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NEW APPROACH TO REGULATING FINANCIAL MARKETS

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INTRODUCTION

The purpose of this article is to develop a positive theory for the role of the government in regulating financial markets.

The motivation for this endeavor arises from the need to address recent problems caused by financial market disruptions and crises. The abject failure of the existing regulatory architecture to detect, deter or even dampen the incidence of grand financial failures demands a reevaluation of the economic thinking that produced that existing regulatory environment.

These abject failures have put a crack in the Washington Consensus. Most of the new thinking in response has focused on the international financial institutions, that is, criticism of the policies of the IMF and World Bank. There has been a renewal of interest in the long running debate over the relative merits of floating versus fixed versus what kind of fixed exchange rates. This reworking of theoretical open macroeconomic models also lead to their extension to attempt to explain the contagion effects caused by these financial crises. …. This new and renewed thinking has not focused on the economics of financial market regulation: the analysis of the social and private efficiencies, and inefficiencies, caused by the imposition of regulatory restrictions, requirements, taxes…..

I should add that the need to begin thinking anew about the economics of financial market regulation is also motivated by several major, but not widely appreciated, regulatory changes to the U.S. financial markets. These include the revision to the Glass-Steagal separation of banking and securities activities by the Gramm-Leach-Bliley Act of 1999, a deep and broad scale deregulation of derivatives markets by the Commodity Futures Modernization Act of 2000, the new accounting rules for derivatives known as FASB 133, and the promulgation of new rules, known as "Broker-Dealer Lite," under the Securities Exchange Act that lowered the capital requirements for derivatives dealers in 1998.

The theory, as it now stands, holds that unrestricted or laissez-faire competitive equilibria are the most efficient economic arrangements.[1] This is built upon assumptions that include: financial markets are perfectly competitive and are not subject to firms with market power; devoid of market failures; devoid of externalities; do not exhibit non-convex production sets; and there are no national security concerns. The conclusions follow logically from the assumptions.

My approach is to identify inconsistencies between the actual characteristics of financial markets and the assumptions about these characteristics that serve as the foundation for economic theory. , and if I can show where the assumptions are not valid, then it throws the validity of the conclusions in doubt. And if the assumptions are altered to accommodate the actual characteristics of the financial markets, then the conclusions which logically follow from these alternative assumptions, will too be altered.

This is my contribution to beginning to this new approach.

[1]) This concept is known as Pareto Optimality where production and consumption cannot be reorganized or reallocated to increase the utility of one or more individuals without decreasing the utility of some other.

What I argue is that there are specific features about financial markets – several of which are inherent to financial markets – that violate the fundamental assumptions of existing economic thinking. I will attempt to show that financial markets and the overall economy are made more efficient by the imposition of certain regulations.

I will also describe particular policies or situations in which government regulations reflect directly reflect recognized market short-comings. The paper concludes by showing how existing (or previously existing) financial market regulations in advanced market economies address to varying degrees the problems posed by market imperfections, and how they be applied to emerging financial markets in order to both improve the efficiency of those markets and to improve their stability without resorting to difficult policies as capital controls and transactions taxes.

The assumptions are: no externalities;[2] information is costless;[3] perfect competition; no destructive competition; and no national security concerns.

The implications for this line of reasoning apply to both developed countries and less developed countries. The difference is that most developed countries are already close to the state of prudential regulation while the less developed countries are not. Part of the problem is the political will and the economic resources required to create and maintain a prudential regulatory environment. The other part is to enlighten the policy makers in those countries as to the means and merits of financial market regulation.

One very interesting conclusion to note and look out for is that a properly regulated emerging financial market will discourage the excess short-term foreign bank loans and the excess foreign exchange exposure and the overall excessive and volatile flow of funds into and out of the economy by restricting the ability of resident financial institutions to engage in a critical of financial activities. As a result, the need to protect against the dangers of a boom fueled by a surge in capital inflows, followed by a bust as capital flows out, is diminished. And the solution is not an impossibly ambitious global transaction tax, and neither is it a potentially corrupting regime of capital controls. It does not need to wait upon the benevolence of rich developed countries. Instead it resides within the sovereignty of less developed countries to fabricate their own regulatory environs.

[2]) Henderson and Quandt, "The conclusion that perfect competition leads to Pareto-optimal allocations is contingent upon the assumption that there are no external effects in consumption and production." p.267.
[3]) Henderson and Quandt, "A perfectly competitive commodity market satisfies the following conditions… (3) both firms and consumers possess perfect information about the prevailing price and current bids,." p.104.

INVALID ASSUMPTIONS ABOUT MARKET IMPERFECTIONS

The Concept of Externalities

Before proceeding into the evaluation of various fundamental assumptions, it will be useful to review the concept of externalities.[4] Bator (1958) analysis identified three types of externalities that lead to five modes of market failures. The three types of externalities were: ownership or nonappropriability externality; technical externality; and public goods externality.

There are three notions of economic externalities. They are not entirely separate but they are distinct, and so a particular economic activity might be best defined as being of one type or several types. The definitions are useful in order to understand the sources of economic externality.

The first type concerns the limits of ownership or property rights. It has been referred to by Bator (1958) as "ownership externalities" due to *nonappropriability* or inability to enforce ownership rights. This can be illustrated by the classic cases of pollution being an external diseconomy (or economic 'bad') and apple-blossoms being an external economy (or economic good) to nearby honey production.[5] It occurs because producers cannot exclude users, or control the rationing of their output among users. This applies for diseconomies such as pollution where citizens cannot exercise ownership rights for clear, quiet and safe air, space and water. Other examples include the unauthorized copying of music and other software.

Another type of externality derives from the *technical* arrangement of production. Equilibrium in such a case might fail to have a unique price or quantity. Another source of technical externality can arise from the impact of the level of industry output on the costs of individual firms. Greater output can increase the level of trained employees in the industry, but it can also drive up the cost of inputs. Its effects can be positive or negative. What makes it an externality is that its effects are not price mediated.[6]

The third type of externality concerns *public goods*. There are defined as goods (or services) in which all agents can use without diminishing the ability of others to use them. National security, a public concert and many forms of information and knowledges can be used by economic agents without it diminishing its availability for use by others.

While the discussion of the role of externalities has a long thread through the literature on economic theory, and many important contributions by the major theoreticians of the 20th century, the focus has always been on the production of commodities and to a lesser extent services. I have found no instance in which it was brought to bear on finance, prices, information and risk.

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[4]) This section draws deeply from the work by Francis M. Bator (1958), who draws from Meade (1952), Samuelson (1954, 1955), Pigou (1932), Marshall (1920) and Young (1913). I also benefited from reviewing Ferguson and Gould (??), Henderson and Quant (1971) and Ellis and Fellner (1943).

[5]) The metaphor about the bees and apple-blossoms comes from Meade (1952).

[6]) Another aspect of technical externality is involves indivisible units of inputs or outputs, and hence a non-smooth supply schedule.

EXTERNALITY OF RISK TAKING

The first violated assumption that I will address is the *external diseconomy from the activity of risk taking*. It is an inherent property of risk taking in financial markets that it can have a deleterious impact not only on those entities that are not party to the transactions and even those that do not participate in the market.

This is akin to negative external diseconomies such as pollution and congestion.

Markets can discipline internal risk management and the risk-reward relationship for ownership of internalized risk taking activities. Financial markets price securities and other transactions based on their risk-reward characteristics. Financial markets also produce incentives for risk management through the use of collateral, margin and capital.

Market cannot address and solve the collateral damage of bankruptcy and lesser events such as failure to perform on transactions obligations. This affects not only the immediate counterparties, who are supposed to internalize the credit risk of their counterparties, but also other non-counterparties in the market and others who are not in the market.

In financial markets, risk taking has an externality because bankruptcy affects more than the failing firm. Part of the impact on other firms is anticipated by their holding capital in reserve against just such problems. However, reserve capital is costly and competition between market participants drives them to avoid holding any excess capital. Therefore bankruptcy losses in excess of what they anticipate will adversely impact those firms and in turn the other firms and individuals that do business with them. This is most clearly a problem for "too big to fail" firms. If they are driven to bankruptcy or are unable to perform their usual market functions, then it will have an adverse affect on the overall economy unless the government must steps in to restore market order.

Linkages between the various investors and financial institutions, called interlinkages, are inherent in financial markets. My risk becomes your risk becomes his and her risk. Competition does not always discipline market participants against taking on more risk or too much risk. Sometimes competition punishes above normal risk taking as more and more investors decline to do business with the exceptionally risky investor. Other times competition drives down the standard for prudent investing as the competition for capital and customers pushes investors to seek higher returns by moving into riskier investments. Although competitive markets work sometimes, it is the times that they fail which justify the role of the government to provide minimal prudential regulatory standards.

Externality of risk and bankruptcy extends not just to other individual investors but also to the economy as a whole when it strikes key financial institutions such as banks that are critical to clearing payments, dealing in or clearing U.S. Treasury securities, underwriting and dealing in other bonds or interest rate derivatives. The problem is that the cost to the individual for their risk taking is less than the social cost.

Derivatives, especially OTC derivatives, make it worse by reducing transparency.
The externalities inherent in the risk-taking activities in financial markets makes it economically necessary for the government to play a role in setting prudential standards. Competitive markets

alone will not do this. This role of the government, though is not justified by some paternalistic motive to protect fools from themselves. Rather it justified by need to protect the rest of us from the fools.

One of the most glaring illustrations of this notion is the failure of LTCM

> "Had the failure of LTCM triggered the seizing up of markets, substantial damage could have been inflicted on many market participants, including some not directly involved with the firm, and could have potentially impaired the economies of many nations, including our own." Alan Greenspan before the House Banking Committee in October, 1998.

Current U.S. regulations are in fact designed to address this externality.

- capital requirements for financial institutions which are calculated based on internalization of counterparty exposure, but which also serve as buffer to other outside disturbances
- restrictions on banks' balance sheets
- segregated accounts
- speculation limits on futures and options exchanges [CFTC just filed charges against a futures trader who exceeded position limit].
- margin requirements on stock transactions and futures and options positions
- exchange trading halts and circuit breakers
- appropriate person limit to certain types of transactions
- regulatory oversight and supervision
- know-thy-customer provisions in securities laws

Prospective regulations that would further reduce the economies vulnerability to the externalities of financial market failures.

- stand still provisions for debt
- bankruptcy reform for debtors
- proper accounting rules to address the market risk of all balance sheet and off-balance sheet positions
- collateral and margin requirements for off-balance sheet and OTC positions
- proper capital requirements to address market risk exposure
- encourage the development of better clearing arrangements and organizations

Prospective regulations for developing countries include:

- limits on foreign exchange exposure
- limits on maturity exposure
- integration of these limits for balance sheet and off-balance sheet positions

EXTERNALITY OF INFORMATION

A second violation of the assumption of non externalities comes from the inherent *externalities of information* that is generated by the price formation process in financial markets. Prices are information, and that information has all three characteristics of an externality: ownership; technical; and public goods. Even some non-price market information, such as volume, open interest, volatility, serves as important externalities to other parts of the economy.

The first characteristic is of ownership externality. Price and market information is like the nectar produced by Meade's apple blossoms and which becomes an externality in the production of honey elsewhere in the economy. Pricing information is used throughout the financial markets in order to price other assets and derivatives, to make forecasts, to make investment decisions about physical investment plant and equipment and so on.

An excellent illustration of this is how the interest rate swaps market produces prices (interest rates) on the term structure of interest rates and this is in turn used as a benchmark for pricing securities in the mortgage backed securities (MSB), asset backed securities (ASB) and corporate bond markets. Similarly, futures prices from a variety of commodities are used by a wide range of investors as an indicator of future inflation.

The *price discovery* process results in the establishment of prices that are used throughout the economy as the basis for forming expectations decisions and making decisions. When the prices in other markets are used in a very direct way to set prices in other markets, this is known as price basing. For example, the prices of many commodities though the U.S. are set by quoting a basis spread above the prices set on the futures exchange. The price of number 2 yellow corn in Iowa might be priced at $0.08 below the near month futures price on number 1 yellow corn traded at the Chicago Board of Trade for delivery along the Southern Illinois River.

This type of externality, known as ownership externality, arises, as in the bee and blossom metaphor, from the absence of ownership rights to the information. The market participants in which the price is discovered derive some private benefit from the information in the price, but the social benefit is larger still. Baumol (1964) defines an externality when A's activities produce a benefit for B such that the marginal social benefit exceeds the private benefit of A, and that A is not compensated by B for that activity. This externality can cause a competitive equilibrium to fail to be Pareto optimal because not enough of A's activities will be produced.

The second characteristic is of technical externality. Product innovation, liquidity and risk shifting transactions in one market affect the efficiency of pricing and trading in other markets. This is much like the ways that production at nearby firms in an industry can generate a skilled labor force that lowers the production costs at firms that employ those skills.

This is best illustrated in financial markets by the way that interest rates derivatives such as futures on Treasury securities traded at the CBOT and futures on eurodollar interest rates traded at the CME. These instruments are an important factor in the ability of interest rate swap markets to maintain liquidity and reduce the risks (and hence bid-ask spreads) of market making trades. Other comparable examples include the role of money markets for the repurchase

agreement (repo) markets and securities lending markets that in turn add so much to the cash markets for Treasury securities and stocks.

The third characteristic is of *public goods externality*. The information contained in financial market prices is like a public good in that the consumption of that information goods does not preclude the consumption by others. It is like knowledge and research.

Grossman (1977, p. 447) makes this point on the way to other, although not contradictory, conclusions, "where all the relevant information is revealed via the price system, it is clear that there are informational externalities." He goes on to explain how if derivatives, or other financial market, prices generate information as an externality then other competing entities can get free information. Grossman's concern is that since social benefit exceeds the private benefit, then this externality will result is insufficient information being produced.

Earlier, Samuelson (1954, 1955) analyzed prices in a competitive equilibrium would fail to generate a Pareto Optimal outcome in the presence of public goods. Public goods are such that all marginal rates of substitution are equal, and not additive, in the aggregation of consumption and production. No price can achieve Pareto optimality, he showed, because a price high enough to induce production would be a price that would result in insufficient distribution and consumption. Bator (1958, p. 371) states this point well, "The set of prices which would induce profit-seeking competitors to produce the optimal bill of goods, would be necessarily inefficient in allocating that bill of goods."

These ideas applied to financial markets illuminate a problem. Private firms tend to hoard certain types of information about themselves and others.[7] Notice that OTC financial market prices are the least distributed. Yet efficient market prices depend upon perfectly informed market participants (investors).

This part of the economic foundation of the need for market transparency. In regards the nature of prices as a public good, prices and non-price market information are crucial to the creation of a *transparent* financial market place. Transparency is considered a fundamental condition to improve market safety and soundness. Yet like other public goods, the social benefit is greater than the private benefit of producing it and so too little is produced and consumed. The result, is that the competitive equilibrium in the unfettered marketplace will result in less than optimal amount of such information.

The private collection and distribution of information is limited for the following reasons. Another private firm lacks any authority or than the offer of cash payment to coax the information from market participants. That firm will also lack the complete faith and trust of market participants to protect the proprietary nature of the information and otherwise limit its distribution accordingly; to not trade ahead by using the information; and to distribute true and honest figures on the market. A private firm cannot easily establish a legacy so that a data series is consistently collected and distributed over a number of years and into the indefinite future. Lastly, the private firm must charge a price sufficient to cover its costs and this limits, often sharply, the distribution of the data and thus does not result in a market that is uniformly well

[7]) Of course there are other types of information that they pay to distribute through such activities as advertising and public relations.

informed. On the other hand, the government can overcome all these limitations and so it is no wonder that the government is responsible for much of the data collection and distribution today.

Policy Response. In recognition of these financial market short-comings, the government has intervened to improve on the situation. The following are instances of government regulation that are not inefficient and ill-conceived restrictions on otherwise efficient activities, but rather are regulatory activations that are designed to improve upon the efficiency of market outcomes.

- detect and deter manipulation and fraud
- transparency
- all perfectly informed market participants

The fact that prices play an important role in markets outside that in which they are established means that there is an externality to those prices. This basic insight is reflected in the laws written to regulate futures markets in the United States. Section 3 of the Commodity Exchanges Act, entitled "The Necessity of Regulation," states that futures are "affected with a national public interest." "The prices in such transactions are generally quoted and disseminated throughout the United States... for determining the prices to producer and consumer of commodities and the products and by-products thereof and to facilitate the movements thereof in interstate commerce."

Alternatively, when the prices are distorted by fraud or manipulation then the externality is a negative diseconomy and the role is akin to that of inflation.

Moreover, the availability of that information and its integrity is critical. Financial markets have at times been plagued by false reports and rumors. The movie "Trading Places" illustrated the critical importance of a false Department of Agriculture crop report on oranges and hence frozen orange juice. Other problems arise when the information is not equally available to all. Privately collected information tends to be hoarded or narrowly distributed.

The current policy response has been for the U.S. government to take important measures to improve transparency and the production of market information. In response to the market crash in 1929, the Securities Act of 1933 and the Securities Exchange Act of 1934 improved the quantity and quality of market information by requiring public disclosure and quarterly reporting for the public issuance and trading of securities. It also prohibited false reports on the market for securities and futures. Similarly, the prohibition against insider trading is based on the economic rationale that markets are efficient when information is equally available and insider information is the opposite of that. In addition, the government funds research, collects data on market fundamentals and distributes it broadly and cheaply. This includes information on prices, output and even crop forecasts. The rationale is that it gives everyone the same access to information about the economic factors that underlie market performance.

The externality of information that extends its importance beyond its immediate market means that fraud and manipulation are not self-policed by the market and that it is a matter of pubic interest – not just a problem for those who are defrauded or suffer the losing end of the manipulation – because they threaten the integrity of the markets i.e. of the price discovery process. Keep in mind that manipulation does not have to be grand in the old fashion way, but can consist of small changes in prices. If prices of winter wheat are off only 3 cents a bushel,

and we produce and sell at home and for export 1,612 million bushels, then it will be a $48.36 million cut in income for the farmers on the winter wheat crop alone. That same 3 cents applied to the 9.5 billion bushels of corn would affect income by $285 million – almost six times the impact. That would equal 1% of the nation's net farm income for all crops.

Similarly, consider a manipulation of 3 basis points on a new auction of Treasury securities. If the auction was for $12 billion in 30-year bonds, then the mere 3 basis points would raise the cost of borrowing to the government by $3.6 million a year or $43.2 million over the life of the security. If it were paid by the government on all outstanding Treasury securities held by the public, then it would cost the Treasury and hence us as taxpayers $1.1 billion annually.

Other problems arise when the information is not equally available to all. Privately collected information tends to be hoarded or narrowly distributed.

Prospect responses include:

- require more reporting, and collect and disseminate more information on a timely basis
- improve the quality of the information (easier for public entity to do)
- OTC reporting requirements on positions and trading activities
- public access to OTC price quotes and execution prices for all electronic exchanges, brokerages, regulated exchanges and clearing houses.

THE COSTLINESS OF INFORMATION

The existing literature focuses on moral hazard and adverse selection. The concern is that insurers would end up over-insuring because the insurers did not know how much existing insurance the insured already had or in the future would acquire. Similar thinking raised the concern about transparency. By contrast, the concern with moral hazard in the context of financial market regulation is not based on the amount or cost of information but rather the fact that it is widely expected that investors will be bailed out in the event of a crisis. Stiglitz and Weiss (1981) show that costly information results in credit rationing in competitive equilibrium and that government regulation, such as usury laws, can actually be Pareto improving. Also, information costs explain why bank deposit insurance, combined with a bank supervisor, is efficient.

The efficient financial market, the Pareto Optimal market outcome, depends on the market participants possessing perfect information or all relevant information about the market. The validity of this assumption is then made all the more reasonable as the price of information declines.[8]

Pareto efficiency assumes that everyone in the market has perfectly complete knowledge of market information. In financial markets, asymmetric or unevenly distributed information is a problem. In order for a market to function efficiently, all market participants have all relevant information about that market. However it is economically unreasonable for all customers of financial institutions to have the time to explore, collect and analyze the information necessary to

[8]) Here the price is presumed to include the total (money and time) cost of locating, purchasing, delivering and absorbing the information.

evaluate all the potentially available banks, brokers, mutual funds, insurance companies and pension funds.

Information is important to the efficient functioning of markets for several reasons. Market participants need to know prices, quantities bought and sold at that price and "quality" issues such transaction terms. Information is also important that it be public and not asymmetric or "insider" information. One problem is with the use of equity swaps by corporate executives to reduce their price exposure on stocks issued as compensation and to manipulate their disclose requirements and tax reporting on those options.[9]

In that context, one of the useful roles of the government in the financial markets is to provide regulatory supervision in order to attest that the financial institution meets the minimum standards for safety and soundness set for that type of financial firm. It does not guarantee against any one firm's difficulties or bankruptcy, but it provides useful information that the firm is well managed, that it is meeting its regulatory requirements, its books are properly audited, and that its earnings are properly reported.

Another related market imperfection is the problem of asymmetric information. This can lead to credit rationing on the part of lenders who cannot obtain sufficient information to prevent adverse selection and cannot restrict (and more to the point enforce restrictions) on all needed constraints on borrowers' behavior to maximize repayment. (Stiglitz and Weiss. 1981)

NO DESTRUCTIVE COMPETITION

In order for competition in the marketplace to have efficient and beneficial outcomes, there must be rules in place so that the competitive activities do not extend to destructive practices such as fraud and industrial sabotage.

In financial markets, there is always a real and present danger of fraud. The reliance by markets on prompt, up-to-the-minute information makes markets subject to being defrauding by rumors, false reports on the market, deceptive sales pitches as well as insider-trading. The reliance on transactions conducted over the phone or internet, and transactions with new and unfamiliar parties makes these markets particularly subject to dishonest trading, misappropriation of funds, and simple theft.

In response, the government regulators have required the segregation funds by brokers to protect individual investors' money from the misuse by the broker, the maintenance of an audit trail, and the regular reporting of financial statements to help detect any irregularity in trading or accounting. Government regulators also prohibit insider trading, false reports on the market, and the use of inappropriate sales methods.

PERFECT COMPETITION

[9]) Bolster, Paul, Don Chance and Don Rich. 1995. "Equity Swaps and Corporate Insider Holdings: Now You See It – Now You Don't." Working Paper 95-6, Department of Finance, Virginia Tech.

Perfect competition in a market requires, amongst others, the following two key assumptions. One is that firms and consumers are numerous, and transactions are small in relation to the aggregate amount. The other is that

No one firm or individual should have the ability to influence market output or prices. On the supply side this is known as a monopoly or oligopoly, and on the demand side this is known as monopsony.

In financial markets, the issue of market power arises in the role of exchanges and market makers or dealers. Consider the position of exchanges for securities and derivatives. The exchanges are the center of liquidity. The benefits of liquidity are substantial, and therefore market participants will gravitate to where liquidity is greatest. This movement further adds to the liquidity of the most liquid market and detracts from that of the less liquid ones. This process can result in the establishment of a single marketplace. The owners or managers of such a single marketplace are not subject to the pressures from market forces to address the needs of all their customers and this is especially true for their smaller customers.

In the case of regulated exchanges, the government regulators have
often acted as intermediaries between market participants and exchanges in order to address customer concerns. The result has been that the monopoly power of exchanges is sometimes tempered by the need to meet the concerns of all investors and not simply pursue the profit maximizing direction of their members or owners.

NO INCOMPLETE MARKETS

Arrow on **Incomplete Markets**:

> "The welfare case for insurance policies of all sorts is overwhelming. It follows that the government should undertake insurance in those cases where this market, for whatever reason, has failed to emerge." p. 961

What prevents more insurance, or contingent claims, markets from emerging is the lack of, or the cost of, keys types of information. "It is probably true that hospitalization and surgery are more under the casual inspection of others than is general practice and therefore less subject to moral hazard; this may be one reason why insurance policies in those fields have been more widespread." p. 962

"It is impossible to draw up insurance policies which will sufficiently distinguish among risks, particularly since observation of the results will be incapable of distinguishing between avoidable and unavoidable risks, so that incentives to avoid losses are diluted."

Pauly, et al, followed up on this concern with moral hazard as caused by shortfalls in information. More insurance would be offered and at better rates if there were zero costs to information such that insurers could calculate the probabilities of all states of nature and the possible losses in each state.

NO NATIONAL SECURITY CONCERNS

No matter how much responsibility is granted to individuals or assumed by markets, the government is ultimately responsible for assuring peace and security when the nation is faces with a substantial, widespread economic crisis.

In financial markets, like in other spheres of the economy, the government will have to reckon with any major crisis or disaster. This role in the economy has a tendency to socialize some of the costs of a crisis – financial or otherwise in its origins – and so it is sound economic policy for the government to set prudential rules and regulations in financial markets in order to diminish the likelihood of such a crisis.

- systemic failures
- too big to fail

POLICY RECOMMENDATIONS

Existing proposals to reform the global financial architecture from conservative perspectives have focused on the need for a more free approach. They blame the presence of the IMF and World Bank as well as government intervention for thwarting market forces. There solutions are to reduce the role of all these actors in the markets.

This approach can be characterized as ***detached arrogance*** and expressed in the three French phrases: *laissez-faire*; *saive qui peut*; and *tout va bien*.

Existing proposal to reform the global financial architecture from progressive or left-wing perspectives have focused on controlling the quantity of short-term capital flows. The policy tools include speed bumps such as the Chilean requirement for reserves on short-term capital inflows, strict controls by practiced by the Malaysian government (ex post facto), and "sand in the gears" to slow down cross border transactions by imposed a Tobin tax of Currency Transaction Tax (CTT).

This approach has put too much emphasis on controlling "hot money." These short-term bank funds are viewed as too speculative and too short-term. They overvalue exchange rates when they flow into a developing countries and they cause drastic exchange rate depreciation when they flow out.

This approach can be characterized as ***troll*** behavior because of the focus on taxing or otherwise restricting flows over the bridge or through the lock or dam.

I am trying to develop a new approach that is not entirely different from the history of financial market regulation in advanced capitalist countries. Instead of radical laissez-faire, and in distinction from quantitative restrictions, I am proposing a combination of regulations and surveillance designed to improve the efficiency and stability of financial markets in advanced as well as developing economies. It is based on the history of market regulation in the U.S. but extends the lessons gleaned from U.S. history and adapts them to developing country circumstances.

This goal of this approach is not to directly control the quantity of capital flows, but rather to try and shape the ***quality*** of these flows. In doing so it will undoubtedly impact the quantity – and that may well be a good thing – but it will do only by discouraging and restricting certain forms of capital flows that have proven destructive in the past.

Focusing on the quality of capital flows draws new attention to the issue of hot money. These short-term bank loans and short-term notes are not primarily a problem because their maturity is too short. Of greater concern is the foreign exposure that they represent and the presence of embedded "put" options that can further reduce the effective maturity of the debt.

This approach can be characterized as shunning the construction of dams and in their place erecting aqueducts and sewers.

Proposals.

1. Regulatory Standards for Financial Institutions

- reporting requirements to bring off-balance sheet activities and positions into the light and regulation of balance sheets;
- limit foreign exchange, maturity, and interest rate exposure both on and off-balance sheet;
- reporting requirements for large positions, trading volume, prices (these are needed for proper market regulation);
- reporting requirements for credit position of off-balance sheet items;
- capital standards that take into account value at risk;
- collateral and margin standards;
- modernize accounting rules to properly account for embedded derivatives.

2. Regulatory Standards for Markets

- dealers but act as market makers and maintain bid-ask quotes throughout trading day;
- market participants report transactions information including price, volume, open positions, large trade positions, contract basics;
- enforcement can be enhanced by requiring reporting of transaction as condition for legal enforceability;
- prohibit false reports on the market;
- require maintenance of audit trail.

3. Regulatory measures for developing countries

- limits on foreign exchange rate and interest rate exposure (applicable to on-balance sheet as well as off-balance sheet positions), and the limits should be tighter for higher degrees exchange rate management;
- limits on the mismatch in maturity on debt and loans;
- banks should not have equity positions;
- investment banks (brokers and dealers) should not accept checkable deposits;
- modern accounting standards;
- modern capital requirements;
- market surveillance and institutional supervision by regulatory agency staffed with top level professionals;
- prohibit the use of "putable" debt instruments.

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