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Abstract

While many commentators have been openly critical of China's currency policy on the basis of an undervalued renminbi, despite a similar surge in GCC's (Gulf Cooperation Council) balance of payment surpluses in the first decade of this century, the vast majority of the commentators have maintained a stony silence on the undervalued Gulf currencies. This underscores the geopolitics of currencies as a form of asymmetric warfare and the consequences of dollar, euro or renminbi diplomacy. This paper makes two main additions to the literature on Gulf monetary union. First, it emphasizes that the creation of a fiscal union is necessary for the Gulf monetary union to succeed. Second, it proposes some alternatives to pegging to the dollar, which would allow the GCC to absorb large swings in global commodity prices (oil, food) in the short to medium run. The proposed exchange rate regimes are not conditional on the formation of the Gulf monetary union, and can be implemented individually or collectively.

Keywords: Fixed exchange rate; Currency basket; Fiscal union; Monetary union; Gulf Cooperation Council.

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1 Introduction

The Gulf Cooperation Council (GCC) countries² are already in a monetary union with the United States (US) dollar. The widespread and intense discussion about the planned GCC currency union is about replacing the US dollar with the (new) GCC currency, commonly known as the Khaleeji dinar. The benefits of a currency union are well-known, as are its costs. The major cost of joining a monetary union is the loss of sovereign monetary policy. However, such cost is not a new phenomenon for the GCC (as the current monetary union with the US shows), while the potential benefits of a GCC-specific monetary union are presumed to greatly outweigh its costs. Some key benefits are worth reiterating here. These include transaction cost savings, greater price transparency, increased import purchasing power and, above all, a much needed new economic paradigm for the GCC to support the economic growth and development of the member countries in the 21st century.

Over the past decades, a large number of academic and non-academic papers have been written covering the economic, political and social aspects of the planned GCC monetary union. This is no occasion to offer a critical review of the existing contributions. Interested readers are advised to consult, among others, Buiter (2007), Alkholifey and Alreshan (2010), Alkhater (2012) and the references therein. A somewhat common conclusion that arises from the majority of the contributions is that although the GCC monetary union makes good economic sense, the project faces significant headwinds in terms of low intra-regional trade, a lack of supranational political institutions and enormous gaps in research capacity.

This paper contributes to the literature on the Gulf monetary union in two ways. First, in light of the structural problems in the European Monetary Union (EMU), this paper emphasizes the need for the proper fiscal arrangements within the GCC union. In the case where market mechanisms for risk insurance are not sufficient, a monetary union requires a system of interregional and intertemporal transfers which can alleviate the consequences of negative shocks such as those that occurred in the financial crisis of 2007–2009 (see Bordo et al., 2011). Unless the

¹President Nixon's Treasury Secretary.

²The GCC includes Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates (UAE). All currencies but the Kuwaiti dinar maintain a de facto peg to the US dollar. It is widely believed that the US dollar has a high share in the Kuwaiti currency basket.

Gulf monetary union is complemented by the GCC fiscal union, the political commitment to facilitating the monetary union would be marred by low credibility.

Second, despite their massive balance of payment surpluses and the associated effects on domestic demand, the GCC's propensity to peg to the US dollar has not changed. The unreasonableness and the unsustainability of this mix of a large surplus and a peg should be clear to the GCC's policy makers. A flexible exchange rate regime will permit the GCC to absorb large swings in commodity (oil, food) prices and allow them to devise their own monetary policy to address domestic conditions. This paper proposes an alternative to pegging to the dollar for the GCC countries to consider until the GCC central bank can be fully independent from the Federal Reserve.

The plan of this paper is as follows: Section 2 provides a summary assessment of the current state of economic integration among the GCC countries. Section 3 provides a description of the proposed GCC fiscal union, while Section 4 offers a menu of choices of flexible exchange rate regimes for the GCC. Section 5 concludes the paper.

2 The Current State of Economic Integration among GCC Countries

Since a thorough assessment of the economic integration is beyond the scope of this paper,³ we limit our attention here to trade and financial flows among the six GCC countries. Figures 1 and 2 plot the intra-GCC import and export flows over the 1975–2010 period. Several remarks are in order. First, the magnitude of intra-GCC exports is lower than that of intra-GCC imports because of the high share of oil in several countries' total exports. As of 2010, the average share of oil in the combined GCC exports is nearly 75%, with Kuwait (the UAE) being the most (least) dependent on oil exports (90% versus 35%). Second, although some members have important bilateral import trade with other GCC countries, for the two largest economies in the region (i.e., Saudi Arabia and the UAE), the share remains at a stubbornly low level. The comparatively high ratios observed for Bahrain, Oman and Qatar reflect, in part, the nature of their factor endowment, being limited domestic production base. On the other hand, despite having a narrow domestic production base, Kuwait relies on imported consumer and capital goods from countries outside the GCC region. Overall, total trade flows among GCC countries

³Interested readers are referred to World Bank (2010).

rose from US\$8 billion in 1980, which represented 3.85% of their total trade flows with the rest of the world, to US\$62 billion in 2010, a share of 6.50% of their total trade with the rest of the world. This suggests that despite showing some tendency for trade creation, the intra-GCC trade is experiencing slow progress in trade integration.⁴ Similarities in resource endowments and production structures and limited product differentiation are among the possible factors that can explain the low degree of intra-regional trade.

Compared to commodity trade, financial integration among GCC countries has been moving at a faster pace (see World Bank, 2010), but the real benefits from increased financial integration are difficult to evaluate. While intra-GCC FDI (foreign direct investment) flows and M&A (mergers and acquisitions) activities have flourished in recent years,⁵ hitherto the GCC has been unable to leverage their collective resources (e.g., sovereign wealth funds) on investment in regional industry. Policy makers in the GCC often miss the point that intra-regional investment is a major force to help the region to move forward as a force of change. Trade is a secondary issue to this wider system. The GCC faces a number of challenges to achieving a strong financial integration in the region. One such factor is the increasing standards of corporate governance, which portend a significant challenge to the traditional business mindset of the Gulf companies. As a result, the capacity for cross-listing among various Gulf bourses remains very limited. Second, a glaring problem in the region is that none of the countries considers the abuse of 'insider information' as a criminal offence. The volatility and turbulence often observed in the regional stock markets are largely a result of relatively "weak corporate governance and the lack of good transparency and accountability and disclosure standards" (Saidi, 2011).

Summing up, without a strong home-based economy, financial wealth alone can be very ineffective in mitigating risks. The long-term economic and political risk of the GCC's total trade dependence on the outside world cannot be overemphasized. Most Gulf countries are aware of this risk and recognize the need to diversify their local economies. A visionary plan based on greater regionalization can serve as a building block to a more healthy economic union.

3 Lessons for the GCC from Europe: A GCC Fiscal Union

One of the clearest lessons of the European debt crisis is that a monetary union without a fiscal union is problematic. A common monetary policy may sometimes fail to stabilize asymmetric

⁴See Nechi (2010) for additional discussion.

⁵See Booz & Company (2011) and Espinoza et al. (2011) for numerical and statistical figures.

shocks across members, which makes the case for insurance arrangements among members to provide transfers to countries in more dire circumstances. A fiscal union thus works as an automatic stabilizer across regions, providing adequate buffers against asymmetric macroeconomic shocks in a currency union.

Within the GCC, the UAE offers a close resemblance to the EMU's structure. The UAE is a confederation of emirates, where the monetary and exchange rate policies are managed on a federal basis by the Central Bank of the UAE. However, similar to the EMU, each emirate manages its own fiscal policy independently with no explicit obligation to contribute to the budget of another emirate (see Cevik, 2011).⁶ The limitations in the design of UAE's fiscal federalism, as in the EMU, were exposed when Dubai World, a holding company of the Government of Dubai, was unable to repay its debt in mid-2008, prompting the Government of Abu Dhabi to extend financial support to restructure the debt of Dubai World and its subsidiaries. This incident highlights the vulnerability associated with the high degree of fiscal decentralization at the sub-national level and the need for closer coordination in fiscal policy.

The first step in designing proper fiscal policy arrangements with the GCC is to identify the goals of the supranational federal fiscal authority, as there is no single definition of fiscal federalism. If the goal is to compensate a member state for a decline in its income not only when this decline is temporary (fiscal stabilization) but also when it is permanent (fiscal redistribution), then the fiscal–federal structure of the US and Canada can be used as a template for the GCC. In the absence of personal income taxation in the GCC, these programs can be financed through revenue-sharing arrangements so that the "have not" member states end up securing more (oil) money.⁷

Alternatively, the supranational fiscal authority can coordinate among member states in setting a medium-term common fiscal stance, subject to periodic revisions, as a means to synchronize government spending within the monetary union. This involves outlining a medium-term common fiscal budget, where the members are committed to remain within the strict purview of the agreed upon expenditure levels and are willing to offset any shortfalls that may occur due to changes in market conditions. Further, although a fiscal union generally provides an expost solution to crises within a monetary union, it is wise to take an experiodic e.g., overspending) for the

⁶Both Abu Dhabi and Dubai, the largest and wealthiest emirates, contribute to federal budget in agreed amounts, but the federal responsibilities are managed by Abu Dhabi (Cevik, 2011).

⁷See Buiter (2007) for further discussion of the issue of fiscal federalism in the context of the GCC.

stability of the unified monetary union.

In either case, strong coordination with the unified monetary authority is a prerequisite. Union-wide expansionary fiscal spending, for example, can only be implemented if the common central bank is well equipped with medium- to long-term debt instruments to sterilize excess liquidity from the banking system.

A major obstacle to GCC fiscal union is the loss of discretionary fiscal spending power, especially those targeting social categories. For instance, following the political transformations in the countries affected by the Arab Spring, the GCC governments launched politically motivated fiscal measures in 2011 in a bid to avoid public protests (see Table 1). In a fiscal union, the freedom of implementing such politically motivated fiscal measures will be seriously curtailed, since any discriminatory politically motivated fiscal action in one country will create similar pressure in other member states, due to the very unique economic and political structure of the GCC. Given the nontrivial size of these expenses as a share of GDP, the GCC governments thus face a dilemma about whether or not to give up (or curtail) the autonomy of such political instruments in favor of a federal fiscal union to support the broader economic union.

Table 1: Summary of recent fiscal measures in GCC countries.

Time	Country	Package Contents
February 13, 2011	Bahrain	Cash transfers of US\$2,660 to each family.
January 17, 2011	Kuwait	Cash transfers of US\$3,600 to each Kuwaiti citizen
		and free essential food items for 18 months beginning
		in February 2011. An estimated spending of about
		3.25% of annual GDP.
February 27, 2011	Oman	Employment for 50,000 Omanis and establishment of
		a monthly unemployment benefit of US\$390.
September 1, 2011	Qatar	Substantial increases in public sector salaries and pen-
		sions beginning in September 2011, estimated at more
		than 3% of GDP.
March 18, 2011	Saudi Arabia	Plan to construct 500,000 housing units, and build and
		expand hospitals; a two-month salary bonus to state
		employees and a 19% increase in the minimum public
		sector wage.
February 1, 2011	UAE	Infrastructure stimulus program focusing on the
		northern emirates, a 70% increase in pensions for mil-
		itary personnel, and state subsidies for rice and bread.

Source: IMF (2011) and Al Masah Capital (2012).

A specific characteristic of GCC diplomacy is that these countries tend to settle disputes and disagreements between them through informal means, rather than resorting to institutionbased treatments. It is thus possible to have a shadow fiscal union without any institutional constraint. The creation of a US\$20 billion 'Gulf development fund' in 2011 to provide financial assistance to Bahrain and Oman provides good validation of the GCC's general diplomatic principles. The fund was set up by the four wealthiest members of GCC after Bahrain and Oman were hit by public protests in early 2011. This fund will provide US\$1 billion annually over the next 10 years to both countries to address the socio-economic issues they face.

We conclude this section with a few remarks on the role of the common central bank as a lender of last resort (LOLR). Some commentators (De Grauwe, 2011; Wyplosz 2011) have pointed out that a key design flaw in the Eurozone was the absence of a LOLR (i.e., the European Central Bank, ECB) in government bond markets. As a result, the Eurozone has set up the European Financial Stability Facility for this purpose. Under immense political pressure, the ECB has lately announced that it will make itself the LOLR in government bond markets under the new program, dubbed Outright Monetary Transactions.

Should the GCC learn such a lesson from the EMU? Experience shows that such a system tends to be more crisis-prone (see Johnson and Boone, 2012). This is where the significance of ex ante fiscal arrangements within a monetary union apply. If the habit of irresponsible spending beyond one's means is curtailed at the outset, the issue of the LOLR becomes less significant. Further, given the large accumulation of foreign exchange reserves in the form of sovereign wealth funds, the GCC countries are well equipped to face a truly systematic financial crisis. Nonetheless, an 'anti-crisis fund' can be created to partially mitigate the economic and social costs of an unforeseen crisis.

4 GCC Currency Union: Evaluating Exchange Rate Regimes

The single factor that characterizes GCC's affair with the US dollar is oil. As oil is priced, invoiced and paid in US dollars, the GCC governments found it natural to peg their currencies to the dollar. The dollar peg worked relatively well in the 1980s and 1990s, primarily because the oil price tended to revert to the mean; however, as the composition of global growth has fundamentally shifted from the OECD countries to large emerging economies⁸ during the past decade, resulting a disconnection between (i) oil prices and the federal funds rate (FFR) and (ii) oil prices and the value of the US dollar (see Figures 3a,b). As these graphs show, oil price

⁸For example, Brazil, Russia, India and China, the so-called BRIC countries.

tended to mean-revert over 1973–2000, while since the beginning of 2001, they have shown a highly positive trend. The fact that both 'oil prices and the FFR' and 'oil prices and the US dollar' have moved in opposing directions in the past decade has important implications for the currencies of the GCC countries.

First, the fact that the Federal Reserve did not increase its targeted FFR during most of the last decade when oil prices were rising strongly, suggests that the Federal Reserve was more concerned with the deteriorating domestic economic conditions rather than the potential inflationary spillover of rising oil prices into the US economy. By comparison, facing a completely different economic situation, the GCC countries wrongly imported the easy monetary policy of the Federal Reserve at a time when their domestic economies were booming on the back of soaring oil export revenues. The fact that oil prices and the FFR have diverged in the last decade is a powerful validation of the economic de-coupling of the US and GCC economies, however temporary. As Figure 4 shows, although they continue to be volatile as before, the nominal GDP growth in each of the GCC countries was much higher than that of the US. Likewise, despite their high inflation rates during 2000s, the GCC's real GDP growth rates were well above the US level (see Figure 5). Conceptually, a country should raise (but not lower) its interest rates when the domestic economy is booming to prevent a possible hard landing.

Second, we also see that, unlike in the 1980s and 1990s when both the US dollar and oil prices maintained a somewhat positive relationship, since the start of the last decade, that relationship has clearly diverged. In fact, for the first time in history, the US dollar has persistently depreciated at a time when oil prices persistently increased. The GCC currencies were hit hard by the depreciating dollar. Since the GCC's nominal exchange rates could not adjust, all the adjustment of the weakening dollar was reflected in their real exchange rates in the form of higher domestic price levels. As shown in Figure 6, save for Bahrain, compared to the US, inflation rates were much higher in the remaining GCC countries. Higher domestic inflation rates helped real interest rates to dip into negative territory. Negative real interest rates, in turn, contributed to both asset and goods price inflation, posing a long-term risk to financial stability and misallocation of capital.⁹

⁹Further, the GCC's large current account surpluses (see Figure 7) translated into rapid monetary growth, while the significant fiscal intake from oil-related activities has fueled infrastructural and other spending. These, along with the weak dollar and world food price inflation, were the main drivers of inflation in the GCC countries – see Basher and Elsamadisy (2012) for further discussion.

Although the decoupling of the US dollar and the FFR from the oil price makes a strong case for the GCC to ditch the dollar peg that has lasted for over 30 years, a more fundamental argument against the dollar peg comes from the evidence of the structural economic shifts that the GCC economies have experienced in the first decade of the 21st century. The GCC now has a vibrant non-hydrocarbon sector, a relatively sophisticated financial sector and a healthy balance of payment surplus. Further, both the GCC's imports and exports are increasingly exposed to demand from emerging Asian countries (especially China), while its monetary policy is still guided by the Federal Reserve. The unreasonableness and the unsustainability of this mix of structural economic shifts in the GCC economies and the imported interest rate policy should be clear to the GCC policy makers. To put this into perspective, imagine the predicament China would be in had it maintained its de facto peg to the dollar.

It is clear from the discussion above that the GCC countries must soon adopt a more flexible exchange rate regime (and hence a more independent monetary policy) to deal with large swings in global commodity prices. In the remainder of this section, we consider several alternative exchange rate choices, keeping in mind the structural characteristics of the GCC economies. Some variations of the proposed exchange rate regimes have already been discussed in Sester (2007), Jen (2008) and Khan (2009). It must be emphasized that the proposed currency regimes are not conditional on the formation of the GCC monetary union, and can be implemented both at the individual and/or regional level.

4.1 The BBC Regime

"BBC" stands for basket, band and crawl, and was popularized by Williamson (2000). The basket part of the BBC proposal involves pegging a country's currency to a set of its trading partners' currencies. The currencies (and their associated weights) in the basket are generally determined based on a country's commodity trade with its trading partners; subject to data availability, service trade and financial flows can also be considered when selecting the optimal number of currencies. For the GCC, a relevant issue is which weights to use: exports, imports or both. Until today, GCC's exports – dominated by oil and gas – have not faced competitive pressure in the international market mainly due to a lack of alternatives to hydrocarbon products. Further, the share of non-oil exports in the GCC's total exports is still small and

¹⁰However, the coming boom in global natural gas production will increasingly challenge the hegemony of oil, and may replace oil as a transport fuel and as a feedstock in petrochemicals in a few decades.

non-oil exports tend to comprise oil-related products such as petrochemicals. Based on these facts, it is not viable to include exports in the calculation of the weights because preserving the price competitiveness of merchandise exports is yet to be a policy target for the GCC due to its unique pattern of trade. This leaves import weights as the principal basis of the construction of a currency basket. Indeed, for the GCC the pressing goal is to preserve the purchasing power of imports due to its heavy dependence on importing a large spectrum of commodities (including agricultural, food, industrial and capital goods). Further, given the specific structure of the GCC's domestic production base, imports are widely considered as one of the factors of production.

One of the main challenges that GCC countries face is the volatility of their income, due to large fluctuations in oil prices. As shown in Figures 4 and 5, the GCC's nominal and real GDP growth is far more volatile than that of the US. High income volatility exerts a negative effect on consumption and investment, and is the leading cause of the pro-cyclicality of budget deficits in GCC countries. ¹¹ The currency basket based on import weights proposed above is not equipped to deal with income volatility stemming from large swings in oil prices. One way to dampen income volatility is to include the price of oil alongside the trading partners' currencies in the conventional basket. This is well-known 'peg to export price' (PEP) system proposed by Frankel (2005). By including oil price in the currency basket, the value of the domestic currency is allowed to move in tandem with the fluctuations in oil prices. Thus, when the dollar price of exports rises (falls), the domestic currency appreciates (depreciates) in terms of dollars. Such accommodation of the terms of trade shocks is precisely what is needed to dampen the income volatility of GCC countries. Therefore, the recommended first step for GCC countries is to devise a broad currency basket that also includes the price of oil.

The second element of the BBC system is a band as a target around the central parity (interpreted as up to $\pm 5\%$, $\pm 10\%$ or even $\pm 15\%$). Given the difficulty of estimating the equilibrium exchange rate, the primary rationale for bands is to provide the flexibility to prevent volatility in the financial markets from adversely affecting the real economy, as seen, for example, in the strong but temporary capital inflows in Qatar and the UAE prior to the intensification of the financial crisis in mid-2008.¹² A natural response in such a situation is to widen the

¹¹Over the 1970–2002 period, the average pro-cyclicality of deficits in Bahrain, Kuwait, Oman and the UAE was estimated at 12% compared to a counter-cyclicality of about 16% in the OECD countries. See Shamloo (2005) for additional discussion.

¹²See Elsamadisy *et al.* (2013) for an analysis of the consequences of speculative capital inflows on the domestic banking sector in Qatar.

policy bands as volatility increases in foreign exchange markets and subsequently narrow them when some degree of calm returns to the market. During the Asian financial crisis, the policy band helped the Monetary Authority of Singapore to mitigate the short-term volatility of the Singapore dollar against major currencies.¹³

The final element of the BBC regime is the crawl. The crawling band exchange rate regime is implemented through continuous adjustment of the trade-weighted nominal effective exchange rate of the domestic currency, usually at a rate of crawl based on the differential between the domestic inflation target and the forecasted inflation of the trading partner countries. For the fast-growing GCC countries, a crawling band offers additional flexibility for fighting inflation.

A basket-based system of exchange rate determination, although more complicated than the fixed peg, is not a stranger to GCC countries. Kuwait has been living with a currency basket since 1975, except between January 2003 and May 2007, when the Kuwaiti dinar was pegged to the US dollar. The solid track record of the Monetary Authority of Singapore, the country's central bank, in managing its exchange rate system under the BBC principles tells us that even for small open economies in the GCC, such as Bahrain, Kuwait, Oman and Qatar, an independent monetary regime with a flexible exchange rate system is not only feasible but also desirable for their quest for national economic transformation.

4.2 The Floating Regime

A pure float offers the possibility of transforming the new GCC currency into a major international currency in the long run. One way to achieve this is by pricing the GCC's exports (largely oil and natural gas) in its own currency. Pricing exports in the local currency will immediately create a sizable international market for the new GCC currency. Given the imperfect substitutes for oil and natural gas in the world market, there will be a natural demand for the new GCC currency. However, the main impediment on the implementation of a free float is the lack of economic diversification within the GCC. Unless the GCC's economy becomes as diversified as that of Australia, Canada or Norway, a pure float will likely experience greater exchange rate volatility than a managed float based on the BBC principles.

In fact, before adopting a fully-fledged BBC system, GCC countries could contemplate widening exchange rate band around the existing fixed parity as a means to gain more flexibility to their currencies. For instance, if Qatar considers a $\pm 5\%$ band around the existing parity (i.e.,

 $^{^{13}}$ See Robinson (2001).

US\$1=QR3.64), it would allow the monetary authority to steer its currency in a direction that is supportive to its monetary policy goal(s). Of course, identifying the actual width of the band would require detailed analysis to eliminate the need to speculate, and the upshot of this argument is that a move from the current status quo arrangement to a more flexible exchange rate system would demand minimal institutional arrangements.

Summing up, the GCC monetary union based on the BBC currency system raises many positive possibilities. An independent currency will allow GCC economies to effectively manage external shocks, and it will also contribute positively to the regional economy. For example, Yemen may find it attractive to peg its currency to the new GCC currency, or Iraq may wish to join the GCC monetary union as a new member. A well-designed GCC monetary union could trigger a much needed macroeconomic transformation throughout the Middle East and North Africa region, and may pave the way to eventually turn into a Pan-Arab monetary union.

5 Concluding Remarks

As implied in the famous remark by John Connally, the GCC has to solve its own problem and the time to act is now. The decoupling of 'oil prices and federal funds rate' and 'oil prices and the dollar' in the past decade makes a strong case against the sustainability of the dollar peg for the GCC countries. Further, the recent implementation of the third round of "quantitative easing" or QE3 (widely dubbed as 'QE Infinity') by the Federal Reserve implies that the federal funds rate is kept at the near zero level until mid-2015, while the US dollar is likely to continue to fall as a result of the Federal Reserve's latest round of printing money. Given the relatively bright economic outlook for the GCC region, the cost of continuing to import an ultra-easy monetary policy (and the resulting weakness in the US dollar) will be heavy for the GCC economy. The GCC has to realize the shift in the world's oil demand from industrial to emerging markets that took place over the last decade, and translate this into action by making the required reforms in its exchange rate policy. The GCC has much to gain from greater exchange rate flexibility, and the world economy would also benefit from an effective global adjustment.

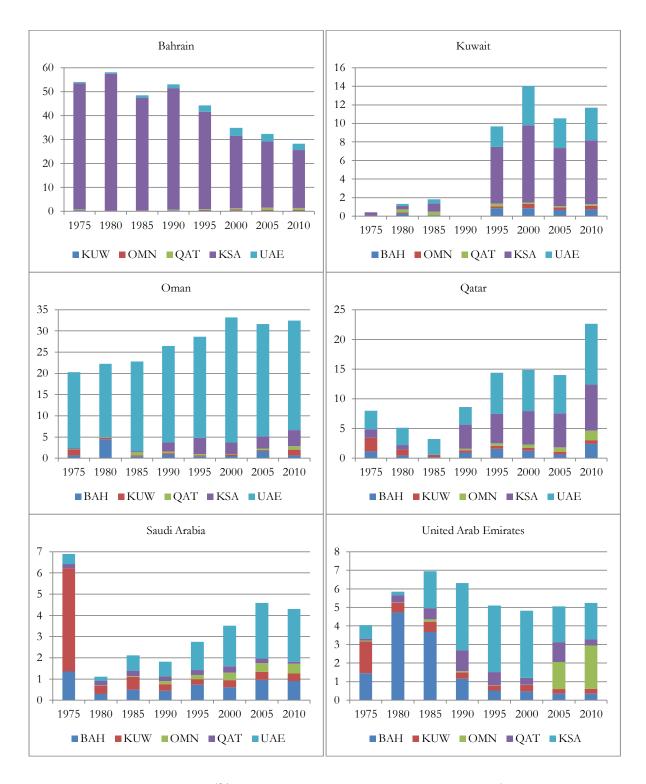


Figure 1: Inter-GCC imports (% of total imports in the respective countries). Source: Direction of Trade Statistics, International Monetary Fund and the author's own calculations. BAH, Bahrain; KUW, Kuwait; OMN, Oman; QAT, Qatar. KSA, Kingdom of Saudi Arabia; UAE, United Arab Emirates.

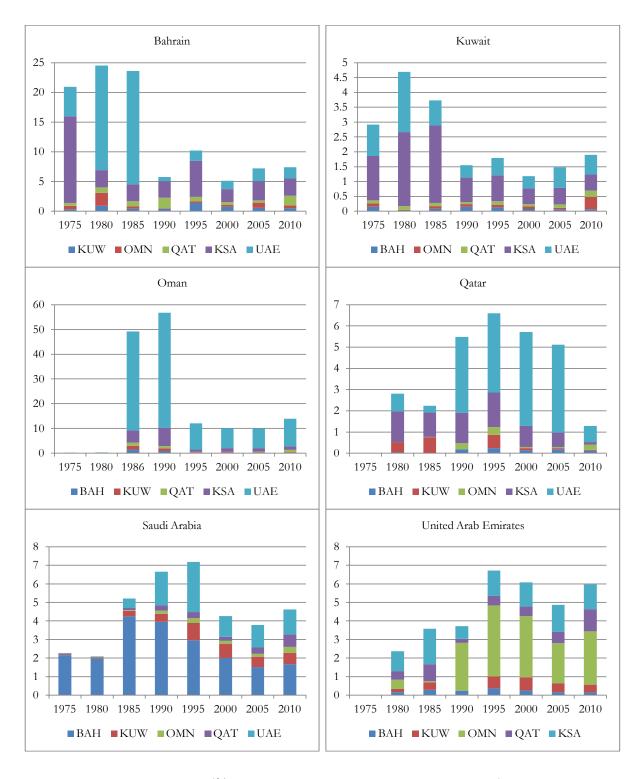
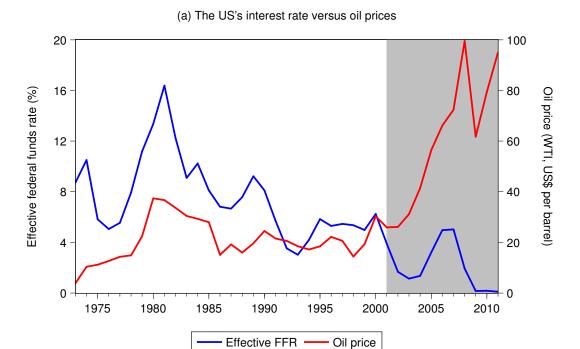


Figure 2: Inter-GCC exports (% of total exports in the respective countries). Source: Direction of Trade Statistics, International Monetary Fund and the author's own calculations. BAH, Bahrain; KUW, Kuwait; OMN, Oman; QAT, Qatar. KSA, Kingdom of Saudi Arabia; UAE, United Arab Emirates.



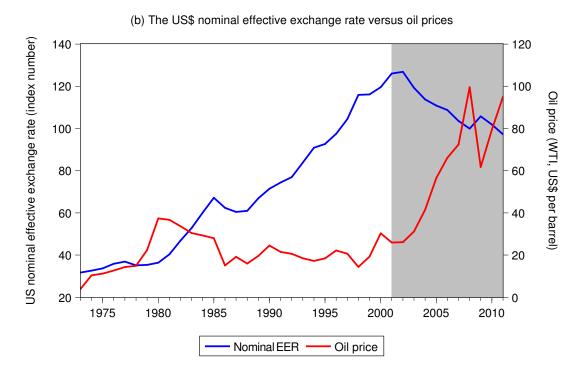


Figure 3: Oil price, federal funds rate and US dollar nominal effective exchange rate (EER). Source: Federal Reserve Economic Data (FRED), the Federal Reserve Bank of St. Louis and the author's own calculations.

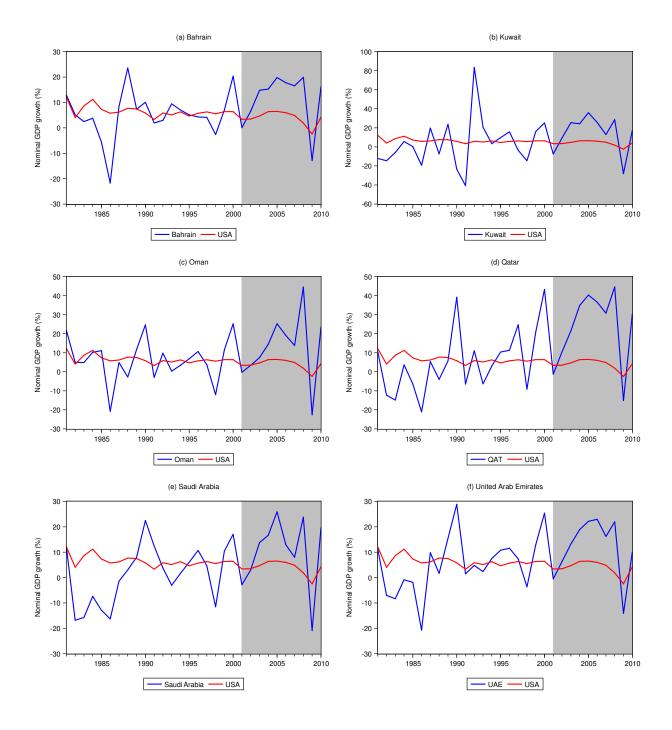


Figure 4: Nominal GDP growth in the US and GCC countries (%). Source: World Economic Outlook database, International Monetary Fund and the author's own calculations.

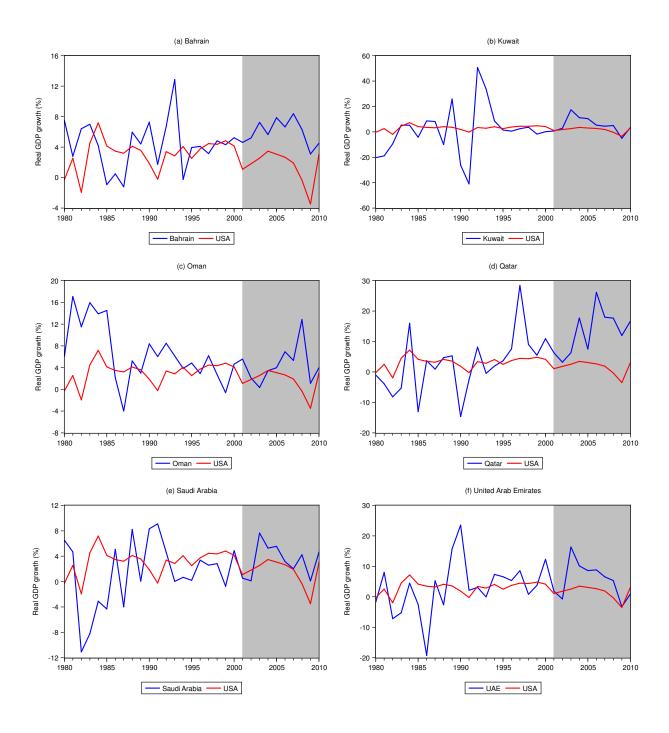


Figure 5: Real GDP growth in the US and GCC countries (%). Source: World Economic Outlook database, International Monetary Fund and the author's own calculations.

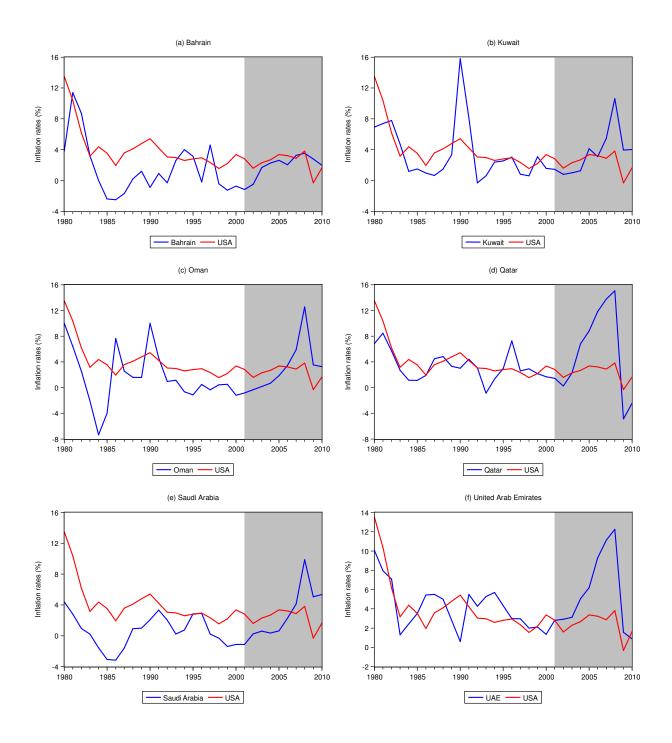


Figure 6: Inflation rates in the US and GCC countries (%). Source: World Economic Outlook database, International Monetary Fund and the author's own calculations.

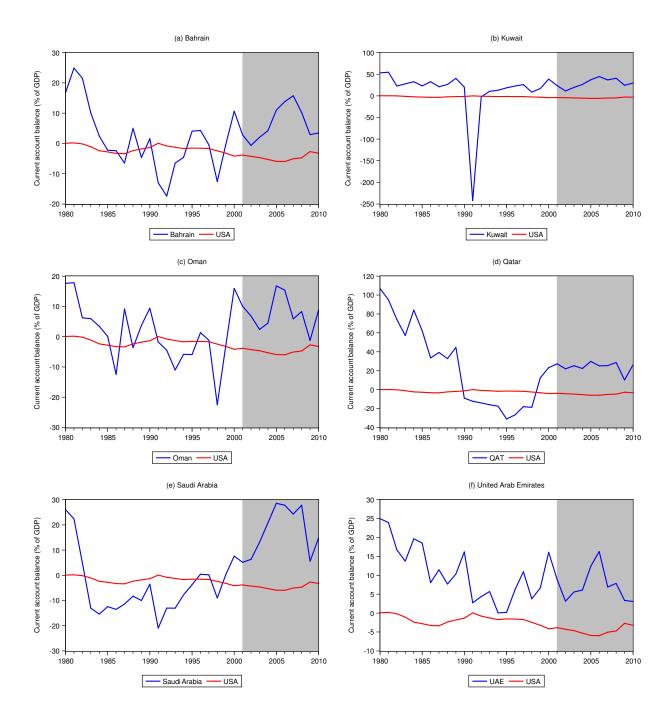


Figure 7: Current account balance in the US and GCC countries (% of GDP). Source: World Economic Outlook database, International Monetary Fund and the author's own calculations.

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