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BDI, Gold Price and Economic Growth

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Abstract

Since its establishment, the Baltic Dry Index has become one of the foremost indicators on the cost of shipping as well as an important barometer on the volume of worldwide trade and manufacturing activity. In this paper, the MSIH(3)-VAR(3) model is selected to analyse the relationship between BDI, Gold prices and economic growth for the United States. The BDI, gold prices and GDP are cointegrated for the United States. The crisis regime tends to last 1 years on average, while Regime 2 is comparatively more persistent with 6.46 years. Finally, Regime 3 which corresponds to high growth tends to last 1.16 years, on average. The crisis regime of the economy is the most persistent regime in the US. Thus, the BDI and gold prices can be used as an indicator of crisis in GDP growth for the United States.

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1. Introduction

Investors are always looking for practical economic indicators they can use to make informed investment decisions. Recently, the Baltic Dry Index has been used as an economic indicator on a global scale. In addition, the BDI depends on the volatility of crude oil prices and port and docking fees which make the BDI sensitive to global demand and manufactured goods ([*]Economic SYNOPSES). The BDI is a measurement to determine the cost of raw materials around the world such as iron, coal, cement and grain. The average price of 22 different shipping routes around the world is compiled daily to form the Baltic Dry Index. Economic indicators such as unemployment rate, inflation and oil prices can be manipulated or influenced by governments and speculators, however, the Baltic Dry Index is difficult to manipulate because it is driven by clear forces of supply and demand. One of the reasons for the

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BDI to be difficult to manipulate and influence is that the number of ships around the world is limited; in order to manipulate and increase the supply, more ships need to be built which would be very costly.

When we look at the composition of the BDI it supplies investors tools and indicators in four different sub-index. Panamax (BPI) in 1998: is calculated according to four available routes for a Panamax dry bulker, each route is calculated with the same weight (25%). Capesize (BCI) in 1999: is according to shipping costs of 10 available route for Capesize dry bulker in which each route is weighted based on its importance against to nine others. Handysize (BHSI) / Handymax Index (BHMI) in 2000: Handysize carries up to 60.000 tons. There are 2000 unit in service totally about 43 million tons. They are flexible because their size allow them to enter smaller ports. Handysize and Handymax differ by capacity and size of the cargo. Supramax (BSI) in 2005: vessels have three voyage charter and six trip charter routes, but the Baltic Supramax Index (BSI) has only six trip charter routes.

After economic recessions and during economic growth, demand for raw materials increases as production and investment also increase. As a result, transportation volume grows accordingly. On the other hand, during economic slowdowns, demand for raw material decreases which creates utilized capacity (Oomen, 2012). Global factors also play an important role in the supply and demand of the BDI. The BDI and global markets have common economic and financial movement due to market supply and demand which is a result of turmoil and crises. Iron ore, coal, phosphate, grain and alumina are the main goods of dry bulk transportation. These goods are mostly from the construction and energy sector. Moreover, the freight rate is determined by raw material demand as transportation needs continue to remain the same.

In this sense, our work is related to, among others, Korajczyk and Viallet (1989), Cutler, Poterba, and Summers (1991), Harvey (1991, 1995), Bekaert and Hodrick (1992), Campbell and Hamao (1992), Ferson and Harvey (1993), Heston and Rowenhorst (1994), Bekaert and Harvey (1995), Dumas and Solnik (1995), De Santis and Gerard (1997), Fama and French (1998), Griffin and Karolyi (1998), Rowenhorst (1998), Bossaerts and Hillion (1999), Jorion and Goetzmann (1999), Rangvid (2006), Guidolin and Timmermann (2008), Bekaert, Hodrick, and Zhang (2009), Pakthuanthong and Roll (2009), Rapach, Strauss, and Zhou (2009), Hjalmarsson (2010), and Henkel, Martin, and Nardari (2010).

In addition to this BDI and/or Gold prices relationship with economic condition had investigated; Sarac, Zeren and Basar (2015) analysed the relationship between the global gold price changes and the U.S. Supplemental Nutrition Assistance Program (SNAP) Expenditures, along with Baltic Dry Index (BDI). Based on the ARDL Bounds cointegration analysis indicates that the global gold prices are significantly and positively related with SNAP expenditures both in short and long term, while it is positively yet much less significantly related with BDI only in the short term. Toda-Yamamoto Test indicates one-way causality from SNAP to gold prices. Toraman, Basarir and Bayramoglu (2011) studied which is to determine factors affecting the gold prices. They used MGARCH (Multivariate GARCH) model and CCC (Constant Conditional Correlations). According to their emprical findings, highest correlation is found between gold prices and USA exchange rate negatively and they found a positive correlation between gold prices and oil prices. Koutsoyiannis (1983) studied the gold prices were affected by the USA economy. Gold prices is expressed in US dollars and raw oil prices are quoted in US dollars. He found a negative relationship between US dollar and gold prices.

Gold is a precious metal which is used both as a property and as a financial asset. Importance of gold from past to present, increasing its value and the area of usage. Gold was the fundemantal of the monetary policy system in the past and then became a reserve tool pegged to Dolar following the Bretton Woods. Gold is reliable in politically and economically uncertain environments. Gold has become a major element of international reserve assets for countries.Demand of gold tends to increase in the recent years, after the financial crises and individuals need for more secure investment tools. Consequently, price of gold boomed once again under this condition.

This study aim which may be found relationship between gold prices and BDI affected on US GDP. In this paper, the MS-VAR model is selected to analyse the relationship between the BDI and economic growth for the United