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THE RELATIONSHIP BETWEEN GENERAL ECONOMIC CYCLE AND THE REAL ESTATE CYCLE

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ABSTRACT

The economic cycle is the natural fluctuation of the economy between periods of expansion (growth) and contraction (recession). Factors such as gross domestic product (GDP), interest rates, levels of employment and consumer spending can help to determine the current stage of the economic cycle. The recognition of the cycle's importance together with an increasing industry focus on real estate has caused investors and portfolio managers to place increased emphasis on the strategic and decision making implications of real estate cycle theory and analysis. Real estate business activity shows a very high correlation to the general economic events and cycles. Cycles are a major determinant of success or failure because of their pervasive and dynamic impacts on real estate returns, risks and investment value over time – impacts that should not be ignored or over-simplified. The real estate cycle is very similar to the general economic cycle, however it usually follows with about a year delay. The adage "timing is everything" is especially applicable to real estate development.
Keywords: business, cycle, economic, investment, real estate

INTRODUCTION

This paper demonstrates that the major economic cycle affects the real estate cycle and different types of real estate can have a different cyclicality. I had four objectives in this work. Firstly, to prove that there is a high correlation between the economical cycle and the real estate cycle. Secondly, to demonstrate empirically that different property types might have different cyclic behaviour. Thirdly, to illustrate that market agents could make mistakes in forecasting in where they only analyze trends from the past instead of utilizing market research data as well. Finally, the adage "timing is everything" is especially applicable to real estate development.

MATERIALS AND METHODS

In the first instance I investigated both the Hungarian and International macroeconomic and microeconomic literature relating to major economical cycles and real estate cycles, which I analyzed with reference to personal knowledge. Besides emphasizing the theoretical disciplines of the topic I collected market data from the different property management and property advisor companies regarding the real estate business and its submarkets. Where possible I used market data for a five year period. In addition to this I used extensive personal experience and knowledge – eight years in the property industry – to strengthen to my research.

RESULTS AND DISCUSSION

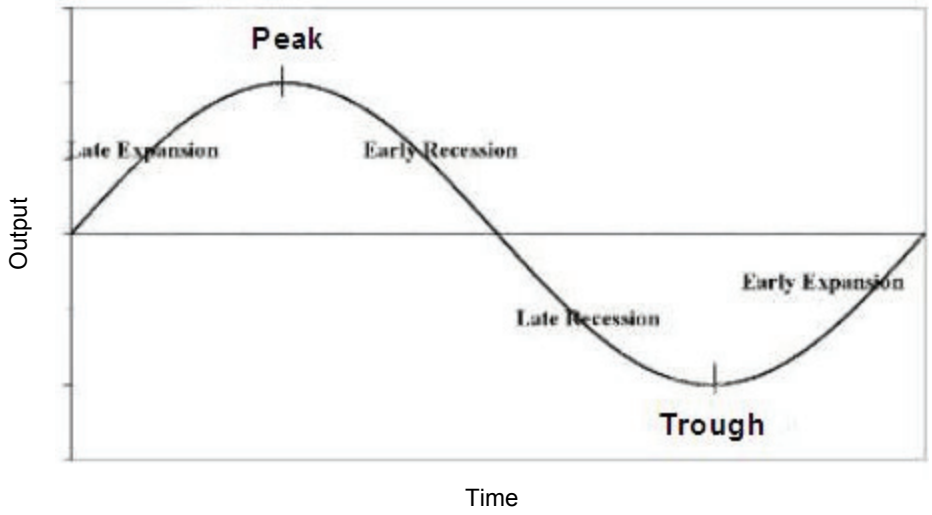
Major Economic Cycles

National output in the economy does not rise or fall at a uniform rate. Our economy experiences a regular trade or business cycle where the rate of growth of production, incomes and spending fluctuates over time. Statisticians calculate annual and quarterly movements in national output and these are then tracked to measure the cyclical movement of the economy. The concept of Economic Cycles, which are sometimes referred to as Business Cycles, is a theory that attempts to explain changes in economic activity that vary from a long term growth trend as observed in a developed market economy. Factors considered in defining an economic cycle include growth of GDP, household income, employment rates, etc. According to Samuelson-Nordhaus capitalism is basically the history of expansions and recessions (*Figure 1* and *Figure 2*). They argue that one of the main tasks of the macroeconomic is to explain economic cycles (*Molnár*, 1993).

According to *Bodie*, *Kane and Marcus* (2005, 630. p.) the economic cycle is the natural fluctuation of the economy between periods of expansion (growth) and contraction (recession). Factors such as gross domestic product (GDP), interest rates, levels of employment and consumer spending can help to determine the current stage of the economic cycle. An economy is deemed to be in the expansion stage of the economic cycle when gross domestic product (GDP) is rapidly increasing. When real output falls or when the growth of output is below its long run trend rate – then economic recession exists.

Figure 1

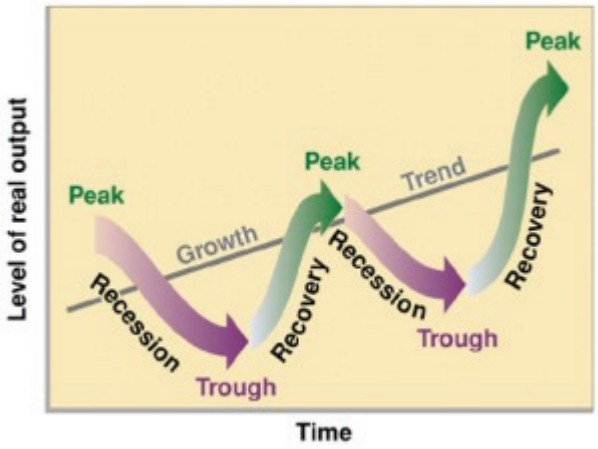
General Economic Cycle 1



Source: *Tracy*, 2006

Figure 2

General Economic Cycle 2



Source: *SMC Global Blog*, 2009

According to economic analysts the following are the main characteristics of an economic recession:

- Consumer prices fall back suddenly, stocks of cars and other non-perishable consumer goods increase rapidly, and there is a declining aggregate demand, results from businesses and enterprises reducing their output. Following on from this GDP begins to decrease and finally the net result is that volume of investments decrease as well.
- Demand for labour force fall, unemployment rises.
- As the output reduces, inflation slows down, demand for basic commodity and their prices fall (wages and service prices usually do not move down, but increase slower in recession).
- Business confidence and profits fall sharply, rate of exchange on stock market begin hedge-hopping earlier (*Samuelson and Nordhaus*, 2003, 423. p.).

Samuelson and Nordhaus (2003) and *Molnár* (1993) agree that sings of expansion are mirroring the process written above.

Real Estate Cycles

Real estate cycles have been a significant underlying reason for the financial successes and failures of real estate investments throughout history. Cycles are a major determinant of success or failure because of their pervasive and dynamic impacts on real estate returns, risks and investment value over time – impacts that should not be ignored or over-simplified. The Hungarian real estate business does not have as long a history as the USA's, but it is developing continuously. The recognition of the cycle's importance together with a growing industry focus on real estate has forced investors and portfolio managers to place increased emphasis on

the strategic and decision making implications of real estate cycle theory and analysis. However Wesley Mitchell established the theoretical foundation for and practical evidence of cyclical economic activity in the United States in 1927 and Homer Hoyt investigated the relationship between real estate finance and real estate investments disciplines in the 1930s. Despite its early importance in the general business and land economics literature, real estate cycles have been largely ignored or discounted by real estate academics and practitioners until recent years. While limited research studies are currently available on real estate cycles in a global decision-making context, researchers are focusing more attention on global cycle considerations because of increasing commitments by investors to real estate in other countries. Also, researchers and investors recognize that investment and portfolio returns and risks are increasingly being influenced by international economic events and flows of investment funds (*Pyhrr et al.*, 1999, 8. p.).

The Relevancy of Cycles (or Ignoring Cycles)

To provide a context for consideration of real estate cycles it is helpful to recognize that cycles in nature are everywhere and independent. Basically "a cycle is a sequence of events that repeat". Changes in the physical environment, in turn, affect human behaviour and economic activity. Human behaviour and economic activity affects supply and demand forces in the real estate markets, which in turn affect the financial performance of properties through changes in the rents, vacancy rates, operating and capital expenses and capitalization rates. There are two schools of thought on the question "Are real estate cycles relevant?" The "first school" argues that real estates cycles are not relevant and therefore can be ignored, the „second school" argues that real estate cycles are very relevant and should be carefully studied by analysts and investors (*Pyhrr et al.*, 1999, 9. p.).

Over the past thirty-five years of research on the subject, authors have recounted numerous reasons and arguments on the irrelevancy of the cycles. I support the „second school" but summarize below 16 reasons and arguments collected by Pyhrr-Roulac-Born as to why real estate cycles are not relevant or can be ignored (*Pyhrr et al.*, 1999, p. 10):

1. Little academic interest in cycles, not many academics are interested in research on real estate cycles, therefore, cycles must not be very relevant
2. Modern financial and portfolio theory does not explicitly address cycles, therefore, cycles must not be very relevant
3. Cycles cannot be measured
4. Economic forces are random in nature, thus cannot be forecasted of modelled
5. Real estate markets are efficient, knowledge about cycles cannot be used to increase the returns of a portfolio or reduce a risk
6. Diversification eliminates cycle effects
7. Long-hold approach eliminates cycle effects
8. Cycle strategy gains are offset by costs
9. Lack of evidence about economic cycle impacts, little is known about the effects of economic cycles on cash-flow variables – rents, vacancy rates, operating and capital expenses, capitalization rates

10. Cycle model specification is difficult
11. Inadequate data, adequate and accurate market data is not available
12. Lack of investor interest in cycles
13. Simplicity and lower cost of trend analysis
14. Tradition, traditional investors are slow to change their perception of the investment environment and investment evaluation techniques
15. "Go with the flow" investors just do what their peers in the industry do, mavericks are not generally acceptable in bureaucratic institutional environments
16. "No crystal ball", most portfolio models are based on historical data inputs. In contrast, cycle decision models require the analyst to input forecast data. (forecasting is a high-risk business)

Considering that the cycle activity is very important in the real estate business, I have summarized below the contribution of knowledge of the "second school".

Distinction between Macroeconomic and Microeconomic Literature

Macroeconomic cycle studies are defined here as those whose primary cycle focus or emphasis is at national, international or regional levels. The general business cycle, inflation cycles, currency cycles, population and employment cycles, and technology cycles are of cycles that are generally classified under the macroeconomic category. Demand cycles, supply cycles, occupancy cycles, long and short cycles at regional or national levels are also considerations in macroeconomic cycles.

Macroeconomic conclusions

Nikolai Kondratieff started to research the cycles in the national economy in the 1920s. He noticed that since the start of the industrial revolution capitalist economies experienced long waves of growth and contraction. These long waves became known later as the "Kondratieff Wave". They consist of a twenty-five to thirty-five year wave of increasing prosperity and living standards and are followed by a decade or more of depression and falling living standards, which makes a fairly regular forty-five to sixty year cycle period. Another early pioneer of long real estate cycle research was Roy Wenzlick who published one of the first real estate periodicals. He charted long cycles of housing transactions from 1795 through 1973 in USA level and concluded that the average length of the long cycle was eighteen and one-third years. This topic was investigated by Mitchell in 1927. Dauten and Valentine expanded on Mitchell's theoretical base and included macroeconomic theory to help explain economic cycles in 1974. In 1983 More updated Mitchell's work and included extensive theoretical and empirical treatise on business cycles and inflation in the national economy. More recently this question was searched by Chatterjee in 1999.

The relationship between the *national economy and real property* has been investigated by many researchers. In 1935 Burns compiled the first authoritative summary and analysis using the mass of economic data collected by government agencies and private parties concerning the long construction cycles. Grebler and Burns analyzed total construction, public construction, private construction and

residential property construction over the period from 1950 to 1978 and found six cycles in residential construction and four cycles in nonresidential construction in the U.S. They also found that peaks in GNP lead the peak in the construction cycle by about eleven months. They and later Brown also found that there is a high correlation between economic cycles and real estate performance. *Prichett* analyzed the impact of the national economy on cycles in investment grade real estate during the period from 1967 to 1982 to understand which key real estate cash-flow variables indicated the change in the cycle phase. He concluded following:

1.) Demand leads supply as the construction cycle rises to a peak but lags supply as the cycle falls to trough.
2.) The best indicator of the cycle phase is vacancy rate.

He found that usually vacancy rates reach high levels during the recession phase of the cycle, declining during the expansion phase, and then reaching a low point as the peak of the construction cycle is approached. Hekmann in 1985 then Kling and McCue in 1987 considered the influences that macroeconomic factors have on office construction. Down's work in 1993 concluded that differences in equilibrium vacancy rates in different markets are due to fundamental differences in market supply and demand conditions in those markets. He argues that, because some markets contain a higher proportion of rapidly growing firms, or are experiencing more rapid population growth, dynamic markets will have higher vacancy rates than static markets. He also validated the linkage between real estate cycles and general economic cycles. In 1993 *Roulac* argued his perspective view of a twenty-five year real estate business cycle. He evaluated real estate markets influenced by economy, office demand, office construction, property values, volume of transactions, capital for real estate, investor interest and tax climate factors (*Pyhrr et al.*, 1999).
Earlier real estate research evaluated market behaviour based on a homogenous national market. More recent analyses explore inter-market distinctions and linkages between macroeconomic variables and real estate market variables. These cases are related to *macro real estate cycles*. A number of studies found a direct linkage between office employment changes and both supply and demand variables and noted that supply responds more quickly than demand. Many studies carried out in the 1990s have all documented long-run cyclic movements in office rents, construction and vacancy that do not match the more frequent macro-economy fluctuations. In 1996 Clayton studied the Canadian property cycle and developed a time series vector autoregressive (VAR) model to study the linkages between economic or business cycles (measured by cycles in GDP growth) and real estate cycles (measured by cycles in aggregated total real estate returns for all property types), the effects of market cycles on pricing and property income and the implications for buy-and-sell decisions. The study results suggest that commercial property prices might be "forecastable" and major market movements (cycles) may be detectable in advance (*Pyhrr et al.*, 1999).

In short all researchers agreed that economic factors are cyclical, cash flow variables (rents, vacancies, capitalization rates) are cyclical and real estate performance (rates of return) is cyclical at national and regional levels. However the arguments regarding the duration of the real estate cycle are different. As will be

seen, the usefulness of cycle modelling increase as we move from macro-to more micro-level analysis at the metropolitan area and property location levels.

Microeconomic Literature

In recent years, several research's have analyzed the effects of cyclical economic factors on real estate investment performance at the metropolitan area, submarket and property levels. Born in 1984 developed cycle theory which considered that inflation has a significant impact on real estate returns. Apgar in 1986 suggested using a strategic framework to avoid missing important economic factors. The suggested strategy included key factors relating to property type, entrepreneurial involvement, investment strategy, investment structure, target market and ultimately, target properties. Rodino one year later connected Agpar's strategic framework with market data and stressed that market research is the key to satisfactory analytical results. He also suggested that supply, demand, economic base and investor factors should be considered. Corgel and Gay evaluated the potential for regional investment diversification and found significant differences in the economic vitality of the thirty largest metropolitan areas in the U.S. in 1987. Mueller and Laposa investigated the cyclical movements of fifty-two office markets around the U.S. in 1994 and found that there were differences between markets and that by examining the duration, amplitude and timing of the market cycle. At the micro as well as macro level real estate literature supports the theory that real estate markets are cyclical, cash flow variables (e.g. rents, vacancies, capitalization rates) are cyclical and real estate values and returns, risks are cyclical (*Pyhrr et al.*, 1999).

As concluded, virtually every phenomenon in social affairs, political economy, business and real estate is cyclical in nature. However, most investors and analysts incorrectly view such phenomena as „trends", not cycles. Because of this most investors capitalize the present economic situation into perpetuity when forecasting the future, acting as if the current trends (whatever they are) will continue forever. As a result many investors do the wrong thing at the wrong time over the cycle, buying high (during the boom) and selling low (during the bust), following the "herd instinct" and doing what the crowd is doing. These investors are victims of their own experience.

Summarizing the above, there are some strategic implications of cycles by *Pyhrr, Roulac and Born* (1999) for investors and portfolio managers which should be followed to get the most out of the cycles and investment success:

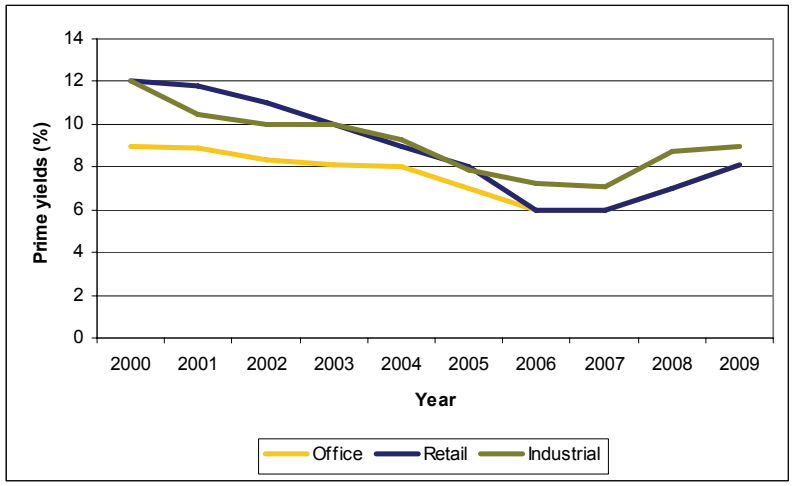
1.) The impact of cycles on real estate performance and wealth is dramatic.
2.) The basic strategy is to buy at the bottom of a cycle and sell at the top.
3.) Cycles affect an investor's acquisition and disposition strategies, and the optimal holding period of each investment.
4.) Depending on the cycle projections made, the investor will develop different optimal strategies for leverage, lease structures, capital expenditure plans and operating policies.
5.) Analyst must alter the nature and scope of their market research and types of data that needs to be collected and analyzed.
6.) Analysts must restructure their cash flow models used to evaluate projects and portfolios.

7.) Cycles affect the types of properties purchased and the countries, states, cities and submarkets where investments are made, diversification of the portfolio is useful.
8.) Investors must change their view of the world, move away from trends and herd mentality.

The above mentioned are true not only for the U.S. but also for Hungary and its real estate market. Hungary's real estate sector has a cyclical activity and shows differences between its submarkets (office, retail, industrial). *Figure 3* presents that yields on submarkets are not exactly the same, but there are similarities in their movement and shape.

Figure 3

Property Yields in Hungary between 2000-2009



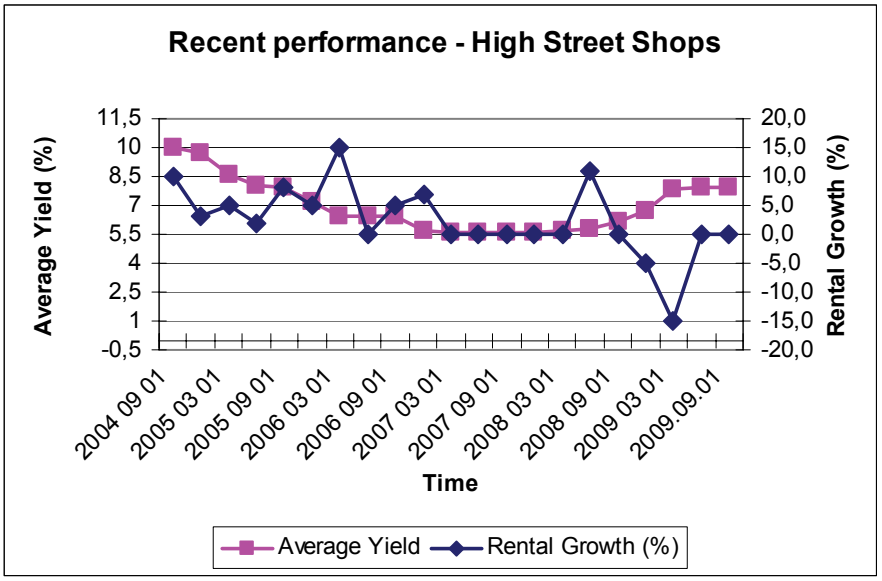
Source: *DTZ*, 2009

Figures 4, *5* and *6* confirm the theory mentioned earlier. They show the average yields and the rental growth for the past five years between 2004 and 2009. It is clearly visible that the rental growth on the submarkets moved on a wide scale in the studied period. Whilst the rents on high street (due to the actual financial crisis) showed a 15% reduction in the first half of 2008, office rents stared to move down only in 2009 and the drop was only 2-3%. However rent on the industrial real estate market reacted to the crisis at the same time as the retail submarket but the fallback was lower than there.

The next two figures (*Figure 7* and *Figure 8*) apply to Hungary and also support the theory. Vacancy rates regarding the two submarkets show a slight variation confirming the opinion of the economist and researchers – including myself – who argues that the different submarkets are affected by the same economical activities. In this work I do not deal in detail with regions or countries but there can be found many similarities and differences among them and their submarkets (*Figure 9*).

Figure 4

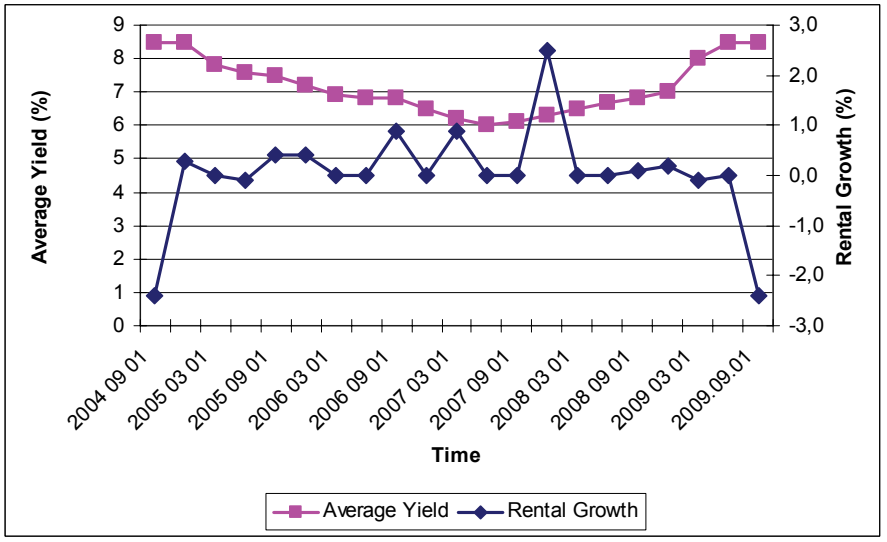
Recent Performance – high street shops between 2004-2009



Source: *Cushman and Wakefield*, 2009

Figure 5

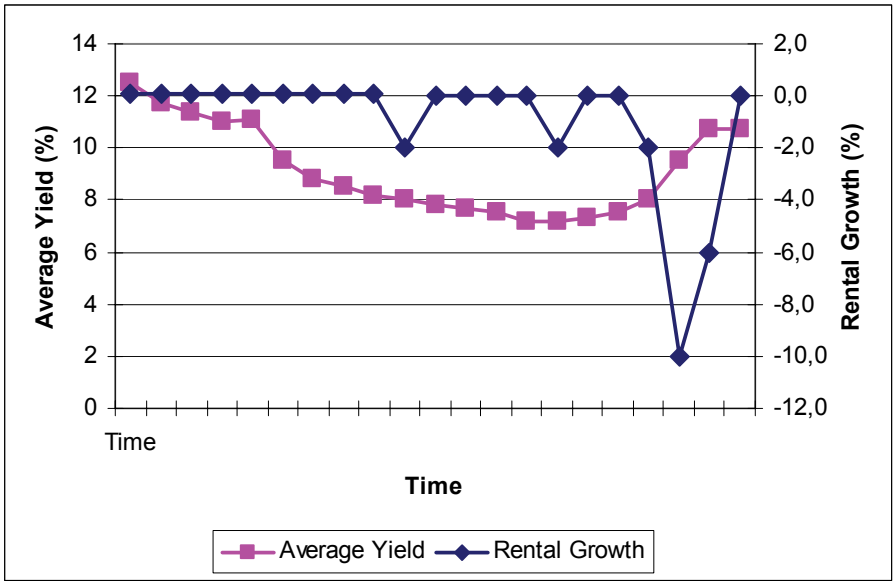
Recent performance – offices between 2004-2009



Source: *Cushman and Wakefield*, 2009

Figure 6

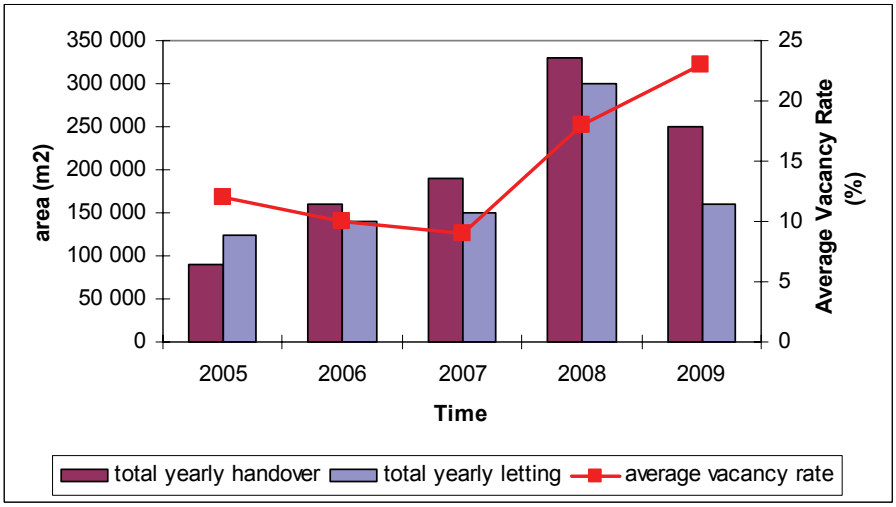
Recent performance – industrial properties between 2004-2009



Source: *Cushman and Wakefield*, 2009

Figure 7

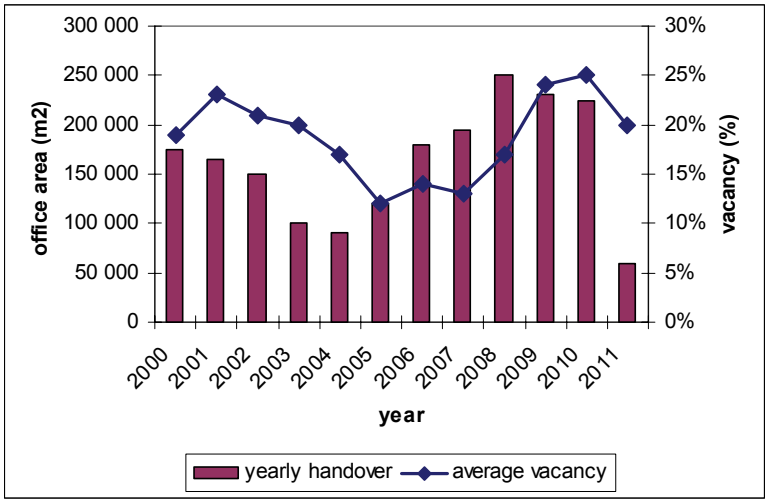
Industrial properties – Market Activity between 2005 - 2009



Source: *Eston*, 2010

Figure 8

Office Properties – Market Activity between 2005-2009



Source: *Eston*, 2010

Figure 9

Retail Market Rent and Yield Levels Europe 2009

	Rental Growth (yr to Sep 09)				Yield levels (Q3 2009)			
	Shopping Centers	Shop Units	Retail W/Houses	Trend	Shopping Centers	Shop Units	Retail W/Houses	Trend - All Sector
Austria	1,0	0,0	0,0	→	6,10	4,70	5,75	→
Belgium	0,3	-0,3	-2,3	→	5,50	5,25	6,50	→
Bulgaria	-11,1	-21,9	n/a	↘	10,50	9,00	n/a	↗
Czech Republic	-4,6	-7,2	-2,4	↘	7,00	7,00	8,25	↗
Denmark	-13,6	-5,9	-4,2	↘	6,00	5,00	7,25	↗
Finland	-7,6	-16,1	-10,5	↘	6,25	6,50	7,50	→
Frence	-10,2	0,0	-4,7	↘	5,50	5,00	7,25	→
Germany	0,0	2,1	0,0	→	5,40	4,20	7,60	→
Greece	-18,2	-19,4	18,2	↘	6,50	5,80	6,50	↗
Hungary	-21,2	-20,0	-5,6	↘	7,50	7,75	8,50	↗
Ireland	-12,8	-20,4	-37,1	↓	7,50	6,30	7,50	↑
Italy	-5,7	-2,6	-13,0	↘	6,50	5,00	6,75	→
Luxembourg	n/a	0,0	n/a	→	n/a	5,75	n/a	→
Netherlands	-2,0	-2,0	-8,8	↘	7,00	5,25	7,75	→
Norway	0,0	-13,8	0,0	↘	6,50	6,00	8,75	→
Poland	-16,4	-3,9	-2,9	↘	7,75	9,50	8,50	↘
Portugal	-1,7	-1,0	-12,5	→	6,50	6,75	7,75	→
Romania	-33,3	-42,7	0,0	↘	9,00	9,25	9,00	↗
Russia	-29,2	-33,0	-21,4	↘	13,00	n/a	14,00	→
Slovakia	0,0	-37,5	-3,1	↘	7,75	7,75	8,50	↗
Spain	0,0	-0,9	0,0	→	6,25	5,50	7,50	→
Sweden	-1,7	-6,3	-5,6	↘	5,75	5,75	6,50	→
Switzerland	-7,9	0,0	0,0	→	5,50	4,50	5,25	→
Turkey	-21,8	-17,9	-32,3	↘	9,50	8,75	10,50	→
Ukraine	-39,4	-40,5	n/a	↓	14,00	17,00	n/a	↗
UK	-6,4	-9,8	-29,5	↘	6,75	5,00	5,75	↓

Source: *Cushman and Wakefield*, 2009

The relationship between general business cycles and the real estate cycle

Recently it has became popular to invest in the real estate business. According to András Szalay land is in short supply. This could mean that land prices will continuously increase over time and the value of the property will continue to increase. However this is not true since we already know that reality works cyclical. Real estate business activity shows a very high correlation to the general economic events and cycles. The real estate cycle is very similar to the general economic cycle, however usually follows that by about a year later (*Soós*, 2005, 223. p.).

Phases and Characteristic of the Real Estate Cycle

Szalay's and Mueller's explanations' for the real estate cycle are the same and following:

There are four phases (*Figure 10*):

1. Recovery
2. Expansion
3. Hypersupply
4. Recession

Phase I: Recovery at the bottom of a cycle, the marketplace is in a state of oversupply from previous new construction or negative demand growth. At this bottom point occupancy is at its trough. As excess space is absorbed, vacancy rates fall and rental rates stabilize and even begin to increase. Eventually, the market reaches its long-term occupancy average where rental growth is equal to inflation.

Phase II: Expansion, demand growth countries at increasing levels, creating a need for additional space. As vacancy rates fall, rents begin to rise rapidly, pushing rents to cost-feasible levels. At this stage, demand is still rising faster than supply, and there is a lag in the provision of new space. Demand and supply are in equilibrium at the peak occupancy point of the cycle.

Phase III: Hypersupply commences after peak/ equilibrium point when supply is growing faster than demand. When more space is delivered than demanded, rental growth slows and eventually construction slows or stops. Once the long-term occupancy average passed, the market falls into Phase IV.

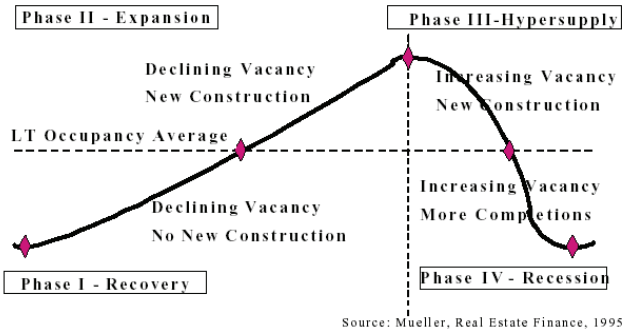
Phase IV: Recession begins as the market moves past the long-term occupancy average with high supply growth and low or negative demand growth. The extent of the down cycle is determined by the difference between supply growth and demand growth. The cycle eventually reaches bottom as new construction and completions slow or as demand begins to grow faster than new supply added to the marketplace (*Soós*, 2005; *Peiser and Frej*, 2003).

András Szalay and Glenn Mueller explain economic cyclicality in the following way. Hypersupply always leads to recession. A recovery occurs when real national output picks up from the trough reached at the low point of the recession. The pace of recovery depends in part on how quickly aggregate demand starts to rise after the economic downturn. In boom conditions, output and employment are both expanding and the level of aggregate demand for goods and services is very high. Typically, businesses use the opportunity of a boom to raise output and also widen

their profit margins. A slowdown occurs when the rate of growth decelerates – but national output is still rising. If the economy continues to grow (albeit at a slower rate) without falling into outright recession, this is known as a soft-landing. A recession means a fall in the level of real national output (i.e. a period when the rate of economic growth is negative). National output declines are leading to a contraction in employment, incomes and profits. When real GDP reaches a low point at the end of the recession, the economy has reached the trough - economic recovery is imminent (*Soós*, 2005).

Figure 10

The Real Estate Cycle



Source: *Peiser and Frej*, 2003

The adage "timing is everything" is especially applicable to real estate development. The importance of real estate cycles cannot be overemphasized according to *Preiser and Frej* (2003). Like other large, capital-intensive purchases, real estate is highly sensitive to changes in interest rates. Income or commercial properties (office, industrial, retail space and apartments) provide insufficient cash flow to be financed when interest rates move above certain levels. When rates are high, buyers tend to wait for them to come back down before buying a property. The development industry is further affected by high interest rates because development firms typically are smaller than most corporate bank customers. When money is scare, lenders tend to prefer their non-real estate customers. Even very sound projects can be difficult to finance because lenders fear the unknown development risk. The supply as well the demand side moves up and down. Lenders often appear to exhibit a herd mentality, all seeming to prefer the same type of product or geographic area at the same time. In Dallas, for example, during the boom in the early 1980s when money was plentiful for office buildings, some lenders began to fear that the market was being overbuilt, and money was shifted from office buildings to retail centers. From 1983 to 1986 almost every shopping center in Dallas that was older that 15 years was renovated. But as suddenly the money was turned on, it was turned off, as lenders across the country shared their concerns about the Dallas retail market. Selecting the right time to enter development is

crucial. A project launched early in the positive cycle means less competition for the developer. During the early stage of the development cycle, land is cheaper, terms are softer, and there is less market risk.

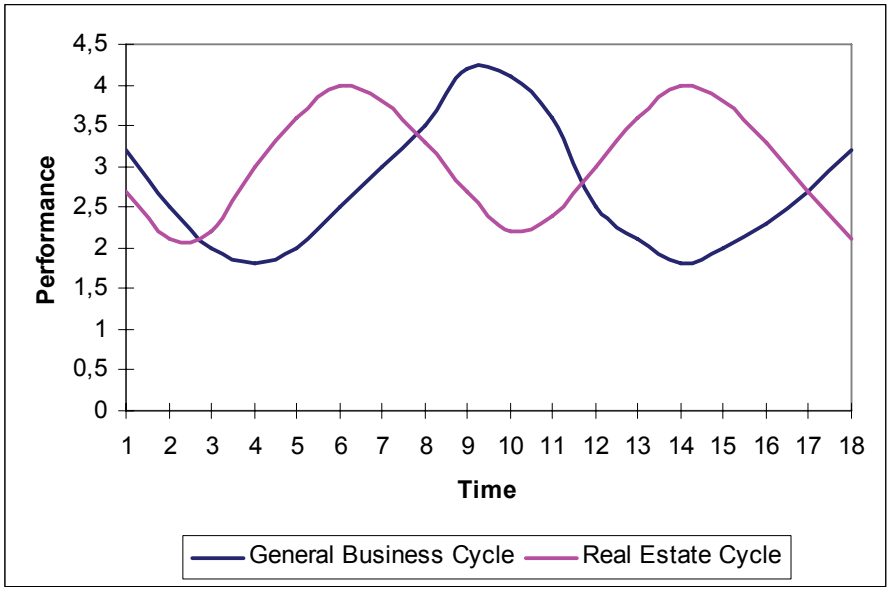
The "Real Estate Cycle Metology" report of Price Waterhouse Coopers in 1999 summarized the six key factors which determinate six phases:

1. Demand
2. Supply
3. Vacancy rate
4. Rental growth
5. Capitalization rate
6. Investors profit

Many economists consider commercial real estate cycles to be a mirror reflection of the economy. András Szalay and Glenn Mueller agree that commercial real estate is a cyclical industry because its demand side affected by economic cycles and supply historically lags demand. They both found that peaks in general business cycles are followed by peaks in real estate cycles with about a year delay. *Figure 11* shows this tendency. It follows that the real estate business is calm. The real estate business responds slowly to the general economic effects since it is a long-term investment. This characteristic of the property business makes it able to lengthen the "new construction" or welfare period, but the recession throws it back more than the other sectors (*Mueller*, 2006).

Figure 11

Relationship between the General Business Cycle and the Real Estate Cycle



The question of the real estate "bubble" keeps the researchers mind both in Hungary and worldwide occupied. There are bubbles in the economy, these are classes of assets whose prices inflate like air in an expanding balloon and then collapse. The basic case is usually land speculation. During an economic boom, at first the growing demand for real estate is met by reducing vacancies. But then new real estate is constructed and rent and land values rise. Speculators notice this and buy land expecting to sell at higher prices later. This speculative demand, added to the demand for use, carries land prices so high that investments in enterprise become unprofitable. Land becomes priced for expected future uses, rather than present-day uses. Very simple, market players don't consider that trends do not last forever. When the bubble busts, it is very dangerous since it affects financial markets directly (*Soós*, 2005).

Are general business and real estate cycles avoidable?

According to *Samuelson and Nordhaus* (2003, 431. p.)view the development of macroeconomic showed the governments what they can do to avoid recession and keep from financial crises.

However I really appreciate Samuelson and Nordhaus view and work, I answer this question with a citation of Arthur M. Okun's "The Political Economy of Prosperity":

> *„Recently it is recognized, that recessions are generally avertable alike as air catastrophes, but unlike as hurricanes. However we did not manage completely to get rid of airplane accidents and is not clear yet, whether we have the wisdom or ability to eliminate recessions. Danger is still there. The forces which generate recessions again and again are waiting behind the scenes and are just waiting for the keyword."* (*Samuelson and Nordhaus*, 2003, 431. p.)

CONCLUSIONS

Real estate cycles have a significant impact on the financial success and failures of real estate investments because their pervasive and dynamic impacts on real estate returns, risks and investment values. Because of this recognition, investors and portfolio managers in the future should place increased emphasis on the identification, analysis and decision-making implications of real estate cycles. It is proved that there is a high correlation between the economical cycle and the real estate cycle. The work demonstrates that different property types might have different cyclic behavior. It also shows that timing is very important to real estate development.

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