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Are Global Imbalances Due to Financial Underdevelopment in Emerging Economies?

Though much of the current discussion about global imbalances focuses on the swelling current account deficit in the U.S., the other side of this imbalance itself presents a puzzle. Specifically, the increase in U.S. international liabilities must be matched by an increase in assets elsewhere, and, in the current environment, a prominent "elsewhere" is among emerging Asian economies. For example, according to the *World Economic Outlook* (IMF 2007), in 2006 emerging Asian countries (including China, India, South Korea, and Singapore) accumulated $373.9 billion in reserves, a large portion of which is in the form of U.S. Treasury securities and other dollar-denominated assets. At the same time, these emerging-market countries also have relied to a large degree on private foreign direct investment (FDI) to finance domestic firms, receiving $40.5 billion in net private inflows (including FDI and portfolio equity investment) that year. So the puzzle is, why would emerging-market countries rely so heavily on foreign equity capital to finance the operations of local firms when they have access to a large pool of domestic savings that they are lending to the rest of the world?

Several theories about this puzzle have been suggested, but most do not fully explain it. For example, one theory holds that emerging markets are using foreign financial capital markets instead of their domestic ones to allocate capital and are holding reserves as collateral for this international financing; however, this theory must deal with the criticism that reserves held by foreign sovereign governments cannot be repossessed in the event that the financing by international investors is not repaid. Another theory holds that emerging markets are accumulating reserves to depress the value of their currencies and encourage exports, but this theory cannot explain why equity sales are happening at the same time.

This *Letter* presents recent research on a new explanation for both the export of savings and the import of equity by emerging countries: their level of underdevelopment of the financial sector compared to that of more advanced countries. Specifically, financial underdevelopment in emerging markets can lead to both oversaving by domestic agents and undervaluation of domestic firms, which encourages international investors to purchase equity there.

Financial market underdevelopment

Financial markets in many emerging economies can be characterized as "underdeveloped" because they operate with various so-called "imperfections," which include, for example, government overregulation, inefficient legal systems, and direct government lending that competes with private companies. Two particularly important imperfections that recent research focuses on are poorly enforced financial contracts and shallow or immature capital markets.

One fairly common example of poor enforcement of contracts is when the government grants blanket debt amnesties for large groups, such as farmers in times of drought and homeowners in times of rapid house price declines. Even when domestic residents may wish to repay their debts, national governments may shut down the financial system when renegotiating their own debts with foreign lenders, as Argentina did in 2001. Such ineffective enforcement means that, when debtors default, local and foreign creditors find it costly to recover their investment or the value of the collateral. The lack of effective enforcement of financial contracts raises the cost of lending, increases the spreads between borrowing and lending rates, depresses the domestic rate of return to savers, and increases borrowers' cost. Poor contract enforcement may even prevent the offering of sophisticated finan-

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cial contracts that domestic residents could use to diversify their risks.

Countries with underdeveloped financial systems generally have shallow capital markets; that is, the domestic bond and equity markets are generally not big or active enough to offer a lot of liquidity, and only the largest firms can raise domestic financing for their operations. Such immature and illiquid capital markets not only raise the cost of financing, but they also tend to be poor at channeling resources from savers to good investment opportunities. Many times, lending just goes to the largest firms with the most established relationships with banks, and small productive firms are often unable to get the financing they need.

Financial underdevelopment and "precautionary savings"

An important function of financial markets is to pool and distribute risk. Examples in developed countries are numerous. Many people hold insurance policies to protect themselves against the possibility of losses from events such as fires, floods, earthquakes, disease, and premature death. They also save from current earnings for retirement in diversified portfolios, which may ensure their future income in case their current employer is not able to fulfill pension obligations. They borrow to purchase a house, smoothing out living costs due to changes in rents. Firms use sophisticated financial instruments to smooth their cash flows.

All of these financial instruments generally exist because they can be enforced by all parties: insurance companies have to pay in case of a covered adverse outcome, and mortgage lenders can repossess a house in case a borrower defaults on his obligations. Furthermore, deep and liquid financial markets support the use of sophisticated financial instruments. In countries with underdeveloped financial systems, many of these instruments are not offered, and thus people there face more risks that they cannot diversify.

Economic theory holds that people will tend to oversave when faced with uncertainty about future income and little access to financial instruments that allow them to diversify risks. These extra savings are termed "precautionary savings." Mendoza, Quadrini, and Ríos-Rull (2007) formulate a simple two-country model in which one country (the developed country) has stronger financial contract enforcement and thus has wider access to insurance vehicles than the other (the developing country). If the two countries are precluded from trading in international capital markets, the country with weaker contract enforcement has a larger amount of precautionary savings than the other. The large supply of these savings tends to depress the developing country's interest rate relative to the developed economy. When the two economies are allowed to trade in international capital markets, the interest rates will tend to equalize, and the developing country will lend to the developed country. This simple model can generate a current account deficit for the developed country. The developed country's net liabilities grow to over 40% of its output, even larger than what we have observed in the United States.

The cases of Mexico during the peso crisis in 1994 and South Korea during the Asian financial crises of 1997 illustrate that precautionary savings can also play a role in developing countries with relatively more developed financial systems. These countries were hit by large external shocks and could not use international capital markets to smooth out their risks because of poor domestic contract enforcement. Durdu, Mendoza, and Terrones (2007) use another economic model to show that emerging markets that face large external shocks have an incentive to hold a large amount of reserves for precautionary saving as a "war chest" to use in the event of future crises, even when its people and firms can smooth out purely domestic income fluctuations.

Financial underdevelopment and equity sales

Both shallow markets and imperfect enforcement of financial contracts can drive domestic firms to seek external financing for their operations through equity sales. As stated earlier, shallow markets are not very efficient at channeling resources from savers to domestic firms, thus raising the cost of such financing. In terms of imperfect enforcement, Arellano, Bai, and Zhang (2007) present evidence from Ecuador that small firms are financially constrained and tend to use too little debt relative to smaller firms in the United Kingdom, and the authors associate these constraints with the lack of financial contract enforcement. Emerging market firms also find it hard to borrow internationally to finance domestic investment because lenders may fear that their loan contracts will not be en-

forced, much as happened during the Russian crisis of 1996, the Asian crises of 1997, and the Argentinean default of 2001, when people and firms in those countries were not allowed access to their savings to fulfill their financial obligations.

Some economic theories hold that foreigners will tend to purchase firms in emerging markets that are lacking in property right enforcement or in the ability to monitor domestic firm managers. However, newer theories focus on how financial market underdevelopment can also lead to equity sales by depressing the share price of domestic companies. Smith and Valderrama (2007) present a simple model in which domestic firms face increasing costs to access international capital markets. In these circumstances, the value of the firm is depressed relative to the value of a firm with similar investment opportunities but with better access to financing. If international investors can purchase the firm and relax those financial frictions by using financing from their own more advanced countries, then they will find it profitable to purchase the domestic firms, as they are relatively cheap. Thus, even though there is a potential pool of domestic savings, domestic firms will be purchased by foreigners. This transaction shows up in the emerging market's foreign accounts as domestic sales of equity and FDI.

Conclusions

This *Letter* presents recent research that focuses on financial market underdevelopment to explain the current pattern of global imbalances. In particular, financial market underdevelopment can generate lending by developing countries to industrialized countries concurrently with sales of domestic equity in developing countries to foreign investors. Further economic research is needed to quantify the relative importance of this and other theories.

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