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# FRBSF WEEKLY LETTER

March 27, 1987

## 2 + 2 = 4

Excluding infants and some pre-school children, nearly everyone accepts that two plus two equals four. Yet in our national economic life, a comparable convention of counting *and* its implications have not been as generally accepted. I refer to the accounting identity that a nation's trade deficit is a direct and exact reflection of its domestic — private plus government — spending in excess of the national output.

The failure of our society to instruct its citizenry in this elementary economic accounting can have serious consequences. Policymakers may be misled into relying solely on dollar depreciation to reduce U.S. trade deficits without doing anything about excess domestic spending. Congress and the public may be misled to clamor for trade barriers to protect domestic industries without perceiving the futility and potential destructiveness of those barriers. The nation awaits a turnaround in the trade balance, not realizing that there can be no reduction in the trade deficit without a decline in excess domestic spending.

### Internal-external balance

The accounting relationship between the trade balance and excess domestic spending is actually quite simple. Domestic spending consists of household consumption, business investment, and government expenditures. National output is equal to domestic spending minus imports (excluding from domestic spending those goods and services purchased from abroad) plus exports (adding those goods and services that are sold to foreigners).

Since the trade balance equals exports minus imports, simple arithmetic requires that it must also be equal to national output minus domestic spending. In other words, a nation's trade deficit is an exact mirror image of its excess domestic spending. The only way a nation can reduce its trade deficit is by reducing its excess domestic spending. This identity between the trade balance and the domestic spending balance is called the "internal-external balance" identity.

For analytical purposes, it is useful to break up the domestic spending balance into a *private* spending balance and a *government* spending balance. The private spending balance is equal to private income (household after-tax income plus business retained earnings) minus private spending (household consumption plus business investment) — or, more concisely, the private spending balance is equal to the private savings-investment balance. The government spending balance is simply the difference between government tax revenues and expenditures — or, in short, the government budget balance.

Finally, since the trade balance is identically equal to the domestic spending balance, and the domestic spending balance consists of the private savings-investment balance and the government budget balance, the trade balance must, therefore, at all times be identically equal to the sum of the *private savings-investment balance* and the *government budget balance*.

### Three episodes of dollar depreciation

This last identity provides a useful tool for comparing the current developments in the trade balance after two years of dollar depreciation with developments during past episodes of dollar depreciation.

Since the end of World War II, there have been two periods of steep dollar depreciation prior to the current one: 1971Q1-1973Q3 and 1977Q1-1978Q4, when the dollar declined 22 percent and 19 percent, respectively, against an average of other major industrial countries' currencies. The accompanying charts show that during both episodes the trade balance (in bars) began to improve from the fifth or sixth quarter after the start of dollar depreciation. During the present episode, from 1985Q1 to 1986Q4, the dollar depreciated by 32 percent, yet seven quarters after the start of the decline, there was still no trade turnaround.

The charts also show how the private savings-investment balance and the government budget

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balance behaved in each episode. During both of the earlier episodes, the trade turnaround was reflected in a steady improvement in the government budget balance — from a deficit to a surplus — that more than offset a significant deterioration in the private savings-investment balance. During the present episode, in contrast, the huge and persistent trade deficit has been reflected almost exactly in a huge and equally unyielding government budget deficit, with only a slight deterioration in the savings-investment balance.

## Lessons

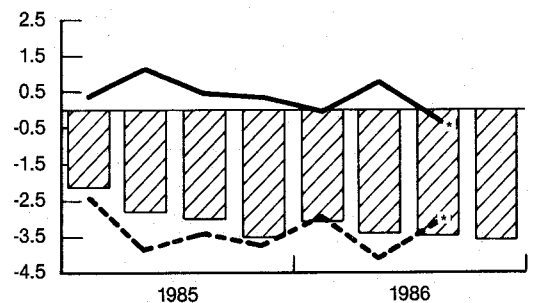
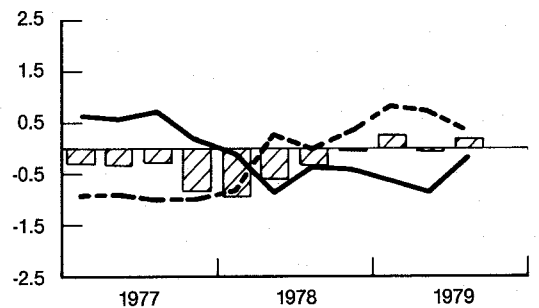
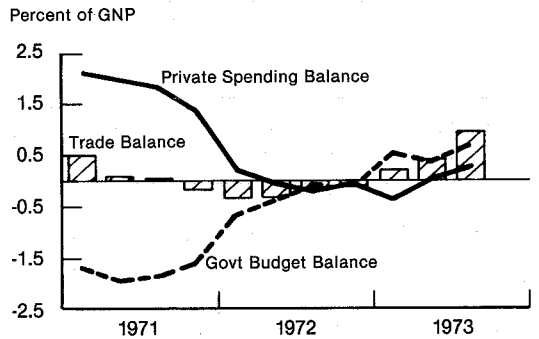
Three lessons can be learned from this analysis. First, barring a severe recession this year, which few foresee, a substantial reduction in the government budget deficit is necessary for significant improvements in the trade balance. It is necessary because, in the past, the private savings-investment balance has followed a counter-cyclical pattern: falling when business prospects brightened and hence investment rose, and rising when business prospects dimmed and investments declined. Savings has remained relatively stable through business fluctuations.

Hence, unless there is a severe recession in the near future, the private savings-investment balance is unlikely to improve significantly, and most of the internal balance counterpart to any improvement in the trade balance would have to come from a substantial reduction in the government budget deficit.

Second, protectionist measures will be ineffective against international competition as long as excess domestic spending persists. Typically, protectionist measures are intended to protect specific industries, such as automobiles, steel, textiles, shoes, dairy products, against imports. Even if the measures were to succeed in keeping jobs in the protected industries — which, according to recent studies, they don't — they would not protect jobs for the nation as a whole unless they reduced the nation's total trade deficit.

Squeezing a balloon from one end will only make the balloon bulge out from another end, *unless enough air is let out*. Similarly, without a significant reduction in excess domestic spending, protectionist measures would only redistribute import injury from politically strong

## Private Spending Balance + Government Budget Balance = Trade Balance



\* Data for 1986Q4 not yet available.

industries to the politically weak. Moreover, if foreign nations were to retaliate, the balloon would collapse, both exports and imports would shrink, and the whole nation would suffer the consequences.

Third, again barring a severe recession in the near future, dollar depreciation also will not be effective in reducing the U.S. deficit without significant declines in the government budget deficit. This point was implied by the first lesson but is worth making explicitly because most of the popular discussions have emphasized the role of

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dollar depreciation rather than a decline in domestic spending in reducing the trade deficit.

Although the trade balance *tends* to improve as a result of dollar depreciation, which makes our exports cheaper to foreigners and imports more expensive to U.S. residents, the tendency can be swamped by the continued strength of domestic (private and government) spending. The mirror image of undiminished excess domestic spending, in spite of dollar depreciation, is a continued, large trade deficit.

This appears to have been exactly what happened in 1986. During the first three quarters of the year, the volume of exports increased by 3 percent, but the volume of imports rose by 11 percent, both at seasonally adjusted annual rates. The trade deficit remained the same in relation to national output (3.5 percent) in 1986Q3 as in 1985Q4 only because the deterioration was offset by 2.4 percent growth in national output.

The lack of improvement in the trade balance is reflected in an equally large and persistent budget deficit (fluctuating around 3.5 percent of the national output), with no assistance from the private savings-investment balance (fluctuating around the zero-percent line). With no decline in domestic excess spending, there can be no turnaround in the trade deficit, despite the large dollar depreciation.

### Conclusions

In concluding, it is useful to point out what this analysis does *not* imply. First, the analysis involves reasoning from definitions and identities; it does not deal with causality. Specifically,

it says nothing about the adjustment mechanism through which a reduction in the budget deficit would bring about a decline in the trade deficit. Within the scope of this *Letter*, it suffices to say that a reduction in the budget deficit would free resources previously absorbed in domestic spending for use in expanding exports and replacing imports.

Second, although it focuses on excess domestic spending, the analysis does not deny that dollar depreciation, foreign output growth, and foreign trade restrictions could significantly affect a nation's trade balance. However, these factors will reduce the trade deficit only if they reduced domestic excess spending. Thus far, they have not.

In short, as a nation, we cannot rely on dollar depreciation, stronger foreign growth, reductions in foreign trade barriers or, worse, our own trade protectionism, to reduce the trade deficit significantly. Barring a severe recession, which few foresee and none wishes to see, there is no alternative but to cut the budget deficit — drastically.

What then are the prospects for such a deficit reduction? For 1987, contrary to popular perceptions, most economic forecasters estimate a decline in the federal budget deficit of between \$30 billion and \$50 billion from its level of about \$210 billion in 1986. If income growth remains moderate, which will keep investment demand relatively weak, there will quite likely be a significant reduction in excess domestic spending, and hence the trade deficit, this year.

**Hang-Sheng Cheng**

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### MONETARY POLICY OBJECTIVES FOR 1987

Federal Reserve Chairman Paul Volcker presented a report to the Congress on the Federal Reserve's monetary policy objectives for 1987 on February 19. The report includes a summary of the Federal Reserve's monetary policy plans along with a review of economic and financial developments in 1986 and the economic outlook in 1987. Single or multiple copies of the report can be obtained upon request from the Public Information Department, Federal Reserve Bank of San Francisco, P.O. Box 7702, San Francisco, CA 94120; phone (415) 974-2246.

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# Research Department Federal Reserve Bank of San Francisco

## BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT

(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding	Change from	Change from 3/5/86	
	3/4/87	2/25/87	Dollar	
Loans, Leases and Investments <sup>1 2</sup>	203,558	- 1,293	- 642	- 0.3
Loans and Leases <sup>1 6</sup>	182,767	- 1,242	- 2,283	- 1.2
Commercial and Industrial	53,450	- 240	- 300	- 0.5
Real estate	67,647	130	1,408	2.1
Loans to Individuals	37,097	- 573	- 3,180	- 7.8
Leases	5,454	0	- 200	- 3.5
U.S. Treasury and Agency Securities <sup>2</sup>	13,723	- 38	2,747	25.0
Other Securities <sup>2</sup>	7,069	- 11	- 1,106	- 13.5
Total Deposits	209,840	4,827	5,966	2.9
Demand Deposits	54,302	3,860	4,462	8.9
Demand Deposits Adjusted <sup>3</sup>	35,969	1,560	3,099	9.4
Other Transaction Balances <sup>4</sup>	19,839	833	4,194	26.8
Total Non-Transaction Balances <sup>6</sup>	135,699	134	- 2,690	- 1.9
Money Market Deposit				
Accounts—Total	46,457	- 2	753	1.6
Time Deposits in Amounts of \$100,000 or more	32,414	- 170	- 5,934	- 15.4
Other Liabilities for Borrowed Money <sup>5</sup>	23,827	- 637	- 3,059	- 11.3
<b>Two Week Averages of Daily Figures</b>	Period ended 2/23/87	Period ended 2/9/87		
<b>Reserve Position, All Reporting Banks</b>				
Excess Reserves (+)/Deficiency (-)	45	111		
Borrowings	7	6		
Net free reserves (+)/Net borrowed(-)	38	106		

<sup>1</sup> Includes loss reserves, unearned income, excludes interbank loans

<sup>2</sup> Excludes trading account securities

<sup>3</sup> Excludes U.S. government and depository institution deposits and cash items

<sup>4</sup> ATS, NOW, Super NOW and savings accounts with telephone transfers

<sup>5</sup> Includes borrowing via FRB, TT&L notes, Fed Funds, RPs and other sources

<sup>6</sup> Includes items not shown separately

<sup>7</sup> Annualized percent change