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Did Foreign Investors Cause Asian Market Problem?

The role that foreign portfolio investors have played in Asia's ongoing financial market crisis has been a topic of much speculation and debate. In many countries, fickle or downright sinister foreigners have been blamed for driving down currencies and stock prices. Meanwhile, the broader question of whether free flow of capital is really such a good thing is now being taken up even in the United States. What's been missing, though, is much empirical data on the role of hedge funds, mutual funds, and other foreign institutional investors in the market meltdowns of 1997. Two new NBER Working Papers, one focusing on Southeast Asian currency markets and the other on the Korean stock market, attempt to fill that gap, and both find little or no hard evidence that foreign investors were behind the market declines.

Hedge funds that speculate in currencies around the globe have been the most oft-cited scapegoats for Southeast Asia's meltdown. Last year, Malaysian Prime Minister Mahathir Mohamad wrote in the *Wall Street*

Journal that hedge fund operators such as George Soros had driven down the Malaysian ringgit "to enrich themselves and their rich clients." But in **Hedge Funds and the Asian Currency Crisis** (NBER Working Paper No. 6427), **Stephen Brown, James Park**, and NBER Research Associate **William Goetzmann** find no indication that major

used by Brown, Park, and Goetzmann, though. Because hedge funds release no data on their holdings, the three researchers had to estimate exposures to the ringgit and other currencies by correlating the hedge funds' returns with exchange rate changes. Brown, Park, and Goetzmann acknowledged that these calculations may misrepresent the funds'

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hedge funds profited from the collapse of Malaysia's ringgit or other Southeast Asian currencies during the summer and early fall of 1997. In fact, the ten large hedge funds they studied do not appear to have had large exposures—negative or positive—to the ringgit in the summer of 1997, and they appear to have been buying into the currency as it collapsed in August and September 1997.

There are problems with the data on hedge funds' currency exposures

true exposures. Still, they argue, if Soros rigged the ringgit's collapse so he could profit from it—as Malaysia's Mahathir alleged—it is curious that his three funds only broke even during the meltdown.

In **Do Foreign Investors Destabilize Stock Markets? The Korean Experience in 1997** (NBER Working Paper No. 6661), **Hyuk Choe, Bong-Chan Kho**, and NBER Research Associate **Rene Stulz** have much more data to work with. Because of restrictions on foreign ownership of

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South Korean corporations, the Korean Stock Exchange keeps detailed records of stock purchases and sales by foreign investors. Examining data from 1996 to the end of 1997, Choe, Kho, and Stulz find ample evidence that foreign investors behave in a manner that could be destabilizing. They move in herds, often buying and selling the same

stocks at the same time, and they engage in positive feedback trading—that is, they buy stocks that have recently gone up in price and sell stocks that have recently gone down. But when the three researchers tried to pin down evidence that stampeding foreign investors started or even exacerbated the Korean stock market collapse of the last three months

of 1997, they could find almost none. After examining days, and five-minute periods within trading days, when foreign selling was much higher than foreign buying on the Korean exchange, they concluded that “there is no evidence that large foreign selling is a prelude to falling stock prices.” —Justin Fox

Lessons from Latin American Capital Flows

The recent history of capital flows to Latin America is a tumultuous one: first there was the flood of dollars from newly rich Middle Eastern oil exporters, recycled as loans from U.S. and European banks, that washed over the region starting in the mid-1970s. Then came the Mexican debt default of 1982, which set off an economically devastating outflow of capital from the region that lasted for most of the 1980s. In the early 1990s the capital flows resumed, with portfolio and direct investment this time playing a bigger role than bank loans. The Mexican

capital mobility from wreaking havoc.

“During the last few years the Latin American countries have been a laboratory of sorts, where almost every possible approach towards capital mobility has been tried,” Edwards writes. The danger of one approach, letting capital flow as it will, is that capital flows into a country exert upward pressure on the country’s currency. If economic growth keeps up with that pressure, this isn’t a problem. If it does not, then the country’s currency becomes overvalued and its economy loses competitiveness. That means that at some point, capital flows must reverse and the exchange rate must fall,

are low, while a Latin American central bank generally has to pay high interest rates to get investors to buy its securities. Also, the high interest rates on the securities issued by the central bank can bring even higher capital inflows, thus defeating the entire purpose of the intervention.

The government of Chile, however, has had some success with a nominal exchange rate band. That is, the government commits to keeping the Chilean peso exchange rate from rising too high or falling too low against a basket of three foreign currencies. The band is not fixed; its rate of “crawl” is determined by inflation rates in Chile and abroad. And while the band has not entirely prevented real appreciation of the Chilean peso as capital has poured into the country in recent years, it has maintained it at a controlled level.

Probably the clearest way in which developing countries can prevent changes in capital flows from leading to financial panics is by strengthening their banking systems. The foreign investors putting money into Latin America appear to have become more sophisticated over time, coming to understand that there are significant differences among regions and countries. But the weak financial situation and inadequate government supervision of commercial banks in many Latin American countries mean that those countries are still extremely vulnerable to financial crises when capital inflows reverse.

—Justin Fox

“Capital controls, as used in Chile and Colombia, have simply changed the composition of capital inflows, and had little effect on overall flows.”

peso crisis of 1994 slowed this inflow, but unlike the debt crisis of the 1980s it hasn’t stopped it.

These roller-coaster flows of capital have posed huge challenges for Latin American governments, and the effectiveness of those governments’ responses provide lessons for other emerging-market nations, contends NBER Research Associate **Sebastian Edwards**. In **Capital Inflows Into Latin America: A Stop-Go Story?** (NBER Working Paper No. 6441), Edwards reviews the history of the region’s capital flow experiences and concludes that there are signs that both Latin American governments and outside investors are getting better at keeping

which seldom happens smoothly.

One response to this volatility has been the use of capital controls, such as minimum stay requirements for foreign direct investment and reserve requirements on loans. But Edwards argues that such capital controls, as used in Chile and Colombia, have simply changed the composition of capital inflows, and had little effect on overall flows.

Another strategy is sterilized intervention, by which a country’s central bank buys foreign exchange (often issuing securities to pay for it) in an attempt to drive down the price of its own currency. This tactic can be really expensive, since interest earnings on international reserves

Sound Monetary Policy Supports a Healthy Economy

Since the early 1980s, the U.S. economy has enjoyed the desirable combination of low inflation and sustained growth. Yet, in the 1960s and 1970s, the economy was battered by runaway prices and four recessions. What accounts for this striking difference in performance? Monetary policy is an important factor in explaining the economic divide, according to **Richard Clarida, Jordi Gali, and Mark Gertler** writing in **Monetary Policy Rules and Macroeconomic Stability: Evidence and Some Theory** (NBER Working Paper No. 6442).

Of course, many economists and investors agree that the Federal Reserve has done a fine job under the leadership of Paul Volcker and his successor, Alan Greenspan. A similar consensus exists that monetary policy was far from successful during the decade and a half before Volcker became Federal Reserve chairman in 1979. This paper delves into key differences in the way monetary policy was conducted pre- and

post-Volcker. It then looks into whether a marked change in monetary strategy contributed to the dramatic shift in macroeconomic performance.

The primary difference in policy regimes involves the Fed funds rate, the rate of interest charged for overnight money and the principal instrument for conducting monetary policy. In the pre-Volcker years, the Fed allowed real short-term interest rates to drift lower even as anticipated inflation rose. True, the Fed did hike nominal interest rates, but

loomed. "Our results thus lend quantitative support to the popular view that not until Volcker took office did controlling inflation become the organizing focus of monetary policy," say the researchers.

But how does this change in Fed monetary policy rules affect the economy's stability or lack of it? The authors argue that one possibility is that self-fulfilling changes in expectations allowed for bursts in inflation and output in the pre-Volcker years. According to this view, individuals rightly anticipated that the Fed

"In the pre-Volcker years, the Fed allowed real short-term interest rates to drift lower even as anticipated inflation rose."

often by less than expected inflation, say the authors. Thus, policy did not act to stabilize the economy which would have required real interest rates to rise in response to expected inflation.

In distinct contrast, during the Volcker-Greenspan era, the Fed has raised both real and nominal rates when the specter of higher inflation

would accommodate a rise in expected inflation by letting short-term real rates decline. No longer. The monetary rules followed by the Fed under Volcker and Greenspan preclude any similar self-fulfilling fluctuations in economic activity. The Fed adjusts interest rates sufficiently to stabilize any changes in expected inflation. —Chris Farrell

Sentence Enhancements Reduce Crime

In recent years, almost every state has adopted some form of "sentence enhancements" as a way to fight crime. These laws come under a variety of names including "three strikes and you're out," determinate sentencing laws, and repeat-offender enhancements. Regardless of the name, they all share one common feature: stiffer punishments for offenders committing the most serious crimes.

In **Using Sentence Enhancements to Distinguish between Deterrence and Incapacitation** (NBER Working Paper No. 6484), **Daniel Kessler** and **Steven Levitt** analyze the outcome of one such

law: California's Proposition 8. Passed by popular referendum in 1982, this law requires courts to lengthen the sentence of repeat offenders in cases of willful homicide, forcible rape, robbery, aggravated assault with a firearm, and burglary of a residence. Kessler and Levitt find that the law requiring longer sentences has been effective in lowering crime. Within three years, crimes covered by the law fell an estimated 8 percent. Seven years after the law changed, these crimes were down 20 percent.

In order to obtain these estimates, the authors collected data on crimes covered by Proposition 8 and on a set of crimes that was exempted from the law (burglary of a non-res-

idence, aggravated assault without a firearm, simple assault, and larceny). By comparing California's crime rates for these two sets of crimes before and after Proposition 8 to rates in the rest of the nation, they can isolate any causal effect of the law change. Prior to the passage of Proposition 8, California's experience with the two sets of crimes mirrored that of the United States as a whole. Immediately after the law changed, crimes covered by Proposition 8 fell in California compared to the rest of the nation. Crimes not eligible under Proposition 8, however, showed no such pattern.

The timing of the declines in crime also sheds light on the reasons why crime fell. The primary effect of

Proposition 8 was to increase the sentence length of criminals who would have gone to prison even without the law. Thus, for the first few years after the law changed, it had no impact on the size of the prison population: everyone affected by the law would have been behind bars anyway. The authors argue that the immediate decreases in crime—

after the law's change they were still locked up, rather than out on the streets committing crime.

The results of this study are particularly relevant to the spread of "three-strikes laws" which entail extremely long sentences upon a third conviction of a crime. If criminals are effectively deterred by such laws, then it is possible that both the

incapacitation play an important role in reducing crime under Proposition 8 suggests that the results of enforcing "three strikes" laws will be neither as successful as supporters of the law argue nor as disastrous as critics have predicted.

As Kessler and Levitt note, "a direct empirical test of three-strikes is not possible because of the failure of states to enforce such drastic laws in spite of having them on the books." Twenty-four states have passed such laws since 1993, but only California has widely applied its statute. Prosecutors and judges are reluctant to use the three-strikes laws when the punishment for a minor offense, say drug possession or a property crime, is so extreme. The authors conclude that sentence enhancements that are broader in scope and less punitive, such as Proposition 8, may ultimately prove more effective in fighting crime than the three-strikes laws since the former are more likely to actually be enforced. —David R. Francis

"...the law requiring longer sentences has been effective in lowering crime. Within three years, crimes covered by the law fell an estimated 8 percent. Seven years after the law changed, these crimes were down 20 percent."

roughly half of the overall decline—therefore must be attributable to deterrence. Criminals, fearing the harsher sentences that awaited them, reduced their illegal activity.

The fact that the impact of the law's change continued to grow steadily over time suggests that incapacitation also helped to reduce crime. Because convicted criminals were serving longer sentences, years

amount of crime and the number of prisoners can decline. On the other hand, if incapacitation is the only effect, then such laws can lead to the imprisonment of individuals long after their active criminal years are over. Such a geriatric prison population is an extremely inefficient use of resources, since criminal activity declines rapidly as individuals age. The fact that both deterrence and

Widows Choose to Live Alone

The share of elderly widows living alone rose from 18 percent in 1940 to 62 percent in 1990. But there is no reason for anxiety about the increasing unwillingness of younger generations to care for their parents, or the breakdown of the American family.

In **Social Security, Economic Growth, and the Rise in Independence of Elderly Widows in the 20th Century** (NBER Working Paper No. 6511), **Kathleen McGarry** and **Robert Schoeni** show that Social Security and other public transfers may "crowd out" the family, reducing the number of more traditional intergenerational arrangements. On the whole, people like their privacy: before 1935, many widows were too poor to live alone. But the improved economic status of the elderly, in particular the intro-

duction and expansion of Social Security, has given widows the option of living independently.

During the 50 years preceding the Social Security Act of 1935, the living arrangements of elderly widows were virtually unchanged. Roughly 10 percent lived alone, 70 percent with adult children, and the rest in institutions or with other individuals. Intergenerational living arrangements began to change after the introduction and expansion of Social Security. The share of widows living with adult children declined from 59 percent in 1940 to 20 percent in 1990. Today Social Security is the most important source of income for the majority of widows. For widows not receiving Social Security income, or who have sufficiently low benefits, the Supplemental Security Income program provides a guaranteed source of income. Assistance of this sort was particularly important in the early

years of the Social Security program when benefits were far from universal.

There also have been substantial changes in health, race, immigrant status, schooling, and fertility that could have had an effect on living arrangements. To isolate the effect of income, McGarry and Schoeni use evidence from the last six censuses, more than 50 years of observations. They incorporate a direct measure of Social Security income of the elderly over the entire period in examining the choice of living in an institution, living with others, as well as living with adult children or alone. They show that Social Security accounts for nearly two-thirds of the rise in elderly widows living alone. Changes in demographic factors account for a relatively small share of the change. Greater income translates into a higher probability of widows living alone throughout the period, but does not indicate a change in pref-

erences over time.

Because Social Security and SSI may affect people with different incomes quite differently, McGarry and Schoeni consider both of them along with schooling (a proxy for lifetime wealth) as factors in the decision to live on one's own. They find substantial differences among groups of widows with different levels of schooling, both in terms of the level of independent living and in the importance of Social Security and SSI income on the decision to live independently. Widows with 13 or more years of schooling are over 5 percent less likely to live with children relative to those with 12 years of schooling. For widows with more

than 8 years of schooling a \$100 increase in monthly Social Security payments decreases the probability of living with children by nearly 7 percent. The effect is 1.15 percent smaller for those with just 0–4 years of schooling, who may have lower

with children. Within the sample used, the number of children born decreased by 30 percent, from more than 4 in 1940 to around 3 in 1990. Additional children increase the probability that a widow will live with an adult child, lending support

“Social Security accounts for nearly two-thirds of the rise in elderly widows living alone.”

than average benefits or who may be less likely to have an earnings history that entitles them to benefits.

The most significant factor among sociodemographic changes is fertility. If the elderly do not live alone or in an institution, they most often live

to the argument that a decline in fertility had been partly responsible for the changes in living arrangements. The authors find that an additional child increases the probability of living with a child by close to 3 percent.

—Andrew Balls

Economic Benefits of Heart Attack Treatments Outweigh the Cost

Medical treatment of cardiovascular disease, and particularly of heart attack patients, continues to grow more expensive every year. Such treatment has yielded measurable success in life extension. But in purely economic terms, does the benefit justify the cost? In **The Costs and Benefits of Intensive Treatment for Cardiovascular Disease** (NBER Working Paper No. 6514), **David Cutler, Mark McClellan, and Joseph Newhouse** conclude that it does. Their findings provide a framework for measuring overall productivity of the medical care sector, a matter of no small consequence in terms of both the national health and the national economy.

Cardiovascular disease has been the leading cause of death in the United States throughout this century, and in the coming decades is likely to become the leading cause of death world-wide. Still, between 1950 and 1990 the mortality rate for sufferers of cardiovascular disease has fallen by 60 percent, and it continues to fall to this day. In addition,

the health of cardiovascular disease survivors is improving.

But knowing that cardiovascular health has improved dramatically is not enough, the authors say, especially since the cost of achieving that improvement has been so high. Recent estimates suggest that cardiovascular disease costs the United States \$110 billion annually. The average cost to traditional health insurers for the first 90 days following a heart attack is \$38,501. Medicare spends over \$14,000 per patient on hospital bills in the year after a heart attack, plus additional amounts for physicians and outpatient care. Moreover, these amounts are rising at a rate of 4 percent annually.

The NBER study focuses on heart attack mortality for a number of reasons: heart attacks are a common and very serious consequence of cardiovascular disease; heart attacks are expensive to treat; and data on heart attack treatment are easier to obtain than are data for other cardiovascular conditions. Through a comprehensive survey of studies conducted over the last 15 years, Cutler, McClellan, and Newhouse

determine that the treatment most responsible for reducing mortality for heart attack patients is pharmaceuticals (aspirin, beta blockers, thrombolytic drugs). To a lesser degree, mortality reduction may be attributed to invasive procedures (for example, bypass surgery or angioplasty). Other factors, such as “secondary prevention” and individual risk reduction, play their part. But the authors conclude that by far it is the increasing intensity of medical treatment that extends the lives of heart attack patients. Such treatment is also responsible for the increased costs.

Cutler, McClellan, and Newhouse estimate that between 1984 and 1991, life expectancy after a heart attack rose by eight months (from 5 years and 2 months to 5 years and 10 months). In that same period, the cost of treating heart attack patients rose from about \$11,000 to about \$15,000. Total “heart attack spending” in the same period rose from \$2.6 billion to \$3.4 billion.

To determine whether this expenditure was worth it, the authors consider what they call the admittedly

controversial index of the dollar value of a year of life. Using a low central estimate of \$25,000 per lifeyear, they compare the estimated value of the improved heart attack survival time between 1984 to 1991—nearly \$15,000—to the increase in

resulting improved health, the implication is that the cost of living for heart attack victims is actually falling.

The final issue that Cutler, McClellan, and Newhouse undertake is the effect of managed care on the treatment of heart attacks in terms of

“We are better off having spent our money on heart attack care than we would have been if the money had been spent elsewhere. Moreover, in view of the value of the resulting improved health, the implication is that the cost of living for heart attack victims is actually falling.”

the costs of heart attack care over the same period—\$4,000. They conclude that we are better off having spent our money on heart attack care than we would have been if the money had been spent elsewhere. Moreover, in view of the value of the

cost-benefit analysis. They do so because while only 25 percent of the privately insured population was in managed care in 1987, some 75 percent of the privately insured population is enrolled in managed care today. The researchers study the

complete claims records of a large HMO in Massachusetts over a two and a half year period, and of Massachusetts hospital records for a similar period. Treatment and cost data clearly indicate that while the cost-conscious HMOs pay out considerably less than traditional insurance indemnifiers, the patients receive essentially the same care.

The authors therefore surmise that while we pay more for heart attack care than we used to, we get more in return. They caution against generalizing this finding to other types of medical care. But the authors believe that their results provide a framework for measuring productivity in the medical care sector, which they call a longstanding problem in national income accounting.

—Matt Nesvisky

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