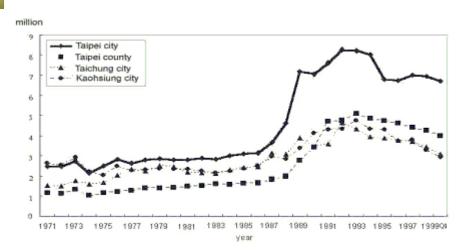


Rating Criteria for Taiwan Residential Mortgage-Backed Securities

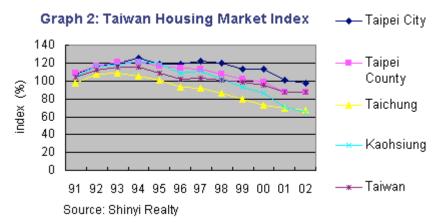
Property Review and Trends

One of the difficulties in analyzing real estate trends in Taiwan is the lack of a central repository of housing prices. While the government does not provide any indices for tracking property prices, some information is available from private companies. For example, some real estate prices have been tracked in the index produced by Taiwan Real Estate Research Center between 1971 and 1999 (see graph 1) and Sinyi Realty Property Price Index since 1991 (see graph 2). Using these sources of data, supplemented by interviews with large domestic commercial banks, property research firms and academics, Taiwan Ratings Corp. and Standard & Poor's have found that the real estate cycle in Taiwan was longer than elsewhere in East Asia, except for Japan. A real estate cycle (from peak to trough) on average lasts seven years in Taiwan, but the current cycle has persisted for 12 years. Since 1971, Taiwan has experienced three identifiable phases and each phase was influenced by different factors, including, government policies, government fiscal stimulus and macroeconomic factors such as economic growth, unemployment rates and demographics. Moreover, property prices in different regions of Taiwan have tended to move in a correlated manner.

Graph 1: Taiwan Real Estate Research Center Index

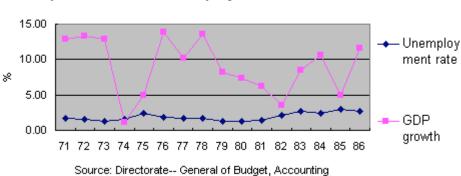


Source: Taiwan Real Estate Research Center



Phase I (1971-1986)

Before 1986, the change in property prices was not significant compared with that in later phases because, during phase I, the island's economy was growing rapidly with per capita income increasing to US\$3,646 in 1986 from US\$410 in 1971. During this period, the most significant issues affecting property prices was the oil crisis in 1973, causing property prices in Taiwan to drop. However, real estate prices recovered within two years, corresponding with Taiwan's economic growth and low unemployment at that time (see Graph 3).



Graph 3: 1971-1985 Unemployment Rate and GDP Growth

Phase II (1986-1991)

and Statistics

Real estate prices rose sharply during the period of 1986-1991. Property prices grew by over 300% in major cities in Taiwan. The booming real estate market was the result of a strong trade surplus in the 1980s due to increasing exports to the U.S. Because of a strong trade surplus, in conjunction with restrictions on foreign exchange, money supplies in Taiwan increased. However, as the domestic market's investment instruments were few, stock and real estate markets became key investment channels. During phase II, the Taiwan Stock Exchange Capitalization Weighted Stock Index (TAIEX) increased from 2,300 points in 1988 to 12,000 points in 1990 and real estate prices more than tripled in Taiwan's major cities. As a result of the surge in property prices, the government adopted measures to slow the market, such as reducing credit extensions by banks to real estate companies in 1989 and 1990 and raising the bank rediscount rate to 7.75% in 1989 from 4.5% in the same year.

Phase III (1991-2002)

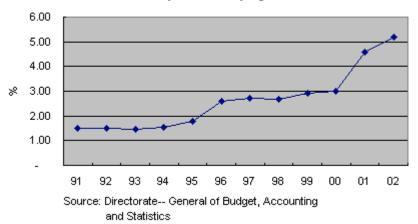
During the 1991-2002 period, real estate prices began to drop following a peak in early 1990s. The downturn of the property prices was mainly because of the drop in the stock market to 2,500 points in October 1990 from a record high of TAIEX 12,000 points in February 1990. During phase III, the government adopted several new policies that affected the real estate market. By the end of 2002 property prices in Taipei City had dropped by around 20%, Taipei County 30%, Taichung area (central Taiwan) 40%, and Kaohsiung area (southern Taiwan) 50%.

Various events negatively affected real estate prices between 1991 and 2002. For



example, the political tension between mainland China and Taiwan in 1995 and 1996 caused Taipei City's housing prices to 6% drop according to the Sinyi Realty property price index, but prices later rebound by around 4% in 1997. The Taichung and Kaohsiung areas both fell by 4%-8% annually during most of phase III. Reduced economic growth as a result of structural economic changes in Taiwan and domestic fund flowing to mainland China were also key factors negatively affected property prices. The gross domestic product (GDP) growth rate of Taiwan fell to negative 2.18% in 2001 from 7.60% in 1991. Another factor pressuring real estate prices was the housing oversupply in market. Taiwan's housing vacancy rate climbed to 17.6% in 2000 from 13.3% in 1990.

Taiwan's economy is undergoing a structural change, such as increasing numbers of Taiwanese manufacturers moving to mainland China, consequently quick growth of real estate prices like that of the late 1980s is not likely to be repeated in the near future. Property prices in Taiwan are not expected to rise, neither are they expected to drop further as a result of housing oversupply problem. Going forward, Taiwan's macroeconomic conditions and government policies are expected to be the main factors affecting the performance of the property market. Moreover, the advantages and disadvantages on increasing business interaction with mainland China are expected to force change and pose challenges in Taiwan's economy.



Graph 4: Unemployement rate

The government has tended to act as a market stabilizer in the domestic property market. For example, the government has given residential mortgage loan subsidies of



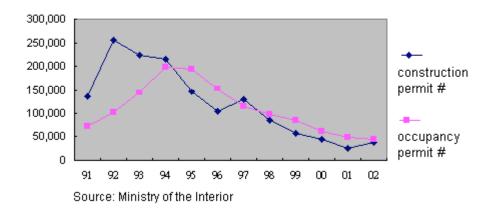
NT\$800 million to homebuyers since 2000 and requested that banks reduce mortgage rates in 2002 to stabilize the downward movement of property prices. Taiwan Ratings expects the government to continue to support the real estate market.

Factors Affecting Housing

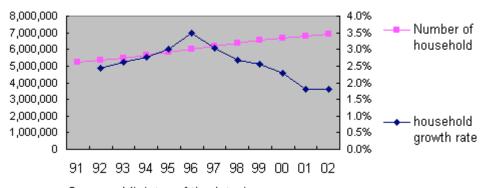
Market supply and demand

The supply of residential housing can be tracked using statistics released by the Ministry of Interior. A key driver of the housing oversupply in the 1990s was rapid property development by real estate developers and construction companies in expectation of a maximum floor area ratio (ratio of floor space of built land to total land) set by the government in 1994. Since the floor area ratio was limited to the total floor area of new buildings, real estate developers and construction companies sped up construction of new buildings before the ratio was implemented. Graph 5 shows that the number of construction permits for residential building granted by the government increased significantly between 1992 and 1994. With the completion of building construction, which generally take two years, the number of occupancy permits granted by the government reached its peak in 1994 and 1995.

Graph 5: Number of Construction Permit and Occupancy Permit



Graph 6: Household Number and Growth Rate



Source: Ministry of the Interior

The demand of property can be tracked with the housing vacancy rate and the household formation figures. Home ownership is high in Taiwan. According to an island-wide household census conducted in 2000, the percentage of home ownership was 82% in 2000, slightly higher than 78% in 1990. Household formation has been slow over the past twelve years, peaking at a growth rate of 3.5% in 1996, but dropping to less than 2% since 2000. The slow formation of new households explains a weak demand in housing. According to a household census conducted by the government every decade, the average housing unit vacancy rate in Taiwan was 17.6% in 2000, an increase from 13.3% in 1990. The vacancy rate in Taiwan. This is because Taipei City is the capital and financial center of Taiwan with the strongest economy. With reduced construction permits granted in recent years, the housing vacancy rate is not likely to increase further or to reduce rapidly.

Table 1: Vacant Housing in 2000 and 1990					
Area	End of 1990		End of 2000		
	Vacant housing units	Vacancy rate (%)	Vacant housing units	Vacancy rate (%)	
Taipei City	71,007	9.40%	101,102	12.20%	
Taipei County	144,354	16.70%	221,531	17.40%	
Taichung City	41,385	19.70%	101,916	26.00%	
Kaohsiung City	57,868	16.20%	82,275	16.50%	
Taiwan Area	674,317	13.30%	1,228,798	17.60%	

Source: Directorate - General of Budget, Accounting and Statistics

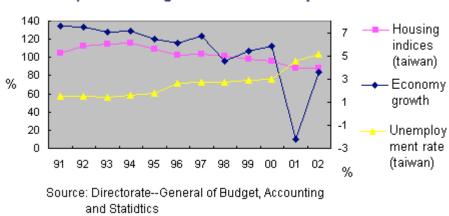


Relationship Between Property Prices and Macroeconomic Factors

To determine what economic indicators may correlate with property price movements, Taiwan Ratings and Standard & Poor's analyzed the relationship between the property index (Sinyi Realty property price index for the period of 1991-2002) and several economic indicators including economy growth rate, unemployment rate, stock market index and interest rate on residential mortgages.

Economic growth

The property index moves in somewhat the same direction as the macroeconomic growth in Taiwan. As shown in the graph 7, when Taiwan's economic growth index rebounded in 1997, so did the property index. However, while the economy grew in 1998 and 1999, the property index declined. The property index dropped significantly in 2001 when the economic growth rate also dropped to negative 2.18%.



Graph 7: Housing Index and Economy Index

Unemployment rate

The unemployment rate is somewhat inversely correlated with property prices. When the unemployment rate has gone up, property price index has tended to go down as shown in graph 8. Taipei's unemployment rate and property price curves have been less volatile than those of the rest of Taiwan. In 2002, the unemployment rates of both Taipei City and the rest of Taiwan climbed but the property index did not drop because several measures taken by the government, such as the introduction of government subsidy programs for homebuyers and reduced interest rates, pushed



property transaction volume up and stabilized the property market.

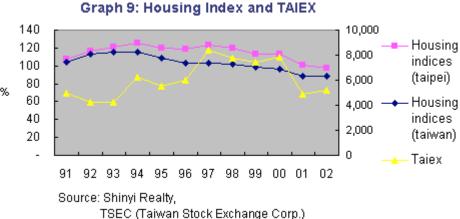
140 5 120 4 Housing 100 3 indices 80 (taipei) 60 2 40 20 Unemploy 93 94 95 96 97 98 99 00 01 ment rate(taipei) Source: Sinyi Realty., Directorate--

Geneal of Budget, Accounting and Statistics

Graph 8: Taipei Housing Index and Unemployment Rate

Stock market index

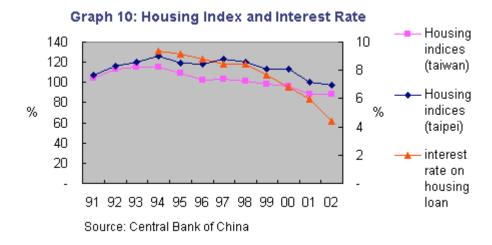
The stock market index and the housing index in Taipei City are somewhat positively correlated. The housing index in Taipei City rose by 4% in 1994, while the TAIEX increased by 48%. In 1995, the Taipei City housing index dropped by 3% and, in the same period, the TAIEX decreased by 11%. In 1997, Taipei City housing index increased by 3.5% and TAIEX increased by 40%. In 1998, the Taipei housing index and TAIEX both dropped by 2% and 8%, respectively. In 2001, the Taipei housing index dropped by 12% and the TAIEX fell by 37%. The relation between the TAIEX and housing index in Taiwan is less relevant than other factors, such as oversupply, which has a more significant impact on property prices.





Mortgage interest rate

Statistics on mortgage interest rates have been available since only the middle of 1994. The mortgage interest rate is the average rate charged by Bank of Taiwan, Taiwan Cooperative Bank, First Commercial Bank, Hua Nan Bank and Chang Hwa Commercial Bank, together representing around 30% of the mortgage lending market. Although interest rates have gradually declined, this has not led to an increase in housing prices. This could be because of uncertainty about Taiwan's overall economy.

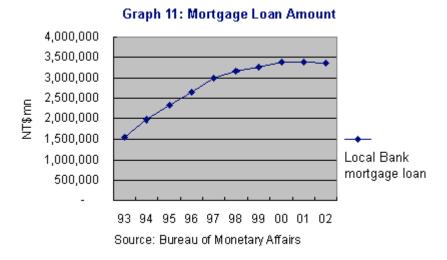


Competition among banks led to price wars, the introduction of a variable rate mortgage, and a low interest rate environment lowered the cost for borrowers. This may explain why the property index in Taiwan stabilized in 2002.

Information on Residential Loans

Residential loan market size

Total mortgage loans extended by financial institutions, including banks (domestic and foreign) and insurance companies (life and non-life), was almost NT\$4 trillion at the end of 2002 (see graph 11). Domestic banks accounted for 84% of total mortgages in 2001, followed by life insurance companies, representing 14%. Taiwan has 52 banks but the top five banks command around 39% of the total bank mortgage market. The mortgage loan market has grown slowly since 1997 and even declined slightly in 2002. Loan growth is expected to remain tepid and the mortgage origination of banks is expected to come mainly from loans transferred from other banks.



Residential loan underwriting

When a financial institution underwrites a residential mortgage loan, the most important documents that the borrower is requested to submit are the land registration certificate and building registration certificate issued by the Land Registration Office to ensure the ownership and lien of the property. As the property is pledged to the financial institution as collateral, the property has to be filed with the Land Registration Office to change the title of the lien. When the mortgage is transferred from other banks, there is a few days lag for the new lender to obtain the title on the lien after it extends the loan to the borrower to pay back the previous loan. In Taiwan, property transfers are not entrusted to lawyers or notaries, which would ensure a clean closing, and proper transfer of funds and legal title of property. The current title transfer system therefore exposes the refinancing bank to an unsecured position or at best a second lien position.

Taiwan property prices are not transparent because no comprehensive official statistics to track the transaction prices of property exist. Domestic banks generally rely on their internal property appraisal and check the most recent transaction prices of similar properties with real estate agents to decide the value of the underlying property on residential loans. As a result, it is possible for the lender to be more aggressive in evaluating the value when real estate market conditions are good and vice versa.



The Joint Credit Information Center (JCIC) provides information on individual loans, including bank lines and balance, as well as delinquent status (overdue for 180 days) of all borrower's loans (including credit cards) to all banks in Taiwan. The JCIC is an established island-wide online credit bureau, and is a regular source of credit information for member banks. Under Taiwan's system, banks are obligated to report information, and the database is updated monthly.

Before 2002, interest rates on non-subsidized residential loans were mainly based on the bank prime rate, which is adjusted significantly slower than market interest rates. The adjustable rate mortgage loan, which uses the savings deposit rate as a benchmark, was introduced in the first quarter of 2002. This interest rate benchmark change, in conjunction with price competition by banks, sparked a flurry of refinancing as borrowers switched to adjustable rate mortgages.

The government does not restrict a bank's ratio of loans to value. In practice, the prevailing ratio of loans to value for a new origination has been 70% since 2001. Many banks have reduced their loan to value levels starting from 2001 because of the deterioration of the Taiwan economy and higher unemployment rates. Banks have already tightened their underwriting policies since 2001 by reducing their ratios of loans to value for new mortgages (averaging 70% compared with more than 80% before) after Taiwan's unemployment rate increased. However, competition among banks as a result of the introduction of adjustable interest rate mortgages in 2002 may cause some banks to increase their ratios of loan to value for loans transferred from other banks. This situation is expected to be remedied after all banks apply adjustable rates on mortgages.

Government subsidy programs

To alleviate the debt burden of homebuyers and to help promote the real estate market, the government has introduced several types of government subsidy programs. The two main ones are a general subsidy and a subsidy for first time homebuyers.

Under these schemes, the government allocates a quota to banks based on their market



share. Consequently, larger banks have a larger portfolio of government subsidized loans. The borrower pays interest rates charged by financial institutions net of the subsidized amount. Financial institutions get refunds for the subsidized portion from the government on a monthly basis. Typically, there is a time lag (from two months to a maximum of nine months) for the government to remit the subsidies back to the financial institution. The borrower is not eligible to be subsidized if the loan has been in arrears for six months or more. The government's claim to liquidation proceeds are subordinate to the lender, and will only be reimbursed for accrued interest if excess funds are collected from the disposal of collateral.

There are several subsidy programs extended by different government divisions to different parties. The major ones are the "House Purchase Project Loan", the "Youth First House Purchase Low Interest Rate Project Loan" and the "Youth First House Purchase Incentive Rate Loan and Credit Guarantee".

1. House Purchase Project Loan:					
Sponsors:	Ministry of Interior, Ministry of Finance, and Central Bank				
Size of Program:	NT\$200 billion annually from 2000 to 2003				
Eligible Applicants:	Resident of Republic of China over 20 years old				
Max. Allowable Loan:	Taipei City - NT\$2.5 million per household, Other areas · NT\$2MM per household				
Subsidies:	0.85% in 2000 and 2001, 0.45% in 2002, and 0.25% in 2003				
Other Conditions:	Borrower must live in the home, borrower can apply for other subsidy programs				
Priority of Government upon Liquidation:	Subordinated to the lending bank				
2. Youth First H	ouse Purchase Low Interest Rate Project Loan:				
Sponsors:	Ministry of Interior, Ministry of Finance, and Central Bank				
Size of Program:	10,000 eligible applicants annually from 2001 to 2007				
Eligible Applicant:	Republic of China resident age between 20 and 40,Low income family in the bottom 20% income group				
Max. Allowable Loan:	NT\$2.2 million per household				
Interest Rate:	3% for the first seven years, postal savings two-year deposit rate plus 1% starting from year eight				
Subsidies:	Mortgage interest rate of the lending bank net of 3% in the first seven years of the loan tenor, no further subsidy starting from year eight (banks obtain funding from postal savings)				



Other Conditions:	First time homebuyer, not subsidized by other programs, up			
	to 5 years interest grace period			
Priority of	Subordinated to the lending bank			
Government upon				
Liquidation:				
3. Youth First H	ouse Purchase Incentive Rate Loan and Credit			
Guarantee:				
Sponsors:	Ministry of Interior, Ministry of Finance, and Central Bank			
Size of Program:	NT\$120 billion from Aug. 2000 to Aug. 2001			
Eligible Applicant:	Republic of China resident age between 20 and 40 with			
	stable income source			
Max. Allowable	NT\$4.5 million in Taipei, NT\$3.5 million outside Taipei			
Loan:	·			
Interest Rate:	Two-year postal saving rate plus 1%			
Subsidies:	0.85%			
Guarantee limit:	20% of the subsidized loan			
Guarantee fee:	0.4% (0.2% each paid by the bank and borrower)			
Other Conditions:	First time homebuyer Guaranteed loan has senior priority in principal repayment, should the borrower defaults, the			
	guarantee fund is to compensate the creditor if proceeds collected from collateral disposal are insufficient to repay the guaranteed amount.			
Priority of	Subordinated to lending bank on subsidized loans, senior to			
	lending bank on guaranteed loans			
Liquidation:	J			

Property transaction process

The buyer

After a homebuyer purchases a property, the buyer is required to register with the respective Land Registration Office, depending on which district the property is located in, to change the title of the property. The registration certificate lists the transfer date, property size and owner of the land and building and title of the lien, if any. The registration is generally processed through a land notary and it takes one day to change the property title after filing with the Land Registration Office.

Costs for buying a property include: (1) deed tax of 6% calculated on the value of the house estimated by the government (factor of valuing a property includes cost of construction, number of floors of the building, and location of the building such as facing a main road); (2) stamp duty of 0.1% of the estimated value of the house; (3) registration fee of 0.1% to Land Registration Office calculated on the estimated value of the house by the government and the public land price; (4) lien registration fee of



0.1% calculated on the amount to be registered as lien; and (5) land scrivener fee of around NT\$5,000 to process on behalf of the buyer.

The seller

Upon the sale of a property, the seller is required to a pay land value incremental tax (LVIT). The LVIT is calculated based on the difference between the official current land value (OCLV) when the property was previously transferred and at the time of the current sale. The LVIT is a progressive tax rate of 40%, 50% and 60%. For housing bought for personal use, each individual can enjoy a favorable LVIT rate of 10% once in a lifetime. Due to the lackluster real estate market in recent years, the government has announced a reduction to the LVIT rate by half to 20%, 25% between February 2002 to February 2004. The reduction in the LVIT positively affected property transaction volume in 2002 (see graph 12).

1,000,000 800,000 400,000 200,000 91 92 93 94 95 96 97 98 99 00 01 02 Source: Ministry of the Interior

Graph 12: Transaction Volume of Land Property Units

Factoring LVIT into loss ratio

Because the seller pays the LVIT upon sale of a property, a bank (creditor) receives proceeds net of the LVIT from final auction of the property. The LVIT is determined by several factors: (1) the time elapsed since the property was previously purchased, (2) the result of the auction price and, (3) the amount of space the building on the land occupies. A seller is likely to have to pay a much higher LVIT if the land was purchased before 1990 when there was a large adjustment of the OCLV by the government. Moreover, if the final auction price was lower than the OCLV of the



property when it was transferred the previous time, the bank (seller) is not required to pay the LVIT because it has not earned capital gains. Assuming the property conditions are the same, the LVIT of a condominium is lower than that of a detached house, because condominiums only share a certain percentage of the land appreciation while a detached house bears 100%.

When considering a bank's loss ratio, the LVIT is taken into account. A bank's losses from the LVIT are mitigated by the amount of loan extended to the borrower that is net of the LVIT at the time of origination. In the event that there is a large increase in OCLV at the final auction of the property, the bank (creditor) is not likely to have its recovery reduced from paying the LVIT.

Foreclosure process

A financial institution starts the collection process after a loan has been classified as delinquent. To mitigate the loss, the financial institution may consider an alternative loss mitigation method such as deed-in-lieu where the borrower is able to process the disposal of the property through the bank's waiver of its lien on the collateral. To mitigate the bank's risk, it processes only the removal of its lien on the collateral after it receives proceeds from the purchaser.

The bulk of the disposed collateral is processed through a legal enforcement process using a court auction. In practice, the first auction is conducted approximately six months after the creditor files with the court to obtain the execution title on a mortgage foreclosure decree. The property price of the first auction is set by the court according to its appraisal. If the first auction fails, there can be up to two subsequent auctions solicited by the court held a minimum of 30 days after the previous auction. The auction price is 20% lower than the previous auction price. If the third auction fails, the property goes into a special auction petitioned by the creditor. The enforcement execution will be withdrawn if there is no petition. After final sale, the court will distribute the proceeds (net of LVIT) to the creditor according to lien seniority on the property. Generally, the legal process from filing to case closed takes about 1.5 years to 2 years to complete.



In order to speed up recovery, financial institutions sometimes foreclose on the property if the auction price is considered acceptable and will take title ownership of the property. The property is either outsourced to an agent for sale or disposed by the bank.

Loss experience

Bad loans are mainly recovered through the disposal of property from court auction. According to data collected from banks in 2002, recoveries by banks against all types of real estate located in Taipei City were generally the highest, while in the rest of northern Taiwan, including Taipei county, Taoyuan City and Taoyuan County and Hsinchu City and Hsinchu County, recoveries have is in the middle level. Mortgage losses generated in other regions, including central and southern Taiwan have been higher than those of northern Taiwan. Since recovery data depend greatly on the year of origination, this information is not relevant to determining loss severity. Nonetheless, this information confirms some points of relativity when looking at loss severity.

Earthquake risk

On Sept. 21, 1999, Taiwan, an island prone to earthquakes, was hit by the most serious earthquake in a century. The earthquake, measuring at 7.3 on the Richter scale, with the epicenter in the middle of Taiwan, caused the collapse of 40,000 units (including houses, factories, and schools), partial damage to another 40,000 units and killed of 2,300 people in six counties in central Taiwan, including Miaoli, Nantou, Taichung, Changhwa, Chiayi and Yunlin.

According to estimates by banks, only about 1% of Taiwan's total loans were affected by the quake. This was because the most seriously affected areas were mainly agricultural economic zones with lower densities of residences. At the time of the earthquake, earthquake insurance was not offered in Taiwan for residential mortgages. The government announced a moratorium on affected mortgage debt payments in 1999, allowing a five-year grace period on principal and an 18-months grace period on interest.



Banks were also entitled to proceed with normal lending practices after the grace period, and to seek recourse from borrowers. Although the program extended the grace period on loan payments, these affected loans are deemed unrecoverable and banks tend to write them off without pursuing collection. In 2002, the government mandated that all newly generated mortgage loans shall be insured for earthquake insurance for a fixed amount of NT\$1.2 million. For large cities such as Taipei, this insurance represents less than 60% of the value of average mortgages. For an average size home (approximately 30-40 pings) in Taipei City and Taipei County, the earthquake insurance covers 40%-60% of replacement costs. For locations that are further away from the business hubs, the earthquake insurance should cover a substantial cost of the rebuilding.

Rating Methodology for Taiwan RMBS

The rating methodology for calculating credit risk for Taiwan residential mortgage loans is based on the analysis of macroeconomic data, real estate characteristics, historical real estate performance, financial institution residential loan delinquency, and foreclosure experience through different economic cycles or stresses.

An analysis of these factors will determine the characteristics of a benchmark pool and the associated default frequency and market value decline levels of the benchmarked pool. Market value decline levels, which together with other liquidity costs, result in a loss given default, or loss severity. Adjustments on the default frequency and loss severity assumptions will be made when the securitized pool deviates from the benchmark pool. The adjustments will affect the expected credit loss amount and therefore, differences to the required credit enhancement.

Geographical and regional economic conditions differ in Taiwan. This is reflected in the performance of residential mortgages, and also, in the liquidity and resale value of homes. Geographic diversification reduces risk to the portfolio because of differing economic cycles and reduces the earthquake risk.

The benchmark pool is classified into (1) Taipei City only (2) other northern metropolitans, including Taipei County, Taoyuan City and County, and Hsinchu City



and County only, (3) central Taiwan and other northern regions not included in the above and Ilan in the north east of Taiwan, and (4) southern and eastern Taiwan.

To determine geographic diversification to mitigate earthquake risk, where available for ratings purposes, Taiwan Ratings Corp. will request mortgage portfolios be broken down by zip code.

Benchmark Pool

Pool Size: Minimum 300 loans.

Loan seasoning: Minimum one payment made.

Taipei City - NT\$6 million Other areas - NT\$3.5 million Max loan size:

Loan-to-value ratio: Maximum 70%. Fully amortized. Loan type:

Loan term: 25 years.

First ranking lien on freehold land and building . Security:

Property type: Owner-occupied, apartment/condo units.

Geographic dispersion:

(1) Taipei City only - maximum 75%

Northern metropolitan area including Taipei County/Taoyuan(city/county) /Hsinchu(city/county) only - maximum

(3) Central Taiwan and other northern Taiwan (including Ilan in upper

east Taiwan) - maximum 25%

(4) Southern and eastern Taiwan - maximum 25% exposure by postal code - Taipei City - 10% maximum exposure by postal code -

all others - 5%

Property age: Less than 10 years at the time of securitizing, unless deemed in

good condition and in prime location (next to good transportation

amenities)

Borrower status: Individual not company. Borrower residency: Domicile in Taiwan. Salaried or professional.

employment status:

Borrower credit: No negative credit history. Clean payment record on mortgage loans

and other loans held with the originator for the past six months.

Borrower age: Between 20 and 60 years old

Mortgage loan or other borrowings with the originator that have not Loan record:

been restructured for credit reasons within 24 months and loan is

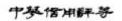
current at closing.

Loan repayment: Auto debit from the borrower's account.

Use of funds: To purchase home or to refinance existing mortgages without taking

equity out

Fixed and variable. Loan interest:





Insurance:

Earthquake insurance coverage is according to the official limit. Fire insurance to cover at minimum the replacement cost.

Market value decline

The market value decline assumption is based on an assessment of the Taiwan property market. Four sets of market value decline ratios are assumed for four regions based on loss experience, real estate status and macro economic conditions. The four regions are (1) Taipei City, (2) Northern Taiwan, including Taipei County, Taoyuan City and County and Hsinchu City and County, and (3) central Taiwan and other parts of northern Taiwan, and (4) southern and eastern Taiwan.

Loss severity

Loss severity is calculated based on the original loan to value, stressed market value decline, and costs associated with the possession and disposal of the property. For example, the assumptions that determine loss severity for a 'twAAA' rating are:

- * 70% loan-to-value ratio;
- * 24 months accrued interest at 9%;
- * An average of 1.5 auctions to sell each property;
- * Cost to sell at 4% of new market value; and
- * Other costs at 3% of total loan balance.

The cost for disposing of a foreclosed property includes filing for the auction process and miscellaneous administration costs. One auction is assumed for property from all areas, however, for 'twAAA' rating scenarios, Taiwan Ratings will assume that the entire portfolio requires 1.5 auctions, i.e., about 50% of the portfolio would be subject to two auctions. The auction discount will be monitored over time and will be reduced as warranted. A loss severity calculation is determined as follows:

Table 2 - Loss Severity Calculation

(Taipei City)	twAAA		
	NT\$		
Original property value	1,000,000		
Less: 30% decline in market value	300,000		
Equals: New market value (NMV)	700,000		



Less: 30% off from NMV due to court auction*	210,000
Equals: liquidated value	490,000
Less: Loan balance (70% of original LTV ratio)	700,000
Equals: Principal loss	
Less: Foreclosure costs	-210,000
24 months accrued interest at 9%	-126,000
Selling costs (4% of new market value)	-28,000
Legal and other costs (3% of loan balance)	-21,000
Total loss	-385,000
Loss severity (total loss/loan balance)	55%

^{* 30%} for twAAA: 20% for others

Credit loss

Credit loss determines the amount of pure credit risk or the likelihood of a loss associated with the performance of the portfolio for a particular rating. The ultimate credit support for a transaction, however, is determined by cash flow analysis and by other structural risks, such as interest rate risk, setoff risks and commingling risks, that must be mitigated.

Table 3 - 'twAAA'-'twBBB' Credit Loss Calculation for Benchmark Pool (%)

	Default Frequency		Loss Severity		Credit Loss		Market Value Decline	
	twAAA	twBBB	twAAA	twBBB	twAAA	twBBB	twAAA	twBBB
Taipei City	11	5	55	32	6.1	1.6	30	18
Northern Taiwan	11	5	61	38	6.7	1.9	36	24
Central Taiwan	11	5	72	52	7.9	2.6	48	36
South Taiwan	11	5	72	52	7.9	2.6	48	36

Other Consideration Affecting the Securitized Pool

The rating evaluation begins with a comparison of a loan pool to the benchmark pool since most pools do not have the same characteristics as the benchmark pool. Adjustments are made to the default frequency and loss severity assumptions of the benchmark pool to reflect greater or lower risks associated with the actual loan pool. Factors that may affect the default or loss severity of a pool varies. The following are



major considerations affecting adjustments:

Pool size

To perform a meaningful statistical analysis, a portfolio of at least 300 loans is needed. For portfolios with less than 300 loans but more than 100 loans, a small pool penalty will be applied to capture increased uncertainty due to a smaller sample.

Loan seasoning

The benchmark portfolio requires a minimum of one month of payment history, though seasoned loans, i.e., mortgages that have been outstanding for a significant period of time, are preferred. For mortgage portfolios, the loss curve is front loaded, meaning that, on average, problem loans tend to surface within the first 12-18 months for first time buyers, and most of the portfolio losses would be captured within the first five to seven years. To the extent that a loan has seasoning in excess of 18 months, adjustments to default frequency may be made to reflect the lower risk of default. To the extent a portfolio has seasoning in excess of seven years, the borrower has built up equity in the property, and the probability of default is reduced.

Size of residential mortgage

The size of a residential mortgage loan is factor for determining its credit quality. During economic downturns, defaulted loans are more at risk because borrowers may have reduced cash flows to service debts and liquidity for luxury properties is low. Such illiquid property can often be liquidated only at a large discount.

Size of property

The size of property may be used as an alternative to the size of the mortgage. A property size that deviates from the normal range will usually be less liquid and may result in greater market value declines. A normal sized housing unit may differ in a city and in a county where population densities differ. For Taipei City, the normal property size (including public area) ranges between 20 pings (1 ping is 3.3 square meters) and 50 pings. Housing units that are smaller than 20 pings are mainly for young individuals and couples who are purchasing their first homes. Properties between 50 pings to 80 pings, the deluxe level, and those over 80 pings, the luxury



level, are more sensitive to market value decline in times of macroeconomic distress. The normal property size outside Taipei is generally more spacious because of the large gap in property prices between Taipei City and other regions of Taiwan. Nevertheless, larger property outside Taipei is also relatively less liquid in the secondary market.

Loan-to-value (LTV)

The loan-to-value ratio is defined as the mortgage balance (net of land value incremental tax at origination) divided by the value of the property used as collateral to secured the mortgage. The loan-to-value ratio is a key factor that determines loss severity. As one would expect, loss severity increases as the ratio increases. When faced with financial distress, borrowers with higher loan-to-value ratios have a higher propensity to default as they have less equity at risk.

Loan repayment type

The majority of the residential mortgages in Taiwan are amortizing loans with an average tenor of 25 years. An amortizing loan enables a borrower to make monthly principal and interest payments. Because the loan principal is reduced over time, the risk of loss upon default is lower than that with a balloon mortgage where the entire principal balance is due on the maturity date. Moreover, the likelihood to default decreases over time as the borrower, through repayments, builds up more equity in the home.

Loan purpose

The purpose of a loan is another important factor for determining portfolio risk. The benchmark pool includes only owner-occupied loans for freehold. In Taiwan, land is predominantly freehold. When a property is occupied by the owner, the borrower has a strong incentive to keep the mortgage current. Investment properties, tend to perform worse and therefore a penalty is applied to the default frequency for such related mortgages.

Loans for purchasing a property or for refinancing of a property can form part of the securitized pool. Refinanced loans with cash out (i.e., where the borrower refinances



his mortgage and obtains a larger loan) are higher risk, as the equity at risk to the borrower is smaller. For rating purposes, refinanced loans with cash out would attract a penalty.

Borrower status

Based on data and discussions with banks, the employment status of the borrower is important for determining risk. Salaried employees or professionals, default less frequently than waged employees, commissioned-based employees or the self-employed. This is because the sources of income for such individuals are relatively uncertain, especially during an economic downturn.

Loan record

At closing, the benchmark pool requires that the loans are current. A delinquent loan suggests problems and therefore, if included in the securitization portfolio, such loans would be deemed to have a higher likelihood of default. Similarly, past payment history is a good predictor of loan quality. A penalty is applied to the default frequency for loans where the borrower has frequently made late payments.

Insurance

In Taiwan, fire insurance is mandatory on property purchased with residential mortgages. Fire insurance coverage must cover the replacement cost of the building. Earthquake insurance has been mandatory on property purchased with a residential mortgage since April 2002. Earthquake insurance coverage is fixed at NT\$1.2 million. Flood insurance may also be required depending on the location of the property. The beneficiary of earthquake insurance, and all other types of insurance, should be the lender for the amount of the loan outstanding. Property without insurance may have a higher loss severity should a catastrophe occur and therefore, would result in the need for increased credit support.

Geographic concentration

In the benchmark portfolio, some amount of geographic dispersion is considered appropriate. Given the economic strength of Taipei City relative to all other areas in Taiwan, the benchmark pool allows up to a maximum of 75% of the exposure to be



homes in Taipei City. To ensure diversification within Taipei City and to mitigate earthquake risk, concentration for each postal code may not exceed 10%.

Servicer strength

A servicer is responsible for collecting interest and payments for a loan. The quality of the servicer in any transaction can increase or reduce losses for investors. A service with a strong collection mechanism may be able to better identify and collect on delinquent loans and therefore the likelihood of losses should be less.

Affordability

Few lenders perform debt-to-income analysis in Taiwan. However, this is slowly changing. The lack of debt-to-income analysis is a concern, and the default frequency will be increased in the rating evaluation.

Cash Flows Issues Affecting Taiwan RMBS

To determine the amount of credit enhancement required to support the rating, a cash flow model should be prepared by the bank. The cash flow model should replicate a transaction's asset and liability structure over the life of the transaction. Cash flows are stress tested according to rating category to ensure timely payment of interest and repayment of principal by no later than the final maturity date.

Cash flow assumptions:

- * Three waves of mortgage defaults are assumed to occur at different intervals over 12 months during a recession;
- * First wave begins six months before closing;
- * Any defaulted mortgages will take 24 months to liquidate and therefore, recoveries assumed for each rating category will take 24 months to become available;
- * Government interest subsidies to be modeled with a six to nine month delay depending on the program;
- * Cash flow modeling simulates a rising and falling interest rate environment;
- * Mortgages may be in arrears and not contributing interest cash flows to the transaction, ongoing delinquency stresses are modeled based on 50% of the assumed cumulative default rate, and persisting for up to six months and delinquency stresses

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are modeled for the life of the transaction;

- * Cash flows test for a low prepayment rate of 0.5% conditional prepayment rate, and where excess spread may be used to absorb defaults and to act as a credit support, a high prepayment rate scenario will also be tested;
- * Cash flow model includes sufficient back-up servicer fees, third party expenses and fees, and factors in 25 basis points of extraordinary expenses; and

Servicer transition reserves

During a servicer transition, collection may be delayed. To ensure the timely payment of interest during a servicer transition, three months of interest and senior expenses will be set aside as reserves to be funded at the closing of the transaction. The servicer transition reserves should also include any one-time expenses required by the back-up servicer, as well as factor the cost of any notification to borrowers.

Set-off reserves

Under Taiwan law, borrowers enjoy a set-off right. A set-off is a right to aggregate obligations between one party and another. This amount of the set-off rights is crystallized at the time of the loan transfer so long as notification is properly given, such as the notification under the Financial Asset Securitization Law. Where the originator is a deposit taker, setoff risk is sized taking into account deposit insurance regime in Taiwan to ensure that the special purpose trust or issuer will not suffer any losses when borrowers exercise their set-off rights. Set-off risk is mitigated through overcollateralization or cash reserves.

Surveillance

Surveillance is conducted throughout the duration of the transaction. Performance data must be regularly provided to Taiwan Ratings. This is to ensure that the transaction performs within the rating expectations and also to determine whether the portfolio or ratings on related parties supporting the transaction, such as swap counterparties, bank account providers or guarantors, have changed. Taiwan Ratings may take rating actions accordingly.