The US Monetary Conditions and Dubai's Real Estate Market: Twist or Tango?

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Background

- Global financial conditions are an important determinant of the real estate market.
- High lending rates have an immediate impact on mortgage lenders and impact the demand for new homes.
- Recently, the property markets worldwide have been exposed to new pressures after the supply chain crisis that is associated with the Covid-19 pandemic lockdown and the economic consequences of the Russian invasion, which prompted central banks to hike interest rates at the fastest pace in decades to combat inflation
- Tighter financial conditions weaken the demand for properties by making it less affordable for mortgage buyers to finance home purchases or refinance existing loans driving down house prices.

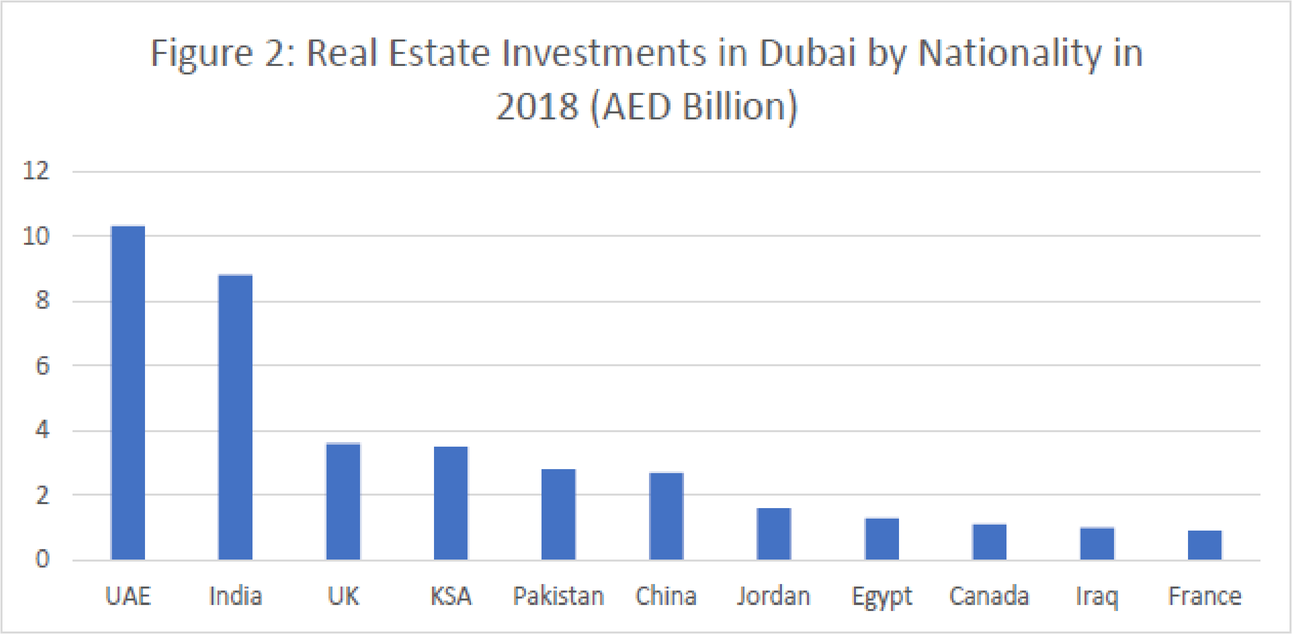
Background (2)

- Dubai is an international real estate market, thanks to its laws that allow foreigners to own properties, a stable currency that is pegged to the US dollar, the emirate’s advanced infrastructure facilities, and the city’s attractions.
- The construction and the real estate sector together constitute about 13.5% of Dubai's economy.
- The UAE currency has been pegged to the US dollar since November 1997, at AED 3.67 to the dollar, which has shaped the UAE monetary policy by aligning the UAE Central Bank interest rate with the US Federal Funds’ target rate
- But on the other hand, a fixed exchange rate ties policymakers’ hands as it imports monetary policy from the US. But if macroeconomic fluctuations are not in harmony (Tango), it is possible that a dollar peg may not be supportive and generates the risk of policy misalignment when economic cycles are out of step (Twist)

Motivation and Research Question

- The recent waves of financial tightening in the US have affected the property markets worldwide and increased the risk of macro instability The construction and the real estate sector together constitute about 13.5% of Dubai's economy.
- Albeit the importance of the real estate sector in the Gulf economies and Dubai in particular, the impact of the US monetary conditions on the housing market in the Gulf region and Dubai has been understudied
- Evaluating the impact of the US monetary conditions on the UAE housing market has paramount importance from the macroprudential perspective and the study fills the gap.

Motivation and Research Question



Source: Dubai Economic Report 2019

How the U.S monetary policy influence Dubai's real estate sector (1/3)

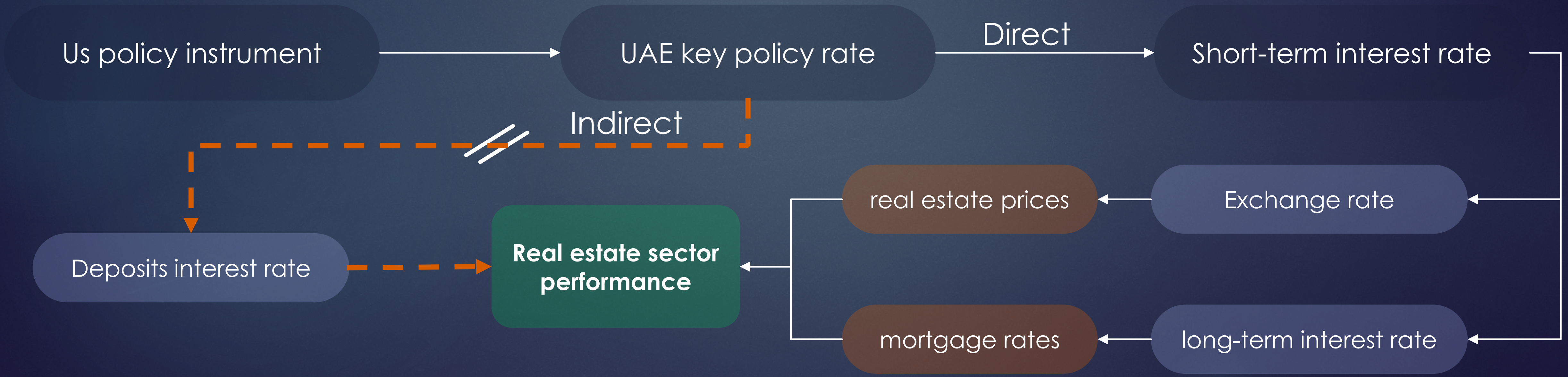
DIRECT EFFECT

The direct effects of interest rate on the real estate sector are through both real estate prices expressed in the exchange rate and the second is the cost of borrowing expressed in mortgage rate.

INDIRECT EFFECT

While the indirect effect of interest rate can be explained as other opportunity cost where interest rates on bank deposit can work as a substitute for investing in real estate.

<u>The mechanism were interest rate influence the real estate market</u>



Real Estate Performance

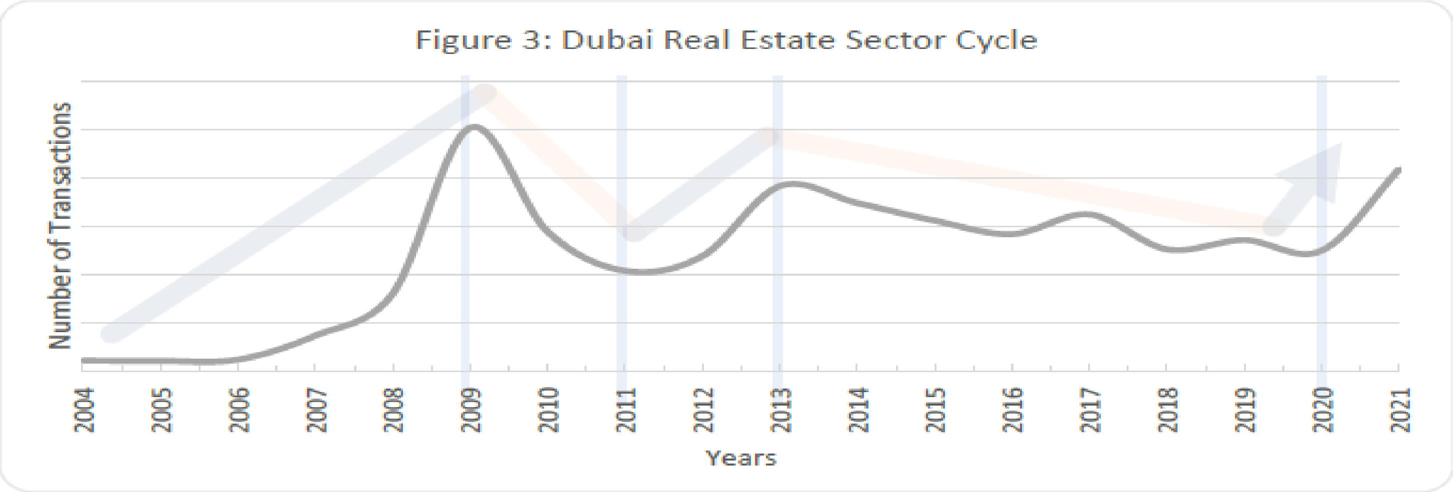


Figure 3: Dubai Real Estate Sector Cycle

Growth (2004 – 2008)

Decline (2009 – 2011)

Recovery (2012 – 2014)

Soft Declining (2015 – 2018)

Potential growth (2021 – 2023)

Source: Calculated by the Authors using DLD data.

Date and Method

- We collected data from several official open sources. Data on the number of monthly sold houses are collected from Dubai Land Department (DLD) covering the period from the year 2014 to July 2022. Our data on home transactions is broken down into two groups based on the type of buyers, mortgage buyers, and non-mortgage buyers.
- Such a breakdown would allow us to apply panel data methods and eliminate any unobserved time-constant effects.
- Data on the US interest rate are collected from the FRED database
- To control for the effect of home prices on housing demand, we use the Dubai House Price Index produced by DLD
- House renting is a substitute good for house owners and might be an important determinant for the housing demand. The DLD produces a monthly index on the performance of the residential rental market.

Date and Method

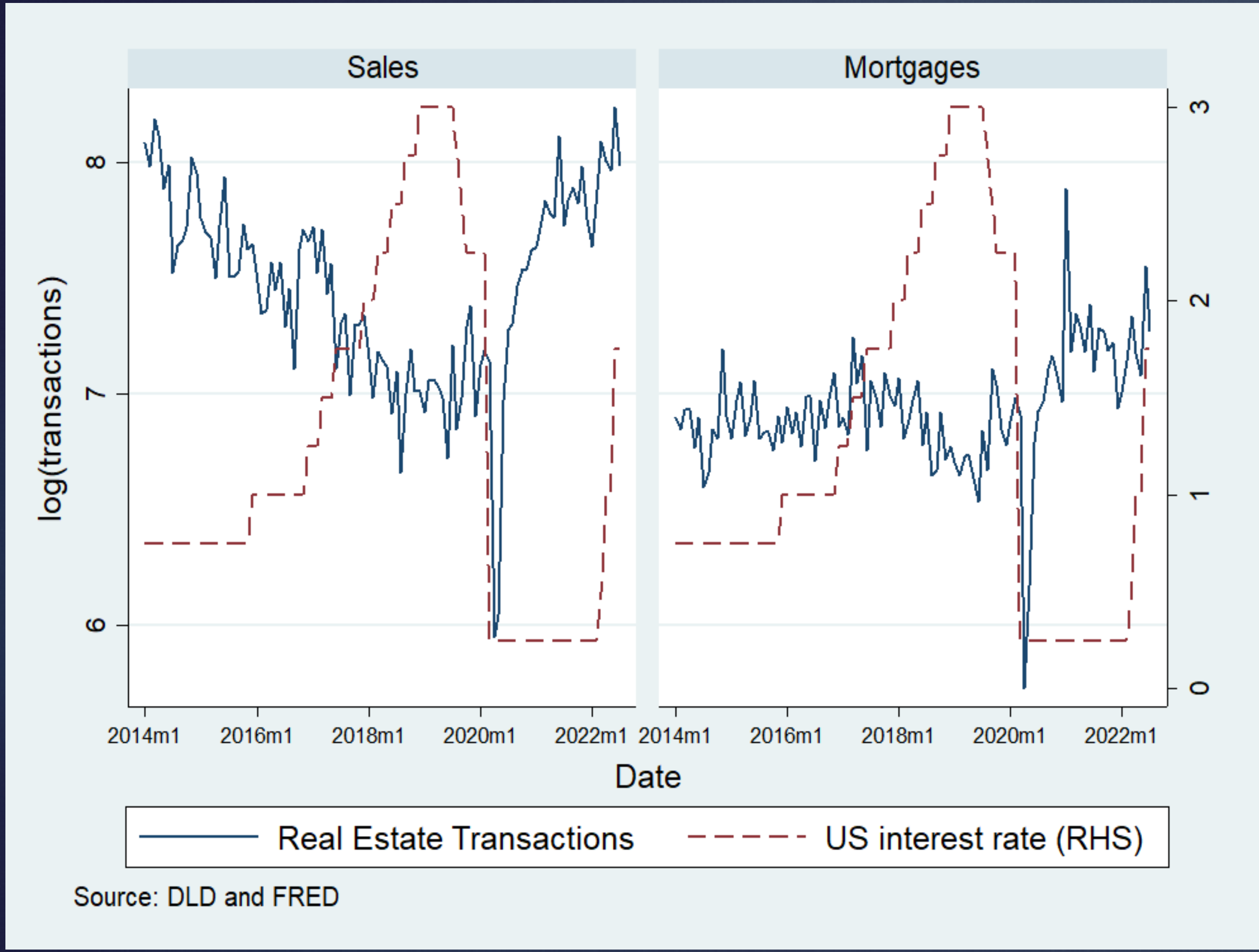
- oil price is an important determinant of the external demand; therefore, we collected data on the global price of Brent Crude from the Fred database
- We Proxy population size by active mobile subscriptions in the UAE
- Our data can be described as long panel data since period T is far larger than the number of groups N
- We have monthly data on two groups of properties (mortgage financed and non-mortgage financed) covering 86 months per group starting from January 2015
- both a generalized least square model as well a fixed effect linear model with an AR(1) disturbance can be adopted to take into account the large T.

Data and Method

$$\Delta \log(House_{it}) = \beta_0 + \beta_1 \Delta interest_t + \beta_2 \Delta Brent_t + \beta_3 \Delta Price_t + \beta_4 \Delta Rent_t + \beta_5\, Covid + \beta_6\, Base + \beta_7\, \Delta \log(mobile_t) + \beta_8\, Mortgage_i \times \Delta interest_t + u_{it}$$

1. $\Delta \log(House_{it})$ is the approximate annual growth rate in property transactions in Dubai at month t for the property group i
2. $\Delta interest$ is the annual change in the US interest rate ($interest_t$-$interest_{t-12}$)
3. $\Delta Brent$ is the annual change in the global Brent price ($Brent_t$-$Brent_{t-12}$)
4. $\Delta price$ is the annual change in the Dubai House Price Index ($index_t$-$index_{t-12}$)
5. $\Delta Rent$ is the change in the Dubai rent index compared to a year ago
6. The variable *Covid* is a dummy variable for the Covid lockdown period in Dubai
7. $\Delta\log$ (*mobile*) is the approximate annual growth rate in the number of active mobile subscriptions
8. β_8 is the coefficient for the interaction term $Mortgage \times \Delta interest$, where *Mortgage* is a dummy variable for the mortgage financed properties. The model control for the fixed effect and eliminates serial correlation and heteroscedasticity by using the variables in difference form.

Descriptive Findings



Results show the association between the US discount rate and real estate transactions in Dubai over the period between January 2014 to July 2022.

The inverse association between the US discount rate and housing demand is obvious in the case of non-mortgage buyers, as the discount rate went up after 2016, the property units sold went down and vice versa.

For the mortgage buyers, the inverse correlation is less visually obvious and will be further checked in the regression models.

Key findings and takeaways (2/2)

Regression Results

	(1) FE-AR	(2) GLSAR	(3) OLSCORR
$\Delta interest_t$	-0.195***	-0.200***	-0.201***
	(0.0384)	(0.0461)	(0.0458)
$\Delta Rent_t$	0.0155**	0.0140	0.0139
	(0.00567)	(0.00737)	(0.00737)
$\Delta Brent_t$	0.00129	0.00178	0.00179
	(0.00113)	(0.00147)	(0.00147)
$\Delta \log(mobile_t)$	-0.847	-0.697	-0.697
	(0.524)	(0.688)	(0.688)
$\Delta Price_t$	-0.0203*	-0.0188	-0.0187
	(0.00863)	(0.0112)	(0.0113)
Interaction term	0.0436	0.0425	0.0423
	(0.0402)	(0.0344)	(0.0344)
Covid dummy	-0.758***	-0.720***	-0.720***
	(0.117)	(0.148)	(0.148)
Base dummy	1.049***	0.986***	0.986***
	(0.105)	(0.133)	(0.133)
_cons	0.0202	-0.00959	-0.00960
	(0.0229)	(0.0353)	(0.0349)
N	172	172	172
adj. R^2	0.551		
Fixed effect	Yes	Yes	Yes

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Our models suggest that there is a strong inverse relationship between the changes in the interest rate in the US and the demand for properties in Dubai.

An increase in the US interest rate by one percentage point lowers the number of property transactions by about 17% and vice versa.

These finding remains robust across different regression specifications.

As the mortgage interaction term is insignificant, this suggests that the pathway through which the US interest rate is influencing the real estate market in Dubai is the exchange rate channel.

Conclusion

- This paper is gaining importance in light of the high rates of inflation around the world after the pandemic that caused disruption in supply chains and the Russian war and the resort of the US Federal Reserve to aggressively raise interest rates to combat domestic inflation.
- As expected, our models suggest that there is a strong inverse relationship between the changes in the interest rate in the US and the demand for properties in Dubai. An increase in the US interest rate by one percentage point lowers the number of property transactions by about 17% and vice versa. This finding remains robust across different regression specifications. As the mortgage interaction term is insignificant, this suggests that the pathway through which the US interest rate is influencing the real estate market in Dubai is the exchange rate channel.
- This is study is not in a position to evaluate the exchange rate policy. However, the International Monetary Fund (IMF) suggests that the exchange rate peg is appropriate and provides a credible policy anchor and stability, and moving away from the peg in the near term would be destabilizing and have limited benefits for competitiveness

Thank you!

Get in touch: