (Tier) such as a fallback or an evacuation - those are left to each banks' decision during the exercise. But banks, especially for the ones of Small and Medium and Regional-banks do not want to give up recovery or put something on hold even during the exercise. As we stated in 8.3, "Creek syndrome" prevents them taking active action to take part in the challenging BCP exercise, which has a very difficult scenario. It would be advisable for them to revisit the FSA's Comprehensive Guidelines and understand that the requirements for BCM differ substantially for the Mega-banks and the Small and Medium and Regional-banks.

Actually most of the banks have already taken the idea of "Tier" in to account when they plan their BCM internally. Let me introduce a case study from the international bank in Tokyo as a sample. Anonymities are requested. They identified a segmented duty with BCM for each business units according to the criticality. Due to the confidentiality, anonymity is requested. As you can see, more recovery strategies are prepared for the one in the higher Tier. This means the higher Tier business has to verify their recovery capability with various recovery strategies. In other word, the bank requires more resiliencies with the critical business such as the Tier 1 business.

Table 7 Business Tier for recovery strategy

Circularity	RTO	How many recovery options to be tested?	Recovery strategies				
			Secondary Backup office	Primary Backup office	Remote access	WLT*4	DO*5
Tier 1	0-2 hours	5	○	○	○	○	○
Tier 2	2-8 hours	4		○	○	○	○
Tier 3	8-24 hours	3		○	○	○	
Tier 4	1-3 days	2			○	○	
Tier 5	More than 3 days	1				○	

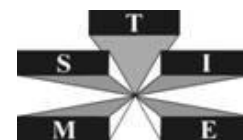
*4 WLT: Work Load Transfer: Make other office to support business operation to reduce the burden of workload

*5 DO: Distributed Operation: Send staff from the damaged office to other office to continue business operation

With making an order for banks to conduct the Street-Wide Exercise, if FSA stated again about their expectation for each segment of banks such as the Mega-banks and the Small and Medium banks and Regional-banks, it helps banks for an active participation and can follow the more realistic reactions.

9.2 Phased solution

Phased approach is also one of the potential solutions for the practical implementation of the Street-Wide Exercise. According to the research in 8.1 and 8.2, we found there are two groups in workload estimation both in the analysis of the scope of the exercise and the exercise methodology. BCP professionals who took part in this research thought that the BCP exercise in the Group A and C is reasonably simple and easy while the ones



in the Group B and D is difficult.

Taking this point from the different angle, if the bank starts BCP exercise from the Group A and C for example, starting from the Management exercise (Group C) with a few other banks in the same region to conduct the Focused-Street Wide Exercise (Group A), it should be practical. Actually, the components of the Management Exercise in are Alert Exercise, Start Exercise, Staff Exercise and Decision Exercise in the same Group (Group C). And those should be same as the ones in Cooperation Exercise (Group D) and Crisis management Exercise (Group D) in the banking industry. On the other hand, the main difference between the Focused-Street-Wide Exercise and the Street-Wide Exercise is a coverage and number of participants in the exercise. Thus after completing the Management Exercise, if the banks are gradually extending the scope of the exercise to involve multiple regions in Japan until they can cover all the banks and critical interested parties in Japan, they can achieve the Street-Wide Exercise.

Table 8 Grouping by challenge level with the Scope of the exercise

Scope of the exercise	Workload estimation	Challenge	Group
In-Company BCP Exercise	Low	Low	A
Industry-Wide Exercise	Low	Medium	A
Focused-Street-Wide Exercise	Medium	High	A
Street-Wide Exercise	High	High	B
Nation-Wide Exercise	High	High	B

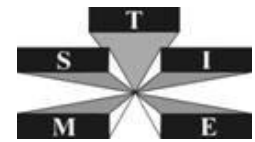
Table 9 Grouping by challenge level with the Exercise methodology

Exercise methodology of ISO 22398:2013	Workload estimation	Challenge	Group
Alert Exercise	Low	Low	C
Start Exercise	Low	Low	C
Staff Exercise	Low	Medium	C
Decision Exercise	Low	Medium	C
Management Exercise	Low	Medium	C
Cooperation Exercise	High	High	D
Crisis management Exercise	High	High	D
National Strategic Exercise	High	High	D
Exercise campaign	NA	NA	NA

9.3 Roster

The preparation workload is one of the issues with the Street-Wide Exercise. In the UK, they assign the special committee members for this exercise and take a couple of months to prepare for it. In Singapore, the Bankers association assigns one of the big banks as an exercise organizer for each test by roster.

One of the potential solutions in Japan is assign one of the Mega-banks as an exercise organizer to plan to conduct the Street-Wide Exercise. In Japan, 3 Mega-bank groups have a majority of the share of trade volumes etc. in the interbank market as well as the services in the retail and corporate market with the customers. Besides them, other couple of hundreds small and medium banks and regional banks support the local markets and the local customers. As discussed in 9.1, considered with the magnitude with the market and the customers, FSA has higher standards of disaster preparedness for the Mega-banks than the other banks in Japan. Thus, this solution provides two benefits to improve resiliencies in the banking industry in Japan. One is that the small and medium banks and the Regional-banks might have a chance to learn from the know-how which to be provided from the Mega-bank who organizes the exercise. The other is that FSA can check the ability of resiliency in the Mega-bank to supervise the exercise that the Mega-bank is organizing.



10. Conclusion

10.1 Importance of conducting Street-Wide Exercise

As we can see on the BOJ report (see [Table 04] BCP Street-Wide Exercise in the major global financial market), other than Japan, the major international financial markets have been conducting the Street-Wide Exercise, while we only have the Industry-Wide Exercise that involves just banks. This is a potential competitive disadvantage. Since the financial market in Japan is one of the biggest in the world, it is very important to demonstrate that we are meeting with the same resiliency level with other major financial markets. Of course the quality of the compliance might be different among those major financial markets, but it is not ideal that Japan has not even been attempting to run the Street-Wide Exercise. Again, having some assumptions with the exercise or scope limitations are not a problem but not conducting the Street-Wide Exercise will leave Japan with a competitive disadvantage among the international financial markets.

10.2 Challenges

There are two problems, discussed on this paper. One is the exercise organizer of the Street-Wide Exercise. Without having a party who has strong initiatives to get things done, it is very difficult to achieve the target. And the other one is lack of motivation in participants' side to complete the Street-Wide Exercise. So called "Creek syndrome" further exacerbates the situation. But without having a challenge, we will not make a mistake and without making a mistake, we will not improve our resiliency in the banking industry. So we have to jump into the creek and have to be soaking wet.

10.3 Next steps

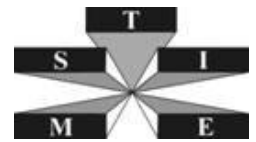
In order to effectively mitigate natural hazard risks and other extreme events and to have a practical way to implement the Street-Wide Exercise in the banking industry, we discussed three potential solutions in this paper. Firstly, we recommend FSA to makes an order to the banks to complete the Street-Wide Exercise. As FSA is the regulator of the banking industry, this is the most straightforward solution to start planning the Street-Wide Exercise. To help achieving this, FSA's order would ideally include the completion criteria with each category of parties in the banking industry, namely the Mega-banks, International banks, Small and Medium banks and the Regional-banks. Completion criteria are sort of the FSA's expectations with each with each category parties. It can reduce any unnecessary operations burdens and strongly incentivize participation.

Secondly, a phased solution was introduced. According to the research conducted by this study with a few BCP specialists in the banking industry, we identified that there are 4 categories of groups in the BCP exercises. Two of them are relatively simple and easy to understand while the other two are very challenging and difficult. If we are starting from simple and easy ones and gradually expanding scope and number of participants, it should be less stressful with participants.

Thirdly, we recommend the Mega-bank should be an exercise organizer. As the Mega-bank has a lot of know-how and knowledge with mitigating risk, this can provide benefit to the other participants such as the Regional-banks. At the same time, the Mega-bank and FSA can freely exchange their opinions to enhance the resiliency of the banking industry.

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