

Forecasting Hong Kong home prices and rents



What is the market status after COVID?

May 2023

The correlation between home prices and rents against macro indicators has changed since the beginning of COVID.

knightfrank.com.hk/research





Preface

The recovery momentum of the Hong Kong economy was visible in Q1 2023, driven by the recovery of inbound tourism, improved unemployment situation and the growth in local consumption. Against this backdrop, it is interesting to see if the correlation between property prices and rents against the macro-economic indicators still holds, or being disrupted by the unprecedented COVID-19.

We published four papers in 2019, 2020 and 2021 to assess how Hong Kong housing prices had changed according to various factors, thereby enabled a more precise forecast of Hong Kong housing prices. Our key findings were:

- 1) the Hang Seng Index (HSI) led Hong Kong housing prices by one to two quarters over the long term;
- 2) the high correlation between unemployment and housing prices could lead to a structural break in the correlation between the HSI and housing prices in the near term. This would be more obvious if there is a rapid growth in unemployment;
- 3) given a stable economic growth, the property market is not likely to fall back to the “recession” stage in our developed “property-economy cycle” model.

This is our fifth correlation paper on the Hong Kong residential property market. After analyzing over 40,000 data points over the past 25 years, we are more confident about revealing the technical relationships between home prices, rents and a series of macro indicators.



Methodology

MACRO INDICATORS



Retail Sales



Consumer Price Index (CPI)



Unemployment Rate



Labour Force



Imports



Exports



International Reserves



Visitor Arrivals



Mainland Visitor Arrivals



Money Supply M3



Gas Consumption



Electricity Consumption



Hang Seng Index (HSI)



Prime Rates

Why macro indicators?

Macro indicators are economic indicators that are based purely on economic development and are not significantly impacted by the performance of the property market. These indicators were selected because the data is updated monthly. Thus, other indicators such as GDP and population size are not included. Property market indicators are not considered in this analysis owing to their mutual relationship with home prices and rents. For example, housing supply impacts home prices and rents, and vice versa.















Correlation vs regression

Each of the macro indicators was tested first on their correlation with home prices and home rents. Normalization was used just to validate the correlation findings. Home prices and rents were correlated, lagging one quarter against the macro indicators. This allowed us to determine how significant a role each macro indicator played as a three-month leading indicator for both home prices and rents.















The correlation coefficients show the directional relationships between the variables but not the magnitude. So for instance, a large correlation coefficient between home prices and CPI indicates they are moving in the same direction most of the time, but does not show the magnitude of the movement. A correlation coefficient of 1 shows a perfect positive relationship between the variables, while -1 shows a perfect negative relationship. Anything close to 0 is negligible.

Instead, the regression coefficient indicates the magnitude of the relationship between home prices and rents against the macro indicators.

Correlation Rankings (1997 – Now)















Rating and Valuation Department (RVD) Prices (Overall)	Retail Sale 	CPI 	Unemployment Rate 	Labour Force 	Imports 	Exports 	International Reserves 	Visitor Arrivals 	Mainland Visitor Arrivals 	Money Supply M3 	Gas Consumption 	Electricity Consumption 	HSI 	Prime Rates 
Correlation Coefficient (no lag)	8	1	9	6	4	5	3	12	11	2	13	14	7	10
Correlation Coefficient (1Q lag)	8	1	10	6	4	5	3	12	11	2	13	14	7	9

Sources: Knight Frank Research

RVD Rents (Overall)	Retail Sale 	CPI 	Unemployment Rate 	Labour Force 	Imports 	Exports 	International Reserves 	Visitor Arrivals 	Mainland Visitor Arrivals 	Money Supply M3 	Gas Consumption 	Electricity Consumption 	HSI 	Prime Rates 
Correlation Coefficient (no lag)	6	1	9	7	4	5	3	11	10	2	13	14	8	12
Correlation Coefficient (1Q lag)	7	1	9	8	4	5	3	11	10	2	13	14	6	12

Sources: Knight Frank Research

Regression Coefficient (1997 – Now)

	Retail Sale 	CPI 	Unemployment Rate 	Labour Force 	Imports 	Exports 	International Reserves 	Visitor Arrivals 	Mainland Visitor Arrivals 	Money Supply M3 	Gas Consumption 	Electricity Consumption 	HSI 	Prime Rates 
RVD Price (Overall)	0.83	2.36	-0.28	4.50	0.94	0.94	0.91	0.30	0.36	0.94	0.51	0.31	1.18	-0.47
RVD Rent (Overall)	0.60	1.54	-0.25	2.92	0.62	0.61	0.58	0.26	0.28	0.60	0.32	0.21	0.81	-0.27

Sources: Knight Frank Research

Which macro indicators have been moving in the same direction as home prices and rents in the past 25 years?

Among the 14 macro indicators tested, the consumer price index (CPI) correlate most closely with both home prices and rents, with a correlation coefficient of 0.98 and 0.95 against home prices and rents, respectively, the following quarter. The second- and third-highest correlated indicators are money supply M3 and international reserves, with a correlation coefficient of 0.90–0.95 against home prices and rents, respectively.

Other indicators with a high correlation coefficient of over 0.8 include imports, exports and the number of people in the labour force; the correlation coefficients of the HSI and retail sales were above 0.7, while the rest were all below 0.5.

Which macro indicators might have the largest impact on home prices and rents in the past 25 years?

Despite not having the highest correlation, i.e. moving at the same direction as home prices and rents, the size of the labour force had the most significant impact on home prices and rents, with a regression coefficient of 4.50 and 2.92 against home prices and rents, respectively. This implies that every percentage point change in the size of the labour force is related to a 4.50 and 2.92 percentage point change in home prices and rents, respectively, in the following quarter.

The CPI and the HSI were the only other indicators with regression coefficients larger than unity on home prices, while the CPI was the only other indicator with a regression coefficient larger than unity. All other indicators related to home prices and rents a quarter later at a less-than-proportionate rate.

Correlation Rankings (2020 – Now)

RVD Prices (Overall)	Retail Sale	CPI	Unemployment Rate	Labour Force	Imports	Exports	International Reserves	Visitor Arrivals	Mainland Visitor Arrivals	Money Supply M3	Gas Consumption	Electricity Consumption	HSI	Prime Rates
Correlation Coefficient (no lag)	9	4	5	6	8	7	2	12	13	11	14	10	3	1
Correlation Coefficient (1Q lag)	10	4	6	3	14	11	2	12	13	9	7	8	1	5

Sources: Knight Frank Research

RVD Rents (Overall)	Retail Sale	CPI	Unemployment Rate	Labour Force	Imports	Exports	International Reserves	Visitor Arrivals	Mainland Visitor Arrivals	Money Supply M3	Gas Consumption	Electricity Consumption	HSI	Prime Rates
Correlation Coefficient (no lag)	10	2	5	3	13	12	8	11	9	4	14	7	6	1
Correlation Coefficient (1Q lag)	14	7	10	2	12	13	9	3	5	4	11	8	1	6

Sources: Knight Frank Research

Regression Coefficient (2020 – Now)

	Retail Sale	CPI	Unemployment Rate	Labour Force	Imports	Exports	International Reserves	Visitor Arrivals	Mainland Visitor Arrivals	Money Supply M3	Gas Consumption	Electricity Consumption	HSI	Prime Rates
RVD Price (Overall)	-0.05	-1.41	0.04	1.56	0.01	0.02	0.52	-0.01	-0.12	-0.20	0.09	-0.05	0.32	-1.72
RVD Rent (Overall)	0.00	-0.22	-0.01	0.43	0.01	0.01	0.05	0.03	0.03	-0.15	-0.02	0.02	0.07	-0.30

Sources: Knight Frank Research

Which macro indicators have been moving in the same direction as home prices and rents since the beginning of the COVID period?

Compared with the long-term trend, the value of the correlation coefficients against home prices and rents have dropped noticeably for almost all macro indicators since the beginning of the COVID period. There was also greater divergence between the correlations against home prices and home rents.

Since the beginning of the COVID period, the HSI, prime rate, labour force size and international reserves have moved up the rankings in their correlation to housing prices and rents. In contrast, the three most highly correlated indicators, CPI, money supply M3 and international reserves, moved down the rankings.














Which macro indicators might have the largest impact since the beginning of COVID?

The story is the same for the regression coefficient, as nearly all macro indicators have had less impact on home prices and rents than the long-term trend shows. The prime rate was the only exception, as it was the only indicator that showed a higher regression coefficient (in a negative way) against home prices and rents since the beginning of the COVID period; the coefficient values rose to -1.72 and -0.30, respectively.















The size of the labour force continued to lead all indicators in terms of magnitude significance, but the coefficient value fell significantly to only 1.56 and 0.43 against home prices and rents, respectively.



Ranking Comparison (Since 2020 vs Since 1997)

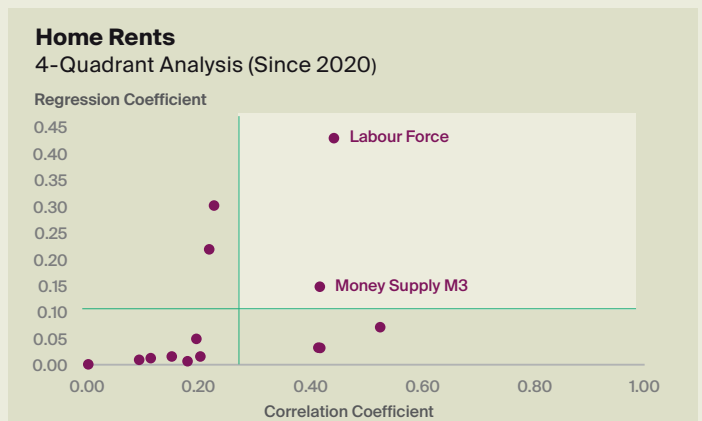
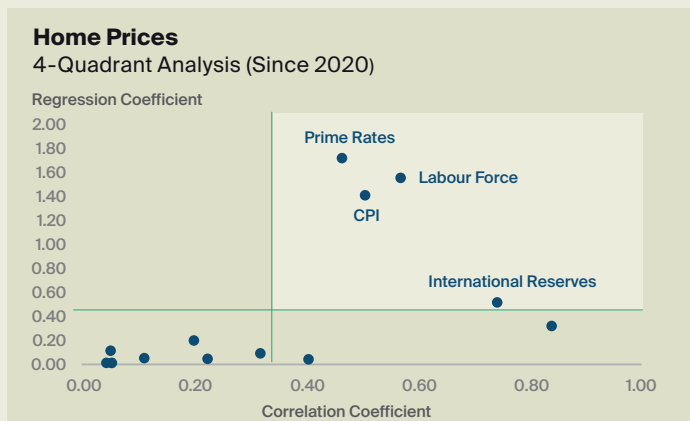
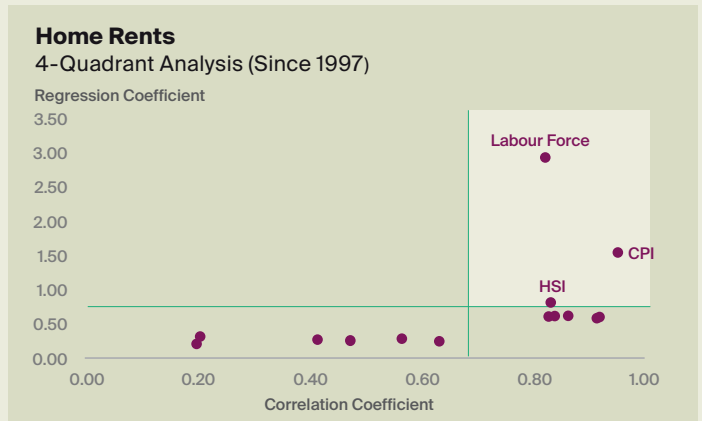
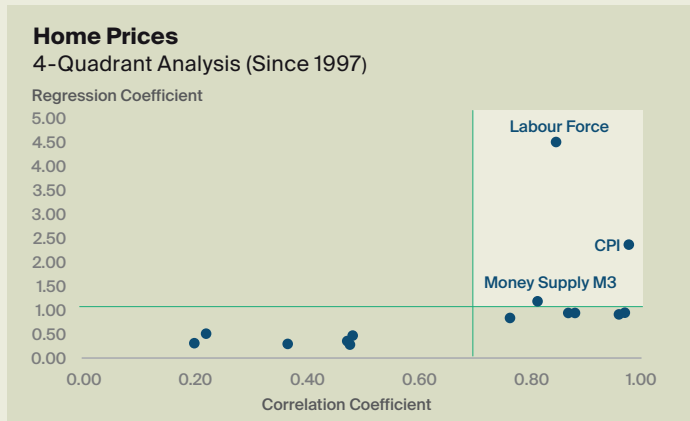
RVD Prices (Overall)	Retail Sale 	CPI 	Unemployment Rate 	Labour Force	Imports 	Exports 	International Reserves 	Visitor Arrivals 	Mainland Visitor Arrivals 	Money Supply M3 	Gas Consumption 	Electricity Consumption 	HSI 	Prime Rates 
Correlation Coefficient (no lag)	▼	▼	▲	◀	▼	▼	▲	◀	▼	▼	▼	▲	▲	▲
Correlation Coefficient (1Q lag)	▼	▼	▲	▲	▼	▼	▲	◀	▼	▼	▲	▲	▲	▲

Sources: Knight Frank Research

RVD Rents (Overall)	Retail Sale 	CPI 	Unemployment Rate 	Labour Force 	Imports 	Exports 	International Reserves 	Visitor Arrivals 	Mainland Visitor Arrivals 	Money Supply M3 	Gas Consumption 	Electricity Consumption 	HSI 	Prime Rates 
Correlation Coefficient (no lag)	▼	▼	▲	▲	▼	▼	▼	◀	▲	▼	▼	▲	▲	▲
Correlation Coefficient (1Q lag)	▼	▼	▼	▲	▼	▼	▼	▲	▲	▼	▼	▲	▲	▲

Sources: Knight Frank Research

Four-Quadrant Analysis



Our four-quadrant analysis summarizes the previous findings about correlations and regressions:

- The labour force size and CPI were the indicators that moved in line the most and have had the most significant impact on home prices and rents since 1997. Money supply M3 had a highly significant correlation with home prices, while the HSI had highly significant correlation with home rents during the same period.

- Since the beginning of the COVID period, the size of the labour force continued to have a high correlation with home prices and rents. The CPI maintained its significant correlation with home prices, and the prime rate and international reserves correlated more strongly than money supply M3 on home rents.

Implication

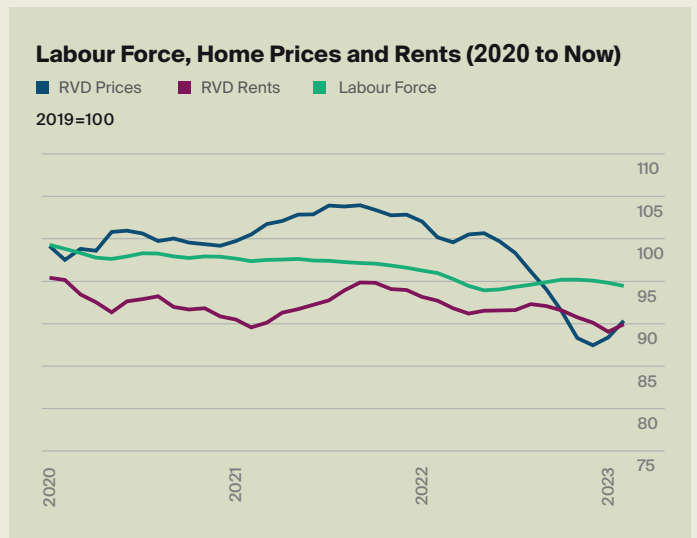
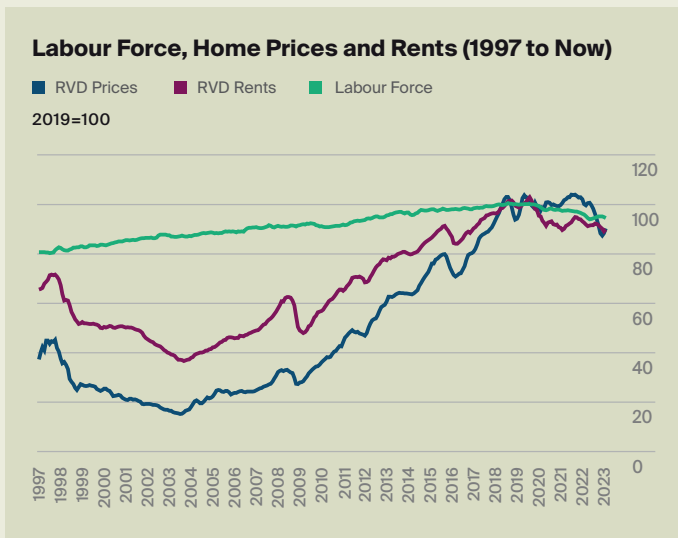
This analysis demonstrates that the size of the labour force has been the most significance indicator for home prices and rents, both in the long term and in the recent COVID period. For the 15-year period from 2004 to 2019, the size of the labour force was on an upward trend. This trend did not change until 2020, when Hong Kong was dealing with high emigration, an economic downturn, COVID, and a permanent structural change in the labour force related to the aging population. The issue of the aging population cannot be alleviated within a short period of time without imported labour. The shrinking labour force size therefore led to lower demand for housing.

In the Policy Address 2022, the government introduced several measures associated with the “Trawl for Talent”, including the Top Talent Pass Scheme (TTPS), to attract global top-tier talent to Hong Kong. Eligible overseas talent settling in Hong Kong will be refunded the extra stamp duty (including Buyer's Stamp Duty (BSD) and the New Residential Stamp Duty) for purchasing residential property in Hong Kong if they subsequently become a permanent resident after residing in Hong Kong for seven years. Although there have been over 8,700 successful applications for the TTPS, there was still a year-on-year reduction in the size of the labour force of 0.8% in 2023 Q1.

The government's relaxation of the BSD to help attract talent has therefore not had much of an immediate impact on the residential market. Since this measure requires new residents to pay the tax first and get a refund later, the stimulus impact is far less than it would be if they received a tax exemption tax first and it was recovered later, if necessary. As this analysis makes clear the importance of the size of the labour force to home prices and rents in both in the short and long term, the government's moves to attract talent should eventually boost the residential market, but it depends on the ultimate response from talent from around the world. A talent influx of just 8,700 to our labour force of 3.8 million will not make a huge difference.

As we have seen from this four-quadrant analysis, home prices will continue to be affected mainly by the prime rate, when is currently at the highest level since March 2008. The adverse impact will not ease until we see a reversal in the prime rate trend following a potential US interest rate cut.

According to our regression analysis, a 0.8% drop in the size of the labour force would relate to a subsequent drop of 1.2% to 3.6% in home prices in about three months' time, but a drop of only 0.4% to 2.3% in home rents. Although this is a pure ex-post technical analysis, it could serve as a reference whenever we see uncertainty ahead.



We like questions. If you've got one about our research, or would like some property advice, we'd love to hear from you.

Research



Martin Wong
Director
Head of Research & Consultancy,
Greater China
+852 2846 7184
martin.wong@hk.knightfrank.com



Lucia Leung
Director
Research & Consultancy,
Greater China
+852 2846 4843
lucia.leung@hk.knightfrank.com

Residential Agency



Maggie Lee (E-076435)
Senior Director,
Head of Residential Agency
+852 2846 9550
maggie.lee@hk.knightfrank.com



Knight Frank Research provides strategic advice, consultancy services and forecasting to a wide range of clients worldwide including developers, investors, funding organisations, corporate institutions and the public sector. All our clients recognise the need for expert independent advice customised to their specific needs. Important Notice: ©Knight Frank 2023. This document and the material contained in it is general information only and is subject to change without notice. All images are for illustration only. No representations or warranties of any nature whatsoever are given, intended or implied. Knight Frank will not be liable for negligence, or for any direct or indirect consequential losses or damages arising from the use of this information. You should satisfy yourself about the completeness or accuracy of any information or materials and seek professional advice in regard to all the information contained herein.

This document and the material contained in it is the property of Knight Frank and is given to you on the understanding that such material and the ideas, concepts and proposals expressed in it are the intellectual property of Knight Frank and protected by copyright. It is understood that you may not use this material or any part of it for any reason other than the evaluation of the document unless we have entered into a further agreement for its use. This document is provided to you in confidence on the understanding it is not disclosed to anyone other than to your employees who need to evaluate it.

Knight Frank Petty Limited EAA (Company) Lic No C-010431
Knight Frank Hong Kong Limited EAA (Company) Lic No C-013197