

ESSAYS IN INTERNATIONAL FINANCE

No. 170, July 1988

THE DOLLAR AND THE
POLICY-PERFORMANCE-CONFIDENCE MIX

SHAFIQL ISLAM



INTERNATIONAL FINANCE SECTION

DEPARTMENT OF ECONOMICS

PRINCETON UNIVERSITY

PRINCETON, NEW JERSEY

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Library of Congress Cataloging-in-Publication Data

Islam, Shafiqul.

The dollar and the policy-performance-confidence mix.

(Essays in international finance, ISSN 0071-142X ; no. 170)

1. Foreign exchange problem. 2. Dollar, American. 3. Monetary policy—
United States. 4. Budget deficits—United States. I. Title.

HG36.P7 no. 170 332.4'560973 88-9254

ISBN 0-88165-077-3

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Printed in the United States of America by Princeton University Press at Princeton, New Jersey.

International Standard Serial Number: 0071-142X
International Standard Book Number: 0-88165-077-3
Library of Congress Catalog Card Number: 88-9254

CONTENTS

1	INTRODUCTION	1
2	A BRIEF REVIEW OF THE DEBATE	2
3	A CONCEPTUAL FRAMEWORK	4
	Savings, Investment, and the Budget Deficit	4
	Monetary Policy, Portfolio Balance, and the Current Account	5
	Confidence and Bandwagons: An Asset-Market Approach to Exchange Rates	7
4	DEFICITS AND THE DOLLAR: SIMPLE FACTS AND MODEL SIMULATIONS	10
	Impressionistic Evidence	10
	Model Simulations	15
5	THE POLICY-PERFORMANCE-CONFIDENCE MIX, 1980-85	18
	Monetary Policy, Confidence, and Leaning with the Wind, 1980-82	19
	Deficits and the Dollar, 1983-85	24
6	THE DOLLAR IN DECLINE	27
7	CONCLUSIONS	30
	REFERENCES	31

LIST OF TABLES

1	U.S. Fiscal Stimulus: Changes in Cyclically Adjusted General Government Budget Balances, 1980-85	12
2	U.S. Federal Deficits, U.S. Interest Rates, and the Dollar	13
3	Effects of a Sustained Increase in Government Spending of 1 Percent of GNP: Estimates from Models	16
4	Fiscal Policy, the Dollar, and the U.S. Current Account: Results from the MSG Model	17
5	Saving, Investment, and Deficits in the United States, 1980-85	25

LIST OF FIGURES

1	U.S. Federal Deficit and the Dollar, 1978-85	11
2	U.S. Monetary Policy, 1978-86	14
3	CPI Inflation Rates, 1978-86	20
4	Long-Term Real Interest Rates, 1978-86	21

THE DOLLAR AND THE POLICY-PERFORMANCE-CONFIDENCE MIX

1 Introduction

Although the dollar has descended substantially from its early 1985 peak, the debate on the causes of its spectacular rise over a four-and-a-half-year period remains unresolved. There are two key points of disagreement. One is the extent to which the dollar's appreciation can be explained by shifts in "economic fundamentals." The other is what these fundamentals are and how they affect exchange rates.

Even those who agree on the first point seem to disagree violently on the second. The difference of opinion is greatest among those who subscribe to the "fundamentalist school." The mainstream view is that the principal cause of the dollar's appreciation was the dramatic rise in the current and prospective U.S. federal budget deficit. But there are many who disagree. These critics believe that the dollar's strength reflected factors such as the rapid decline in U.S. inflation, a rise in long-term profitability in the United States due to tax cuts and deregulation, and the role of the United States as a "safe haven" at a time of rising economic disruptions and political uncertainties abroad.

This essay is an attempt to move the debate closer to resolution by reexamining the causes of the strong dollar within a broad conceptual framework. The framework is based on the premise that while changes in macroeconomic policies influence exchange rates, the relationship cannot be neatly pigeonholed within a system of rigidly specified behavioral equations. Exchange rates are determined in speculative-asset markets, where the state of market psychology and the degree of "confidence" critically influence the way market participants respond to new information on all economic and non-economic variables and developments that are deemed relevant. A principal message of this essay is that we can better understand the spectacular swings in the key exchange rates in recent years by examining them in relation to shifts in what could be called the "policy-performance-confidence (ppc) mix."

This essay is based on two drafts I wrote when I was with the Federal Reserve Bank of New York—one in December 1985 and the other in May 1986. I have made no special attempt to incorporate subsequent developments in the analysis or to update the data used. I would like to thank Jeffrey Sachs and Warwick McKibbin for the simulation results, Sally Moran for competent research assistance, and an anonymous referee for helpful suggestions.

Section 2 briefly reviews the dollar debate. Section 3 offers a broad conceptual framework within which both short-term movements and medium-term swings in exchange rates under a floating-rate system can be explained. This framework explicitly recognizes that shifts in macroeconomic policy affect exchange rates in markets where psychological factors play important roles in the determination of exchange rates. Section 4 assesses the fiscal explanation of the strong dollar with the help of some impressionistic evidence and results from model simulations. Section 5 uses the ppc-mix approach to explain the dollar's behavior from 1980 to 1985. The dollar's decline is explained in section 6. The final section summarizes the key conclusions.

2 A Brief Review of the Debate

It is widely held in both the United States and abroad, in both popular and academic circles, that the prevailing U.S. fiscal policy and its prospective path were largely responsible for the dollar's spectacular rise between 1980 and 1985. Although the lines of reasoning advanced in support of this view have not always been the same,¹ the core of the argument can be summed up as follows: Massive federal budget deficits in the United States created a huge excess demand for savings, resulting in high interest rates and the strong dollar—the two levers that worked together to bring in foreign savings by gradually widening the “safety valve” of the U.S. current-account deficit.

A leading proponent of this view, Martin Feldstein, offered the following deficits-dollar linkage:

When the government borrows on a vast scale, it creates a vacuum in the domestic capital market that sucks in capital from abroad. Massive current and projected government borrowing has driven up the real interest rate on long-term U.S. government and corporate bonds. The higher interest rate makes dollar-denominated bonds more attractive to investors both at home and abroad. The increased demand for dollar securities causes the value of the dollar to rise relative to other currencies. The strong dollar results in an enlarged trade deficit. The capital inflow is the financial consequence of that enlarged trade deficit as we borrow and sell U.S. assets to pay for that trade deficit.²

Observers who subscribe to this view tend to attach varying degrees of importance to two other factors as well: (a) nonaccommodating U.S. monetary policy (U.S. monetary-fiscal policy mix) and (b) contractionary fiscal policies in Europe and Japan (fiscal asymmetry). By contrast, they disagree widely on the importance of such other factors as the dramatic decline in

¹ For a discussion of some of these major differences, see Islam (1984).

² See “The U.S. Emerges as a Capital Importer,” *Journal of Commerce* (June 27, 1985), p. 17A.

U.S. inflation and the "safe haven" status of the United States. What is common to these experts, however, is the view that U.S. fiscal policy is the dominant explanation of the strong dollar.³

There are those who disagree. Some dispute the link between the federal budget deficit and high U.S. interest rates, others dismiss high U.S. interest rates as the main force driving the dollar up, and yet others challenge both linkages. The "fundamentals" these critics favor usually include the underlying strength of the U.S. economy, the improvement in the after-tax rate of return on U.S. investment, the decline in U.S. inflation, the U.S. economy as a "political safe haven," the poor economic performance and "structural rigidities" in Europe, and the debt crisis in the developing countries. To quote from the Congressional testimony of a prominent critic, Beryl Sprinkel, then Under Secretary for Monetary Affairs of the U.S. Treasury:

General confidence in U.S. economic performance and the Administration's firm commitment to noninflationary growth began to dominate market assessment of exchange rates. At times, "safe haven" considerations appear to be more influential than underlying financial and economic considerations. Interest rates are also a factor from time to time, but my basic conclusion is that they have not been the dominant explanatory factor in dollar strength.⁴

In the same testimony, Sprinkel elaborated his views of the linkage between high U.S. interest rates and the strong dollar:

I know that many observers believe that our deficits are causing high interest rates. . . . It is important to look first to see if interest rates and exchange rates are closely related. If they are, then we should discuss the factors determining U.S. interest rates. But I believe my testimony makes the point clearly that interest rates have not been a major determinant of exchange rate movements over the past 3-4 years. Therefore, I do not believe that the question of the relationship between budget deficits and interest rates is particularly relevant to our discussion today.⁵

One purpose of this essay is to shed some light on how two observers can look at the same set of data on exchange rates and interest rates and come to diametrically opposite conclusions. Needless to say, the disagreement is rooted not in the differential access to raw data but in the conceptual frame-

³ Some experts attach little importance to the role of all other factors, including U.S. monetary policy, in their fiscal explanation of the strong dollar. Branson (1985), for example, dismisses several popular explanations, and does not even consider the role of U.S. monetary policy. "The conclusion is clear," he says, "the shift in the budget did it!"

⁴ Testimony to House Banking Committee, Oct. 17, 1983.

⁵ The deficits-dollar view has been challenged from abroad as well: "[That] it is just this budget deficit which artificially keeps the dollar rate in the air is certainly a very one-sided and inadequate argument" (Emile van Lennep, former Secretary-General of the Organization for Economic Cooperation and Development, as quoted in the *Washington Post* (Sept. 8, 1984), p. D10.

work within which the data are processed. It is to the development of a more useful framework that I turn now.

3 A Conceptual Framework

Exchange rates are determined in speculative-asset markets, where psychological factors such as “confidence” and “herd mentality” play an important role. The broad conceptual framework developed here weaves this fact into what standard theory says about the exchange-rate effects of fiscal policy and the monetary-fiscal policy mix. This framework is designed to serve several purposes. It shows how a rising government budget deficit can lead to a rising trade deficit by driving up real (inflation-adjusted) interest and exchange rates, and how the linkages are influenced by shifts in private savings and investment. It points out that whether a rise in the budget deficit leads to a real appreciation of the home currency through higher inflation or through nominal appreciation depends crucially on the degree to which monetary policy accommodates the deficit and on the credibility of that monetary policy. Finally, it highlights the fact that exchange rates are determined in asset markets, so that the exchange-rate effects of shifts in policy depend critically on what is often described as the state of market confidence in the currency.

Savings, Investment, and the Budget Deficit

A major building block of this framework is a well-known macroeconomic accounting identity: current-account balance = general (federal, state, and local) government balance + domestic private-sector balance. The current-account balance is a broad measure of trade balance that includes international transactions in services and transfers. Private-sector balance is the difference between either gross or net private savings and gross or net private investment. Thus any government-sector deficit must be financed either by domestic funds generated through a surplus in the domestic private-sector balance or by foreign funds brought in through a deficit in the current-account balance.

Changes in the private sector's savings and investment behavior can affect the link between the government budget balance and the current-account balance. For example, even if a country achieves a balanced budget, it will run a current-account deficit if domestic private investment exceeds domestic private savings. And a country with a government budget deficit need not run a current-account deficit if the private sector is able to generate enough excess savings to meet the government's financing needs. Therefore, the effect of a fiscal expansion (a tax cut or a spending increase not matched by a tax rise) on the current-account balance depends ultimately on how pri-

vate agents and official (e.g., monetary) authorities, at home and abroad, respond to the fiscal shock. An outline of some of these responses and their interactions follows.⁶

A discretionary increase in the government budget deficit leads to an excess demand for savings and output. Under conditions of less than full employment, both output and real interest rates rise. Interest rates may rise even before future deficits do as the forward-looking asset markets respond to expectations of a future rise in interest rates. The upward pressure on long-term real interest rates is likely to be even stronger if future deficits are projected to remain high or go even higher. Furthermore, if the monetary authorities target nominal or real GNP growth, then the interest-rate effects of a fiscal expansion will be more pronounced as the output effects are reduced by a tighter monetary stance.

With flexible exchange rates and a high degree of capital mobility (relatively few barriers to international capital movements and high substitutability between domestic and foreign financial assets), a relative rise in domestic real interest rates leads to an excess demand for home assets. But this increase in the *desired* net capital inflow cannot be realized without a matching deterioration in the current account. This is because a country can increase its net foreign borrowing only by increasing its net imports of goods and services.

If the current account is initially in balance, the *realized* net capital inflow increases to the extent that a deficit emerges in the current account as higher aggregate demand leads to higher imports. The remaining excess demand for home assets results in higher foreign prices for these assets through a real appreciation of the currency. The higher real exchange rate, as well as further increases in aggregate demand reflecting multiplier effects of the fiscal impact, then lead to additional widening of the current-account deficit, allowing the realized net capital inflow to increase over time. Thus, with high capital mobility a higher budget deficit is primarily financed by foreign funds and not by higher excess domestic savings. Put another way, a fiscal expansion does not "crowd out" the interest-rate-sensitive sectors, as would be the case in a closed economy (or an economy with open trade but low capital mobility) at or near full employment. Instead, the crowding out falls on the exchange-rate-sensitive (tradable) sectors.

Monetary Policy, Portfolio Balance, and the Current Account

The nature and the dynamics of this crowding out, however, depend on (a) the stance and credibility of monetary policy and (b) the ability and will-

⁶ This analysis is based on a generalized version of the Mundell-Fleming model, the framework most economists use to explain effects of policy shifts on exchange rates (see Mundell, 1963, and Fleming, 1962).

ingness of foreign investors to lend funds *relative* to the size and duration of the current-account deficit. Inadequate understanding of these linkages has caused unnecessary confusion in the deficits-dollar debate.

Experience suggests that excessively large budget deficits often lead to a monetary accommodation that results in a depreciating nominal exchange rate. This prompted some critics to question whether excessively large U.S. budget deficits could be responsible for the nominal appreciation of the dollar. The criticism, however, brings out the role of monetary policy and inflation in the transmission mechanism. With high capital mobility, a fiscal expansion is likely to lead to a real appreciation of the home currency. But whether this real appreciation materializes through higher inflation or a nominal appreciation depends, among other things, on the degree of monetization of the fiscal deficits and, more important, on the response of inflation and inflationary expectations to this monetary-fiscal mix. The *nominal* appreciation of the dollar may therefore have stemmed not so much from the current and anticipated U.S. fiscal policy itself as from the monetary response to it.

Also, whether a policy-induced increase in the government budget deficit is financed more by domestic savings or more by foreign savings ultimately depends on the degree to which foreign investors are willing and able to lend foreign funds (degree of capital mobility). If foreigners refuse to finance an emerging current-account deficit at the prevailing interest and exchange rates (low degree of asset substitutability), domestic interest rates rise further and the home currency depreciates. These developments, in turn, keep the current-account deficit from rising significantly, and the higher budget deficit is mostly financed by domestic funds generated through higher private savings and lower private investment. Thus, the macroeconomic outcome of a fiscal expansion resembles the outcome in a closed economy where a higher budget deficit is accommodated either by a crowding out of private investment (under conditions of full employment) or by a relative rise in private savings (if there are unemployed resources).

Finally, the willingness of foreign investors to accumulate home assets at the prevailing exchange and interest rates is also influenced by the size and duration of a country's current-account deficit. We have already seen that with high capital mobility a discretionary increase in the budget deficit leads *initially* to a real appreciation of the exchange rate and a rise in the current-account deficit, matched by higher net capital inflows. But as foreign investors continue to accumulate domestic assets, the perceived risk associated with them rises. This upward shift in risk pushes domestic interest rates up and the nominal and real exchange value of the currency down. Over time, the depreciation reduces the current-account deficit and an increasing proportion of the budget deficit is financed by domestic savings. The adjustment

can even take the extreme form of a “crisis in confidence,” where a sudden jump in perceived risk results in a collapsing currency and rising domestic interest rates, ultimately causing a slump in economic activity accompanied by higher inflation.

Confidence and Bandwagons: An Asset-Market Approach to Exchange Rates

The discussion so far has summarized some of the key insights offered by standard macroeconomic theory on the relationships among fiscal policy, exchange rates, and the current account. But shifts in macro policies are not the only source of fluctuations in exchange rates. In fact, what complicates matters is that too many other variables—economic developments as well as other developments with perceived economic implications—affect exchange rates, sometimes in ways that are not clear even to many market participants, let alone to those who spend their time developing theories of exchange-rate determination.

Under a floating-rate system, exchange rates are determined in speculative-asset markets, where currency values change as agents assess and reassess future return and risk factors in light of new information. Market expectations—correct or false—of future events, and market assessments—reasonable or nonsensical—of those events affect a currency’s exchange rate. These market assessments are often heavily influenced by the state of “confidence” in the currency, which essentially is a judgment of whether the currency is fundamentally weak or strong.

While economic fundamentals such as interest rates, inflation rates, and relative current-account positions influence exchange rates, these variables comprise a small part of the information set to which market participants react. At times, the variables on which the exchange market focuses may have no place in the standard theories of exchange rates. What matters for exchange-rate movements is not how one theorist or another thinks one fundamental or another should affect exchange rates but how market participants respond to new information at a particular point in time.

Recently, some exchange-rate experts have reacted to the strong dollar by chiding the market for “getting it wrong.” The problem, though, is not necessarily an ignorant market but a lack of consensus among experts on what the fundamentals are and exactly how they affect exchange rates. There is also little agreement on what the “right” exchange rates are at any particular time. This lack of clear guidance from the economics profession partly explains why market participants create their own “theories” as they go along and often exhibit bandwagon behavior.

This state of confusion is not peculiar to the foreign-exchange market; it represents the normal state of affairs in all speculative markets. The wide

distribution of expectations of future prices in those markets is not evidence of market inefficiency. It reflects ignorance and uncertainty—ignorance of the true model and uncertainty about the future values of the relevant variables. Nor is the failure of economists to agree on the equilibrium values of various asset prices evidence of professional incompetence. Asset prices at any point in time reflect not only the market's judgment of where prices should be on the basis of all available information but its bet on what the future holds. In other words, both current and long-run equilibrium asset prices depend on a series of variables that are not amenable to rigid specification and quantification.⁷

In this environment, it is not rational for an individual investor to bet against the market on the basis of a particular model of equilibrium exchange rates. Indeed, a rational strategy should involve a "Keynesian beauty-contest approach": try to guess what others will guess the market's guess to be.⁸ This is precisely the strategy most foreign-exchange traders and speculators follow. Those who hold out against the market for too long either learn their costly lesson and drop this tactic or get weeded out by the process of "natural selection."

Exchange-market participants fall into two broad categories: (a) traders (the market makers) and short-term speculators with time horizons measured in hours and days and (b) long-term investors and portfolio managers with time horizons measured in months and years. The market makers (usually foreign-exchange traders in large commercial and investment banks) adjust current rates according to their assessment of "news" that they consider relevant. They buy dollars (and drive the price up) when there is "good news" and they sell dollars (and drive the price down) when there is "bad news." At times, the distinction between good and bad news may have little grounding in economic reasoning or considerations of long-term sustainability of the exchange rate.

⁷ Tobin (1980) has aptly summarized the problem of estimating equilibrium exchange rates: "No one has any good basis for estimating the equilibrium dollar-mark parity for 1980 or 1985, to which current rates might be related. The parity depends on a host of incalculables—not just the future paths of the two economies and the rest of the world but the future portfolio preferences of the world's wealth owners. . . . In the absence of any consensus on fundamentals, the markets are dominated—like those for gold, rare paintings, and—yes, often equities—by traders in the game of guessing what other traders are going to think."

⁸ Keynes (1964, p. 156) described this contest of "picking six prettiest faces from a hundred photographs" this way: "Each competitor has to pick, not those faces which he himself finds the prettiest, but those which he thinks likeliest to catch the fancy of the other competitors, all of whom are looking at the problem from the same point of view. It is not a case of choosing those which, to the best of one's judgment, are really the prettiest, nor even those which average opinion genuinely thinks the prettiest. We have reached the third degree where we devote our intelligences to anticipating what average opinion expects average opinion to be."

Furthermore, at different times traders focus on different sets of fundamentals or assess them differently. A run of good news can create a bullish market for the dollar in which traders tend to focus on good news and ignore bad news. In other words, how the market adjusts the value of a currency in response to a new development depends critically on the state of confidence in that currency. Short-term speculators who are not market makers behave the same way, but they do not directly set exchange rates.

These traders and speculators also use "technical analysis" for guidance in deciding the direction of the next move and setting the "trading range" at any particular time. If rates move out of the current trading range (break "chart points," to use the market jargon), the rules of technical analysis help in deciding the next trading range. The key dictum of technical analysis is that "the trend is your friend until it bends." Thus the theory of exchange rates followed by foreign-exchange traders tends to encourage "bandwagon behavior." Of course, if rates move "too fast" in one direction, traders engage in short-term "profit taking" by closing their positions and slowing down the bandwagon from time to time.

Portfolio managers and long-term investors usually play the role of stabilizing speculators. They are the ones who are supposed to have a long-run view of exchange rates. Indeed, no bandwagon started by the market makers can survive for long if challenged by the longer-term investors. However, if a situation develops in which there is no agreement in official and professional circles or in the market on how high a rate is too high or how low a rate is too low, then even long-term investors begin to ride the bandwagon. If a bandwagon is not checked by official interventions, this behavior can be intensified and prolonged. For example, even if long-term investors believe that the dollar will fall sometime in the future, they may nevertheless buy dollars over the short run if the short-run trend is upward and there is no indication that the long-run constraints are beginning to bite. Each investor assumes that once the dollar turns around he or she will be able to jump off the bandwagon before the rest of the crowd. Of course, when "the trend bends" and panic sets in, a few smart or lucky ones get off, but the rest are trapped on board as the value of their investments plunges.⁹

To sum up, exchange rates under a floating-rate system are determined in speculative-asset markets where there is often a great deal of uncertainty and confusion about what the rates should be and where they are heading. In an

⁹ Keynes (1964, pp. 155-156) compares this phenomenon with "a game of Snap, of Old Maid, of Musical chairs—a pastime in which he is victor who says *Snap* neither too soon nor too late, who passes the Old Maid to his neighbor before the game is over, who secures a chair for himself when the music stops. These games can be played with zest and enjoyment, though all the players know that it is the Old Maid which is circulating, or that when the music stops some of the players will find themselves unseated."