Volatility Of Kuwait’s Real Estate Sector and its Directional Relationships with Oil and Equity Markets

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Broad Objective

The broad objective of this Concept Note is to investigate the time-varying dynamic relationships between Kuwait’s real estate sector, and other sectors and markets including the equity and oil markets. We use weekly data covering the period 2000 to 2016 which includes various oil market cycles of peaks and troughs in addition to financial shocks most recently the global financial crisis of 2008/09 as well as shocks triggered by advancements in information technology that benefit or worsen economic activity and real estate bubbles and shocks including the infamous subprime rate volatility shocks that permeated global economic activities and adversely affected world economic growth and sustainability.

Study Rationale

This study is motivated by a set of factors that underpin Kuwait’s prospective transformation, dubbed Kuwait’s vision, and the leading role that the real estate sector is set to play out in the transformation according to authorities’ vision. Broadly-speaking, the core objective of Kuwait’s vision is to transform Kuwait from resource-based into productivity-driven economy by focusing on key niches such as trade and tourism, modern education and learning centers, information technology, and regional financial hub. All elements of the transformation will have direct bearings on Kuwait’s real estate sector, most notably through their competitive bids and demands for spatial facilities and urban and industrial/financial locations. This is not to mention the prospective demand for housing, schools, hospitals, commercial enterprises, roads and communication networks and other social facilities, that will be driven by income expansion in addition to population growth given the bulging out of the population histogram due to the society’s youthful structure.

The proposed research is cognizant of the temporal opening-up of the economy to international investors, which is also likely to place further demands for Kuwait’s real estate sector. As well, the transformation will likely impact Kuwait’s real estate sector indirectly through the spillover effects of niche developments on the conversion of land into alternative uses required for the attainment of these niches.

The proposed research is also motivated by lessons learnt from Kuwait’s historical economic development that tended to produce price bubbles and create physical area shortages during economic and financial shocks as happened during the formation decades of 1970-1980s, and during global crises such as the global financial crisis of 2008/2009. International shocks that are sourced in commodity markets, or equity markets, let alone shocks produced by monetary policy actions, for instance, the subprime rate, the fed rate, exchange rate disequilibria, all tend to trigger contagion effects on Kuwait’s real estate market. The real estate sector could also be the principal cause of shocks that permeate other sectors of the Kuwaiti economy, notably the financial sector, banks and stock market.

The brief review above underscore the importance of a dedicated and well-designed research on Kuwait’s real estate sector that produce results that aid policy makers in mitigating volatility spillovers and contagion effects with other sectors of the economy notably, the financial and oil sectors.

Data and Methodology

Three sets of high frequency data are utilized in this Concept Note. The first is the weekly data on land prices for Kuwait’s overall spatial horizon as well as according to sector; that is, residential, commercial, industrial and public sector uses. The data are published by Kuwait’s Department of Justice and are detailed according to governance and area, location, and land plot size.

In addition to land prices over time and according to real estate use, the proposed study utilizes high frequency data on weekly oil prices, Kuwait crude and OPEC basket of crude and possibly Brent or WTI.

As well, the proposed concept note will deploy weekly data on Kuwait’s equity markets, overall index and basic components, such as listed companies in such niches as financial and land business areas. Moreover, the equity data will cover trade volume, overall and by key niche, in addition to corresponding indices in international equity markets covering S&Ps FTSE, CAX, Nikki, Hong Kong, and China etc.

Methodologically, the study applies volatility assessment indexes and measures of spillover and contagion in order to vet the total, directional, and net volatility spillovers across several sectors and markets using the dynamic conditional multi-GARCH model.

Specifically, the proposed study applies two measures to the weekly data covering the time-span under consideration. The first is cross-market correlation coefficients. The second is the Dynamic conditional correlation multi-GARCH model and derives the dynamic conditional correlations among pairs of sectors, markets and asset classes including Kuwait’s real estate sector.

Because of the possibility of structural breaks in the data, the study will re-estimate pertinent model parameters by incorporating structural breaks if and when robustly detected.

Policy Relevance

From the policy perspective, the analysis will utilize land price indexes in order to generate the land-gradient functions over time which help in predicting the land-use conversion across sectors on the one hand and provide a robust signal that could be used to track land price bubbles, especially in conjunction with developments in the equity and oil market dynamics.

Because the study deploys appropriate lags in key sector gauges, such as oil prices, it will provide systematic policy tractions and lessons about the direction, duration, and impact of various spillovers according to sector and market type.

Deliverables

The deliverables of the study include the following:

First, a systematic gauge of the nature of spillovers between oil prices, real estate prices and financial markets and determine their directions and durations during tough and prosperous times.

Secondly, beyond its significance for macro-prudential and financial policy designs, the study will derive an index comprising land-price gradients according to use along with empirical identification of the relative order of magnitude of the variables that influence its slope and shifts over time. This deliverable presents a useful tool for spatial and urban planners in formulating land development plans.

Third, time-varying conditional correlation coefficients that gauge the probable contagion amongst sets of markets, and sectors during expansion and contraction times. The dynamic conditional correlation coefficients will be useful for identifying the possibilities of risk mitigation and diversification strategies during time-varying economic and financial conditions.

Finally, the analysis will provide policy makers with pragmatic and effective apparatus for assessing the international, regional, and local sources of shocks and their spillover effects and ways and means to mitigate their impact in order to safeguard Kuwait’s prospective growth, overall and by key sectors identified in this CN.

Partnerships and Expected Duration

The study is expected to last 24 months from commission to completion. In addition to partnership with the Kuwait Banking Association, the core initiating team will approach stakeholders in the real estate sector, in the Chamber of Commerce and Industry, the Department of Justice, and KFAS.