

The Office Buildings Market in São Paulo: Time cycles to absorb vacant space and to recover investment attractiveness

JOÃO DA ROCHA LIMA JÚNIOR AND CLAUDIO TAVARES DE ALENCAR

Department of Civil Construction and Engineering, Polytechnic School - University of São Paulo, Av. Prof. Almeida Prado, travessa 2 n.83. Cidade Universitária – 05508-900. São Paulo, Brasil. e-mail: rocha.lima@poli.usp.br; claudio.alencar@poli.usp.br

Summary

- The office market in São Paulo has been in recession since the year 2000. This situation came up due to two main factors: [i] – the very aggressive attitude of developers during the period that comprises the year 1999 until 2000. At that time there was a very strong perception among investors that a new expansion era for new office buildings in São Paulo was about to begin and, moreover the Brazilian economy had started its recovery; [ii] – The intense retraction of the Brazilian economy along with the political transition in 2002, which was mainly caused by the deterioration of the expectations in relation to the economic policies that would be performed by the new government.
- The recovery of the economic activity in the office building market firstly depends on the macroeconomic growth in Brazil and within the São Paulo metropolitan area. On the other hand, the expansion of the activity in the office buildings sector relies not only on the developers' expectations of how and when the current vacant units will be rented, but also on the potential risk-return composition of new buildings to be developed in the next years.
- This paper describes the economic scenario in which investment decisions to build new office buildings for rent in our local market are made and we also simulated both the necessary period of time for investments in the São Paulo office market to recover attractiveness and the time interval for the increase in the occupation rate absorb the actual vacant spaces. These simulations have taken place based on projections for the Brazilian GNP increase and they showed that for an annual increment of 4.5%, in 3 years could be reached both, attractiveness for new investment and occupation of vacant areas. For a 2.0% annual growth, the absorption of vacant spaces will take 4 years from now and new investment would be attractive only in 2012. Besides, we discuss the market prices fluctuations on the inflexion point where the transition from one phase of the real estate cycle (recession-non attractiveness) to another (recovery-attractiveness) occurs.

Keywords: office buildings, real estate cycles, investment analysis, macroeconomic performance.

Introduction

The São Paulo' offices rental market went through great changes in the cycle 2000 – 2003. The market, whose conditions offered a seemingly comfortable relationship between rental prices and purchase value of the areas, in 2003 moved to a condition where the direct relationship between rental prices and area values became very fragile, what led to a significant reduction of interest on the part of investors. These facts have led to this study, which discusses the two major subjects related to that

market in Brazilian economy:

[i] The structure of this market in Brazil, chiefly in what concerns the means of funding for these undertakings and the problem of the quality of decision-making and information for investing, in order to review this process of decision-making by establishing direct relationships between the value of the real property and the rental prices at a given moment.

[ii] In what concerns to the specific aspect of the current market situation, by simulating scenarios of the macroeconomic situation for the coming years, aiming

at discussing the capacity of price adjustment, both in what relates to regaining attractiveness and occupying the vacant buildings.

Based on the evidences of the market behaviour in the period between 1995 – 2003, we discuss the development of funding mechanisms used to invest in the Brazilian market, aiming at showing its characteristics, which presents behavioural biases or erroneous assessment parameters in the investment analysis, which can pose risks not graspable for investors, but which are potentially harmful for them in the future. We shall address the three first topics in this study. On the other hand, in times considered as of crisis, in which the value of rentals presents a direct relationship with the price for purchasing or investing that is not attractive for investors, it would be inaccurate to assume that such condition is everlasting, and it is not consistent with the reality of Brazilian market. Thus, it is necessary to simulate the potential of the market to reorganise itself in order to allow new investments. These simulations are carried out in the last four topics of this study.

Funding Means in Use in Brazil

By analysing Ambrose et al. (2000), (Geltner and Rodrigues, 1998), Gerbich et al. (1999), Sanders (1998) and Sing et al. (2004) we can conclude that the funding structures for developing real estate undertakings in Brazil have a very specific configuration, when compared to those in other economies. There are no long-term funding offers in the market at rates sustainable by the income generation capacity of these undertakings, and thus, the developers do not have the most traditional means for leveraging their investing capacity in this sector. As a result, the demand has to be met with undertakings that are brought about using exclusively investment resources of the investors' own capital. Office buildings for renting also suffer from this lack of financed resources, and consequently do not depart from the general rule of the Brazilian real estate market.

The developers' capital cannot meet the market demand and the long payback of such investments does not allow the developers that wish to use their own capital in an intensive way to operate in full swing. As the payback for investments in office buildings for rental is too long, an developer can only recover his investing capacity long after delivering the building to the market, and thus, by acting supported only by his own capital, his investing capacity is recovered only from time to time, damaging the construction of new buildings, which cannot be developed efficiently and with due pace.

In more structured economies, with greater power of funding, office buildings are built with little contribution of investment capitals, which are combined with long term funding and that offer period of grace for amortization. With such kind of funding, investment capital payback is short, allowing the developer to keep his insertion in the market and to offer new buildings to keep pace with the demand. This does not occur in Brazilian economy, and as a result, the balance in the sector can only be achieved with the use of third parties' investments, whose investment policy is based on the expectation of having a long payback, a longer duration and to maintain some income level during a long time.

The supplying for the demand in the Brazilian market is carried out with the use of funds from conservative savings accounts, which are traditionally anchored in real estates portfolios for obtaining income. This characteristic of the savers is exploited by the developers in the office building rental business in the following way: the developers develop the real properties and the savers, by buying them, become the tenants, who put the units on the market.

The office buildings for rental, atomised into units (storeys and even small offices apartment), are bought by savers, who expect them to be safe reserves of value, that can generate income flows with a certain degree of sustenance and homogeneity. The institutional investors, who have greater investment capacity and can have portfolios with entire buildings and not only part of them, have the same expectations, but their investment criteria is to have safe reserves of value and regular income flows. Therefore, the market is divided into two large segments: [i] the developers, who construct the buildings but do not explore them, because they need to recover their immobilizations in shorter terms than the ones they would manage with the typical payback for the office buildings for rent and [ii] the savers [individuals or institutional investors], who buy the properties (in units or in whole) to explore and earn income.

The market divided in this manner, the business profiles of developers and savers, each one by him, achieve the desired efficiency when the developers sell the real properties still under construction. The developers' aim is to use the savers' funds as soon as possible, in order to lessen the impact of their investments in the developing and the savers' aim is to pay the best prices by buying the units that are still being developed, even though there is no income generation in this phase.

Some business transactions of this kind, in the Brazilian market are offered with the supplement of what

is called as virtual income by the developers, which is paid by them to the unit buyers during the construction phase. The developers offer this sale model of office buildings for rental to attract the savers for their main goal (stable income flow) and, by doing this, speed up the sales of their units, thus improving the funding structure profile and reducing the need for their own capital investment.

There are, therefore, interesting types of funding: [i] – to meet the developers' objectives, who need to finance the project and do it with the savers' funds and [ii] – to fulfil the savers' wishes, who either pay competitive prices buying during the construction phase or pay the price for already ready units, even during the construction phase, but ensure, in this phase, a stable income flow.

This means that the market has found means to overcome the lack of appropriate funding for developing office buildings for rental. It remains the question of discussing how decision – making for developing and buying is made and if these decisions are supported by competent risk and investment analysis to back the savers. Is there enough available decision-making information for purchasing of an office building for rental as an investment? Does the information available on the market concerning values, prices, levels of rental and demand allow the creation of a reference scenario to support decision- making for investing with a certain degree of reliability? The answer to these questions is no.

The Quality of Decision-Making for Investment in the Brazilian Market

Within any economic sector, decision-making for investment represents a plunge in risk. Especially in the real estate segment when a careful reading of the risks is not performed, the decision on investment may contain a bias. Liu and Mey (1994) proposed, as well as Hughes (1995), interesting approaches to analyse risks in the real estate sector.

In real estate a risk is assessed under two situations: [i] – the one on security, represented by a relation between property value and the price paid, which tends to fluctuate in very slow cycles and [ii] – the one of the capacity of the undertaking to maintain an income in a stable flow which would result in a competitive profitability, considering a conservative attractiveness rate.

However, if, by funding structural characteristics of the office buildings for rental in the Brazilian market, the developers, gifted on supposedly more competent

systems to decide in face of the risk, do not really take the risks linked to the exploration of the real properties, for those the quality of the decision- making has a different basis. In the developer's view, which develops, but to sell to the investor, the return on investment is that which is based on the relation [sale price x development costs], from which comes his profitability. Thus if he sells it fast, to increase the reason of the investors' resource participation in the project funding, and manages to contain the construction costs, or expose itself to a small variation, his profit with some detours will be guaranteed.

Not for the investors, who buy to explore: the return on investment is associated to the expectation of the income flow. But in general: [i] – the investors are not prepared to understand that the income flow is the one that protects the major part of the investment and not the slow rhythm of the fluctuation of the property market value; [ii] – there is no transparent information in the market to be able to recognise the degree of competitiveness of a certain building in the future when it actually is on the market; [iii] – to the developers it does not matter to emphasize any information associated to competitiveness or demand for office buildings for rental in the future, because they are totally exempt of the risk effects that those factors might represent.

To sum up, in Brazil: [i] – in general, an developer's decision is well founded and is of low risk, while [ii] – the investor's decision, who buys the property to explore, is based on a low risk false premise (stability of the value), and because it is associated to income flow it is of higher risk. As to the investor, without knowing it, the decision is well founded when the economy tends to grow above the growth of the supply for new spaces, and on the contrary, it will be a high risk decision if future economic movements will compromise the undertaking capacity of generating income flow in stable patterns, be it because of lower rental values, or still worse, be it because the index of vacant spaces grows.

The Information Which Guide the Decision-Making for Investment in the Brazilian Market

We already brought up that decision-making for investment, associated to the purchase of office buildings for rental, should be looked upon on a different angle of the protection related to value stability. The information, which supports this decision, should speculate on the quality of exploration income by the 20 year operational cycle, which in general, initiates from 2 to 3 years after the decision-making for investing, because experi

ence has been to sell real estate before the construction cycle, to validate the funding equation.

To make this speculation it is necessary to draw a scenario of this period (20 years), with the point of commencement at the beginning of the operational cycle, after the construction conclusion. There are different aspects to be discussed on the quality of these scenarios, but the most relevant is, without any doubt, that it cannot be configured as being a mirror of the moment in which the investment of the real estate is made.

Current practice in Brazil is to arbitrate the value of an office building for rent between 80 to 120 times the possible prices of the rent that can be put into practice at the moment of sale, as if the real property is already finished. This practice translates the monthly gross income between 1.25% e 0.83%, whose wrong translation made for the rate of return is: 80 comes to 15% per year = 1.25%.12 and 100 to 10% per year = 12.0.83%. Reference scenarios for analysis of the quality of investment in office buildings units for rent, which are acquired by the saving investors, should contain a reliable information basis in order that profitability and risks be acknowledged in a clear manner and at this point one will realize the impact of certain effects that cannot be seen in primary evaluations, as of how to arbitrate value multiplying rental market prices by miraculous facts.

We verified taking as an example the 2000-2003 cycle of the severe São Paulo market crisis, what it could have represented an investment decision based on poor quality information. We utilised parameters taken out from a typical operation, with the objective to give a bird's eye view on how poor quality information may induce the investor to unknown risks.

Let us have a look at the following issues:

a. In June 2000, an existing market transaction would be to invest, at reference price, in a high standard undertaking of de R\$5,700.00/m²GLA (Gross Leaseable Area), with a market rental price of R\$62.00/m²GLA (1 US\$ = 2.60 R\$. GLA) –, which was a reflection of the moment. An investment for the thrifty could have been made, paying in cash, receiving revenue of 1% per month during 3 years of construction, paid by the developer.

b. A decision taken in a primary form would be justified between a price and rent relation, which in this region would be 82 (this inaccurate reading treats the rate of return as being the expansion of the monthly profit rate = $1/82 = 1.22\%$, equivalent to 15.7% per year), thus supporting the investment decision.

c. A more detailed analysis, which would use the rental market reference, and would project an operational

cycle of 20 years with a stable rental value, would show an annual rate of return of 16.9%. Taking into consideration that the inflation losses of rentals are paid, this rate would be of 15.6%.

d. Taking into consideration the income fees in the case that the property is owned by a legal entity, adding patrimonial administrative and management fees and considering a certain instability in these 20 years, that would create some sporadic vacant spaces, the rate of return would be of 13.3%.

e. Considering that the real estate should be maintained competitive, to reach a stable income, and that this requires investments in a period of 20 years, which should be liable for the maintenance of the real estate to be kept updated and in good condition, is obliged to have funds for the reposition of assets leading the rates of return to a 12.9% level.

f. Taking into account that the inflation rate changes the effective income, if we use a series of projections for the inflation rate by using the Monte Carlos' approach, we will encounter with 90% of reliability that the rate of return could be around 12.8%.

g. Considering that even if disarrangements may occur, as well as in the income flow (arrears and default) as well as in market prices at the moment of contracts renewal. Combining this effect with the one of inflation, with 90% of reliability, the rate of return could be approximately of 12.6%.

To conclude, taking an attractiveness rate of 10% (this is explained more clearly later); we could consider that this is an appropriate investment. It is quite different to read 12.6% as information than 16.9 or 15.7% (associated to the multiplier 82).

However, we could question that this profitability level of (12.6% of rate of return in a 20 year cycle) is beyond attractiveness and which would be reasonable to admit that the market shall in the near future adjust itself, with the rise of office buildings' purchase values or with the lowering of rental prices in order to lead the internal rate of return of the market to the level of 10% a year.

In case the rentals could become stable at these levels the sales prices of the buildings in the market should rise, for the rate of return to reach the limit of 10%, which would happen if the offer were balanced with the future demand. In other words, this scenario could occur if there were real property in construction in a balanced number with prospect of economic growth in the next three years, period of time in which these real properties would enter the market, and that the macroeconomic indexes would reveal an evolution trend in

the economy, with companies and businesses growing, that would demand more physical spaces to shelter this aggregate, so that the new offer would be inserted in a stable market.

On the contrary, to what has happened the office buildings' rentals would be overrated due to a sudden supply imbalance, and with greater supply, or with any economic crisis, there would be a surplus of vacant space and the rents would lower.

In the year 2000 there were a great number of spaces in office buildings for rent being constructed. In other words, the investors were already engaged in construction and the developers had detected attractiveness to sell these real properties to medium and substantial investors, because they made biased projections of the market performance and thus, felt confident in making investments, which should offer attractive rates of return, above the attractiveness rate.

This combination of non-information generating demand and capacity to produce and deliver, generating positive results, was fatal, in the sense of emulating a supply growth in the future, in imbalance with the demand. The investment decisions were not guided by the scenario exploration of a 20-year operation to be launched in the future, which, on the other hand, should have not been accepted as a mirror of a certain imprint on time. Quality information (hither perceptiveness and risk analysis, as treated in Geltner and Mei (1995)) would have enabled the most conservative investors, or only the most scrupulous in relation to the decision-making process, would do a risk-reading and try to evaluate if the speed with which developing more and more square metres represented a danger of an oversupply (see Gallagher and Wood (1999)).

With the rentals collapsing, like it happened, the other imbalanced and disorganized face of the market shows up. There are a number of medium and small investors who realize a lack of demand for their office buildings for rental and who recognize that it is better to rent for any given price than pay vacant properties expenses (duty and taxes, but especially condominium expenses). There is little demand which puts prices down, because, realizing the lack of control of the supply, have the exact notion of the market imbalance. There are the ones who occupy spaces and realize that they are paying more of what it is worth at the present moment and who make pressure on their landlords to reduce the prices agreed to, which occurs, due to the natural preservation instinct. The office buildings' market price of rent, which should fall to a new balance configuration, still falls more, so that the new rental levels means to

the investor a rate of return below attractiveness.

The situation of projecting 20 year scenarios reflecting the present moment repeats itself, which makes the investors withdraw, because the expected rates of return, when calculated in poorly formatted scenarios, are below attractiveness. Why poorly formatted? Because the lowering of prices is not necessarily, permanent and it would be reasonable to admit a certain degree of reformulation for the case that the expected profitability is below the attractiveness of 10%.

In the following topics we execute a simulation of how the behaviour of the office buildings' rental prices in the future could be, evaluating a migration to new levels, in function of the supply absorption and an eventual retake of the economy growth curve.

The Expansion of Economic activity and Its Impact on the Office Building Rental Markets

From an international perspective, the most dynamic real estate markets and especially the markets for office buildings, have developed in more sophisticated and greater economies, in such a way that it can be realized even instinctively a patent link between the behaviour of office buildings for rental markets with the macroeconomic performance itself of the more developed countries.

In the specialised literature published in the last decade, a series of studies that were developed mainly from the behaviour of markets in the USA, the UK and some Southeast Asian countries, such as D'arcy et al. (1997), Dobson and Goddard (1992), Rosen (1984), Wurtzeback et al. (1991), in effect substantiated and emphasised the strong connection that exists between the performance of the office buildings sector and the expansion rate of the Gross National Product in these countries.

In these economies, which are strongly based on and regulated by market mechanisms, the awareness of production and the availability of information about sector behaviour is far greater than in the Brazilian markets, to the point that it is possible to treat market information with a degree of sophistication that allows the validation of explanatory or prediction¹ models, which would not be currently feasible in Brazil like was done by D'arcy et al. (1999), for instance, moreover to apply Green et al. (1998) proposal.

1. Taking into account all the reservations that the subject forecasting may cause, a theme so many times used and worked out with biases originated from the understanding, which lacks necessary critical filtering, that it is possible to predict future behaviour through the replication of market behaviours of the past.

In Brazil, public time series of real estate markets' behaviour is nonexistent or very unreliable. The information related to the actual transactions concerning office buildings for rental is usually not transparent and is, most of the time, restricted to the agents directly involved in the business deal.

Thus, the efficiency of the office market in Brazil could be improved if we had at our disposal the mechanisms of production and distribution of indicators of this behaviour (However, it should be pointed out that the real estate markets tend to be less efficient than other asset markets due to the structural gap between the moment when an investment decision is made and the actual insertion of the undertaking in the market – greater inertia of supply when the demand is resumed.).

However, it is important to point out that according to the developing stage of the economy; it is possible to conceive that the correlation coefficients between macroeconomic expansion and performance of the sector of office buildings for rental can fluctuate, if the economic structure is based on activities that demand fewer office areas. In the same way, the historic standard of the correlation of this sector with the macroeconomy can change over time in function of technological and managerial advancement of economy, what can result in, for the same GNP growth rates, in different historic periods

in a given urban region, different demands or absorptions of office areas for rental.

For the purposes of projection in this study, the correlation coefficients collected from the data of reference of this work are considered valid. In the figure below, the curves of the development of the Brazilian GNP between 1995 and 2004 are traced and for the same period, the development of the average monthly rental prices of areas in buildings deemed high standard.

The average price growth of building rental rates in the City of São Paulo is in the region of 13% a year, for the period 1995 – 2000, for an annual inflation rate of 9.45%. Between 1995 and 2001, average annual price growth of building rental rate is 9.95% for an annual inflation rate of 9.74%. By considering the same 1995 year base for the year 2002 and June 2003, we will find annual building rental rates of 8.32% and 7.50% respectively and inflation rates of 9.70% e 11.86%, from the year base until 2002 and until 2003, respectively. If we consider the whole period between 1995 and 2004, the rental prices growth 7.92% per year and the annual inflation rate reaches 11.61%.

By observing the chart, it can be easily perceived in the period from 1997 to 2000, the rental prices growing faster than the Brazilian GNP growth. During the years

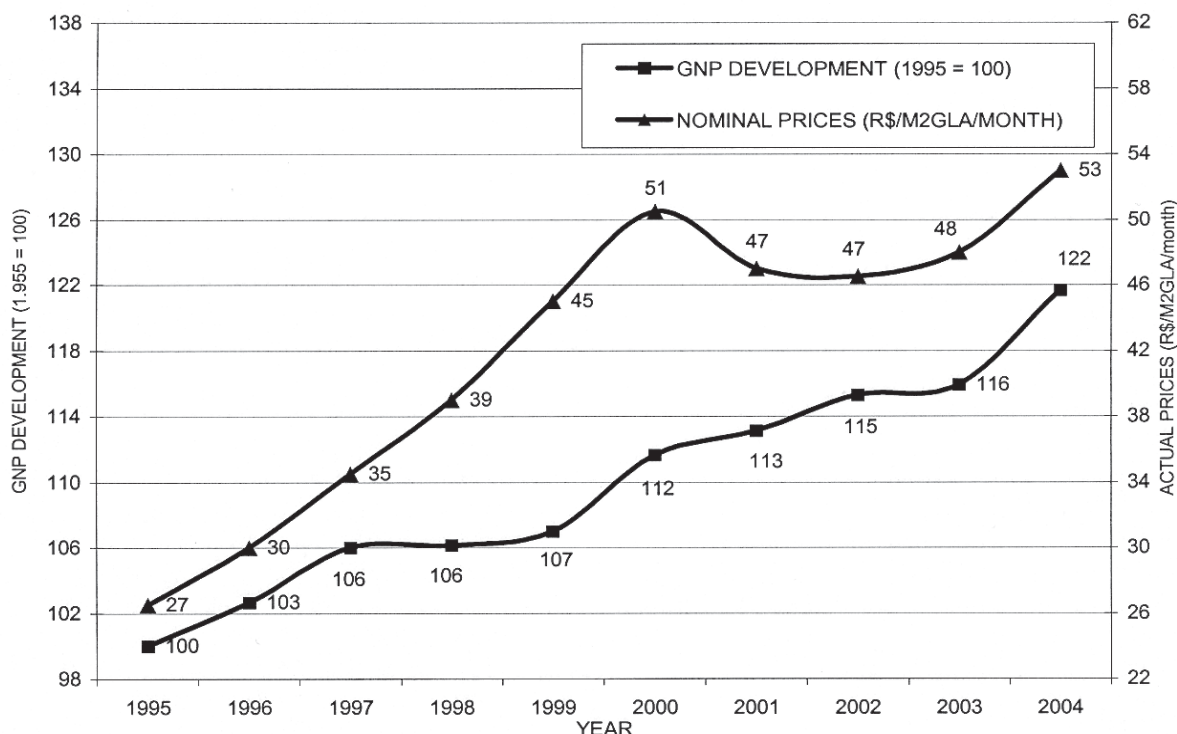


Fig. 1: Curves of GNP development and actual rent prices of high-standard office buildings in São Paulo
Sources: IPEA and Jones Lang LaSalle

2000 to 2002, such trend has a reversion, as matter a high standard fact while the GNP grows steadily the office market in São Paulo gets into a recession.

The disconnection between GNP and rental prices in the years 1997 – 2000 would be explained by two main factors. First, there was the perception that the Brazilian economy will begin to increase strongly, so several companies tried to find better and larger spaces to rent. This demand was quickly recognized by developers, what started an expressive phase of new buildings construction. Nevertheless, the Brazilian economy did not take off in those years due to two international crises, Asia in 1997 and Russia in 1998. Second, in despite of the Brazilian economy performance, in such period there was in the São Paulo’s office market an under supply of qualified spaces.

On the other hand, the discontinuities between rents prices and GNP in the 2000 – 2002 period, as can be seen in the figure 1, also can be explained, again, by an abortion of the economy recovering, against the positive expectations of the principal agents after the international crises. This recovering stop was mainly due to the energy crisis that came up to the Brazilian economy in 2000. Moreover, the aggressiveness of the developers in the years before in making new buildings led the market to an oversupply position. Another event en-

hanced the disturbance of the office marketing in that period, it was the presidential election that it would take place only in 2002, but its effects and expectations over the real estate stakeholders made themselves felt two years early.

In what concerns to the absorption of the supply, the recent history of office buildings in São Paulo vis-à-vis the development curve of Brazilian GNP presents the following profile:

In the figure above it is also clear the discontinuities between the behaviour of GNP and absorption of rental spaces in the market, specially, if we analyse the period 2000 to 2002, when there is an abrupt fall down of absorption indexes. Here we also can assume that such market crash was produced by the two same factors mentioned before; [i] – the abortion of the Brazilian economy recovering, after being controlled the negative effects of the international crises; [ii] – the hyper supply of spaces resulting of the biased expectations of real estate stakeholders in the passed years.

However, it is also evident that from 1995 until 1999 there is a strong alignment between GNP and absorption of office spaces, in the same way, since 2003, when the Brazilian economy actually returned to grow, the correlations between the two variables appears to return significant again (As a matter of fact, the data related to the

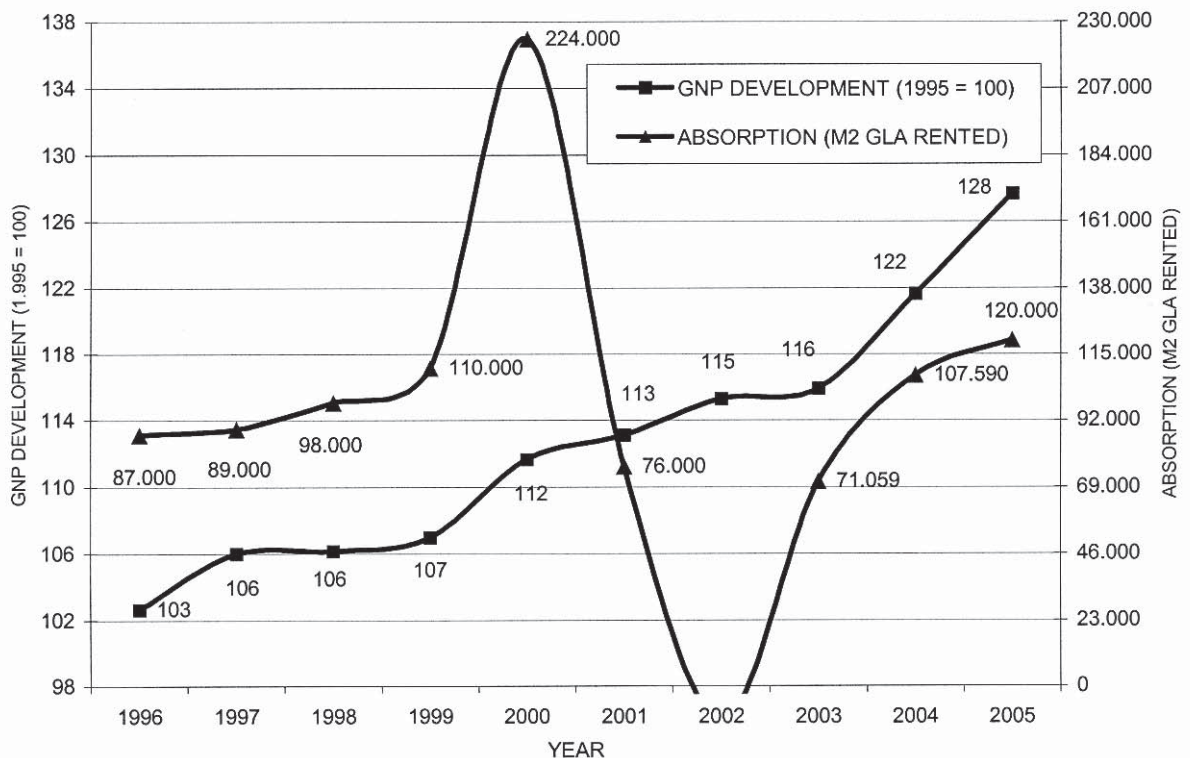


Fig. 2: Curves of GNP development and absorption of rental areas in high-standard office buildings in São Paulo

Sources: IPEA and Jones Lang LaSalle

Table 1: Office buildings for rental in São Paulo - Coefficients of Correlation

	GNP Development x actual prices and GNP x absorption of leaseable areas		
	Analysed Period		
	1995 -2000	1995 -2004	2003 - 2005
GNP x Actual Prices	84.5%	90.4%	96.7%
GNP x Absorption	90.7%	-12.8%	95.8%

2005 are projected to the end of the year taken into account the market behaviour on the first semester).

Therefore, in order to set the forecasts proposed in this paper we are going to take in account only the time series referred to the 1995 – 2000, by purging the data linked to the 2000 –2002 period, to avoid the impacts of turbulences occurred in the Brazilian economy and in the São Paulo office market between 2000 and 2002. Besides, the availability of more accurate time series of sector behaviour would allow one to set econometric models more sophisticated with explanatory variables other than the GNP.

Due to the limitation of the historic series available for this study, the projections proposed are based on a simplified model, which was structured from the correlation between the GNP expansion rates and the behaviour of the prices for office buildings for rental and also on the absorption of the non-occupied buildings, whose coefficients can be seen in the Table 1.

The models specifications obtained by simple linear regression are exposed below:

$$Y_p = -77.7 + 1.42X_p + u_p \tag{1}$$

Where:

- Y_p = dependent variable (rental prices)
- 77.7 = regression coefficient β_1 (interceptor)
- 1.42 – regression coefficient β_2
- X_p = explainable variable (GNP)
- u_p = proxy variable

$$Y_a = -1,614,0449 + 1,415.15X_a + u_a \tag{2}$$

where,

- Y_a = dependent variable (absorption)
- 1,614,044.9 = regression coefficient β_1 (interceptor)
- 1,415.15 – regression coefficient β_2
- X_a = explainable variable (GNP)
- u_a = proxy variable

As it has already been mentioned, this work will create expectations related to the average term within which is possible to recoup the actual average rental prices at levels that allow the sector investments to be remunerated at the same level of attractiveness (10% a year), and in the same way, the term demanded for the recouping of occupation of the vacant high-standard commercial buildings in São Paulo.

In both cases, the explanatory variable adopted for estimating the terms is the projection of the GNP growth in the period. In this study, the arbitrage of the GNP growth follows two references: the goals established in the Pluriannual Plan (PPA) of the Federal Government of 4.5% a year and 2% a year, this being the average level in the period between 1995 and 2002. The 10% a year required rate of return considered in this paper, R_{ob} , was estimated considering the opinions of the office buildings investors in Brazil and taken into account the following Asset Pricing Model:

$$R_b = R_f + b_b \times (R_m - R_f) \tag{3}$$

Where R_p the risk-free rate, is estimated as 6% from the interest rate of the 25-year Brazilian Government Security issued in 2000;

b_{ob} , the equity beta, is estimated as 0.667 from the capital structure of a typical Brazilian office building undertaking (with Total Asset Value/Equity = 1/0.75 = 1.333), and using an asset beta of 0.5;

R_m is the rate of return of the overall Brazilian stock market, taken as 12% using an estimation period from 1995 to 2005.

TIMES FOR RECOUPING INVESTMENT ATTRACTIVENESS LEVELS IN THE MARKETS OF OFFICE BUILDINGS FOR RENTAL IN SÃO PAULO

According to the levels of average costs for developing office buildings for rental effective today in the major commercial regions in the city of São Paulo (the transaction values of the purchase price of new office buildings can be estimated today at the level of R\$ 5,700.00

per square metre of Gross Leasable Area) and further considering the general costs for managing the enterprise of the order of 12% of the gross operational income, the extent of the sector attractiveness rate of 10% annual demands the practice of rental prices of approximately R\$ 65.00 per sq. mt., which was the level of the average price practiced in the year 2001.

For estimating the time for recouping actual rental prices in order to attain the levels of the year 2001, one must bear in mind that in the period between 1995 and 2000, the actual rental prices for high standard office buildings had developed from annual rates of 4.0% in São Paulo's market. In the same period, the average annual rate of growth of the GNP was at a level of 2.34%.

Supposing that these historic correlations will hold valid for the period to be predicted in this study, thus, one can based on the GNP growth, identify the time needed for recouping the different levels of actual rental prices for office buildings as well as the time needed for recouping the historic levels of occupation of the vacant buildings (that is, as long as there are no new supply bubbles of spaces to rent that are not within the actual capacity of absorption of the markets).

It is obvious that the projection should consider as a premise that a new excessive supply in the market will not take place

take place, due to a biased perception of the developers in relation of the market potential when it starts to warm up. This biased perception results from a certain overestimation that spreads in the market in relation to the potential rates of return that is thought likely to obtain.

In Figure 3, it is shown, based on the current average cost indicators of building developing, the remunerations that investments in high standard office buildings would obtain with the levels of prices historically practised in São Paulo.

In the figure, it can be seen that the sector rates of return most attractive are between 1.999 – 2.000, the very period when a great expansion in the supply of new office buildings took place, in conjunction with a dramatic volume of new buildings construction, which enter the market over the years 2002 e de 2003.

For a scenario of GNP annual growth of 4.5%, which is the PPA's goal, we have as a prospective projection, according to what is shown in figure 4, the following levels of behaviour development of average actual prices and rates of return in São Paulo City's markets.

For a scenario of GNP annual growth of 2.0%, a historic average in the recent past, the projections for average prices and rates of return are shown in figure 5.

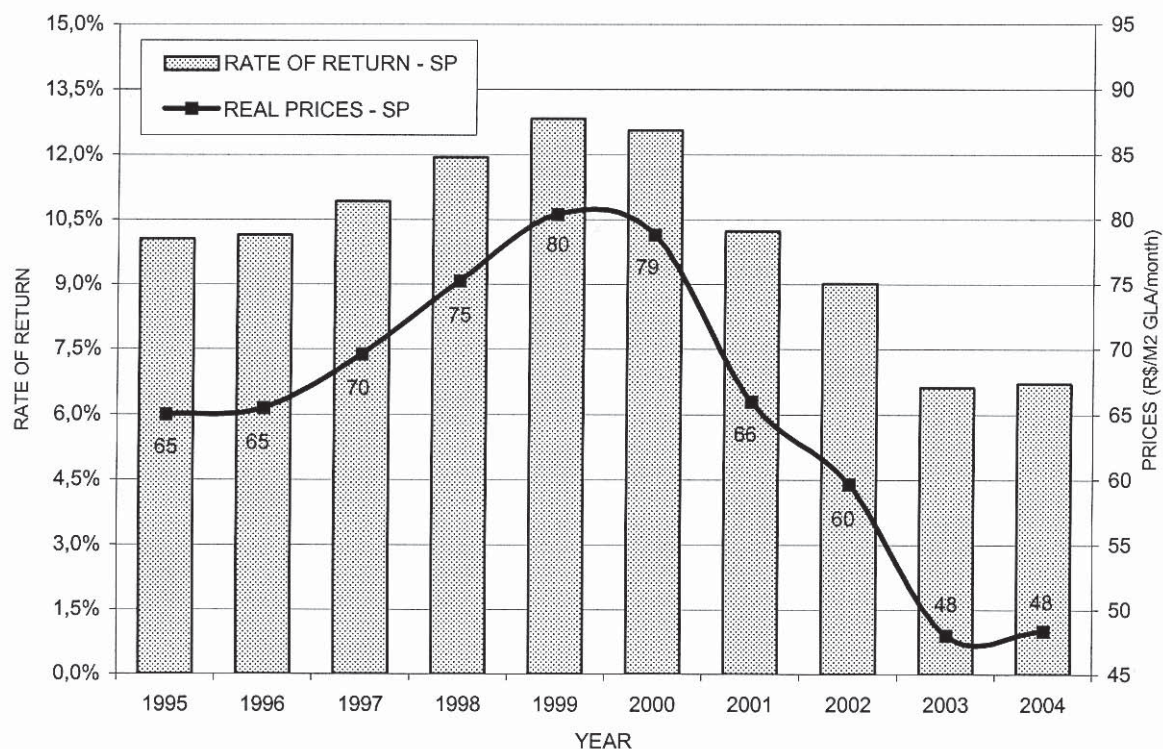


Fig 3: Remuneration of high-standard office buildings in São Paulo's market

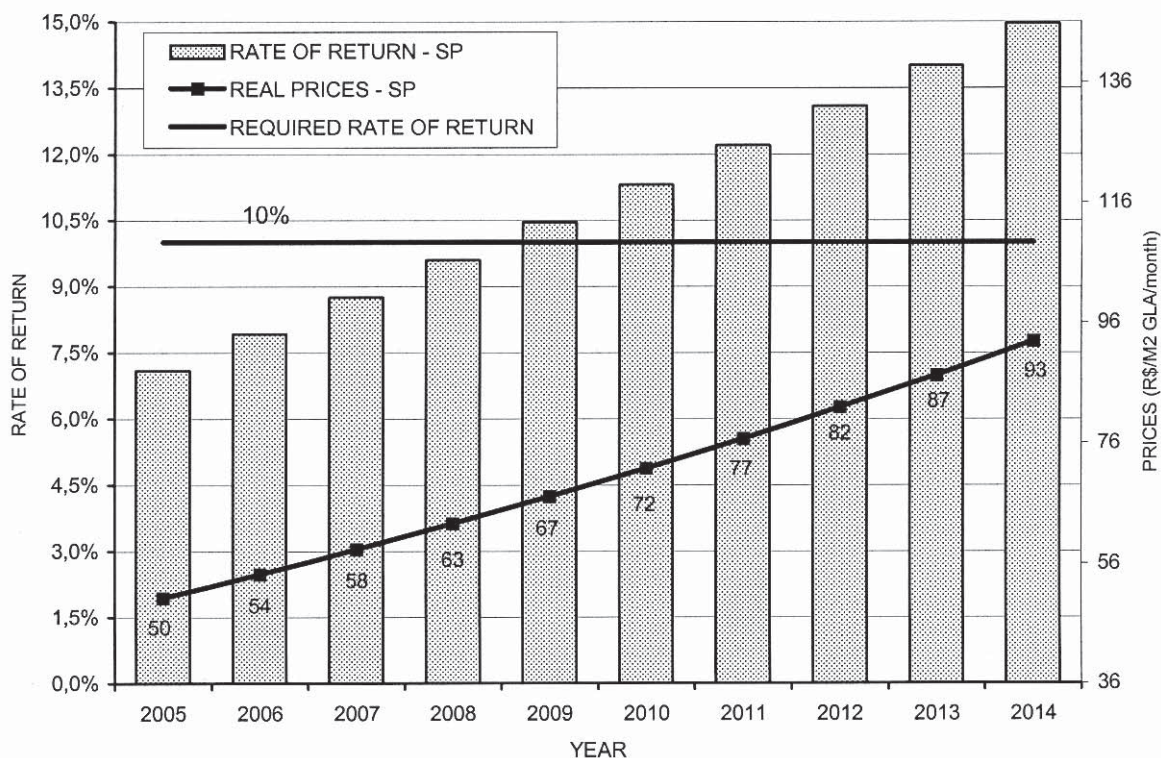


Fig 4: Remuneration of high-standard office buildings in São Paulo’s market – GNP development of 4,5 % a year

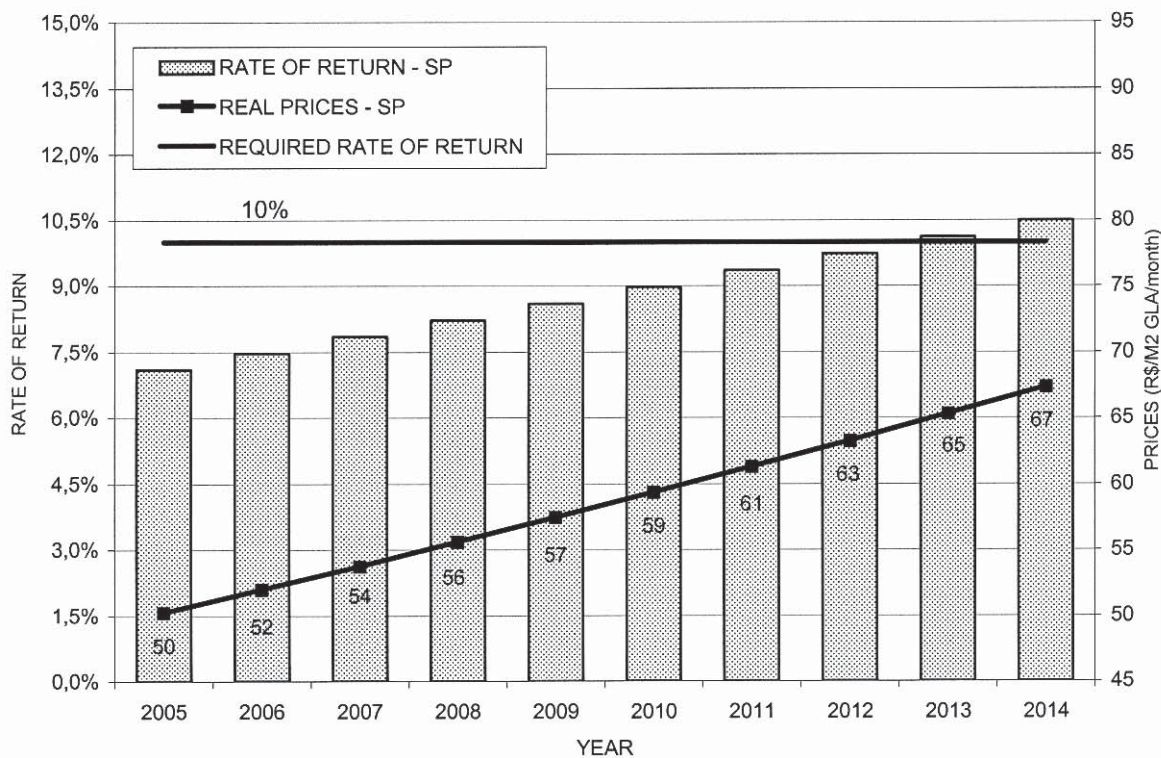


Fig 5: Remuneration of high-standard office buildings in São Paulo’s market – GNP development of 2,0 % a year

In the situation shown in figure 5, according to the evolution of average prices, the market attractiveness rate presently, would be reached only in the year 2012 or 2013. This situation can have two outcomes: [1] stagnation of new supplies; [2] lowering the market attractiveness rate.

Times for Absorption of the Vacant High Standard Office Buildings for Rental in São Paulo

Until 2000, the supply of high standard office buildings for rental in São Paulo was reasonably balanced with the respective demand. This year, the potential rates of return for new enterprises, in view of the average price levels for space rental, were still attractive, notwithstanding the patent trend towards drop in prices for those who searched for recognising market behaviour indicators.

Nevertheless, what was observed in the Brazilian economic environment during the second semester of 2002 and the first semester of 2003, was an intense deterioration of expectations of the market agents in relation to the expansion of economic activity and an increased perception of Brazilian risk, which resulted in an intense retraction in investments in goods and services sectors.

The impact of these on the office buildings sector was undeniable and was translated into a significant retrac-

tion in demand for space in office buildings. Together with this demand retraction, a significant new supply of high standard buildings, a result of good perspectives of remuneration in the sector at the moment of the planning of the enterprises that configured this new supply (In fact, if we look back 36 to 42 months, an average term that involves the cycles of planning and developing sector undertakings, we will just reach the period (mid-1.999 to mid-2.000) in which all-time highest rent prices were practiced in São Paulo's markets.)

In figure 6, shown next, the projections of absorption of the supply of high standard office buildings in São Paulo, as the level of Brazilian economic activity increases.

In this figure, it can be seen that the supply of unoccupied spaces, which is around 500,000 square meters of useful area, can be re-occupied within 4 to 5 years, during 2008 or 2009, according to the GNP growth rate, and from this moment on, the demand for new spaces must grow. Here too, the estimates for these average times are subject to fluctuations, if there is a significant new supply for rental spaces.

It is important to point out that it is precisely in this period comprehended by 2008 and 2009 that the levels of actual rental prices, when practiced, will be able to provide attractive remunerations and shall encourage the expansion in supply of office buildings in the main Brazilian market.

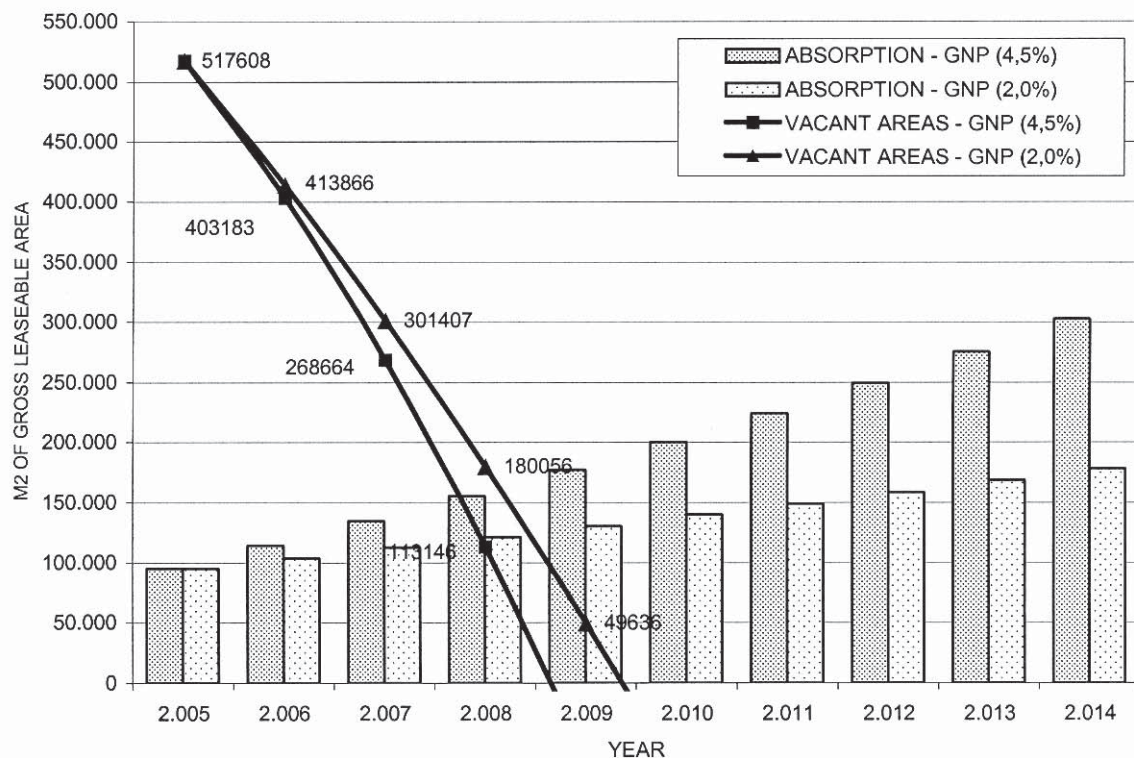


Fig 6: Absorption of high-standard office buildings in São Paulo's market – GNP development of 4,5 %and 2,0% a year

Conclusions

The convergence of the times needed for recouping the investment attractiveness and for absorbing the vacant supply of office buildings for rental in 2008-2009, according to our conclusions in this work, suggests that in this period, a transition (observed the premises in the projections carried out in previous topics of this article) from a phase of Recouping to a phase of Expansion of activities should occur in the markets of office buildings for rental in São Paulo.

Conceptually, see Wheaton (1987) and (1997), Pyhrr (1999) and Dokko et al. (1999), the market cycle for office buildings for rental involves four quadrants. These quadrants are characterised by the average rental prices practiced and the occupation rates in the market, in comparison with references of a historic behaviour, which in turn reflect a certain historic required rate of return of the market. The quadrant that follows the Expansion is the Oversupply, which ends up in a situation of market Recession, which is what is happening now in the city of São Paulo. From this situation marked by Recession, as the demand for new office spaces warms up, the market resumes its Recouping.

São Paulo's market of high standard office buildings is going through a recessive phase, which nevertheless, according to the simulations carried out in this study, can enter the Recouping quadrant as of 2005, a period that would last between 3 to 4 years, and in 2008 and 2009, would enter the Expansion quadrant of the market cycle.

Going through the market cycle, starting from the Recession quadrant, and plunging into the Recouping one, we can find the following indicators in the office buildings for rental market: average occupation rates going up towards the historic behaviour and average rental prices still dropping in relation to the historic behaviour.

In a more advanced phase in the Recouping quadrant, it can be seen that the average behaviour of rental prices is resuming a growth, in the direction of the historic behaviour, the average occupation rates are now stable in relation to the historic market references. In this Recouping quadrant, the average remunerations for investments shall be located between the market required rate of return and a certain opportunity cost.

When both the average rental prices practised and the average occupation rates allow remunerations at the attractiveness level, the market will be in the transition between the Recouping and the Expansion quadrants. Next, in the subsequent stage of the quadrant, it can be

observed that the average behaviour of rental prices is still at the historic levels, but the occupation rates are going through successive increases in relation to their average historic pattern.

In a later phase, still in the Expansion quadrant, the market will advance to its best situation to receive investments, since both average rental prices and occupation rates will attain levels higher than their respective historic average levels, what can provide, to the limit, a maximum rate of return to operations.

In São Paulo, the extension of the Expansion quadrant of the office buildings for rental, from 2008 on and the respective transition for a new phase of oversupply is related to the more or less aggressive posture of the developers, as the today's vacant supply of office buildings is being occupied vis-à-vis the resuming of macroeconomic growth.

References

- Ambrose, B.W., Ehrlich, S.R., Hughes, W.T. and Wachter, S.M. (2000) REIT economies of scale: Fact or Fiction? *Journal of Real Estate Finance and Economics*, **20** (2).
- D'arcy, E., McGough, T. and Tsolacos, S. (1997) National Economic Trend. Market Size and City Growth on European Office Rents. *Journal of Property Research*, **14**(4), 297-308.
- D'arcy, E., McGough, T. and Tsolacos, S. (1999) An Econometric Analysis and Forecasts of the Office Rental Cycle in Dublin Area. *Journal of Property Research*, **16**(4), 309-321.
- Dobson, S.M. and Goddard, J.A. (1992) The Determinants of Commercial Property Prices and Rents. *Bulletin of Economic Research*, **44**, 301-321.
- Dokko, Y., Edelstein, R.H., Lacayo, A.J. and Lee, D.C. (1999) Real Estate Income and Value Cycles: A Model of Market Dynamics. *Journal of Real Estate Research*, **18**, 69-95.
- Gallagher, M. Wood, A. (1999) Fear of Overbuilding in the Office Sector: How Real is the Risk and Can We Predict It? *Journal of Real Estate Research*. **17**(1), 3-32.
- Geltner, D. and Mei, J. (1995) The Present Value Model with Time-Varying Discount Rates: Implications for Commercial Property Valuation and Investment Decisions. *The Journal of Real Estate Finance and Economics*, **11**(2).
- Geltner, D. and Rodrigues, J. (1998) Public and Private Real Estate: Performance Implications

- for Asset Allocation. Chapter 15 in *Real Estate Investment Trusts: Structure, Analysis and Strategy*, Garrigan, R. and Parsons J. (eds), McGraw-Hill, New York.
- Gerbich, M., Levis, M. and Rowland, P.V. (1999) Property Investment and Property Development Firm Performance Around IPO and Rights Offerings: UK evidence. *Journal of Real Estate Finance and Economics*, **18** (2).
- Green, R.K., Malpezzi, S. and Barnes, W. (1998) Developing Confidence Intervals for Office Market Forecasts. *Journal of Real Estate Finance and Economics*, **16** (1).
- Grenadier, S.R. (1995) Local and National Determinants of Office Vacancies. *Journal of Urban Economics*, **37**(1), 57-71.
- Hughes, W. T. (1995) Risk Analysis and Asset Valuation: A Monte Carlo Simulation Using Stochastic Rents. *The Journal of Real Estate Finance and Economics*. **11**(2), 177-187.
- Liu, C. H. and Mei, J. (1994) An Analysis of Real-Estate Risk Using the Present Value Model. *The Journal of Real Estate Finance and Economics*. **8**(1), 5-20.
- Pyhrr, S.A, Roulac, S. E. and Born, W. L. (1999) Real Estate Cycles and Their Strategic Implications for Investors and Portfolio Managers in the Global Economy. *Journal of Real Estate Research*, **18**(1),7-68.
- Rosen, K. (1984) Towards a Model of the Office Building Sector. *Journal of the American Real Estate and Urban Economics Association*, **12**(3), 261-269.
- Sanders, A. (1998) The Historic Behaviour of REIT Returns: *A Capital Markets Perspective*. Chapter 12 in *Real Estate Investment Trusts: Structure, Analysis and Strategy*, Garrigan, R. and Parsons J. (eds), McGraw-Hill, New York.
- Sing, T.F., Ong, S.E., Fan, G.Z. and Sirmans, C.F. (2004) Analysis of Credit Risks in Asset Backed Securitization Transactions in Singapore. *Journal of Real Estate Finance and Economics*, **28** (2).
- Wheaton, W.C. (1987) The Cyclic Behaviour of the National Office Market. *AREUEA Journal* **15**(4), 281-299.
- Wheaton, W.C. (1997) Real Estate Cycles: Some Fundamentals. *Real Estate Economics*, **27**(2), 209-230.
- Wurtzbaach, C.H., Mueller, G.R. and Machi, D. (1991) The Impact of Inflation and Vacancy

of Real Estate Returns. *The Journal of Real Estate Research*, **6**(2), 153-168.