Logistics Risk Management

Current Situation of Hong Kong’s Logistics Industry

By virtue of the geographical advantage, the logistics industry has long been prospering in Hong Kong. As Mr. John Tsang, Financial Secretary of the HKSAR, explained, the logistics industry plays a vital role in the local economy, contributing to 28% of Hong Kong’s GDP and due to technological advancements, its reliability, complexity and competitiveness have been upgraded to face future challenges.

香港物流業的現況

香港的物流業憑著地理位置優勢，一直蓬勃發展。正如香港特別行政區財政司司長曾俊華先生所說，作為本土經濟四大支柱之一，物流業對香港生產總值的貢獻約佔28%，角色舉足輕重。隨著科技的發展，其可靠性、複雜性及競爭力都顯著提升，以此應對日後的各種挑戰。
According to official statistics, the increasing trends in both import and export of merchandise value indicate the rapid development of the logistics industry. The total trade value recorded a growth of 136% in 15 years. In addition, according to the Logistics Performance Index (LPI) ranking, Hong Kong, with a score of 3.83, is the 15th largest logistics center in the world and 2nd in Asia. Other than its location, this remarkable result can be attributed to the outstanding infrastructure, sound regulatory regime, large numbers of well-trained workers and effective customs. However, are there any underlying threats to the logistics industry owing to the rapid development of other countries?

香港政府公佈的數據顯示，貨物的出口及入口價值均有明顯的上升趨勢，十五年內增幅逾倍，標示著香港物流業急速發展。在近日公佈的國際物流績效指數（LPI）中，香港憑3.83得分成為世界第十五大、亞洲第二大物流中心。除了地理優勢之外，取得這些驕人成就亦有賴於香港出色的基礎設施，完善的司法制度，充足的專業人才，以及有效的海關把關。可是，隨著其他國家城市急速發展，香港的物流業前景將會面對甚麼風險呢？
Business Cycle of the Logistics Industry

In general, logistics can be classified into three main parts: storage, warehousing and transportation. For everyday operation, companies have to process orders and transport the required goods in designated quantities to their desired locations. Order processing, which is usually done in the warehouse, includes a number of steps. A withdrawal list is produced, and then the items are selectively removed from the racks manually or by machines. The unloaded items will then be sorted according to their destination, this is followed by package formation which includes labeling and packing of goods.

Trains, vehicles, airplanes and boats are common means of transportation, sometimes multimodal or intermodal transportation may be adopted to achieve a balance between cost and delivery time. For intermodal transportation, goods are kept in the same cargo without extra handling when changing the delivery mode. This can reduce the time and increase the security of intermediate transporting.

Regarding the entry of good, companies have to evaluate the type of goods for the optimum location for storage, they also have to input data such as weight and size of the goods into the system.

物流業的運營周期

物流業的運作大致上可分為三個環節：儲存、入倉及運輸。物流公司每天都要處理客人的訂單並把一定數量的貨物運送到指定的地方。訂單處理包含幾個步驟，而這些工序一般會於倉庫內完成。工作人員首先會制定待提取貨物清單，然後以人手或機器從倉庫中取出貨物，並按照目的地作出分類，再交予包裝人員加上標籤及進行包裝。

除了火車、汽車、航機和貨船等常見的運輸方式外，客戶亦可選擇多式聯運及協調聯運模式，以平衡成本及運貨時間。若貨物以協調聯運的方式運輸，貨物會使用同一個貨運箱由一種運輸方式轉至第二種方式，從而節省另行處理貨物的時間以及加強轉運的安全性。

在存入貨物方面，物流公司除了要按貨品選擇合適的存放位置外，亦需要將物品的資料，例如大小和重量等，輸入電腦系統，以方便管理。
It seems that the business operations of a logistics company are not complicated; however, many decisions have to be made in order to facilitate operation.

In order for a smooth fulfillment process, compatibility between the configuration of the warehouse, the types of goods to be stored and its demand, and the type of automated machines for fast picking and easy sorting have to be taken into consideration. Furthermore, the factors that need to be considered include not only rack dimensions, the design of the rack, the number of racks and the warehouse layout, but also retrieval systems such as forklift or conveyor belt. In addition, flexibility is a factor to consider when handling goods with special needs, e.g., fragile products. All of the above mentioned items play decisive roles in determining the efficiency and productivity of the process.

**Embedded Risks in the Logistics Business Cycle**

On the whole, the logistics industry has to deal with two major aspects of risk: safety and accuracy.

Risks concerning safety issues include the safety of staff in the use of machines, the protection of goods against loss, theft or damage. Measures such as monitoring systems to track the goods are introduced to the industry and will be discussed later in the article.
Accuracy issues cover transportation details which include destination and designated time of delivery, goods details such as type of goods, quantity and the desired kind of packaging. To facilitate identification of goods, almost every logistics company employs computer database and peripheral machines to keep record. Barcodes and radio-frequency identification (RFID) are technologies that facilitate warehouse operations.

Apart from the risks in daily operations, companies have to have excellent crisis management capability. Accidents such as adverse weather conditions, unexpected traffic conditions or water leaks in the warehouse can happen at any time. That is why some companies incorporate the use of a weather forecasting system or traffic conditions monitoring provided by the Hong Kong Transport Department into their systems; regular drills may be included to improve communication between parties.
Big Data in Logistics Industry

Because of the rapid development of technology, millions of shipment occur every day. Handling the fast and massive data is now a new challenge to the industry. A recent survey reveals that about 60% of logistics companies are now investing in big data analysis. However, due to the lack of past experience, more than half of these companies have shown their bewilderment in developing big data strategy.

There is no doubt that logistics business is complex and usually a cross-border operation. Not only do the logistics companies receive a variety of data, but also they need to process the data day and night. In short, the types of big data can be simply attributed to three sources: customers, in-house management as well as transportation.

By utilizing data from customers, logistics companies can cluster their customers in different areas and therefore, optimize the planning of resource allocation and adjust their geographical coverage. In 2013, America accounts for the largest logistics country in the world, followed by China, Germany, United Kingdom and Japan. With reference to the size of the logistics market, companies can explore business opportunities based on customer density.

物流業中的大數據

隨著科技的急速發展，全球每日都要處理數以百萬計的貨運。要迅速處理龐大的數據，為業界帶來了重大的挑戰。最近一項調查發現，60%物流公司正發展大數據的分析業務。可是由於欠缺過往經驗，逾半物流公司對發展大數據的分析策略都頗感迷茫。

物流業無疑非常複雜，而且通常都是跨國運作的。物流公司會收集到不同類型的數據，而且需要日以繼夜地加以處理。簡單來說，物流業的大數據大致可歸納於三個來源：客戶、設施管理及運輸。

物流公司可利用來自客戶的數據，將客戶按不同地區歸類，以此優化其資源分配計劃及調整業務的覆蓋面。在2013年，美國的物流業規模在全球居於首位，其後分別為中國、德國、英國和日本。物流公司會參考各地物流市場的規模，根據客戶密集度來拓展商機。
In addition, the data sourced from the warehouse include size, weight and content of goods while those from the transportation section consist of the cost and time of shipping. Combining these information, logistics companies can systematically draw a plan for transportation to reduce the time for handling and storing of merchandise.

The purpose of handling big data is basically to improve the performance of business by increasing operation efficiency, raising the turnover rate of warehouse as well as expanding the business network. However, the common difficulties that logistics companies, if not all kinds of industry with an interest in investing in business intelligence, facing are the challenges that the 4Vs characteristics (volume, velocity, variety and veracity) pose to IT specification, storage capacity and potency of internal system. As a result, the demand for these products and talents are now a red-hot topic within the industry.

With respect to the form of data interchange, companies usually use spreadsheets to manage their data. Electronic Data Interchange (EDI) is one of the new forms to replace the traditional way. As different departments in one company may save their data in different formats, it takes time for data merging and clearing before processing and calculation, EDI provides a standard form of data input to avoid this scenario. However, since the set-up cost is relatively higher than using traditional tools, EDI is not common in SMEs but utilized by large companies such as IBM, HP and OOCL. Nonetheless, due to the increasing demand for business intelligence to handle big data daily, EDI, as a fast and systematic tool to manage information, should play an important role in the future; some logistics companies have paid attention to investing in EDI development.
New Technologies in the Logistics Industry

In this century, technology has significantly enhanced our standard of living. The logistics industry has also utilized technologies such as Radio-Frequency Identification (RFID), QR-code, warehouse management system (WMS) and electronic payment methods to improve their business by shortening the processing duration.

Vehicle Tracking System

According to an executive from Oriental Logistics Holdings Co. Ltd. during an interview, in order to monitor the operation of their fleets, most logistics companies have employed a vehicle tracking system to keep track of their vehicles. Common constituents of a vehicle tracking system include a tracking device installed in each vehicle, tracking server and user interface with the help of GPS. The location signal is transmitted from the tracking device to the tracking server. Fleet managers can access the information from automatic and real-time positioning graphs.

物流業的新科技

在當今世紀，科技不斷改善人類的生活。物流業亦已開始利用各類技術來處理日常事務及縮短運作周期。這些技術包括無線射頻辨識（RFID）、二維碼（QR-code）、倉庫管理系統及電子繳費等等。

汽車追蹤系統

透過對交通物流的訪問得知，為了有效地監察車隊的運作，很多物流公司都引入了汽車追蹤系統來定位公司的車輛。汽車追蹤系統主要組件包括安裝於車輛的追蹤裝置、追蹤伺服器、用戶介面和全球定位系統（GPS）。定位位置訊息由追蹤裝置發出，經網絡傳送到伺服器進行分析。車隊的管理員可以透過自動定位圖取得車輛的即時資訊。
Stolen vehicle recovery

Tracking systems are beyond doubt an effective way to avoid hijacking and theft. By activating the tracking unit in a vehicle, police can easily track the location of lost cars by following the signals emitted.

Fleet Management

When managing a fleet of vehicles, it is important to have the real-time location of all drivers. Apart from monitoring the process of goods transportation and service delivery, logistics companies can assign a proper route to its fleet by providing an effective solution to avoid carrier delay and allow comprehensive transportation planning.

Emergency Measure

Unexpected events such as traffic congestion and breakdown of vehicles can greatly influence the transportation of wares. Not only does the tracking system help trace the cars that have experienced a breakdown, it also provides emergency measures during traffic congestion through instant route planning and reporting.
Radio-Frequency Identification, RFID

Although its name, RFID, may be strange to us, it is an omnipresent technology in our daily lives. The Octopus card utilizes this electromagnetic technology to identify the chip on each individual card. At the same time, because of the fast-tracking function, logistics companies have also started using this technology to handle dozens of freight.

Traditionally, warehouses use barcodes mainly to label the information of goods in a package. Scanning inconvenience is made since the barcode must be in the line of sight of the reader and the scanning distance cannot be too far. Through using the RFID technology, a reader is used to detect the specific frequencies of the waves emitted from chips with a large amount of information such as the type of goods, destination and delivery date. Also, the detecting distance can be as far as 2m. Obviously, the warehouse can handle the big data carried by the large amount of goods effectively by just installing an RFID reader on the conveyor belt to allow automatic classification and separation of freight.

With the installation of an RFID system, human mistake or warehouse fault can be easily eliminated. In addition, the chips can hold large amounts of data, including weight, size, content and destination, and enhance cargo management from storage to stock counting. Logistics companies can also make use of RFID to increase the product quality and accelerate the processing speed to advance the logistics business cycle and enhance the processing of massive data.

無線射頻辨識

「無線射頻系統」這個名字對某些人來說可能比較陌生，但其實這種技術很常見。八達通早已應用這種電磁技術來辨認卡上的晶片。由於無線射頻辨識具備快速辨認功能，因此物流業開始利用這種科技來處理成千上萬的貨物。

傳統上，倉庫主要利用條碼來標籤包裝內貨物的資料，但條碼需要準確對準解碼器才能閱讀當中的資料，而且掃瞄的距離不能太遠，因此會為掃描帶來不便。透過無線射頻系統解讀器閱讀由晶片所發出的獨特頻率，可取得儲存於晶片內的資料，例如貨物的種類、運送的目的地和運送時間等，從而令貨物的管理變得更方便快捷。除此之外，無線射頻系統的偵測距離接近2米，有助減少掃描操作的不便。物流公司的倉庫可將偵測器安裝於貨物運輸帶上，進行貨物自動分類，以便處理大量的貨物資料。

採用無線射頻系統，有助於減低人為錯誤及倉庫出錯的機會；可重複使用的晶片則能夠減低營運開支及改善倉庫管理，大大提升存貨乃至核算的效率，物流業可利用無線射頻技術來提升產品質量及加快處理速度，從而改善物流業務的工作流程，以及加強處理大量數據。
Weather Forecasting Technology

The weather presents one huge risk to the logistics industry and so should never be overlooked. For aviation, which depends heavily on weather conditions, the risks caused by weather are especially important.

In 1999, a typhoon (Signal No. 10) caused a plane to overturn at Hong Kong International Airport, blocking one of the two runways. In recent years, Airport Authority Hong Kong (AA) was called to the Legislative Council to explain the chaos caused by typhoon.

According to the Airport Meteorological Office, operational risk related to weather conditions is a recurring risk that may severely affect punctuality and reliability of delivery. This is one of the key factors affecting the delivery of high quality services for which the Hong Kong International Airport (HKIA) is renowned.

Most logistics companies rely on the weather forecast by Hong Kong Observatory, as weather conditions are less likely affecting them seriously comparatively. However, HKIA has an independent weather forecasting system due to its unique location. The wind direction, wind speed, visibility, cloud amount and cloud base, etc., are taken into account for any necessary changes in the flights. The lightning warning signals are consulted to determine whether it is safe for outdoor work.

Apart from the forecasting system, an emergency center, with a set of well-made contingency plans, was drawn up by the Airport Authority to effectively coordinate different units in urgent situations. Regular emergency drills are conducted as well to facilitate communications between parties for better resources management.

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<th>Time</th>
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Future Development of Hong Kong’s Logistics Industry

The idea of globalization has led to an increasingly complex logistics industry. To alleviate the market pressures of cost and time, new business intelligence technology has been employed. With additional pressure from terrorism and environmental protection, the global logistics industry is currently facing different challenges. As the busiest cargo airport with 4 million tons of freight handled per day, and the 3rd largest container port in the world, numerous obstacles confront Hong Kong’s logistics industry in its quest to retain its position as an effective transshipment hub between Asia and America.

However, rising operating costs, changes in supply chain model, shifting of production patterns and competition for talents are now serious issues for the local logistics industry. Furthermore, with reference to the rapid growth of logistics industries in other nearby cities such as Singapore and Shanghai, improving the quality of infrastructure, upgrading the logistics capabilities, enhancing the import and export ordinances and offering training to logistics professions are suggested as solutions to help Hong Kong to retain its position in the global logistics industry. Only then will the local logistics industry maintain its position as a key contributor to local GDP, highlighting the importance of Hong Kong to the world.

香港物流業的未來發展

全球化概念增加了物流業的複雜性。為了緩解市場在時間和開支方面的壓力，業界逐步引入新的商業智能工具。恐怖襲擊帶來的安全問題和環境保護的理念，都為全球物流業帶來了新的挑戰。香港擁有每日能處理400萬噸貨物的貨運機場和全球第三大貨櫃碼頭，但要繼續保持其作為亞洲貨物中轉站的地位，物流業同樣面對無數挑戰。

但營運開支的增加、運輸結構的改變、製造形式的轉移及人才競爭都是現時本土行業亟待處理的議題。同時，由於新加坡和上海等周邊城市開始重視發展其物流業，香港物流業將需要進一步增加物流基建、提升本土的貨物吸納能力、善出入口的管制條例及加強培訓專業人士，從而保持香港的物流業國際領先地位、持續支持本土的生產總值，以及維持香港在全球的重要地位。
As aforementioned, the development of Chinese ports pose several challenges to Hong Kong’s logistics industry. With the assistance of technology, the shipment center in Yantian is now able to handle TEUs (Twenty-foot Equivalent Units) in an efficient way. It is starting to replace Hong Kong as a transport hub to China. Apart from development, the fees charged by Yantian port are much lower than those of Hong Kong which is attractive to users who need to reduce their operational cost. In the meantime, when compared with Singapore, Japan and Taiwan, technology support to the industry is insufficient, this will lengthen the processing time and increase the chances of making an error.

Some professions have proposed that as the demand for logistics talent is one of the biggest issues in the future, the industry can promote themselves more in high schools and colleges. Apart from cargo management, functions related to logistics, e.g. law and business, also need talent. Due to the improvement in education, high productivity of local logistics industry can then be maintained by high quality candidates.

如上所述，中國港口的發展緊追香港。在完善科技的幫助下，中國鹽田港現時已有能力處理大型的貨櫃，更開始挑戰香港物流業的地位。鹽田不但發展迅速，其貨運費用亦較香港為低，這都有助其吸引更多客戶。相比新加坡、日本和台灣，香港物流業在應用資訊科技方面明顯落後，這會導致貨物處理時間延長及增加出錯的機會。

有業界人士指出，在未來數年，物流業對人才的需求將會激增，因此業界應加強在中學及大學的推廣，以吸引新人入行。除了貨運管理外，業界對法律和業務管理人才的需求亦顯著上升。做好教育和推廣，有助於提升本地物流業的人才質素，從而改善業界的生产力。

What can the Hong Kong Government do?

- Build Logistic infrastructure
- Construct joint and underground warehouse
- Set up sound Regulation for currency exchange
- More land for logistic industry
Our Suggestions to Hong Kong’s logistics industry

Online Shopping

In our eyes, although Hong Kong’s logistics industry is now facing different kinds of risks and challenges, we believe Hong Kong still plays a vital role in the movement of goods between Asia and America. Since online shopping, as exemplified by online shopping sites such as Taobao, has become a new trend in retail, a new and big market is now appearing when the legislation system between two parties is comprehensive enough to support and protect the trading mechanism.

According to information from tmail.com, as of 11 November 2014, the massive online shopping website function has attracted about 27,000 retailers, including suppliers from overseas. We believe the number of participants in the following years will keep increasing. Meanwhile, the trading amount during this festival has reached over RMB 57 billion. Definitely, with customers from over 20 countries, transportation service for online shopping platforms is a great opportunity for investment.

我們給香港物流業的建議

網上購物

雖然香港物流業正面對著不同的挑戰和風險，但我們相信，香港作為全球舉足輕重的物流中心，一直都扮演著亞美兩地貨運中轉站的角色。現時，淘寶等網上購物成為了一種新的消費模式。隨著保障買賣雙方交易的法律制度日臻完善，一個全新和大型的市場亦會隨之成形。

天貓網的資料顯示，於2014年11月11日所舉辦的大型網上購物活動，吸引了約27000家零售商參與，當中包括海外的零售商，交易金額更超過57億人民幣。我們相信日後如有類似的活動，參加活動的人數將會進一步上升，從來自逾20個國家的顧客人數可知，安排運輸服務支援網上購物是一個值得投資的範疇。
Business Intelligence Development

Furthermore, as mentioned above, the snowballing demand for business intelligence technique and talents are the main perplexity of local, if not global, logistics enterprises. It is suggested that large companies with sufficient resources should set up a dedicated department to handle the flow of big data from its daily business. For SMEs, they can co-operate with IT companies and consultants. As the Hong Kong Government has long been a supporter of IT companies, it is undoubtedly a win-win approach for SMEs in the logistics sector to employ specialized companies in Cyberport or Hong Kong Science Park as the cost should be modest.

Government Support

In addition, since restrictions in exchanging between Hong Kong dollar and Renminbi have been removed, this will surely enhance the use of Renminbi and thus, foster the business cycle. Therefore, to make full use of our location advantage, the Hong Kong Government should take the initiative to establish a complete set of rules to protect the industry to cater to the rapid changes in information technology.

However, according to statistics from the Census and Statistics Department, operating costs have been increasing in recent years. With an insufficient number of warehouses due to the lack of land, running a logistics business is now more difficult than in the past. Although Hong Kong has excellent infrastructure, the red light is flashing. To maintain the competitiveness of its logistic industry, the government should allocate more resources to this sector to prevent the demise of this important industry.
In addition, apart from warehouses, developing the logistics industry requires a large amount of land for relevant facilities such as airports and container terminals. Although the third runway for the Hong Kong International Airport is in discussion, our suggestion for the local logistics industry is to construct multi-company warehouses since these facilities can help companies, especially SMEs, to reduce their operational cost and, on the other hand, they occupy a smaller amount of land. Furthermore, building underground warehouses could be one method to alleviate the tension of shortage of land because freight warehouses are usually located indoors, in windowless facilities without direct sunlight. As long as there is sufficient space for the movement of forklifts and trucks and storage of goods within the building and there is water and electricity supply, underground warehouses could be a solution to the problem of shortage of land in Hong Kong.

除了貨倉以外，發展物流業同時亦需要大量的土地來建設相關的設施，例如機場及港口。雖然香港已就建設機場第三條跑道展開討論，但仍要面對設施短缺的問題。我們認為，各物流公司可考慮共建及共用貨倉等資源。這一方面可以幫助減低營運成本，特別是對於中小企而言；另一方面則可減少占用的土地。除此以外，興建地底貨倉亦有助於緩和土地不足的問題。貨倉毋需自然光和優美的環境，只要能解決室內貨物運輸和水電問題便可，因此可透過興建地底貨倉，解決物流業用地匱乏的問題。
Establishment of Risk Management Department

According to our survey, the function of risk management in the logistics industry is usually shared by different departments, usually legal, finance and operations. It is suggested that due to the increasing complexity of the global logistics industry, a specific risk management department should be set up to handle the challenges in the future and reduce losses due to a sudden crisis by setting up a series of responses. Actually, risk management is not only relevant to the banking industry but all kinds of business. Therefore, logistics companies should pay more attention to risk management. Regarding the rapid changes in global trading conditions and style, the logistics industry is now gaining in importance in goods interchange over any part of the World. As a result, to maintain and grow their business, logistics companies should focus on market needs and concentrate on developing their core business to face future challenges.

設定風險管理部門

根據我們的訪問，物流公司的風險管理工作大多都由多個不同部門分擔，如法律、金融和運營部門等。由於全球物流業的複雜性不斷增加，各公司應成立風險管理專業部門來應對未來的挑戰，並負責制訂各種政策來減低由突發事件所帶來的損失。而事實上，風險管理不是銀行獨有的部門或領域，各公司都有可以、亦有必要成立風險管理部門。有見及此，物流公司需要更加重視業務的風險管理。鑑於全球交易方式及條件在不斷轉變，物流業正對全球的貨物交換起著重要的作用。要持續發展物流業，物流企業必須因應市場需求發展業務，迎接日後的各大挑戰。
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Ms. Maria Luk
Assistant General Manager, Aviation Logistics, Hong Kong International Airport

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Assistant General Manager, Sales & Marketing, Oriental Logistics Company Ltd.

Group Members

Wong Yuen Man 黃遠文
Kwong Wing Man 鄭穎汶
Ng Wing Leong 吳永亮
Chan Ling Fung 陳凌鋒
Lo Ka Chun 盧嘉駿

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風險管理及商業智能學系三年級生
BASEL III

Black Monday (1987), the Asian Financial Crisis (1997), the Dot-com Crash (2001), the Euro Crisis (2010). There is no lack of examples of unexpected economic downturn in history. Stock price plunges and it usually take years for an economy to recover from a recession. Meanwhile, there is a very great chance of credit default and postponed loan repayment. Such an environment will definitely be more challenging for banks to operate and make a profit.

Banks are vulnerable to extensive credit default and money withdrawal. Problem arises when they do not have a sufficient amount of cash flow or capital reserve to deal with daily operations. The situation worsens during a global market downturn or financial crisis. Banks will encounter liquidity problems and, it goes without saying, experience extra pressure. Therefore, it is imperative that they put aside a certain amount of capital reserve to buffer sudden and unexpected cash outflow. Yet what is its benchmark? Who is responsible for setting it? How is this impacting the financial market and banking industry? There are a lot of questions for us to consider.

巴塞爾協定


若出現大規模的信貸違約及擠提，銀行便可能沒有足夠的流動資金或資本儲備應付日常運作需求，從而在業務上出現困難。在全球經濟正值金融危機侵襲階段，情況將會因流動資金更加匱乏而變得更差，這無疑會對銀行構成額外壓力，為此，銀行應該保持一定程度的資本儲備，以應付突發性的大量資金外流。那麼，儲備的標準是什麼？由誰負責釐定？而這些標準又會怎樣影響金融市場及銀行業的發展？很多問題都值得我們認真思考。
History and Evolution of Basel

In 1974, The Basel Committee on Banking Supervision (BCBS) was established by the central bank governors of the Group of Ten, or G10, industrial countries, with the objectives to provide intuitions and enhance understanding of key supervisory issues, as well as improve banking supervision worldwide. BCBS sets international regulatory guidelines for banking supervision, for instance, capital requirements and leverage ratio. This has become a well-recognized standard for the banking industry to follow.

In 1988, Basel I was released which marked the first Basel debut. It primarily focused on credit risk and risk-weighting of assets. However, in order to better supervise capital levels in the ever-changing financial world, the benchmark has changed from time to time. Higher capital requirements were proposed and market liquidity risk was the reason for more careful monitoring. As a result, the Basel Accord was revised and eventually Basel II & III were released.

巴塞爾協定的歷史演化

巴塞爾銀行監理委員會(下稱巴塞爾銀行監管)於1974年正式成立。它由十個國家的中央銀行監管機構組合而成，目的是提高各國金融機構對監管事宜的了解及認識，並提升監管的素質。巴塞爾銀行監管負責制定國際監管規範，例如資本要求及槓桿比率。從而為各國銀行提供一個受廣泛認可的標準供業界遵循。

《巴塞爾協定I》於1988年頒佈實施，內容主要圍繞信貸風險及資產的風險配額，並為日後改良的版本奠下基礎。為了緊貼瞬息萬變的金融世界，監管規範需要隨著時間作出調整，以更準確地規管資本水平。由於需要提高資本要求及加強規管市場資金流動性下行風險，巴塞爾協定得到了持續的改良和優化。《巴塞爾協定II》與《巴塞爾協定III》因而相繼頒佈實施。
Impact on local banks

An analysis of the costs and benefits of the Basel Accord for Hong Kong’s economy summarized in the table below was performed with reference to the research done by HKMA’s research department on 9 Nov 2010. It is known that an increase in reserve capital and liquidity ratio, and a decrease in leverage ratio will reduce the GDP of Hong Kong. One of the reasons is that banks will charge a higher lending rate to compensate for the cost of complying with the new regulations. In a positive sense, this can reduce the risk of a financial crisis and the respective GDP loss.

According to the report, the local banking industry could benefit from the new Basel regulations with a higher rate of RWA (Risk Weighted Asset). From Table 1, by considering the temporary effect of a financial crisis, the benefit to Hong Kong’s economy would be maximized at 10% RWA. It was estimated that the new regulation would generate a net benefit of 0.17% for Hong Kong’s GDP. On the other hand, by focusing on the permanent effect, the benefit would be maximized at 11% RWA. It was estimated that the new regulation would generate a net benefit of 2.76% for Hong Kong’s GDP, which is a considerable amount.

對本地銀行的影響

以下是巴塞爾協定對香港經濟帶來的代價與得益的分析，是根據香港金融管理局研究團隊於2010年11月9日完成的課題而作出的。我們知道，資本儲備和資金流動性上升及槓桿比率下降都會降低本地生產總值(GDP)，其中一個原因，是銀行會收取較高的借貸利息以彌補在新法規下的經營成本。故此，從正面的角度看，嚴謹的法規可以減低金融危機發生的風險，並相應減低金錢和GDP損失。

研究報告顯示，本地銀行業能受惠於《巴塞爾協定III》中有關提高資產風險配額要求的規定。由表一可見，在分析金融危機對香港的短暫影響時，在最佳情況下，投資於《協定》會為香港貢獻0.17%GDP。另一方面，在分析其永久影響時，在最佳情況下，投資於《協定》會為香港貢獻2.76%GDP。這是一個非常可觀的數字。
The report also suggests the influence of the new regulations on Hong Kong would be less significant than that estimated by BCBS. From Chart 1 and Chart 2 below, the net benefit of the new regulations after a financial crisis in Hong Kong would be around 0.07% less on average assuming a temporary drop in GDP, while it would be 2.7% less on average, assuming a permanent loss in GDP due to the crisis.
The reasons given by the research team are twofold. On the one hand, the probability of a financial crisis will not be affected much by capital ratio, but crucially by the level of liquidity in the banking system. An additional percentage increase in RWA will only reduce the probability “marginally”. On the other hand, the drop in GDP resulting from the financial crisis would cause a significantly smaller loss to Hong Kong according to statistics. For example, during the 1999 financial crisis, the loss predicted by the BCBS was around 158% of GDP. Yet the maximum loss to Hong Kong would be around 133% of GDP, given that the banking distress was happened repeatedly.

A low credit spread and high amount of capital retainment are the two major difficulties for banks in Hong Kong in following Basel III. As it requires banks to keep a 4.5% common equity, 6% Tier 1 capital and more importantly a higher liquidity ratio, its ability to leverage capital will be capped and profitability lowered. Thus in the foreseeable future, it will be harder for banks to do business and earn revenue.

Lessons learned from overseas

To tackle the challenges of CCAR (Comprehensive Capital Analysis and Review) and Basel III, many financial institutions are choosing to restructure their business to meet compliance requirements. Some banks may even shed certain business lines in response to the new capital requirements.

研究團隊提出兩個主要原因：第一，金融危機發生的機率並不會只因資本比率而產生太大變動。反之，整體銀行業的資金流動性會很大程度影響到其機率，而資產風險配額的百分比上升則只會降低金融危機發生的「邊際機率」。第二，根據統計數據，金融危機給香港帶來的經濟損失遠比巴塞爾監管預計的少。舉例說，於1999年金融風暴期間，巴塞爾監管預計各經濟體的虧蝕為該地方生產總值的158%，可是在銀行業持續低迷的前提下，香港的虧蝕仍只為生產總值的133%。

低信用利差與鬱資本儲備是香港銀行遵守《巴塞爾協定III》的兩大困難之處。由於它需要銀行持有4.5%普通股本、6%一級資本和更高資金流動性比率，銀行的資本槓桿能力和盈利能力將會被降低。因此，在可見的未來，銀行業的營運只會越來越困難，盈利能力亦會備受考覈。

從國外經驗得到的啟示

為符合《綜合資本分析與評估》及《巴塞爾協定III》的要求，許多金融機構均展開架構重建，有些銀行更趁機刪減部分部門。
Recently, for example, Standard Chartered Bank (SCB) shut down its equity research and equity capital markets business around the world, and focused on retail and corporate lending. The bank is implementing “RWA Optimization Strategies” to optimize RWA and use of capital to minimize regulatory impact. On the one hand, SCB has purged less-profitable departments to conform with the proposed capital requirements. On the other hand, it has more efficiently allocated its resources to further develop its core competencies. Hence, Basel Accords urge banks to simplify their business models and operate according to their competitive edge.

In the future, regulations will only tighten. We have to see how banks will evolve in response so it may be a pull or a push to banking industry reformation. No one is sure about how the banking environment will change, but we know well that it will indeed be an economically safer world – which is the primary aim of the Basel Accords.

Example: Recently,渣打銀行裁減了全球證券研究和證券資本市場業務，將更多的精力投放於散戶及企業借貸。其應用了「資產風險配額優化策略」來達到最佳風險配額和資本應用，以將監管的影響減到最低。一方面，該兩個業務是盈利能力較低的範疇，資源需再分配可以更有效地達到資本要求；另一方面，資源可以分配到重點項目或盈利能力較強的部門，以鞏固及加強自身的競爭優勢。

監管法規在日後只會變得越來越嚴格，從而令銀行需要尋找相對應的措施進行變革，但這種變革是好是壞仍是未知之數，沒有人能夠預言銀行業在未來會變成甚麼樣。但我們知道，這一切都是為了讓世人有一個更安全、更有保障的經濟環境。

This is the primary aim of the Basel Accords.

Text 擰文
LEE Tung Kiu 李東橋
LO Ka Chun 盧嘉駿
TAM Kiu Fai 譚耀輝
LEE Kwok Ho 李國浩

Year 3 Students of Risk Management and Business Intelligence
風險管理及商業智能學系三年級生

Risk Management and Business Intelligence Program
The Hong Kong University of Science and Technology
Phone: 2358 6955
Fax: 3104 0026
Email: rmbi@ust.hk
Website: http://www.rmbi.ust.hk

Advisors 顧問
Prof. Lei CHEN 陳雷教授
Prof. Xianhua PENG 彭獻華教授
Dr. Adela S. M. LAU 劉秀梅博士

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