

ECONOMICAL EFFICIENCY OF OUTSOURCING AT BANK OPERATIONS: CONSIDERATION WITH “RISK-ADJUSTED” POINT OF VIEW

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Abstract

Motivations and management decision basis for the banks to arrange outsourcings are mainly categorized into 1) operating cost reduction, 2) predictable cost forecasting, 3) efficient capital allocation, 4) flexible business expansion, 5) professional resource assurance, and 6) availability of large-scale outsourcers. However, in actual management decision process, there is not so much chance that risks along with outsourcing arrangement are discussed quantitatively as discussed qualitatively. Risks that should be considered in the discussion of bank operations outsourcing are operational risks that may threaten availability and quality of the outsourced services.

This paper explores the operational risk factors along with the outsourcing at bank operations and considers conceptual model structure for evaluation of economical efficiency with an aspect of “risk-adjusted” concept which has been already applied in market risk and credit risk management field in the bank management and provides a basis for further consideration of how “risk-adjusted” cost saving should be reflected in the process of management decision. Finally discusses about internal audit based risk monitoring and management approach and future research direction for Japanese major banks.

Keywords: Service availability, “risk-adjusted” economical efficiency, Operational risk, Reversibility assurance, Business Continuity Plan (BCP), Disaster Recovery Plan (DRP).

I. Introduction: Banking business environment which accelerates outsourcing arrangement

Due to the competitive business environment among existing banks and new entrants to the banking industry, traditional banks are required to be more efficient in operations and more innovative in service offerings. For efficient business operations, they have already started outsourcing their operations to external service bureaus or system vendors in their core processing operations, systems development & maintenance, *et al.* that require large scale infrastructure and continuous IT investments to maintain their service level.

Addition to the existing competition, the banking industry is facing more competitive

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business environment with new entrants from other industries such as retailer, manufacturer, or newly established web-based banks. Along with the recent development of financial engineering and IT/network technology, client needs for the bank services and products is getting diversified and requires more professional capability in product development and more convenience and sophistication in service delivery.

On the other hand, due to the fact that most of financial products and services are getting commoditized, banks are facing difficult time to make profit and spend a lot of their time and efforts to cost reduction through business process reengineering or outsourcing arrangement. There are also pressures from the market and stakeholders for operational efficiency and cost-reduction. To catch up with those demanding requirements, banks have to keep continuous IT investments with huge amount of money. This is critical for the banks to retain each competitiveness at the market but any single bank cannot do all of its operations in house with making profit. From this aspect, many leading banks have already started outsourcing their non-core operations that require “economy of scale” for economical justification.

Under the above circumstances, several major outsourcers have appeared in the market and they have been establishing track record in providing outsourcing services to the banking industry and enhancing their services to be more value-added ones. This proven availability of IT and outsourcing service providers accelerates outsourcing arrangement in bank operations.

II. *Outsourcing in banking operations and discussion scope*

1. Outsourcing area categorization by management importance and purpose

Outsourcing areas at bank operations are categorized by 1) management importance of outsourced operations and 2) purpose of outsourcing (Sanwa Bank, 1999). With this framework, the criteria can be divided into 1) strategic area, defensive area, and inevitable area and into 2) cost reduction, business resource optimization, and expertise possession. For example, primitive but absolutely essential functions such as document mailing, guard, physical cash handling, or communication network are positioned as “inevitable area with cost reduction purpose”, operations planning, systems development, credit decision for smaller lending, or call center operations as “defensive area with business resource optimization purpose”, and product & service development, marketing, or systems planning as “strategic area with expertise possession purpose”.

2. Discussion scope of this paper

Major banks are annually spending approximately 1.5 billion US dollars in average into IT related areas and the average bank achieves saving in excess of 18% in operational costs from outsourcing IT functions (Wong, 2000). This business environment is industry-wide push for outsourcing and availability of proven outsourcing service providers is another reason to accelerate outsourcing in bank operations as described in the Section I. However, this rapid penetration of outsourcing arrangement is a factor to increase outsourcing risk exposure of banks if the management does not take a concept of “risk-adjusted” into their business decision regarding economical efficiency of outsourcing.

Considering the level of managerial impact of IT related costs and investments to today's banking business management, this paper focuses on economical efficiency of IT outsourcing arrangements such as transaction data processing, systems operations, and systems development & maintenance.

3. Quick review of outsourcing business development in the US market

In the US market, outsourcing business for banks started with accounting area by many small business process outsourcers in 1960s. As business processes had been automated with computer systems in 1970s, major US banks started providing outsourcing services to smaller banks to recoup investments in their core processing infrastructure until the services were replaced by major system vendors who could provide service bureau processing and facilities management outsourcing with their own products and services. (Hunt, 2002; Wang, 2000) After mid-80s, several independent outsourcers appeared and a few major outsourcers have dominated the market after a series of merger and acquisitions to gain wider range of product and service line and more capital. (Hunt 2001)

Bank management may learn from the history of US market that it is very important for them to have business partnership with outsourcing service providers who have enough capital to realize "economy of scale" with continuous investment into IT and operational infrastructures including skilled staffs.

III. *Business decision on outsourcing*

1. Business decision criteria

A comparative study in 1997 regarding outsourcing practices in the US, Japan and Finland (Apte and Sobol, 1997) indicated that America's most effective IS (Information Systems) users, 1) cost containment, 2) reduced need to hire IS professionals are two most important reasons for outsourcing and other important reasons behind outsourcing includes 1) an improved cost predictability, 2) an improved ability to focus on the strategic use of IS, and 3) increased accessibility of vendors. From the technology side, time-to-market, scalability, and keeping up with changes in technology will make outsourcing a logical and cost effective strategy. (Hunt, 2001)

Addition to what Hunt (2002) discussed as reasons for core systems outsourcing, several discussions are found for the outsourcing decision criteria and categorized as follows:

(1) Operating cost reduction

Most of the banks that decide outsourcing primarily rely on a reason for operating cost reduction. Indeed actual cost saving can be realized in figures by outsourcing labor-intensive routine processing works to external service providers that can operate same works with reasonable level of quality at cheaper labor costs. This allows banks to spend business resources more into strategic focused core-business areas that differentiate themselves from other competitors. Ngwenyama (1999) described the effectiveness of external service providers is

mainly because of vendor's economies of scale and labor specialization.

(2) Predictable cost forecasting

By contracting a packaged service with the outsourcing service providers, banks can avoid encountering unplanned IT expenses to increase processing capability or hire additional personnel (Hunt 2002). With well-prepared SLA (Service Level Agreement) with outsourcers, banks can forget about unexpected costs to keep their service level to the customers even in overcapacity trouble with seasonality factor.

(3) Efficient capital allocation

Outsourcing services make banks to avoid capital expenditures and preserve capital. (Hunt 2002) In other words, banks can transfer IT related fixed cost such as computer hardware purchasing, application development and systems maintenance into variable cost and have flexibility in accounting management with more capacity for strategic investment.

(4) Flexible business expansion

Banks can concentrate their business resources more into core businesses that are positioned as "core competence" by outsourcing non-core routine operations to external outsourcing service providers.

(5) Professional resource assurance

By outsourcing operations that require professional skills to external professional firms, banks can expect higher level of efficient operations and risk management. This makes banks to avoid uncertainty of in-house skill development or hiring professional with expensive recruiting costs.

(6) Availability of large-scale outsourcers

The existence of fully equipped outsourcers that can handle large volume transactions with stable availability at reasonable service fee is a key for banks to make final decision for outsourcing. Hunt (2002) indicated that large-scale outsourcers are well capitalized, reinvest in their products and provide high-quality services and the ability of them has been proven in the US market.

2. Discussion scope: Pre-contractual stage

Although management decision criteria is defined in several ways as discussed in the previous section, there are many cases that bank management makes decision of outsourcing only with simple simulation of cost savings or without any quantitative consideration about outsourcing risks. In order to evaluate and make decision of economic efficiency of outsourcing arrangement more practical way, bank management should try to quantify predicted risks and reflect them in adjusting economic efficiency for better management decision.

Vining (1999) provided a conceptual framework to assist managers to identify pre- and post-contractual risks associated with outsourcing decisions. According to this definition of stages, this paper focuses on the pre-contractual stage which should require full involvement of management in decision making rather than post-contractual stage which requires less involvement of them in continuous monitoring of outsourcer's performance and periodical contract renewal reviews.

IV. *Risks along with IT outsourcing at bank operations*

In the previous sections, this paper explores background of management decision about outsourcing at bank operations and defines discussion scope. In this section, risks along with IT outsourcing at bank are discussed with operational risk point of view.

1. Risks along with IT outsourcing

There have been many discussions about outsourcing related risks though the past literatures. In this section, several past discussions in the literatures are reviewed and categorized to have an idea for further discussion. As general risks along with outsourcing, Quinn & Helmer (1994) defined new types of strategic risks along with outsourcing as 1) loss of critical skills or developing the wrong skills, 2) loss of cross-functional skills, and 3) loss of control over supplier and addition to this definition, the three other discussions (Earl 1996; Willcocks 1999; Ngmenyama 1999) regarding IT outsourcing risks are reviewed and categorized in the Table 1.

According to Earl's definition for IT outsourcing risks (1996), there are eleven risks of IT outsourcing. Willcocks (1999) defines for ten risks with different point of view, and Ngwenyama & Bryson (1999) also defines five basic risk factors in IT outsourcing. These risks are intangible but it is very important to have some quantitative way to measure the risks in the process of management decision about IT outsourcing with economical efficiency point of view.

For further discussions to try to reflect outsourcing risk factors on management decision processes with quantitative approach, this paper mainly focuses on risk areas of operational control, technology management, and cost management that are comparatively easier for quantitative discussions than other intangible risk areas such as overall management, skill management, outsourcer management, and client management. In banking businesses, the focused risk areas are positioned as a part of operational risks which is defined by the Basel Committee on Banking Supervision (2001) as "the risk of direct or indirect loss resulting from inadequate or failed internal processes, people and systems or from external events".

2. Operational risks along with IT outsourcing

In the Table 2, outsourcing related operational risks at banks are categorized into the four major service requirement categories with risk definition and description of assumed impact along with risk realization.

(1) Service availability

Service availability is the most important area to be assured from operational risk management point of view. Risks that are categorized into "Service Availability" are a) process capability, b) exception handling, c) data accuracy, and d) operational discontinuity. When these risks are realized, unexpected business discontinuity happens.

(2) Service level (quality)

Risks that are categorized into "Service Level (Quality)" are a) seasonality handling, b) expandability, c) "economy of scale", d) M&A, e) quality control, and f) outsourcer

TABLE 1. IT OUTSOURCING RISK DISCUSSIONS
(Coverage and applicability to discussions in this paper)

Coverage Area	Risks Discussed	Earl (1996)	Willcocks (1999)	Ngwenyama (1999)	Applicability to the discussion of this paper
Overall Management	Possibility of weak management	○			
	Business uncertainty	○			
	Fuzzy focus	○			
	Lack of maturity and experience if contracting for an managing "total" outsourcing arrangements		○		
	Outsourcing for short term financial restructuring or cash injection rather than to leverage IT assets for business advantage		○		
	Unrealistic expectations with multiple objectives for outsourcing		○		
Operational Control	Changing boundary of the firm by moving operation outside of it			○	
	Endemic uncertainty	○		○	✓
	Speed/Flexibility: loss of immediate control of important value chain activities			○	✓
Technology Management	Technological indivisibility	○			✓
	Treating IT as an undifferentiated commodity to be outsourced		○		
	Difficulties in construction and adapting deals in the face of rapid business/technical change		○		✓
Cost Management	Hidden cost	○			✓
	Lack of organizational learning	○			
Skill and Expertise	Loss of innovative capability (loss of competences to the outsourcer)	○		○	
	Failure to build and retain requisite in-house capabilities and skills		○		
	Pool sourcing and contracting for development and new technologies		○		
Outsourcer Management	Inexperienced Staff	○			
	Outdated technology skills	○			
	Incomplete contracting		○		
	Lack of active management of the supplier on contract and relationship dimensions		○		
	Power asymmetries developing in favor of vendor (opportunistic bargaining and decisions by vendor)		○	○	
Client Management	Dangers of eternal triangle	○			

management.

(3) Security

Security requirements are threatened by risks in a) data leakage, b) internal fraud, and c) security holes. Security areas are relatively technical but to be considered as management issues from operational point of view.

(4) Credit

Both a) business performance and b) outsourcer bankruptcy are out of control factors for

TABLE 2. OPERATIONAL RISKS ALONG WITH IT OUTSOURCING

Requirement Category	Risk Area	Risk Description
(1) Service Availability	Process capability	Capability decline of transaction processing which may cause business interruption by overflow of transactions to be processed.
	Exception handling	Less capability of exception handling because of the lack of industry knowledge especially in business processes. This may cause inappropriate processes or unnecessary delays of processing which requires huge time and efforts for recovery.
	Data accuracy	Lack of data accuracy which may impact on quality of service at customer banks.
	Operational discontinuity	Unexpected service interruption caused by outsourcer's fault or trouble that is out of control of customer banks.
(2) Service Level (Quality)	Seasonality handling	Limitation of transaction capacity for peak transaction flows with seasonality or other reasons may cause unexpected delay of transaction processing.
	Expandability	Lack of expandability may limit customer banks' business expansion with required functions at right timing and may miss business chances.
	"Economy of Scale"	Lack of "Economy of Scale" may reflect on service fees and limit IT investments that reduce service level to customer banks.
	M&A	Changing business policy or services by mergers and acquisitions at outsourcers may impact on service contents and quality.
	Quality control	Lack of quality control at outsourcers may directly impact on service quality of customer banks.
(3) Security	Outsourcer management	Outsourcer's management decision such as reducing service lines, changing service contents, level, pricing may threaten service level that customer bank requires.
	Data leakage	Leakage of customer data or transaction data may realize reputational risk with direct economic damage through decrease deposit and loans by customer churn.
	Internal fraud	Lack of security control may lead realization of reputational risks with lawsuits or customer churn.
(4) Credit	Security holes	The more network will be involved in outsourcing arrangement, the more number of interfaces and communication of data may expose to network related crimes through "security holes".
	Business performance	Decline of business performance of outsourcers may negatively impact on service level (quality)
	Outsourcer bankruptcy	Outsourcer bankruptcy may lead discontinuity of outsourcing services. In the disaster recovery area, COMDISCO, a major disaster recovery service provider filed chapter 11 in July, 2001 and their business was acquired by SUNGUARD but COMDISCO's clients experienced temporary but discontinuity of disaster recovery services (including stand-by services) or revision of service level agreement.

customer banks but bank management should establish processes for monitoring outsourcer's business performance and arranging back-up servicer if necessary.

Addition to the operational risks that are discussed in the Table 1, level of concentration of outsourcers should be considered. The more outsourcing areas are concentrated into a specific outsourcer, the more concentration risks are recognized. On the other hand, the more vendors are involved, the more multi-vendors control risk arises and bank management should try to keep consistency among contracted outsourcers and control interdependency among them.

ASP (Application Service Provider) is another factor to be considered. This is a recently

introduced way of business to provide necessary systems functionalities through network on demand basis. This makes user banks to eliminate host computers or servers to retain applications on their site full-time basis and this leads IT cost saving. However, if day-to-day operational dependency on the ASP services is very high, discontinuity of services with ASP's faults or troubles leave user banks with no option other than discontinuing of business or doing their business on manual basis. (i.e. with human beings in a primitive labor-intensive way)

3. Reversibility assurance of outsourced operations

Requirements for security level and service availability of banking business are relatively higher than other service industries because banks are responsible for a part of functions in socioeconomic infrastructure such as settlement or deposits and loans for individuals and enterprises. Considering its nature of the business, bank management should stick to keep their service availability even in the outsourced operations. By retaining service availability, banks can also keep stability, durability, and expandability that they can appeal to capital market and investors as competitive advantage.

Most important aspect which bank management should try to retain in the outsourced operation is "reversibility assurance" which makes outsourced operations back to in-house operation with alternative means to minimize impact of business interruption to their customers. Banks have an obligation of stable operation not only to customers and stakeholders but also to marketplaces such as settlement, foreign exchange, and stock & bond market.

FIG. 1. REVERSIBILITY ASSURANCE (for outsourced operations)

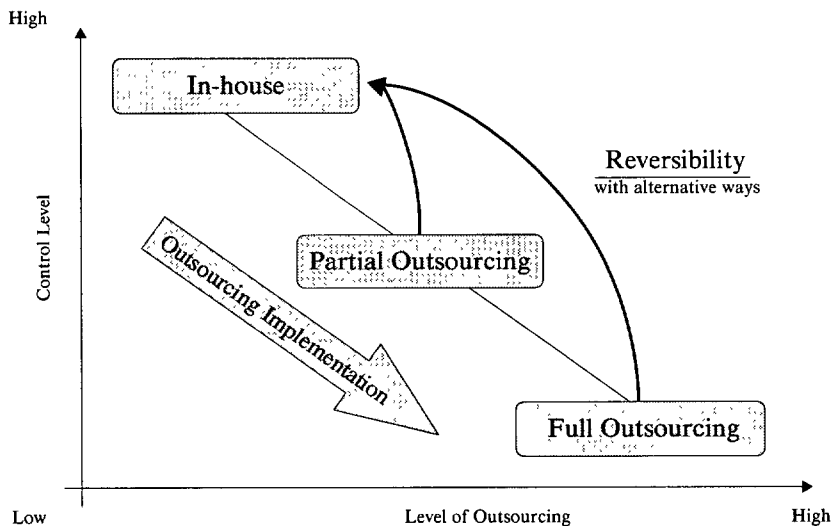


Figure 1 indicates reversibility of outsourced operations with alternative means. Regardless of outsourcing level (partial or full), it is important to assure reversibility of operations from "outsourced" to "in-house" or "under control" status. Theoretically ultimate alternative

mean of recovery for outsourced operations is manual processing, however, it is physically impossible to process very large volume transactions such as auto-debits for public utility charges within reasonable timeframe without any critical negative impact on customer satisfaction for bank services. One of practical alternative means of recovery to assure reversibility is contracting with another outsourcer as a back-up servicer.

4. Economical recovery and practical (operational) recovery

Considering the importance of banking business in a society as discussed, many authorities or central banks have already started to lead banks to “Be prepared” for unexpected events that may threaten service availability of banks and checking each bank’s status through periodical or surprise inspections and examinations. Their focus is on practical (operational) recovery rather than economical recovery such as money reserve or insurance for loss with lawsuits from customers over business discontinuity. The business discontinuity leads realization of reputational risks that may cause economical damages such as drastic decrease of deposits and loans with customer churn. With this aspect, bank management should concentrate their effort into retention of service availability for outsourced operations even in troubled situations.

5. Business Continuity Plan (BCP)

In order to retain service availability in troubled situation, banks have several plans for it. Business Continuity Plan (BCP) is sometimes confused with Disaster Recovery Plan (DRP) or Contingency Plan but BCP focuses on how a business entity can continue its business even in a troubled situation. DRP or Contingency Plan is included in BCP as actual recovery actions.

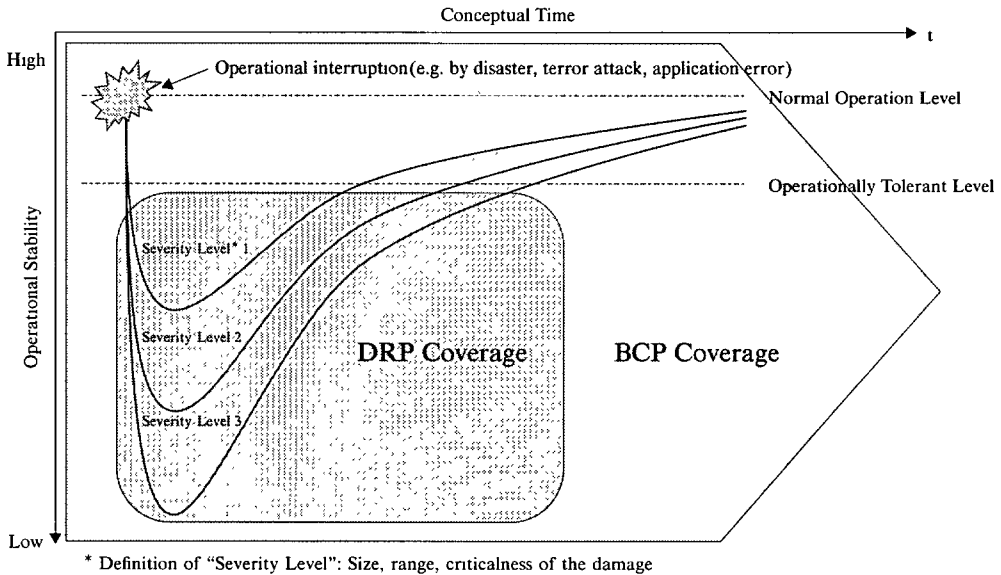
Figure 2 shows how BCP and DRP are covering actions for retaining service availability. Once any operational interruption occurs, operational stability is reduced. As can be seen in the figure, though DRP covers operational recovery from the reduced stability level at the timing a disaster happens to the operationally tolerant level, BCP covers the timing before the disaster happens to normal operation level and even after. In other words, DRP is “one-shot” activity and BCP is continuous efforts that the bank management should work on even in a situation that any disaster never happens. Most of banks have DRP and resource budget for it but not for BCP. Cost for actions that belong to the coverage area deficit between BCP and DRP is defined as “hidden cost” which is discussed in the next section.

The activities which are included in a BCP and not in a DRP are such as 1) monitoring procedures to detect incoming risks and to prepare actions (avoid, control, assume, and transfer) in advance, 2) communication control plan for media and press to minimize unnecessary damages of reputation, 3) investors relations (IR) and customer communication procedures.

6. Case: Systems trouble at Mizuho Bank in April, 2002

As three major Japanese banks — Fuji Bank, Dai-ichi Kangyo Bank (DKB) and Industrial Bank of Japan (IBJ) have been merged in 2002, they integrated their core banking

FIG. 2. CONCEPTUAL COVERAGE COMPARISON OF BCP(Business Continuity Plan) AND DRP(Disaster Recovery Plan)



systems with many system interfaces and switch relay servers without giving any centralized authority to system vendors that have taken care of each bank's core processing system or network for the past many years. This decentralized and uncontrolled situation caused few days systems unavailability and inconvenience in auto debit settlement and ATM cash withdrawal right after the cut over of the integrated system and brought huge economical damage to their customers and severe reputational damage to the Mizuho Bank.

This is based on the one of the outsourcing risks that Earl pointed out in 1994 and because of too many interdependencies among Mizuho systems, any system vendor did not understand the problem well enough to sort it out quickly. As survey results indicated (Apte & Sobol, 1997), the ratio of outsourcing in disaster recover area was very low with 9.3% in Japanese companies comparing with US companies which were with 39.6%. This is one of the background for the case which shows that the Mizuho has outsourced their day-to-day IT related activities to system vendors but not for the contingency situation.

V. Introducing "risk adjusted" point of view

The issues in the current decision process for outsourcing at bank operations have been discussed already and necessity of reflection of risk in the management decision is recognized.

1. "Risk-adjusted" aspects in bank management

Concept of "risk-adjusted" has been already existed at bank management for over the last

twenty years in the management of market risk, credit risk, and recently operational risk. Market risk is the risk of adverse fluctuations of the marked-to-market value of a financial portfolio during the period required to liquidate the portfolio and credit risk is the risk of loss due to exposure to the default of a counterparty of funds or lending (Marshall, 2001). BIS (Bank for International Settlements) has already included the concept of “risk-adjusted” in their guideline of capital adequacy requirements for banks based on quantifications of market risk and credit risk that has been defined by the Basel Committee on Banking Supervision.

In the investment world, “risk-adjusted” concept has also been already introduced into the measurement of investment returns such as RAROC (Risk Adjusted Return On Capital) or RARORAC (Risk Adjusted Return On Risk Adjusted Capital) to have realistic rate of return of investments. By having these indicators, investors can make decision with risk profile analysis in quantitative way.

Of the existing risks that banks face and allocate capital toward, the management of operational risk is the least advanced. (Marshall, 2001) However, leading banks, system vendors, and consulting firms have been developing tools and techniques for quantitative measurement of operational risks.

2. Conceptual Model Structure

Based on the discussions in the previous sections, this paper defines conceptual model structure for risk-adjusted expected cost saving with outsourcing that can be applied to management decision processes in the pre-contractual stage. (i.e. before outsourcer selection and contracting)

As described in the Figure 3, the risk-adjusted expected cost saving of outsourcing (B) equals the deficit of expected cost saving without risk consideration (A) and reserve against risks with outsourcing (C) plus hidden costs (D). $[B = A - (C + D)]$ There should be a case that the risk-adjusted cost saving becomes negative that indicates “No go” for an outsourcing decision except the case that there is any strategic reason to support outsourcing arrangement.

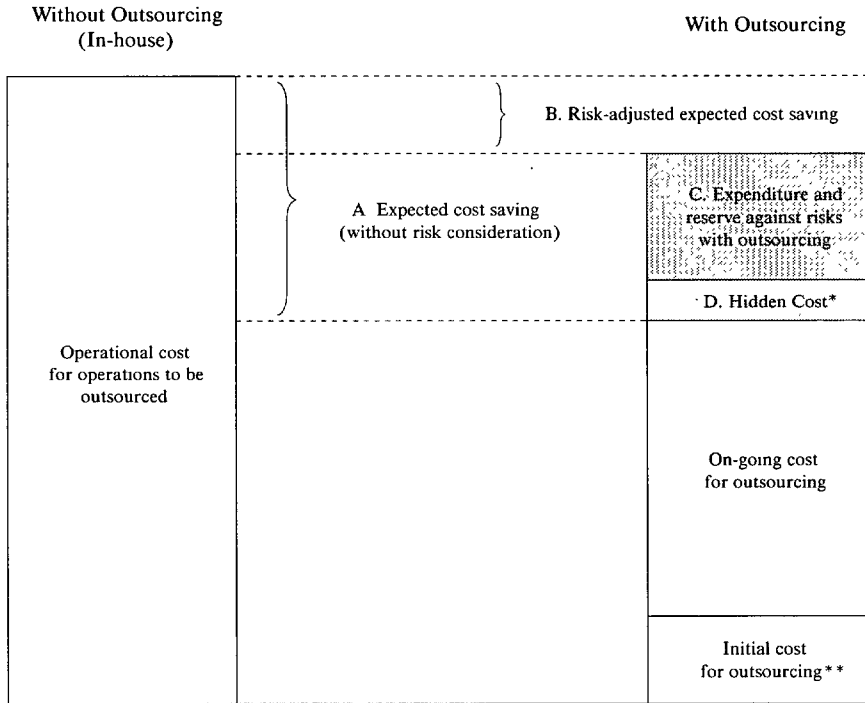
On-going cost should include not only simple aggregation of contracted running cost for each outsourcing service provider but also cost for multi-vendor management. The multi-vendor management cost tends to be neglected but very important to be considered especially if outsourcing service is provided by several different vendors. (Barthelemy, 2001)

Hidden costs were defined by Earl (1996) as 1) underestimation of setup costs, including redeployment costs, relocation costs, and longer than expected handoff or parallel running cost, and 2) underestimation of management costs and also by Barthelemy (2001) as 1) vendor search and contracting, 2) transitioning to the vendor, 3) managing the effort, and 4) transitioning after outsourcing. Addition to those definitions, the deficit between BCP and DRP should be counted as an additional hidden cost to be reserved in advance as discussed in the section IV.5. After September 11 terro-attack in New York, many insurance companies decided to increase insurance premium for companies without sufficient BCPs.

3. Feasibility and limitations of the model

Most part of the managerial feasibility of the model relies on the progress of development of operational risk management tools and techniques. One of the current limitations of them

FIG. 3. RISK-ADJUSTED EXPECTED COST SAVING WITH OUTSOURCING
(Conceptual Model Structure)



* Earl (1996) and Barthélemy (2001)

** Normally to be depreciated

is lack of historical data (internal and external) that negatively impact on a readiness of the model for practical use. In order to overcome the limitation, banks and bank associations have started sharing operational risk related historical data to calculate VaR (Value at Risk) that is reflected on their management decision. Accounting firms and consulting firms support their activities through providing integrated database by purchasing accident records from individual bank that have not been released by public media. Systems vendors are also developing tools and techniques such as relational database management (RDBM) applications, VaR calculation engine, or MIS (Management Information Systems) template for operational risk management.

Therefore the readiness of this model mostly depends on how fast the on-going efforts of existing banks in quantification of operational risks and model development will be completed and also internal and external historical data will be ready to apply for the model.

VI. *Discussion and Conclusion*

1. Discussion

Although conceptual model structure for outsourcing decision with “risk-adjusted” point of view is discussed in the Section V, it is also very important to consider how to apply the model to the day-to-day business decisions and management processes. In 1990s, some companies introduced a new role for intermediaries or interpreters between IT specialists and users as business analysts or system liaison officers to promote IT implementation to their operations for effective systemization. However, it did not work well because of inefficient communication. The two parties should work very closely without any “middlemen” (Earl, 1996) From this point of view, any organization that is not responsible for managing business risks is not appropriate to have a right for day-to-day risk management activities. For instance, a Risk Management Division does not have any authority to make decision and just provides information to bank management could not be relied on. Top management or responsible business unit (BU) should take the role directly.

An internal audit based monitoring and management approach for decision making of outsourcing that is defined by Figg (2000) is an effective approach to make it happen in more practical way. This is an alternative approach and makes internal audit to play more active role in risk management processes and to be able to take necessary actions in the pre-contractual stage and also in the post-contractual stage. To make this approach more effective, an internal audit division or equivalent organization should have a right to audit not only for internal management processes but also for outsourced operations actually run by outsourcer(s).

Addition to the further research of risks in the post-contractual stage and risk quantification of more intangible risk areas that are out of discussion scope of this paper, there is one more specific topic as future research direction. Japanese major banks are getting bigger (in asset size) through a series of mergers but lapse into “Too big to manage” or “Too big and complex to retain service availability” rather than “Too big to fail”. The bloated computer systems and inflated IT related costs prevent the Japanese banks from being cost effective in competitiveness or even in outsourcing arrangement. The failure of the traditional bank operations in Japan and standardization of non-core operations for more outsourcing arrangement should be discussed for sound competition among banks in the Japanese market.

2. Conclusion

Due to the recent increase of competition in the banking market and rapid development of information technologies, bank management cannot avoid outsourcing as a management option. As discussed through this paper, bank management should be involved more in risk management of outsourcing at bank operations as decision maker at each pivotal point. In those efforts, quantitative approach for risk adjustment along with designing and implementing procedures for monitoring and evaluating risks is necessary to make reasonable and appropriate management decision or judgment for outsourcing arrangement. If bank operations continue to be with less management involvement in risk management, risk exposure to critical business discontinuity would increase day by day. Bank management also should be risk

conscious to make more strategic decision of outsourcing to retain their service level and avoid “blissful ignorance” exposure to operational risks with business interruption which may cause critical economic damage to the business.

As a further discussion point that is extended from discussions regarding economic efficiency of outsourcing, bank management should start rethinking their business model to simplify bank operations and processes by redesigning their products & services and organizations for future success (Ramamurthy, 2002). Unbundling and redefining each function of bank operations by separating core operations (i.e. operations that support core competence businesses) from non-core operations in parallel with business process re-engineering (BPR) is a critical factor for successful outsourcing decision on the operations that are to be “reasonably” outsourced in the long-term strategic point of view.

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