IBM Global Business Services
Executive Report

Financial Markets, Banking and Public Sector

IBM Institute for Business Value

The *yin yang* of financial reform

Embracing maxims to enable financial stability and healthy financial innovation

IBM Institute for Business Value

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By Suzanne Duncan, Srini Giridhar and Lynn Reyes

Regulatory reforms that were triggered by the financial crisis intend to address imbalances in the global financial system. However, these reforms have yet to fundamentally resolve structural tensions in the system. We believe distractions due to market uncertainty and an absence of trust among market participants further inhibit recovery and healthy growth. To mitigate unintended consequences, participants must work together to commit to new maxims – principles that spur a new mindset and guide specific actions.

After the dust settled from the worldwide financial crisis, most industry participants – consumers, governments, banks and financial markets firms – turned their immediate focus to moving beyond the meltdown and regaining financial health. As they began to get their heads above water, they commenced seeking long-term solutions to help mitigate the effects of future crises. And in many countries, citizens began to demand answers.

In early 2009, we published a paper that concentrated both on moving beyond the crisis and, by examining the underlying tensions that led to it, reshaping the industry to help avoid future calamities. Published post-Lehman collapse but pre-regulatory reform, "The *yin yang* of financial disruption" identified the key features of the financial crisis, particularly the extraordinary interventions taken by governments around the world; the inherent structural tensions within the global financial system; and key maxims that are needed for progress in the new era.[1] The paper urged public and private sector leaders to gain consensus on maxims that underpin the cooperation necessary to address system imbalances.

Now, we revisit the topic of financial disruption to gauge progress in striking a new balance between financial stability and healthy innovation in a currently fragile system. Based on new research, as well as surveys and interviews conducted for the 2010 IBM CEO study, "Capitalizing on Complexity: Insights from the Global Chief Executive Officer Study," this paper acknowledges that some progress has been made.

However, even more important, we focus on the potential unintended consequences of the various financial reforms, as well as current conditions that could further inhibit healthy growth: distraction – due to market uncertainty – from the system's unresolved structural tensions and an absence of trust among financial system participants. These factors are particularly alarming in the context of financial reforms. Unresolved tensions combined with lack of trust could very well result in yet another shadow system in which unhealthy practices outpace healthy innovation.

As in our prior report, we focus on a systemic "*yin yang*" – or set of opposing forces – that exists between financial stability and healthy financial innovation (see sidebar, A *yin yang* for the financial system). This time, we examine it in the context of financial reform and consider some of the tensions that exist in that realm. In addition, we consider the global system's future stewardship and the maxims we believe are essential not only to its stewardship, but also to healthy financial growth.

Why? Because in today's era of global interdependence, striking a healthy, sustainable balance between stability and innovation will require global cooperation to resolve structural tensions and renew trust among the various market participants. It's more important than ever that financial market participants worldwide not only embrace new maxims for progress, but also commit to take action today to change the way they conduct business. Specifically, they should rationalize their portfolio of activities, address areas of operating model weakness and transform destructive organizational cultures.

A *yin yang* for the financial system

In Chinese philosophy, systemic *yin* and *yang* represent seemingly opposing forces within a greater whole – that are interconnected, are interdependent and both transform and balance one another. So, too, the path to a healthy, sustainable equilibrium in the global financial system will require managing the systemic *yin yang* – the delicate balance between financial stability and healthy financial innovation.

***Financial stability* – The strength to:**

- **Withstand extreme volatility and risk contagion (the tendency for financial shocks to propagate, e.g. from country to country or from asset class to asset class)**
- **Support and sustain positive economic impact**
- **Avoid crises.**

***Healthy financial innovation* – A fundamentally new way to solve problems or create opportunities by one or more market participants within or across sectors. Healthy financial innovation:**

- **Occurs through the creation and popularization of new products, services, business models, technologies, relationships and revenue models**
- **Has a positive and sustainable impact on the real economy (i.e., consumers, firms, industries, markets and GDP).**

Today's post-crisis world

The global financial crisis was a huge and rather loud wake up call alerting financial leaders that the world has indeed changed – and the global financial system must change in response. The world has entered a new period and societal shift – an era of dramatically increased systemic interdependence and fragility.

The basic actors in the global financial space have not necessarily changed. The system still consists of three main sets of participants: 1) the public – consumers, employees and taxpayers; 2) private sector finance industry companies; and 3) public sector organizations, such as government and international quasi-governmental organizations. What has changed is that participants have become actively vocal as they wrestle with some important issues:

- Private sector participants are struggling to determine the right balance between a safe and lucrative return.
- Public sector participants are concerned with determining valid regulatory and supervisory inputs.[2]
- The public is unsure of the safety of its assets, skeptical of the vehicles for accumulating wealth and asking whether there is stewardship of the public good from all parties.

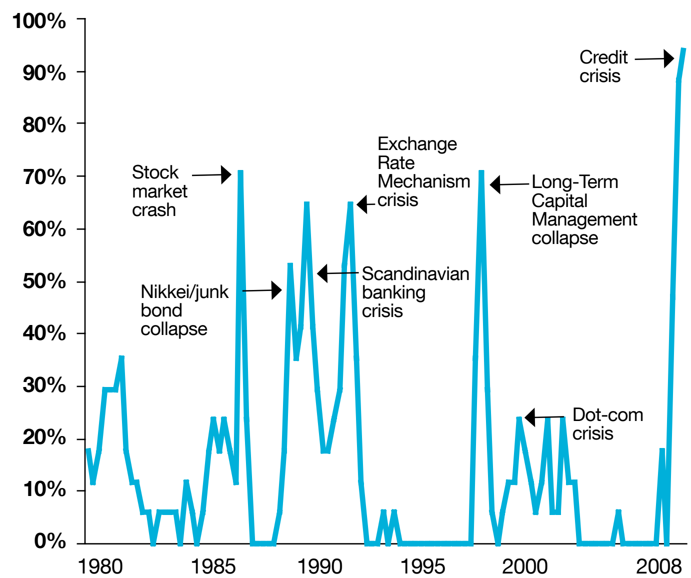
Indeed, heightened consciousness for stewardship has become a compelling force, elevating the importance of acting to promote "public good." Today it's not sufficient for these financial system participants to simply coexist. Increased interdependency and growing pressure to act in the best interest of the public have made it more important than ever for all participants to work together.

"It has become exceedingly clear that we are all codependent. Together, we must build a new financial system to position for future prosperity. Sometimes it takes a crisis to drive step changes forward."

Chief Executive Officer, large European asset manager

Today's financial system is truly a global one and, as the crisis proved, it is more interconnected and volatile than many leaders and consumers realized. Economies are more intertwined and fluid than current business models recognize and accommodate. Underscoring this reality, the percent of mature market countries experiencing financial stress reached its highest level (see Figure 1).

Percent of mature market countries experiencing financial stress



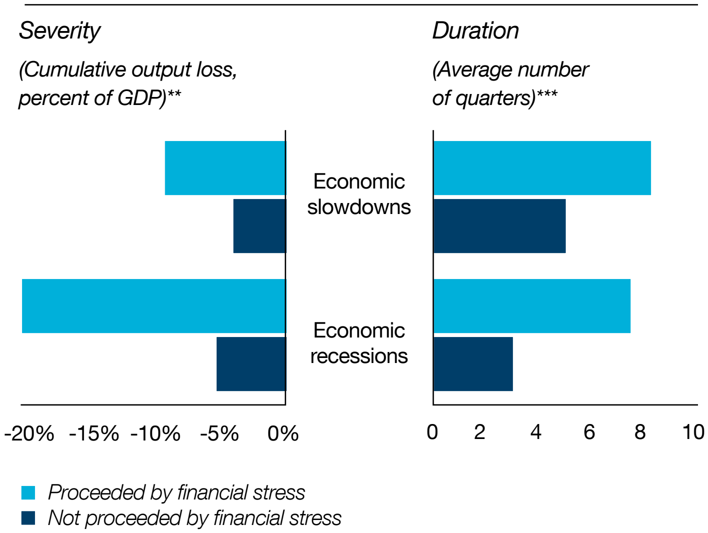
Source: "Financial stress and economic downturns." World Economic Outlook. International Monetary Fund. October 2008.
Note: Financial stress is measured using an IMF-created country-by-country index that includes variables such as interbank spreads and equity and bond market performance.

Figure 1: **The percent of mature market countries experiencing financial stress reached its highest level during the financial crisis.**

"We need both incentives and disincentives to shift the mental model toward better stewardship."

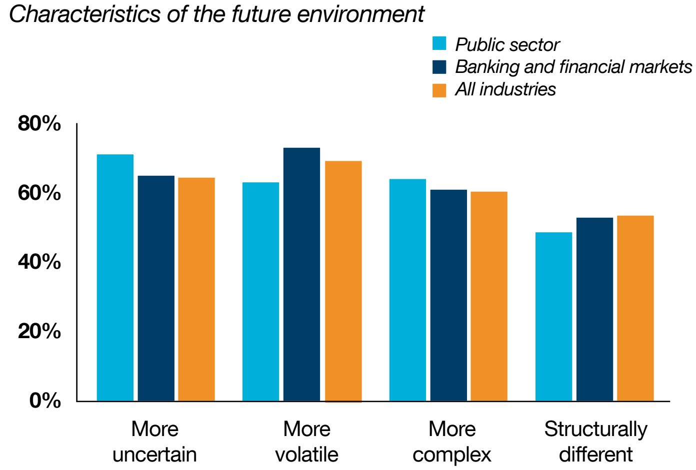
Executive Vice President, central bank

In addition, financial slowdowns and recessions preceded by financial stress episodes such as a credit bubble bursting tend to be longer and more severe (see Figure 2). Further supporting this trend, financial market leaders in both the public and private sectors expect the environment to be characterized by more uncertainty, volatility and complexity (see Figure 3).



*Note: *Severity and duration are measured globally from 1980-2009; **Slowdown output loss is cumulative output loss below trend; recession output loss is cumulative output loss until recovery; ***Slowdown duration is number of quarters during which GDP is below trend; recession duration is number of quarters until GDP is at or exceeds peak level.*
Source: IMF Working Paper. May 2009. "Financial Stress, Downturns and Recoveries." http://www.imf.org/external/pubs/ft/wp/2009/wp09100.pdf; IBM Institute for Business Value analysis.

Figure 2: **Slowdowns and recessions preceded by financial stress tend to be more severe and longer in duration.***



Source: IBM Global CEO Study 2010; IBM Institute for Business Value analysis.
Note: Question asked: To what extent will the new economic environment be different from today? Percentage represents participants that selected "to a large extent."

Figure 3: **Industry and government predict a more uncertain, volatile and complex future environment.**

Regulatory structures have failed to keep up with the increasing interdependence. Using the recent financial crisis as an example, there was a plethora of contributing factors, and fingers of blame can be pointed in numerous directions to both public and private participants. However, at the heart of the crisis were imbedded conflicts of interest and outdated regulatory regimes, which created a climate ripe for disaster.

Consider some of the rated instruments involved in the financial crisis: mortgage-backed securities (MBSs) and collateralized debt obligations (CDOs). Regulators failed to react to the fact that the credit rating agencies (CRAs) had an ongoing, interdependent relationship with institutions issuing most of the MBSs and CDOs. Since many ratings were essentially paid for by the issuing institutions, not by investors, the situation fostered both an inappropriate interdependent relationship and a conflict of interest for the CRAs. And existing regulatory structures did not prohibit or address such issues and might actually have exacerbated the crisis. When regulations mandated that institutions use CRAs, internal credit research essentially died. Had institutions done their own credit analyses, perhaps the ultimate outcome would have been different or, at the very least, less severe.

Financial reforms

Since the Lehman collapse, a number of changes designed to avoid future crises have occurred – and some progress has been made. For example, governments in the United States and Europe are working to address the imbalances in their national financial systems by passing both structural and operational reforms (see Figure 4). Structural reforms, typically enacted by political or legislative bodies, focus on size, scope, societal costs and "too big to fail" institutions (i.e., cross-firm reforms). Operational reforms, typically implemented by regulators (including bilateral quasi-governmental statutory organizations) or multilateral international organizations, focus on capital, liquidity, incentives and taxation (i.e., what firms need to do within their own organizations).

Even with some increasing clarity for what the future of financial reform holds, there is still a significant amount of uncertainty. Both the Dodd-Frank Wall Street Reform and Consumer Protection Act and Basel III seek to strengthen the financial system, though neither is immune to challenges.

Structural reforms - enacted by political, legislative bodies Focus on size, scope, societal costs and "too big to fail" institutions	
• **Separation of activities**	*Separation of utility banking from risky activities*
• **Caps on size and concentration**	*Limits size of banks and concentration of market power*
• **Recovery and resolution**	*Legal and orderly winding down of failed institutions*
• **Macro prudential regulation for failures**	*International fund for handling future crises and failures*
• **Consumer protection**	*Oversight of banks' relationships (sales) with clients*
• **Clearinghouse for derivatives trading**	*Clearing vehicle for transparency and collateral requirements*

Operational reforms - enacted by regulators, multi-lateral statutory organizations Focus on capital, liquidity, incentives and taxation	
• **Increased capital requirements**	*Increased capital, better quality capital*
• **Increased liquidity requirements**	*Increased near-term liquidity (cash outflow, stable funding)*
• **Compensation**	*Aligning compensation with risk horizon*
• **Accounting requirements**	*Rules for calculating capital, write downs*
• **Taxation and stability fees**	*Taxes to discourage speculation, enhance stability*

Source: IBM Institute for Business Value.

Figure 4: **Examples of structural and operational reforms.**

For example, the passing of the Dodd-Frank Act in the United States is just one of many phases as the policy makes its way through the U.S. bodies that will determine the specific regulations, including the Securities and Exchange Commission (SEC), the Federal Deposit Insurance Corporation (FDIC), the Commodity Futures Trading Commission (CFTC) and the Federal Reserve System.[3] Similarly, Basel III must be approved by The Group of 20 (G20), which may seek to raise capital levels further depending on the priorities of the individual countries within the G20.[4]

Efforts aimed at financial reform – both structural and operational – extend beyond Europe and the United States. For example, India is encouraging bank consolidation for efficiency but, at the same time, acknowledging "too big to fail" issues. In an effort to improve stability from the outset, China is developing a derivatives settlement and clearing organization and is increasing reserve requirements for the top six state-owned Chinese banks. In terms of global operational reforms, there is broad support in Asia for compensation limits, though there is need to build consensus among the regulators.

How do private sector industry executives view current and impending regulations? Realistically, they recognize that adhering to new regulations could impose additional costs and onus on their organizations. However, most finance executives in a recent survey believe reform can indeed bring benefits. For example, 42 percent believe compensation being linked more closely to long-term performance will benefit risk management. And 40 percent believe more stringent capital and capital reserve requirements will benefit risk management. Even more heartening, only 7 percent picked "none" as being beneficial, indicating only a small percent view reform as simply a burden with no benefits.[5] The majority recognize the potential benefits reform, and perhaps regulation itself, can bring.

Despite recognizing possible benefits, many public and private sector industry participants have valid concerns about financial reforms. Amid uncertainty, they wonder what effect reforms will have on business models, consumers, risk and beyond (see sidebar, Financial reform apprehension).

Financial reform apprehension

Financial reform uncertainty has many in the industry asking questions, such as:

- **What will public and private sector business models look like in the wake of financial reform?**
- **Will banks and financial markets firms pass along costs to individual and institutional clients?**
- **Will banks and other financial intermediaries tighten credit further?**
- **Will global banks and financial markets firms emerge from loosely regulated countries?**
- **Will the cost of compliance outweigh the benefits in the public and private sector?**
- **Will talent leave the banking and financial markets industries?**
- **Do governments and regulators have the required talent to be effective?**

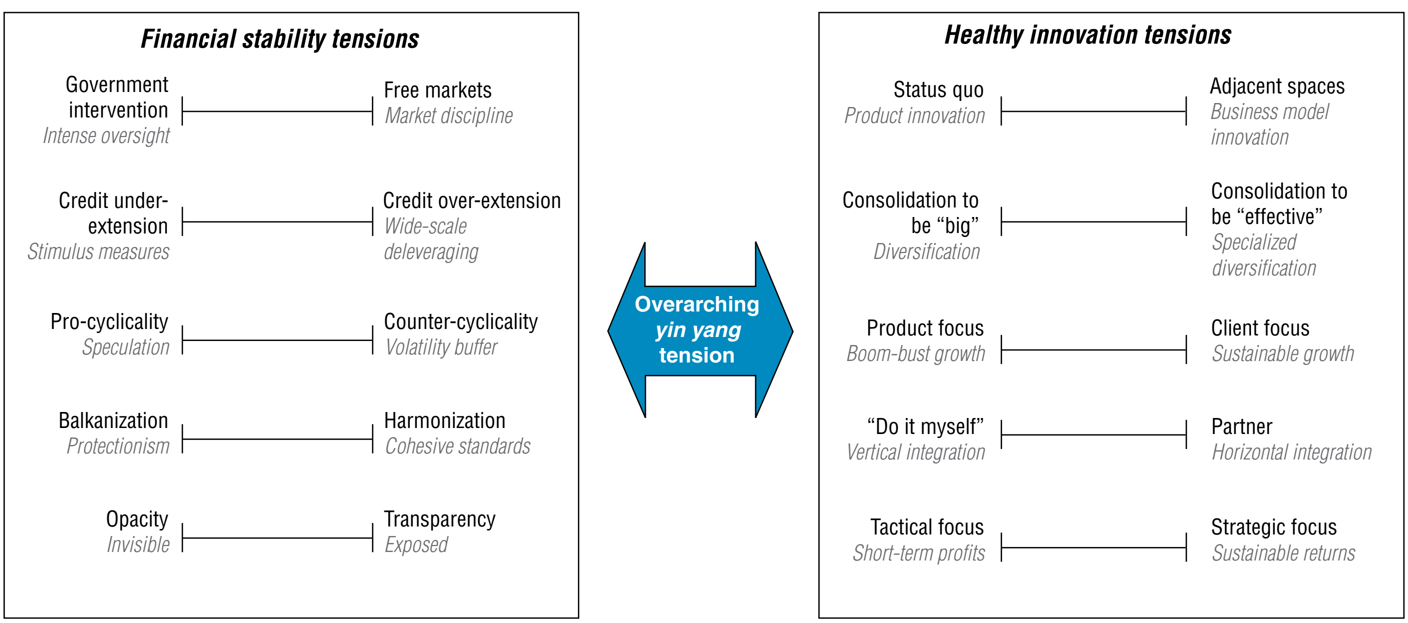
Distracted by uncertainty

The post-crisis atmosphere has been rife with uncertainty – from uncertainty regarding potential regulatory reforms to questions regarding the very future of some industries. This situation has created distractions from the very necessary task of resolving the structural tensions at the root of the crisis.

Structural tensions remain

Despite the progress enabled through recent reform efforts and regulations, the basic structural tensions in the system remain unresolved (see Figure 5). This alarming imbalance could cultivate yet another precarious environment in which stability is sought but not created and unhealthy innovation supplants healthy innovation.

These tensions represent factors that have the power to potentially disrupt or enhance the delicate balance between financial stability and healthy innovation (see side bar, Examples of structural tensions in action). Unfortunately, neither government nor the industry has decided where to draw the lines – or put the levers – in the gamut of tensions between financial stability and healthy innovation that exist. And the few lines that have been drawn by the government through regulation were done largely without widespread industry dialogue.



Source: IBM Institute for Business Value.

Figure 5: **Two pillars of structural tensions.**

Examples of structural tensions in action

Financial stability tension: "Balkanization" versus harmonization

When public officials are facing the effects of financial contagion and potentially significant short-term negative economic impact, the pressure to "protect" from further duress is at its highest. Consequences could include:

- *Positive:* Global contagion stemmed by coordinated responses across interconnected national financial systems.
- *Negative:* Severe political consequences in the short term.
- *Negative:* Absent international cooperation on policy, large differences in domestic demand arise even as international payment imbalances spike, systemic risk increases and hard-to-mitigate economic ripple effects (e.g., jobs) play out.

Healthy innovation tension: Status quo versus adjacent spaces

Consider an investment bank that was a recipient of bailout monies. That same investment bank also sees an opportunity to develop a new type of product group that would be sold to institutional investors. A tension exists between the potential return from the new product line and sources of inexpensive capital. Consequences could include:

- *Positive:* The investment bank is able to jump start this new product line at an attractive return on invested capital.
- *Negative:* Public bailout money, if appropriate levels of funding separation and visibility are unclear, may have been used to subsidize private gain.

Distraction due to market uncertainty has impeded progress in resolving structural tensions. We believe this reality, combined with the disconnects among private and public sector participants regarding reform measures, will result in many unintended consequences. Though consequences might be extreme, not all are negative (see Figure 6). A positive consequence, for example, would be if a high degree of partnering led to common standards and healthy practices.

When considering regulatory reform, another set of potential unintended consequences could occur when a policy is actually implemented. As policies are enacted and enforceable laws are created, the difference between the intent of the original enacted legislation and resulting rules and application could be significant (see sidebar, Sarbanes-Oxley consequences).

Resolving the structural tensions – and avoiding further unintended consequences – will require all participants working together in cooperation. However, a major barrier to this cooperation exists in the form of a trust gap.

Stability pillar *Consequences and examples*	**Innovation pillar** *Consequences and examples*
Excessive government intervention *Example: Excessive regulation leads to the creation of another large shadow system*	**Extent of innovation** *Example: Innovation breakthroughs lead to beneficial step changes*
Limited credit extension *Example: Lending is dramatically curtailed*	**Degree of consolidation** *Example: Banks become too big for countries to save*
Cyclicality *Example: Countercyclical measures lead to a "smoothing" out of boom and bust cycles*	**Product and client focus** *Example: Banks create products that destroy client wealth*
Extent of protectionism *Example: Money flows to less regulated markets*	**Extent of partnering** *Example: Governments work together to create a common set of standards for compliance reporting*
Disclosure *Example: Information deluge masks the real risks of investment decisions*	**Temporal focus** *Example: Banks consider short-term legislation effects and fail to identify long-term beneficial impacts*

Source: IBM Institute for Business Value.

Figure 6: Examples of possible unintended consequences.

Sarbanes-Oxley consequences

The Sarbanes-Oxley Act of 2002 (SOX) was passed by the U.S. congress in response to a number of major corporate and accounting scandals. Intended to restore investor confidence in public securities by encouraging a shift from private to public debt and equity, penalties for noncompliance were clearly drawn out. Yet, the standards for compliance were unclear. So, firms – even those that were not involved in corporate securities – went to great expense to comply; so much so, that many believe the costs far outweighed the intended benefit. An unintended consequence was that many public corporations were taken private. In addition, many in the industry speculate that the number of initial public offerings decreased and some companies elected to go public on foreign exchanges to bypass compliance.[6]

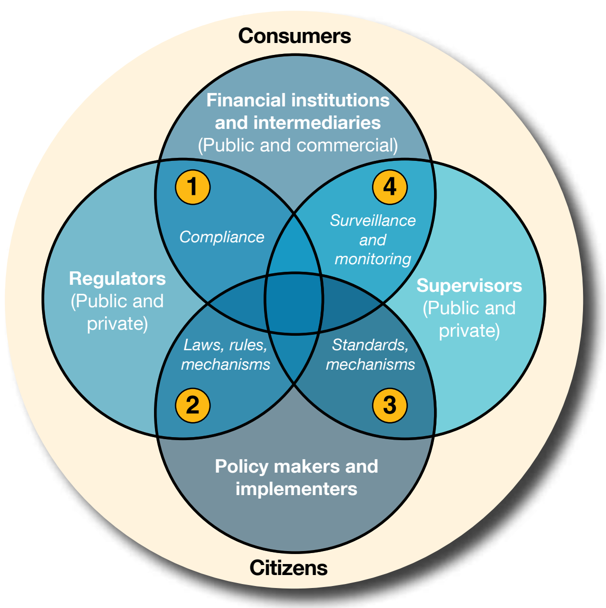
At the same time, some benefits have been realized over the longer term – some of them multidimensional. A recent study identifies how the Act resulted in benefits for the industry (e.g., longer-term access to capital and lowered agency costs of complying firms), regulators (e.g., increased visibility into internal controls) and the investing public (e.g., improved reliability of financial reporting).[7] The last, in the light of the most recent financial crisis, may well play a critical role in winning back public confidence…again. Moving forward, it will be important to consider cost-benefit equations more broadly and for organizations to consider the unintended consequences from different perspectives.

Absence of trust

Global cooperation is essential in today's era of interdependence. Each financial system participant's "world" overlaps with all the others' worlds. As a result, the financial architecture must be co-created to reach the end goal of achieving systemic health, safety and confidence (see Figure 7).

Although all parties want the same thing – health, safety and confidence – a lack of trust is impeding cooperation in co-creating this architecture. Interdependence necessitates cooperation, and cooperation necessitates a certain level of trust. Without the foundation of trust, cooperation has no core from which to flourish. Unfortunately, the reality is that a significant (and widening) trust gap exists among global financial system participants – and it's hindering progress.

A recent report shows the public's trust of the U.S. government is on an overall downward trend. Just 22 percent of U.S. residents recently surveyed say they can trust the government in Washington almost always or most of the time. This is among the lowest measures in half a century.[8] Europe faces similar issues: From 2007 to 2010, the percentage of those surveyed who did not trust European Union institutions (European Parliament, European Commission and European Council) grew from a quarter to a third.[9]



1. Oversight (i.e., controls/constraints and enablers)
2. Behaviors, issues and trends through the lens of regulation
3. Risk-adjusted practices, enablers, constraints and limits
4. Behaviors, issues and trends through the lens of supervision

Source: IBM Institute for Business Value analysis.
Consumers = individual and corporate consumers/citizens.

Figure 7: **Global cooperation is essential in the era of interdependence.**

"To restore trust, we must overhaul how we deliver our value proposition. There is a huge difference between what we sell and what clients need – we are nowhere near where we need to be on this."

Chief Executive Officer, large European wealth manager

There is also distrust within the financial industry itself. In a 2009 survey, 66 percent of clients said they believe financial providers offer products primarily in their own interests rather than those of their clients – and, surprisingly, 62 percent of financial executives agreed.[10] This trust gap is widening, with the percentage of clients and financial executives who felt this way growing to 70 and 66 percent respectively in 2010.[11]

While trust remains a serious issue, there are signs that industry leaders recognize the problem. The 2010 IBM CEO study reveals that a majority of banking and financial markets firm CEOs believe integrity is the most important leadership quality.[12]

Although global financial system participants generally agree that change is necessary, they have thus far been unable to develop trust and collaborate on building a healthy future. In addition, the changes and progress that have occurred are not enough to resolve the basic structural tensions within the system.

Avoiding unintended consequences

To resolve structural tensions and balance the *yin yang* of healthy innovation and financial stability, financial leaders must find a way to work together. Through trust and cooperation, they could pave the way toward a new age of healthy growth. We believe the first step involves adherence to new rules of conduct.

New maxims for stability and healthy innovation

The era of interdependence and fragility demands that all market participants – government, industry and the public – help reduce tensions by embracing new rules of conduct, or maxims. We have identified eight maxims to help create a climate that will enable participants to strike the right balance across the structural tensions and rebuild trust (see Figure 8).

The first maxim is foundational to the rest, as it addresses the need for a shared strategic vocabulary between market participants and begins to build a common understanding regarding "what is important." If the first maxim is the foundation, then the last can be thought of as the roof – or ceiling – that encapsulates all the maxims through a commitment to change and trust.

"We need a 'new normal' for values. The stakes are much higher today, so we have to get this right."

Director of Supervision, European regulator

1. A shared frame of reference and aligned measures among market participants must form the basis of design for market stability and healthy innovation.
2. Incentives balancing "returns to society" and "returns to shareholders" are key – after all, people, firms and governments do what they are incented to do.
3. Leaders must internalize that progress in the new era is not a zero-sum game. Only by collaborating to grow and innovate does the "whole" become stronger.
4. Transparency, systemic intelligence and proactive management at multiple levels across the system are *all* essential to improved risk management, informed decision making and agile responses.
5. Leaders must have the mindset, insight and means to move beyond today's "herd mentality," along with a commitment to clients' and citizens' interests and a sense of shared stewardship to chart a different course.
6. A rationalized oversight model, recognizing the global nature of the financial system, is required to allow for cohesive, streamlined and relevant supervision and regulation.
7. Flexible models enabling innovation and progress toward orderly and transparent processing of distressed assets, crisis resolution, consumer protection and insurance are powerful instruments of confidence.
8. Commitments – whether to principle, obligation, action or other – are noteworthy if appropriately and visibly made; but when they are kept, they are "units" of trust for their makers.

Source: IBM Institute for Business Value.

Figure 8: New maxims for progress.

These maxims provide a framework to guide market participants in adapting to the new environment. By accepting the maxims, every participant would be following the same rules of play, yet free to pursue growth in accordance to the rules. If all participants did indeed adhere to the maxims, how might the system change? In envisioning this potential future, imagine if…

1. Common vocabulary and terminology were shared (e.g., a common understanding of "proprietary" trading) and related measurements were clear.
2. Incentives were aligned to organizational roles relative to the purpose of the financial system.
3. Collaboration and innovation were conducted in an environment in which there were mutual trust.
4. Intelligence, transparency and management were tuned to clients' needs, business models and systemic risk.
5. Leaders showed the courage to move beyond the "herd" mentality and demonstrated commitment to both clients' interests and the public good.
6. Oversight models were tuned to the realities of the new economic environment, enabling financial stability and healthy financial innovation.
7. Rather than fragmented and siloed, protection, resolution and insurance were integrated.
8. All industry participants were committed to the maxims – committed to change – and to mutual trust and cooperation.

The eighth point is key: For financial reform to be successful, all market participants must adopt the maxims. Everyone must have a shared understanding of the purpose of the financial system, adhere to the spirit of parallel financial principles and play by the same rulebook.

When adopting the maxims, market participants must have a clear understanding of and appreciation of their roles in the overall system. No single participant should act without recognizing the system as a whole (see Figure 9).

Leaders need to work toward crystallizing previously unclear or varied perceptions regarding the overall ecosystem and individual roles within it. Part of this involves overcoming organizational stereotypes that destroy trust. Rather than a belief in common "types," with some considered "positive" and some "negative," participants need a clear understanding of which role or roles they and other participants fulfill. Once that is achieved, industry participants are better equipped to define what's important, work together, address the fundamentals and innovate.

"We must begin to look at the industry as a whole system – this is really missed because everyone is too short term and micro focused."

Director of Supervision, central bank

Source: IBM Institute for Business Value.

Figure 9: **No single participant should act without recognizing the *system.***

"There is no regulation that will fix greed, risk and ethical values. We must work together to conduct behavioral analyses – we must do a moral check as we reform."

Chief Executive Officer, large European bank

Taking action in support of new maxims

The maxims are obviously broad ranging and knowing how to implement such an extensive undertaking can prove challenging. How can individual organizations start today to create an environment where devotion to the maxims is a given?

We believe government, banking and financial market leaders can trigger the process by implementing actions that support three main goals:

1) Rationalize the portfolio: In the era of increased interdependence, governments, banks and financial markets firms must adopt a strategy that streamlines the portfolio according to the organization's role within the context of the system. A portfolio includes a set of activities such as divisions or lines of business that must be continually assessed and rebalanced based on collective risk and return levels. For example, private banking, investment banking and retail banking would constitute three lines of business that must be managed as a cohesive whole. The Dodd-Frank Act and Basel III also represent a set of financial reform measures that need to be reconciled and managed. To effectively streamline their portfolios, participants need to gain consensus on the maxims and pursue reform based on global risk levels and contribution to growth. In addition, they need to identify duplicative or conflicting entities or regulations and underlying legislation.

2) Adapt the operating model: Organizations will be in a better position to execute their portfolio strategies if they identify and address operating model weaknesses. Many financial industry executives recognize that operating models need to be restructured. In fact, 80 percent in a 2009 survey cited business and operating model uncertainty as something that keeps them "up at night."[13] Although this "identity crisis" sounds negative, it presents a significant opportunity for organizations to reflect on the emerging regulatory environment and to take advantage of the development of new models, rather than be hindered by them. What new kinds of business models could profit *because of* strategies built on principles of transparency? Both the public and private sectors need to reduce complexity to increase efficiency and effectiveness. In doing, they should seek ways to improve their ability to monitor risk and regulatory compliance at the company, country and global systemic levels.

3) Reform destructive cultures: Organizational cultures embody the values of the collective group and influence both day-to-day and strategic long-term decisions. To make the kind of changes necessary to build a new financial order, broken organizational cultures must be repaired. Destructive cultures can arise from extreme organizational shifts such as mergers or acquisitions or in more subtle ways. For example, a large culture clash exists between divisions that are in the business of *assuming risk* versus those divisions that are responsible for *reducing risk*. To overhaul destructive internal cultures, organizations should adopt management structures that encourage sustainable growth while reducing the effects of boom and bust cycles. In addition, they should be willing to partner and cooperate with the competition, as well as provide employee incentives that promote long-term goals and relationship building.

We have identified some specific actions that various participants in the financial system can take in support of these goals (see Figure 10). By committing to the maxims and taking actions to embrace them, financial services participants will be poised to pen a new industry chapter.

A new chapter in financial history

As historians reflect on the recent global financial disruption, it undoubtedly will be deemed a crisis. However, might it also be viewed as a turning point – as the spark that ignited a revolutionary change in the global financial system?

If all financial system participants can move beyond their distractions, work together and take actions to embrace the new maxims for change, the crisis could indeed be considered a catalyst that ultimately set the stage for global financial equilibrium. By transforming their portfolio strategies, operating models and internal cultures today, financial leaders could launch a new and hopeful chapter in global financial history.

System role	Recommendations (Examples)
Consumer	
Borrower (e.g., a business, individual, bond issuer)	• Improve business planning to ensure working capital meets the demands of expansion. • Reduce the risk of over leveraging by determining the full financial picture across multiple market scenarios. • Insist on transparency and full disclosure.
Financial services consumer	• Spend time understanding what is being paid for and the value that the financial services institution is providing.
Investor (e.g., a hedge fund, sovereign wealth fund, individual)	• Develop a full understanding of the requirements (asset size, yield, risk, duration) needed to meet clearly articulated investment objectives. • Implement robust liquidity/marketability risk management practices within the overall risk function.
Finance sector	
Custodian (e.g., a trust company)	• Create new businesses to help clients facilitate transparent trading, such as in the over-the-counter derivatives market.
Evaluator (e.g., a credit rating agency)	• Strengthen collateral/asset/liability valuation practices and value funds regularly to reflect market risk. • Remove conflicts of interest between the evaluator and those who have instruments or funds that need to be evaluated.
Financial channel enabler (e.g., an exchange)	• Assess whether there is an appropriate spectrum of information to equip decision makers.
Financial intermediary (e.g., a financial market)	• Agree on the purpose for intermediation and create a common set of rules of engagement among other intermediaries and with clients (e.g., for newly created clearing firms and swap execution. facilities).
Lender (e.g., a bank, government or agency)	• Stress-test lending decisions by including worst-case scenarios within the due diligence process.
Market maker (e.g., a broker dealer)	• Provide liquidity while managing enterprise risk.
Public sector	
Advocate/representative (e.g., a consumer advocate, elected official)	• Identify and disclose potential conflicts of interest. • Develop "communities" and related platforms that will capture the "voice" of the represented and inform standards bodies.
Financial/economic policy maker (e.g., a ministry of finance)	• Define criteria to determine those entities that are too big or too critical to fail. • Create incentives that reward transparent behavior and information sharing and punish inappropriately opaque behavior in industry and government. • Define, track and communicate progress indicators for financial system stability and vitality.
Monetary policy maker (e.g., a central bank)	• Define leading indicators for systemic volatility and economic risk (e.g., price) and align liquidity and absolute value measures for counter-cyclicality. • Aggregate liquidity risk trends and communicate to the regulatory and supervisory community.
Regulator (e.g., a government or quasi-government organization)	• Proactively consider the equal-and-opposite reactions and work with supervisors to determine impact and any adjustments to risk management practices and standards. • Coordinate with international community and reduce the number or simplify the web of agencies, roles and activities to avoid regulatory arbitrage. • Adopt a portfolio approach to regulation that recognizes the different business models of financial institutions and can enable "views" of these portfolios along different lines.
Supervisor (e.g., a central bank, international quasi-government organization)	• Strengthen supervision of systemic liquidity risk and funding sources (including offshore). • Work with regulators internationally to define risk indicators that could be added to an indicator "inventory."

Figure 10: Recommended actions by system role.

Implications
• Technology-enabled advice processes must be developed to encourage borrowers to determine financial scenarios. • "Experience" platforms and channels should be considered as potential value-added services.
• Fee/compensation structures must be transparent, understandable and predictable and conflicts of interest disclosed.
• Investors need to be knowledgeable about the investments they make, and financial advice must be provided in convenient, intuitive technology-enabled formats. • Portfolios need to be continually reassessed to transparently reflect aggregate asset-liability mixes, funding status and liquidity levels.
• Existing infrastructure must be leveraged to enable connectivity and realtime transparency across multiple clients and markets.
• Near-realtime access to and correlation of large data streams is necessary. • Market risk must be communicated to market participants based on more regular valuations. • Hybrid or alternative funding models for ratings work should be considered.
• Enabling technology that can dynamically sift through and analyze information must be embedded.
• Operating model must be assessed to determine whether it supports the current rules of engagement such as enabling realtime transparency.
• Processes and computing infrastructure must be modified to support multifactor/dynamic stress testing models.
• Processes, systems and data must be streamlined to enable a firm-wide view of risk positions.
• Appropriate levels of transparency must be defined/created to educate consumers, such as a set of operational indicators of value. • Capture mechanisms will need to be put in place that allow trend/pattern analyses and aggregation.
• Information management and data governance arrangements must be refined to enable a culture of better and more systemic information sharing. • Work must occur with other policy leaders to create incentives that change/prevent behaviors, such as creating new ways of aggregating patterns from exemplars. • Policy makers, supervisors (including central banks and international organizations) and regulators will need to work together to define a small set of progress indicators (metadata) and corresponding information platform for aggregating related data from multiple sources.
• Work with the international community, including supervisors, must occur to align liquidity buffers (agreements, resources and triggers). • Interactive governance arrangements must be created to share data more systematically and uniformly.
• Information and data governance arrangements must be refined to enable a culture of collaboration and information sharing, including creating incentives and penalties. • A shared "inventory" of risk indicators and associated analyses (anonymized) should be considered for the broader oversight community. • Reference metadata will need to be created and made available as appropriate to enable information linkages and networks, according to system roles.
• The scope (granularity of information/number and size of entities) of surveillance monitoring must expand. • Key standards must be mandated and made visible through international platforms and collaboration on the adoption and use of key standards.

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