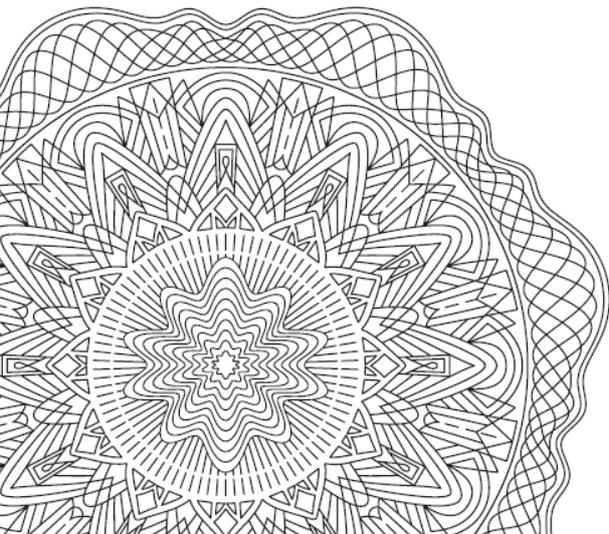




BANK OF THAILAND

Thailand Floods 2011

Impact and Recovery from Business Survey



Economic Intelligence Team
Macroeconomic and
Monetary Policy Department
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This report can be downloaded from

<http://www.bot.or.th/English/EconomicConditions/Thai/BLP/Pages/index.aspx>

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Executive Summary

In 2011, Thailand encountered with the worst floods crisis in 70 years. The economy was broadly affected, experiencing temporary halt in some production sectors. This reinforced the negative impact on exports from the global economic slowdown, further undermining private sector confidence. As a result, GDP growth in 2011 Q4 was expected to significantly contract, causing GDP growth forecast in 2011 to be revised down from 2.6 percent to 1.0 percent. (Estimation as of 25 Jan 2012) Nonetheless, such contraction was temporary. The economy was expected to recover in 2012, growing at a favourable rate of growth.

Production and exports: Overall business was expected to gradually recover within 1-6 months from now, leading to a recovery of exports. Businesses which were affected indirectly through supply chain disruptions resumed their productions gradually in response to continued favourable demand. They acquired raw materials from alternative sources domestically and externally. As for insurance claim process, the minimum claims would be paid to affected businesses in order to continue their business activities and then followed the negotiation process for the rest of the claims. While, financial institutions prepared credit facilities to support businesses during their restoration and reconstruction phase. All these supportive factors facilitated the economic recovery.

Businesses anticipated that automotive industry would be the early revived industry. The factories that were not flooded were expected to produce close to their normal level by late December 2011. Semiconductor industry would resume their production in early January 2012. Meanwhile, production of hard disk drive industry may partially recover by March 2012.

Investment: Businesses continued their on-going investment although being halted by the floods. Moreover, private investment tended to expand following restoration and investment for future flood protection. While existing investment projects to substitute for labor and expand production capacity in long term were still undertaken. Some businesses planed to diversify production risk by expanding their existing factories in the northern and northeastern of Thailand.

As for the issue of relocation of production base, in short term, foreign investors remained confident to use Thailand as a production and export base. Since quite sizable investment were undertaken following long term investment plan. This created a complex and robust production network in the country. However, going forward, whether foreign investors will expand their existing investment or start new investment will solely depend on the credibility of the government's water management strategy. Nevertheless, diversification of Thai and foreign investment tends to increase significantly in a foreseeable future.

For insurance risk, concern over risk of insufficient reinsurer relieved as foreign insurance companies, in particular from Germany and Japan, continued to accept reinsurance from Thailand. This improved investment and businesses confidence in the country. However, higher insurance premium was inevitable. Hence, the government played crucial role to reduce such insurance cost for businesses by establishing a clear and concrete water management strategy.

Consumption: Private consumption was temporary affected in 2011 Q4 owing to supply-side and logistic problems. Businesses anticipated that consumption will recover in 2012 Q1 following accelerated spending in order to replace damaged goods. The rebound in consumption was facilitated by the recovery of employment situation as well as financial supports from the government and financial institutions.

In summary, it has become apparent that business recovery gradually began and would take approximately 6 months to return to normal. This reflected the flexibility and resiliency of Thai businesses. The on-going process of recovery helps shore up private sector confidence and contributes to the economic expansion in 2012.

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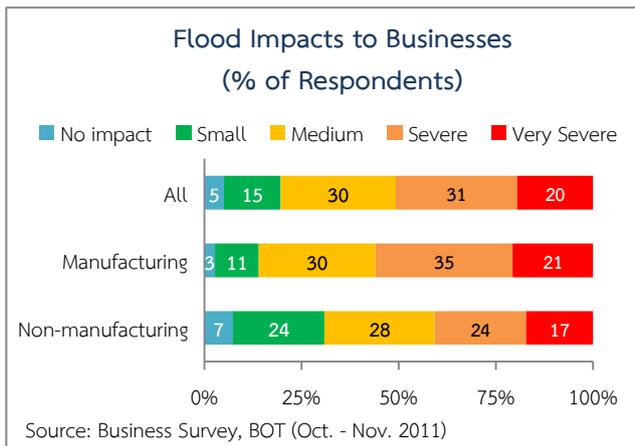
1. Introduction

In 2011 Q4, Thailand encountered with the worst floods crisis in 70 years due to heavy and widespread rainfall in major areas of the country during rainy season influenced by monsoon storms. The worst floods were in October and November, causing tremendous losses to people and affecting the economy.

To comprehensively assess the impact of the floods and the business recovery path, the Bank of Thailand (BOT) has acquired information directly from private sector through a business survey and the Economic/Business Information Exchange Program. This information is valuable and contributes to the BOT's role in formulating appropriate monetary policy response consistent with real economic conditions. The information in this report was acquired from business sector¹ during October and November 2011.

2. Flood impacts

The floods had begun since 25 July, 2011 in northern of Thailand and expanded to central and northeastern regions. The flooding situation was peak in October as 7 industrial estates in Ayutthaya and Pathumthani provinces were flooded for the first time in history. The BOT anticipated that Thailand's economic growth in 2011 Q4 would contracted considerably, reducing GDP growth forecast in 2011 from 2.6 percent to 1.0 percent. (Estimation as of 25 January 2012)

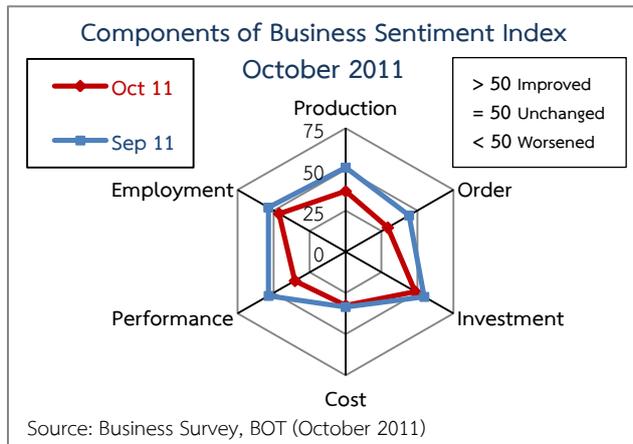


The BOT conducted a special business survey on flood impacts during October - November 2011. According to the survey, 95 percent of respondents were adversely affected by the floods. Almost half of them experienced severe to very severe impact. Meanwhile, manufacturing sector encountered worse

¹ This report was compiled from information obtained from following sources:-

- Special business survey "Impact from the floods and export outlook" with 273 responded firms
- Special loan officer survey "The outlook and quality of credits as a result of flood situation" with 20 responded commercial banks
- The Business confidence survey in October, 2011 with 510 responded firms
- The dialogues with 61 business executives done by the BOT's headquarter

impact than non-manufacturing sector. Automotive and electronics industries were the worst industries hit by the floods.



In addition, Business Sentiment Index (BSI) in October 2011 fell from the previous month to 36.7, closed to the lowest point of 34.4 in November 2008 when the Suvarnabhumi airport was seized. The reduction in BSI stemmed from the decline in all sub-components, particularly significant decline in production, employment, orders, and performance.

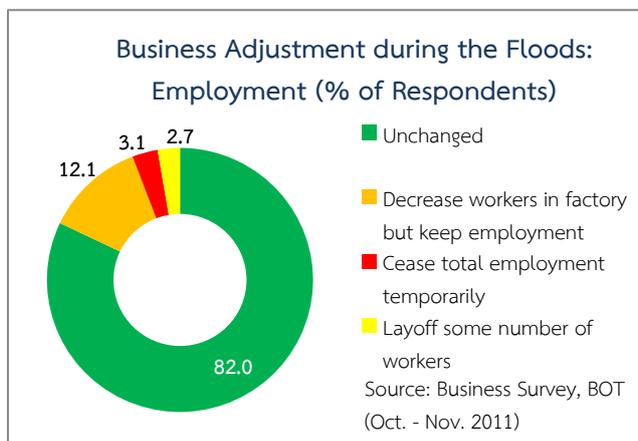
The floods also indirectly affected non-flooded factories through supply chain disruptions. Many factories could not produce due to raw material shortage affected by the temporary halt in production of flooded factories. While some factories were affected due to the postponement or termination of their product delivery from flooded factories.

3. Business Adjustment

Prior to the floods, businesses employed various measures to protect their factories and machines. Machines, goods, and raw materials were moved to safe and high areas. For some businesses that could not move machines in time, rescue team had been sent to salvage flooded machines in order to curtail the recovery period. Some businesses moved their machines and workers temporarily to produce at other areas. While, businesses that encountered supply chain disruptions ordered raw materials from other domestic suppliers or imported from the world market. These adjustments led to higher production cost.

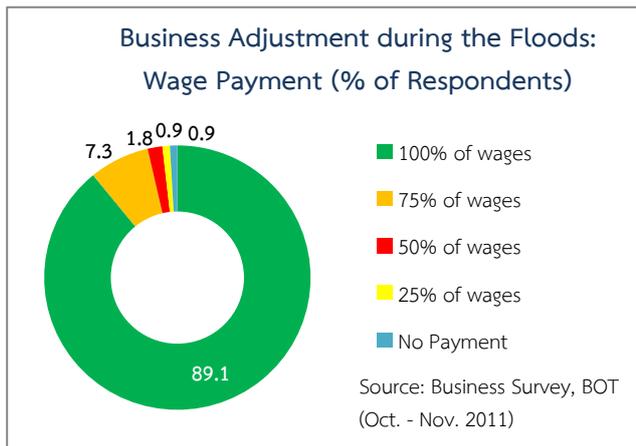
As for logistic, businesses made adjustment by commuting through indirect routes or using bigger vehicles, causing longer delivery period as well as higher cost. Some had to use air cargo in order to deliver their products on time. Meanwhile, with good cooperation from

their customers, some businesses could postpone the delivery of the products.



Regarding employment situation, businesses attempted to keep their employment as long as possible in order to resume production quickly after the floods subsided even though the production was temporarily suspend. According to the survey, 82 percent of respondents maintained existing

employment while 12.1 percent of respondents decreased number of workers working in the factories and only 2.7 percent of respondents laid off some employees due to the floods. This was because prior to the floods most businesses experienced labour shortage. Nevertheless, businesses anticipated that **some SMEs may have to close down, resulting in increasing unemployment. However, such increase in unemployment could be absorbed by increasing demand for labour from large businesses.** Moreover, during recovery phase businesses would accelerate the production, causing demand for labour to increase especially for skilled workers in construction sector and technicians.



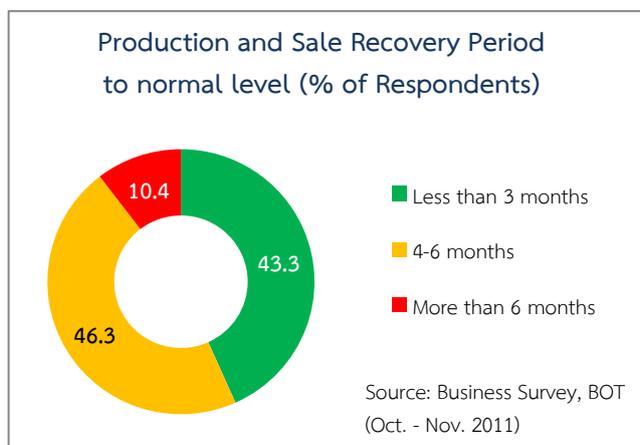
For wage payment, most businesses continued to pay employees as usual. Some businesses paid 75 percent of wages in line with the labor laws when experiencing temporary halt in production. Some businesses paid higher wages to workers who worked during the flooding period and reduce wages for workers who took leave. Regarding the business survey, 89.1 percent of

respondents still paid their workers in full amount, while 7.3 percent of respondents paid workers 75 percent of wages and only 4.9 percent of respondents did not pay their workers.

4. Recovery phase

4.1. Time frame for recovery

Some businesses started their recovery process while being flooded by salvaging important machinery parts from the water to repair, sending foreign surveyors and experts for evaluating losses and planning restoration process, and purchasing new machineries for replacement in order to resume production as quickly as possible.



Businesses anticipated that production and sales would gradually recover after the flood subsided. According to the survey, 46.3 percent of respondents expected that recovery of production and sales would take 4-6 months, while 10.4 percent of respondents anticipated recovery period with more than 6 months. Businesses affected indirectly through supply chain

disruptions could resume their productions partially during the end of 2011. However,

production of industries directly affected by the floods was expected to gradually recover and return to pre-flood level within 2012 Q3.

Businesses projected that electrical appliance industry would recover to pre-flood level in early 2012 Q2 because many firms were not directly affected and could acquire intermediate goods from other sources. In contrast, automotive industry would recover to pre-flood level in late 2012 Q2 because a major firm was directly hit. However, non-flooded automotive firms could recover their supply chain and resume production at full capacity in late 2012 Q1. For semiconductor and hard disk drive industries, recovery took more time because most firms located in flooded area. The process of import and installation of new machines would take a period of time due to complexity of technology. Furthermore, the installation process needs precision and cleanliness procedure. Hence, semiconductor and hard disk drive industries were expected to recover to pre-flood level within 2012 Q3.

4.2. Source of fund for recovery

4.2.1. Insurance claims

The general insurance association expected that insurance claims would be gradually paid in the beginning of January 2012. The payment process should not be late as insurance companies will pay minimum claims to their customers in order to facilitate business operation. The rest of the claims will be negotiated later. Depending on an agreement between businesses and insurance companies, damaged machineries can be moved or repaired while loss assessment has not finished yet. In the case of reinsurance², the general insurance association also convinced that the payment of claims would not be late as foreign reinsurance companies will rely on assessment and data provided by Thai insurance companies. Capital inflows from foreign reinsurer had already been observed in November 2011. Therefore, the speed of claim payment depends on how fast insurance surveyors in Thailand work. Currently, the government had temporarily allowed foreign surveyors to work in Thailand in order to relieve the surveyor shortage.

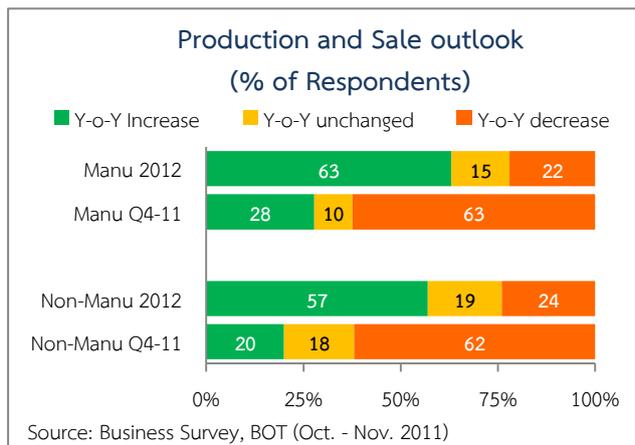
4.2.2. Credits from government and financial institution

Credit from government and financial institution are the important sources of funds for SMEs, which have less liquidity than large corporate. The government had launched many financial projects to support SMEs via Specialized Financial Institutions (SFIs), for example, a 100,000 million Baht Portfolio Guarantee Scheme by Thai Credit Guarantee Corporation (TCG) on SMEs credits channeled through 15 commercial banks.

² 90 percent of insurance contracts in manufacturing sector was reinsured by foreign reinsurance companies.

In the mean time, the BOT also launched many measures to support flooded borrowers³. For instance, commercial banks and non-banks were allowed to maintain flooded customer's loan classification as pre-flood class and consider credits to such borrowers as new loan approval with special interest rate. While repayment period would be extended and principal and/or interest payment could be reduced. Besides, monthly debt repayment of flooded credit card holders could be less than 10 percent of debt outstanding, effective until 30 June, 2012.

4.3. Manufacturing and export recovery



Most businesses expected production and sales to expand in 2012 as compared to 2011 after resuming normal production levels as a result of favorable demand. From the survey, 63 percent of manufacturing businesses and 57 percent of non-manufacturing businesses anticipated an increase in production and sales in 2012. Some businesses expected higher sales

as a result of greater proportion of market share as their competitors who were flooded still could not resume their production close to normal levels. In addition, businesses whose order books remained favorable intended to compensate losses by speeding up their production, particularly in automotive industries.

4.4. Consumption Recovery

Consumption was temporarily affected in 2011 Q4 due to supply and transportation disruptions. Major manufacturers and distribution centers were flooded, while the floods caused inconvenience of commuting to spend and obstacle to transport system. However, consumption in non-flooded areas was slightly affected. Going forward, businesses perceived that consumption in 2012 Q1 would expand following spending in repair and replacement of goods damaged by the floods. Factors underlying the consumption growth momentum included the recovery of employment situation following the gradual business recovery and financial supports from government and financial institutions.

Businesses in retail trade and personal loan sectors anticipated that consumers would resume normal consumption level. As employment was expected to quickly return

³ Additional information [Thai version only] <http://www.bot.or.th/Thai/PressAndSpeeches/Press/News2554/n5354t.pdf>

to normal conditions, thus, income and loan repayment capacity would not be affected in long term. Nevertheless, businesses believed that certain group of consumers who had already been risky would have less loan repayment capacity. As a result, businesses have to be more cautious.

4.5. Investment recovery

The flooding situation resulted in the postponement of investment in 2011 Q4. However, investment was expected to expand going forward following investment for restoration and reconstruction, on-going investment under the existing plans, investment for flood prevention, as well as investment for expanding business opportunity while competitors encountered problems.

Foreign investors expressed confidence to continue their businesses and maintained production base in Thailand. According to the dialogues with foreign businesses and foreign chambers of commerce such as the American Chamber of Commerce, the Korean-Thai Chamber of Commerce, and the Japan External Trade Organization (JETRO), foreign investors viewed the recent flooding situation as a temporary setback while their decision on production base was a long-term issue. Thailand still has a comparative advantage for investment due to well-organized public utility, qualified labour, and good location in the Greater Mekong subregion. Numerous industries had invested in Thailand and created a complex and strong supply chain networks such as automotive and hard disk drive industries. Therefore, relocation of the production base was not easy. In addition, confidence to continue business operation improved as foreign insurance companies, particularly from Germany and Japan, continued to accept reinsurance in Thailand. However, businesses were inevitable to bear higher insurance premium.

Nonetheless, the government's unclear water management strategy, labour shortage, and increased labour cost were factors that negatively affect investors' decisions. Going forward, foreign investors were expected to diversify their investment by increasing production capacity or shifting investment for new products in other ASEAN countries such as Indonesia, Vietnam, Cambodia, the Philippines, and India.

5. Conclusion

This first-hand information obtained directly from business sector enables the BOT to assess economic conditions comprehensively. Both the ability of businesses to adjust themselves during the floods and the recovery path after the floods subsided reflected the resiliency of Thai businesses as production base and strong supply network. Currently, it had become apparent that business recovery phase has begun and would resume normal situation by 2012 Q3, depending on each industry's conditions and flexibility. At the same time, both Thai and foreign investors strongly required a convincing water management

strategy from the government so that they can make a decision on future business operation and investment expansion.

Ability to recovery of businesses as well as clear and practical water management plan of the government will be undoubtedly essential factors contributing to economic growth in 2012, improving investor's confidence in the long run. Nevertheless, businesses have to be prudent regarding other risk factors negatively affected Thai economy going forward. Particularly, the global economic slowdown due to European public debt crisis together with other risks would undermine the restoration and reconstruction phase.