Construction Financing in Taiwan: Current State and Policy Regime

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Abstract

Construction industry is an important industry in Taiwanese’s economy. It supplies more than 95 percent of housing supply in the market. However, Taiwan construction industry was developed under a conservative financial system and was difficult to acquire financing in the early years. In this paper, we firstly describe the general situation of Taiwan real estate market and the development of construction industry. We further describe the financing of construction industry and how construction companies use informal measures such as the pre-sale system to acquire enough funds to complete projects. We also analyze characteristics and problems of Taiwan construction industry and how Taiwanese government regulates and controls construction industry. Finally, we propose several suggestions regarding the operation of construction financing and how to improve the system.

Keywords: Construction Industry, Construction Financing, Land Financing, Taiwan
I. Introduction

The financial environment and policy both have enormous influence on the real estate market. From the perspective of market demand, interest rates affect the purchasing power of home buyers. From the viewpoint of market supply, interest rates affect the investment and operation of construction businesses. Governments typically use interest rates or credit control to regulate the boom or bust of the real estate market. However, many countries around the world are currently in environments of low interest rates under policies of quantitative easing, whereby borrowers have easy access to funds. This could lead to over investment and cause prices to rise sharply in the real estate market. One of the major causes of the U.S. subprime mortgage was the over investment in real estate, which caused housing prices to surge upward. When economic development abated and the flow of funds began to reverse, housing prices declined and borrowers were unable to repay their mortgages, resulting in a crisis in the financial industry.

Most literature has argued that the inadequately applied monetary policy of the U.S. is responsible for this crisis. To stabilize the financial environment, governments must consider changes in the real estate market when formulating monetary policy. Taiwan has long been in an environment of an easing monetary policy. People tend to ignore market risk, credit risk, or macroeconomic risk. However, the Taiwanese real estate market has been expanding for 8 or 9 consecutive years, and the chance that the market may begin to shrink is increasing. The government needs to consider the possible consequences of a shift in economic cycle.

The usual channel for construction businesses to obtain financing in Taiwan is to directly apply to banks for construction finance. However, because the financing industry is relatively conservative in the early years, Taiwanese construction businesses usually end up having to raise funds on their own. A special financing method called the pre-sale system, which still prevails in the Taipei area, successfully helped the development of housing market in Taiwan. However, banks were still most critical to the access of construction funds. Because of great fluctuations observed in the real estate market, the construction businesses are in an environment of instability. During this period of economic downturn, many construction businesses may close down and have a negative influence on bank operations. Therefore, the government must examine development in the construction industry with greater scrutiny.

Since 2004, the real estate market in Taiwan has regained its energy and housing prices have again increased dramatically, especially in the Taipei area. This upward trend has continued through the present day. This upward trend was the longest in
many years and has caused heavy burdens on ordinary home buyers. Furthermore, this trend may continue into the near future. According to the national population census of 2010, the percentage of vacant houses (vacancy rate) had a high of 20%, a total of about 1,560,000 vacant homes. This indicated that a huge amount of capital is currently invested in vacant real estate. This idle capital might come from mortgage investment, the savings of rich households, or an inflow of international capital. When interest rates increase or other higher-return investment instruments exist, this capital would eventually flow outward. As a result, many vacant homes were released, causing housing prices to decline. After continuously increasing for 8 years, housing prices now had an increasing probability of falling. For the construction industry, operations risk had reached its threshold.

The construction industry is considered the locomotive engine of Taiwanese industry. It has had a significant contribution to housing development and construction in Taiwan. However, the Taiwanese construction industry was brought about in a very unique environment as compared to other countries. The first unique characteristic is that Taiwanese construction industry was developed under a conservative financial system. Obtaining funding from financial institutions was difficult for business. Constructors must use informal measures, such as the pre-sale system, to acquire the capital needed for development. Under such circumstances, construction businesses in Taiwan were able to provide 95% of the housing supply in the market. Almost all of the housing stocks were produced by construction companies. Public housing provided by the government had no major influence on market supply. In such an environment, the question of how the Taiwanese construction industry matured became of relative interest.

In addition, for a long time the Taiwanese government had no specific housing policy. Compared to other governments, the Taiwanese government intervened relatively little in the housing market. The government put the greatest emphasis on economic development, resulting in that the public housing department was ignored and the housing development was led by the private sector. On several occasions, the government failed to take any measure to stabilize housing prices, until the prices were heightened to a level that caused public indignation. By then, the construction industry was already over-invested. When observing the changes in each housing business cycle, we found it obvious that housing prices increased in the short term and then contracted slightly over the long term, indicating a short period of expansion and a long period of contraction. Whether the construction industry would face many years of difficult operations because of an oversupply becomes an issue to be addressed. With this in mind, this study analyzed the development of the Taiwanese
construction industry and the influence of the financial environment and government policy on this industry.

This article includes the first half of this KDI Taiwan project. To analyze the current conditions and policy regime of construction financing in Taiwan, this paper first describes the general situation of Taiwan real estate and the development of construction industry. The focus of this study is on analysis and discussion of the influence of financing and government policy on the development of the construction industry.

II. Real Estate Cycles of the Taiwanese Real Estate Market

Over the past forty years, Taiwan real estate market has experienced high rate of growth. Figure 1 shows Taipei’s household disposal income and housing prices in real term from 1973 to 2010. There were four cycle periods: 1972-74, 1978-80, 1987-89 and 2004-2010. We can see that the first and second cycles had an approximately two-year expansion period and a seven-year contraction period. The third cycle had a three-year expansion period and a thirteen-year contraction period, and the recent cycle so far has had a six-year expansion period. One phenomenon found in the Taiwan housing market is that expansion periods are short, whereas contraction periods are long. (Chang and Chen, 2011)

1. The First Cycle (1972 to 1974)

The rise in housing prices in the early 1970s was commonly seen to have been caused by the oil embargo. The oil embargo caused inflation rates to jump around 80 percent from 1973 to 1974, and also led to a sharp rise in the cost of construction and the cost of capital on the supply side, and triggered the expectation of housing price increases. Money supply is believed to be an important factor behind the housing price rise. Before the oil embargo, Taiwan had a few years of high economic growth and the trade surplus caused foreign money expansion and led to increases in domestic money supply. In order to stabilize the inflation caused by the oil embargo, the government proposed some programs such as "Economic Stabilization Program" in order to control the negative effect of inflation on economic growth. Other programs include credit restrictions and termination of permits on vacant development land. These policies successfully stabilized the economy as well as housing prices.

The factors that stimulated the increase in housing prices in this period were similar to those that caused the first boom. Again to dampen the real estate boom, the government proposed programs similar to those in the first boom period such as termination of construction permits, and increase in land value for tax base, etc. These measures again successfully brought the boom to a halt. Unfortunately, world-wide economic recession began after this boom and affected the Taiwanese economy. This economic slump affected the investment demand and also severely damaged the construction industry. About 13 percent of property developers declared themselves bankrupt by 1981.


The main cause of housing price increases during this boom was the rapid expansion of the money supply. The primary reason behind the increase of the money supply was the consistently high economic growth rate around 12 to 13 percent. There are some other causes further to induce money supply increases. For example, credit restrictions in 1987 cause the expansion of lending volume to the housing sector by
banks. Change in the foreign exchange rate regime, liberalization of foreign exchange and Taiwan’s currency appreciation all induced speculative activity in the foreign exchange market, causing foreign money to flow into and out of domestic financial markets. The government again proposed programs such as raising interest rates and loan controls to reduce the money supply in 1989. The Central Bank adopted selected credit control measures, including stopping uncollateralized loans for land and restricting the amount of construction loans and LTV below 50 percent. These helped to push the economy into recession and weakened the housing market considerably.


The difference of this cycle from the previous cycles is that it occurred in the major metropolitan areas but was not widely spread out in Taiwan. The Taipei metropolitan area had a much higher housing price growth rate than the other cities. This phenomenon is fundamentally related to resources distribution unbalances in Taiwanese regional development because Taipei is the political and economic center and has more job opportunities than other cities. This cycle is basically fueled by low interest rates, which give business conglomerates and speculators leverage to play the market. Other factors include the surging stock market, reduced estate and gift taxes, an easing of cross-Taiwan Strait regulations and a lack of confidence in derivatives or other sophisticated financial instruments. Although the Central Bank used credit tightening measures in specific areas and the Finance Ministry also use a luxury tax against real-estate speculation. However, so far housing prices remained resilient.

III. The Development and Operation of Taiwan Construction Industry

According to the definition provided by the Ministry of the Interior, the construction industry includes construction companies, building development companies, and building investment businesses which provide capital for the development of land that is designed, planned, developed, and sold for profit upon completion. The construction industry is considered the leading industry in Taiwan because it involves various related industries and receives extensive attention from the government, businesses, and general investors. Under this definition, the construction industry in Taiwan, as discussed in this study, refers to industries known as construction companies or construction businesses. Below is a brief description of the development and operation of the construction industry in Taiwan.

1. The Historical Development of the Construction Industry

According to Chang (1996) and Huang (2003), we can divide the development of the
construction industry in Taiwan into several stages:

(1) The period of military dependent villages (since the recovery of Taiwan until 1961)

After the recovery of Taiwan from Japan, housing demand increased dramatically due to economic development, the immigration of a large population which came to Taiwan with the Nationalist government, and reconstruction works after the war. To help these immigrant soldiers and their dependents settle down, the government constructed numerous military dependent villages and began paying attention to housing construction, and hence attracted participation from the private sector. There were increasing numbers of businesses which joined in the construction activities and contributed to the development of the construction industry. This was called the period of military dependent villages.

(2) The apartment period (1962 to 1971)

As national income increased following economic development, demand for residential quality increased accordingly. To cater to greater demand for comfort, standards for apartment construction and residential facilities were also increasing. Various professional investors appeared who operated as corporations to plan lands and construct all types of housing. This was also called the growth period of the construction industry in Taiwan.

(3) The start of the high-rise housing period (1972 to 1981)

In this period, the prevailing pre-sale system changed the trading pattern of the entire newly constructed housing market. The global economic recession and the oil crisis resulted in global inflation. Expecting the price to rise, people rushed into the housing market with the belief that this market was most able to retain investment value. As a result, the real estate prices surged dramatically upward. To stabilize the domestic situation, the government introduced the Program for the Stabilization of the Present Economy. Influenced by the government suppression and by economic factors, real estate in Taiwan entered into the first wave of a recession cycle. In 1974, the government lifted the ban on construction and opened up high-rise housing in downtown areas. Residential buildings of 7 to 10 stories and higher began to appear, and buildings gradually extended into suburban areas.

(4) The height of the high-rise housing period (1982 to 1991)

After two upward trends in both housing and land prices, low-rise buildings were
no longer economically feasible given the increased cost of land. Under such circumstances, high-rise residential buildings sprang up and became common in the market.


Since the end of 1991, 15 new private banks opened in succession, with their lending operations focused on mortgage and construction financing. Moreover, construction related policies such as plot ratios were implemented beginning in 1992. As a result, construction businesses rushed to apply for licenses and promoted numerous housing projects, which led to later problems of oversupply. The sales rate of pre-sale housing gradually declined, bringing the construction industry into a period of stagnation. To overcome this difficult situation, businesses diversified the design of housing products and constructed not only residential buildings, but also recreational housing, housing for seniors, shopping malls, office buildings, hi-tech housing, luxury housing, cross maisonette housing, composite sandwich housing, and more.

(6) The period of polarized housing products (2004 to present)

After more than a decade of recession in the real estate market, the outbreak of Severe Acute Respiratory Syndrome (SARS) in 2003 bottomed out housing prices. With a background of low interest rates and an inflow of foreign and Chinese capital, the housing market regained its upward momentum in 2004. Because Taiwan was becoming an M-shaped society, construction companies preferred constructing studios and luxurious mansions with large interior spaces for higher profits and sales rates. During this period, a large quantity of expensive and luxurious mansions emerged in Taiwan. Compared with housing prices in other cities, those in Taipei all increased to a level of luxury, and were more than five times the housing prices in the second largest city of Kaohsiung. Most peculiarly, the prices of residential real estate were higher than those of commercial real estate in urban areas.

2. Statistics Related to the Development of the Construction Industry

In the Taiwanese housing market, most of the housing was constructed by the construction industry. Public housing supplied by the government constituted less than 5% of total housing. Figure 2 shows the square measures of construction licenses issued during the past years, which demonstrated changes in the housing supply cycle in Taiwan. The difference between high and low levels of supply was quite large, which indicated the instability of the Taiwanese construction industry.
Figure 2 Total Floor Area of Building Permit

As mentioned previously, the environment for the construction industry in Taiwan was not well developed. However, shortage in the housing supply was not observed. The construction industry had met housing demand. Table 1 shows the result of 7 population censuses. According to these censuses, no shortage in housing supply in Taiwan was observed, except in 1980 (2% shortage). In other years of the censuses, the unit numbers of residences were all higher than the number of residents, indicating that housing supply was sufficient. However, this did not mean that each household could own a home. Ownership rates in these years increased from 66.2% to 83.8%. Particularly, housing vacancies were relatively large. This table shows that the vacancy rate reached 13.1% since the 1980s, and increased to 19.4% by 2010. This not only indicates over-construction by the construction industry, but it also means some of the rich households owned more than one residence, resulting in a high vacancy rate. The high vacancy rate revealed that a lot of real estate resources in Taiwan were left unused and wasted.
### Table 1 Census Statistics related to Housing

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>13,348,096</td>
<td>14,693,013</td>
<td>16,206,183</td>
<td>17,968,797</td>
<td>20,286,174</td>
<td>22,226,879</td>
<td>23,056,788</td>
</tr>
<tr>
<td>Household Number</td>
<td>2,272,161</td>
<td>2,625,682</td>
<td>3,071,101</td>
<td>3,733,522</td>
<td>4,943,029</td>
<td>6,481,584</td>
<td>7,959,088</td>
</tr>
<tr>
<td>Average Person per Household Home Ownership</td>
<td>5.7</td>
<td>5.5</td>
<td>5.3</td>
<td>4.8</td>
<td>4.0</td>
<td>3.4</td>
<td>3.0</td>
</tr>
<tr>
<td>Home Ownership</td>
<td>66.2%</td>
<td>66.1%</td>
<td>70.1%</td>
<td>79.1%</td>
<td>78.5%</td>
<td>82.5%</td>
<td>83.8%</td>
</tr>
<tr>
<td>Housing Unit</td>
<td>2,292,191</td>
<td>2,623,265</td>
<td>3,068,420</td>
<td>3,665,122</td>
<td>5,073,909</td>
<td>6,977,770</td>
<td>8,054,184</td>
</tr>
<tr>
<td>Household Number/Housing Unit</td>
<td>1.01</td>
<td>1.00</td>
<td>1.00</td>
<td>0.98</td>
<td>1.03</td>
<td>1.08</td>
<td>1.01</td>
</tr>
<tr>
<td>Vacant House</td>
<td>21,928</td>
<td>479,839</td>
<td>674,317</td>
<td>1,228,798</td>
<td>1,561,275</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vacancy Rate</td>
<td>1.0%</td>
<td>13.1%</td>
<td>13.3%</td>
<td>17.65</td>
<td>19.4%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. **Methods of Project Construction in Taiwan**

Several methods of project construction exist in Taiwan’s construction industry. The first type is to purchase and develop the land on one’s own, meaning that the constructor purchased land, and completed construction and sold it independently. The second type is joint construction, meaning that constructor provides funding, and the landlord provides the land to construct the residence jointly. After the construction is completed, the residence and the land or profits are distributed according to the ratio agreed upon. The third type is joint investment construction, meaning that more than two constructors exist. These constructors jointly construct the residence and pay the building costs and fees. As with joint construction, the residence and the land are distributed according to the agreed upon ratio after construction is complete. The last type is commissioned construction, in which a constructor is commissioned to construct the residence by a client who owns the land. The house is delivered to the client after the construction is completed.

4. **The General Process of Construction Investment in Taiwan**

The process of construction investment in Taiwan includes market analysis, raising funds, land acquisition, project planning, construction and sales. The market analysis is usually conducted by a sales agent or consultancy company, and investment feasibility is analyzed by the construction company based on its own financial conditions and access to the land. The funds to be invested in the construction come partly from the equity fund of the construction company, and partly from loans made by financial institutions. Land can be acquired through numerous methods, including purchasing it from or reaching a mutual agreement with the
landlord, or by acquiring it through the government or through judicial foreclosure. In a real estate project, the party investing in construction typically is responsible for project initiation, decision-making, and project implementation. The planning is mostly outsourced to other related businesses. For example, the sales plan is drafted by the sales agent, and the construction plan is drawn up by the architect or the engineering consultancy company. The construction process includes design, contracting, construction, and construction management. Design is mainly implemented by the architect, whereas contracting is done by the construction investors themselves. The construction is done by various levels of construction companies, professional engineering companies, and contractors. The later sales process includes marketing, sales, contract signing, and transfer of ownership. The marketing and sale of real estate is mostly delegated to professional sales agencies. The typical development process of the Taiwanese construction is shown in Figure 3.
5. Types of Construction Companies in Taiwan

Construction companies in Taiwan can typically be divided into two types: large and medium-small. Large construction companies are mostly large corporations listed in the stock market or supported by syndicate(s). Such companies have integrated operations, from land acquisition and development planning to supervision of construction and sales. They also have their own technical departments covering civil engineering, plumbing, electrical engineering, decoration, and related operations. Moreover, their affiliated companies can partake in related work and share profits, and these affiliates can circulate their finances, write off accounts, or offset purchases and sales with each other to increase profits. Small and medium sized construction companies account for 90% of the industry. More than 60% of companies close down after developing only one project.
IV. The Financing of the Construction Industry in Taiwan

1. Historical Development

Construction financing was quite conservative prior to 1974 (the initial stage), and followed the procedure for ordinary corporate loans. From 1974 to 1976, the global energy crisis drove up real estate prices and hence commodity prices. The government implemented the Program for the Stabilization of the Present Economy and suspended pledge and secured loans to housing construction projects. This measure limited the sources of financing, so the construction industry was not able to obtain enough financing from lending institutions. As a result, the construction industry tended to raise its development capital by means of pre-sales. Therefore, the pre-sale system prevailed and became a characteristic of the real estate market in Taiwan. Housing prices later stabilized. To stimulate the real estate market and to rectify trading orders in the market, the government issued the “Essential Points for Improving the Investment Environment” in 1977 and restored construction finance.

When international oil prices rose again and the second oil crisis occurred, market prosperity reached another peak between 1979 and 1980. Thus, the government announced a restriction on the construction of vacant lands and traced the sources of capital that were invested in purchasing more than three residences, resulting in the bankruptcy of many construction companies. In 1981, the “Measures to Mitigate Current Difficulties in Industry and Commerce” were issued, giving the Land Bank of Taiwan the authority to make special construction loans. In 1985, the restraints on construction financing in lending institutions were gradually eased. During the housing bull market between 1986 and 1989, financial institutions increased credit to the construction industry under the pressures of a prosperous real estate market and large amounts of savings. Construction finances expanded dramatically, resulting in soaring housing prices. Therefore, the government implemented selective credit control measures in 1990 to limit the maximum quota and terms of construction financing, and also to suspend unsecured loans for the purchase of land and loans for vacant land without an objective for use. After the 1990 real estate boom subsided, the central bank announced its termination of selective credit control and widely eased up construction lending. The volume of construction loans increased greatly in response. Under the pressure of plot ratio control since 1992 and reforms on land taxes, construction companies launched numerous projects. In addition, the establishment of many private banks also helped to increase construction financing. (Wong and Chang, 1993) Nevertheless, the real estate market had plunged into a long term bear market since 1990. Therefore, the
government proposed a succession of nine politically advantageous mortgage policies after 1999. Though these policies subsidized mortgages for home buyers in the purchase of primary residences, subsidizing mortgage interest seems not be so important, because Taiwan had been in an environment of low interest rates for a long time. The purpose of the government was to avoid construction companies from closing down in the long term, which could cause a depression and affect the financial order.

Table 2 shows the statistics of the construction loans and prime rate over the years. We discovered that an upward trend and cyclical behavior in the balance of construction loans.
Table 2 Construction Loans and Prime Rate.

<table>
<thead>
<tr>
<th>Year</th>
<th>Loan for Construction (Million TWD)</th>
<th>Prime Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1988</td>
<td>54876</td>
<td>7.05</td>
</tr>
<tr>
<td>1989</td>
<td>63351</td>
<td>10.43</td>
</tr>
<tr>
<td>1990</td>
<td>66079</td>
<td>10.05</td>
</tr>
<tr>
<td>1991</td>
<td>117655</td>
<td>8.65</td>
</tr>
<tr>
<td>1992</td>
<td>272427</td>
<td>8.30</td>
</tr>
<tr>
<td>1993</td>
<td>630816</td>
<td>8.03</td>
</tr>
<tr>
<td>1994</td>
<td>714803</td>
<td>7.94</td>
</tr>
<tr>
<td>1995</td>
<td>629356</td>
<td>7.67</td>
</tr>
<tr>
<td>1996</td>
<td>517044</td>
<td>7.38</td>
</tr>
<tr>
<td>1997</td>
<td>553191</td>
<td>7.50</td>
</tr>
<tr>
<td>1998</td>
<td>612298</td>
<td>7.70</td>
</tr>
<tr>
<td>1999</td>
<td>591918</td>
<td>7.67</td>
</tr>
<tr>
<td>2000</td>
<td>558510</td>
<td>7.71</td>
</tr>
<tr>
<td>2001</td>
<td>507837</td>
<td>7.38</td>
</tr>
<tr>
<td>2002</td>
<td>418809</td>
<td>7.10</td>
</tr>
<tr>
<td>2003</td>
<td>420396</td>
<td>3.43</td>
</tr>
<tr>
<td>2004</td>
<td>508638</td>
<td>3.52</td>
</tr>
<tr>
<td>2005</td>
<td>664254</td>
<td>3.85</td>
</tr>
<tr>
<td>2006</td>
<td>834254</td>
<td>4.12</td>
</tr>
<tr>
<td>2007</td>
<td>1038174</td>
<td>4.31</td>
</tr>
<tr>
<td>2008</td>
<td>1055252</td>
<td>4.21</td>
</tr>
<tr>
<td>2009</td>
<td>1017609</td>
<td>2.56</td>
</tr>
<tr>
<td>2010</td>
<td>1273635</td>
<td>2.68</td>
</tr>
</tbody>
</table>

Source: Central Bank of Taiwan

2. The Financing Methods of the Construction Industry

Essentially, the financing measures of the construction industry can be divided into two categories: corporate financing and project financing, as shown in Figure 4. Corporate financing includes the securitization of real estate and entrance into the security market or the over-the-counter market, whereas project financing includes construction and land financing. One of the financial measures is “formal financing,” and refers to loans from financial institutions. The other measure is “informal financing,” or funds raised by the construction industry via private investment and income from pre-sales.
With regard to formal financing from financial institutions, the loans made to construction industry constitute part of their credit business. These are mainly circulating loans to the development projects of the construction industry. They can be divided into land and construction financing.

Land financing refers to loans for the purchase of land. Because this is a type of secured loan, the loan-to-value ratio is higher than that of a construction loan. Depending on market condition, up to 90% of value of the collateral can be borrowed in land financing. Banks are more willing to approve land financing because of its secure nature. As a result, some construction businesses reserve land for future development while the interest rates are still affordable. When housing prices are too high, the central bank usually asks banks to set restrictions on loans to the construction industry (construction must begin within a certain period after the loan is granted, or the bank would increase the interest rates or even recall the loan) to avoid speculative behavior in the construction industry.
Construction financing refers to loans for the construction of residences, which are short term loans which last from one to three years, or no longer than 5 years. The loan-to-value ratio and the amount of the loan depend on the marketing of projects, the credit of the investor, collateral, etc. Generally, the total limit for construction financing (including secured and non-secured loans) is 60% of the estimated construction value. In addition, unlike other loans which are paid in a single payment upon approval, construction financing is paid in installments according to the progress of the construction. This is because financial institutions hope to reduce the financing risk and ensure that the borrower utilizes the loan for construction.

Informal financing refers to funds privately raised by the constructor or capital income from a pre-sale system used as the financing capital of the project. The reason for the prevalence of the pre-sale market in Taiwan is because of an insufficient supply of construction funding from financial institutions. To continue construction to complete the project, the construction industry had to rely on the pre-sale system to acquire capital. In the pre-sale system, the constructor could collect funds by pre-selling houses to serve as operating capital. This was a type of portfolio selling strategy of constructors (Chang and Ward, 1993) because they could distribute one third of the houses in each of the three stages, including pre-sale, construction, and completion. Home buyers could buy their houses by means of installments and mortgages. This could increase their purchasing ability. The pre-sale system allows constructors to be aware of selling conditions, and for home buyers to accrue a sense of participation during the construction process.

The process of the pre-sale system is shown in Figure 5.
3. Credit Extended to the Construction Industry by Financial Institutions

In the process of construction financing, a bank normally first speaks with the constructor about the construction plan and the financial requirements of the related project. After the initial contact, the bank then asks the contractor to provide a construction proposal and related financial documents. The bank evaluates the credit risk of the project immediately after receiving the loan application. Next, the credit control department audits and analyzes the project, then sends it to a higher authority to approve or overrule it. If the project is denied or postponed, the business unit would euphemistically inform the applicant of the result. If it is approved, the applicant would be informed of the conditions and terms of the credit extension. Once the applicant agrees upon the terms and conditions, formalities including contracting, verification, and setting of pledge are then processed.
After the related formalities are completed, the borrowed quantity of land financing is mostly paid by lump sum. According to the allocation criteria, the borrowed amount of construction financing is paid in installments based on the progress of the construction. In post-loan management, the bank periodically audits and reviews the debtor’s credit and inspects the collateral to see if the operations of the borrowing company and the progress of construction are normal. The review procedures continue until the project is completed and the debt is paid off. When the project is overdue or in default, the case is forwarded to the debt management department to proceed with a litigation procedure. Fig. 6 shows the practical operations process of credit extension for construction financing by financial institutions in Taiwan.

In addition, the construction industry sometimes negotiates an agreement of “wholesale loans” with financial institutions. The wholesale loans agreement is usually made with large construction projects to encourage home-buyers to borrow from the correspondent bank of the construction company. This was a type of batch processed mortgage loan. As long as the land is well situated and the constructor has a good reputation, the financial institution can promise borrowers loans at preferential interest rates. Therefore, the constructor can assist home-buyers in borrowing from the financial institution from which the constructor applied for construction financing, or from other institutions. Furthermore, to recover profits from loans as soon as possible while considering the payback ability of constructors, most of the banks ask constructors to pay interest monthly, and the principal in a single payment when the loan is due.
Figure 6. Practical Operations Process of Credit Extension for Construction Business by Financial Institutions in Taiwan

Oral Discussion Written Application

Construction Financing Application Received

Evaluation of Credit Risk

Credit Review

Decision

Denial
Inform the Applicant Tactfully

Approved
Inform the Applicant of Financing Conditions

Payment Operations

Payment of Construction Financing

Payment of Land Financing

Construction Project Successfully Completed

Case Closed after Clearing off Debts

Default/Overdue Payment

Report and Collect

Recover Debts or List as Bad Debts
4. **Major Default Risks in the Construction Industry of Taiwan**

The construction industry in Taiwan is highly dependent on financing from financial institutions. The land and construction financings are also the major credit operations of banks. Banks should consider the problems and risks related to providing construction financing. Difficulties encountered by the construction industry have direct influences on the safety of credited assets of the bank, and whether the capital can be recovered successfully. The major risks related to construction financing made by banks in Taiwan include:

(1) The financial ability of the constructor is unsustainable due to unfavorable sales rates.
(2) Falling real estate prices which result in problems of insufficient collateral.
(3) The operations of the constructor expanded too rapidly and triggered a credit crisis.
(4) The capital flows to affiliated businesses or other purposes, affecting the implementation of construction projects.
(5) Risks related to disputes occur upon delivery of the houses.

V. **Characteristics and Problems of Taiwan Construction Industry**

To summarize, the construction industry in Taiwan has several characteristics:

1. **It is easily affected by external factors**

Taiwan is a small economy with limited natural resources, and hence is easily affected by fluctuations in international oil prices or economic activity. Other major influences to the operation of the construction industry include domestic changes in commodity prices, wages, construction laws and regulations, and financial, monetary policies, and other policies of the government.

2. **It is highly dependent on financing, with a low percentage of equity capital**

The liability ratio of the construction industry is much higher than those of other industries in Taiwan; however, the interest protection multiples are much lower. Therefore, they need to maintain close relationships with banks. In addition, the construction industry tends to reserve land for future construction, and the long selling period results in illiquid capital, generating risk related to the escalation of interest expenses. If the houses are not sold well, capital may be locked up and
there may be a shortage of working capital, resulting in difficulties in business operations. After each stage of a prosperous housing market, there are always a large number of construction businesses that close down.

3. The importance of land financing

The high price of land is a major cost in the operation of construction enterprises. The price ratio of general housing land to building sites is approximately 7 to 3 or higher. Therefore, gaining access to the land and raising enough funds are extremely important to the construction industry.

4. Cooperative construction with landlords

Because land is so expensive, the construction industry had come up with the idea to co-construct with landlords. They search for land and negotiated with the landlords about cooperative construction. After the construction is complete, profits are distributed according to agreed percentages. This is commonly seen in the construction industry in Taiwan.

5. Too many construction companies on a single project

Because of large fluctuations in the market and considerations of costs and responsibility, “one project construction companies” exist in Taiwan, which refers to construction companies which close down after just one project. Despite being called construction companies, they are actually nothing more than market opportunists. The quality of the construction is not guaranteed, and the warranty after sale is discontinued. Though not all of the one project companies are bad (some of them are subsidiaries established by parent companies for purposes of tax evasion), the after sale warranty of this type of house is often flawed. With limited market information, it is difficult for home-buyers to correctly judge the quality of construction companies.

6. The prevalence of the pre-sale system and related issues

The operation of the financial industry is quite conservative in Taiwan. That is why the pre-sale system was developed. Currently, this system still prevails in the northern part of Taiwan where land prices are higher. However, both bad and good construction companies exist, and the transaction order is not especially regulated. Additionally, information is asymmetric; hence, home buyers are under less protection. As a result, many housing disputes arise. Most of the housing disputes handled by the Consumers’ Foundation are related to pre-sold houses.
7. The preference of financial institutions for the construction industry

Many construction companies in Taiwan are small in scale and of uneven quality. They present a relatively large risk to banks in financing. However, real estate prices keep going up for a long period, with strong defensive quality. Compared to financing in other industries, lending institutions still prefer to provide finance to the construction industry.

8. Limited building sites and the monopolistic nature of land development in the capital

The population is concentrated in the Taipei area. The supply of land is particularly limited in Taipei City. Because obtaining building sites is difficult, new construction projects in Taipei City are almost all luxury housing.

9. A shortage of construction workers

The shortage of labor is a common phenomenon in Taiwan industries. Work in the construction industry is particularly laborious and dangerous; therefore, it is hard to recruit a sufficient work force. To finish construction, construction companies have to increase the wages substantially to recruit workers. Consequently, the construction costs are also increased.

10. Approval amount of loans for construction projects

The quantity of loans approved by financial institutions to the construction industry is determined by referencing the financial proposal of the construction company, and paid by installment based on progress. Though financial institutions in Taiwan favor providing financing to the construction industry, there is no systematic measure for evaluating the construction project as a basis for determining the amount of financing; neither do institutions employ an appraiser to evaluate the development costs of the project. Furthermore, because the financial industry does not have clear grasp on the project and the market, banks are likely to fall into a credit crunch to avoid risk during times of recession in the real estate market.

11. Problems of interest groups

Though Taiwan is a democracy, democratic literacy is not fully mature. Many problems still exist with the representative system. Most parties have background support from interest groups in the construction industry. Many legislators are
supported by the construction industry. These have become obstacles for the government in implementing real estate policies.

12. Vague market information, prices easily manipulated by the construction industry

The real estate tax system is unique in that housing and land taxes are collected according to the prices appraised by the government. No impartial organization for collecting and publishing price information regarding the real estate market is present. The market price is controlled by the construction industry and lending agents. Hence, a great deal of room for arbitrage exists in the housing market, resulting in volatile housing prices. When the real estate market fluctuates, construction companies avail themselves of this advantage to purposely drive up selling prices to earn extortionate profits.

13. Land property as a preferred asset for ownership

Taiwan is a country with a large population over a small territory. With the concept that land can increase or preserve investment value and hence is the best asset for ownership, people value these assets greatly. Besides satisfying demands for residency, real estate also functions as an investment. Many related industries are involved.

14. Focus of the government

Though the Taiwan government intervenes little in the real estate market, it regards construction as a very important industry. Political parties and elected representatives have support from construction companies, and the government regards this industry as the engine of industry, with its huge workforce in related industries. Additionally, construction financing constitutes a large portion of the business of banks. If construction companies close down, there could be consequential problems of non-performing loans (NPL). This is also a focus of the government.

Real estate development in Taiwan also utilizes unofficial measures, particularly in the early period, when many construction businesses used their political and economic relationships to keep the development going smoothly. These measures might be more difficult to employ now, but they are still commonly used by large construction companies or those who are supported by syndicates. The followings describe how the construction industry in Taiwan uses its political and economic relationships to
push through their real estate development.

1. Acquiring capital

Generally, the capital of the construction industry comes from normal and legal channels. However, in the early period, some unofficial channels of manipulation existed. For example, syndicates or large construction companies with abundant financial resources could raise funds from financial institutions in their affiliated enterprises by means of excessive credit or overvaluation of collateral. They could also procure funds from financial institutions through the elected representatives they supported in central or local parliaments.

2. Acquiring land

From the aspect of land acquisition, the best land is that with a low cost and high profit. Hillside land in urban areas, forest land, farmland, and public land have the most potential. After acquisition, construction companies then use these lands to apply for loans from financial institutions and increase the value of the land by means of land consolidation, or land-use change, or asking government to construct large public facilities. When land values are increased, construction companies either sell the lands in segments or construct office or residential buildings on the sites before sell them to complete the speculation process.

3. Problems related to land-use change

In terms of the system, the Urban Planning Commission (UPC) is in charge of the planning of urban land use, and hence became the key to land-use changes. Members of the commission are employed or dispatched by governors of all levels of government, with the governor being the chairman. Controlled by the governor, UPC has become the channel of interest distribution in the early stages.

4. Problems related to hillside land development

In terms of hillside land in urban areas, most are public land. The government utilizes these lands by selling or leasing them to increase revenue and reduce management costs. Those who occupy public land are usually able to purchase them with public appraised and assessed values (rather than market values). In addition, a serious problem regarding the development of hillside land exists. Especially in the early periods, it was extremely easy to obtain licenses to develop residences on hillside land. The cost was low and the profits were enormous. Once construction companies obtained the construction licenses for the land, land values soared
immediately. Moreover, the control on the building coverage ratio and the plot ratio was loose. Construction companies often built residences in a high density to increase their profits. The development of hillside land was reviewed by the government. As long as the proposal complies with the related regulations, the government must approve it. The lack of concrete policies resulted that syndicates in possession of land interests actively engaged in construction development, and were able to pass through all restrictions using their privileges to gain extravagant profits.

5. Land speculation by large syndicates and local factions

Construction-related interest groups with support from syndicates have a certain influence on the executive and legislative departments in the government. Taking hillside land as an example, the square measure of the development area is usually more than 10 hectares, according to regulations of non-urban land usage control. Such a scale is favorable to large syndicates. After obtained the land, the syndicate could increase the land value by changing the land-use.

On the other hand, there is an interdependent relationship between local factions and power elites in the central government agencies. In the interactive process of power and interest exchange, the power elites provide political and economic interests to their followers in exchange for support of their regime. Land speculation is an important measure for local factions in accumulating fortunes. Most low-level elected representatives such as magistrates, mayors, and speakers of county or city councils are agents of local faction interests. Generally, common devices include changes in the land-use, land consolidation, comprehensive review of urban planning, and public construction planning that is favorable to private lands. In terms of capital, local factions usually control low-level financial institutions such as credit unions and credit departments of farmers and fishermen associations, and have easy access to finance. They also apply for loans from publicly-owned banks or national financial institutions through elected representatives. These were commonly seen situations in the early periods.

VI. The Effects of Regulations and Policies on the Construction Industry

The legislative environment of the construction industry is based on regulations of Building Act, along with the relevant regulations in Civil Code and Land Act. These regulations are modified from time to time to adjust to changes in the economic environment and policy implementation. Because of various changes in the market and demands from industrial development, numerous related regulations have been newly added or modified to help promote a healthier development of the construction
industry. For example, the Consumer Protection Law, enacted in 1994, brought positive influences and improvement to housing transactions; the 1995 Condominium Management Ordinance became the basic source of laws regarding community management; and the 1999 Real Estate Broking Management Act and the 2000 Real Estate Appraiser Act both improved the management and safety of real estate transactions. In addition, the Urban Renewal Act enacted in 1998 became the source of urban renewal related regulations, including those for the establishment of urban renewal trust companies and the securitization of real estate. The Real Estate Broking Management Act was enacted in 1999 as the basis for the management of real estate brokerages and sales agents. Also, the 2003 Construction Industry Act established a complete system for the manufacturing part of the construction industry.

The regulations related to real estate were gradually established along with the development of the market. In the changing macroeconomic environment and the real estate market, the government has implemented various policies to stabilize the market and to adjust the development of the construction industry. Table 3 shows the major events and policies related to the real estate market and the construction industry in the past 40 years. Policy measures regarding the industry can be summed up as follows:

1. **Policy measures restricting over investment by the construction industry**

   In times of high inflation or a boom in the real estate market, the government took more direct measures to restrict over investment by the industry, including the following:

   1. Restricting construction on vacant lands;
   2. Selective credit control: such as suspending unsecured loans for the purchase of lands, limiting the amount of construction financing to certain multiples of the publicly appraised value of the land, limiting loan conditions, and restricting loans for construction working capital to under a certain percentage of the building cost;
   3. Limiting the prices of construction materials;
   4. Restricting the construction of tall buildings;
   5. Increasing interest rates on loans;
   6. Reducing the loan-to-value ratio;
   7. Constructing public housing

   Indirect measures were also adopted to restrict demands for real estate investment, such as tracing the source of funds for the purchase of homes, limiting the
loan-to-value ratio, and levying a luxury tax (Selected Goods and Services Tax Act). However, the Taiwanese government typically failed to take any policy measure until there had been major changes in market prosperity or serious public indignation. Essentially, the Taiwanese government intervened less in the market as compared to neighboring countries such as Hong Kong, Singapore, Korea, or China.

2. Policy measures to prevent construction businesses from closing down

To restrict the increase in housing prices, the government usually took certain measures which have caused the construction industry to be mired in difficulties. After the government’s interventions in both the second and third waves of soaring housing prices, thousands of construction businesses closed down. Therefore, after implementing these measures, the government normally removed controls on credit and took other measures such as the “Tax and Financial Measures Related to the Construction Industry.” The government might also take some indirect measures to stimulate demand for housing, to help the construction industry escape its plight. These measures included releasing farmlands suspending subsidies for the construction of public housing, preferential mortgage loans, allowing foreign and Chinese capital to invest in Taiwanese real estate, or cutting the land value increment tax and extending the applicable range of preferential rates thereof.
<table>
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<th>Year</th>
<th>Events</th>
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| 1973 | 1. First oil crisis; housing prices began to soar  
2. The government issued Eleven Measures to Stabilize Commodity Prices, including suspending announcements of current land values, restricting the construction of tall buildings, and restricting the prices of construction materials |
| 1974 | The government issued the Program for the Stabilization of the Present Economy; suspending investment and loans made by financial institutions to housing construction and suspended purchases except for owner occupied residences  
2. Restricted construction financing  
3. Removed restrictions on the construction of tall buildings |
| 1977 | The Executive Yuan issued the Essential Points for Improving the Investment Environment, opening up financing to the construction industry. |
| 1979 | Oil price increased and housing price soared again |
| 1980 | 1. International oil prices went up again  
2. The government announced restrictions to construction on vacant lands and the tracing of the source of funds used to purchase houses |
| 1981 | Restriction to construction on vacant lands; purchase by land owners declared value |
| 1985 | The government approved the Tax and Financial Measures Related to the Healthy Development of the Construction Industry |
| 1987 | The Cathay Life Insurance company placed a high bid on public land adjacent to China Airlines, causing real estate prices to soar |
| 1989 | 1. The TAIEX hit 10,000  
2. Implementation of selective credit controls to constrain housing prices |
| 1990 | 1. The stock market plunged  
2. The government announced the loosening of the 228 selective credit controls |
| 1991 | Restrictions on financing loans were again loosened |
| 1992 | Comprehensive implementation of plot ratio control; construction companies rushed to construct |
| 1994 | Farmland was permitted to be traded freely |
| 1999 | The government provided 150 billion NTD in mortgage loans at preferential interest rates; by 2009, the preferential loans were provided 9 times, and the total amount was approximately 2 trillion NTD |
| 2001 | 1. The Executive Yuan issued the Measures to Recover the Real Estate Market  
2. Foreign and Chinese capital permitted for investment in the real estate market. |
| 2002 | The land value increment tax was cut in half for 2 years |
| 2003 | 1. Outbreak of the SARS epidemic  
2. Approval of the Clauses of the Real Estate Securitization Act |
| 2004 | 1. Half cuts to the land value increment tax were extended for 1 year  
2. First real estate asset trust (REAT) in Taiwan  
3. Housing price went up again |
| 2005 | 1. The ratios of the land value increment tax were permanently reduced.  
2. First Real-estate Investment Trust Security (REITs) company went public |
| 2008 | The bankruptcy of Lehman Brothers ignited a global financial crisis |
| 2009 | 1. Estate and gift tax reduced to a unified ratio of 10%  
2. The applicable range of preferential ratio of land value increment tax was extended  
3. The Executive Yuan approved the Directions for Chinese capital investment in Taiwan, officially opening up the age of cross-strait investment |
| 2010 | Selective credit control in certain areas; including stipulations that the loan-to-value ratio be no more than 70% of the appraisal value, that a grace period be given for mortgage loans, that second mortgage were prohibited, and that loan interest rates were to increase |
| 2011 | The Specifically Selected Goods and Services Tax Act (commonly known as the Luxury Tax) was issued to levy taxes on short term ventures in the real estate market |
VII. Conclusions and Policy Suggestions

Over the past four decades, the housing market in Taiwan has been in a situation of cyclical fluctuation and a long term upward trend. Many resources and capital were attracted into the construction industry, and this industry was considered the engine of economic development in Taiwan. In fact, the contribution of this industry to housing development and construction has been significant. However, the construction industry was developed under a conservative financial system. It was difficult to acquire financing, and therefore informal measures (such as the pre-sale system) were adopted to acquire enough funds to complete development. Construction companies also utilized their political and economic relationships to acquire capital and land. Though the government took this industry very seriously and most political parties and elected representatives had support from construction companies. When housing prices soared excessively, the government had to employ certain measures to suppress prices. These measures usually affect construction companies which are overinvestment and cause them to go to bankruptcy. Nevertheless, the government also duly provided assistance to avoid impacts to the job market or issues of non-performing loans in financial institutions.

Currently, housing prices have been on the rise for 8 consecutive years. The chance that housing prices will enter into a period of contraction is increasing. This will be another challenge to the operation of construction businesses and to the government. In light of this, we have following suggestions regarding the operation of construction financing and how to improve the system:

1. The government should strengthen normal financing channels of the construction industry and reduce informal measures of financing, to help this industry to function properly and hence stabilize the real estate market.
2. Financial institutions should improve their review process of construction financing. A systematic review process could help to fend off excessive credit.
3. Financial institutions should establish a credit evaluation system regarding the construction industry, and cease to approve loans based on the relationship between the bank and the construction company.
References


Chen, Ming-Chi, Chin-Oh Chang, Chih-Yuan Yang, Bor-Ming Hsieh (2011), Investment Demand and Housing Prices in an Emerging Economy, Journal of Real Estate Research (SSCI), forthcoming
