Commercial Property Performance and Economic Policy Uncertainty: A sub-class analysis of retail rents

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# **Abstract**

Over the past two decades, global economic uncertainty has increased in response to recessions, supply chain disruptions, geopolitical and trade tensions, and COVID-19. This study examined the impact of economic policy uncertainty on rents in Australia’s retail sector across the regional, sub-regional, and neighbourhood sub-classes. Vector autoregressive (VAR) models were adopted to analyse quarterly data on net rents from 2000Q4 to 2022Q3. Overall, regional retail rents are most resilient to external shocks, reacting slowly in the first two quarters, followed by minor declines. Sub-regional rents exhibit higher short-term sensitivity, experiencing an immediate decline in response to an uncertainty shock, which continues for five years. Neighbourhood rents fluctuate the most in the short term, immediately declining and returning to pre-shock levels within a year. However, neighbourhood retail rents respond positively to uncertainty after a year, indicating that it may represent a viable opportunity for investors when the market outlook is uncertain.

**Keywords**: economic policy uncertainty; commercial property; retail; rents; COVID-19; Australia; vector autoregressive

# **1. Introduction**

Owing to its distinct financing structures, higher capital requirements, illiquidity, and information asymmetry (Clayton et al., 2009; Marcato & Nanda, 2016), the commercial property sector is highly susceptible to exogenous economic conditions (Gholipour et al., 2022; Ling et al., 2010). In recent years, economic uncertainty has steadily climbed to unprecedented levels following a series of major shocks to the global economy: the Global Financial Crisis (GFC) of 2007-2008, Brexit, US-China trade tensions, the coronavirus pandemic (COVID-19), geopolitical concerns, supply chain disruptions and the ongoing Russia-Ukraine war (Ahir et al., 2022; IMF, 2022)*.* These concerns have been further exacerbated in the Australian property market due to the Reserve Bank of Australia’s (RBA) monetary policy decisions – a series of 12 consecutive cash rate increases between May 2022 and May 2023 to tackle rising inflation (Gholipour et al., 2022; RBA, 2023). The growing uncertainty among commercial property investors has impacted transaction volumes (Allan et al., 2021), vacancy rates (Gholipour et al., 2022), and capital deployment (JLL, 2023). Globally, commercial property investment experts acknowledge economic uncertainty as the most critical threat to sustained capital deployment (JLL, 2023).

Traditionally, the city centre has served as the hub of commercial activity and the primary gathering place for the populace. Over the last few decades, however, two major trends have forced changes to this well-established aspect of social life – digitalisation and rapid urbanisation (Nanda et al., 2021). The sudden occurrence of the COVID-19 pandemic in 2020 made in-person interactions unsafe, further accelerating these trends (Morales, 2021). All sectors of the economy were affected by these enforced changes, with uncertainty and volatility comparatively higher in the aftermath of the COVID-19 crisis than in any previous pandemic or recession (Baker et al., 2020). Notably, the retail sector was impacted more than other sectors of the property market – as compared to a 14% drop in office rents, Allan et al. (2021) found that retail rents fell by 30% in the first 6 months of 2020. Although the long-term implications of COVID-19 lockdown restrictions and consumer preferences in terms of online retail and working-from-home (WFH) may not mean the end of high-street stores, these structural changes continue to transform the urban retail landscape, forcing a rethink of commercial investment decision-making and portfolio composition (Nanda et al., 2021).

Some studies have explored the effects of economic uncertainty in the commercial property sector (Cypher et al., 2018; Gholipour et al., 2021, 2022; Milcheva & Xie, 2022), but there has been little focus on retail specifically. This gap in knowledge is critical because, in addition to the prevailing uncertainty levels inhibiting investment activity and performance in the commercial property sector, the retail sector has undergone significant restructuring due to WFH trends and the rise of online retail (Carson et al., 2021; Nanda et al., 2021). Moreover, COVID-19 accelerated relocation trends from city centres, bringing into focus the adaptability of office and retail spaces (Allan et al., 2021; Carson et al., 2021). In the immediate aftermath of COVID-19, Allan et al. (2021) noted significant capital reallocation from retail assets, indications of investors’ flight to safety. Further, these structural changes have also impacted the total share of the retail sector in the Australian commercial property market – from 30% at the end of 2021 to 28.8% at the end of 2022 (MSCI, 2022, 2023), largely linked to capital reallocation due to higher perceived risk and uncertainty levels.

Thus, this study assessed the impact of economic policy uncertainty (EPU) on Australia’s retail rents, presenting a sub-class analysis of the regional, sub-regional and neighbourhood asset classes. Although a few studies have previously explored retail performance in the aftermath of COVID-19 (Allan et al., 2021; Lashgari & Shahab, 2022; Nanda et al., 2021), the retail sub-classes are too dynamic for aggregate models (Hardin & Carr, 2006). Moreover, this is the first study to directly consider the impact of economic uncertainty on distinct sub-classes of retail, and the varied reactions highlight the need for more refined approaches to assessing retail investments, particularly as investors’ interest in low-end assets rises. Given the role of rents as an indicator of short-term property performance (Lizieri & Satchell, 1997), these findings highlight the resilience of retail sub-classes to unexpected exogenous shocks and provide empirical indications of which asset classes are best suited for defensive investment strategies.

# **2. Literature Review**

Commercial property investment decisions rely on future expectations of market movements, which make decision-making the most volatile component of aggregate demand under conditions of uncertainty and suboptimal market efficiency (Carrière-Swallow & Céspedes, 2013; Nayar et al., 2023; Sah et al., 2010). Generally, investment and capital allocation decisions are made in consideration of the asset’s risk-return profile (Adair et al., 1994; Hargitay & Yu, 1993; Roberts & Henneberry, 2007). When the market outlook is uncertain, or investor confidence in the fundamentals is constrained due to exogenous shocks, capital deployment and risk perceptions could impact investment decisions (Adair et al., 1994; Brundin & Gustafsson, 2013; Jackson & Orr, 2019). According to Knight (1921), uncertainty is distinct from risk because the former pertains to a scenario in which decision-makers have no probabilistic information about how external events may impact the results of their choices. Although all investment decisions are invariably made under some level of uncertainty (Hargitay & Yu, 1993), recent shocks such as COVID-19, the Russia-Ukraine war, and geopolitical tensions have resulted in higher overall levels of economic uncertainty (Ahir et al., 2022; Bloom et al., 2022; IMF, 2022). Consequently, economic uncertainty has emerged as the primary barrier to capital deployment in the commercial property sector, as opined by over 70% of top investment and fund managers around the world (JLL, 2023).

Little scholarly work has been done with a focus on the implications of uncertainty in the commercial property sector, but the overall picture suggests a distinctly inverse relationship between uncertainty and property performance (Allan et al., 2021; Gholipour et al., 2021). The economy pays a heavy price for the aggregated reactions of investors acting under uncertainty, and COVID-19 has provided clear indicators of these consequences. In an effort to avoid further losses, investors may take increasingly pessimistic stances that only delay any potential recovery (Bird & Yeung, 2012; Chmielewska et al., 2020). As reported by Jackson and Orr (2019), this is because individuals are less likely to invest in times of high uncertainty, usually making cautious allocation decisions in the wake of an unforeseen exogenous shock. Periods of uncertainty can also increase the perceived risk associated with property investments and result in sustained periods of mispricing (Chmielewska et al., 2020; Jackson & Orr, 2019). Baker et al. (2020) predicted a large output contraction in the aftermath of the COVID-19 pandemic, attributing over 50% of these expected downturns to COVID-induced uncertainty alone.

Online retail as a percentage of total retail increased from 9.3% in 2019 to 14.6% in 2022 (CBRE Research, 2021, 2022), raising further doubts about the long-term relevance of brick-and-mortar retail assets in commercial property portfolios (Allan et al., 2021; Lashgari & Shahab, 2022). COVID-19 further accelerated trends of relocation from city centres, bringing into focus the adaptability of retail spaces (Allan et al., 2021; Carson et al., 2021). Allan et al. (2021) reported substantial reallocations of capital from retail to the industrial and residential subsectors in the Asia Pacific region, a possible indication of flight to safety due to uncertainty. Property investors act with extreme caution under uncertainty due to the illiquidity of the underlying asset, and this caution reduces demand, prices, and performance (Antonakakis et al., 2015). In such instances, investors may choose to wait until the uncertainty subsides before venturing into investment activities (Bloom, 2009). This is evinced by a 32% drop in commercial property transaction volumes in the first six months of 2020 after COVID-19 due to increased investor risk perceptions and uncertainty (Allan et al., 2021). Additionally, these structural changes have impacted the total share of the retail subsector in the Australian commercial property market – from 30% at the end of 2021 to 28.8% at the end of 2022 (MSCI, 2022, 2023).

As the long-term implications of COVID-19, WFH trends and online retail emerge (Gholipour et al., 2022), it is paramount to re-examine the relationship between uncertainty and property performance, particularly in the retail sector which is under increasing threat of lower capital deployment and investor engagement. Consumers have cited reductions in commute times, reduced carbon emissions and higher productivity as motivations to move or work away from the city centres, all of which have implications for retail property as an asset class (Carson et al., 2021; Jian et al., 2020; Švecová et al., 2020). Despite widespread indications of a negative relationship between uncertainty and property performance (Allan et al., 2021; Gholipour et al., 2021, 2022; Ling et al., 2020; Milcheva & Xie, 2022), there is limited literature assessing the dynamics of this relationship in the retail sector. Consequently, this study examined how retail rents respond to shocks in economic policy uncertainty to underscore the resilience of the various subclasses to exogenous events and inform investment decision-making.

# **3. Data and Methodology**

## **3.1. *Data Description***

This study examined the impact of economic uncertainty on rents in Australia’s retail property sector, specifically the regional, sub-regional, and neighbourhood sub-classes. The final dataset includes quarterly data from 2000Q4 to 2022Q3 on net face rents, EPU, and control variables such as the quarterly percentage changes in consumer price index (CPI) and gross domestic product (GDP), the unemployment rate (UNEM) and the real house price index (HP), deflated by CPI.

The Property Council of Australia (2021) defines the sub-classes as follows: regional retail as shopping centres typically incorporating a full-line department store, a full-line discount department store with approximately 100 specialty shops, sub-regional retail as medium-sized centres with at least one full-line discount department store with approximately 40 specialty shops, and neighbourhood retail as local shopping centres comprising a supermarket with approximately 35 specialty shops. Overall, these sub-classes represent 52% of Australia’s retail sector – regional (10.5%), sub-regional (22.3%), and neighbourhood (19.2%) (Property Council of Australia, 2023b).

Proprietary data on retail rents were sourced from CBRE Research and presented as aggregated national-level data on the various sub-classes. The EPU index, which tracks the prevalence of keywords such as ‘uncertainty’ in eight Australian newspapers (Ahir et al., 2022), was adopted as a proxy for economic uncertainty, given its wide coverage and prevalence in the existing literature (Gholipour et al., 2022; Jackson & Orr, 2019). The index is updated monthly, but end-of-quarter values were adopted to ensure consistency with other variables in this study. Table 1 presents descriptive statistics of all variables adopted for further analyses.

Table 1: Descriptive Statistics

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **Statistics** | **Normality** | **ADF Test** |
|  | *Mean* | *Median* | *Std. Dev.* | *Skew.* | *Kurt.* | *JB-stat* | *Prob.* | *Lag*  | *Level* |
| Reg\_Rent | 7.26 | 7.30 | 0.15 | -1.04 | 2.95 | 15.77\*\*\* | 0.03 | 1 | I (0) |
| Subreg\_Rent | 6.61 | 6.71 | 0.20 | -1.36 | 3.73 | 31.14\*\*\* | 0.00 | 2 | I (1) |
| Neigh\_Rent | 6.40 | 6.43 | 0.15 | -60 | 2.25 | 7.73\*\* | 0.00 | 2 | I (0) |
| EPU | 4.49 | 4.52 | 0.54 | -0.03 | 2.58 | 0.68 | 0.01 | 1 | I (0) |
| CPI | 0.076 | 0.10 | 0.82 | -0.43 | 8.68 | 134.72\*\*\* | 0.00 | 3 | I (1) |
| GDP | 0.72 | 0.70 | 1.05 | -3.11 | 28.09 | 2755.53\*\*\* | 0.00 | 3 | I (0) |
| UNEM | 5.58 | 5.49 | 0.87 | 0.22 | 3.09 | 0.81 | 0.08 | 1 | I (0) |
| HP | 4.51 | 4.54 | 0.27 | -0.61 | 2.58 | 6.77\*\* | 0.02 | 3 | I (0) |
| **Note:** This table presents the descriptive statistics of all variables adopted for this study. The dataset contains 88 observations (2000Q4 to 2022Q3). Normality assumptions were tested with Skewness **(Skew.)**, Kurtosis **(Kurt.)**, and the Jarque-Bera test **(JB-stat)**. The p-values of the JB-stat are denoted by asterisks: \*\*\*, \*\*, \* indicate statistical significance at 1%, 5% or 10%, respectively. Stationarity assumptions were also tested with the Augmented Dicker-Fuller **(ADF)** test. I (0) is integrated of order zero, denoting that the variable is stationary at level and I (1) is integrated of order one, denoting that the variable is stationary after taking the first difference. |

## **3.2. *Methodology***

The responses of retail rents to uncertainty shocks were examined through impulse response functions (IRFs) of reduced-form vector autoregressive (VAR) models. According to Stock and Watson (2001), VAR models are ideal in the absence of established causal relationships because all variables in the framework are treated as endogenous. By making no distinction between dependent and independent variables, this model specification overcomes the limitation of imposing strict causal relationships (Marcato & Nanda, 2016; Sims, 1980; Stock & Watson, 2001). As shown in Equation 1, the temporal path of one sequence, (yt), is influenced by the current and previous (one period lag) realisations of another sequence, (xt), in a reduced-form VAR.

$$\left[\begin{matrix}y\_{t}\\x\_{t}\end{matrix}\right]=\left[\begin{matrix}a\_{1}\\a\_{2}\end{matrix}\right]+\left[\begin{matrix}b\_{11}&b\_{12}\\b\_{21}&b\_{22}\end{matrix}\right]\left[\begin{matrix}y\_{t-1}\\x\_{t-1}\end{matrix}\right]+\left[\begin{matrix}u\_{t}\\v\_{t}\end{matrix}\right] Equation 1$$

The subsequent discussions draw on the IRFs, which describe a variable’s dynamic response to an instantaneous input signal and provide insights into the variable’s behaviour over time (Pesaran & Shin, 1998). In short, the IRFs tested how retail rents respond to unit shocks in overall uncertainty levels, simulating the magnitude, direction and persistence of variation caused by exogenous shocks (Gholipour et al., 2022; Pesaran & Shin, 1998).

Following the initial estimation, the validity and reliability of the outputs were checked through a series of diagnostic and robustness tests. The three key information criteria for model selection were used to estimate optimal lag length in these model specifications: Hannan-Quinn, Schwarz-Bayesian, and Akaike (Marcato & Nanda, 2016). To establish the stationarity of the variables, the Augmented Dickey-Fuller (ADF) test was conducted, utilising the Akaike Information Criterion (AIC) to determine the appropriate lag length and differencing non-stationary variables. Also, the resulting p-values of the Lagrange Multiplier (LM) tests were jointly rejected, confirming the models’ reliability and the absence of systemic patterns and long-term dependence (Johansen, 1995). Finally, the inverse roots of the autoregressive (AR) characteristic polynomials supported the stability of the VAR estimations, based on the requirement that no roots lie outside the unit circle (Lütkepohl, 2005).

# **4. Results and Discussion**

The outputs of the estimated VAR models were interpreted based on the generalised IRFs, which represent the responses of rents in Australia’s retail subclasses to unit shocks in uncertainty levels. The variations were assessed over a 20-quarter period following the initial shock, highlighting the short- and long-term relationship between economic uncertainty and retail rents, as well as the resilience of the various subclasses. A summary of these results is presented in Figure 1. Overall, retail rents in all the sub-classes decline in the short-term following an unexpected uncertainty shock. Similarly, there is a delay in reaction for the regional and sub-regional classes, reflecting the slow response of commercial property performance indicators to an exogenous shock (Gholipour et al., 2022; Ling et al., 2020). However, the magnitude and persistence of these shocks vary across different sub-classes and offer insights into their resilience and appropriateness for different investment strategies.

Figure 1: Response of Retail Rents to a Positive Shock in National Uncertainty (EPU)

|  |
| --- |
| ***1a: IRF of Regional Retail Rents to EPU*** |
| ***1b: IRF of Sub-regional Retail Rents to EPU*** |
| ***1c: IRF of Neighbourhood Retail Rents to EPU*** |
| **Note**: These charts represent the impulse response functions of retail rents to national uncertainty shocks (EPU). Uncertainty shocks (1 standard deviation) were applied to rents in the regional, sub-regional, and neighbourhood retail sub-classes. The x-axis reflects time (quarters after the first-moment shock to uncertainty levels), while the y-axis reflects the magnitude of variation created by the uncertainty shock. The bold line tracks the IRF of the indicators within standard error confidence bands of +/-2. |

## **4.1 *Response of Regional Retail Rents to Uncertainty***

Compared to the other sub-classes under consideration, regional rents respond the least to one standard deviation (SD) shock in economic uncertainty. Regional retail rents remain fairly stable for approximately three quarters following the first-moment shock, followed by a sharp decline that troughs within a year of the initial shock. Subsequently, rents recover slowly and return to steady-state levels by the end of the fourth year. These declines in rental performance are consistent with the literature, as Ling et al. (2020) reported a 49% decline in the total returns of retail Real Estate Investment Trusts (REITs) amid COVID-19 uncertainty in 2020. Compared to other sectors of the commercial property space, Wen et al. (2022) suggest that retail is more susceptible to exogenous shocks due to its functional dependence on consumer behaviour and preferences, which can be unpredictable (Nanda et al., 2021). With the reduced demand for central spaces due to reduced footfall and consumer presence, (Milcheva, 2022) found that the regional retail sub-class returned the lowest daily average of returns under conditions of high uncertainty, at 1.88%. Following the initial reaction to an increase in uncertainty, these results indicate that regional retail can represent a stable investment asset in the medium- and long-term, at least as an alternative to high-end assets.

## **4.2. *Response of Sub-regional Retail Rents to Uncertainty***

Sub-regional retail rents react immediately to an uncertainty shock, declining slightly over the first two quarters and then more sharply until the third quarter. A short period of recovery between the third and fifth quarters is undone by more sustained declines that persist until the fifth year. Allan et al. (2021) reported no significant impact of COVID-19 on retail rents, but the overall picture of the extant literature suggests an inverse relationship between rents and economic uncertainty (Milcheva, 2022; Wen et al., 2022). Consistent with these indications, sub-regional retail shows the most long-term effects of uncertainty, with rents not recovering over a five-year horizon. Arguably, this highlights the volatility of the sub-class to exogenous shocks and how susceptible investors are to unexpected events. Although sub-regional retail has received renewed investor interest and capital influx over the past few months, the Property Council of Australia (2023a) suggests this is mostly underpinned by the lack of availability of other, more stable sub-classes such as Super Regional. This higher investor activity will likely sustain as ongoing uncertainty around interest rates and cost of debt limit investment activity in larger sub-classes such as Super Prime and Prime (CBRE, 2023).

## **4.3. *Response of Neighbourhood Retail Rents to Uncertainty***

As an asset class, neighbourhood retail shows the most fluctuations following an exogenous shock. In the short term (within the first two quarters), neighbourhood rents decline sharply after one SD uncertainty shock. However, a strong recovery begins immediately after this initial decline, with rents returning to pre-shock levels before the fourth quarter. Interestingly, this recovery continues its upward trajectory into a positive response to uncertainty just after a year – the disparity suggests that, unlike the other sub-classes, uncertainty improves neighbourhood retail performance, possibly due to an increased demand for the asset class under these conditions (Property Council of Australia, 2018). In the long-term, neighbourhood retail rents retain a positive response to uncertainty, up to the end of the fifth year after the first-moment shock.

Demand for neighbourhood retail in Australia has remained strong since 2014, mainly driven by private investors seeking lower price points and capital value growth (Property Council of Australia, 2018). In response to lockdown restrictions amid COVID-19 and subsequent spikes in online retail, Nanda et al. (2021) noted that reduced footfalls adversely affected retail properties in the city centres due to restrictions in consumers’ movements. Despite the universal declines in retail rents amid the higher levels of uncertainty, neighbourhood retail rents were more resilient because these clusters are more adaptable to shifts in consumer behaviour (Che et al., 2023). Moreover, CBRE (2023) observed that COVID-19 and lockdown restrictions reinforced the importance of the “20-minute” neighbourhood, allowing neighbourhood retail centres to dominate retail stock delivery and future supply – up to 68% of completions all shopping centre completions in 2022. Beyond the initial decline in rents after an exogenous shock, these findings suggest that neighbourhood retail may represent an opportunity under conditions of uncertainty, driving demand and transactions as other sub-classes go through periods of reduced investor interest.

# **5. Conclusions**

Motivated by the current unprecedented levels of global economic uncertainty and the ongoing debate over the relevance of traditional brick-and-mortar retail assets in commercial property portfolios, this study examined the response of retail rents in Australia to uncertainty shocks, considering the distinct impact on three sub-classes: regional, sub-regional, and neighbourhood retail. These findings are timely because although all investment decisions are invariably made under some level of uncertainty, COVID-19 and the consequent shifts to consumer preferences and shopping habits continue to force a rethink of commercial property investment strategies and repositioning. Moreover, economic uncertainty is exacerbated in Australia following a year of consistent cash rate hikes by the RBA and ongoing inflation concerns.

The responses of retail rents to exogenous shocks were tested using reduced-form VAR models on a quarterly dataset from 2000Q4 to 2022Q3. The EPU index was adopted as a proxy for uncertainty due to its prevalence in the extant literature, and several control variables, such as the quarterly changes in CPI and GDP, unemployment rates, and the real house price index, were also included in the empirical frameworks. Following the initial analyses, optimal lag length, heteroscedasticity, and model stability assumptions were all checked to establish the validity of the results. The subsequent discussions were based on generalised IRFs, which trace the magnitude, direction and variation in rents caused by a unit shock in uncertainty levels.

Overall, retail rents decline in response to exogenous shocks, but there are interesting variations across the sub-classes which have practical implications for investment strategies and the appeal of certain asset classes amid ongoing concerns about the long-term relevance of retail assets. Although rents decline in all sub-classes, these short-term drops are less pronounced in regional retail, indicating its resilience to exogenous shocks over a short investment horizon. Similarly, sub-regional rents react negatively to uncertainty and continue to fall over a five-year horizon. With no sustained investor interest in the sub-regional sub-class when there are alternatives, this lack of resilience inhibits its long-term prospects. Neighbourhood retail rents present the most compelling results, with full recovery occurring within a year of the first-moment uncertainty shock, beyond which rents respond positively to uncertainty shocks. As consumers continue to move away from the traditional city centres, neighbourhood retail has emerged as a particularly accessible investment option for private investors. This dynamic, coupled with the increased importance of the “20-minute” neighbourhood continues to drive interest and investment in Australia’s neighbourhood retail sub-class. After a year following an initial uncertainty shock, neighbourhood retail rents respond positively to uncertainty, further highlighting the market view of this sub-class as an opportunity when the economic outlook is uncertain.

Given the ongoing conversations around the long-term relevance of the traditional city centre, and the positioning of retail investment strategies, a consideration of these sub-class variations has become increasingly important for investors seeking exposure to the retail space. Although the performance of high-end sub-classes such as Super Prime and Prime remain relatively stable amid conditions of economic uncertainty, these assets are mostly only accessible to institutional and high net-worth investors. For private investors especially, neighbourhood and the other low-end sub-classes present an alternative asset class, and these findings highlight a level of variation and resilience not previously explored in sector-level assessments of property performance.

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