



**PLANNING MALAYSIA:**  
*Journal of the Malaysian Institute of Planners*  
**VOLUME 21 ISSUE 3 (2023), Page 57 – 69**

## **COMMERCIAL REAL ESTATE PRICES IN MALAYSIA AND COVID-19**

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### **Abstract**

The consequences of the coronavirus disease 2019 (COVID-19) pandemic on commercial real estate pricing are examined in this article, with a focus on the Malaysian market. It begins by pointing out certain cautions to keep in mind while using direct real estate indices. The authors then look at how commercial real estate prices changed during the epidemic, highlighting disparities between property kinds. This study uses data from both direct and listed real estate to achieve this goal and goes on to explore changes in the primary elements driving commercial real estate pricing. The essay then moves on to the expected future trajectory of commercial real estate values. Retail and hospitality assets, as well as, to a lesser extent, office buildings, were shown to be the most affected by the findings.

**Keywords:** Commercial, Real Estate, Price, Covid-19, Malaysia

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## **INTRODUCTION**

The COVID-19 crisis has had an enormous impact on the commercial real estate market. As containment measures enacted in reaction to the pandemic negatively affected economic activity and decreased demand for commercial property, commercial property transaction volumes and prices fell internationally in the second quarter of 2020. The commercial real estate market in Malaysia quickly recovered from the initial shock, but long-standing social limitations continued to impede occupier demand in various economies and led to an expanding disparity in commercial real estate pricing between areas and commercial real estate segments (such as retail, office buildings and industrial).

Beyond the immediate effects, the pandemic has made several market segments' that are already in an unfavourable structural trend worse. This is especially true for the retail industry, where traditional shopping methods are in high demand. A desirable asset type for institutional investors is commercial real estate. It provides predictable income returns, its returns are inversely connected with the returns on financial assets, and empirical data also supports the effectiveness of the investment in mitigating inflation (Falkenbach and Hoesli, 2017). In light of this, numerous studies have demonstrated the advantages of including real estate in mixed-asset portfolios (Hoesli et al., 2004; MacKinnon and Al Zaman, 2009; Delfim and Hoesli, 2019).

Some of the key variables affecting commercial real estate pricing have been impacted by the coronavirus disease 2019 (COVID-19) pandemic. Significant damage has been done to rental streams. For instance, the World Tourism Barometer reports that during the first half of 2020, foreign visitor arrivals decreased by 65% (UNWTO, 2020). The combination of this plus a steep fall in business travel has resulted in significantly lower hotel occupancy rates and frequent hotel closures. The epidemic has also had a significant impact on retail earnings. Online commerce, which was already expanding quickly even before the epidemic, saw a significant boost when lockdowns made it difficult to shop in-store in many regions. The success of this type of work organisation has been demonstrated by the work from home policies that have been introduced in many areas, raising concerns about the need for office space going forward and, consequently, rental rates. Risk premiums are likely to have risen and growth expectations to have decreased as a result of the uncertainties surrounding cash flows.

It is difficult to gauge how COVID-19 will affect the real estate markets. Data on pandemics is scarce because they are exogenous and uncommon, and this is especially true given how rarely real estate time series occur. Furthermore, because prices can be considerably impacted by more general macroeconomic variables that are time- and place-bound, it is challenging to isolate the impact on the market. Nevertheless, between March 2020 and mid-October 2020, more than 50 scientific papers surfaced that specifically address

this issue. The other half of these research is still in the working paper stage, despite the fact that more than half of them have already been published in multidisciplinary or field-specific peer-reviewed journals.

## **LITERATURE REVIEW**

Hotel and retail properties are two commercial real estate segments that were directly impacted by the shutdown and are currently experiencing the highest level of uncertainty. These structures house businesses that were forced to shut down completely because they primarily offered in-person services and/or had independent points of sale. Office structures and areas for business meetings are still empty. However, because they work in fields where there is less demand for physical interaction, the companies that occupy these premises are frequently nonetheless able to supply their services from their employees' homes (such as financial or professional services firms). However, because of the low demand, enterprises at industrial production sites continue to run in the majority of the world's economies, but with more safety precautions and at reduced capacity. Higher vacancy rates in the commercial real estate industry are anticipated as a result of these unfavourable events.

These low growth forecasts, coupled with a higher level of uncertainty, cause high net worth individuals, private equity funds, private as well as public real estate investment trusts, or developers' commercial property portfolios to lose value. As a result, these significant losses are accompanied by increased leverage ratios and risk premium needs for upcoming projects. It is getting more difficult for commercial investors to obtain money on the lending market as a result of falling property values. Additionally, the stock values of publicly traded real estate corporations fall, further drying up the funding market. Particularly during the COVID-19 epidemic, stock values are lower for companies, especially real estate securities, with less cash on hand, more debt, and limited earnings before 2020. (Ding et al. 2020).

The early effects of the pandemic on commercial real estate prices have been examined in a number of studies. As a result, it is difficult to extend the findings to estimate the long-term impacts of COVID-19 on real estate prices. The relationship between US Real Estate Investment Trust (REIT) returns and a geographically weighted exposure of their underlying assets to COVID-19 growth is examined by Ling et al. (2020). They state that returns to such exposure have had a deleterious impact. Among all sectors, businesses specialising in retail and residential real estate react more negatively, whereas the exposure to COVID-19 growth is positively connected with the healthcare and technology sectors. According to Xie and Milcheva (2020), being close to COVID-19 cases has a negative impact on the profits of Hong Kong real estate enterprises. Additionally, markets believe that commercial structures pose a greater risk than residential ones. According to Milcheva (2021), the COVID-19 effect is linked

to a sharp fall in the returns on international real estate securities as well as an increase in risk. Healthcare has the lowest sensitivity to COVID-19, whereas retail is determined to have the highest sensitivity. Finally, van Dijk et al. (2020) extrapolate future pricing changes on direct markets based on liquidity impacts at the start of the pandemic. With price drops between 14 and 19 percent, they forecast that the retail sector will be the most severely affected. Price decreases of between 10% and 15% are anticipated for the industrial sector, which is expected to be marginally more resilient.

Duca et al. (2021) concentrate on COVID-19's effects on housing markets. They note differences in how home values have changed between nations, with areas with a high reliance on tourism reporting dropping house prices while those in other countries have generally seen prices rise. They contend that the low interest rate environment, the relative lack of impact of the pandemic on the higher income people, as well as behavioural variables are to blame for the lack of a negative influence on house values. The latter concern perceptions regarding the length of the economic crisis brought on by the pandemic and its chances of recovery, the notion that housing is an excellent long-term investment, and decreases in the quantity of assets up for sale as a result of loss aversion behaviour.

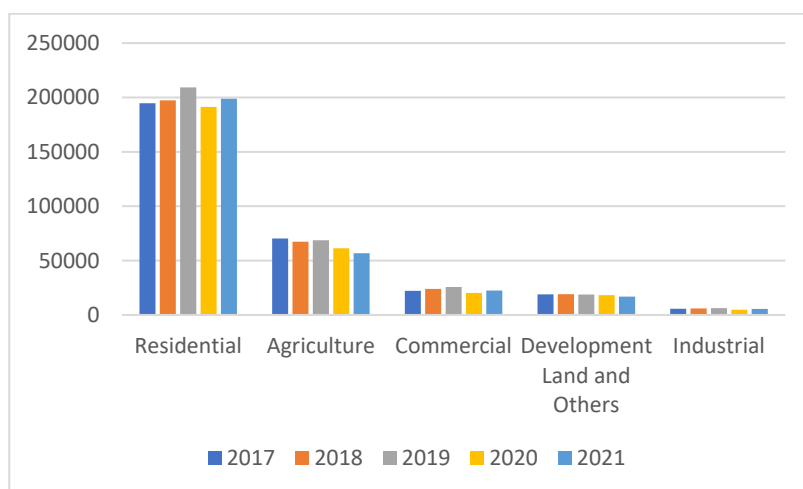
## **REAL ESTATE PRICE AND IMPACT FROM PANDEMIC**

Although there were numerous disturbing reports about COVID-19 coming out of China in January 2020, most people in Europe and the US only began to realise that the sickness was likely to spread to those places in February. There were numerous verified instances in several European nations by the second half of February. The World Health Organization classified the crisis as a pandemic on March 11. Due to these developments, many nations now impose limits on the free movement of people both within and between their borders. Some nations enacted stringent lockdowns, with France and Italy serving as two notable instances. Many different sorts of properties, especially those in the retail and hospitality industries, experienced an immediate impact on their income generation. Rent arrears increased along with the trend toward online retailing, which had already begun several years earlier, since in-store sales were frequently abruptly terminated and much of the retailing activity transferred to the internet. Logistics properties profited from the rise in demand from e-commerce businesses looking for hubs to ship goods to customers. The lack of completed and under construction properties in prime areas worsened the influence on prices. Both leisure and business travel were considerably impacted, which had an impact on hotels and resulted in low occupancy rates or hotel closures. Additionally, risk premia were probably impacted, as they were at the start of the world financial crisis (Duca and Ling, 2020).

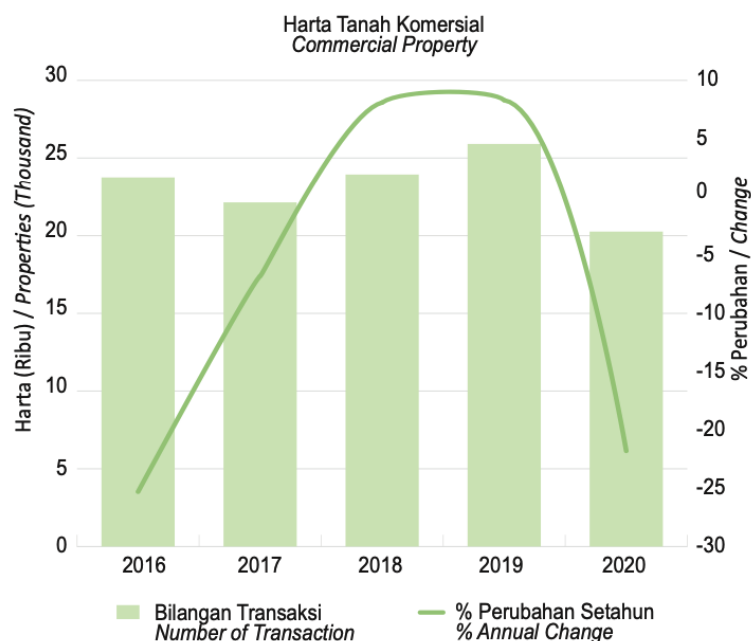
Overvaluation of commercial real estate prices may indicate downward pressure on commercial real estate values, particularly if structural movements toward teleworking and e-commerce continue to pick up speed. It is extremely difficult to predict with any degree of accuracy how changes in company policy and consumer preferences will affect the valuation of commercial real estate because the economic recovery is so uneven across and within numerous economies. Recognizing these challenges, we make an effort to do a scenario analysis to analyse how a change in commercial real estate demand may affect fair prices. To achieve this, the model is expanded to include vacancy rates for a smaller set of economies for which statistics are available. Subsequently, to simulate a persistent shock to the demand for commercial real estate-specific goods and services, we shock the model using a sustained rise in vacancy rates. We then assess the impact on fair value of commercial real estate. While the magnitude of the effect varies between economies, a 5%-point permanent increase in the vacancy rate would cause a median decline in fair values of around 15% after five years.

### COMMERCIAL PROPERTY PRICE IN MALAYSIA

Commercial property price in Malaysia has seen tremendous growth during the pre-COVID 19 pandemic. Although residential property still dominated the property market in terms of number of properties over the period of 2017 to 2020. Commercial property has seen consistent upward trend except during the high peak of COVID-19 cases. This has made the commercial property in Malaysia to become more significant within the property sector.



**Figure 1:** Number of Properties Across Property Sector in Malaysia



**Figure 2:** Number of Transaction and Annual Change of Commercial Property in Malaysia

### COVID 19 IMPACT TO THE ECONOMY

The effects of COVID-19 on the overall economy have been extensively studied in the literature. For instance, Baker et al. (2020) report that the COVID-19 pandemic has had a more severe negative impact on the stock market and the economy than past pandemics. According to Ozili and Arun (2020), the rise in lockdowns and travel restrictions have both led to a decline in economic activity. According to research by Gerding et al. (2020), stock returns during the COVID-19 pandemic reacted more negatively in nations with larger debt-to-GDP ratios, indicating that a nation's fiscal capacity is a crucial factor in reducing the pandemic effect. The COVID-19 pandemic has had a significant impact on company liquidity globally, as demonstrated by De Vito and Gomez (2020), who predicted in their model that 10% of enterprises would become illiquid within six months of the pandemic's commencement. Alfaro et al. (2020) demonstrate unexpected changes in predicted infections in aggregate as well as firm-level stock returns at the firm level. Schoenfeld (2020) discovers that the majority of businesses saw a decline in value at the start of the pandemic, despite the fact that firm managers consistently overestimate their firms' exposure to the disease.

According to Chen et al. (2020), after lockdown notifications, returns for companies with headquarters in U.S. states are lower, but different, when the county has a significant number of infections.

It should come as no surprise that the COVID-19 pandemic has a significant negative influence on the global real estate market given how much it has already had on the stock market and the economy. By examining market liquidity in eight significant U.S. markets, Van Dijk et al. (2020) in a special report from the MIT Center for Real Estate quantify the pandemic's effect on the private commercial property market. The report shows that since the start of the epidemic, liquidity has significantly decreased across all markets. The report also demonstrates that the recent decline in market liquidity is the largest decline since the Global Financial Crisis (GFC), and that the decline in the first four months of 2020 alone is already a sizable portion of the whole decline in market liquidity throughout the entire GFC. The first evidence of home price fluctuations for the U.S. residential real estate market is presented by D'Lima et al. (2020) and Zhao (2020). According to Zhao (2020), the COVID-19 has little effect on the home market in the United States because median residential house price growth rates fell in March and April but swiftly recovered after April. D'Lima et al. (2020) give a preliminary analysis of the impact of the COVID-19 pandemic shutdown reactions, but found no evidence of an impact on overall pricing. Using a detailed sample of firms' individual commercial property holdings in the U.S., Ling et al. (2020) develop a novel measure of listed commercial real estate (CRE) portfolios' exposure to the growth in COVID-19 cases. The same study then documents a negative relationship between COVID-19 case growth and real estate firms' risk-adjusted returns, that also demonstrates how the impact of the COVID-19 epidemic on real estate enterprises varies according on the type of property, with the technology sector responding favourably and the retail and hospitality sectors unfavourably. The majority of REITs have had value declines because to the pandemic, according to Akinsomi (2020), although other REITs, including as data REITs, grocery-anchored REITs, and storage REITs, have been less negatively impacted. The co-movement of real estate stocks and the whole stock market is examined by Milcheva (2020). According to the study, these correlations grow significantly during pandemics and there are significant disparities across different real estate sectors, with the retail sector showing the greatest susceptibility. When Xie and Milcheva (2020) look at how closeness to COVID-19 cases affects real estate business returns, they discover that the COVID-19 pandemic has a very unfavourable impact.

In 2019, Malaysia's financial development slowed to 4.3%, the lowest level since 2016 and lower than the previous record-low growth rate of 5.4% set in 2010. The lowest financial growth in ten years was 3.6% in the fourth quarter of 2019. The central bank, Bank Negara Malaysia, stated that the COVID-19 will have a negative effect on Malaysia's financial development. Only few studies

have explored the impact of pandemic to property market. These including Razali et al (2021) and Lee et al (2000). The impact of COVID-19 also give significant impact to the Malaysian real estate market. Research done by Razali et al (2021) have alarmed the government and all Malaysian property stakeholders on the performance of the country's listed real estate companies over the previous few decades that the impact of epidemics on property profile investments requires caution. The threat from breakouts appears to need to be taken into account in the government's financial strategic planning in the 21st century, while previously the contingency was only built up for financial crises. Malaysian private participants, particularly institutional investors, must be aware of and prepared for the challenge posed by outbreaks. Another study done by Lee et al. (2000) investigates the performance of Malaysian listed stock market. The study revealed number of COVID-19 cases significantly affected the performance of almost all sectors in Malaysian stock market. The growth of Malaysian real estate has been impeded by the COVID-19 pandemic. First, new operational and policy concerns regarding the supervision of construction workers were made clear by the coronavirus outbreak. Second, there are concerns about the building sites' current business model following the COVID-19 pandemic. Third, given that worker infection is no longer acceptable, how does a high COVID-19 transmission and infection rate affect the site? Even in the post-Coronavirus era, according to Megahed and Ghoneim (2020), there is still uncertainty over global best practises for real estate construction. Consequently, it might take years to contain the COVID-19 epidemic. Due of the COVID-19 pandemic, Malaysia has implemented many entry and mobility restrictions. Due to these limitations, project operations now face greater uncertainty and new difficulties (Shah et al. 2020).

## METHODOLOGY

Since simple rule-of-thumb metrics give a skewed image, a thorough analysis is required to determine how much actual commercial real estate prices reflect economic fundamentals. It will begin by defining fair commercial real estate prices in order to calculate the misalignment as the difference between current commercial real estate prices and those implied by fundamentals. According to Campbell and Shiller (1989), the price of commercial real estate can be described in terms of the growth of net operating income (NOI) both currently and in the future as well as the overall returns on commercial real estate holdings. The model is based on the equation developed by Deghi et al. (2021)

$$\log \frac{Price_t}{NOI_t} = k = \rho \log \frac{Price_{t+1}}{NOI_{t+1}} + \Delta \log (NOI_{t+1}) Return_{t+1} \quad (\text{Equation 1})$$



Where:

$Price_t$ , ( $NOI_{t+1}$ ) and  $Return_{t+1}$  = commercial real estate prices

$NOI$  = Consumer Price Index

$$Return = \frac{Price_{t+1} NOI_t}{Price_t} = spread_t + 3MRATE_t - Inflation \text{ (Equation 2)}$$

The equilibrium process is expressed by using structural autoregression (SVAR):

$$Ay_t = B_0 + B(L)y_{t-1} + u_t \text{ (Equation 3)}$$

Where  $y_{t-1}$  = vector variables reflecting economic performance

$A$  = Relationship between variables

$B(L)$  = effect from past shocks

## FINDINGS

The total sample of this research has 4578 across all 14 states major cities in Malaysia from Bricks Database over the period January 2000 to December 2021. Table 1 presents the descriptive statistics of the variables used in the empirical analysis. Price growth has seen small annualised change over the period of the case study period. The slow pace of growth has also been seen in GDP as well as in total return. In addition, present day growth has seen contraction percentage change during the high peak of pandemic period.

**Table 1: Descriptive Statistics**

Variable	Mean	SD	Min	Max
Price Growth	0.12	1.83	-21.34	8.09
GDP Growth	0.04	1.12	-6.34	20.44
Total Return	0.01	1.68	-17.45	9.43
Interest Rate	2.55	2.22	-0.80	12.00
NOI Growth	-0.43	4.03	-50.44	75.67
Monetary Policy	0.00	0.27	-1.52	1.32

This study re-estimates our specification while allowing for time-varying factors for increased robustness. In the panel quantile estimation following the fourth quarter in the forecasting horizon, the standardised coefficients of the commercial real estate price misalignment variable are the greatest among the important components, as shown in Table 2. These results

provide more evidence for the importance of commercial real estate price misalignment for monetary stability. According to the calculations, a one standard deviation increase in the misalignment measure, which corresponds to a capitalisation rate that deviates by 10 basis points from its long-term trend, increases the downside risk to GDP growth by 1.4% points in the short term (over the course of four quarters cumulatively) and 2.5% points in the medium term (cumulatively over 12 quarters).

Over the course of the whole predicting horizon, the coefficients are negative and statistically significant. Our findings are also resilient to the addition of measurements of the credit-to-GDP gap, allaying worries about confounding factors brought on by the relationship between GDP and financial leverage. The model has been re-estimate equation (2) individually for advanced and developing market economies because the structure of the financial system and commercial real estate markets may vary between the two.

These results demonstrate that larger CRE price misalignments raise the adverse risk to GDP growth. Importantly, despite the impact is less and statistically weaker for the latter, commercial real estate price misalignment has a considerable impact on GDP growth in both advanced and developing market nations. The lesser scale of their commercial real estate markets and the smaller credit-to-GDP imbalance in comparison to established economies may be a factor in the lower predicted impact for emerging market economies.

**Table 2:** Commercial Properties by Each Sectors Price at Risk: 2000-2022

Variables	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8	h=9
Price	0.172	0.171	0.1102	0.172	0.167	0.083	0.070	0.0021	0.041
Growth	(0.108)	(0.080)	(0.141)	(0.132)	(0.112)	(0.109)	(0.123)	(0.112)	(0.093)
GDP	-0.223	-0.144	-0.132	-0.092	-0.009	-0.010	-0.021	-0.020	-0.029
Growth	(0.112)	(0.072)	(0.060)	(0.092)	(0.087)	(0.087)	(0.072)	(0.065)	(0.053)
Total	-0.335	-0.471	-0.445	-0.523	-0.552	-0.578	-0.583	-0.625	-0.557
Return	(0.172)	(0.072)	(0.154)	(0.145)	(0.187)	(0.117)	(0.111)	(0.124)	(0.110)
Interest	-0.432	-0.432	-0.382	-0.391	-0.391	-0.291	-0.223	-0.259	-0.258
Rate	(0.104)	(0.081)	(0.121)	(0.110)	(0.115)	(0.141)	(0.141)	(0.071)	(0.091)
NOI	-0.340	-0.481	-0.571	-0.577	-0.594	-0.522	-0.567	-0.559	-0.640
Growth	(0.059)	(0.099)	(0.113)	(0.120)	(0.131)	(0.108)	(0.144)	(0.142)	(0.112)
Monetary	-0.451	-0.477	-0.411	-0.371	-0.323	-0.318	-0.269	-0.238	-0.231
Policy	(0.132)	(0.069)	(0.062)	(0.049)	(0.029)	(0.029)	(0.031)	(0.032)	(0.023)
Leisure	-0.433	-0.291	-0.201	-0.143	-0.124	-0.88	-0.011	0.043	0.067
Property	(0.131)	(0.114)	(0.110)	(0.075)	(0.030)	(0.051)	(0.043)	(0.043)	(0.032)
Office	-0.502	-0.551	(0.112)	0.312	0.279	0.299	0.244	0.184	0.192
Property	(0.177)	(0.155)	0.155)	(0.072)	(0.066)	(0.052)	(0.067)	(0.055)	(0.055)
Retail	-0.311	-0.311	0.148	0.311	0.278	0.291	0.244	0.182	0.191
Property	(0.152)	(0.129)	(0.109)	(0.075)	(0.065)	(0.051)	(0.071)	(0.049)	(0.031)

## CONCLUSION

When considered collectively, the results show that price misalignment can interact with other financial weaknesses, which magnifies its impact on the size of economic downturns. As a result of banks' heightened risk appetite, they may lend to less creditworthy companies during times of strong credit growth, which could explain why credit losses during downturns are larger, especially when there has been a significant correction in asset prices. Depending on the misalignment's sign, it's probable that the impact on economic tail risk changes. It makes sense that periods of overvaluation, which correlate to positive misalignments, would have a greater impact on financial fragility. As a result, this study also includes in equation (2) an interaction term between the misalignment of commercial real estate prices and an indicator variable that equals 1 when it is positive. As anticipated, the interaction term's coefficient is negative and significant, whereas the single term's coefficient is no longer significant. The findings revealed that it is possible for macroprudential measures to have a role in averting a rise in commercial real estate market vulnerabilities. This is a crucial topic given the detrimental consequences of commercial real estate pricing misalignments on macro-financial stability described in the preceding section. Although commercial real estate price levels are not a policy target in and of themselves, macroprudential measures could theoretically reduce the possibility of significant commercial real estate price corrections and ease the pressure from adjustments should a correction take place. Overall, the results imply that macroprudential regulations play a significant role in reducing the vulnerabilities of the commercial real estate sector. In terms of numbers, a tightening of targeted CRE policies lowers short-term downside risks to CRE price increases by 0.3% points per quarter (over 8 quarters). Economically speaking, this conclusion suggests that a macroprudential tightening targeted at commercial real estate vulnerabilities two years before to the global financial crisis would have decreased the decline in commercial real estate prices from about 14% to 6.5% on average.

## ACKNOWLEDGEMENT

This paper is funded by Ministry of Higher Education under FRGS, Registration Proposal No: FRGS/1/2019/SS08/UTM/03/1

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Received: 19<sup>th</sup> December 2022. Accepted: 19<sup>th</sup> June 2023