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Political Uncertainty and the Real Estate Risk Premiums in Hong Kong

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Abstract. **This study investigates the effects of political uncertainty associated with the 1997 repossession of Hong Kong by China on the real estate market. Such effect is reflected in the change in the real estate risk premiums. A model is derived to estimate the trend of real estate risk premium for each subsector of the real estate market from observable market data. The results suggest that there was a discrete jump in the risk premiums when the 1997 issue was revealed to the public in 1983, indicating investor concern about the post-1997 future of Hong Kong. The increase in the risk premium is much more obvious in nonresidential real estate than in the residential sector. This is probably due to its dual nature (an investment good as well as a good for self-consumption) and the effects of rent control, which only applies to the residential units. However there is also very strong evidence that investor confidence has been increasing recently, thus leading to a decline in the implied post-1997 risk premium, although the increasing confidence is still not sufficient to bring the risk premium back to pre-1983 levels. If the concern about the repossession of Hong Kong by China turns out to be unnecessary after 1997, a re-valuation of the risk premium will take place. This will bring the risk premium level back to the pre-1983 level, assuming no other significant changes have taken place. Other things being equal, such re-valuation will result in a one-time discrete increase in property prices. This is in contrast to the common view that investors have already discounted the 1997 Hong Kong/China issue completely.**

Introduction

The purpose of this study is to estimate of the risk premium for investing in Hong Kong real estate and to assess the effects of the 1997 repossession of Hong Kong by mainland China, if any, on the risk premium.

Ever since Margaret Thatcher visited China in 1983 concerning the future of Hong Kong, the 1997 issue has been a major concern for all Hong Kong real estate investors. Not only has it affected the thinking of all Hong Kong people, the issue has attracted more and more attention internationally as Hong Kong's real estate investment market has become increasingly international.

In 1997, Hong Kong, one of the world's freest economies, was to be handed back to China, the largest planned economy in the world. Despite the fact that the British Government and the Chinese Government signed the Sino-British Joint Declaration in 1984, which guarantees that the economic system and the life style of people in Hong Kong shall remain unchanged for fifty years after 1997, the investment environment post-

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1997 has become more uncertain. Deng Xiaoping's one-country, two-system model is certainly innovative and is perhaps one of the best solutions for solving the political, economic and ideological issues that may arise as Hong Kong becomes part of China on July 1, 1997. However it is also because of its novelty that uncertainty arises.

Uncertainty is always associated with new ideas, although such ideas might prove to be excellent later. Uncertainty about what might happen after July 1, 1997 increases the risk of investing in Hong Kong, but this is especially true for real estate, since real estate is not as liquid as other forms of investment, and real estate assets are immobile.

At the same time, the economic reform in China, which started in 1979, has opened up numerous opportunities for both Hong Kong and overseas investors. Hong Kong's economy has benefited from the huge supply of cheap labour and land in China and vast trading opportunities (due to convenient access to a huge virgin market with a population of 1.2 billion).

Ever since the economic reform in China, the GDP of Hong Kong has been growing at an average rate of 8% in real terms (see Census and Statistics Department, 1994). As a result of this spectacular economic growth, some people argue that the political risk associated with 1997 has been vanishing and has by now virtually disappeared. An even more optimistic view is that the 1997 issue is in fact a positive factor. The argument is that as Hong Kong became part of China (as of July 1, 1997), Hong Kong would further benefit as China's economy continues to open up. This view is sometimes supported by opinion surveys of investor confidence about the future of Hong Kong.

One of the most frequently cited pieces of "evidence" by the media in support of the above optimistic view is the declining trends in rental yields or capitalization rates. Up until the late 1980s, the average capitalization rate for Hong Kong's real estate market was about 10%. The average capitalization rate has declined since then. It is now approximately 5%. The decline in capitalization rates has been interpreted as a decrease in the risk premium for investing in Hong Kong real estate, which also implies an increase in investor confidence about the future of Hong Kong.

The problem with this simplistic interpretation is that the capitalization rate is affected by other factors, such as interest rates, expected long-term rental growth capital, appreciation, etc., besides the risk premium. A decrease in the capitalization rate does not necessarily imply a decrease in the risk premium. In order to assess whether the 1997 issue has had any effect upon the risk premium, other factors affecting the capitalization rate must be taken into account.

Research Design

Whether the 1997 issue has any effect upon the risk premium of real estate investment in Hong Kong is an empirical question. The major objectives of this study are to test whether such an effect exists and to estimate its change over time. The study is positive in nature in that the results have no connotation about whether the future arrangements for Hong Kong, as stipulated in the Sino-British Joint Declaration, are realistic or achievable, nor do they imply the practicability of the one-country, two-system policy. The result simply shows the market's assessment of real estate investment risk resulting from the 1997 issue, if any. It does not mean that the market's ex ante assessment is correct; it is simply a fact. The market's expectations might easily prove to be wrong, ex post, either positive or negative.

However, the results potentially have important implications for Hong Kong real estate investor investment strategy. Since the risk premium is implicit in the capitalization rate, explicit estimation of the risk premium can help investors assess the risk premium they have to pay and therefore enable them to make more informed investment decisions.

Land in Hong Kong is leasehold rather than freehold. However the lease period is very long (over seventy-five years in general). Therefore, the freehold formula is a good approximation. By definition, the rental yield or capitalization rate of an unleveraged freehold real estate is:

$$R = \frac{A}{V}, \tag{1}$$

where A is the current market rental income per annum and V is the capital value of the property. Ignoring the effect of depreciation, R is also the discount rate since equation (1) can also be written as:

$$V = \sum_{t=1}^{n} \frac{A}{(1+R)^t}, \tag{2}$$

where n is approaching infinity or very large (say >fifty years). The nominal rate of return for real estate investment (R_N) is defined as the discount rate that reduces the nominal stream of net rental income, taking into account the expected future rental growth, to the current market capital value. Therefore:

$$V = \sum_{t=1}^{n} \frac{A(1+g)^t}{(1+R_N)^t}, \tag{3}$$

where g is the expected long-term rental growth, which is also equal to expected long-term capital appreciation, assuming the changes in capitalization rates are negligible in the long run. The market equilibrium capital value is determined in the long run by expected future rental income.

Comparing (1) and (3):

$$\frac{1+g}{1+R_N} = \frac{1}{1+R}, \tag{4}$$

and,

$$R_N = R + g + Rg\,. \tag{5}$$

However, R_N is not directly observable, therefore an indirect means of estimating R_N is necessary. In theory, it is determined by the nominal risk-free rate-of-return (opportunity cost of money) and the return for bearing the risk of real estate investment (or the risk premium). That is, R_N can be broken down into two major components so that:

$$R_N = R_F + R_P\,, \tag{6}$$

where R_F is the nominal risk-free interest rate (in perpetuity) and R_P is the real estate

investment risk premium. We have ignored the difference in transaction costs between investing in risk-free investment vehicles (such as government bonds) and those of investing in real estate assets. This, however, is not important for the purpose of this study since such difference is unlikely to change substantially over time.

Combining equation (5) and (6) yields:

$$R_p = R - R_F + g + Rg \, . \tag{7}$$

Therefore the risk premium can be estimated from the capitalization rate, long-term nominal risk-free interest rate and expected long-term rental growth. Data required for estimating these variables are described in the next section.

The reader should note that equation (7) is derived using the constant growth model. While the model can be a good approximation, it can also distort the results if growth rates fluctuate significantly in early years. This, however, should not have any significant effects on the results of this study since its focus is on long-term changes, rather than short-term fluctuations.

The 1997 issue was revealed to the general public in 1983. Assuming that the market is efficient with respect to publicly available information, the impact of the 1997 issue can be assessed by comparing the risk premium before and after 1983. A sustained increase in the observed risk premium after 1983 would indicate an increase in the perceived uncertainty associated with the 1997 issue.

In order to assess whether there has been any change in investor perceptions about the real estate investment risk associated with 1997, it is necessary to estimate the implied post-1997 risk premium from the observed risk premium. In order to do this, it must be assumed that the 1997 issue only affected investor confidence about the income generated from the real estate asset after 1997. That is, the risk associated with the rental income before 1997 would be the same as if there were no 1997 issue. The stream of rental incomes before and after 1997 should therefore be discounted using different discount rates (implying different risk premiums) such that:

$$\frac{1}{R} = \sum_{t=1}^{n} \frac{(1+g)^t}{(1+R_{pb}+R_f)^t} + \sum_{t=n+1}^{\infty} \frac{(1+g)^t}{(1+R_{pa}+R_f)^t} \, , \tag{8}$$

where n is the number of years to mid-1997, R_{pb} and R_{pa} are, respectively, the implied risk premium before and after 1997. Assuming that the risk premium remains stationary had there been no 1997 issue, the implied pre-1997 risk premium (R_{pb}) can be estimated from the average risk premium before 1983 (when the 1997 issue was not known to the public) using equation (7). Equation (8) can be interpreted as pricing the real estate asset as if it has an artificial expiration date (mid-1997), after which its nature will be different resulting in a different risk premium, and therefore, a different discount rate.

The variable R_{pa} in equation (8) can only be solved using numerical methods, since it is a polynomial of order n. Since R_{pa} is an indicator of investor confidence about the post-1997 era, if the trend of R_{pa} is decreasing (increasing), then investor confidence about Hong Kong's future after 1997 is increasing (decreasing). The impact of the 1997 issue disappears when there is no significant difference between R_{pa} and R_{pb}.

Data

Capitalization Rate (R)

Historical information on capitalization rates in Hong Kong has been scattered and not readily available. Fortunately, rental and capital price indexes for different types of real estate can be obtained from the Rating and Valuation Department (RVD) of the Hong Kong Government. Rental and capital price indexes of retail premises (shops), offices, flatted (multistorey) factories, and different categories of private residential premises are available for the 1978–94 period. Residential premises are further subdivided by the Rating and Valuation Department into five classes according to unit size as follows:

Class A	below 39.9 m^2
Class B	40–69.9 m^2
Class C	70–99.9 m^2
Class D	100–159.9 m^2
Class E	over 160 m^2

Rental and price indexes are available for Class A, B, C, and Class D/E combined.

The rental and price indexes are constructed based upon actual market transactions adjusted for quality differences using the Rating and Valuation Department's assessment of the ratable value. The following paragraphs were extracted from the technical notes of the Rating and Valuation Department (1994). They indicate the characteristics of the rental and property price indexes:

> Average rentals are based on an analysis of rental information recorded by the department for fresh lettings (new leases) effective in the quarter being analyzed. For non-domestic (commercial real estate) premises, rentals negotiated on renewal are also included.
>
> Average rentals and prices may change from one period to another not only because of value changes, but also because of shifts in quality. The rental and price indices, on the other hand, are designed to measure rental and price changes with quality kept at a constant. Movement of the indices may, therefore, differ from changes in the average rentals and prices for the same period.
>
> The rental and price indices are derived from the same data that is used to compile average rentals and prices. The indices measure value changes by using rental or price, divided by ratable value of the subject properties, rather than by reference to the rental or price per square meter of floor area. In effect, by utilizing ratable value, allowance is made not only for floor area, but also for other qualitative differences between properties.

Compared with other valuation-based indexes produced by private-sector consultants, the RVD indexes are more suitable for this analysis, since they are free from the appraisal-smoothing problems. Examples of research on the problems associated with bias resulting from appraisal smoothing include Burns and Epley (1982), Chan, Hendershott and Sanders (1990), Firstenberg, Ross and Zisler (1988), Geltner (1991), Giliberto (1988,

1993), Lee (1987), Newell (1994), Webb, Miles and Guilkey (1992), and Wheaton and Torto (1989). Another reason for using the RVD data is that they are available over a longer time horizon than any other similar series currently available in Hong Kong.

Equation (1) is also applicable to the respective indexes; therefore the trends of the capitalization rates for different types of real estate can be estimated from the respective price and rental indexes. However, this method assumes a 100% occupation rate. Therefore the capitalization rate trend has to be adjusted for changes in vacancy rates, i.e.,

$$\overline{R}_t = \frac{\overline{A}_t}{\overline{V}_t}(1-\upsilon_t), \tag{9}$$

where R_t, A_t and V_t are the indexes of capitalization rates, rental incomes and prices respectively, and v_t is the vacancy rate during time t. Vacancy rates are available from the Rating and Valuation Department on a yearly basis (year end) only. For the purpose of this study, quarterly figures are estimated by linear interpolation between the available year-end figures.

By estimating the average capitalization rate (adjusted for vacancy rate) of a particular period, say, the fourth quarter 1994, historical capitalization rates can be derived from the capitalization rate trends estimated from the rental and price indexes. A similar method is used by the Rating and Valuation Department (1994) to arrive at the capitalization rates (before adjustment for vacancy rates). Their figures are very similar to the author's estimate (before adjustment for vacancy rates). Exhibits 1 through 7 show the trends of capitalization rates for seven sectors of the Hong Kong real estate market.

Nominal Risk-Free Interest Rate (R_F)

In theory, R_F is the interest rate of a risk-free bond with no maturity date. In practice, R_F is normally estimated by the ten-year government bond yield. The ten-year bond yield should, in theory, be lower than R_F, since the latter is longer term and thus should have

Exhibit 1
Implied Capitalization Rate—Residential (Class A)

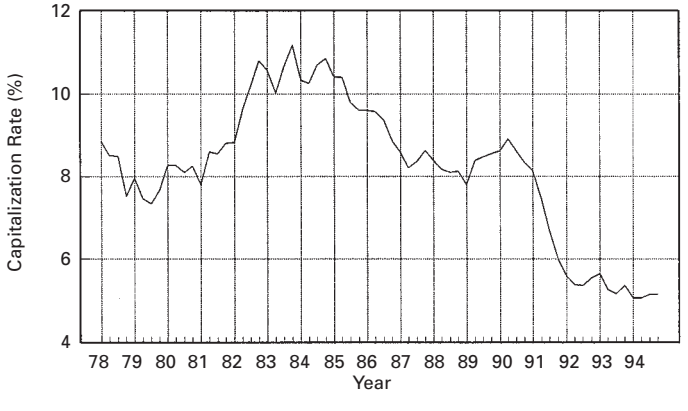


Exhibit 2
Implied Capitalization Rate—Residential (Class B)

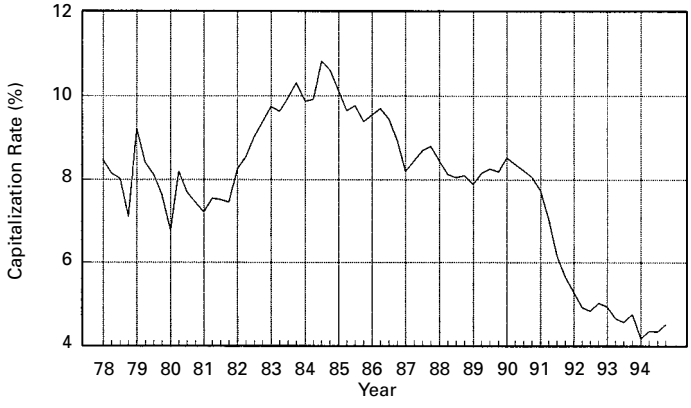


Exhibit 3
Implied Capitalization Rate—Residential (Class C)

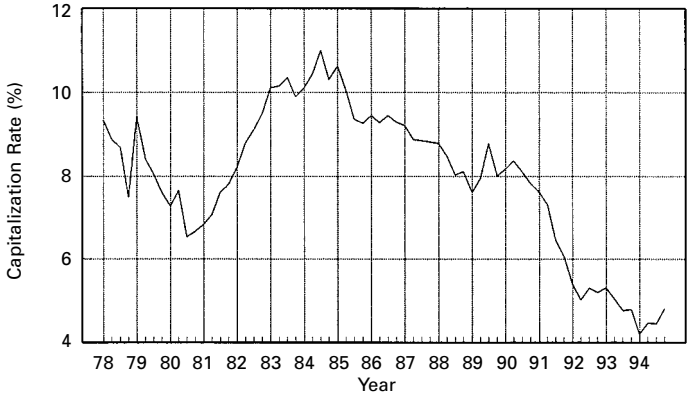


Exhibit 4
Implied Capitalization Rate—Residential (Class D/E)

Exhibit 5
Implied Capitalization Rate—Offices

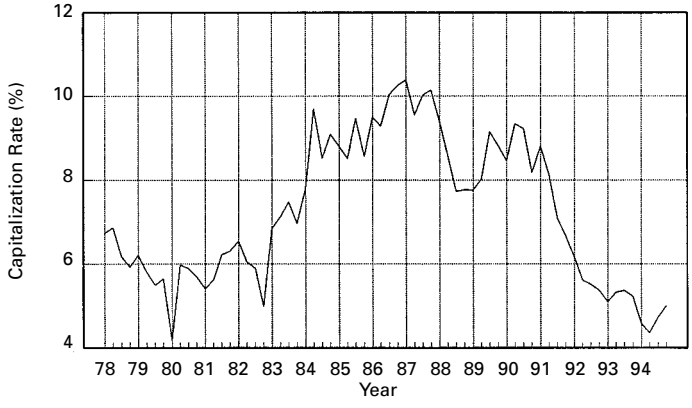


Exhibit 6
Implied Capitalization Rate—Retail Shops

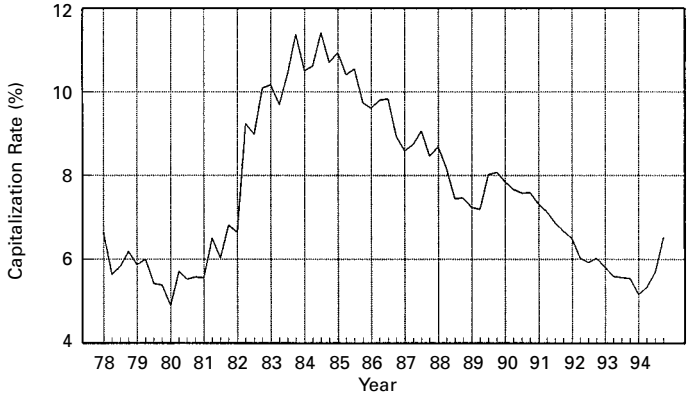
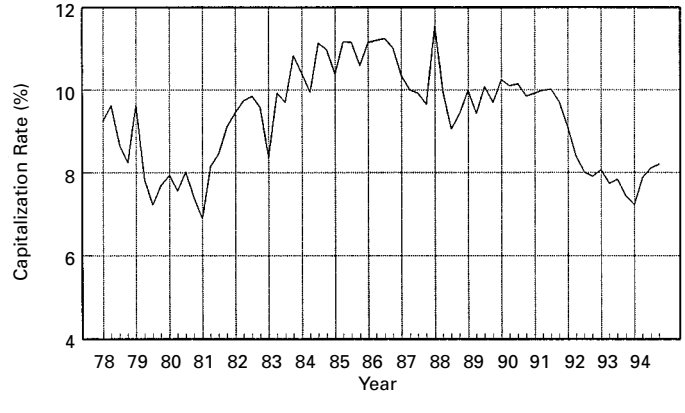


Exhibit 7
Implied Capitalization Rate—Flatted Factories

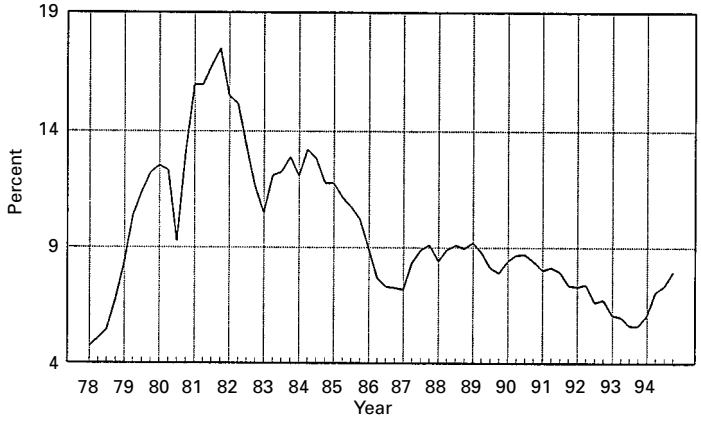


a premium over and above the ten-year bond yield. However, such differences are small and should be relatively consistent over time. Therefore the use of the ten-year bond yield should not significantly effect the results of the analysis.

However, the Hong Kong government has never issued long-term government bonds. Fortunately, long-term risk-free interest rates in Hong Kong after 1983 can be estimated using the ten-year U.S. government bond yield which is readily available from the *International Financial Statistics Yearbook* published by the International Monetary Fund, Washington, D.C. The use of the U.S. long-term interest rate as a proxy for the Hong Kong long-term interest rate is possible because the Hong Kong dollar has been pegged to the U.S. dollar at a rate of one U.S. dollar to 7.8 Hong Kong dollars since 1983. Under this system, the note-issuing banks in Hong Kong (currently there are three of them: the Hong Kong Bank, Standard Chartered Bank and the Bank of China) have to deposit one U.S. dollar with the Hong Kong Government's Exchange Fund whenever HK$7.8 is issued and the Exchange Fund also guarantees exchange (between H.K. and U.S. dollars) with the note-issuing banks at the pegged rate. This system has effectively turned all Hong Kong dollars into U.S. dollars. Therefore, the interest rates of the two currencies should be approximately the same and thus the post-1983 long-term interest rate in Hong Kong can be estimated by using the long-term U.S. government fund yield. For the purpose of this study, the potential risk of the Hong Kong government not being able to maintain the peg is ignored. Such risk will lead to an under- or overestimation of the long-term risk-free interest rate depending upon whether there is upward or downward pressure on the exchange rate of Hong Kong dollars. While it is difficult to assess the direction and magnitude of this bias directly, the shorter term interest rates of Hong Kong and U.S. dollars are almost identical; therefore the bias resulting from such risk should not be significant.

Before 1983, the interest rates of the two currencies were not exactly in line with each other, although they were closely related due to the strong dependency of Hong Kong's economy upon the U.S. economy. For the purpose of this study, long-term interest rates before 1983 were estimated from short-term interest rates, assuming that the term struc-

Exhibit 8
Long-Term Nominal Risk-Free Interest Rate



tures of interest rates in Hong Kong and the U.S. were similar. Exhibit 8 shows the estimated long-term risk-free interest rates.

Expected Rental Growth (g)

Measurement of the expected long-term rental growth (g) involves the analyses of how expectations are formed. There is a substantial amount of research literature on the theory of expectation formation and the measurement of expected price changes. Examples of research on estimating expectations include Dougherty and Van Order (1982), Harris (1989) and Hendershott and Hu (1981).

For the purpose of this study, the assumption that people's expectations about future rental price changes depend upon historical and current rental prices has been used, i.e.,

$$g_t = f(P_{t-i})\ i = 1, 2, 3, \ldots, \tag{10}$$

where the P_{t-i}'s are current and historical rental prices. In order to estimate the expected long-term rental growth, long real estate rental price series are required. They are, however, lacking in Hong Kong. So for the purpose of this study, expected long-term rental growth is assumed to be not significantly different from expected long-term inflation. We have to use expected inflation rate as a proxy for expected rental growth rate since a much longer time series for general inflation is available. The available rental price series is not long enough for us to estimate expected rental growth using equation (10). The implicit price deflator for private consumption expenditures is used as the inflation index. Expected rental growth, (g), is estimated as the moving average of the annual percentage changes in this index. It is difficult to determine the number of periods for the moving average. Moving averages of different quarters are used. The author has chosen to report the results of using a twelve-quarter moving average in this study. However the use of moving averages greater than eight quarters procured similar results. In fact, the longer the moving average used, the more significant were the results. Therefore it is only necessary to assume that real estate investors have memories of more than eight quarters in terms of forming their long-term rental growth expectations, which is not unreasonable given the nature of real estate.

Results

The trends of R_p for all the property sectors are calculated using equation (7). The trends are shown in Exhibits 9 through 15. The dotted horizontal lines show the subperiod averages before and after the fourth quarter 1982 (when the 1997 issue was revealed to the general public). The solid lines show the trends of the estimated risk premiums.

All trends show significant fluctuation over time, which is likely to result from random data error and the sluggish response of rental and capital prices to changing demand and supply conditions. Such variances are, however, short term and random, rather than systematic in nature and thus would not significantly effect the reliability of the results.

To test whether there was a jump in the risk premium after the 1997 issue was revealed to the general public (in the fourth quarter 1982), the difference between the average values of R_p before and after 1983 were calculated for each property type. A standard t-test was used to determine whether the observed differences are statistically significant for each property type. Exhibit 16 summarizes the results.

Exhibit 9
Risk Premium—Residential (Class A)

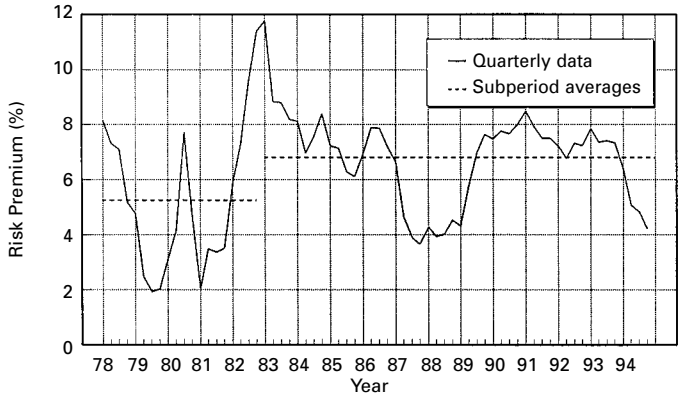


Exhibit 10
Risk Premium—Residential (Class B)

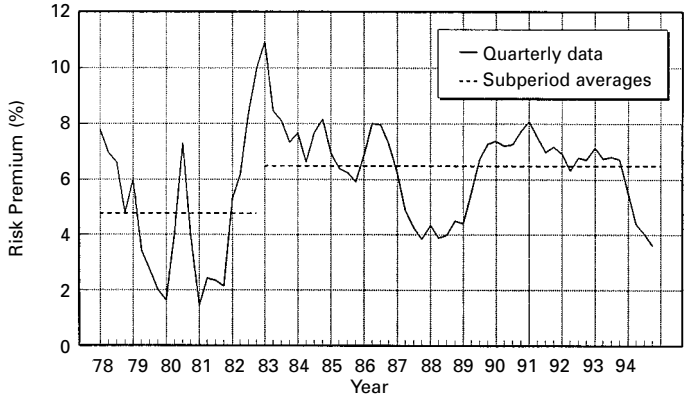


Exhibit 11
Risk Premium—Residential (Class C)

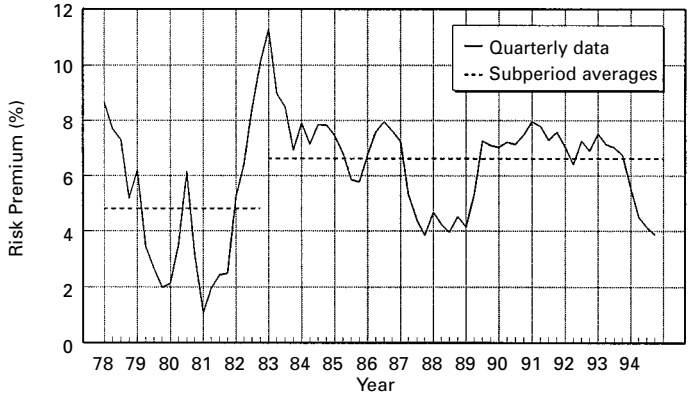


Exhibit 12
Risk Premium—Residential (Class D/E)

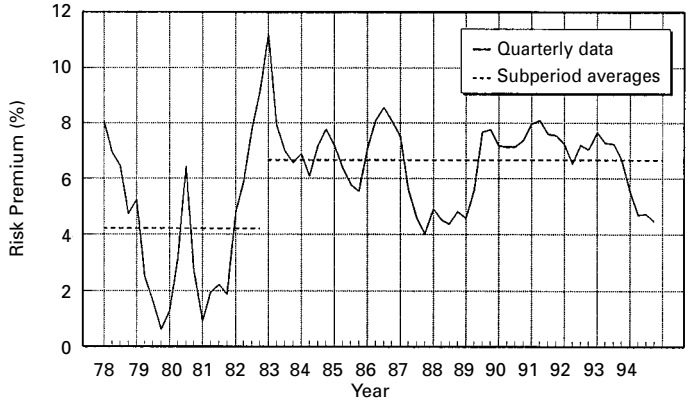


Exhibit 13
Risk Premium—Offices

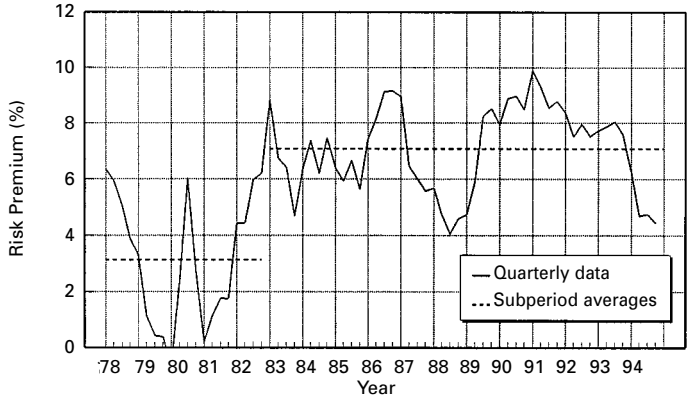


Exhibit 14
Risk Premium—Retail Shops

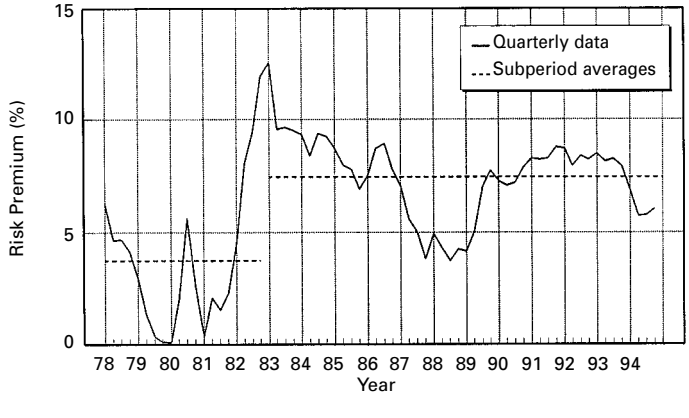
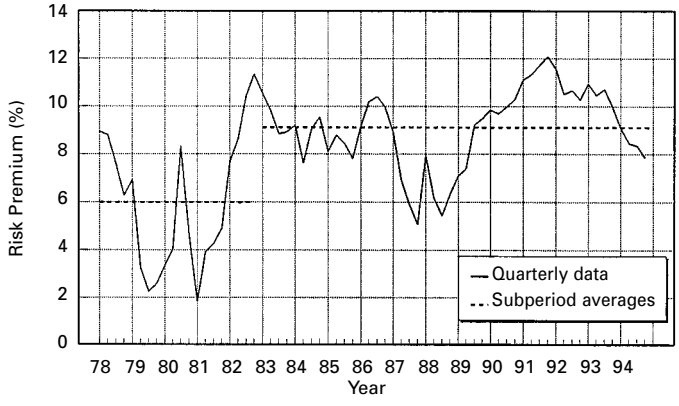


Exhibit 15
Risk Premium—Flatted Factories



All the property types exhibit an increase in the risk premium after 1983 and the increases are all significant at the 99% level of confidence. The increase in the risk premium is, however, larger and more significant (larger *t*-statistics) for the nonresidential property types. Among the residential property types, the results are more significant for larger units than for smaller ones. The results for Class A, B and C are very similar. Statistical tests cannot reject (at 90% level of confidence) the hypothesis that the increase in risk premiums for the smaller units (Class A, B, and C) are the same (Exhibit 17). However, the risk premium increases for larger units (Class D/E) are significantly higher than those of the smaller units (Class A, B and C). The differences in risk premium increases between large units and smaller units are statistically significant at the 99% level of confidence (Exhibit 17).

Such results can be accounted for by two reasons. First, residential units potentially have a dual nature. They can be both an investment vehicle, as well as a consumption

Exhibit 16
Comparison of the Average Risk Premiums before and after 1983

Subsector	Before 1983 (%)	After 1983 (%)	Difference (%)	*t*-Stat.
Nonresidential				
Offices	3.1	7.1	3.9	8.12*
Retail Shops	3.8	7.5	3.7	6.00*
Flatted Factories	6.0	9.1	3.1	5.85*
Residential				
Class A	5.3	6.8	1.6	2.91*
Class B	4.8	6.5	1.7	3.44*
Class C	4.8	6.6	1.8	3.49*
Class D/E	4.2	6.7	2.4	4.94*

*significant at the 99% level of confidence

Exhibit 17
Comparison of Increase in Risk Premium for Different Types of Residential Properties

	Class A	Class B	Class C	Class D/E
Class A	0.0%			
Class B	0.1% (1.22)	0.0%		
Class C	0.2% (1.62)	0.1% (0.92)	0.0%	
Class D/E	0.8% (5.10)*	0.7% (5.68)*	0.6% (5.45)*	0.0%

Notes: Entries to the table are the difference in the increase in risk premium after 1983. Figures in the brackets are the *t*-statistics.
*significant at the 99% level of confidence

good. In Hong Kong, a large proportion of people living in private housing are owner-occupiers. For owner-occupiers, since the residential units are purchased for satisfying self-accommodation needs, rather than for the purpose of investment, the residential capitalization rate is consequently less sensitive to changes in political risk. Exhibit 18 shows the proportion of newly completed residential units owned by owner-occupiers by type of residential class. Smaller units (Class A, B and C) have a higher proportion of owner occupiers when compared with larger units (Class D and E) and therefore the increase in the risk premium is also smaller for smaller units (Exhibit 16).

Second, the other reason may be due to rent control for residential property. Such

Exhibit 18
Proportion of New Private Residential Units Purchased by Owner-Occupiers (versus Investors) by Class

	Class (%)				
Year	A	B	C	D	E
1986	94	93	88	75	26
1987	96	95	91	59	53
1988	93	94	90	74	40
1989	89	92	84	59	59
1990	79	81	76	52	15
1991	84	88	57	52	31
1992	83	92	77	52	32
1993	79	82	77	59	41
1994	75	81	63	52	46
Avg.	86	88	78	59	38

controls place a cap on the rental increase possible for all pre-war units, as well as post-war units below a certain ratable value, which is largely determined by size. This means that the contract rent can deviate from the market clearing rent. Since the rent control legislation effects the smaller units (lower ratable value) more than large units (larger ratable value), the results are less significant for smaller units (Exhibit 17).

On the other hand, the nonresidential property types are free from rent control and thus the risk premium results are more reliable. Results for the nonresidential property types show that after the 1997 issue had been revealed to the public, investors began demanding a significantly higher risk premium for investing in Hong Kong real estate and that the increase in the risk premium persisted up to the end of 1994 (the end of the period used in this study).

The implied post-1997 risk premiums (R_{pa}) for the nonresidential property types are calculated from equation (8) using an iterative/numerical method. There is no solution for R_{pa} for the quarter immediately after the 1997 issue was revealed to the public (1st quarter 1983) in the retail subsector since the capitalized stream of rental income before 1997, assuming no 1997 issue (first term of the right-hand side of equation (8)) is larger than the observed capital value (the left-hand side of equation (8)). This implies that the real estate asset will have a value less than zero or an infinitely high-risk premium after 1997. This can be due to data errors, errors in the assumptions or investors' over-reaction. Since there is only one such point, it was excluded from the analysis. This will not change the conclusion that the trend of R_{pa} has been decreasing towards 1997.

The resultant trends are shown in Exhibits 19 through 21. The dotted line shows the implied pre-1997 risk premium (R_{pb}), which represents the risk premium had the 1997 issue not existed. The implied pre-1997 risk premium is estimated using the average observed risk premium before 1983. The thin solid line shows the trend of the implied post-1997 risk premium.

Although R_{pa} fluctuates significantly, a general downward sloping trend can still be

Exhibit 19
Implied Post-1997 Risk Premium—Offices

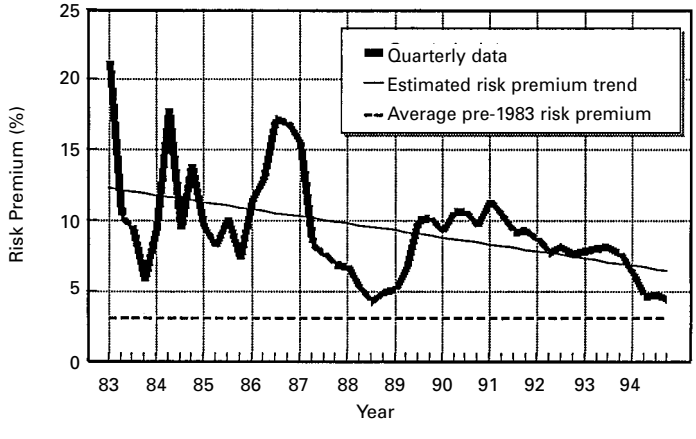


Exhibit 20
Implied Post-1997 Risk Premium—Retail Shops

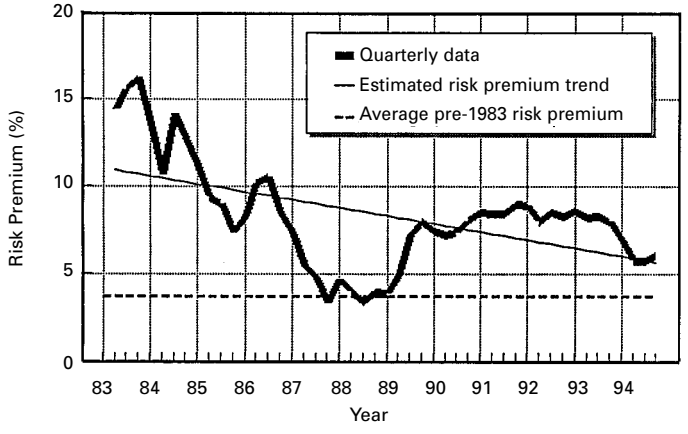
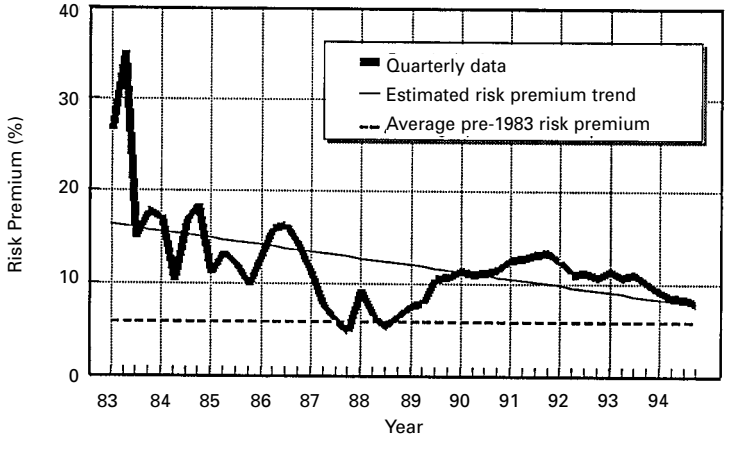


Exhibit 21
Implied Post-1997 Risk Premium—Flatted Factories



observed. In order to test whether the underlying trend is significant, R_{pa} is regressed on the time variable (t) assuming a linear underlying trend, i.e.,

$$R_{pa}=a+bt\ . \tag{11}$$

The results are shown in Exhibit 22. All slope parameters (b) are negative and significant at the 99% level of confidence. The results suggest that investors in Hong Kong are becoming increasingly confident about the post-1997 period, resulting in a downward adjustment of the post-1997 risk premium. The thin lines in Exhibits 19 through 21 show the estimated underlying trends. The results are similar when a log-linear trend of the form $\ln(R_{pa})=a+bt$ is used.

Exhibit 22
Estimated Underlying Trends of the Post-1997 Risk Premiums

Offices	$R_{pa}=12.26-0.124t$ (13.19)* (3.65)*	Adj. $R^2=0.21$	$F_{1,46}=13.33$*
Retail Shops	$R_{pa}=11.03-0.115t$ (13.80)* (3.96)*	Adj. $R^2=0.24$	$F_{1,45}=15.71$*
Flatted Factories	$R_{pa}=16.29-0.182t$ (12.61)* (3.85)*	Adj. $R^2=0.23$	$F_{1,46}=14.83$*

Note: Figures in brackets are the *t*-statistics. R_{pa} and t are in percentage points and number of quarters, respectively.
*significant at the 99% level of confidence

On the other hand, the R_{pa} trend is consistently above the R_{pb} trend for all the commercial property types. This implies that investors, though becoming more confident about Hong Kong's future, are still uncertain abut the post-1997 period. The post-1997 risk premium has never gone down to that of the pre-1983 period when the 1997 issue did not exist.

The results of investor confidence surveys often suggest that the 1997 issue is a non-issue and that investors have completely discounted the political risk associated with 1997. However this may need to be re-interpreted, given the findings in this study. While investors are increasingly confident, they have not completely discounted their concerns about Hong Kong's investment environment in the post-1997 period, since the implied post-1997 risk premiums are still (up to the end of 1994) above the pre-1983 level. People who believe that the investors no longer take into account the 1997 repossession issue have confused the "level" of risk and its "change" over time. A decreasing (increasing) risk premium does not necessarily imply a low (high) level.

The interpretation of the results for opinion surveys done in Hong Kong also depends upon how the questions in the survey were structured and interpreted by people being surveyed. Since the 1997 issue was brought into the market more than fourteen years ago, real estate investors, and particularly, those in the market for a long time, have taken this event for granted. Survey findings that suggest that the 1997 issue was a non-issue could be taken to mean a smooth transition scenario up to 1997. That means, all the adjustments in the risk premiums had already taken place. That is, there would be no further upward adjustment to the already upwards-adjusted premium after 1997. Interpreted this way, the survey results do not necessarily contradict the empirical results of this study, since the former does not imply that the 1997 issue had no impact upon the real estate market. It merely suggests that the 1997 issue had already been taken into account. This interpretation is also consistent with the rational expectations hypothesis.

Most investors believe that a complete re-valuation (resulting in decreased risk premium) of the Hong Kong investment market (including the real estate market) has already occurred in the past few years. However this study suggests that further re-valuation in the real estate market is still possible, given the most optimistic scenario under which the risk premiums fall back to the pre-1983 period. The implication is that investors who are confident about Hong Kong's future and believe that the post-1997

period should not warrant a risk premium higher than that of the pre-1983 period should take this opportunity to add Hong Kong real estate to their portfolios.

Summary and Conclusions

A method for assessing the impact of the 1997 repossession of Hong Kong by China on the risk premium of investing in Hong Kong real estate is presented. The results of the analysis indicate that the revealing of the 1997 issue to the general public in 1983 caused a significant increase in the risk premium for all the commercial subsectors of the real estate market. Results from the residential subsectors are less obvious, due mainly to complications arising from residential rent control which distort the observed rent.

Contrary to the beliefs of most people, the effects of the 1997 issue on the risk premium have not completely dissipated. Investors still have some concerns about the uncertainty resulting from the 1997 repossession of Hong Kong by China. On the other hand, the results of this study are consistent with the common perception that investors are becoming more confident about the future investment environment in Hong Kong, since the underlying trends of the implied post-1997 risk premiums for all nonresidential real estate subsectors are downward sloping. However, despite such downward-sloping trends, the increase in risk premiums resulting from the 1997 issue has not totally disappeared. Therefore while investor confidence about Hong Kong's future, in general, increased towards 1997, it did not fall back to the pre-1983 level. This also implies that there is still a possibility for another re-valuation. If the concern about the one-country, two-systems arrangement proves to be unnecessary post-1997, there will be a readjustment of Hong Kong's investment market. All other things being equal, the readjustment will result in a further decrease in the risk premium, and therefore, an increase in real estate prices!

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