A very short essay on exchange rate regimes

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1 Introduction

The idea that a regime of fixed exchange rates is superior to one of flexible rates is deeply ingrained in the Keynesian tradition of economic thought. This is not surprising in light of Keynes' own position in the 1940s, and his contribution to the creation of the Bretton Woods system. Although the implementation of the new, post-war monetary architecture differed from what Keynes had envisioned, most of his followers believe that Keynes' position was characterized by the idea that a better organization of the international economy had to rely on a regime of fixed but adjustable exchange rates. Such monetary system would work only if strict controls and constraints on capital movements were introduced. Moreover, international institutions had to be created to guarantee as many reserves as required to temporarily hold exchange rates, while interventions adjusted policy to move towards balanced trade. His proposal of a supranational currency called Bancor reflected this point of view.

Other supporters of fixed exchange rates, such as Joseph Stiglitz, point out that the current regime of flexible rates, together with the free movement of capital, is far more unstable and prone to crisis than the previous Bretton Woods regime. Robert Mundell also makes the case for fixed exchange rates, although with a different purpose in mind, that of a strict monetary discipline. A return to fixed exchange rates is therefore seen as a way to ensure more stability in the international economic system (Sardoni and Wray, 2007).

To properly introduce the subject we will start by covering the basic tenets of the

exchange markets, the underlying assumptions of both fixed and flexible exchange rates, and a fairly light distinction between the two exchange rate regimes.

2 Background

2.1 Foreign exchange markets

The foreign exchange market (henceforth FX market) is the market in which foreign currency — such as the dollar or the pound — is traded for domestic currency, such as the Euro. This *market* is not centralized; it consists of a large group of peers in remote locations interconnected by a digital network that continuously buy and sell domestic and foreign currencies.

The FX market is alone responsible for a daily global turnover, or amount exchanged, of approximately 1,49 thousand million Euros, plus another 1 thousand million in derivatives such as forwards and options[1]. These massive amounts were a direct consequence of the financial openness and liberalisation, along with the phenomenon of globalization.

These markets trade currencies at a specified **price**, the **exchange rate**. The prices of these currencies either float freely or are maintained fixed through direct intervention. What sets them apart is the exchange rate regime to which the currency belongs.

2.2 Exchange rate regimes

Textbooks usually refer two polar exchange rate regimes. At one extreme is the case of a freely floating, fully flexible exchange rate where neither the government nor central bank intervenes in the FX market to influence the price at which one currency trades with another. The exchange rate is then determined by supply and demand for the currency relative to other currencies. This is a so-called **floating exchange rate**.

At the other extreme lay fixed exchange rates. In this regime, the government sets a rate at which it will buy or sell foreign exchange as necessary in order to keep the exchange rate fixed. These sales or purchases of foreign exchange by the Central Bank are called official interventions. Hence, in a **fixed exchange rate** regime, official intervention is required to keep the currency in-line with the country macroeconomic fundamentals, especially with that of the balance of payments[2].

[1] Survey from the Bank for International Settlements, September 2004

[2] Recall that the BOP contains the record of all the economic transactions between the domestic residents and the rest of the world.

Although most economists use the terms *fixed* and *pegged* interchangeably, Milton Friedman draws a further distinction between the two (see Table 1). The main difference derives from what kind of mechanisms the Central Bank employs to target international balance-of-payment adjustments. Pegged rates require the Central Bank to manage both the exchange rate and the supply of money, which often results in conflicts (Hanke, 2012). Furthermore, it lacks an automatic response mechanism to fix external imbalances. Indeed, these mismatches in the balance of payments become ever more glaring as the Central Bank begins to offset more and more of the capital outflows by printing money. From that moment on, it is a matter of time before speculators spot the contradictions between the exchange-rate and monetary policies. This eventually forces a devaluation, the imposition of exchange controls, or both.

Type of Regime	Central Bank	Exchange Rate Policy	Monetary Policy
Floating	Y	N	Y
Fixed	N	Y	N
Pegged	Y	Y	Y
	Exchange Rate vs Monetary Policy	Balance-of-Payments Crisis	Exchange Controls
Floating	N	N	N
Fixed	N	N	N
Pegged	Y	Y	Probably

Table 1: Friedman's Foreign-Exchange Trichotomy

It was precisely in opposition to the levying of capital controls and exchange taxes that Friedman stood against, as a vindication for free exchange and economic efficiency. Friedman advocated instead for a free-market approach to balance of payments adjustments, which either requires a fixed or floating exchange rate. However, he laid great stress on the fact that a fixed exchange rate administered by a Central Bank might pose some threats (Hanke, 2012). There is always the potential for a Central Bank to engage in discretionary monetary policy and to break the one-to-one link between changes in foreign reserves and changes in the money supply.

2.3 Theoretical assumptions behind floating exchange rates

Two main propositions are assumed. The first posits that individuals are utility-maximizing agents. These micro-foundations lay the basis for rational expectations to work, as they formally hypothesize that individuals will use all the available information at their disposal to their own advantage. At the same time, and deriving from this assumption, we hypothesize about the efficiency of a market, which is a cornerstone of market economies.

This will provide a clue regarding what the price of the currency may say about the economy's fundamentals.

These assumptions are the building blocks of a floating exchange rate regime. If exchange rates are to be seen as asset prices, then the question whether the foreign exchange rate behaves in a manner consistent with the efficient market hypothesis must be asked. In particular, are forward exchange rates unbiased predictors of future exchange rates? Furthermore, is the market using all relevant information in forming its expectations about future spot prices?

The answer to this question is fuzzy, at least, and subject to major controversy amongst scholars. Although seemingly academic, it is of great importance. If proof is made that the market is a bad bet for prices, then the argument for rejecting floating rates and sticking instead to fixed ones may be convincing. As we will see, proponents from both sides have valid arguments, although the distrusters of financial markets in general fail to realize that the efficient market hypothesis is a simplification of reality and not all assumptions need to be verified in full for the theory to hold.

2.3.1 Assumption 1: Rational Expectations

Rational Expectations theory asserts that individuals strive to make an optimal forecast of the future by using all the available information. Individually, predictions might differ, but variance should approach nil as we see the market as a whole. As a result, rational expectations do not differ systematically or predictably from equilibrium results. That is, it assumes that people do not make systematic errors when predicting the future, and deviations from perfect foresight are only random. Note that this does not imply that agents are somehow perfect or clairvoyant. It only implies that errors follow a white-noise distribution, i.e., they are random and, therefore, unpredictable.

The hypothesis builds upon three assumptions (Muth, 1961):

1. Information is scarce, and the agents generally do not waste it;
2. The way expectations are formed depends specifically on the structure of the relevant system describing the economy;
3. A "public prediction" will have no substantial effect on the operation of the economic system (unless it is based on inside information).

Assuming rational expectations discloses the indirect assumption that prices, and partic-

ularly the exchange rate, fully reflect all of the information that is available at that time — which means, whatever can be predicted about the future based on the information that is available to the public (Fama, 2012).

2.3.2 Assumption 2: Efficient Markets Hypothesis

According to the economist that coined the term, Eugene Fama, the **Efficient Market hypothesis** (EMH) is the proposition that financial securities such as stocks or bonds, either backed by real assets or not, fully reflect the information available on the value of the firm, and there is no way to earn excess profits (i.e., above the market's rate of return) in a consistent way (periodical returns above the market are possible and consistent with the theory). If this is the case, then the full effects of new information will be *immediately* reflected in market prices (Rudiger, 1976), and asset prices will follow no predictable pattern, i.e., they will follow a *random walk*.

EMH assumes that the agents have rational expectations. EMH allows that, when faced with new information, some investors may overreact and some may underreact. All that is required by the EMH is that investors' reactions be random and follow a normal distribution pattern so that the net effect on market prices cannot be reliably exploited to make an abnormal profit, especially when considering transaction costs (including commissions and spreads). Thus, an individual can be wrong about the market — in fact, everyone can be — but the market as a whole is *right* — it is the best predictor for the price.

There are three common forms in which the EMH is commonly stated: weak, semi-strong and strong, depending on the amount of information that is made available to the public. Each form has different implications on how markets work. Distinguishing between the three forms is relevant but outside the scope of this work.

Recent discoveries, particularly the work stemming from the field of behavioral economics, have identified market imperfections under the guise of cognitive biases and other psychological influences. Actually, behavioral finance and economics strengthens the case for EMH, identifying biases that can be spotted individually but are not seen on competitive markets.

Empirical evidence has been mixed, but has generally not supported strong-forms of the EMH (Fama and French, 1992; Nicholson, 1968), and Eugene Fama himself asserted that inside-trading is definitely an imperfection to the EMH hypothesis (Fama, 2012).

2.4 Fixed versus floating exchange rates

The analysis suggests that exchange rate regimes cannot be unambiguously rated in terms of economic performance. But it seems clear that, whatever exchange rate regime a country pursues, long-term success depends on a commitment to sound economic fundamentals, and a strong banking sector (Caramazza, 1997).

Nevertheless, there has been a shift from fixed to flexible exchange rates. In 1976, pegged rate regimes were the norm in Africa, Asia, the Middle East, non-industrial Europe, and the Western Hemisphere. By 1996, flexible exchange rate regimes predominated in all these regions (Caramazza, 1997).

The trend towards greater exchange rate flexibility has been associated with more open, outward-looking policies on trade and investment, and increased emphasis on market-determined exchange rates and interest rates. However, most developing countries are still not well-placed to allow their exchange rates to float freely. Many have small and relatively thin financial markets, where a few large transactions can cause extreme volatility. In such cases, active management may be required. In these circumstances, a key issue for the authorities is where and when to make policy adjustments — including the use of official intervention to help avoid substantial volatility and serious misalignments.

Milton Friedman was a proponent of full convertibility and free exchange without capital controls, whether that required a flexible or fixed exchange rate. Contrary to popular belief, Friedman favored both floating and fixed rates, and rejected pegged rates as "*worse than either extreme*" (Friedman, 2000).

Friedman, however, laid great stress on the fact that a fixed exchange rate administered by a Central Bank can turn problematic, and to a larger extent dangerous, as the case of Argentina between 2000 and 2004 clearly demonstrated. There is always the potential for a Central Bank to engage in discretionary monetary policy and to break the one-to-one link between changes in foreign reserves and changes in the money supply. He was particularly worried about free exchange. At the time, European countries were imposing a plethora of controls on cross-border flows of trade and capital. Friedman opposed these restrictions. He concluded that adopting floating exchange rates across Europe would remove the need for exchange controls and other distortionary policies that endangered economic growth (Hanke, 2012).

For many of these countries, Friedman was skeptical about floating exchange rates be-

cause he mistrusted their Central Banks and doubted their ability to adopt a rule-based internal anchor (such as a money-supply growth rule or an inflation-targeting rule). To ensure that no exchange controls were imposed on developing countries, his solution was the fixed exchange rate (an external anchor).

In fact, one of the strongest arguments in favor of a fixed exchange rate is the inability of the Central Bank to generate inflation: *"The surest way to avoid using inflation as a deliberate method of taxation is to unify the country's currency [via a fixed exchange rate] with the currency of some other country or countries. In this case, the country would not have any monetary policy of its own. It would, as it were, tie its monetary policy to the kite of the monetary policy of another country — preferably a more developed, larger, and relatively stable country."* (Friedman, 1974).

Paul Krugman, on the other hand, frequently cites the work of Nurkse (1942) to make the following counterpoint: volatility on floating exchange markets, either due to speculative action or to the effect of the over-shooting hypothesis (Rudiger, 1976), is a major factor of turbulence and creates pointless and economically damaging fluctuations.

Not all studies support Krugman's claim. Flood and Rose (1999) studied the macroeconomic volatility of countries with flexible exchange rates, and whether they are more vulnerable to economic shocks than countries with fixed exchange rates. They summarise the results as follows: *"There is remarkably little evidence of a systematic relationship between the exchange rate and measurable macroeconomic phenomena... Simply put, countries with fixed exchange have less volatile exchange rates than floating countries, but macro-economies that are equally volatile"*.

This evidence could be interpreted as showing that having a flexible exchange rate does not necessarily expose countries to additional sources of shocks. But it can also be interpreted as showing that flexible exchange rates are no better at absorbing shocks than fixed regimes. In fact, this implies that the exchange rate has a low pass-through.

3 Conclusion

From an empirical standpoint, the effects of exchange rate instability on both prices and volumes of goods and services in world trade have been quite small. Despite introducing some volatility, speculators are also responsible for introducing liquidity to the markets, something of indisputable usefulness. Also, misalignments and currency crashes are equally likely under pegged and flexible exchange rate regimes Caramazza (1997).

What this author then suggests is a pragmatic approach to the exchange rate regime, favoring free exchange and no capital controls, with the decision of which regime to adopt depending mostly on the country institutions' maturity. Fiscally disciplined countries would benefit from a joint union with a stable exchange rate within subscribing countries, as long as they keep their current account in check, in this way lowering transaction costs. Countries prone to lax policies should instead adopt a floating exchange rate, then benefiting from the automatic response mechanisms that are triggered upon imbalances. Greece stands as a clear case for a country that should had stick to its own currency.

Readjusting to declining macroeconomic conditions under a fixed exchange rate is harder to attain. Salary and price real adjustments are implicitly guaranteed by an exchange rate devaluation. On the other hand, fixed exchange rates leave no room for monetary manoeuvre, leaving structural reforms as the only option. Supply-side reforms are the means to sustainable economic growth, but such policies are widely unpopular and so some monetary loosening should help. Clearly, policymakers who cannot adjust fiscal policy in the short run should not adopt a rigidly fixed exchange rate regime.

In the end, macroeconomic fundamentals and institutional maturity of countries are so asymmetric and heterogeneous that there is no golden rule for an exchange rate. A case by case evaluation is required. And that rests on our *expectations* about the future. Assuming reasonable and responsible leaders — would that make for a rational expectation?

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