Granger-causality testing within the Eurozone: Policy Analysis of the Efficacy of the ECB's policy tools

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Monetary Policy: Recent Decision Making

- **Due to weak economic growth prospects and inflation in the Eurozone, the ECB initiated a $1.25 trillion bond-buying, stimulus program**
- **The program exerts pressure and responsibility to buy the bonds on the national Central Banks rather than the ECB itself**
- **Expect around $60 billion of government bonds to be bought per month until September 2016.**
- **Growth estimates for the Eurozone have increased from 1.0% to 1.5%**
- **As interest rates slide into negative territory in nations like Spain, prices have surprisingly not risen to the degree that economic growth estimates have**
  - **ECB suspects the inflation rate will be well below the targeted rate of 2% for some time**

Deflationary Pressures

- **Prices fell 0.2% in December 2014 in the Eurozone.**
  - **Some posited that this would inevitably invoke harmful deflation.**
- **The 6.3% decline in energy prices has primarily benefitted European households and businesses.**
- **1.1% increase in retail spending in Europe in January 2015**
- **ECB Benoit Coeure said, "We don't see deflation in the euro zone. We see it as a possible risk, and we have to be ready to act against the risk if it materializes." – acting against threat of deflation**
- **Core inflation – inflation less energy, food, alcohol, and tobacco – actually rose 0.8% in December.**

Results of the Granger-causality test

- **Employing data from Deutsche Bank and the IMF's International Financial Statistics, I found no visible causality between the money supply and price levels in the Eurozone at both the aggregate and national levels at high degrees of significance (alpha = 0.01 for three)**
- **The disconnect between the change of the price levels in response to changes in the money supply and the reciprocal effect is clearly evident within the German data as well.**
- **One model did imply the PCE_i is driving $M3_i$ in Germany**
  - **However, the model almost entirely lacked explanatory power, as described by the extremely low value of the adjusted R^2 and the relatively low value of SIC in comparison to its reciprocal model's value of SIC.**
  - **Despite this, the conclusions are logical in some sense; the extremely low inflation rates are prompting the ECB to increase the money supply.**

Results of the Cagan Model

- **Using data from Q2 2003 until Q3 2014**
- **The Cagan Model illustrated the fact that the interest rate is not significant in explaining movements in real money balances in Europe.**
- **The p-value associated with in the individual statistic was not significant at alpha = 0.05 (0.0848)**

Possible Explanation: Recapitalization

- **One potential explanation for the division lies in the high amount of excess reserves in the Eurozone.**
- **Theory would suggest imposing an even greater fee on reserves (cutting the interest rate from -0.1% to -0.2%) would lead to an increase of lending and subsequently reduce excess reserves to zero effectively, the reality of the matter is entirely different.**
- **The funds do not reach the hands of non-bank, private businesses or consumers; one must keep in mind the fact banks do not lend reserves to private non-bank entities; instead, banks will either lend to public institutions – like other national central banks requiring capital– or to other private banks throughout the globe.**
- **This posits that excess reserves will simply become redistributed.**
  - **Undercapitalized countries in Southern Europe like Italy and Greece would be the primary beneficiaries of such a policy**
  - **Moral hazards may arise**
- **For instance, the Danish central bank primarily lowered their interest rate to detract foreigners from investing in their currency and accumulating excess reserves in their banks.**

Another explanation: Currency War

- **Eurozone QE as well as negative interest rates prior to this situation have been successful in dampening the international value of the euro.**
  - **The euro has not seen lows relative to the dollar to this extreme since the early 2000s, with the dollar per euro rate at $1.07; some investors even suspect parity between the dollar and the euro may be in the near future.**
- **The ECB were well aware of the depressing effect negative interest rates have on the value of the currency.**
  - **Denmark, Switzerland**
  - **The Euro area – especially Germany, the driver of the European Union – has experienced incredible trade surpluses due to lackluster demand or high savings rates; it would not be surprising for the ECB to have lowered the value of the euro so that German exporters benefit largely.**
- **Both Japan and China have acknowledged they are pursuing extreme easy money policies to benefit their export sectors. Essentially all major economies have engaged in this new monetary experiment**
  - **The long-term consequences are unknown, but typically currency wars end with mass hyperinflation and debt – which would suit Mr. Weidmann's prophecy of hyperinflation.**