Chapter 1

MONETARY POLICY TRANSMISSION IN BRUNEI DARUSSALAM: A STUDY ON THE IMPACT OF EXCHANGE RATE SHOCKS ON BRUNEI’S CPI

By
Hanisah Abu Bakar
Idya Ali

1. Introduction

Understanding how monetary policy works remains a key issue for both policymakers and academic researchers. There have been ample studies done to study the effects of monetary policy on the real economy and yet no consensus has been reached on the exact functioning of a monetary policy transmission mechanism. In general, monetary policy transmission refers to the changes in a country’s aggregate demand or inflation that stem from changes in monetary policy decisions such as changes on the interest rate, money supply or exchange rate. There are a number of transmission channels that have been identified in the past literature, including the interest rate channel, bank lending channel, asset prices channel and exchange rate channel. However, there is still a gap in the literature on how the monetary policy transmission works in countries with a currency board system.

Under a currency board arrangement (CBA), a country pegs its domestic currency to an anchor (foreign) currency. Such a system is popular in use by small and open economies such as Brunei Darussalam and Hong Kong. In the past, a CBA was adopted to address specific economic challenges such as hyperinflation (Argentina and Bulgaria) and to facilitate transition economies (Estonia and Lithuania). However, there are a few issues that arise when attempting to understand the dynamics of monetary policy transmission in a country with a currency board. This is because, under a currency board, the central bank does not make any independent monetary policy decisions, which consequently limits monetary policy exercises. Domestic interest rates and money

---

1. The views expressed here are solely those of the authors and should not be attributed to the Autoriti Monetari Brunei Darussalam (AMBD) or The SEACEN Centre.
2. Manager, Monetary and Policy Management, AMBD.
3. Assistant Officer, Monetary and Policy Management, AMBD.
supply are treated as endogenous while anchor-currency monetary policy is seen as an exogenous change in monetary policy stance.

This paper therefore attempts to address the gap in the literature on monetary policy transmission under a currency board arrangement, using Brunei Darussalam as a reference country. Brunei Darussalam is a small and open economy that is reliant on international trade. For over almost five decades now, Brunei has been operating a currency board arrangement and a Currency Interchangeability Agreement (CIA). Since the Autoriti Monetari Brunei Darussalam (AMBD) does not conduct active monetary policy due to the currency board arrangement, this paper thus focuses on the Singapore exchange rate as the main source of monetary policy shock.

The paper is organized as follows. Section 2 provides an overview of monetary policy in Brunei Darussalam and a brief insight on how decisions by the Monetary Authority of Singapore (MAS) on the Singapore Nominal Effective Exchange Rate (SNEER) could impact Brunei’s real economy. Section 3 provides a brief literature review on monetary policy transmission in economies similar to Brunei’s, focusing explicitly on the exchange rate channel. Section 4 explains the data and methodology used to assess monetary policy transmission in Brunei Darussalam while the empirical results are discussed in Section 5. Finally, Section 6 concludes with discussions of our results.

2. Overview of Monetary Policy and Monetary Transmission in Brunei Darussalam

As with other small and open economies such as Hong Kong, an exchange rate policy is the preferred choice for monetary policy in Brunei Darussalam. Ensuring exchange rate stability is vital for Brunei whose total exports account for approximately 60% of its Gross Domestic Product. Furthermore, 90% of these exports are attributed to the oil and gas sector.

For almost five decades now, Brunei Darussalam has operated a Currency Board Arrangement (CBA) with the Republic of Singapore, where the Brunei Dollar is at par with the Singapore Dollar whereby the currency in circulation must be backed up by not less than 100% with foreign assets, as stated in the Currency and Monetary (Amendment) Order, 2010. The Currency Interchangeability Agreement (CIA) between the two countries, which took effect on 12 June 1967, provides the basis for these arrangements. Under the CIA,
the domestic currencies in both countries are customary tender in the other country, where the monetary authorities and banks of each country are obliged to accept the currencies of the other country at par and without charge.

With the CIA in place, it does not only assist in encouraging bilateral trade, investment and tourism between Brunei and Singapore but it also promotes strong political cooperation between the two countries. In 2014, Singapore was the third largest trading partner for Brunei Darussalam, accounting for 21.7% of imports of goods (B$931.7 million) and 3.3% of exports of goods (B$446.1 million) (JPKE 2014). Singapore was also the source of 2.8% of total foreign direct investment (B$41.9 million) into Brunei Darussalam in 2011 (JPKE 2012). As of end 2013, banking institutions licensed in Brunei Darussalam had B$5.08 billion (26.3% of total assets) in investments and placements in Singapore.

Due to the peg to the Singapore Dollar, the Brunei Dollar is directly affected by the decisions of Monetary Authority of Singapore on the conduct of its monetary policy. Unlike most central banks that choose the interest rate as its monetary policy instrument, the Monetary Authority of Singapore targets the Singapore Dollar Nominal Effective Exchange Rate (S$NEER) which is managed within a policy band. The slope and width of the exchange rate band, as well as the level at which the band is centered, are calibrated to attain the optimal monetary policy stance for the Singapore economy to ensure low and stable inflation over the medium-term.

This policy has boded well for Brunei, for which the monetary policy objective, among others, is to achieve and maintain domestic price stability. In fact, the International Monetary Fund (IMF) has commended the currency board arrangement and the Currency Interchangeability Agreement (CIA) as one of the key contributors to Brunei Darussalam’s macroeconomic stability.

Apart from that, the Government of Brunei Darussalam has also implemented price controls and subsidies on several items to help ensure prices of necessities are affordable for the low-income group. The Price Control Act (Cap 142) commenced in 1974 but was revised further over the years. The Price Control Act Amendment Order 2012 caps the price of cars, rice, sugar, plain flour, baby milk powder, milk, petrol, automotive oil (diesel), dual purpose kerosene, bottled liquefied petroleum gas, cooking oil and construction materials such as sand, stone (aggregate 3/4), cement, bitumen, asphalt, ready-mix concrete and bricks (clay and concrete). In a study by Koh (2015), it was estimated that 31.9% of the total CPI is subject to subsidies and price controls.
Such measures along with the exchange rate policy have helped to keep the inflation rate in Brunei Darussalam at low levels over the years, as shown in Figure 1 below. The average inflation rate from 1984 until 2014 is about 1.2%.

**Figure 1**

**Inflation Rate in Brunei Darussalam 1984-2014**

(Annual % Change in CPI)

Source: World Development Indicators.

Furthermore, a major source of inflation in Brunei is assumed to stem from imported inflation as about 80% of its food requirements are imported from other countries (UNFAO, 2015). Food items, in turn, have the highest weight in the country’s CPI basket of goods and services. The strong Singapore Dollar, has thus, helped to contain inflationary pressures from abroad.

3. Literature Review

Earlier research on monetary policy transmission largely involves the study of how an interest rate shock or a change in base money supply impacts the aggregate demand or the level of inflation in an economy. Under a currency board arrangement, however, due to the endogeneity of interest rate and money supply, the anchor currency monetary policy would instead play a more significant role. For Brunei Darussalam, this would imply that Singapore’s monetary policy, which is its exchange rate policy of the SNEER, would have an impact on Brunei’s economy through, presumably, the exchange rate channel. For this reason, this section will, therefore, solely concentrate on past literature on the exchange rate channel as a form of monetary policy transmission.
Mishkin (1996) previously highlighted the growing importance of the exchange rate channel in today’s globalized economy. This channel operates through exchange rate effects on net exports where, in theory, changes in the exchange rate induce changes in relative prices of goods and services, and consequently, could lead to adjustments in the spending pattern by individuals and firms. For instance, an appreciation in the exchange rate will increase the relative prices of exports and make imported goods relatively cheaper to local residents in the country. Assuming that exports and imports are perfect substitutes and are price elastic, changes in their relative prices will lead to an increase in the consumption of imported goods by local residents and/or lower exports by foreign buyers. This could, therefore, lead to a fall in the country’s output growth. Furthermore, an exchange rate appreciation could also translate into a decline in net wealth of a country, assuming that it has a significant level of wealth denominated in foreign currency. This could, in turn, lower the level of the country’s expenditure.

Other past research also analyzed the exchange rate pass-through effect on domestic prices in a country. A ‘complete’ exchange rate pass-through occurs when the response of domestic prices to exchange rate changes is one for one. In other words, a complete exchange rate pass-through occurs when prices of imported goods, usually invoiced in foreign currency, are sold to consumers for local currency at the going market exchange rate.

Olivei (2002) and Campa and Goldberg (2005) argued that a few factors may determine the degree of exchange rate pass-through to domestic prices in a country. This includes the pricing behavior by exporters in the producer countries, the responsiveness of mark-ups to competitive conditions and the existence of distribution costs that may drive a wedge between import and retail prices. In fact, Mihaljek and Klau (2001) highlighted that, empirically, the measured pass-through is usually the highest for imported goods prices and lowest for consumer prices. This is reaffirmed with other past studies such as Burstein et al. (2005), Goldberg and Campa (2010) and Burstein and Gopinath (2014).

Apart from that, the composition of imports may also affect the extent of exchange rate pass-through to domestic prices. A complete pass-through was generally found for energy and raw materials and lower pass-through for food and manufactured items (Mihaljek and Klau, 2001). In addition, Gopinath (2015) argued that the exchange rate pass-through to CPI is considerably lower due to a lower import content in the consumption bundle compared to an exchange rate pass-through to the Import Price Index (IPI).
At the time of writing, there has not been any research done to study the monetary policy transmission mechanism in Brunei Darussalam. However, AMRO\textsuperscript{4} (2013) analyzed the determinants of inflation in Brunei Darussalam using a VAR model and found that inflation was mostly determined by its own lag rather than on other foreign variables such as Singapore inflation, global oil prices or even Brunei M2 growth. In fact, global oil prices and Singapore inflation only accounted for 4.7\% and 5.3\% respectively, of Brunei’s inflation, suggesting low pass-through of foreign variables into Brunei Darussalam’s economy. Nevertheless, this study focused on the overall CPI rather than analyzing the imported component of CPI, where the presence of administrative price controls could have hindered the effect of foreign variables in Brunei’s CPI.

Focusing on the earlier studies on monetary policy transmission in small and open economies, we have found ample evidence on the impact of exchange rate disturbances on the macroeconomy. Chew et al. (2009) attempted to study the exchange rate transmission channel in Singapore via the pass-through to import prices and domestic consumer price index (CPI) and they found that the exchange rate pass-through to CPI was fairly low. Their results showed that a 1\% appreciation in the S$NEER led to a 0.1\% decline in the domestic CPI in the short-run and a 0.4\% decline in the long-run.

Similarly, Liu and Tsang (2008) found that a 1\% depreciation of the Hong Kong NEER would lead to a range of 0.09-0.13\% increase in domestic prices in the short-run and 0.13-0.25\% increase in domestic prices in the medium-run. Comparing this to Singapore, we can see that the impact of exchange rate shocks to domestic CPI in the short-run effect is quite similar, although the long-run impact for Singapore is marginally higher. This may, in part, be due to the different components in the CPI basket and more importantly, the varying import content present. Singapore, in particular, has about 40\% of imported items in their CPI (Loh, 2001) while Hong Kong has about 28.7\% (Liu and Tsang, 2008). The higher import content in Singapore’s CPI basket can, therefore, arguably explain the higher impact of exchange rate shock to the country’s CPI.

Nevertheless, recent studies (Mihaljek and Klau, 2008) have questioned whether the exchange rate pass-through has declined in emerging market economies as central banks become more independent. Their findings showed that as nominal exchange rates became more volatile, the exchange rate pass-through also declined. Indeed, they noted in their study that countries with a

\textsuperscript{4} ASEAN+3 Macroeconomic Research Office.
fixed exchange rate such as Hong Kong as well as Malaysia and Thailand in the early periods of the 1990s, had fairly stable exchange rate pass-through in comparison to other countries with a floating exchange rate regime. However, it was also argued that other factors, apart from the choice of the exchange rate, could have also contributed to the declining exchange rate pass-through such as lower volatility of domestic inflation and foreign prices. The former was confirmed in a study by Gagnon and Ihrig (2001) who found that the decline in the strength of pass-through effects from exchange rate to inflation is commonly associated with countries that have low inflation levels.

Based on the literature review, we can therefore make an initial assumption that due to the currency board arrangement between Brunei Darussalam and Singapore, shocks to the SSNEER, the anchor currency in Brunei, could have an impact on the domestic CPI, through import prices. This is due to the high number of imported goods that are included in the CPI basket. The next section will present the methodology on how we test for these predictions, followed with a description on the data used.

4. Data and Research Methodology

To assess the impact of exchange rate to domestic CPI, this study uses a Vector Autoregressive (VAR) model. VAR modeling involves “estimating a system of equations for which each variable is expressed as a linear combination of lagged values of itself and all other variables in the system” (Weinhagen, 2002, p.4). We have constructed a VAR model consisting of four variables which includes inflation, import growth (in nominal and real terms) and exchange rate. We include both import growth in nominal and real terms to assess any impact of exchange rate changes to the volume of imports as well as the prices of imports. The exchange rate is the trade-weighted exchange rate of Singapore against its major trading partners while inflation is the consumer price index (CPI) sourced from the Department of Economic Planning and Development. Due to the currency board arrangement where the Brunei Dollar is pegged to the Singapore Dollar, we assume that any monetary policy shocks on the Singapore Dollar will be fully reflected on the Brunei Dollar. This study has also included three other variables including global oil prices, global food prices and world inflation which are assumed to be exogenous in the model. These variables are meant to capture inflationary pressures from abroad which could affect domestic inflation in Brunei. We use a VAR approach to estimate the following:

\[ y_t = \alpha + A_1 y_{t-1} + \ldots + A_k y_{t-k} + Bx_t + \varepsilon_t \]
for \( t=1,2,\ldots, T \); where \( y \) is a vector of endogenous variables that includes SNEER, nominal import growth, real import growth, CPI and \( x \) includes global oil prices and world inflation sourced from Bloomberg as well as global food prices as found from the Food and Agriculture Organization of the United Nations. The model is estimated for the period beginning in January 2005 until December 2014 using monthly data. Due to the differences in the frequency of data, we have converted quarterly imports data to monthly data using E-Views.

In order to ensure the stationarity of the data, we applied the Augmented Dicky-Fuller unit root test on level forms for all variables described above. The test suggests that all variables have \( I(1) \) order of integration.

In order to choose the optimal lag length, the Schwarz information criteria suggests that 2 lags need to be included in the model. However, serial correlation is detected among the residuals when only 2 lags are included in the VAR model. Hence, we have included 8 lags to overcome this problem.

To assess the stability of the model, we applied the Roots of AR Characteristics Polynomial. The results show that our VAR model satisfies the stability condition. In addition, we also used the LM test to detect for autocorrelation which subsequently reveal that there was no serial correlation problem in our model.

5. Empirical Results and Case Study

5.1 Impulse Response Analysis

As discussed in the previous section, this study used a VAR model to assess the impact of the exchange rate to the real economy, particularly using the Singapore exchange rate as the policy shock and imports and inflation as the macroeconomic variables. Figures 2 to 4 below depict the impulse response functions to the exchange rate shock.
Figure 2 plots the response of real imports to exchange rate shocks while Figure 3 plots the response of nominal imports to exchange rate shocks. As seen from the graphs above, a positive exchange rate shock did not produce any statistically significant response to real imports, suggesting that volume of imports may not be affected by changes in the exchange rate. However, as seen from Figure 3, shocks to the SNEER led to a rise in nominal imports or presumably, import prices if, as implied from Figure 2, that volume of imports remains
unchanged. A 1% appreciation of the SNEER produced a 0.2% rise in nominal imports growth in the first three months. However, our results become statistically insignificant after five months.

Figure 4, on the other hand, depicts the response of a positive exchange rate shock to domestic CPI where shocks to the exchange rate did not produce statistically significant responses to CPI. This implies that the exchange rate (SNEER) does not significantly affect domestic CPI and that there are other factors which could affect domestic CPI in Brunei.

5.2 Variance Decomposition Analysis

As previously mentioned, a variance decomposition analysis is used to determine the relative importance of exchange rate and imports on CPI as reported in Table 1 below.

<table>
<thead>
<tr>
<th>Horizon</th>
<th>Exchange Rate</th>
<th>Nominal Imports</th>
<th>Real Imports</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>2.37</td>
<td>3.25</td>
<td>2.49</td>
</tr>
<tr>
<td>12</td>
<td>3.07</td>
<td>4.65</td>
<td>5.17</td>
</tr>
<tr>
<td>18</td>
<td>3.06</td>
<td>4.53</td>
<td>6.28</td>
</tr>
<tr>
<td>24</td>
<td>3.22</td>
<td>4.41</td>
<td>6.17</td>
</tr>
<tr>
<td>30</td>
<td>3.15</td>
<td>4.68</td>
<td>6.09</td>
</tr>
</tbody>
</table>
For CPI, the percentage variance explained by the exchange rate and both nominal and real imports are very small, accounting for 2.37%, 3.25% and 2.49% respectively, in the first six months. The low values indicate that exchange rate disturbances do not pose a large impact on Brunei’s domestic CPI.

5.3 Case Study: Singapore Exchange Rate Disturbances on Brunei’s Economy

Apart from the empirical analysis above, we also created a simple case study to analyze the trends between the Singapore trade weighted exchange rate (SNEER) and real imports in Brunei Darussalam. As seen from Figure 5, the two variables tend to track one another, indicating high correlation (0.85) between the two. This suggests that an appreciation in the SNEER would lead to a rise in imports in Brunei Darussalam. This is because as the SNEER appreciates, prices of exports become more competitive relative to prices of imports. This in turn, would switch consumers’ preferences to consume more imported goods.

Figure 5
Average SNEER and Total Real Imports

Source: JPKE and MAS.
In fact, as we can see from Figure 5, each time MAS announces a policy adjustment to the SNEER, this affects total imports in Brunei in almost all cases. For instance, a policy tightening by the MAS in Q2 2004 led to an upward trend in imports in the coming years. Similarly, when MAS announced a zero appreciation policy in Q4 2008, total imports started to decline, with the possibility of import prices becoming more competitive relative to prices of exports. This suggests that changes in the country’s nominal exchange rate pose an impact to imports.

However, to assess whether these changes are transmitted to consumer prices, a simple analysis on the correlation of the SNEER and Brunei Darussalam’s CPI was measured, as shown in Figure 6. As depicted in the graph, there is no significant correlation between the two (0.01). This suggests that any disturbances in the exchange rate will have no direct impact on domestic CPI. For instance, when the MAS tightened its policy beginning in Q4 2007, we would expect that the appreciation of the exchange rate would dampen inflationary pressures from abroad. However, as we can see from the graph, inflation actually rose in Brunei.

Figure 6
Average SNEER and CPI

Source: JPKE and MAS.
This finding, again, contrasts with our earlier assumption where we argued that due to the high number of imported items in the consumer basket included in the CPI, inflation in the country will be heavily influenced by exchange rate movements, or the SNEER. However, as evident from Figure 6, this is not the case. We assume that this may be due to the presence of government fiscal policies such as price controls and subsidies on selected imported items particularly food items. Furthermore, imported goods may not reflect their actual prices due to the importers’ choice to retain their profit margins. If imported goods with high elasticity of demand were priced according to their true prices, any rise in prices from the depreciation of the exchange rate, may push consumers to demand other cheaper goods available in the market. In addition, some importers may choose to import more in times of an exchange rate appreciation for inventory purposes and to only sell these goods at a later stage. Such move, in turn, may explain the low exchange rate pass-through to CPI in Brunei. Additionally, some importers may have a fixed agreement on the pricing of their imported goods which limits the sensitivity of exchange rate changes to retail prices.

6. Conclusion

In this study, we have employed a VAR model to examine the impact of the Singapore exchange rate on the macroeconomic environment in Brunei Darussalam, particularly on domestic CPI. Our empirical findings from both the impulse response and variance decomposition analyses suggest that changes in the Singapore exchange rate do not significantly affect the domestic CPI. We attribute this to the existence of price controls and other government policies, particularly on food items in the country, which hamper the full transmission of the exchange rate to domestic prices. Nonetheless, we undertook a simple case study to assess the movements between the Singapore exchange rate and imports as well as CPI in Brunei. Our findings reveal that while imports and the Singapore exchange rate are highly correlated, there is no significant correlation between the exchange rate and the domestic CPI. This further implies that there is incomplete pass-through of exchange rate to domestic prices, which could be due to (i) administrative price controls; (ii) the choice of importers to adjust their profit margins rather than prices; (iii) the choice of importers to increase inventory of imported commodities without releasing it for sale to consumers; or (iv) importers having a fixed contract regarding the pricing of imported items which limit the sensitivity of any exchange rate shocks to the imported goods. Finally, we think that future research is needed to assess the domestic CPI, focusing particularly, on the imported CPI or with the elimination of the effects from fiscal policies such as subsidies and price controls.
References


Chow, H. K., (2004), A VAR Analysis of Singapore’s Monetary Transmission Mechanism, Research Collection School of Economics.


JPKE, (2013), Brunei Darussalam Statistical Yearbook.
JPKE, (2014), Brunei Darussalam Key Indicators.


Monetary Authority of Singapore, (2008), Monetary Policy and The Economy, Economic Explorer Series 2.


Appendices

Response to Cholesky One S.D. Innovations ± 2 S.E.
Variance Decomposition:

<table>
<thead>
<tr>
<th>Period</th>
<th>S.E.</th>
<th>DSNEER</th>
<th>NOMINAL_</th>
<th>REAL_</th>
<th>CPI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>IMPORTS</td>
<td>IMPORTS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>0.515640</td>
<td>0.500383</td>
<td>1.348215</td>
<td>1.729901</td>
<td>96.42150</td>
</tr>
<tr>
<td>2</td>
<td>0.537341</td>
<td>1.242296</td>
<td>1.521918</td>
<td>2.082519</td>
<td>95.15327</td>
</tr>
<tr>
<td>3</td>
<td>0.549233</td>
<td>1.259203</td>
<td>1.654305</td>
<td>2.101963</td>
<td>94.98453</td>
</tr>
<tr>
<td>4</td>
<td>0.553113</td>
<td>1.287596</td>
<td>3.140105</td>
<td>2.588404</td>
<td>92.98389</td>
</tr>
<tr>
<td>5</td>
<td>0.579889</td>
<td>2.496676</td>
<td>3.045753</td>
<td>2.536227</td>
<td>91.92134</td>
</tr>
<tr>
<td>6</td>
<td>0.583098</td>
<td>2.369009</td>
<td>3.253482</td>
<td>2.491604</td>
<td>91.88590</td>
</tr>
<tr>
<td>7</td>
<td>0.584087</td>
<td>2.429331</td>
<td>3.601781</td>
<td>2.416721</td>
<td>91.55217</td>
</tr>
<tr>
<td>8</td>
<td>0.588659</td>
<td>2.412149</td>
<td>4.197105</td>
<td>3.048953</td>
<td>90.34179</td>
</tr>
<tr>
<td>9</td>
<td>0.590068</td>
<td>2.493842</td>
<td>4.163017</td>
<td>3.068538</td>
<td>90.27460</td>
</tr>
<tr>
<td>10</td>
<td>0.599242</td>
<td>2.986449</td>
<td>4.556325</td>
<td>3.834661</td>
<td>88.62257</td>
</tr>
<tr>
<td>11</td>
<td>0.603681</td>
<td>2.996301</td>
<td>4.581479</td>
<td>3.819990</td>
<td>88.60223</td>
</tr>
<tr>
<td>12</td>
<td>0.605767</td>
<td>3.056536</td>
<td>4.648842</td>
<td>5.168257</td>
<td>87.11727</td>
</tr>
<tr>
<td>13</td>
<td>0.605928</td>
<td>3.058560</td>
<td>4.580053</td>
<td>5.180515</td>
<td>87.18087</td>
</tr>
<tr>
<td>14</td>
<td>0.608206</td>
<td>3.012641</td>
<td>4.515881</td>
<td>5.814235</td>
<td>86.65724</td>
</tr>
<tr>
<td>15</td>
<td>0.608902</td>
<td>3.022607</td>
<td>4.578940</td>
<td>5.815906</td>
<td>86.58255</td>
</tr>
<tr>
<td>16</td>
<td>0.609293</td>
<td>2.999386</td>
<td>4.615416</td>
<td>6.053376</td>
<td>86.33182</td>
</tr>
<tr>
<td>17</td>
<td>0.609727</td>
<td>3.079608</td>
<td>4.607544</td>
<td>6.043789</td>
<td>86.26906</td>
</tr>
<tr>
<td>18</td>
<td>0.609957</td>
<td>3.057448</td>
<td>4.532968</td>
<td>6.284395</td>
<td>86.12519</td>
</tr>
<tr>
<td>19</td>
<td>0.610401</td>
<td>3.063510</td>
<td>4.540950</td>
<td>6.262975</td>
<td>86.13257</td>
</tr>
<tr>
<td>20</td>
<td>0.610687</td>
<td>3.088478</td>
<td>4.496428</td>
<td>6.256857</td>
<td>86.15824</td>
</tr>
<tr>
<td>21</td>
<td>0.611018</td>
<td>3.097033</td>
<td>4.490953</td>
<td>6.249195</td>
<td>86.16282</td>
</tr>
<tr>
<td>22</td>
<td>0.612072</td>
<td>3.188830</td>
<td>4.458136</td>
<td>6.247465</td>
<td>86.10557</td>
</tr>
<tr>
<td>23</td>
<td>0.612945</td>
<td>3.193521</td>
<td>4.453493</td>
<td>6.233201</td>
<td>86.11979</td>
</tr>
<tr>
<td>24</td>
<td>0.613073</td>
<td>3.215934</td>
<td>4.410656</td>
<td>6.173504</td>
<td>86.19991</td>
</tr>
<tr>
<td>25</td>
<td>0.613543</td>
<td>3.194229</td>
<td>4.462857</td>
<td>6.147227</td>
<td>86.19569</td>
</tr>
<tr>
<td>26</td>
<td>0.614148</td>
<td>3.182155</td>
<td>4.472233</td>
<td>6.116696</td>
<td>86.22891</td>
</tr>
<tr>
<td>27</td>
<td>0.614564</td>
<td>3.171025</td>
<td>4.481317</td>
<td>6.096094</td>
<td>86.25156</td>
</tr>
<tr>
<td>28</td>
<td>0.614720</td>
<td>3.175199</td>
<td>4.549049</td>
<td>6.068498</td>
<td>86.20725</td>
</tr>
<tr>
<td>29</td>
<td>0.615118</td>
<td>3.162091</td>
<td>4.664532</td>
<td>6.088002</td>
<td>86.08537</td>
</tr>
<tr>
<td>30</td>
<td>0.615265</td>
<td>3.151191</td>
<td>4.682298</td>
<td>6.091880</td>
<td>86.07463</td>
</tr>
</tbody>
</table>

Cholesky Ordering: DSNEER NOMINAL_IMPORTS REAL_IMPORTS CPI