Impact of unexpected depreciation on current account balance

Consider a country that has experienced near full employment but, due to the openness of its economy, is unable to deal with its persistent and large CA deficit in its balance of payments. Due to unexpected political events, the country unexpectedly witnesses a depreciation of its currency which analysts believe will help to improve its CA balance. Explain and illustrate how an unexpected depreciation of the country's currency is likely to impact its CA balance.

The United Kingdom's (UK) current account (CA) balance has steadily declined since the mid 1950's. In fact, according to the Office for National Statistics (2017), the UK reached record deficit levels of 5. 4% of GDP in 2015. Resolution of the CA deficit has proven difficult for various reasons including reduced earnings on overseas investments and the country's high marginal propensity to import (Schomberg and Heneghan, 2016). The latter is helped by the UK's near full employment as demonstrated by record eleven year lows in the jobless rate of 4. 8% in early 2017 (BBC News, 2017). Analysts have purported for some time that depreciation in the British pound (GBP) is necessary for current account improvement. The recent BREXIT events have so far resulted in a 17% depreciation in the pound vs the US dollar year over year (as of March 17th 2017; ycharts) and if maintained will soon reveal the true impact on the CA balance.

To explain and illustrate the potential impact of depreciation on the CA, two approaches will be considered – the Marshall-Lerner (ML) elasticities approach and the absorption approach. Both approaches generally do not clearly indicate whether depreciation will improve or worsen the current account (Pilbeam, 2013: p. 70). However, they each contain useful messages

for policy makers trying to steer depreciation toward strengthening of the CA (Pilbeam, 2013: p. 70). In the case of the absorption approach, CA deficit reduction may be achieved if this approach is accompanied by other economic policy measures (IMF, 2000: p. 6).

When a currency depreciates, it will buy less of a foreign currency when compared to pre-depreciation. In general, this is viewed as beneficial to the CA balance as it is seen as reducing the cost of exports for foreigners and increasing the cost of imports for domestic consumers (CA = Exports – Imports) (Pilbeam, 2012: pp. 45-47). Analysis of both approaches however, shows that the potential impact to the CA is more complex than previously described.

The elasticities approach was developed by Alfred Marshall (1923) and Abba Lerner (1944) and was further pioneered by Joan Robinson (1937) and Fritz Machlup (1939) (Pilbeam, 2013: p. 57). It can be used to determine whether depreciation will benefit a country’s CA balance and assumes that the supply elasticities for exports and imports are perfectly elastic (Pilbeam, 2013: p. 57) i. e. “ domestic and foreign prices are fixed so that changes in relative prices are caused by nominal exchange rate changes” (Pilbeam, 2013: pp. 56-57). In this approach, the starting point is a CA deficit with two outcomes following depreciation – an improvement in the CA deficit or a worsening in the CA deficit (Pilbeam, 2013: p. 57). According to the ML condition, depreciation will improve the CA balance if the sum of the export and import demand elasticities is greater than unity” (Pilbeam, 2013: p58). The demand elasticity measures how the quantity demanded changes with price changes (S-cool, price elasticity of demand formulae). For instance a small price

change that results in a substantial change in demand suggests a high demand elasticity. There are two effects that impact the demand elasticities and therefore the CA – the price and volume effects (Pilbeam, 2013: pp. 58-59). When the volume effect outweighs the price effect, the demand elasticities will be larger resulting in CA improvement (Pilbeam, 2013: pp. 58-59).

It is worthwhile mentioning the caveats of the ML condition. The first is that a more complex version of the ML condition exists in which the CA improves when the supply price elasticities of exports and imports is less than infinity and the sum of the demand elasticities is less than one (Pilbeam, 2013: pp. 59-60).

Secondly, the ML condition is mostly satisfied in the long term for periods greater than two years as evidenced by studies by Hooper et al. (1998) and Artus Knight (1984) (Pilbeam, 2013: p. 60). In fact, there could be a worsening of the CA in the short term (0 – 6 months) and an improvement in the long term – this is known as the J-curve effect (Pilbeam, 2013: pp. 60-63). Over time, the price elasticity changes due to several reasons such as a time lag in consumer and producer responses and imperfect competition (Pilbeam, 2013: pp. 61-63). The time lag in consumer responses refers to the time taken for individuals in domestic and foreign countries to respond to lower export and higher import prices respectively (Pilbeam, 2013: p. 63). In the home country, consumers will need to gain confidence in domestic alternatives and vice versa in the foreign country (Pilbeam, 2013: p. 63). The time lag in producer responses is the time it will take for “ domestic producers to expand production of exportables” (Pilbeam, 2013: p. 63).

Further, it typically takes time for importers to renegotiate existing orders as they are not easily cancellable (Pilbeam, 2013: p. 63). In markets with imperfect competition, there arises the opportunity for some firms “ with super-normal profit margins to reduce their prices” (Pilbeam, 2013: p. 63). Thus, when import prices increase, the market share of foreign countries in the home country is threatened and may result in the lowering of export prices by foreign countries (Pilbeam, 2013: p. 63). In a perfectly competitive market, foreign firms would not be able to sustain such lowering of export prices (Pilbeam, 2013: p. 63). The time lag in consumer and producer responses and imperfect competition explain why the J-curve effect might exist and why the ML condition tends to hold in the long run (Pilbeam, 2013: pp. 60-63).

In summary of the elasticities approach, to determine the impact of depreciation on the CA, one must look beyond whether the sum of demand import and export elasticities is greater than one (Pilbeam, 2013: p. 58). The time horizon as well as the supply elasticities should be considered in the analysis (Pilbeam, 2013: pp. 59-62). In the example of the UK GBP depreciation and the planned European Union (EU) exit, in the near term, export volumes will likely pick up and import volumes will likely dampen due to the weaker pound. However, it is unknown whether this will be enough to help the CA. Further, as it will take some time to execute leaving the EU, it is difficult to determine the long term effect on the CA given heightened uncertainty around future trade agreements and the BREXIT process.

In the elasticities approach there is an emphasis on the role of prices without considering the impact of depreciation on income and spending (Pilbeam,

2013: p. 64). The absorption approach however, achieves this and is therefore considered complementary to the elasticities approach (Pilbeam, 2013: p. 70). Absorption is defined as the total spending by domestic residents and includes spending on domestic and foreign items i. e. it is the sum of domestic consumption, domestic investment, and government expenditure (Montiel, 2009: p. 32). This is different from domestic spending which is the spending on domestic goods only (Montiel, 2009: p. 32).

In the absorption approach Alexander (1952) states that the CA can be improved by either increasing income or reducing absorption (Pilbeam, 2013: pp. 65-69). More specifically, " a depreciation can affect the current balance only by: changing the marginal propensity to absorb, a; changing the level of income, dY; and by affecting direct absorption, dAd". Given that CA = (1-a) dY – dAd, the CA will be in surplus only if the first term is greater than the second i. e. income must exceed absorption (Pilbeam, 2013: p. 65). When depreciation takes place, national income is affected by two effects, the employment and the terms of trades. In the case of full employment, national income will change very little on depreciation while the terms of trade would typically worsen (Pilbeam, 2013: p. 66). The impact of depreciation on (direct) absorption is more complex to examine as there are five effects of depreciation (Pilbeam, 2013: pp. 67-70). Of the five, only one gives a clear indication of the effect of depreciation on absorption and the CA.

Firstly, the real balance effect gives a clear indication that depreciation reduces the direct absorption and therefore the CA balance (Pilbeam, 2013: p. 67). In the real balance effect, depreciation results in an increase in the

general price index and assuming the money supply is constant, the purchasing power of individuals goes down resulting in reduced spending (Sharan, 2012: p. 24). Generally, there will be a sell off of bonds, resulting in low bond prices and increasing interest rates, resulting in low consumption (Pilbeam, 2013: p. 67).

Secondly, the income redistribution effect refers to the income redistributed among different groups (Pilbeam, 2013: p. 68). An increase in the general price index redistributes income away from the fixed income population to the variable income population (Sharan, 2012: p. 24). With the fixed income/poorer population having a greater propensity to absorb, the diversion of income will reduce absorption (Sharan, 2012: pp. 24). Similarly, some companies will benefit from depreciation while others that rely on imports will not (Pilbeam, 2013: p. 68). The effect on absorption will depend on whether companies that gain from the depreciation will have a higher propensity to absorb than those that lose from the depreciation (Pilbeam, 2013: p. 68). This makes it difficult to determine if income redistribution will boost or lower absorption (Pilbeam, 2013: p. 68).

Thirdly, in the Laursen-Metzler effect, deterioration in the terms of trade typically follows depreciation resulting in income and substitution effects (Pilbeam, 2013: p. 69). For the income effect a deterioration in the terms of trade will lower income and therefore lower absorption while in the substitution effect, domestic goods are cheaper and more favoured than imported goods (Pilbeam, 2013: p. 69). Where substitution outweighs the income effect, this deterioration in the terms of trade will reduce absorption.

Thus, the effect of depreciation on the CA is also not definitive (Pilbeam, 2013: p. 69).

Fourthly, the money illusion effect occurs when people do not realize that their purchasing power has changed and they continue to spend as usual (Pilbeam, 2013: p. 68). This effect can have two opposing results – an increase in spending as previously mentioned and a cut back in spending that is disproportionate to the price increase (Pilbeam, 2013: p. 68). While its impact is ambiguous it is worth noting that its effect is typically short lived and minimal (Pilbeam, 2013: p. 68).

Lastly, the expectation effect refers to the possibility that price increases from depreciation will spark further price increases (Pilbeam, 2013: pp. 68-69). Alternatively, it can be argued that inflationary expectations may reduce investment which lowers direct absorption (Pilbeam, 2013: pp. 68-69). Yet again, the effect of depreciation is unclear (Pilbeam, 2013: pp. 68-69).

According to some IMF study notes on balance of payments (2000: p. 6), “ Overall, the absorption approach suggests that a depreciation will have many diverse and often conflicting effects on the current account” (IMF, 2000: p. 6). It goes on to further state that depreciation will help to improve the CA if policy measures that encourage increasing income and lowering absorption are implemented (IMF, 2000: p. 6). In the case of the UK, the impact is further complicated by the fact that BREXIT will take time to unravel and for new trade ties and policy measures to be established.

Some examples of policies measures that could be implemented to reduce absorption and thereby aid in CA deficit reduction include, imposing import

control tariffs, increasing taxes, reducing public spending and improving the competitiveness of domestic products (S-cool- Balance of Payments). Import control tariffs would make imported goods more expensive and less attractive to consumers thus reducing spending on imports (S-cool- Balance of Payments). Typically, this would be difficult to implement given the importance of free trade (S-cool- Balance of Payments). However, with growing worldwide protectionism, the difficulty in implementing this may change. Increasing taxes would similarly reduce the purchasing power of households which in general would curb spending (S-cool- Balance of Payments). Again, this is difficult for governments to propose as it tends to hurt their electoral popularity (S-cool- Balance of Payments). Improving the competitiveness of domestic products through price reductions that are passed along to the consumer via tax relief for capital investment, research etc. is possibly the most realistic policy measure (S-cool- Balance of Payments).

In conclusion, the impact of depreciation on the CA balance of a country is not clear under either approach. However policy makers will find it useful to keep in mind two points. Firstly, the elasticities approach is generally better for long term predictions of current account movements, noting that there are instances where the ML condition may not be satisfied but the CA may still improve i. e. supply elasticities are less than infinity and sum of demand elasticities is less than one (Pilbeam, 2013: pp. 57-60). Secondly, the absorption approach, is just as ambiguous as the former and can vary tremendously among countries (Pilbeam, 2013: p. 70). Further, this approach proves more useful when coupled with policy measures that take advantage

of depreciation to help reduce spending. Given all this, the depreciation in the GBP due to BREXIT, may or may not improve the country's CA balance. Consideration of the length of time and effort that it will take to execute its exit from the EU and re-establish new trade ties, makes it very difficult to determine how people will perceive and react to changes and how spending, income and demand elasticities will change in the UK. Once there is greater evidence for these changes it will be easier to accurately predict the impact to the CA balance.

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