Dynamics of main alternative assets - real estate, art and fine wine prices: evidence from short- and long-run co-movements.

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Abstract:
Over the past few decades, an increasing number of investors have been effectively using alternative assets to optimize the risk-return ratio of their portfolio. Actually, alternative assets under management more than doubled between year-end 2003 and 2012, to $6.5 trillion. This trend represents a compounded annual growth rate of 14 percent over the period, far outstripping traditional asset classes. However, we know little about the links between traditional asset and alternative asset prices and also, between alternative assets prices themselves. In particular, an intuitive view is that financial crises (since 2000) have generated contagion effects between markets. In particular, three representative alternative assets have been selected for their maturity and dynamism in portfolio diversification strategy: residential property, art, and fine wine.

The question of prices transmission between these alternative assets and assets has been explored since 1990’s. In the art market, Chanel (1994) finds a six-month time lag in the cross-correlation of the evolution of indices between art and financial market. Ginsburgh and Jeanfils (1994) or Higgs and Worthington (2003) used the cointegration method or ECM models to identify short and long run co-movements. Worthington and Higgs (2004) indicated a volatility transmission effect between financial and different segments of the art market by using MGARCH methodology. Masset and Henderson (2009), Baldi et al. (2013) and more recently Faye et al. (2014) explored this transmission of price tendencies within the wine market. Finally, concerning real estate market, Glascock et al. (2000) are the first to report that U.S. REITs were cointegrated with bonds until 1992. More recently, Serrano and Hoesli (2012) are the first to identify the degree of fractional cointegration by depicting the nature of the long-run nonlinear relationships between securitized real estate and the three most commonly used models in the literature (Chan et al., 1990; Liu and Mei, 1992; and Clayton and MacKinnon, 2003) to explain and forecast returns.

Our paper focuses on price transmission between financial assets and alternative assets and also between alternative assets themselves. By using traditional market indices (MSCI world, Liv-ex 50, Case and Schiller 10 and global Artprice) and a cointegration procedure (Toda and Yamamoto, 1995) we examine the overall price trend and the contagion effect between these assets during the period from 2000 to 2014. Our contribution is threefold. First, our observation period (2000-2014) is generally longer than in previous studies, including the global financial crisis. Second, to the best of our knowledge, while most of studies have analyzed prices transmission between assets and alternatives assets, they didn’t examined transmission between alternative assets themselves. Third, we used the Toda and Yamamoto (1995) procedure to
investigate the cointegration between price series. This procedure is based on the estimation of an augmented VAR in which the asymptotic distribution of the Wald statistic, i.e., an asymptotic $\chi^2$ distribution, is assured. By using traditional market indices (MSCI world, Liv-ex 50, Case and Schiller 10 and global Artprice) and a cointegration procedure (Toda and Yamamoto, 1995) we examine the overall price trend and the contagion effect between these assets during the period from 2000 to 2014. At the moment, our results and interpretations are in process.

**Keywords**: Real estate, art market, fine wine, VAR-ECM model