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THE CHANGING RISK PROFILE OF LISTED PROPERTY TRUSTS

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ABSTRACT

The listed property trust (LPT) sector has undergone considerable change in recent years, including increased levels of international property, increased levels of debt, incorporating property development activities via use of stapled securities structures and a reduced number of LPTs via mergers and acquisitions. By analysing LPT performance over 1993-2004, the changing risk profile of LPTs is assessed. In 2003-04, there is evidence of increased levels of LPT risk, particularly in the international LPT and stapled securities LPT sectors. LPT correlations with the stockmarket have also increased. This increasing risk profile for LPTs, whilst still off a low base, sees a reduction in the traditional defensive characteristics (ie low risk) and portfolio diversification benefits of LPTs.

INTRODUCTION

Listed property trusts (LPTs) have been a successful indirect property investment vehicle in Australia. At November 2004, the LPT sector had total assets of over $100 billion, comprising over 1500 institutional-grade properties in diversified and sector-specific portfolios (Property Investment Research, 2004a). LPTs currently account for over $73 billion in market capitalisation, representing over 8% of the total Australian stockmarket capitalisation (UBS Warburg, 2004).

Table 1 presents an overall profile of the LPT sector at November 2004. Currently, LPTs account for approximately 8% of institutional asset allocations and account for 49% of all institutional-grade property in Australia (Garing et al, 2004). LPTs have performed strongly compared to the other major asset classes over the last ten years (see Table 2), being the best performed sector over the 3, 5 and 10-year holding periods. LPT risk levels (10.44% over 1985-2004) are significantly below stockmarket risk (19.23%) (Property Council of Australia, 2004), reflecting the defensive characteristics of LPTs. Sector-specific LPTs have also typically outperformed the corresponding direct property sector over these various holding periods.

LPT and stockmarket performance in Australia is correlated (r = .63 over 1985-2004) (Property Council of Australia, 2004) and it has been shown that there is not long-term market integration between LPTs and the stockmarket (Wilson and Okunev, 1996, 1999; Wilson et al, 1998). This evidence of market segmentation suggests that there are diversification benefits from including LPTs in an investment portfolio, particularly in conditions of increased stockmarket volatility (Newell and Acheampong, 2001). Both diversified and sector-specific strategies are equally effective for LPT portfolio diversification (Newell and Tan, 2003), with LPTs also showing evidence of superior property selection and market timing (Peng, 2004). The establishment of an LPT futures market in August 2002 further enhanced the stature of LPTs, with institutions being able to use LPT futures as an effective risk management tool for hedging their LPT exposure (Newell and Tan, 2004).

However, the LPT sector has undergone considerable structural change in recent years, including increased levels of international property, increased levels of debt, incorporating property development activities via the use of stapled securities structures and a reduced number of LPTs via significant mergers and acquisitions. The potential impact of these structural changes is to increase LPT risk levels and see LPTs as more sensitive to interest rates and less reflective of property market conditions, and reduce the traditional defensive nature of LPTs and their benefits in a portfolio (Oliver, 2004).

As such, the purpose of this paper is to assess the changing risk profile of LPTs over 1993-2004, specifically focusing on the impact of the above factors on the LPT risk profile, both at a LPT sector level and at an individual LPT level. The implications for the portfolio diversification benefits of LPTs will also be assessed.

LPT STRUCTURAL CHANGE

Structural change in the LPT sector has largely focused around four key issues.

Increased levels of international property

With LPTs accounting for 49% of all institutional-grade property in Australia (Garing et al, 2004), the lack of local investment opportunities has seen LPTs seeking international property investments in recent years (Murdoch, 2004). Other motivating factors have been diversification benefits, growth in investment funds, better returns and lower cost of capital (Murdoch, 2004; Newell and Worzala, 1995). Beginning with Westfield America in 1996, international property now accounts for over 29% of LPT total assets (Garing et al, 2004), with industry surveys indicating these levels of international property are expected to increase to 50-60% of LPT total assets over the next five years (Norris, 2004).

International property has been included in LPT portfolios as stand-alone international LPTs or merged with local property, with Table 3 indicating the level of international property in LPTs. 48% (12/25) of LPTs in the ASX300 now have international property in their portfolios, accounting for over 430 properties or 30% of properties in the LPT sector (PIR, 2004b). In addition to LPTs with 100% international property (ie: Macquarie ProLogis (101 properties), Macquarie DDR (22 properties), Galileo (45 properties)),

LPTs with significant levels of international property in their portfolio include Westfield (59%, comprising 86 retail properties), Macquarie Office (39%, comprising 10 office properties) and Macquarie CountryWide (34%, comprising 37 retail properties).

While international property introduces the additional risk factors of currency risk, political risk and economic/investment risk, LPTs have typically used joint venture structures with local market participants and hedged rental income streams for up to five years as effective risk management strategies.

The addition of international property to the LPT portfolio has been shown to give diversification gains (Tan, 2004a), as well as mixed-asset portfolio benefits (Tan, 2004b). The stature of international property in LPTs is reflected in the recent introduction (June 2004) by UBS Warburg of an international LPT performance index, in addition to the property sub-sector performance indices currently available (UBS Warburg, 2004).

Increased levels of debt

Debt levels for LPTs have steadily increased from 10% in 1995 to 35% in 2004 (Oliver, 2004). Whilst these debt levels are still low in comparison to US REITs and the overall stockmarket, they are largely attributable to a low interest rate environment and increased international property exposure. These increased debt levels further heighten the sensitivity of LPTs to future interest rate changes.

At September 2004, the debt levels for the leading LPTs were Macquarie ProLogis (50%), Galileo (48%), Westfield (43%), Mirvac (38%), Macquarie Office (37%), Investa (36%), Macquarie Goodman Industrial (33%), Commonwealth Property (33%), ING Office (32%), Centro (31%), Macquarie DDR (30%), DB RREEF (28%), GPT (28%), Gandel (27%), Macquarie CountryWide (22%) and Stockland (22%) (PIR, 2004b). In structuring this debt profile, LPTs have used a range of debt products including:

- CMBS: $3.7B over 2001-04 via 27 issues (eg: Mirvac, Macquarie Goodman Industrial, ING Office, ING Industrial, Investa, Macquarie Office)
- Property trust bonds: $4.8B over 2001-04 via 40 issues (eg: Gandel, Commonwealth Property, GPT, Stockland, Westfield).

Incorporating property development activities via stapled securities

While the traditional LPT model involved external managers, recent years have seen an increased focus on an internal LPT management structure via stapled securities. This internal management structure has enabled a closer alignment of unit holders and manager interests, no fee leakage and a lower cost of capital, but it has increased LPT exposure to non-property investment risk; in particular, to property development risk. This reduced LPT exposure to rental income has seen this exposure decrease from 96% in 2000 to 90% in 2004 (Garing et al, 2004), with non-rental income components comprising property development (60%), funds management (30%) and construction (10%) (Garing et al, 2004).

At November 2004, stapled securities accounted for 69% of the LPT market capitalisation compared to only 29% in April 2004 (UBS Warburg, 2004). Leading LPTs using this stapled security structure include Westfield, Stockland, Mirvac, Investa, Centro, Ronin, James Fielding, DB RREEF and Multiplex, with a number of these LPTs

actively engaged in property development (eg: Stockland, Westfield, Mirvac, Thakral). The stature of stapled securities in LPTs is reflected in the recent introduction (June 2004) by UBS Warburg of a stapled securities LPT performance index, in addition to the property sub-sector performance indices currently available (UBS Warburg, 2004).

While stapled securities typically take on more risk due to property development risk and higher leverage ratios, stapled securities outperformed externally managed LPTs on a risk-adjusted basis over 1997-2003 (Tan, 2004c), with property development being an important value-adding dimension in LPT performance (Tan, 2004d). Importantly, industry surveys have indicated that industry participants consider stapled security returns outweigh the extra risk, and property development being seen as the most effective future growth strategy to optimise returns (Norris, 2004). Similarly, LPT fund managers do not consider the risk will increase substantially, due to the generally low levels of property development activity undertaken in the overall LPT portfolio (Tan, 2004d).

Reduced number of LPTs via mergers and acquisitions

Recent years have seen considerable consolidation in the LPT sector via merger and acquisition activity. This strategy has been largely implemented to build funds under management and increase international competitiveness (Oliver, 2004). This has seen the LPT sector grow significantly, but the number of LPTs reduce significantly; eg: in the ASX200, the number of LPTs has reduced from 51 in 1999 to 23 in November 2004 (UBS Warburg, 2004).

Recent examples of this LPT consolidation via mergers and acquisitions include:

- DB RREEF; formed from Deutsche Office, Deutsche Industrial and Deutsche Diversified
- Westfield; formed from Westfield, Westfield America and Westfield Holdings
- Centro acquiring Prime
- Multiplex acquiring Ronin
- Mirvac acquiring James Fielding.

This consolidation now sees a significant contribution by a smaller number of large LPTs to the LPT sector market capitalisation; eg: Westfield ($23.9B), Stockland ($7.6B), GPT ($7.3B), Centro ($3.9B), Mirvac ($3.4B), Macquarie Goodman Industrial ($3.4B), Investa ($3.1B) and DB RREEF ($2.8B) (UBS Warburg, 2004), with considerable liquidity evident in the LPT sector. The potential impact with this consolidation is for LPTs to behave more like stocks than previously.

Other LPT risk factors

Other recent factors likely to contribute to the changing risk profile of LPTs are:

- movement into new property sectors; eg: retirement, pubs, hospitals
- increasing bond yields
- outflow of funds into international property investment funds
- restructuring of LPT index composition.

Overall, these recent major structural changes in the LPT sector can have a potential impact on LPT risk levels, and hence their portfolio diversification benefits. Some industry sources have suggested a resulting 20-30% increase in LPT risk, while others suggest these changes still see LPTs as low risk and have not reduced the attractiveness of LPTs as an asset class (Oliver, 2004; Rees and Velleley, 2004).

The following sections of this paper will more fully assess the impact of these structural changes on the LPT risk profile over 1993-2004.

METHODOLOGY

Monthly total returns were obtained from UBS Warburg for August 1993- September 2004 for the following:

- overall LPT sector (LPT300)
- LPT300 sub-sectors: retail, office, industrial, diversified, leaders, stapled securities (since Feb 1994), international (since July 1996)
- individual LPTs: Centro, Deutsche Diversified, GPT, ING Industrial, Investa, James Fielding, Stockland, Westfield, Gandel (since May 1994), Macquarie CountryWide (since March 1996), Macquarie Goodman Industrial (since October 1996), Macquarie Office (since January 1994), Thakral (since July 1994), Westfield America (since July 1996)
- equivalent stockmarket (All Ordinaries), bond (All Maturities) and cash (90-day bill) sectors.

Risk analyses were done for the 11-year period of August 1993-September 2004 and for the two sub-periods of August 1993-February 1999 and March 1999-September 2004. 1993 was chosen as the start date as it ensured sufficient LPTs for analysis, as well as representing the start of significant growth in LPT market capitalisation, with the LPT sector becoming a more mature asset class compared to the 1980s. The sub-period selection of early 1999 was chosen as it coincides with the time of maximum number of LPTs and when average LPT debt levels first exceeded 20%.

RESULTS AND DISCUSSION

LPT risk analysis

Table 4 presents the LPT risk analysis for the LPT sector, LPT sub-sectors and individual LPTs over 1993-2004 and for a number of sub-periods. While LPT sector and LPT sub-sector risks were lower over 1999-2004 than for 1993-1999, the more recent LPT risk profiles over 2003 and 2004 were higher than for the period of 1999-2004. This was evident for all LPT sub-sectors except international; this is likely to be attributable to the thinness of the international LPT series in these earlier years (ie largely Westfield America), with most international LPTs only being introduced since 2000 (Tan, 2004a, b). Similar trends of increasing risk in more recent years for most individual LPTs was also evident.

In more recent years, unlike LPT risk, stockmarket risk has decreased (see Table 4). To highlight this changing relationship between stockmarket risk and LPT risk, Table 5 presents LPT risk as a percentage of stockmarket risk over 1993-2004 and various sub-periods. Increasing LPT risk as a percentage of stockmarket risk is evident in 2003 and 2004 for the LPT sector, most LPT sub-sectors and individual LPTs.

Further evidence of increasing LPT risk in recent years is shown in Figures 1a - 1i, with the dynamics of the LPT risk profile assessed using rolling 3-year windows (monthly). Typically, LPT risk levels have increased since early 2003, with this being most evident for diversified LPTs (see Figure 1e) and stapled securities (see Figure 1g). The significance of early 2003 as the period of increasing LPT risk reflects the significant growth in international property in LPT portfolios, increased levels of stapled securities and increased levels of debt. Similarly, Figure 1i shows the continued decrease in stockmarket risk in recent years. Whilst these increases in LPT risk are not large as yet, they indicate this trend across the LPT sub-sectors resulting from these LPT structural changes in recent years.

Table 6 presents the LPT beta analysis for the LPT sector, LPT sub-sectors and individual LPTs over 1993-2004 and various sub-periods. LPT betas decreased over the sub-period of 1999-2004, but have increased in 2003 and 2004. While these betas are still low, they reflect a reduction in the defensive characteristics of LPTs in recent years. The dynamics of the LPT beta profile is shown in Figures 2a-2h using rolling 3-year windows (monthly). Increasing betas were most evident for office LPTs (see Figure 2b), stapled securities (see Figure 2g) and international LPTs (see Figure 2h).

Overall, there is evidence of increased levels of LPT risk in recent years, with these risk increases coinciding with increased levels of international property in LPT portfolios, increased use of stapled securities and increased levels of debt. While the LPT risk levels have recently increased for international LPTs and stapled securities, Tan (2004a, b) has previously shown that international LPTs provided superior risk-adjusted returns over 1997-2003 and Tan (2004c,d) has shown that internal LPT management and low levels of property development in stapled securities LPTs provided superior risk-adjusted returns over 1997-2003. The analyses by Tan (2004a, b, c, d) do not include the 2003-04 period which has been characterised by these significant LPT structural changes.

LPT correlation analysis

Table 7 presents the LPT correlations with the stockmarket over 1993-2004 and various sub-periods. LPT correlations reduced significantly in 1999-2004 compared to 1993-1999, reflecting enhanced portfolio diversification benefits. In recent years, these correlations have been stable, with marginal increases in correlations in 2003 and 2004 seen at the LPT sector and LPT sub-sector levels.

The dynamics of this LPT correlation profile is shown in Figures 3a-3h using rolling 3-year windows (monthly) for the various LPT sub-sectors. Evidence for increasing LPT correlations was seen for the LPT sector (see Figure 3a), office LPTs (see Figure 3b), stapled securities (see Figure 3g) and international LPTs (see Figure 3h). These increases were largely evident since June 2002 (LPT sector and stapled securities) and since June 2001 (international LPTs). These LPT correlations still remain low, but reflect some loss in portfolio diversification benefits by LPTs since 2002.

For the LPT sub-sectors, Table 8 presents the correlations between the LPT sub-sectors over 1993-2004. Correlations between the LPT sub-sectors increased over 1999-2004 compared to 1993-1999. Figures 4a-4f present the rolling LPT sub-sector 3-year correlations (monthly), with evidence of declining or stable correlations in recent years; these correlation levels typically being .60-.80, reflecting limited portfolio diversification benefits.

The correlations between international LPTs and the LPT sub-sectors are given in Table 9, with the rolling 3-year correlations (monthly) given in Figures 5a-5e. These correlations have reduced significantly since June 2002, particularly for office, industrial and diversified LPTs. Typically, these correlations are now .20-.50, having reduced from .60-.70 and reflecting enhanced portfolio diversification benefits.

The correlations between stapled securities LPTs and the LPT sub-sectors are given in Table 10, with the rolling 3-year correlations (monthly) given in Figures 6a-6e. These stapled securities LPT correlations have increased or have been stable in 2003, reflecting reduced portfolio diversification benefits. The increasingly significant contribution by stapled securities to the total LPT market capitalisation has been a key driver in this increased correlation ($r = .78$); particularly for office ($r = .72$), industrial ($r = .70$) and diversified LPTs ($r = .84$).

Overall, this LPT correlation analysis has shown LPT correlations with the stockmarket increasing; particularly for international LPTs and stapled securities. International LPTs have seen reduced correlation with the LPT sub-sectors, while stapled securities LPTs have seen increased correlation with the LPT sub-sectors. This further reinforces the loss of diversification benefits by stapled securities LPTs and to a lesser degree by international LPTs.

CONCLUSION

LPTs have previously been seen as a well-performing asset class, with strong defensive characteristics (eg: low risk) in a portfolio, particularly in a volatile stockmarket environment. However, the recent structural changes in the LPT sector have seen increased international investment, increased levels of debt, incorporating property development activities via stapled securities LPTs and a reduced number of LPTs via significant mergers and acquisitions.

The impact of these structural changes in the LPT sector has seen evidence of increased levels of LPT risk in recent years (2003-04); particularly in the international LPT sector and stapled securities LPT sector. Similarly, the correlation structures for LPTs with the stockmarket have increased; particularly for international LPTs and stapled securities LPTs. Stapled securities LPTs have also increased their correlations with the other LPT sub-sectors. The cumulative effect sees emerging evidence of LPTs taking on higher risk levels in recent years, reducing their traditional defensive characteristics and reducing their portfolio diversification benefits.

While the recent increase in LPT risk levels and reduced portfolio diversification benefits have not as yet been large and come off a low base, they have seen a progressive movement away from the traditional attractive portfolio attributes of LPTs. With an increasing focus by LPTs on international property and the use of stapled securities, the continued monitoring of LPT risk levels will become increasingly important.

LPTs will continue to be an important property investment vehicle in Australia, offering features such as liquidity, high yields and access to quality assets. However, this is now likely to be in an environment of higher LPT risk levels. The potential impact of these higher LPT risk levels include revised LPT credit ratings by the major agencies (eg: Moodys), investors wanting more exposure to investments behaving more like direct property (eg: unlisted property trusts, property syndicates) and investors seeking international property exposure via the newly established global property securities funds (eg: BT Global Property, Colonial First State Global Property Securities, Deutsche Global Property Securities Fund) and international direct property funds.

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Table 1: LPT sector profile: November 2004[(1)]

LPT	Market capitalisation ($B)	Total assets ($B)	# of properties
Diversified	**$24.59B**	**$30.54B**	**464**
Stockland	$7.59B	$7.21B	102
GPT	$7.34B	$8.21B	78
Mirvac	$3.36B	$3.97B	43
DB RREEF	$2.80B	$5.03B	172
Multiplex	$2.57B	$4.09B	21
James Fielding	$0.42B	$0.56B	9
Macquarie Leisure	$0.21B	$0.22B	6
Thakral	$0.20B	$0.76B	18
Grand Hotel	$0.09B	$0.49B	15
Office	**$8.55B**	**$12.32B**	**129**
Investa Property	$3.09B	$4.46B	39
Commonwealth Property	$1.69B	$2.62B	26
Macquarie Office	$2.07B	$3.10B	33
ING Office	$1.32B	$1.77B	24
Valad Property	$0.39B	$0.37B	7
Retail	**$32.68B**	**$45.66B**	**548**
Westfield	$23.86B	$31.81B	125
Centro Properties	$3.93B	$4.53B	67
Gandel Retail	$2.00B	$3.81B	22
Macquarie CountryWide	$1.13B	$1.59B	112
Macquarie DDR	$0.84B	$1.94B	22
Bunnings Warehouse	$0.43B	$0.58B	50
Galileo	$0.34B	$0.82B	45
ALE Property	$0.16B	$0.58B	105
Industrial	**$5.83B**	**$7.28B**	**295**
Macquarie Goodman Industrial	$3.39B	$4.09B	139
ING Industrial	$1.42B	$1.69B	55
Macquarie ProLogis	$0.82B	$1.50B	101
Total	**$71.45B**	**$95.80B**	**1,436**

Source: UBS Warburg (2004), PIR (2004a)
(1): LPTs shown are those in ASX300; 10 LPTs which are not in ASX300 account for an additional $2.00B

Table 2: Asset class performance analysis: June 2004 [(1)]

Asset class	Average annual return (%)			
	1Y	3Y	5Y	10Y
Direct property	10.91%(3)	10.43%(2)	10.63%(2)	10.07%(2)
Office	7.43%	7.63%	8.78%	8.81%
Retail	13.87%	12.94%	12.24%	10.98%
Industrial	12.98%	12.94%	12.80%	13.83%
LPTs	**17.22%(2)**	**14.82%(1)**	**14.08%(1)**	**12.28%(1)**
Office	5.90%	7.50%	9.40%	9.10%
Retail	24.40%	18.00%	15.40%	14.20%
Industrial	14.30%	17.20%	15.90%	12.90%
Diversified	15.10%	15.10%	14.70%	12.30%
Shares	22.37% (1)	4.93% (4)	7.41% (3)	10.02% (3)
Bonds	1.86% (4)	5.20% (3)	5.61% (4)	7.85% (4)

Sources: PCA (2004), UBSW (2004)

[(1)]: Ranks of major asset classes given in brackets

Table 3: Significance of international property in LPTs

LPT	% international in LPT total assets (%$)	# of international properties	% international of LPT properties (%#)
Macquarie ProLogis	100%	101	100%
Macquarie DDR	100%	22	100%
Galileo	100%	45	100%
Westfield	59%	86	69%
Macquarie Office	39%	10	30%
Macquarie CountryWide	34%	37	33%
ING Office	24%	3	13%
DB RREEF	19%	92	53%
Ronin	12%	11	48%
Centro	10%	16	24%
Multiplex	7%	3	14%
Macquarie Goodman Industrial	5%	6	4%

Source: Authors' compilation from PIR (2004b)

Table 4: LPT risk analysis: 1993-2004

	Annual risk					
	Aug 1993 – Sept 2004 (%)	**Aug 1993 – Feb 1999 (%)**	**Mar 1999 – Sept 2004 (%)**	**2000-2003 (%)**	**2003 (%)**	**2004** (%)**
LPTs	9.70	11.26	7.90	7.70	9.70	6.87
LPT sectors						
Office	9.34	9.57	9.17	8.98	9.46	11.54
Retail	11.26	13.39	8.72	8.27	9.64	6.84
Industrial	9.86	11.57	7.84	7.87	8.58	8.71
Diversified	11.03	12.44	9.51	8.56	12.18	13.20
Leaders	11.57	13.72	9.01	8.41	10.34	7.24
Stapled securities	10.87*	12.26*	9.49	8.82	9.83	11.90
International	12.74*	14.89*	11.46	10.93	7.11	8.91
Individual LPTs						
Centro	13.68	15.34	11.87	11.59	12.49	17.50
Deutsche Diversified	15.14	16.71	13.36	11.47	17.35	24.10
GPT	14.58	16.26	12.77	10.18	14.21	19.56
ING Industrial	13.04	15.87	9.52	9.96	9.90	8.51
Investa	13.41	15.01	11.68	11.97	10.88	12.37
James Fielding	16.75	19.94	12.93	11.45	15.57	10.50
Stockland	12.49	13.23	11.76	10.27	14.13	14.86
Westfield	13.90*	15.73	11.82*	10.44	12.33	13.26*
Gandel	13.27*	14.84*	11.85	10.74	13.35	14.64
Macq. CountryWide	15.19*	19.81*	12.02	11.45	11.17	11.85
Macq. Goodman Ind.	9.58*	9.22*	9.78	9.65	12.06	10.05
Macq. Office	11.09*	13.74*	8.00	8.18	8.92	8.17
Thakral	20.45*	19.50*	21.32	22.12	12.25	13.58
Westfield America	13.06*	14.08*	12.54*	11.61	7.95	10.15*
Shares	12.31	13.74	10.78	11.10	10.22	5.18
Bonds	4.83	5.31	4.32	3.47	2.98	2.63

* : does not cover full period
** : 2004 covers 9 months to September

Table 5: LPT risk as percentage of stockmarket risk: 1993-2004

	Percentage of stockmarket risk					
	Aug 1993 – Sept 2004 (%)	**Aug 1993 – Feb 1999 (%)**	**Mar 1999 – Sept 2004 (%)**	**2000 -2003 (%)**	**2003 (%)**	**2004** (%)**
LPTs	79	82	73	69	95	133
LPT sectors						
Office	76	70	85	81	93	223
Retail	91	97	81	74	94	132
Industrial	80	84	73	71	84	168
Diversified	90	91	88	77	119	255
Leaders	94	100	84	76	101	140
Stapled securities	88*	89*	88	79	96	230
International	103*	108*	106	99	70	172
Individual LPTs						
Centro	111	112	110	104	122	338
Deutsche Diversified	123	122	124	103	170	465
GPT	118	118	119	92	139	378
ING Industrial	106	116	88	90	97	164
Investa	109	109	108	108	106	239
James Fielding	136	145	120	125	152	203
Stockland	101	96	109	93	138	287
Westfield	113*	114	110*	94	121	256*
Gandel	108*	108*	110	97	131	283
Macq. CountryWide	123*	144*	112	103	109	229
Macq. Goodman Ind.	78*	67*	91	87	118	194
Macq. Office	90*	100*	74	74	87	158
Thakral	166*	142*	198	199	120	262
Westfield America	106*	103*	116*	105	78	196*
Bonds	39	39	40	31	29	51

* : does not cover full period
** : 2004 covers 9 months to September

Figure 1a: Rolling risk: LPTs

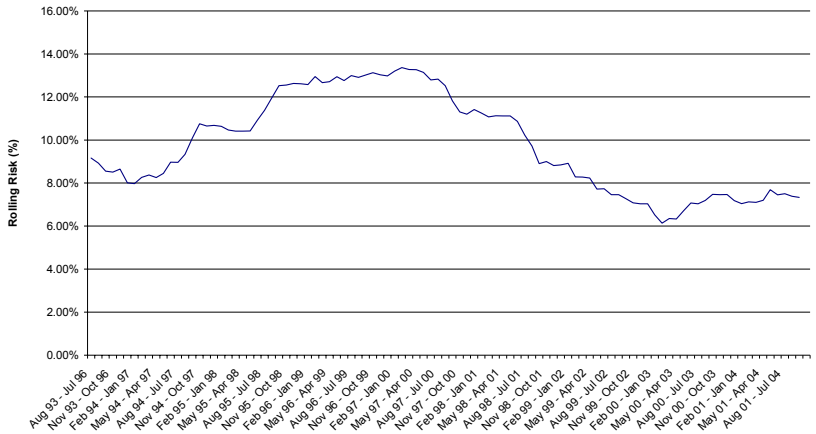

Figure 1b: Rolling risk: office LPTs

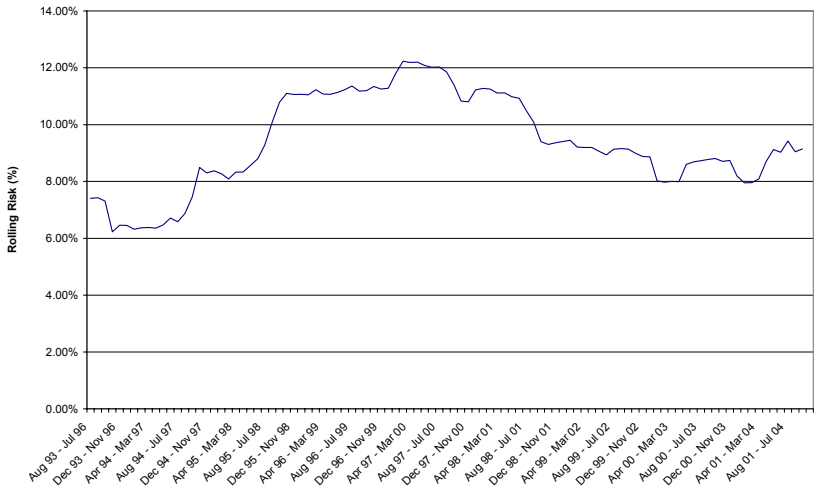

Figure 1c: Rolling risk: retail LPTs

Figure 1d: Rolling risk: industrial LPTs

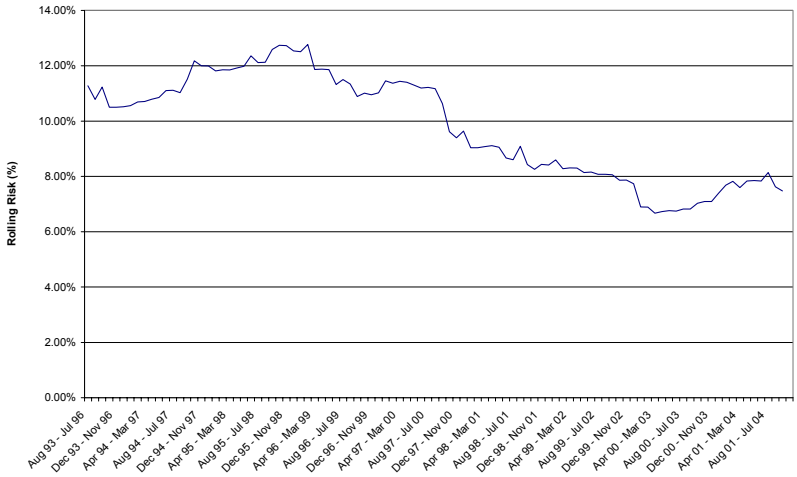

Figure 1e: Rolling risk: diversified LPTs

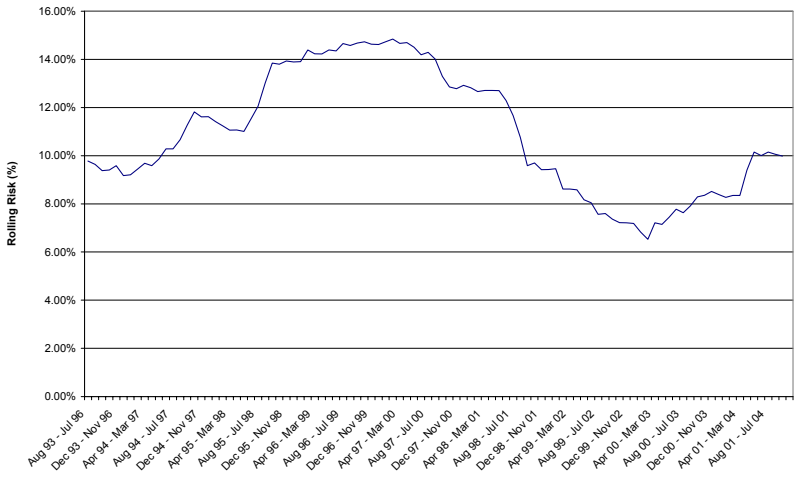

Figure 1f: Rolling risk: leader LPTs

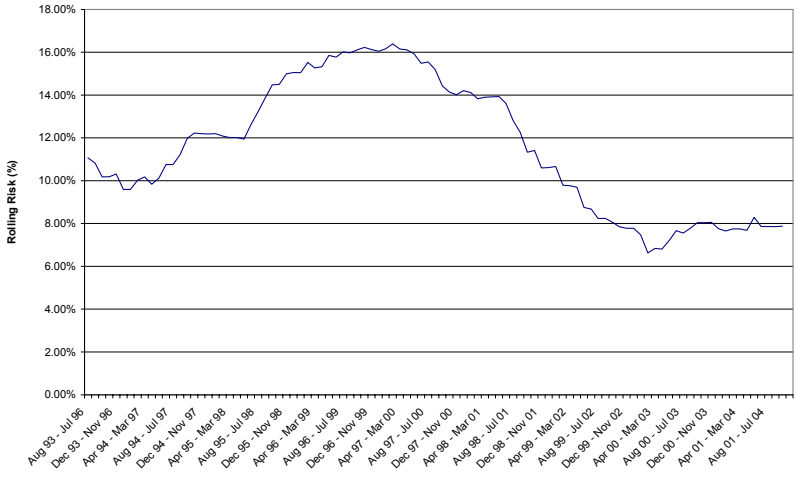

Figure 1g: Rolling risk: stapled securities LPTs

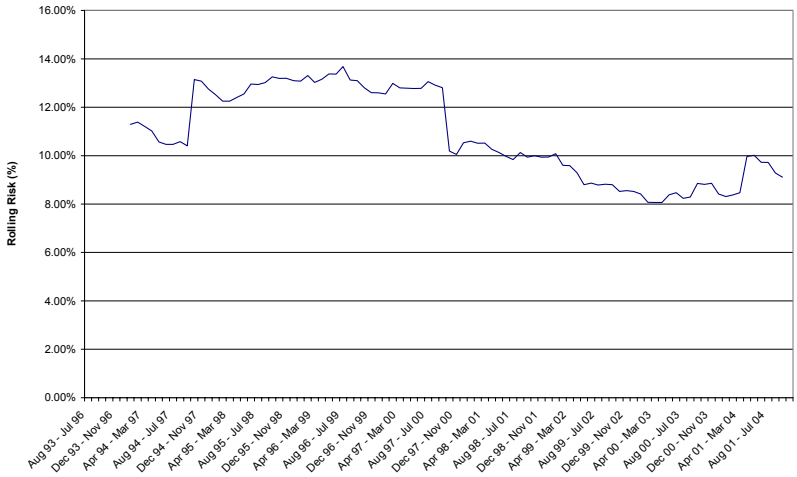

Figure 1h: Rolling risk: international LPTs

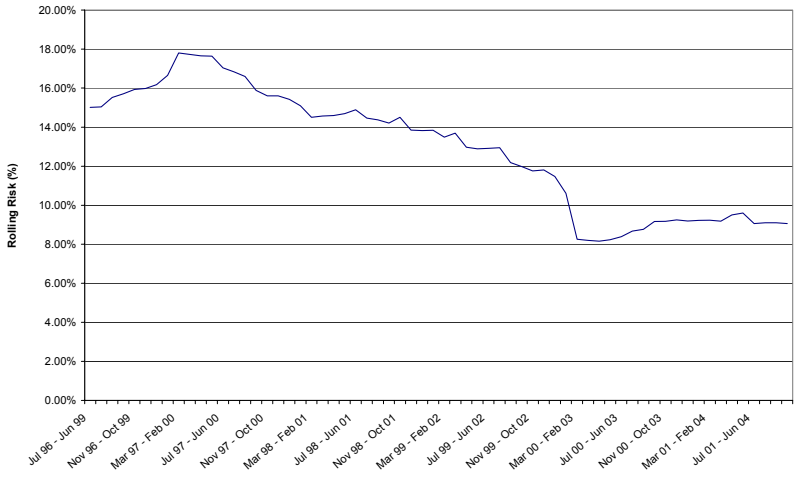

Figure 1i: Rolling risk: All Ords

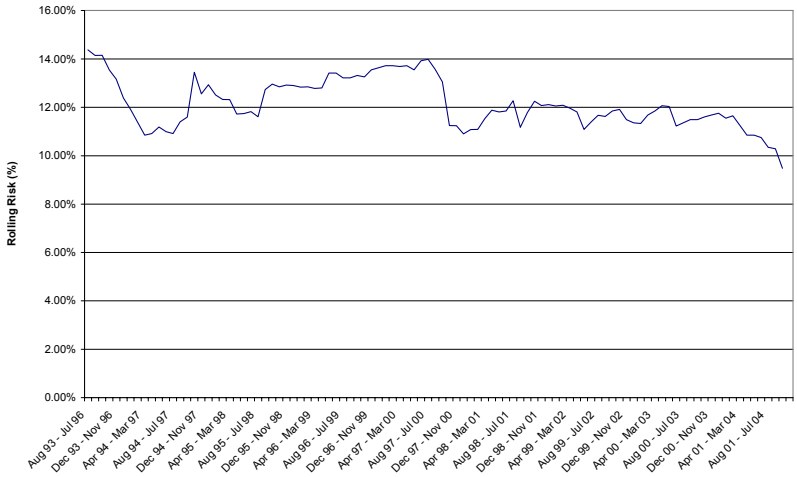

Table 6: LPT beta analysis: 1993-2004

	Beta					
	Aug 1993 – Sept 2004	**Aug 1993 – Feb 1999**	**Mar 1999 – Sept 2004**	**2000 -2003**	**2003**	**2004****
LPTs	.389	.498	.218	.185	.311	.400
LPT sectors						
Office	.309	.328	.282	.266	.394	.777
Retail	.409	.542	.197	.154	.272	.400
Industrial	.279	.284	.275	.268	.244	.787
Diversified	.413	.546	.203	.158	.315	1.060
Leaders	.426	.580	.181	.122	.261	.246
Stapled securities	.392	.588	.132	.100	.230	1.032
International	.266	.516	.076	.200	.154	.754
Individual LPTs						
Centro	.353	.437	.223	.258	.133	.042
Deutsche Diversified	.369	.441	.244	.261	.395	.310
GPT	.533	.707	.258	.151	.362	1.148
ING Industrial	.353	.386	.301	.345	.131	.968
Investa	.299	.346	.231	.205	.230	1.027
James Fielding	.157	.293	.058	.010	.164	.975
Stockland	.366	.521	.121	.099	.188	1.053
Westfield	.437*	.585	.195*	.089	.326	n/a*
Gandel	.490*	.653*	.297	.177	.355	.686
Macq. CountryWide	.545*	.875*	.288	.319	.330	.049
Macq. Goodman Ind.	.228*	.304*	.184	.173	.328	1.189
Macq. Office	.317*	.421*	.175	.255	.534	.120
Thakral	.448*	.546*	.342	.216	.016	.671
Westfield America	.260*	.480*	.093*	.192	.123	n/a*

* : does not cover full period
** : 2004 covers 9 months to September

Figure 2a: Rolling beta: LPTs

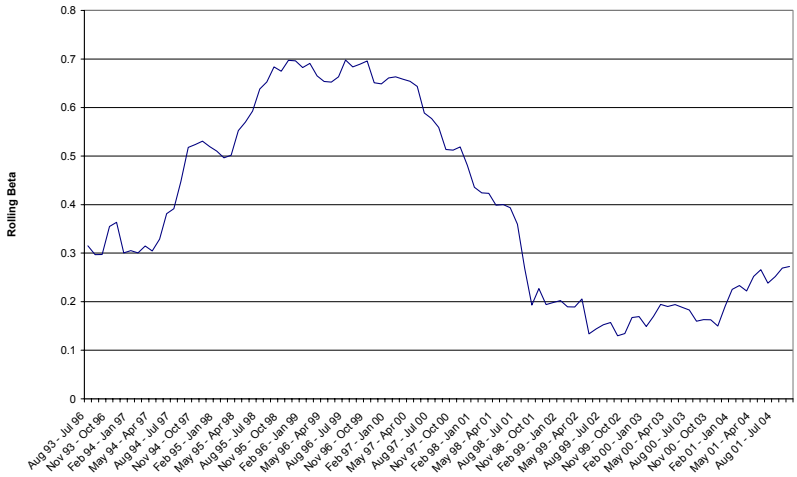

Figure 2b: Rolling beta: office LPTs

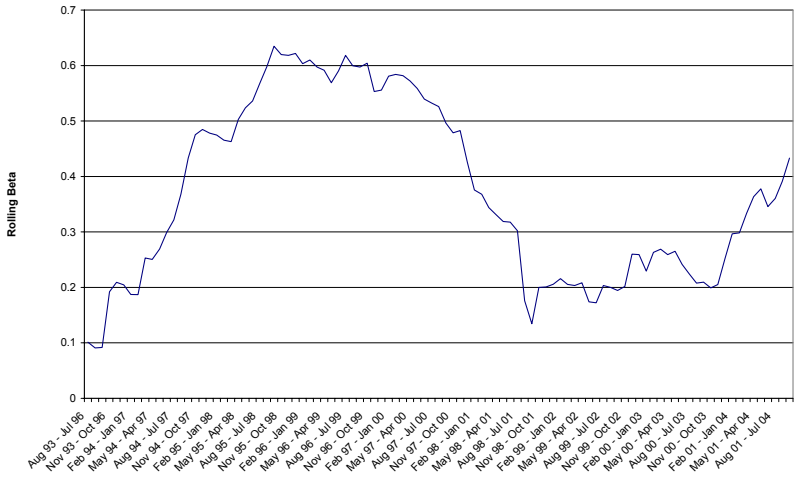

Figure 2c: Rolling beta: retail LPTs

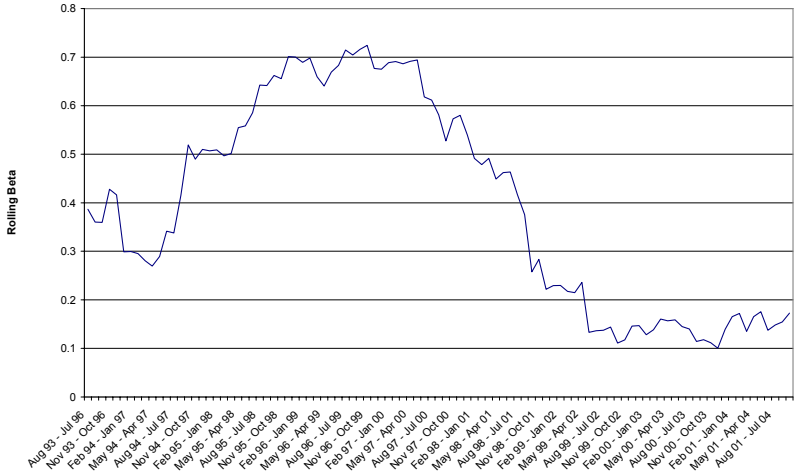

Figure 2d: Rolling beta: industrial LPTs

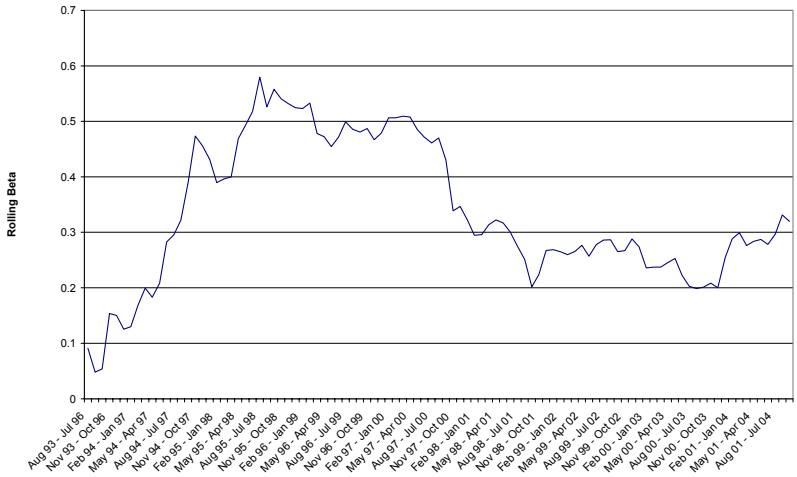

Figure 2e: Rolling beta: diversified LPTs

Figure 2f: Rolling beta: leader LPTs

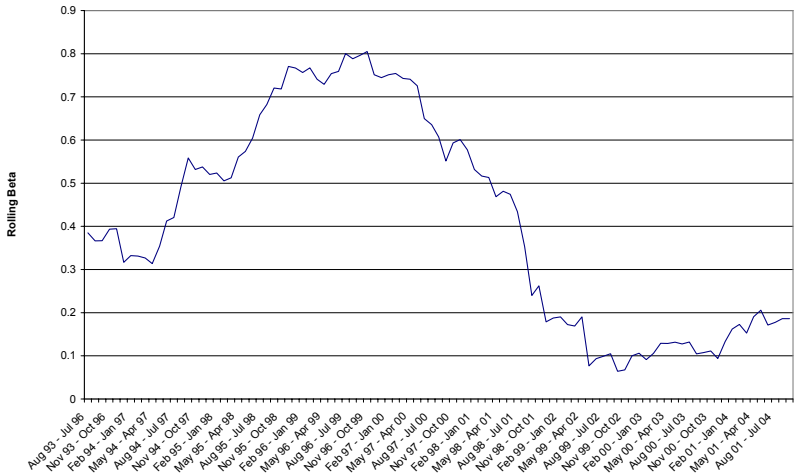

Figure 2g: Rolling beta: stapled securities LPTs

Figure 2h: Rolling beta: international LPTs

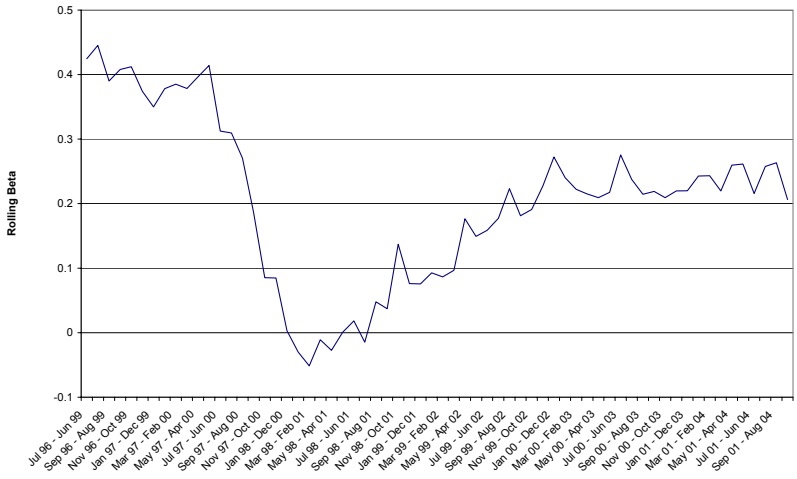

Table 7: LPT correlations with stockmarket: 1993-2004

	Correlation					
	Aug 1993 – Sept 2004	**Aug 1993 – Feb 1999**	**Mar 1999 – Sept 2004**	**2000 -2003**	**2003**	**2004****
LPTs	.49	.61	.30	.28	.33	.30
LPT sectors						
Office	.41	.47	.33	.33	.43	.35
Retail	.45	.56	.24	.20	.29	-.30
Industrial	.35	.34	.38	.37	.29	.47
Diversified	.46	.60	.23	.22	.27	.42
Leaders	.45	.58	.22	.18	.26	.18
Stapled sec.	.43	.63	.15	.13	.24	.45
International	.24	.46	.07	.18	.22	-.44
Individual LPTs						
Centro	.32	.39	.20	.21	.11	-.01
Deutsche Diversified	.30	.36	.20	.19	.23	-.07
GPT	.45	.60	.22	.19	.26	.30
ING Industrial	.33	.33	.34	.40	.14	.59
Investa	.27	.31	.21	.20	.22	.43
James Fielding	.11	.20	-.05	.02	.11	.48
Stockland	.36	.54	.11	.12	.14	.37
Westfield	.39*	.51	.18	.11	.27	n/a*
Gandel	.43*	.55*	.27	.19	.27	.24
Macq. CountryWide	.41*	.57*	.26	.29	.31	.02
Mac. Goodman Ind.	.28*	.45*	.20	.22	.28	.61
Macq. Office	.34*	.40*	.24	.33	.61	.08
Thakral	.26*	.36*	.17	.13	-.01	.26
Westfield America	.23*	.45*	.08*	.17	.16	n/a*
Bonds	.16	.45	-.30	-.21	-.30	.58

* : does not cover full period
** : 2004 covers 9 months to September

Figure 3a: Rolling correlations with ASX: LPTs

Figure 3b: Rolling correlations with ASX: office LPTs

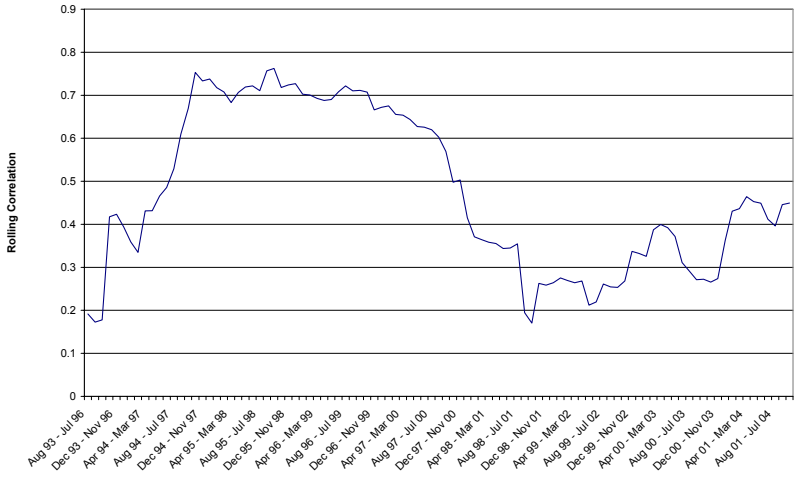

Figure 3c: Rolling correlations with ASX: retail LPTs

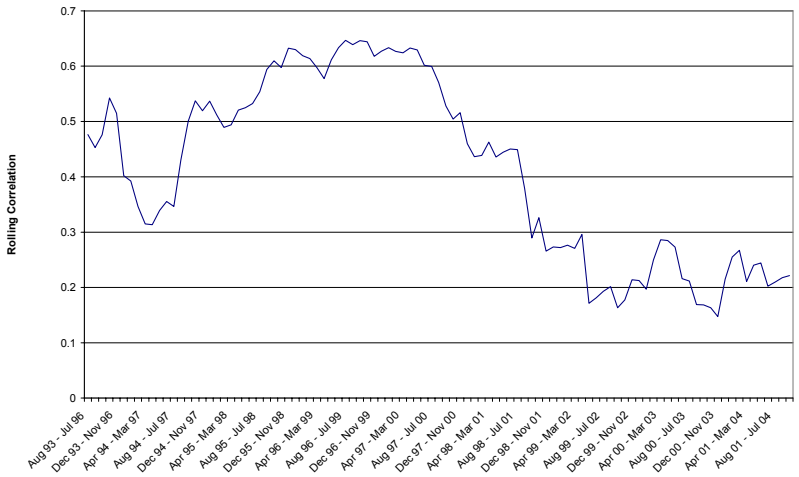

Figure 3d: Rolling correlations with ASX: industrial LPTs

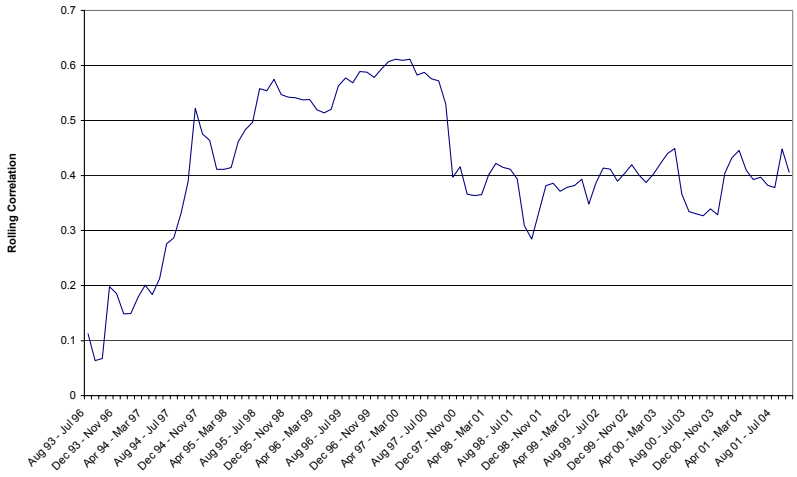

Figure 3e: Rolling correlations with ASX: diversified LPTs

Figure 3f: Rolling correlations with ASX: leader LPTs

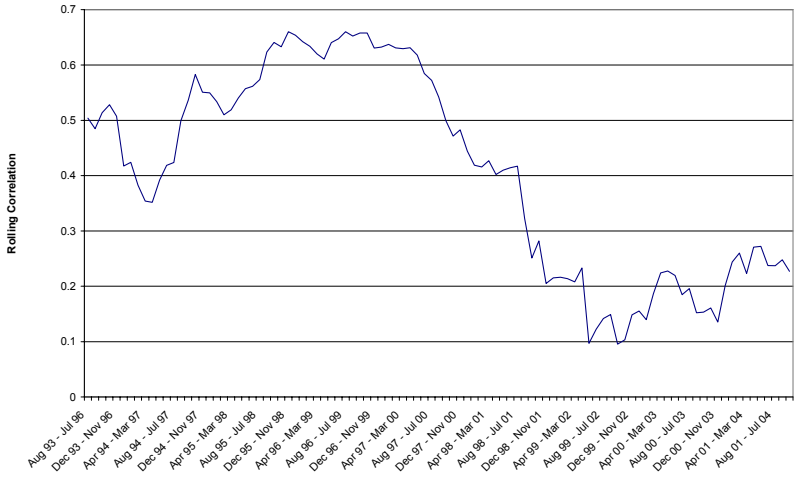

Figure 3g: Rolling correlations with ASX: stapled securities LPTs

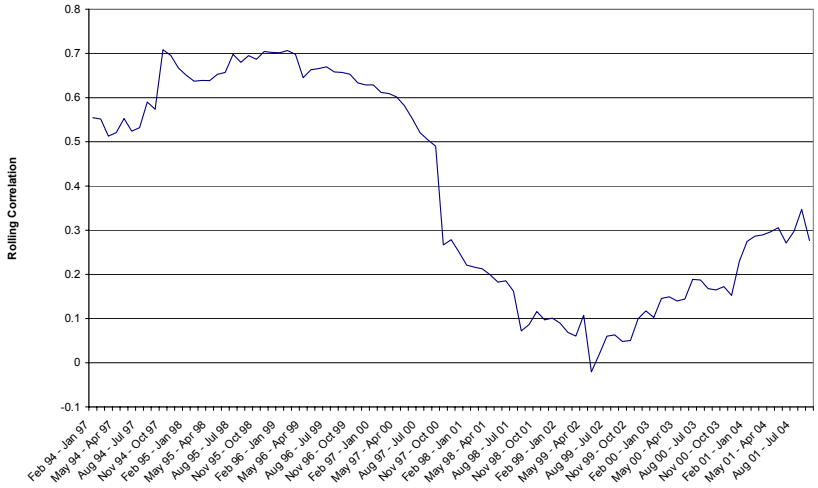

Figure 3h: Rolling correlations with ASX: international LPTs

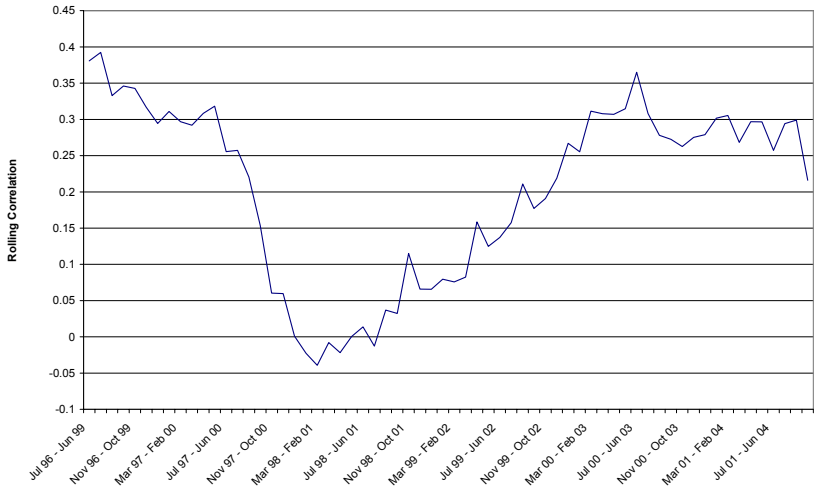

Table 8: LPT sector correlations: 1993-2004

Sectors	Correlation					
	Aug 1993 – Sept 2004	Aug 1993 – Feb 1999	Mar 1999 – Sept 2004	2000-2003	2003	2004*
Office - Retail	.79	.62	.85	.79	.83	-.29
Office - Industrial	.70	.96	.91	.68	.62	.68
Office - Diversified	.89	.84	.94	.79	.73	.89
Retail - Industrial	.52	.75	.83	.63	.72	-.06
Retail - Diversified	.95	.90	.97	.88	.95	-.22
Industrial - Diversified	.49	.93	.87	.66	.66	.73

* : 2004 covers 9 months to September

Figure 4a: Rolling sector correlations: office LPTs/retail LPTs

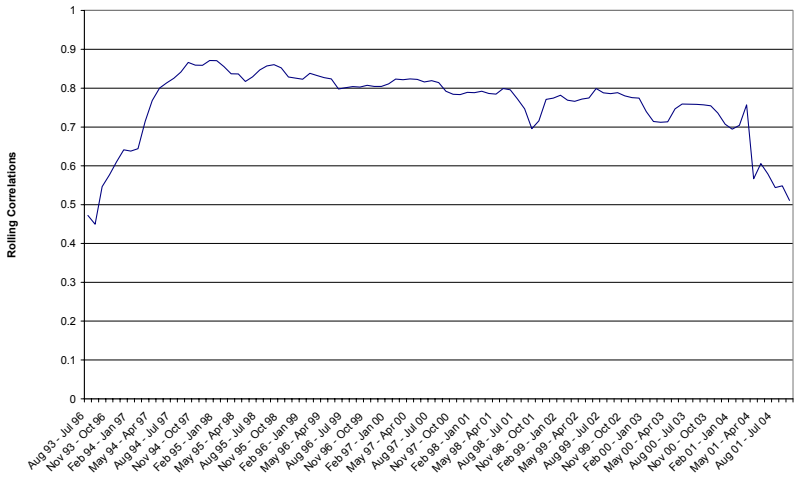

Figure 4b: Rolling sector correlations: office LPTs/industrial LPTs

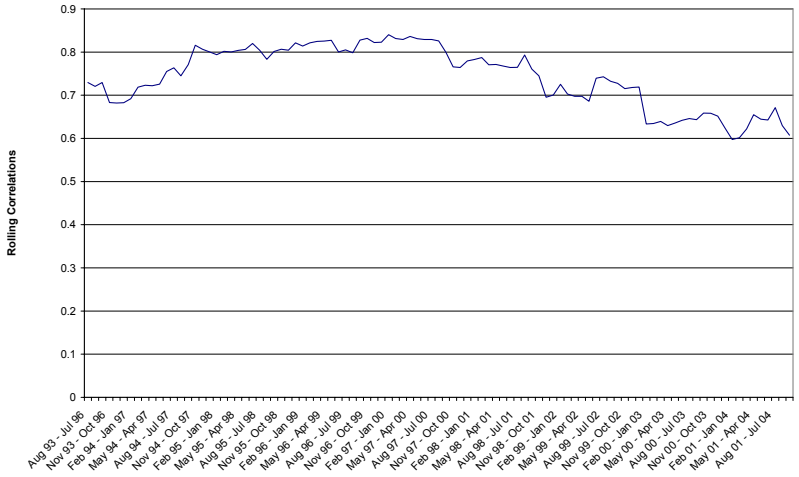

Figure 4c: Rolling sector correlations: office LPTs/diversified LPTs

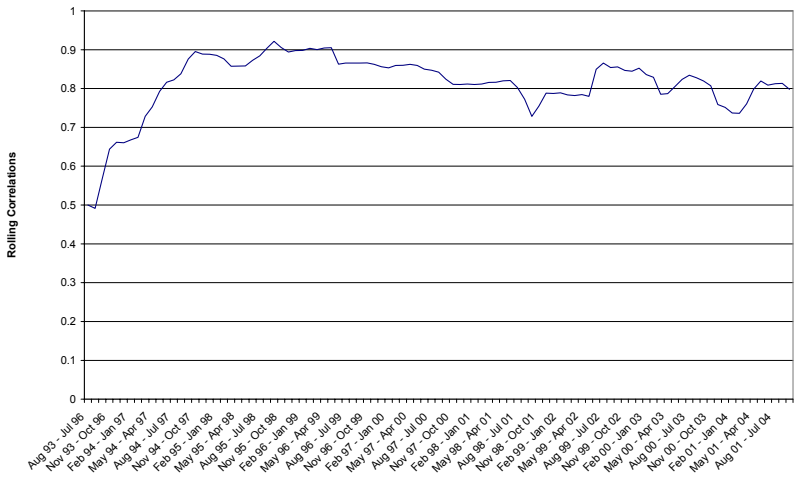

Figure 4d: Rolling sector correlations: retail LPTs/industrial LPTs

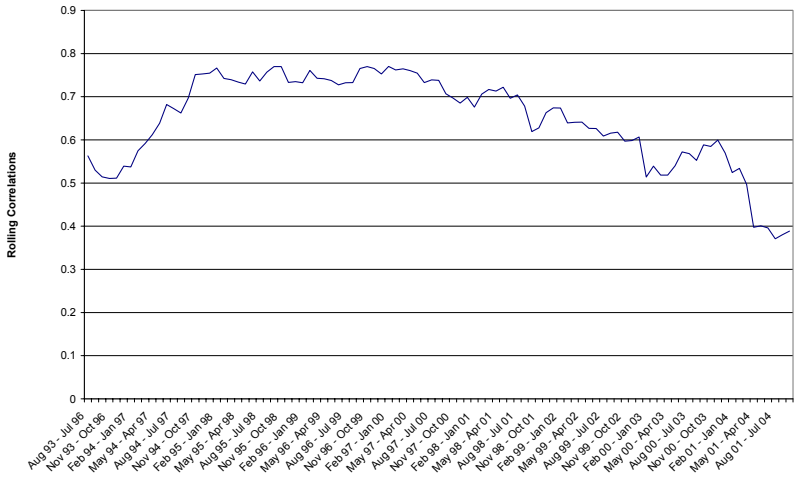

Figure 4e: Rolling sector correlations: retail LPTs/diversified LPTs

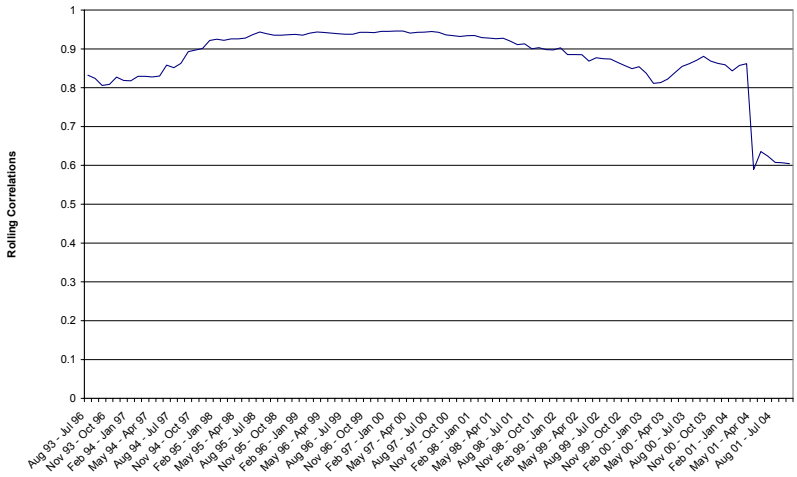

Figure 4f: Rolling sector correlations: industrial LPTs/diversified LPTs

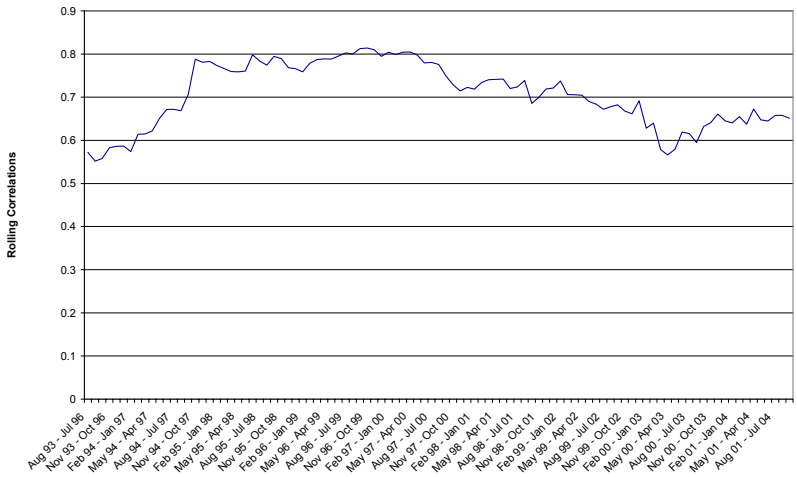

Table 9: LPT sector correlations with international LPTs: 1993-2004

Sectors	Correlation					
	Aug 1993 – Sept 2004	Aug 1993 – Feb 1999	Mar 1999 – Sept 2004	2000-2003	2003	2004*
LPTs	.67	.78	.57	.68	.76	.10
Office LPTs	.49	.61	.40	.59	.75	-.39
Retail LPTs	.78	.85	.70	.74	.78	.92
Industrial LPTs	.42	.58	.29	.48	.67	-.53
Diversified LPTs	.57	.73	.42	.57	.65	-.21

* : 2004 covers 9 months to September

Figure 5a: Rolling correlation with international LPTs: LPTs

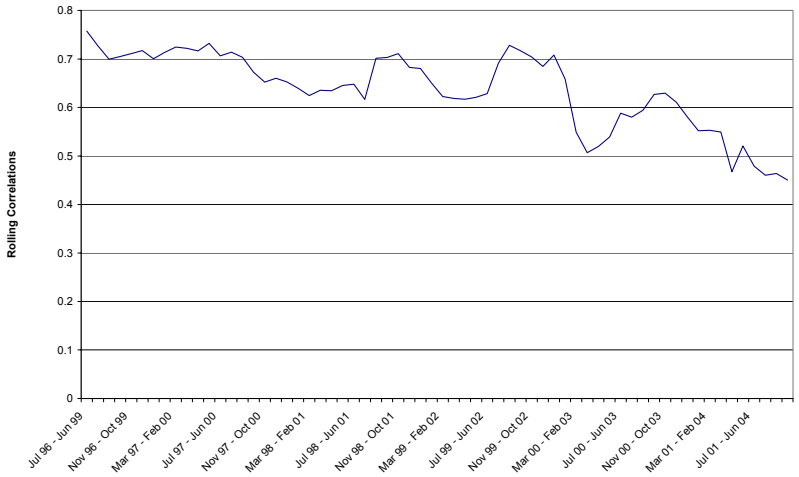

Figure 5b: Rolling correlation with international LPTs: office LPTs

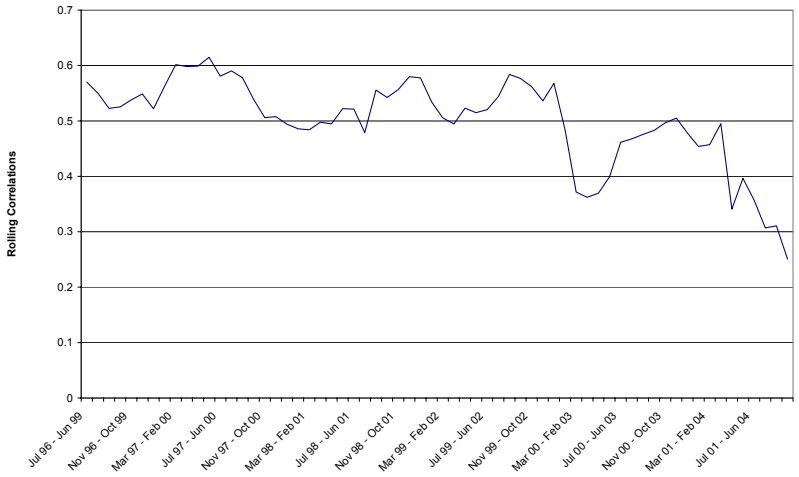

Figure 5c: Rolling correlation with international LPTs: retail LPTs

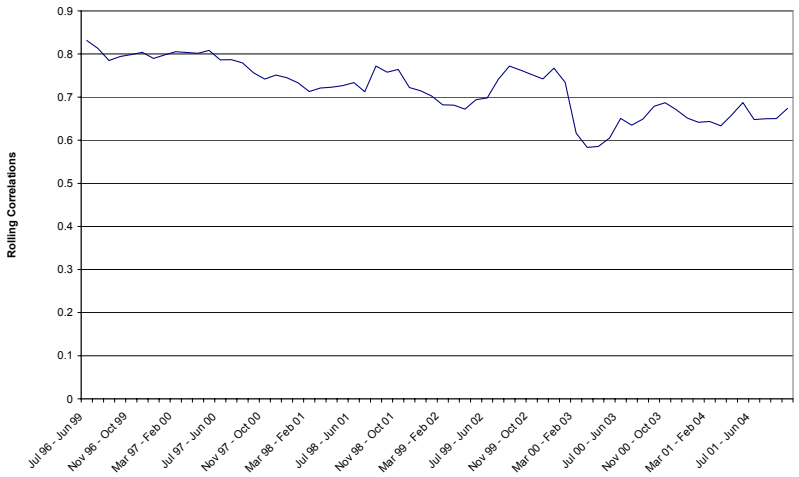

Figure 5d: Rolling correlation with international LPTs: industrial LPTs

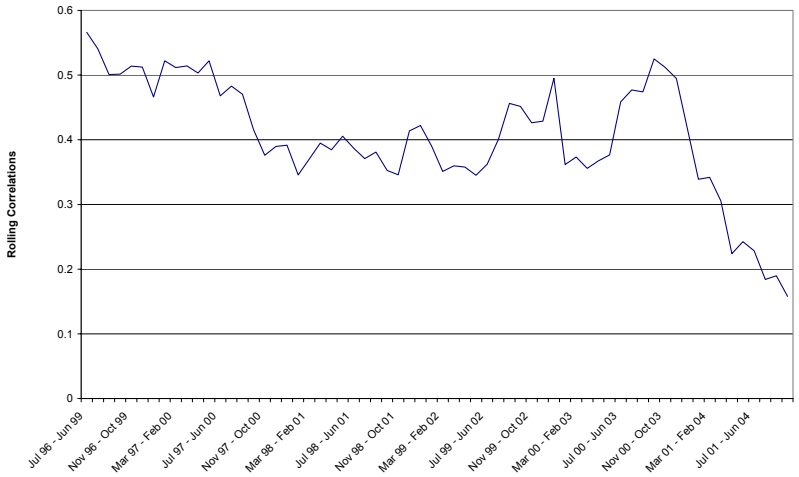

Figure 5e: Rolling correlation with international LPTs: diversified LPTs

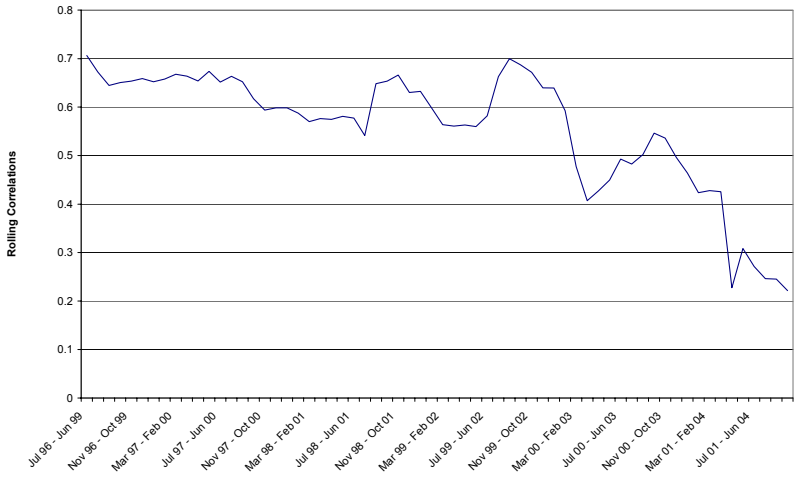

Table 10: LPT sector correlations with stapled securities: 1993-2004

Sectors	Correlation					
	Aug 1993 – Sept 2004	Aug 1993 – Feb 1999	Mar 1999 – Sept 2004	2000-2003	2003	2004*
LPTs	.75	.70	.83	.86	.89	.76
Office LPTs	.67	.63	.73	.78	.77	.70
Retail LPTs	.62	.62	.63	.76	.86	-.18
Industrial LPTs	.63	.60	.67	.68	.86	.59
Diversified LPTs	.76	.70	.85	.85	.84	.88

* : 2004 covers 9 months to September

Figure 6a: Rolling correlation with stapled securities LPTs: LPTs

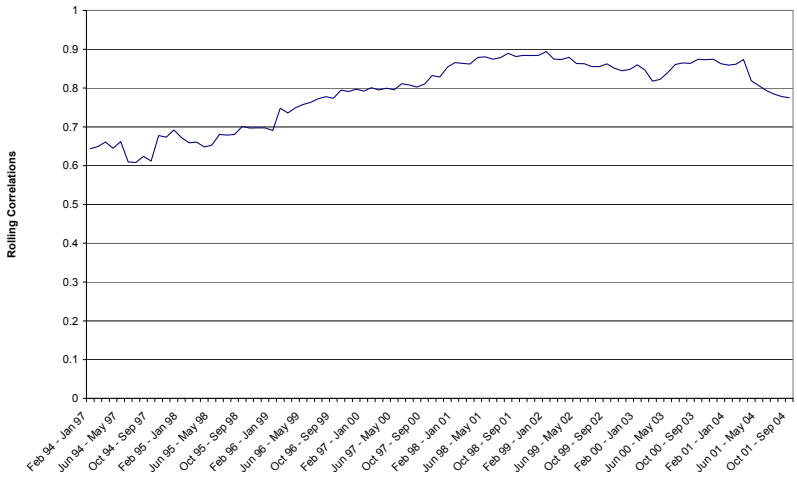

Figure 6b: Rolling correlation with stapled securities LPTs: office LPTs

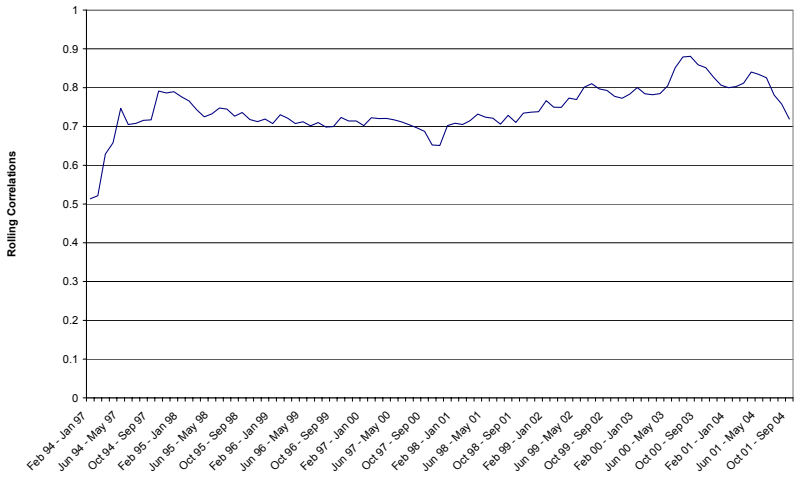

Figure 6c: Rolling correlation with stapled securities LPTs: retail LPTs

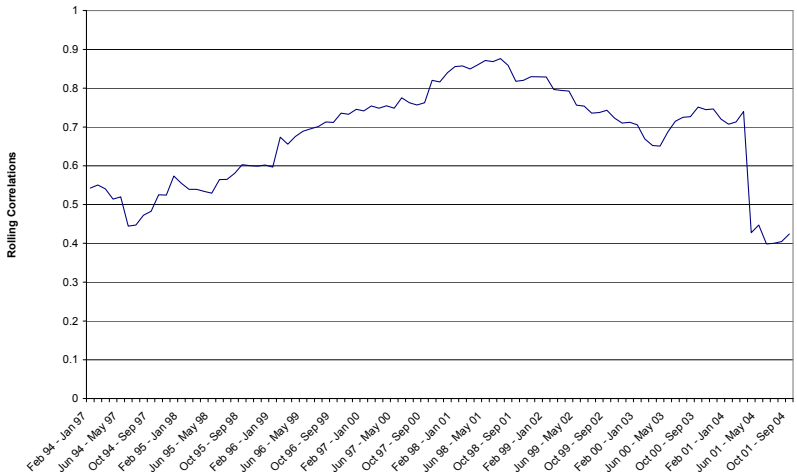

Figure 6d: Rolling correlation with stapled securities LPTs: industrial LPTs

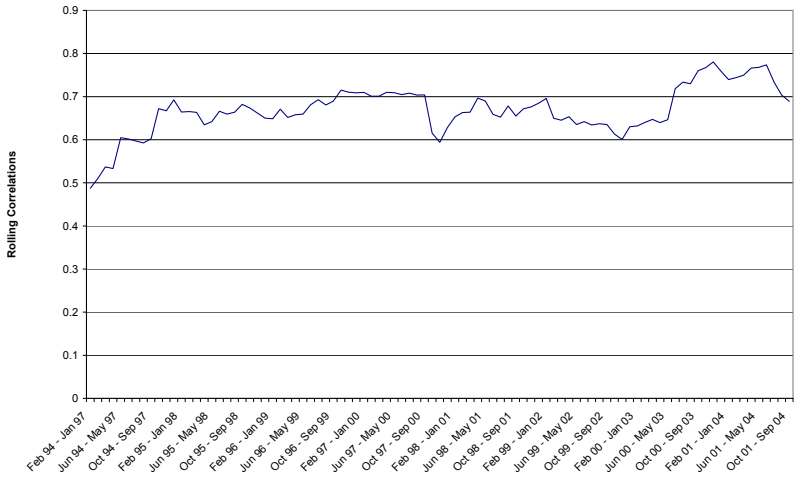

Figure 6e: Rolling correlation with stapled securities LPTs: diversified LPTs