

Just How Bad Would Brexit Potentially Be?



Photo/FT

By Jared Osoro¹ and David Muriithi²

Abstract

This paper seeks to answer the question of how bad the decision by Britain to vote to exit the European Union – so called Brexit – would potentially be. The answer very much depends on the respondent. The negative effects of the Brexit on real output growth are anticipated to be marked for Britain, material for Europe, and modest for the world. Such effects on the real economy come with a time lag unlike the markets whose reaction has been spontaneous and adverse for the British financial system. The magnitude of the deeper effects of the Brexit are a function how the uncertainties created are managed.

The Brexit is still unfolding, with the ensuing uncertainty based on the unclear direction of the exit process and anxiety regarding possible political fallout, pointing to an evident cautious policy stance amongst major central banks, notably the Bank of England, the European Central Bank and the Federal Reserve Board. These key central banks have largely been pushed back to the unconventional monetary policy territory.

The near zero, and in some jurisdictions negative, interest rates would benefit portfolio flows to economies such as Kenya. We argue though that the substantial positive interest rate differential in favour of Kenya – just like other developing economies in the region – will have at best a marginal influence on exchange rate movements.

Arguably, the main influence of the Brexit in our context would likely emanate from the attitudes it will engender with regard to the East African Community (EAC) integration. There is a possibility that Brexit would inculcate a sense of looking at every aspect of the EAC project with a binary sense of the choice between sovereignty and democracy on the one hand and integration and globalisation on the other. That would influence the pace and thrust of regional integration in East Africa.

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The Pound Sterling (GB£) got an immediate pounding, plunging against the US dollar

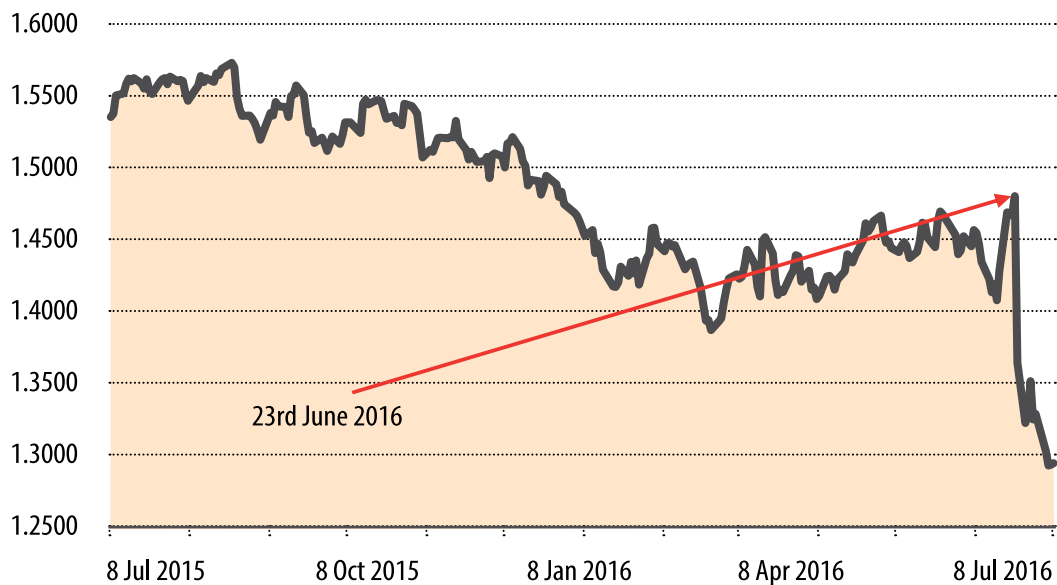
Introduction

Advocates of the campaign for Britain to leave the European Union (EU) – so-called Brexit – sold their proposition as valuable high-street merchandise. And on June 23rd 2016 their ideas were bought, and regret characterised the mood soon after. Predictably, market jitters arising from the uncertainty on how deep the adverse impact of the Brexit vote would be were evident and immediate.



- Pound Sterling (GB£) got an immediate pounding, plunging against the US dollar (Figure 1). The Pound hit a 31-year low against the USD.
- The FTSE 250, an equities index comprised mainly of British companies and investment trusts, fell by over 10 percent within three days.
- At least USD3 trillion was wiped out of the global share prices two days post the Brexit verdict was announced; the stocks of banks were particularly battered, with trading of Barclays and Royal Bank of Scotland being temporarily suspended.
- The Bank of England (BOE) signalled an alarm, announcing its preparedness to inject an equivalent of USD 350 billion to the financial system if needed and would consider other measures to address the “period of uncertainty and adjustment”.

Figure 1: Nominal Exchange Rate (USD/GB)



Source: Federal Reserve Bank of St Louis



The credibility and the rigour informing the view that Brexit would be a costly mistake is compelling.

With the immediate consequence being so pronounced as outlined, the question that is easily on the mind of many is: how bad will the Brexit be? Of course the proponents of the Brexit – even with inner regret – will posture and misrepresent the intentions of John Maynard Keynes by almost overtly asserting that the markets’ (over)reaction is all that there is to worry about. In other words, their case is anchored in the assumption that the long-term not really matter.

For the Brexit proponents, therefore, *“this long run is a misleading guide to current affairs. In the long run we are all dead. Economists set themselves too easy, too useless a task, if in tempestuous seasons they can only tell us, that when the storm is long past, the ocean is flat again”*.³ In

essence therefore, they argue that the markets will throw the usual tantrum after which things will revert back to normal.

That argument is obviously wanting. Economists and other opponents of Brexit warned of the immediate consequences, which have come to pass. What is more though, they also warned of dire long-term consequences. The credibility and the rigour informing the view that Brexit would be a costly mistake is compelling. The most notable of such analyses is the British Treasury (HM Treasury, 2016)⁴ which observed that the alternative to the EU for Britain are:

- of the European Economic Area (EEA), like Norway;

- A negotiated bilateral agreement, such as that between the EU and Switzerland, Turkey or Canada;
- World Trade Organization (WTO) membership without any form of specific agreement with the EU, like Russia or Brazil.

The conclusion of HM Treasury (2006) is that *“none of the alternatives come close to matching the net economic benefits to the UK of EU membership. Using a negotiated bilateral agreement like Canada as the central assumption for the alternative, the UK economy is 6.2 percent larger in the EU, British families are £4,300 better off in the EU, and the UK’s receipts are GB£36 billion healthier in the EU. The overall economic benefits of EU membership are significantly higher than in any potential alternative”*.

This conclusion has been independently corroborated by Dhingra, et. al. (2016).⁵ These analyses were undertaken before the Brexit vote. Now that the verdict is in, it is clear how Brexit will hurt Britain. But what are the implications of Brexit to Kenya? That is the objective of this short paper. The paper provides reflections on the implications of the Brexit beyond financial markets, trade, investments and output performance, giving perspectives on how it could influence the East African Community (EAC) integration agenda.



3 Keynes, J.M., *A Tract of Monetary Reform*, MacMillan and Co., Limited, London, 1923

4 HM Treasury (2016), *HM Treasury analysis the long-term economic impact of EU membership and the alternatives*, London, April. (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/517415/treasury_analysis_economic_impact_of_eu_membership_web.pdf)

5 Dhingra, S., Ottaviano, G., Sampson, T. and Reenen J.V. (2016), *The UK Treasury analysis of ‘The long-term economic impact of EU membership and the alternatives’*: CEP Commentary; Centre for Economic Performance (CEP), London School of Economics. (<http://cep.lse.ac.uk/pubs/download/brexit04.pdf>)



The transmission

The initial view of the economic effects of the Brexit has been that it is more a regional issue than a global one. That has informed the perspective, by for instance *The Economist* (2016)⁶, that any downward review of the growth forecast on account of the Brexit is “markedly for Britain, materially for Europe, and modestly for the world”. Formal analyses by, for instance IMF, (2016)⁷ confirm this view and asserts that Brexit represents a materialisation of a key downside risk for the world economy.

IMF (2016) argues that although the Brexit is still unfolding, the ensuing uncertainty – hinged on direction of the exit process and anxiety regarding possible political fallout – has occasioned a downward review of the global economic outlook by 0.1 percent for 2016 and 2017. Just like *The Economist* (2016), the IMF (2016) contends that the negative effect will concentrate in advanced Europe, with the impact elsewhere being at worst muted.

According to this line of argument, the reduction on Europe’s real GDP growth would be between one third and half of Britain’s drop (a rule of thumb). How the hit is transmitted to the rest of the world is a function of whether the market panic is contained, in which case the spillover to the world economy will be limited; the alternative, where the panic is not contained, is a bigger effect on the global economy.

We undertake simple assessment of the association of real output performance for the period 2000 – 2015 between (a) the World Economy and the Eurozone economy (b) the World economy and the EU Economy, and (c) Britain and the EU economy. We undertake a similar assessment for (a) Kenya and Britain and (b) Kenya and the EU.

This assessment, as reported in Appendix 1, shows that there is a stronger growth correlation between the Britain and the EU than between EU and the Global economy. It also shows that the growth correlation between Kenya and Britain on the one hand and Kenya and the EU on the other. This informs our view that if the potential adverse effects arising from Brexit is minimal to the global growth, it is even more muted for Kenya and other East African economies.

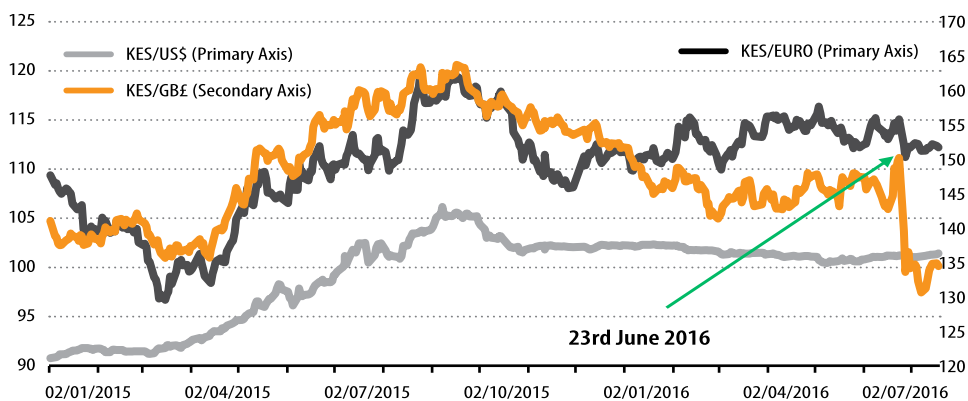
While the effect on the real economy could be muted or, even where it to

noticeable, comes with a time lag, asset prices respond rapidly. The view that the Kenyan market took soon after the verdict of the Brexit vote manifested itself in the dipping of the GB£ against the KES while the exchange rate vis-à-vis the US\$ and the Euro remained stable (Figure 2).

How the markets play out going forward will depend on the policy stance in the respective major markets in view of the uncertainties about the extent of the economic effect and the possibility (or lack thereof) of a damaging political fallout arising from the Brexit vote. As earlier noted, the BOE has signalled that monetary policy will be easy for as long as uncertainty prevails.

The Eurozone is in a negative interest rate territory as the European Central Bank (ECB) strives to support the block out of very slow growth experienced since the global economic meltdown. The Federal

Figure 1: Nominal Exchange Rate (KES/Foreign Currency)

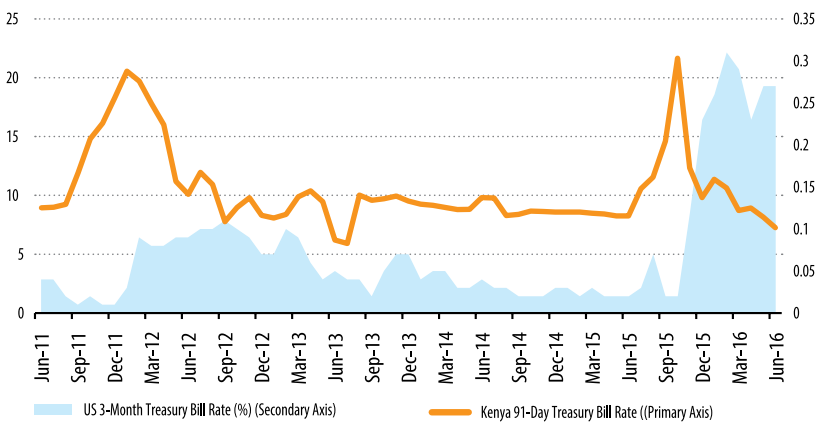


Source: Central Bank of Kenya Foreign Exchange Dataset

6 *The Economist*, July 2nd – 8th 2016.

7 IMF (2016), *World Economic Outlook Update*, July 19th. [<http://www.imf.org/external/pubs/ft/weo/2016/update/02/pdf/0716.pdf>]

Figure 3: US and Kenya 3-Months Treasury Bill Rates (%)



Source: Federal Reserve Bank of St Louis; Central Bank of Kenya



Reserve Board – the body responsible for monetary policy in the US – has signalled that it will wait for a while before moving to the conventional territory.

There is therefore a strong likelihood that the unconventional monetary policy regime would continue until the uncertainty triggered by the Brexit gives way to clarity on the extent of the effects. This implies that the low interest rates in the developed financial markets, the interest rates differential (local rates less foreign rates) remain positive (Figure 3). This will have the obvious influence on portfolio flows to small-open economies such as Kenya. The critical question to ask is: how will this influence the foreign exchange market going forward?

To answer the question, we test using data from the Central Bank of Kenya and the Federal Reserve Bank of St Louis for a 10-year period (June 2006 – June 2016) the validity of the Uncovered Interest Parity (UIP) condition. The concept of UIP relates the difference between risk-free domestic interest rate and risk-free foreign interest rates of the same maturity with exchange rate. The parity condition is that the domestic interest rates should be equal to foreign interest rate plus the

expected changes in the exchange rate.⁸

From the empirical estimations, whose results we report in Appendix 2, the UIP proposition is rejected.⁹ This finding conforms to literature that argues for the validity of the concept even when it is challenged by empirical evidence especially if one is to consider the short-term (see for instance Isard, 2006)¹⁰. We can therefore argue that the low interest rate regime that may be prolonged by the Brexit is not likely to have short-term influence on the exchange rate even when it could influence portfolio flows to the economy.

The key inference arising from that observation is that markets are unlikely to suffer the possibility of carrying the risk of turmoil in the event of future policy changes monetary policy normalising, like was the case in major merging market when the US hinted that it will scale down on Quantitative Easing (QE) – what has been referred to as the Taper Tantrum (see Neely, 2014)¹¹. We by no means suggest that there is limited possibility of market turmoil; our argument though is that such occurrence (if at all) cannot be pinned solely, even substantially, on Brexit and the macro policy it has induced.

If at this stage the envisaged effect of the Brexit on growth to Kenya – just like other markets and the global economy – is not expected to be substantial, and the market reaction in a negative manner beyond the immediate response is likely to be mild, then why should the Brexit be an issue of concern to Kenya and the EAC economy?

We argue that the Brexit could trigger attitudes towards integration with implications on the EAC pace and thrust. The rest of the paper focuses on these aspects, noting that post Brexit has seen a rethink in some EAC members on the conclusion of the EAC – EU Economic Partnership Agreement (EPA) – whether this is triggered by the Brexit or merely a coincidence.

8 According to the UIP proposition:

$$r_t = r_t^* + f_t - S_t \dots\dots\dots(i)$$

Where r_t =domestic interest rate, r_t^* =foreign interest rate, f_t =forward rate and S_t =spot rate. The UIP is difficult to test because the expected future rate is unobservable. As assumption is made therefore that the current forward rate is equal to expected exchange rate plus a forecast error. Therefore:

$$f_t = E(S_{t+1}) + \varepsilon_{t+1} \dots\dots\dots(ii)$$

Equation (i) can be re-written as: $r_t = r_t^* + S_{t+1} - S_t + \varepsilon_{t+1}$ and rearranged as: $S_{t+1} - S_t r_t = r_t - r_t^* + \varepsilon_{t+1}$.

We test the validity of the UIP by empirically estimating α and β in:

$$S_{t+1} - S_t r_t = \alpha + \beta (r_t - r_t^*) + \varepsilon_{t+1} \dots\dots\dots(iii)$$

9 Interest rate differential is statistically significant at 10 percent, an indication of its peripheral influence on exchange rate changes.

10 Isard, P. (2006), "Uncovered Interest Parity", IMF Working Paper WPS/06/96, April. [<https://www.imf.org/external/pubs/ft/wp/2006/wp0696.pdf>]

11 Neely, C. J. (2014) "Lessons from the Taper Tantrum", Economic Synopses, Federal Reserve Bank of St. Louis, January 17. [https://research.stlouisfed.org/publications/es/14/ES_2_2014-01-28.pdf]



Photo/Flowerweb.com

EAC and Brexit

One lesson that the Brexit vote can teach us is that when considered from a practical viewpoints – and not from the perspective of proponents who choose to see opportunity – regional integration (just like globalisation) has its limits. Such limits are well illustrated in Rodrik (2011)¹² and are summarised in what is described as a “trilemma”.

How does this “trilemma” arise? It hinges on the argument that there is a contradiction between the “national scope of government and global nature of markets”. Regional integration and globalisation works to diminish the role national regulatory authority, consequently allowing capital market to operate unconstrained. In essence, regional integration and globalisation defies the limits that democratic governance imposes through social legislation and consent of government.

It therefore becomes difficult, goes the argument, to imagine a deeply integrated regional or global market in which national sovereignty and democracy thrives. The converse is that if one wants sovereignty and democracy – like was the case for Brexit proponents – it has to

be at the cost of weaker regionalisation and globalisation. Therefore there has to be a choice, for you cannot have them all. It is on the back of this “trilemma” that the Brexit presents an opportunity to examine the EAC integration agenda.

The EAC integration journey seeks to ultimately lead to a political federation. The signing of the Protocol for the Establishment of the EAC Monetary Union in November 2013 marked an important milestone in the integration agenda of the EAC partners. Being the penultimate level of integration, a monetary union presents an opportunity for the EAC’s five partner states to demonstrate their willingness to shed some sovereign aspects of economic management, specifically the right to issue currency and conduct monetary

policy to address any arising domestic challenges where such policy conduct is appropriate.

The logic behind the willingness to forgo the right to conduct monetary policy to a supranational institution – in this case the proposed East African Central Bank (EACB) – is that it will be more than adequately compensated by the anticipated gains. The process so far has been supported by analytical work¹³ that underpins the choice of the convergence criteria.

Evidently, the EU’s experience with the Euro – the EAC’s apparent chosen benchmark – provides a guide to the determination of the EAC monetary union convergence criteria. The one lesson that we contend has not informed the EAC process – and we take a view that it ought to – is why Britain stayed out of the Euro. As we later argue, this would be an opportunity missed if – now that we have the Brexit – we don’t ponder on how this will enrich the debate on the EAC integration project on the back of the “trilemma” premise.

The convergence that at least three economies must meet at least three years before the monetary union comes to effect are:

12 Rodrik, D. (2011), *The Globalisation Paradox: Democracy and the Future of the World Economy*, New York, W.W. Norton.

13 Duverall, D. (2011), *“East African Community: Preconditions for an Effective Monetary Union”* University of Gothenburg School of Business, Economics and Law, Working Papers in Economics, No 520, December, presents an argument that an EAC monetary union is politically risk albeit with potentially high economic benefits. Other analytical work that has informed this process include Davoodi, H. R. [ed.], (2012), *“The East African Community after Ten Years: Deepening Integration”*; EAC Secretariat; and Davoodi, H.R., S. Dixit and G. Pinter, (2013), *“Monetary Transmission Mechanism in the East African Community: An Empirical Investigation”*, IMF Working Paper WP/13/39, February.

- A ceiling of core inflation of 5 percent; and a ceiling of headline at 7 percent;
- A ceiling of fiscal deficit excluding grants of 6 percent of GDP; and a ceiling of fiscal deficit including grants of 3 percent of GDP;
- A tax revenue to GDP ratio of 25 percent; and a debt ceiling of 50 percent of GDP in net present terms;
- A foreign currency reserve cover equivalent to 4.5 months of import cover.

If the essence of the convergence criteria is to anchor sustainable non-inflationary growth, then it is logical to expect that the five EAC economies seek to have their business/economic cycles synchronized. Therefore, economic growth is at the core of this ambition but is interestingly not part of the convergence criteria.

That real growth is not of the convergence parameters is controversial, for at the pinnacle of the monetary union is the conduct of a common monetary policy that is expected to influence growth (Fischer, 1977)¹⁴. It doesn't have to be convergence at a certain rate – it can be a growth threshold. It is obvious that with the monetary policy ceded, the countries in the monetary union will seek to have fiscal policy as their macroeconomic lever to influence growth.

But the fiscal policy as a growth driver has to be in line with the parameters of the convergence criteria. This is often an issue that has strong sovereignty dimensions in the Rodrick's trilemma context. It is now common practice that the fiscal budgets of the five EAC partners are presented on the same day. This could well be an act of symbolism, though it didn't need be so.

The essence of fiscal coordination as a key determinant of the success of the monetary union needs to be evaluated on the platform of what fiscal policy is



Photo / African Reporter

– decisions that the government makes about spending and taxes. Given our argument for the need to have real output growth as an important parameter in the journey to a monetary union, we could surmise that the consideration of the demand-side parameters in the convergence criteria – which we surmise are meant to entrench stability – need to be matched by supply-side considerations.

Supply disturbances are particularly important given that their effect on the real economy could shift the economy's potential output. If the disturbances are highly correlated, then it is plausible to assume that they would need the same kind of monetary policy response, hence a monetary union. Otherwise, a monetary union would be a costly affair.

On account of the supply disturbances, the fiscal policy crucially enters the equation. The economies subjected to supply disturbances will obviously not sit on their hands and watch but will exercise their sovereign mandate of restoring a desirable economic order by way of expenditure and tax measures. That is why as we have argued, fiscal policy will be the only macroeconomic policy lever that is at the discretion of each sovereign economy under the monetary union. As the experience of the Euro zone has shown us, sovereign fiscal positions in a monetary union need to be taken into account while bearing in mind the situation in the other economies in the block.

We can argue that the essence of having an agreed level of fiscal deficit as part of

the convergence parameters is meant to address fiscal policy related challenges in monetary union. This is especially the case given that the EAC monetary union will not be accompanied by a fiscal union as the political federation is a vision whose attainment seems daunting.

It is necessary to have a fiscal parameter in the convergence criteria. It is however far from sufficient unless there is some analysis of the unbundled budgets of the respective economy in the bloc to determine how the proposed expenditure is to be financed. In the East African case, there are glaring disparities in the budget financing mechanisms with some economies routinely having more than a half of their budgets externally financed.

Beyond fiscal considerations that, as alluded, have sovereignty dimensions, it is important to examine why Britain remained out of the Euro. This entails a careful examination of the Optimal Currency Area (OCA). What has been fronted as a key advantage of a monetary union is the argument that a monetary union would lower transaction costs and the elimination of exchange rate volatility amongst the partners. The anticipation is that these advantages will more than compensate for the loss of an independent monetary policy and the use of exchange rate as an economic policy instrument.

It will have to take an economic or market jolt for one to determine the extent of the advantages a monetary union surpasses the disadvantages. If the shocks are symmetrical amongst the economies in the monetary union – meaning the



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14 The monetary policy – growth is a well-argued nexus that stretches back to the seminal paper, Fischer, S. (1977), "Long-Term Contracts, Rational Expectations and the Optimal Money Supply Rule", The Journal of Political Economy, Vol. 85, No. 1, pp. 191 – 205, February.

disturbances are similar and correlated – then a monetary union will be able to counter them and the economies adjust to desirable positions.

The alternative is where the shocks are asymmetrical and unrelated, a scenario where the cost of adopting a monetary union is much higher given that each economy would need a different monetary policy response. The question then is: how do you ensure that there is quick and smooth adjustment?

Take a case where two EAC partners are hit by adverse shocks with unemployment rising in one and falling in another. More flexibility in both labour and wages will facilitate ease of adjustment. It can be assumed that this aspect has been taken care of under the EAC common market that allows for free labour movement within the block. Beyond labour flexibility, and perhaps most critical, is the earlier argument for mechanisms of differentiating between demand and supply disturbances.

Divergent demand shocks arising from different monetary policies would not arise under a monetary union regime. However the relationship between supply disturbances needs special scrutiny given that they hinge on the underlying structure of a given economies that seek to be in a monetary union. Supply disturbances are particularly important given that their effect on the real economy could shift the economy's potential output.

If the disturbances are highly correlated, then it is plausible to assume that they would need the same kind of monetary policy response, hence a monetary union. Otherwise, a monetary union would be a costly affair. That is why under ideal circumstances when there is no hitch insofar as meeting all the pre-conditions a monetary union is concerned – in other words the regional block being an “optimal currency area (OCA)¹⁵” – then economies such as the EAC members could go ahead and have a monetary union.

Several studies indicate that the Euro zone – which we observe to be the EAC's apparent benchmark – was never an optimal currency area¹⁶. But the experiment went on. Recent analyses¹⁷ indicate that by October 2012, all the Eurozone economies were in violation of their own convergence criteria. It is noteworthy too that the Maastricht criteria, an equivalent of the EAC Protocol's convergence, is pretty close in terms of the parameters (and not necessarily their magnitude). The four-point Maastricht criteria is as follows:

- Price stability (inflation rate not more than 1.5 percentage points above the rate of the three best performing member states);
- Sound public finances (public deficit should not exceed 3% of GDP);
- Sustainable public finances (government debt should not exceed 60% of GDP);
- Durability of convergence (long-term

interest rate should not be more than 2 percentage points above the rate of the three best performing members in terms of price stability) and exchange rate stability.

With the assertion that the Euro-zone economies have not been able to sustain their attainment of some level of convergence, it is worthy reflecting as to whether they provide the best benchmark for the EAC monetary union. In any case, if meeting the Maastricht criteria is challenging, then expecting the same economies to consider aspects of OCA is far-fetched. This implies that the decision of the European Union members that formed the Euro-zone was driven the political drive, monetary union being political process as it is economic.

Does it matter that Euro Members frontloaded the political will than the persuasion to arise from the economic case? The answer seems to lie in the reasoning behind Britain staying out of the Euro. This is an aspect that has conspicuously missed out of the debate on the EAC monetary union and didn't get as much attention as the Brexit verdict.

The British economy was on a strong footing to be among the first economies to qualify to join the Euro based on the Maastricht criteria. Instead its British's Treasury decided to spend the initial years of the seven-year transition period – an equivalent of the ten years under the Protocol – to respond to five tests set out by the Chancellor of the Exchequer.



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15 The Pioneering seminal work of Mundell, R. (1961), “A Theory of Optimum Currency Areas,” The American Economic Review, Vol. 51, No. 4, pp. 657 – 665, and the subsequent rich literature gives a clear picture when a monetary union works without hitches.

16 Among other studies that come to such conclusion is Furrutter, M. (2012), “The Eurozone: An Optimal Currency Area?” IIFER Papers, February.

17 See for instance a study by Investment bankers, Nordea, [<http://research.nordeamarkets.com/en/2012/10/18/all-eur-countries-in-violation-of-their-own-convergence-criteria/>]. According to this study, of all the Eurozone economies, it is only the so-called peripheral economies of Finland, Luxembourg and Estonia come closest to meeting the criteria at the time of assessment.

These tests, which speak directly to the question of an optimal currency area, are:

- The convergence test – are business cycles and economic structures compatible so that we and others could live comfortably with euro interest rates on a permanent basis?
- The flexibility test –if problems emerge is there sufficient flexibility to deal with them?
- The investment test – would joining Euro create better conditions for firms making long-term decisions to invest in Britain?
- The City test – what impact would entry into Euro have on the competitive position of the UK’s financial services industry, particularly the City’s wholesale markets?; and
- The jobs test – will joining Euro promote higher growth, stability and a lasting increase in jobs?

The verdict of the assessment, as contained in 18 papers that the British Treasury published, was that “neither flexibility nor convergence are sufficient at present to make joining Euro in the

near future desirable”. This was evidently an informed position; unfortunately, the Brexit popular verdict didn’t benefit from the credible analysis meant to dissuade the exit vote. In any case, the core argument of the test was that the five tests had a crucial advantage of dealing with the real economy and the macroeconomic implication of the required adjustments in markets at the microeconomic level the Maastricht criteria that dealt with exclusively nominal variables.

While all the analytical work informed the British’s decision as regards its joining of the Euro is concerned, two of them are arguably instructive to the EAC move towards a monetary union post the signing of the protocol. One of them¹⁸ argues that there are transition costs that may have a bearing to the meeting of the convergence criteria and therefore should not be ignored. The other,¹⁹ which essentially assesses whether the US is an OCA, highlights the importance of having a fiscal union if the monetary union is to function optimally. On the back of the above arguments, the Brexit presents an opportunity – probably an excuse – for attitude evaluation with regard to the EAC integration agenda.



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Conclusion

The negative effects of the Brexit on real output growth are anticipated to be marked for Britain, material for Europe, and modest for the world. Such effects on the real economy come with a time lag unlike the markets whose reaction has been spontaneous and adverse for the British financial system. The magnitude of the deeper effects of the Brexit are a function how the uncertainties created are managed.

The Brexit is still unfolding, with the ensuing uncertainty based on the unclear direction the exit process and anxiety regarding possible political fallout, leading to an evident cautious policy stance the respective part of BOE, ECB and the Federal Reserve Board. These key central banks have largely been



pushed back to the unconventional monetary policy territory.

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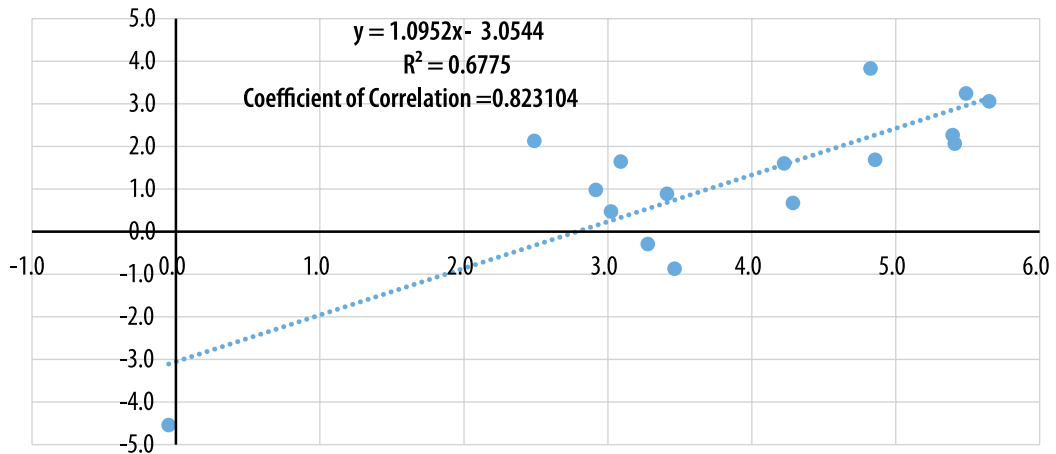
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18 Peter Westaway, (2003), “Modelling the transition to EMU: EMU Study”, HM Treasury.

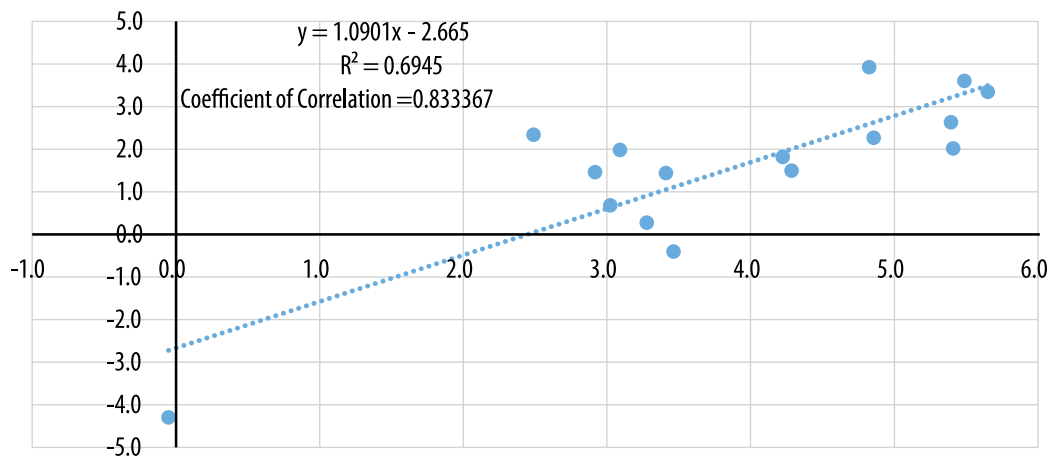
19 HM Treasury, (2003) “The United States as a monetary union: EMU Study” HM Treasury.

Appendix 1 ²⁰

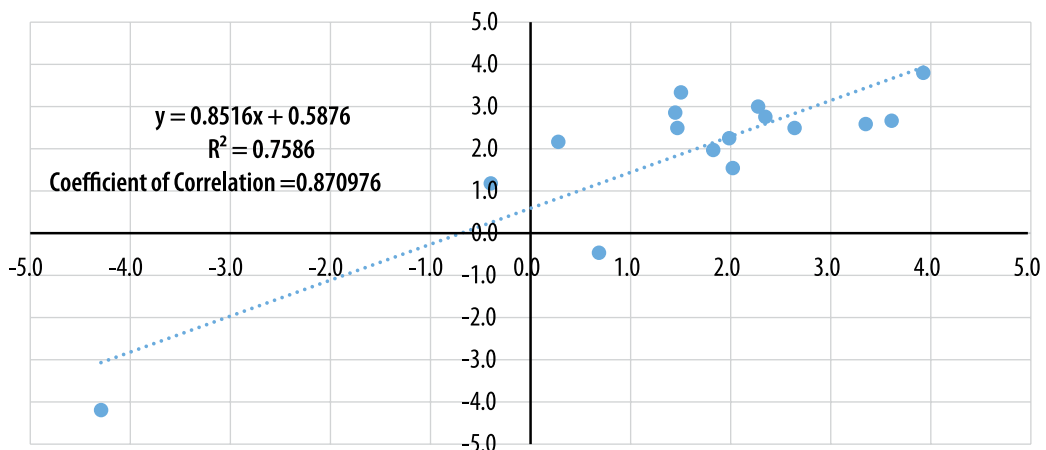
Euro Area : World Economy



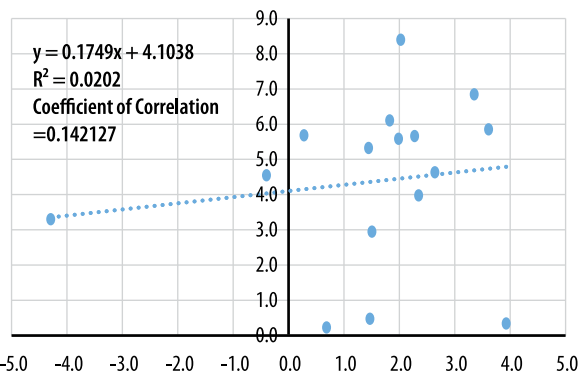
European Union : World Economy



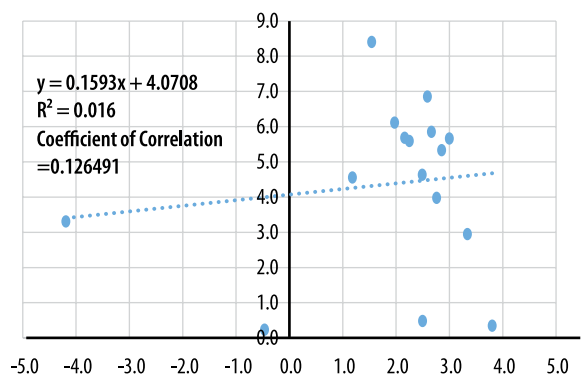
Britain : World Economy



Kenya : European Union



Kenya : Britain



Appendix 2 ²¹

Regression results for the estimation of $s_{t+1} - s_t r_t = \alpha + \beta (r_t - r_t^*) + \varepsilon_{t+1}$

Uncovered Interest Rates Parity Model (Non-log)						
	Coef.	Std. Err.	t	P> t	95% Conf. Interval]	
β	0.1733	0.0946	1.83	0.069	-0.0140106	.3606467
α	51.2146	6.4483	7.94	0.000	38.44746	63.98167
Number of observations = 122						
Total Sum of Squares = 151310.5						
Degrees of freedom = 121						

Uncovered Interest Rates Parity Model (Log)						
	Coef.	Std. Err.	t	P> t	95% Conf. Interval]	
β	0.1551	0.0914	1.7	0.092	-0.0258117	.3360042
α	3.2415	0.3575	9.07	0.000	2.533715	3.949288
Number of observations = 122						
Total Sum of Squares = 106.177962						
Degrees of freedom = 121						

The domestic interest rates is measured by the 91 – Treasury bill rates while the foreign interest rates measured by the United States 90 – day Treasury bill rates. The difference between the two rates is the interest rate differential which is regressed on the movement in the exchange rates.

The estimated exchange rate is the exchange rates between the US\$ and the Kenya shilling, defined as KES per US\$. In this case we use the mean monthly spot rates at which the Kenya shilling exchanges against the US dollar. The movement in the exchange rate is therefore determined by the difference between the current month’s mean monthly rate and the previous month’s mean monthly rate.

21 The definitions of variables in the UIP empirical equation are given in footnote 8.



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