Global Network Finance

Organizational Hedging in Times of Uncertainty

By

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Abstract:

The financial market crisis that began to unfold in the summer of 2007 and has deepened in September 2008 has revealed some fundamental problems of global financial system: A massive market failure; a high level of global financial interdependence; regulatory failures at level of nation states; and a looming governance vacuum at the global level. The crisis has forced market participants, policy makers and regulators to enter unchartered waters in their attempt to stabilize financial markets and to begin the process of building a more sustainable governance regime for global financial markets. This paper suggests that elements of such a regime have already emerged over the course of the past eighteen months as major financial intermediaries, including banks and Sovereign Wealth Funds from different parts of the world began to engage in "organizational hedging" strategies (Stark). By partnering with institutions from different governance regimes, different expertise and institutional practices, they have created the foundation for transposing elements from one regime to another and recombining them to ultimately form a new governance regime. Whether or not this was their intention at the outset, the pattern of investments among these various organizations has taken the form of relational ties, which collectively can be described as an emergent global financial network. This paper argues that Global Network Finance (GNF) has the potential of performing critical governance functions for the global financial market place.

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I. Introduction

This paper joins a growing literature on the importance and impact of the so-called "sovereign wealth funds" (SWFs) as well as other sovereign controlled financial intermediaries.[2] Unlike existing studies,[3] it does not attempt to analyze all SWFs and all investments they have made so far. Instead, it focuses on investments in what at least used to be major financial intermediaries located primarily in the West. It also departs from a convention in the foreign direct investment literature, which classifies only investments that exceed the 10 percent level as foreign direct investments, all others as "portfolio investments". Instead, it focuses on cases where SWFs took a substantial stake in a foreign financial intermediary. Depending on the ownership structure of that intermediary, even a 2-3 percent stake can make a SWF one of its largest investors.

The paper argues that SWFs and their increasing importance as stakeholders in financial intermediaries around the world is part of broader reorganization of global financial market – and by implication, of global financial market *governance*.

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[2] There is still considerable confusion about the 'right' definition of sovereign wealth funds. The focus of this paper, however, is on what they do and in particular the relations they form with other financial intermediaries. Specific attributes of the actors that may fit some definitions of SWFs, but not others, are therefore of secondary importance.

[3] The consulting group Monitor published a study in June 2008 that tracks SWFs transactions between 1975 and March 2008. See Monitor, "Assessing the Risks: The Behaviors of Soveriegn Wealth Funds in the Global Economy," (New York: Monitor Group, 2008). The European Central Bank published on Occasional Paper in the impact of SWF on global financial markets in July 2008. See Monitor, "Assessing the Risks: The Behaviors of Soveriegn Wealth Funds in the Global Economy." Finally, a recent paper by Fotak et al traces the impact of SWF on stock price performance of firms they have invested in. See also Kamil Mohammed Gerard and Karl Sauvant, "What Do We Know About State-Controlled Entities, and Espeically Sovereign Wealth Funds?," in *FDI by State Controlled Entities* (Columbia University: 2008). as well as Alan Rugman, "The Experience with State-Controlled Entities and Concerns Related to Them," in *FDI by State-Controlled Entities* (Columbia University: 2008).

Governance in this context is defined as the set of practices and institutions that form the basis for the collective expectation that the existing regime will persist. It consists of formal rules and regulations adopted by lawmakers and regulators, as well as practices developed by market participants in response to these rules and regulations. Importantly, a governance regime can collapse without legal change. Conversely, legal change is insufficient to create a new governance regime. Only when formal institutions become part of the collective expectations do they become part of a governance regime.

The need for reorganizing the existing governance regime has become apparent with the onset of the credit market crisis in 2007 and its deepening the fall of 2008. This crisis has revealed several fundamental problems of the existing global financial system: A case of massive market failure – as indicated by the failure of financial self-regulation; a high level of financial interdependence globally – as evidenced by the contagion effect of the crisis; wide spread regulatory failure at level of nation states – as suggested by their inability to preempt of a crisis of this scale; and a looming governance vacuum at the global level, which has resulted in a truly global financial crisis.

The search for governance solutions began with the onset of the crisis in 2007 and has intensified in the summer of 2008. As a historian of financial markets has put it, the history of financial markets is a history of financial market crisis.[4] In fact, the history of financial crises is also a history of major innovations in the governance regime of financial markets. It is not a coincidence that major reforms of

[4] Larry Neal, *The Rise of Financial Capitalism* (Cambridge: Cambridge University Press, 1990).

financial market governance, most important among them the 1933/34 Securities and Exchange regime and the separation of commercial and investment banking in the United States was preceded by a major financial crisis.[5] A critical question is where solutions to the global governance vacuum may come from at this time. The most recent international financial market crises – the East Asian financial crisis of 1997/98 and the subsequent emerging market crises in Russia and Latin America -- did not face a similar dilemma. At the time it seemed obvious that the institutional solutions should be derived from 'best practices' in developed market economies.[6] This belief formed the basis for policy advice by the International Monetary Fund, the World Bank, the US Treasury and others given to afflicted countries.[7]

In the current crisis distinguishing between good and bad governance practice has become as difficult as distinguishing between good and bad assets. As the chairman of the US Federal Reserve, Ben Bernanke, put it after the government announced a massive bail out plan on September 19th, "there are no atheists in foxholes and no ideologues in financial crises".[8] While the political debate in the US

[5] See Joel Seligman, "The Historical Need for a Mandatory Corporate Disclosure System," *Journal of Corporation Law* 9, no. 1 (1983). For a more critical account see Paul Mahoney, "The Political Economy of the Securities Act of 1933," *Journal of Legal Studies* 31, no. 1 (2001).
[6] IMF, "International Capital Markets, Developments, Prospects and Policy Issues," (Washington, D.C.: International Monetary Fund, 1995), IMF, "International Standards: Strengthening Surveillance, Domestic, Institutions, and International Markets," (Washington: International Monetary Fund, 2003).
[7] Neither the belief nor the policy advice that followed from it was undisputed. For a critical review of the reforms in South Korea following the East Asian crisis, see, for example, Jang-SUp Shin and Ha-Joon Chang, "Economic Reform after the Financial Crisis: A Critical Assessment of Institutional Transition and Transition Costs in South Korea," *Review of International Political Economy* 12, no. 3 (2005).
[8] Peter Baker, "A Professor and a Banker burry old dogma on markets", The New York Times, 20 September 2008, p. A1.

Congress that surrounded the adoption “Troubled Assets Rescue Plan”[9] may suggest otherwise, the absence of a dominant ideological pre-commitment is one reason for the lack of a blue print for a new governance regime. The absence of a ready made solution leaves open the question where to look for the material and the actors that will produce governance solutions to respond to the crisis and create a more sustainable governance regime for the future.

This paper suggests that one place to look are the actors that were involved in the first response to the crisis, namely private banks from the West and Sovereign Wealth Funds (SWFs) from the East. Beginning in early summer of 2007, a number of SWFs have taken fairly large equity (or convertible debt) positions in what at least used to be some of the largest financial intermediaries in the West.

When the credibility of a governance regime is undermined, as typically happens in a major crisis, actors hedge not only their financial bets. They also hedge their bets as to what the new ‘rules of the game’[10] might be. As David Stark has suggested in the context of transition economies, actors engage in “organizational hedging”.[11] They do so by establishing relations with actors outside existing relations and established patterns of behavior. The primary motivation for creating new relations may be purely economic (i.e. financial diversification). Yet, once created, durable ties -- that is relations which de jure or de facto do not allow for

[9] The House of Representative rejected TARP with over 50 percent of Republican voting against it, in part because government intervention on this scale was deemed to be “un-American”. ADD REF
[10] Douglas North refers to institutions as the rules of the game. They include both formal institutions (laws and regulations) and informal institutions (social norms and business practices). See Douglass Cecil North, *Institutions, Institutional Change, and Economic Performance* (Cambridge; New York: Cambridge University Press, 1990).
[11] David Stark, "Recombinant Property in East European Capitalism," *American Journal of Sociology* 101, no. 4 (1996).. ADD references

easy exit -- create an opportunity for sharing information, experience, and practices, from which solutions for a new set of practices and institutions may develop.[12] A new governance regime emerges from this search process when these practices become institutionalized, that is, when they become part of the collective expectations of critical actors that they will persist.[13]

The transactions between SWFs and Western banks that have emerged beginning with the CIC investment in Blackstone in May/June of 2007 have linked some of the largest financial intermediaries from different parts of the world (banks from the US and Western Europe with SWFs from the Far and the Middle East); and different governance backgrounds (privately owned banks with dispersed ownership structures with entities controlled and financed by governments). The way these transactions were structured and the context in which they emerged suggest that both parties to the transactions had interests beyond the immediate financial quid pro quo. Most were formed for the long term (several years). Indeed, several transactions had explicit lock-in provisions (between 6 months and 3 years), and in some cases followed by gradual divestiture provisions. Others created an incentive structure adverse to early exit. This has been the case for the transactions (the majority of the ones scrutinized in this paper) that used mandatorily

[12] Charles Sabel and others refer to similar process as "experimental governance". See Charles Sabel and Jonathan Zeitlin, "Learning from Difference: The New Architecture of Experimentalist Governance in the European Union," *Unpublished working paper* (2006). for an analysis of the evolution of governance in the context of the European Union.
[13] Masahiko Aoki, *Toward a Comparative Institutional Analysis* (Cambridge, MA: Cambridge University Press, 2001). has emphasized that institutions *are* sustained collective expectations. Greif emphasizes that these expectations must translate into "regularized patterns of behavior". See Avner Greif, *Institutions and the Path to the Modern Economy: Lessons from Medieval Trade (Political Economy of Institutions and Decisions)* (Cambridge: Cambridge University Press, 2006).

convertible securities.[14] Moreover, the transactions were formed in the context of growing uncertainties about the future of global finance. Not only were there increasing signs that the high leverage-high return bonanza had run it course (or to paraphrase the words of Citigroup's former CEO Charles Prince, 'the music had stopped'). Even more importantly, the landscape of global finance was shifting. At the macro-economic level the pattern of global capital flows had shifted with highly industrialized countries becoming net *importers* of capital, contrary to their long-standing role as capital *exporters.*[15] At the micro-level, financial intermediaries sponsored by governments were asserting a greater role as investors in global financial markets. While a number of SWFs had been around for decades, their foray into finance is of more recent origin.

Taken together, these factors create powerful rationales for SWFs and banks to invest in governance and to do so collaboratively. Both sides share an interest in the future governance regime for global financial markets. Both sides have an interest in controlling contagion effects of financial distress and to seek solutions to address contagion effects once they occur. Banks in particular face a serious credibility problem. They need to rebuild trust both vis-à-vis other banks and vis-à-vis customers and investors. Conversely, SWFs need to enhance their credibility as value investors rather than politically motivated ones. And finally both sides are in need of addressing problems of financial discipline, the root cause of which differs between the two types of organizations.

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[14] For details see below [].

[15] Eswar Prasad, Raghuram Rajan, and Arvind Subramanian, "Foreign Capital and Economic Growth," *Brookings Papers on Economic Activity*, no. September (2007). See also McKinsey Global Institute, "Mapping Global Capital Markets," (New York: Mc Kinsey Global Institute, 2008).

In sum, the paper has several goals. The first is to document the financial investments by SWFs in large financial intermediaries from the West and the network ties that resulted from them. The second goal is to develop a framework for analyzing the functions these network ties once formed may perform. The third goal is to identify the challenges for a viable governance regime of global financial markets and to explore if and how Global Network Finance (GNF) may respond to these challenges.

II. A Taxonomy of Transactions and Actors

Between May of 2007 and today, about 25 transactions were completed between 14 banks located primarily in the US and Western Europe and 9 SWFs or other state controlled investment vehicles respectively (see Appendix 1 for details) that resulted in SWFs taking a substantial minority stake in Western banks.[16] The total value of these transactions is estimated to be about 55bln.[17] While this is a relatively low number when compared to overall investments into financial institutions,[18] the concentration of these investments in a handful of (at the time) the largest financial intermediaries in the world is significant. Indeed, as can be seen from the above numbers, several actors on both sides of the transactions were repeat players. They are of particular interest for the purpose of this study, because the relative short time span since the formation of these relations and the lack of much direct evidence as to how they are used in practice makes it difficult to extrapolate from the sum of all transactions. Analyzing the patterns of relations among actors whose repeat engagement suggests a strategy is likely to hold more cues for discerning what this strategy might be. Among the Western banks that raised capital from more than one SWF over the past year were Barclays (Qatar Investment Authority, QIA, Temasek of Singapore, and China Development Bank, CDB); Citigroup (ADIA of Abu Dhabi, Kuwait Investment Authority, and the Government of Singapore Investment Corporation, GIC); UBS of Switzerland (with

[16] Share acquisitions on the secondary market, such as China's SAFE's minority acquisitions of stakes smaller than 1 percent in 50 different UK listed entities have been excluded from the survey.
[17] See the figures in Appendix for details
[18] Gerard and Sauvant supra note [].

GIC and two unidentified SWFs from the Middle East), as well as Merill Lynch (Temasek, Kuwait Investment Authority, KIA, and the Korean Investment Corporation, KIC).[19] They received capital injections amounting up to US$12billion each from more than one SWF. According to 2007 data, these four financial intermediaries were among largest financial intermediaries in the world based on asset value.[20] They were also among the top 5 institutions in each of their respective home countries.

The SWFs that invested in these large financial intermediaries invested not only only in one, but in several banks. Singapore's Temasek acquired substantial minority stakes in Barclays and Merrill Lynch after having previously secured a 14 percent stake in Standard Chartered.[21] Temasek's sister organizations, GIC, became an important stakeholder in Citigroup and UBS. China's new state investment corporation, CIC, participated in two investments: a 9.9 percent stake in the private equity group Blackstone, and a five percent stake in CIC in Morgan Stanley. In addition, it invested US$ 3.2 bln in a distressed asset vehicle managed by the US firm JC Flowers.[22] Finally, Kuwait Investment Authority (KIA) invested in Citigroup as well as UBS.

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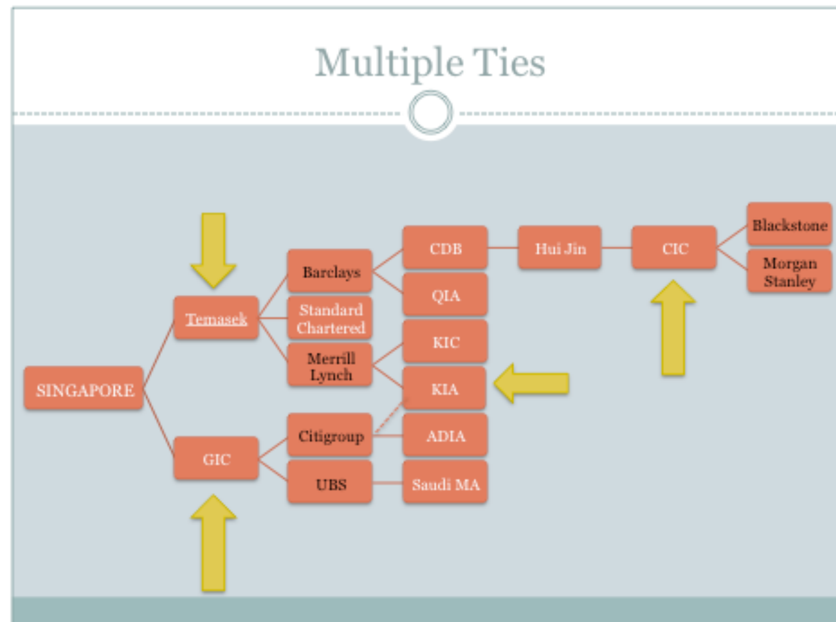
[19] As a result of the stock for stock merger between Merill Lynch and Bank of America agreed in September of 2008, these SWFs are now slated to become minority shareholders in Bank of America.
[20] Citigroup is the largest, Barlcays the 2nd largest company, followed by UBS (30th) and Merrill Lynch (45th). Source: Orbis data base available through Columbia University Libraries.
[21] The stake has since been increased to 19 percent.
[22] Moreover, entities that are indirectly controlled by CIC have been involved in additional acquisitions. Industrial and Commercial Bank of China (ICBC) acquired a 20 percent stake in South Africa's Standard Bank, and Bank of China a similar stake in the French banking house Edmond the Rothchild. In addition, China Development Bank invested in Barclays, and the brokerage firm Citic entered an agreement with Bear Stearns, which, however was cancelled when Bear was acquired by Chase Morgan in March 2008. (See Table 1 for details)

Figure 1 below depicts graphically the relation among these key players.



The Nature of their Ties

The terms of the transactions that have linked Western banks and SWFs and Western banks have varied. Some transactions were for common stock, others for non-voting equity units, and yet others conferred on the SWFs convertible debt securities with fixed dividend payments. Some of these debt securities made the conversion optional, others provided for mandatory conversion at a fixed future date. [23]

[23] Column 4 of Table 1 lists the different features of the transactions.

From a legal perspective these formal features gave SWFs very different positions in these banks. Common stock gives investors voting rights. Yet, even the few SWF/Bank transactions that gave SWFs common stock have been for minority stakes. Such minority stakes do not translate directly into control. Most minority shareholders are rationally passive and when they assert influence over their investment target it is frequently by threatening with their exit option or with withholding future capital. As SWF became the largest minority shareholders in these banks, the threats may be credible, not the least because the behavior of the largest shareholders has important signaling effects for smaller investors who tend to take clues from them.[24] How credible they are depends, however, on the performance of the bank and the markets in which their shares are traded. Large minority shareholders have an exit option only in a liquid market. And the credibility of the threat to withhold future financing depends on the demand for external funds at a future date and the availability of alternative sources to meet this demand. Given the uncertainty of these future outcomes it appears that SWFs and banks have locked themselves into relations that are likely to excceed the hold or lock-in periods they had formally agreed on.

This is also the case with respect to transactions in which SWFs received convertible debt securities rather than equity stakes. While convertible debt securities guarantee the investor some return in the form of fixed recurrent

[24] This appears to apply also to SWF. A good example is the role of Temasek as acquirer of a substantial number of shares in a private placement of shares of a small Chinese derivative trading company launched in October 2005 – only weeks before it filed for bankruptcy. As detailed in Curtis J. Milhaupt and Katharina Pistor, *Law and Capitalism: What Corporate Crises Reveal About Legal Systems and Economic Development around the World* (Chicago: Chicago University Press, 2008)., smaller investors responded positively to Temasek's lead, and as a result implicated it in the insider trading allegations that have marred this sale.

payments, the real value of the investment is determined at the time of conversion. Mandatory convertibility at a fixed future date exposes the investor to the risk that the conversion is preceded by a decline in share prices. Conversely, if the conversion takes place after a rise of share value the investor gains. The implication of this dynamic is that investors – in this case the SWFS - have a real interest in the performance of the company well beyond securing their regular dividend payments. Given the stake they hold and their track record as investors, it is likely that they will make sure that they are being heard irrespective of whether or not they command formal voting rights.[25]

Most of the transactions documented in Appendix 1 were for convertible debt securities. This came in response to the growing evidence that markets had not bottomed out and that SWFs were taking on substantial risk by investing in Western banks. In fact, the only exceptions, i.e. transactions for common stock, were transactions that preceded the credit crisis (as the Blackstone and the Barclays transactions) or investments in banks deemed not to have been affected by it (as ICBC's investment in South Africa's Standard Bank and Band of China's investment in Rothchild of France).

Of the transactions in this sample, CIC's investment in Blackstone is the one with the fewest safe guards for the investor. In this transaction (of May 2007) a unit that later became a subsidiary of CIC (which was formally established only in September 2007) acquired US$9 bln worth of non-voting units, or 9.9% of all

[25] It is therefore questionable, whether a proposal to restrict voting rights of SWF's would have much of an impact. Such a proposal has been developed by Ronald J. Gilson and Curtis J. Milhaupt, "Sovereign Wealth Funds and Corporate Governance: A Minimalist Solution to the New Mercantilism," *Stanford Law Review* 60, no. 5 (2008).. For a similar critique see [GELPERN].

outstanding units, in the newly formed limited partnership Blackstone LP. [26] While exposing the new Chinese asset company to market downturns, it arestricted CIC's exit option by including a 3-year lock-in provision and requiring a gradual divestiture over another 3 years.[27] The value of Blackstone's units has declined by over 50 percent since – much to the dismay of policy makers and the public in China. In December 2007 CIC invested in Morgan Stanley, this time following trend of using convertible debt securities rather than equity.

As the table in Appendix 1 suggests CIC is not the only sovereign wealth vehicle from China that has invested heavily in private banks. Others include China's government controlled banks. As of now, their investments have been much more cautious than CIC's investment in either Blackstone or Morgan Stanley.[28] The Industrial and Commercial Bank of China (ICBC) has acquired a 20 percent stake in the South African bank Standard in October 2007. Standard is a diversified financial conglomerate, but with major expertise in financing mining and natural resource projects. ICBC's investment underlines the growing investment relations between China and Africa in this sector. Bank of China acquired a 20 percent stage in the

[26] Blackstone was incorporated as a limited partnership under Delaware law. In a limited partnership, most unit holders do not have voting rights. Control rights over key decisions of the firm, including mergers and acquisition, changes in the company's charter and by-laws, etc. are vested with the "general partner". In the case of Blackstone this is a limited liability company owned and controlled by Blackstone's senior partners. See [] for details.
[27] The Blackstone investment was the first for a series of SWF investment in Western financial institutions. It was completed in May 2007 at a time when CIC itself had not been formally set up. The transaction differs from the SWF investments that followed in important ways. First, it was the only non-voting equity investment without any compensation in the firm of fixed payments. Second, the capital injection was used by Blackstone's senior partners to cash in their equity holdings in the firm just prior to the IPO rather than to stabilize the capital base of financial intermediaries. Third, CIC was committing to give Blackstone a future role in its asset management rather than using its investment in Blackstone in extracting any future concessions. The details of the transactions are available in the prospectus issued by Blackstone prior to its IPO. See []
[28] See below for details on this transaction.

French family owned bank Rothchild in the midst of the unfolding financial crisis of September 2008. Commentators suggest that this move allows Bank of China an entry to the European market, in particular to Rothchild's expertise with medium size and family controlled firms. Thus, both transactions reflect a strategic plan to expand into foreign markets and use a partnership with local banks in those markets to that end.[29]

Arguably, CIC's in Morgan Stanley fits pattern as well. While is timing and structure resembles other crisis driven investments, the investment also fits CIC's need in building asset management expertise for global financial markets. The decision by CIC to invest in Morgan Stanley may also have been motivated by the long term relation between Morgan Stanley and Hui Jin Investment Corporation (now a subsidiary of CIC), which brokered Morgan Stanley's joint venture with China Construction Bank (CCB) to form China International Capital Corporation (CICC).[30] CCB had earlier transferred its holdings in CICC to CIC, thus making CIC and Morgan Stanley direct partners in this venture. In March of 2008 Morgan Stanley attempted to sell its holdings (a 34.4 percent stake) in CICC – presumable to further raise capital to respond to the deepening crisis -- but put off such plans after it received bids for only half of the amount it had hoped to raise.[31] It is, of course, not inconceivable that Morgan Stanley dropped these plans in light of its relations with CIC.

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[29] Both banks may have benefited from advice by some of their largest shareholders. In the case of Bank of China they include RBS (28.4 percent), Temasek (13.7), UBS (5.36) and Morgan Stanley (4.98); and in the case of ICBC Goldman Sachs (19.84 percent) – that is, some of the same names that were involved in the major SWF/bank deals discussed in this paper. Data on shareholdings of these banks are available from www.bloomberg.com (last visited 27 September 2008).

[30] See supra at [].

[31] See Henry Sender, "Morgan Stanley halts CICC stake sale", the Financial Times, 26 March 2008.

This backgroun is interesting for several reasons. First, it suggests that among the various Chinese government sponsored investment vehicles, CIC is consolidating financial services in the areas of investment banking and asset managing, thereby freeing up banks to focus on core business within China and in their global expansion strategy. Second, it is indicative of relational ties between Morgan Stanley and CIC. Indeed, when Morgan Stanley was facing collapse in September '08, CIC's chief executive, Gao Xiqing traveled to New York together with Morgan Stanley's chief executive for China, Wei Christianson, to consider CIC taking another 40 percent stake in the investment bank. In the end, this deal did not materialize. Instead, the Japanese holding bank Mitsubishi UFC began negotiating a 10-20 percent stake in Morgan Stanley.[32] According to press reports the reason cancelling negotiations with CIC may have been related to political obstacles both in China and the US to a major CIC stake in Morgan Stanley with time running out for Morgan Stanley.[33]

The fact that China's various investment vehicles may be pursuing different strategies with respect to global acquisitions is confirmed by CDB's investment in the UK bank Barclays, where it joined forces with Singapore's Temasek. The initial deal was completed prior to the onset of the credit crisis, which is typically dated August 2007.[34] While from Barclay's perspective the primary reason was to shore up the bank's capital base, for CDB it offered an opportunity to get access to two

[32] Michael Flaherty and David Dolen, "True partnership may be elusive for Mitsubishi UFJ and Morgan Stanley", International Herald Tribune 28 September 2008 available at www.bloomberg.com.

[33] Rick Carew, "Why a China Deal did not Work for Morgan Stanley", The Wall Street Journal, 22 September 2008, available at www.bloomberg.com

[34] Clearly, this does not mean that market insiders, including the parties involved in these transactions, had realized at an earlier date that markets were turning south.

quite different but equally important financial intermediaries: Barclays, the 2nd largest bank in the world by market capitalization in 2007, and Temasek, an experienced and probably one of the most successful sovereign vehicles. The transactions occurred in the context of a takeover battle over the Dutch bank ABN-AMRO between Barclays and a consortium of Western European banks let by the Royal Bank of Scotland (RBS).[35] In April of 2007 Barclays and ABN-AMRO had agreed to a stock for stock merger designed to create the largest universal banks in the world. This aspiration was subsequently challenged by RBS' competing bid for ABN AMRO, which proposed a 93 percent cash merger with the explicit goal of breaking up ABN AMRO. At this juncture Barclays began to distance itself from the deal and to court Temasek and CDB for a capital injection of about US$ 5bln, which translated into 2.6 and 3.2 percent common stock respectively for the two sovereign wealth vehicles. Publicly Barclays announced the Temasek & CDB investment as a way to provide Barclays with sufficient cash to compete with the RBS bid for ABN AMRO. Yet, the revised offer valued ABN AMRO still at €2 per share below the rival bid by the RBS consortium – and this at a time when Barclays own shares, which accounted for most of the consideration, was declining. It is more plausible that Barclays' major motivation was to stem the decline of its own shares by raising capital from SWFs. As a result of the transaction, CDB and Temasek became the second and third largest shareholders in Barclays.[36] In June of 2007, the Qatar Investment Authority (QIA), another SWF had acquired a 6.4 percent stake by

[35] The other two banks that participated were Standander of Spain, the Belgo-Dutch Bank Fortis.
[36] As of September 2008, QIA is still the largest investor in Barclays. However, as a result of additional share issues, the relative share of CDB and Temasek in the company has declined with CDB ranking eighth and Temasek occupying the 15th place. Information available at www.bloomberg.com.

exercising an earlier rights issue. Jointly, the three SWFs now owned more than 10 percent of Barclays, with all remaining shareholders being highly dispersed.[37]

Still, none of the SWFs is represented on Barclays' board, even though the share purchase agreement between Temasek and CDB offered both of them a board seat at their option. Instead, their leverage over the bank has been primarily of a financial nature and the financial cushion they provided seems to have served Barclays well. While the bank – as other banks over the past year - suffered a decline in the value of its shares, it faired much better than many of its competitors. Indeed, it acquired Lehman's New York operations from the brokerage's bankruptcy proceeding for US$1.75 bln after having declined to rescue the company without government guarantees. According to press reports, QIA has played a role in financing this transaction,[38] perhaps not unrelated to the fact that that Qatar had only recently licensed Lehman (along with Citigroup and RBS) to operate on its territory.[39] CDB and Temasek have contributed more indirectly. Despite the fact that Barclays' share value declined by 38 percent after these two sovereign vehicles had bought their additional stake, they jointly invested another US$8.4 bln in Barclays' share issue in June 2008, this time acquiring shares for roughly half the amount they had paid a year earlier.[40] They thereby provided critical backing to Barclays share

[37] Not even institutional investors owned more than 1 percent according to Barcays' annual reports.
[38] Sundeep Tucker and Roula Khalaf, "Qatar fund spurned Wall Street", The Financial Times, 25 September 2008 at 18.
[39] Will McSheehy, "Lehman, RBS and Citigroup receive Qatar licenses", 5 April 2008, available at www.bloomberg.com.
[40] Jean Chua, "Temasek's profit raises on asset sales as shares drop", Bloomberg, 26 August 2008, available at www.bloomberg.com.

issue.[41] Apparently, both companies are betting on long term value. Indeed, the recent annual report of Temasek published in August of 2008 indicates that Temasek's positive performance over the past year is due primarily to the sale of assets it had acquired at an earlier point, not to increase in the share value of current holdings.[42] This is consistent with the characterization of Temasek as an investor type with greater affinity to (proactive) private equity firms than (passive) mutual funds.[43]

The remaining deals all used convertible debt securities as the means of payment, albeit each on slightly different terms. [44] The attractiveness of debt securities indicates that SWFS became less sanguine about the value of the banks they invested in or the prospects of a quick turn around of the market. As noted above, debt securities give investors a fixed dividend and thus ensure them at least some return on their investment even in times of economic downturn. Indeed, the target banks in the relevant transactions agreed to pay fixed dividends of between 7 and 11 percent per annum – a substantial premium over the going market rate for inter-bank lending or the rate set by the Fed during the relevant time frame.[45] It reflected a steep increase in the cost of borrowing for financial intermediaries with substantial exposure to the market for debt derivatives as of the last quarter of 2007. The debt features of these securities notwithstanding, their equity component has put the two parties to these transactions into a bind. This is the case,

[41] See Ben Livsey, "Barclay rises on speculations of talks with Temasek", Bloomberg, 16 June 2008, available at www.bloomberg.com.
[42] See Chua suprt note [].
[43] See supra at [].
[44] The first deal that used convertible debt securities was the transaction between
[45] ADD

because a reasonable return on the investments made be SWFs depends on the turnaround of the banks in the near future. Moreover, these banks may well need additional capital support to achieve this turnaround and SWFs will have to determine whether injecting more capital in these faltering organizations is worth their while. Banks therefore have incentives to court rather than shun SWFs as their most potent investors (except for their own governments).

As has become clear in September '08, the financial cushion SWFs provided was not sufficient in all cases. The bankruptcy of Lehman Brothers forced the hand of Merrill Lynch, which agreed to a stock-for-stock merger with Bank of America for the equivalent of $40.45 US bln. Several SWFs, including Temasek and the Korean Investment Corporation (KIC) had invested earlier in the company, Temasek initially acquiring a 9.4 percent stake in mandatory convertible preferred stock at 9 percent interest for US$ 4.4 bln and KDI bought a 3.3 stake with similar terms for US$ 2bln. Indeed, Temasek invested an additional US US$3.4 bln in Merrill Lynch, just weeks before the company lost its independence. However, part of the new investment was a wash. Temasek had negotiated a provision in the earlier share acquisition agreement that it would be compensated for any difference between the price it had paid and a lower price for a new share issue by Merrill Lynch that would occur within 12 months. Still, Temasek did invest an additional US$ 900 mln and thereby increased its stake in Merrill Lynch to about 13 percent – thereby becoming the largest shareholder of the investment bank.[46] Ultimately, these rescue measures

[46] See "Singapore's Temasek to up Merrill's Stake", The Sidney Morning Herald, 27 August 2008, available at www.bloomberg.com

did not succeed as Merrill Lynch was forced to sell itself to Bank of America in September 2008.[47]

The investments by SWFs in UBS and Citigroup fall in between the Barclays and the Merrill Lynch transactions. In both cases, the transactions were triggered by the deepening financial crises and the major losses incurred by their investment banking operations these large commercial banks had to write off. Unlike the Barclays transaction the investments were therefore structured not as common stock, but as convertible instruments. This time the sister fund of Temasek, the Government of Singapore Investment Corporation (GIC), participated in the deal. As Temasek, GIC has repeatedly stated its long term perspective on this investments and sought to deflect critique at home and abroad that it was investing in losers. As Temasek, it has not taken up formal board positions on the banks it invested in. Yet public statements by top officials of GIC suggest that the fund is confident that its voice is being heard.[48] At one point GIC expressed publicly its opposition to any plans that would result in a break up rather than a restructuring of the Swiss bank

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[47] Some commentators suggested that the takeover was still profitable for Temasek. Mohammed Hard and John Jannarone, "Temasek is still sitting pretty with its stake in Merrill", The Wall Street Journal, 15 September 2008. See also Ben Shiyin, "Temasek my reap US$1.5 bln from Merrill Lynch takeover", Bloomberg 15 September 2008, available at www.bloomberg.comHowever, the recent decline in BofA' stock has hed doubts on this calcuation.

[48] Recently, GIC's chief investment officer has reiterated this in a statement, which also reflected on the role GIC plays in the two banks. See Chen Shiyin, "GIC's NG says UBS, Citigroup to offer good returns long term", Bloomberg, 23 September 2008, available at www. bloomgerg.com. Although the SWF had been invited to nominate members to the board, so far it has declined. ``Now with regard to having a say in these two banks, we have not taken up a board seat in either of them. We have been invited by the UBS board to nominate a director, but we have declined forthe time being. Our view is that we can make our views known as a shareholder to UBS and Citigroup, and we're happy that we're able to give an input which is generally helpful to the board and management of UBS and Citigroup. So this will be our position for the time being." (Ibid)

UBS.[49] Both UBS and Citigroup also raised capital from Middle Eastern SWFs; Citigroup from Abu Dhabi's ADIA as well as the Kuwait Investment Authority (KIA); UBS from the Saudi Arabian Monetary authority.[50] So far, both banks have weathered the storm of the crisis. How much of this can be attributed to the capital injection SWFs provided earlier, or the fact that both banks have a financial cushion in forms of deposits, a feature Merill Lynch was lacking, or on a combination of both factors is difficult to say.

In sum, the transactions between SWFs from the Far East and the Middle East and Western banks have forged new ties among large financial institutions with very different governance regimes and investment objectives.[51] In part by design, in part by circumstances these ties have created long-term relations. In several cases they have re-enforced ties or made reciprocal ties that had emerged earlier. This is the case in particular with respect to China, as many Western banks had earlier invested in large Chinese banks when part of their shares were put up for sale in 2005/06. They include Morgan Stanley, Citigroup, Goldman Sachs, UBS, RBS, Bank of America, among others. Just like the transactions discussed in this paper, the foreign investors acquired substantial minority stakes often with lock-in provisions and some guarantees against the dilution of their value.[52] Moreover, as in the current

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[49] Paul Verschur, "GIC opposes UBS split, prefers restructuring", Bloomberg, 23 January 2008, available at www.bloomberg.com

[50] Earlier report referred to the latter as an "undisclosed strategic investor from the Middle East", Business Wire, Zurich, 10 December 2007, available at www.bloomberg.com. However, the Financial Times recently identified this investor as the Saudi Arabian Monetary Agency. See the table in Chris Hughes, "A high price to pay for the backing of Omaha's sage" Financial Times, 25 September 2008, at 18.

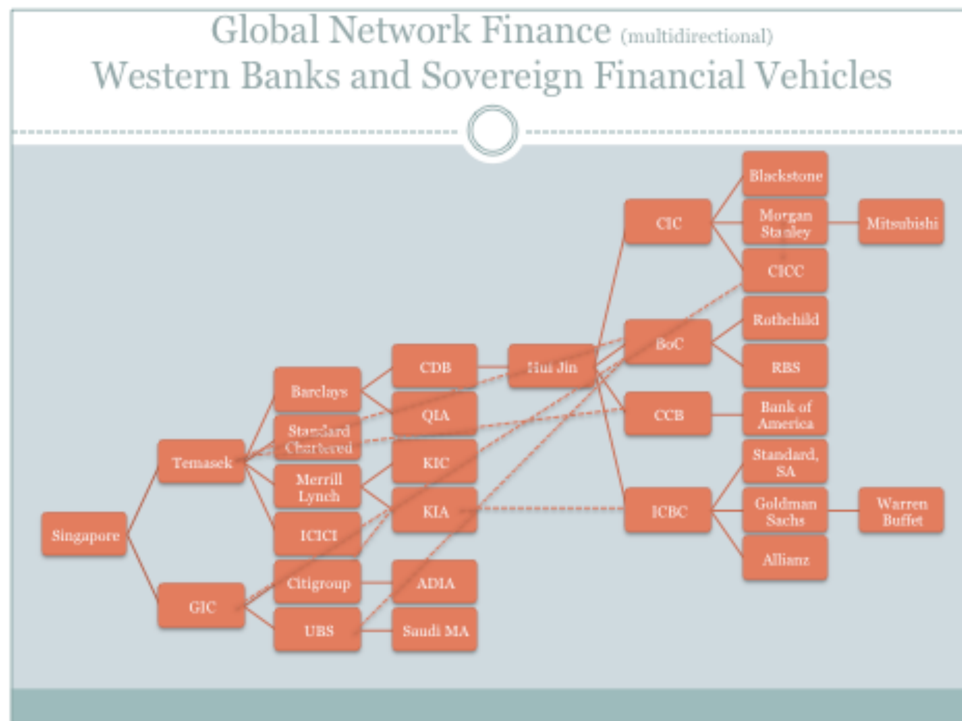
[51] The latter will be explored in greater detail below under []

[52] See Appendix 2 for details.

transactions, in most cases more than one foreign financial intermediary invested in the same bank.

Taken together, the investments by Western banks and Temasek into Chinese state controlled bank in 2005/06 and the investment by SWFs from China, Singapore, Korea and the Middle East in Western banks in 2007/08 form a network that spans the globe. Figure 2 below illustrates the shape of GNF. Note that the links between different nodes in the network do not indicate the direction of investment.

FIGURE 2:



The network depicted in Figure 2 includes only substantial equity (or quasi-equity) stakes among large financial institutions headquartered in the West or in the home countries of SWFs. It does not identify other relations among the "nodes" in

the network. Neither does it capture the large number of subsidiaries many of these financial institutions hold in countries around the world. Thus, the network presented in Figure 2 capture only the proverbial tip of the iceberg. However, the importance of the financial intermediaries within their domestic markets and as international players calls for attention to the relations they have formed with each other.

III. Organizational Hedging: An Analytical Framework

The concept of 'organizational hedging' was developed first by David Stark in his work on the transformation of property rights in the former socialist countries of Eastern Europe.[53] Stark documented that during the early period of transition enterprises in Hungary began to create extensive webs inter-firm relations, which were typically centered on state owned enterprises that faced the prospect of privatization. Some of the enterprise' assets were spun off to other entities; others entered joint venture relations with domestic or foreign parties; yet others were transferred to employee ownership and control, or remained under the formal control of the enterprise. Many of these configurations changed over time as "networks of assets and chains of debt" were "recombined".[54] Stark interpreted the multifaceted recombination of assets as an attempt by actors facing uncertainty as

[53] Stark, "Recombinant Property in East European Capitalism." See also David Stark and Laszlo Brusz, *Postsocialist Pathways: Transforming Politics and Property in East Central Europe* (Cambridge, UK: University of Cambridge Press, 1998).
[54] David Stark, "Networks of Assets, Chains of Debt - Recombinant Property in Hungary," in *Corporate Governance in Eastern Europe and Russia*, ed. Roman Frydman, Cheryl Gray, and Andrzej Rapaczynski (London, Budapest, New York: CEU Press, 1996).

to the direction and outcome of the reform process to operate across “multiple evaluative principles”.[55] They learnt how to play by the rules of an emergent market place while simultaneously adhering to established practices of state control. This is the essence of ‘organizational hedging’. The recombination of assets created the space for experimenting under conditions of uncertainty.

Stark emphasize that organizational hedging is different from financial hedging as conventionally understood. Financial hedging refers to transactions aimed at reducing financial risk exposure by diversifying one’s portfolio or entering into transactions, such as swap or option agreements, that offset the risk of other transactions. In contrast, organizational hedging is a response to uncertainties related to the governance of economic relations, or the ‘rules of the game’. Actors respond to the constraints and opportunities of alternative governance frameworks, none of which has been settled in the sense that it is capable of shaping the sustained collective expectations of actors about how to operate in a given environment.

Uncertainty about the rules of the game may stem from a variety of causes. It may result from weaknesses in existing governance regimes, including weak or capricious enforcement of formal law, pending legal change, or a general weakening of state authority. It may also be triggered by uncertainty about social or business practices and behavior whether or not that behavior is grounded in law. Established practices or ‘regularized patterns of behavior’[56] may be undermined by shocks to

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[55] Stark (1996) supra note [] at []

[56] See Greif, *Institutions and the Path to the Modern Economy: Lessons from Medieval Trade (Political Economy of Institutions and Decisions)*. at [] for a definition of institutions as “regularized patterns of

the system or by an increase in defections from established practices in anticipation of a major change. Uncertainties about governance will affect not only how actors (individuals and organizations) organize their internal relations, but also their relation vis-a-vis others.

Organization hedging strategies are often defensive. Actors scramble for certainty and reach out to other actors with different institutional expertise. They create the space within which institutional practices may be examined and recombined for developing new solutions. Whether these solutions – or proto-institutions as one might call them – will help shape the new rules of the game depends on how widely they will be followed.[57] Not all proto-institutions will ever be institutionalized. In fact, most will not. The point is that the re-configuration of relations among critical actors from different institutional domains is an important source for institutional innovation and change. Moreover, such innovation frequently takes place in a context where previously distinct domains have been bridged. As Padgett and McLean have put it, "recombinant innovation in organizations is produced (…) when one or more social relations are transposed from one domain to another, mixing in use with relations already there."[58] An innovation can become a system-transformative invention according to Padgett et al., if and when it spreads into domains and usages beyond those where it originated. Importantly, the actors themselves may not realize that their

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behavior". Note that this conceptualization of institutions deviates from North's notion that institutions are made (man made devices) operating as an infrastructure or endowment.

[57] Greif suggests that the authority of some actors may signal a shift in regularized patterns of behavior. See ibid at [].

[58] John F. Padgett and Paul D. McLean, "Organizational Invention and Elite Transformation: The Birth of Partnership Systems in Renaissance Florence," *American Journal of Sociology* 11, no. 1463-1568 (2006). at []

experimentation or hedging strategy may trigger institutional change, much less that such change can at times have the potential for systemic transformation. Indeed, the real beneficiaries of institutional invention frequently did not participate in their creation.

In their study of institutional development in Renaissance Florence Padgett and McLean show that "partnership systems", an institutional invention that has been credited with the birth of financial capitalism, was the product of recombining traditional features of local banking with long distance trade. In the aftermath of a major political crisis local bankers were co-opted into the political system. Their newly gained access to levers of political control helped dismantle the traditional guild system, which had re-enforced sectoral specialization and inhibited institutional change. The new alliance between merchants and bankers, which was reinforced by marriage ties, facilitated the expansion of merchant banking through diversified partnerships.

The example illustrates some important features of organizational hedging. A crisis (in this case a political crisis) precipitated a new alignment of actors in the political/economic system with diverse institutional expertise. They contributed institutional practices from their respective domains, which in the process of their interaction were recombined to produce institutional innovations. Once they were followed by a critical mass they were institutionalized, i.e. they became the new 'rules of the game'.

Similarly, the collapse of the socialist system created substantial uncertainty about the future organization of economic, social and political relations. In this

context new coalitions were formed between government and non-government actors, domestic and foreign parties, insiders and outsides of firms. These coalitions were critical for reorganizing relations during the transition period. In doing so, they influenced the organization of firms, markets and their relation to politicians and government agencies in the long term.[59]

Actors in today's global financial market arguably face similar challenges as they confront the fallout from the financial market crisis of 2007/08. By all appearances, this crisis is fundamentally reshaping the organization of the global financial system. Until as a recent as 2007, Western banks dominated virtually unchallenged the global financial market place. According to a recent World Bank report, at the end of 2006, 100 institutions controlled 79 percent of global bank assets.[60] Most of these institutions are located in the West/North. 70 percent of the banking system in Eastern Europe and over 40 percent of the banking system in Latin America today is in the hands of relatively few large financial intermediaries, again mostly from the developed world. The dominance of Western banks also implied the dominance of the model they espoused for organizing economic and financial relations. This model was based on the separation of the private and the public spheres; regulatory oversight of banks based on internationally agreed principles (BIS accords) with a clear allocation of host and home country risk in terms of regulatory oversight and responsibility as lender of last resort; and decisions about investment strategies and risk allocation firmly vested in private

[59] [ADD]
[60] Worldbank, "Global Development Finance: The Role of International Banking," (Washington, D.C.: The World Bank, 2008).

hands. Multilateral organizations, such as the IMF and the WTO played a critical role in spreading the model by offering policy advice based on it, and by promoting the globalization of financial services inspired by the Western model of international banking.

The future of Western bank dominance in global finance and the model it represents has now become uncertain. As they confronted the first serious symptoms of the crisis, the pillars of Western bank dominance, financial intermediaries like Citigroup, Barclays, Merrill Lynch and Morgan Stanley, reached out to SWFs from East Asia and the Middle East.[61] SWFs offered troubled banks much needed liquidity. The choice of SWFs over at that time still available alternative sources of finance is likely to have been motivated by the desire receive capital injections from institutions that were not themselves afflicted by the same problems Western banks were facing.

At first glance, the motivation of Western banks thus appears to have been primarily financial rather than organizational hedging. That alone does not explain, however, why SWFs would partner with private banks and expose themselves to substantial financial risk in doing so. Moreover, even if it was the primary motivation the ties once formed may still serve organizational hedging functions. And finally, the deepening of the crisis has created new urgency for developing a new governance regime for global financial markets.

[61] According to available press reports, most investments were initiated by Western banks, not SWFs.

IV. Governance Challenges

The thrust of the argument developed in this paper is that the global financial network depicted in Figure 2 has the potential to influence, if not shape the new governance regime for global financial markets. The existence and operation of any complex market is dependent on a viable governance regime. It is therefore in the interest of all actors to ensure that such a regime exists and that a new one is created that will help stabilize markets. One can identify at least three rationales for organizational hedging by actors now linked in the emergent global financial network: a political economy rationale; a credibility rationale; and a governance rationale.

Political Economy Rationale

From a political economy perspective, the network relations give critical 'nodes'[62] in the network a say in shaping the new rules of the game for the global financial market place. The countries that have sponsored SWFs have a strong interest in asserting such a role. This is true in particular for countries like South Korea, China, and Singapore, i.e. countries that were either directly affected by or witnessed the 1997/98 East Asian financial crisis in close proximity. There is now substantial agreement that the cause for the crisis lies not simply in 'bad

[62] The simplest definition of a network is a set of links between nodes. See John Scott, *Social Network Analysis* (Los Angelos, Delhi, London, Singapore: Sage Publications, 2007)., 7-37 for an excellent overview of the intellectual history of network relations.

institutions'[63] in these countries, but in the speed with which financial markets were liberalized in the early 1990s, thus exposing them to the volatility of global capital flows.[64] The accumulation of what has been deemed "excessive" reserves by these countries in the aftermath of this crisis was a direct response to this experience. These reserves provide an important buffer against future currency crises. But perhaps even more importantly, they offer extra insurance in the event of a severe or prolonged crisis against IMF intervention and the dictate of domestic policies that accompanied it, in particular after attempts by Asian countries to create a regional IMF were blocked.[65] This interpretation is supported by the fact that several emerging markets, South Korea among them, have paid back their loans to the IMF early to regain the policy autonomy over areas that were governed by IMF conditionality.[66] It would only be consistent with this account, if the same countries were using SWFs not only for financial purposes, but also as a way to increase their countries' influence in shaping the global governance of finance.

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[63] See, however, Simon Johnson et al., "Corporate Governance in the Asian Financial Crisis 1997-98," *Journal of Financial Economics* 58 (2000), Raghuram G. Rajan and Luigi Zingales, "Which Capitalism? Lessons from the East Asian Crisis," *Working Paper, Chicago University* (1998).
[64] Martin Feldstein, "Economic and Financial Crises in Emerging Market Economies: Overview of Prevention and Management," *NBER Working Paper 8837* (2002), K.S. Jomo, "International Financial Liberalization and the Crisis of East Asian Development," (Lima, Peru: Intergovernmental Group: XII Technical Group Meeting (unpublished mimeo), 2000), Maurice Obstfeld and Alan M. Taylor, *Global Capital Markets: Integration, Crisis, and Growth* (Cambridge, UK: Cambridge University Press, 2004), Steven Radelet and Jeffrey Sachs, "The East Asian Financial Crisis: Diagnosis, Remedies, Prospects," (Cambridge, MA: Harvard Institute for International Development, 1998), Shin and Chang, "Economic Reform after the Financial Crisis: A Critical Assessment of Institutional Transition and Transition Costs in South Korea."
[65] Japan proposed the creation of a regional monetary fund in Asia following the crisis, but this proposal did not find much support by Western countries.
[66] Werner Baer, Pedro Elosegui, and Andres Gallo, "The Achievements and Failures of Argentina's Neo-Liberal Economic Policies," *available from ssrn.com* (2003). [ADD] The flip side of this development has been a weakening of the IMF, whose operations are to a large extent funded by loans extended to those countries.

Private banks from the West that sought help from the SWFs, but perhaps even more so their governments, are interested in ensuring their continued influence over the governance of global financial markets as well. This was evident in the responses to the first series of SWF investments. The former Treasury secretary of the United States, Larry Summers, expressed a widely shared that the rise of SWFs might propel "the end of capitalism as we know it"[67] fear as early as August 2007. Moreover, government oversight over foreign direct investment in "sensitive" sectors was strengthened in several countries. In the United States, the oversight standards of the Committee on Foreign Investment in the United States (CFIUS) were rendered more ambiguous by adopting a rather broad definition of 'control'.[68] Other countries prepared similar legislation.[69] Academics have joined the debate and proposed, for example, to cap the voting rights of state sponsored vehicles.[70] The attitude towards SWFs appears to have changed after the scale of the global financial crisis has become more apparent during the course of 2008. Not only did it become evident that capitalism as we knew it had been quite capable of triggering its own undoing without much help from SWFs. But as banks were

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[67] Lawrence Summers, "Sovereign funds shake the logic of capitalism", FINANCIAL TIMES, 30 July 2007, p. 9.

[68] Section 721 of the Foreign Investment and National Security Act of 2007 leaves the definition of control to CFIUS. The proposed rule to clarify the meaning of control, 31 CFR 800.203, defines the term as follows: "(a) The term control means the power, direct or indirect, whether or not exercised, through the ownership of a majority or a dominant minority of the total outstanding voting interest in an entity, board representation, proxy voting, a special share, contractual arrangements, formal or informal arrangements to act in concert, or other means, to determine, direct, or decide important matters affecting an entity; in particular, but without limitation, to determine, direct, take, reach, or cause decisions regarding the following matters, or any other similarly important matters affecting an entity." This definition has received a lot of commentary from foreign investors, including CIC. [ADD]

[69] For an overview of FDI regulations in 10 countries, see the GAO Report of February 2008 available at http://www.gao.gov/new.items/d08320.pdf.

[70] Gilson and Milhaupt, "Sovereign Wealth Funds and Corporate Governance: A Minimalist Solution to the New Mercantilism."

scrambling for fresh capital SWFs were perceived as stabilizing rather than de-stabilizing. This time around, however, SWFs were more guarded as a result of financial and the political costs their earlier investments had created.[71]

The governance of global financial markets may ultimately be resolved at the political level. Indeed, several proposals have been made to create a new global financial monitoring authority.[72] The political process, however, will take time and probably more time than actors in the financial market can currently afford. Moreover, government responses to the crisis so far suggest that most governments prefer to act alone to protect their country's economies. Coordination has proved difficult even in Europe despite is decades long project of economic integration andi coordination.

Workable solutions may therefore more likely to be found in places where the lines between politics and markets have been blurred. Organizations like SWFs, and networks between SWFs and banks are places where governance and financial interests converge. Indeed, it is no longer the less developed world that violates the sacrosanct principles of arms-lengths relations between governments and markets. The US, probably the strongest advocate of governance regimes based on such principles (even though it has not always adhered to them[73]) is now operating some of the largest government owned investment vehicles in the world: Fannie Mae and Freddie Mac, AIG, and soon the new vehicle to be created under the "Troubled Asset

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[71] See the discussion of CIC's pull out from increasing its 9 percent stake in Morgan Stanley to 49 percent. Infra at [].

[72] See, for example, Jeffrey Garten, Dean of the Yale School of Management, "Global authority can fill financial vacuum", The Financial Times, 25 September 2008, Section "Comments and Analysis".

[73] As commentators have recently reminded, us in 6 of the past 13 years a former Golman Sachs partner has been the Secretary of the Treasury. See also John Gepper, "What is Good for Goldman…", The Financial Times, 24 September 2008

Rescue Plan" (TARP), which was signed into law by President Bush on 3 October 2008.[74]

The stated goal of this far-reaching government intervention is that it will be only temporary. Given the scale of the crisis, this is increasingly becoming uncertain. Moreover, as long as it lasts and given the absence of alternative viable governance regimes, these new joint ventures between governance and finance are likely to reshape the organization of global finance and the ends it serves.

Credibility Rationale

The credibility rationale captures the fact that both sides – SWFs and Western banks - face substantial credibility problems as global financial players. The Western banks have lost much of their credibility in the eyes of their investors, customers, and counter parts as a result of the financial meltdown. The most telling indicators for the evaporation of credibility is the decline of the virtual stand-still in credit markets, including the inter-bank lending market and the flight into government bonds even as the yield for these bonds was tending towards zero.[75] Clients have moved their business away from banks affected by the crisis and investors have taken flight from financial institutions after several institutions were bankrupted.

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[74] See Mark Landler and Edmund L. Andrews, "For Treasury now comes hard part of bail out", The New York Times, 4 October 2008 stating that this vehicle "will be one of the world's largest asset management firms with an impressive $700 billion war chest". In comparison, ADIA of Abu Dhubai is said to manage about US$750bln in assets. [ADD]
[75] ADD

Networking with SWFs can be viewed as one strategy for re-building credibility. Not only did SWFs provide "clean capital" in the sense that they were largely unaffected by the credit derivative bubble.[76] The ties with SWFs could also signal a shift in investment strategy from "financialization" as the dominance of finance over the real economy has become known, to a more traditional role of intermediation and development finance.[77]

Overall, the investment strategy of SWFs has been much more conservative than of Western banks. Nonetheless, their marked differences among SWFs and many SWFs have re-adjusted their investment strategy over time. Traditionally, SWFs have invested primarily in 'safe' assets, such as domestic or foreign treasury bills. This was consistent with the primary objective of maintaining an asset base for future generations or for purposes of monetary policy. In response to rising oil prices, the accumulation of excess reserves well beyond what is needed to respond to balance of payment crises, and the decline of the US dollar, SWFs have begun to shift assets into equity at home and abroad. While on average SWFs still have most of their investments in fixed income securities and commercial real estate,[78] the SWFs that participated in the financial investments analyzed in this paper are more strategic investors. Table 1 below lists key aspects of the investment strategies of Temasek, GIC, CIC and KIA. While the precise composition of the portfolio of GIC and KIA is not known available evidence suggests that all 4 SWFs are heavily invested in

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[76] The most directly affected SWF is probably GIC, which describes itself as one of the larges real estate investors in the world. [ADD]

[77] For a comprehensive treatment see Gerald A. Epstein, *Financialization and the World Economy* (Esward Elgar, 2006).

[78] See Fotak et al supra note [] at 6.

equity, and that they have a track record of holding relatively large stakes.[79] This is particularly true for Temasek, which might be best described as a hybrid between a development band and a private equity firm.

TABLE 1: SWF Investment Strategies

SWF Taxonomy

	Temasek	GIC	CIC	KIA
Control Rights	Ministry of Finance	Ministry of Finance	State Council	Gov't
Financing	Reserves	Reserves	Reserves	Natural Resources
Informal Ties	Mgt recruited from Gov't; CEO&PM	Chairman = Lee Kwan Yew	Mgt recruited from Gov't	Board Members = Ministers
Finance/ Portfolio	40%	? (growing) RE substantial	substantial	22%
Domestic/ Foreign	67/33	0/100 (40% NA, 35% EU, 23% AS)	60/40	70% in US
Management Strategy	Listed large blocks = 48% of portfolio (~17% AR)	Passive/indirect (~6-8% AR)	Hui Jin active strategic CIC semi-active	57% equity 6% RE, PE, HFs 15% bonds

To be sure, SWFs face their own credibility problem. They are new and not well-trusted actors in global markets, especially in the West as indicated by the political backlash to their initial large-scale investments in financial institutions.[80] While private banks are now feared because of their reckless investment strategy, SWFs are feared for their actual or assumed political motives. SWFs have attempted to dispel some of these fears by insulating SWFs from politics through formal

[79] See also Monitor supra note [] at 43. According to this report, 48 percent of Temasek's portfolio is invested in large equity stakes of listed companies.
[80] See the discussion supra at []

barriers. Yet, the existence of strong informal ties between SWF executives and board members and government agencies suggests that formal barriers may not be sufficient. Partnering with large private players that are perceived to be independent from such government interference may be more effective to address this credibility problem.

From a purely formal perspective most of the SWFs scrutinized are independent legal entities established by and accountable to the government. In some cases SWFs answer directly to the Ministry of Finance. This is the case for GIC as well as Temasek, the two funds from Singapore. In the case of CIC the State Council, i.e. the government, that is the formal principal. As legal entities, the SWFs operate in principle autonomous from the government. As principals of the funds, the Ministry of Finance or State Council appoint and dismiss the SWF's board members, who in turn appoint the executives. Moreover, most board members currently serving on the board of directors of one of the SWFS have either previously served in the government are currently serving in such capacity.[81] This suggests that the government also has substantial informal ties over SWFs.

There is little direct evidence about how governmental control over these entities is exercised in practice. While there is some evidence that board members change over time, they typically explained with "resignations".[82] However, it is

[81] Of the 12 members currently serving on Temasek's board, only 2 do not have such affiliation. At KIA the minister of finance and his deputy are serving as board members. CIC's chief executive officesr have previously occupied positions in securities regulators, among others. ADD
[82] See Temasek's most recent financial report mentioning the "resignation" of [] after many years of service.

unclear whether resignations are related to the performance record of the relevant board members.[83]

The clearest evidence for government control over SWFs is the occasional veto right over sizeable investment decisions. An example is China Development Bank's (CDB) purported investment in Citigroup. After CDB, which had only recently been transformed from a development bank into a commercial bank had acquired a 3 percent stake in Barclays in the summer of 2007, which lost substantially in value thereafter, in December of 2007 the bank found itself in negotiations with Citigroup over a substantial investment. These negotiations were terminated, according to press reports because CDB was called back by the Chinese authorities. It was only then that Citigroup turned to ADIA (Abu Dhabi) and KIA for capital injection.[84] Similarly, CIC backed down from acquiring an additional 40 percent in Morgan Stanley (it had already acquired a 9 percent stake in late 2007) during the financial meltdown of September 2008. This has been attributed to political difficulties the investment would have faced both in China and the United States.[85]

A recent survey of SWFs by the International Working Group of SWFs reports that in 40 percent of all SWFs investment decisions are determined by the government rather than the fund's board.[86] Yet, it remains unclear what

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[83] Relating management turnover to governance mechanisms is also difficult in privately owned firms. According to a series of studies by Kaplan et al, the real trigger for a shake up in management is a crisis, and in the presence of a crisis, difference in the governance regime of Japanese, German or US firms are marginal. See Steven N. Kaplan, "Top Executive Turnover and Firm Performance in Germany," *Journal of Law , Economics and Organization* 10 (1994). [ADD]

[84] ADD [Financial Times]

[85] For details see infra at [].

[86] IWG, "Sovereign Wealth Funds," (2008). at 8. The reports also includes information about the legal basis for SWFs and the relevance of advisory committees. However, it is unclear what role these formal legal devices play in relation to informal ties that link SWFs to the authorities.

implications this has on the performance of SWFs. Several studies have scrutinized investment patterns of SWFs over long periods of time.[87] None of these studies presents conclusive evidence that the investment patterns of SWFs can be attributed to political motives. This does not mean that broader policy objectives do not play part in determining the SWF strategy for funds, or that the allocation of resources has on occasion been motivated by objectives other than the maximization of returns.

An example is CIC's use of its initial capital. Of the US$200bln of assets CIC received in 2007,[88] US$67bln were used to acquire Central Hui Jin Investement Corporation (CHIC), US$40 bln for a capital injection into the Agricultural Bank of China (ABC) – the only of China's largest banks that did not float its shares or attract substantial foreign investment at this time – and another US$20bln of capital was injected into CDB.[89] This left only about US$70bln for discretionary investments, including investments abroad. Some commentators have cautioned against these "non-commercial" motives.[90] Yet, from the perspective of a developing country or emerging market, development goals, such as the creation of a viable banking sector are of critical importance. From today's perspective they do not appear to be quite as objectionable either as they have been in the age of financialization.

A critical task of the financial intermediaries now tied in network relations will be to develop institutional mechanisms for resolving both credibility problems – excessive risk taking on one hand, and lingering concerns that the politics of a

[87] Supra note []. The summary in this paper draws on all three publications.
[88] For details see infra at []
[89] Ibid at 8.
[90] Martin (2008) supra note [] at [].

SWFs sponsoring country might overtly influence their investment strategy. Such mechanisms are already emerging. A commonly used strategy well known in the Western markets is to create different portfolios with different investment objectives. Major investment funds in the US offer investors a range of opportunities depending on their taste for risk, but also on their political preferences (i.e. human rights) or environmental concerns (green funds). Similarly, CIC requested Morgan Stanley a few months ago to devise a strategy for the US$70bln discretionary funds it planned to invest abroad.[91] That strategy included clear performance criteria, including expected returns, with only US$10bln left for ad hoc investments. CIC also indicated that it was seeking asset managers for managing different portfolios, and specifically not investment banks or similar institutions that might have a conflict of interests.[92] At the same time, CIC is the parent company of Hui Jin, which controls the Chinese banks that are pursuing more strategic investment abroad.

An alternative model is Temasek. Temasek is a 'hands-on' investor taking fairly large stakes in many companies in its portfolio, including in financial companies.[93] The impressive return of about 17 percent per annum over the past 20 years, including a 18 percent return in 207/08 relies on a strategy of holding assets for a long time, enhancing their performance and selling them after they appreciated in value. Temasek uses different subsidiaries to manage different classes of assets depending on industry sector as well as geographic location.[94] A similar strategy is

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[91] ADD. Given the pace of change at the current moment, it is not clear whether this plan is still in place, but the mechanisms used are of interest even if it is not.
[92] www.bloomberg.com [ADD]
[93] See supra Table [] at page [].
[94] Refer to organizational chart

pursued by other SWF sponsoring countries. They frequently use multiple investment vehicles to pursue different investment strategies.[95] The separation of investment portfolios is not absolutely immune against future interventions. However, those assets that are handed over to independent asset management companies are likely to be quite removed from such danger.

This is not to say that institutional devices that mitigate against political or excessive financial risk are already up and running. The examples are given simply to suggest that there are already plenty of devices that can be mobilized and re-configured to address these new challenges.

Governance Rationale

A fundamental objective of any governance regime is to minimize negative externalities and to guard against a substantial misallocation of resources. An important lesson that emerges from the current crisis is that under certain conditions governance regimes that were thought to optimize both objectives – i.e. namely extensive self-governance of financial markets -- can fail at both simultaneously. This calls for a reassessment of governance regimes, and most importantly, greater awareness of the relative costs and benefits of each and greater skepticism about the optimality of any of them.

The most common device currently in use for guarding against externalities is government regulation. Nominally, the financial sector is one of the most heavily

[95] Temasek's siste organization, GIC has long 'specialized' in real estate investments. Abu Dhabi has several investment vehicles. ADIA is the largest funds and is regarded primarily as a diversified passive investor. However, Mubadala is more of a development bank with clear objectives to invest internally.

regulated sectors in all countries precisely because of its potential to create huge negative externalities. The nature of regulatory devices has evolved over time and some have proved to be more effective than others. The major lesson from the severe economic crises of the late 19th and the first part of the 20th century was the development of mechanisms to prevent bank runs by creating deposit insurance and, as a quid pro quo, to require banks to hold capital reserves and to observe principles of prudential lending. Some countries used additional devices, such as the separation of investment and commercial banking. This has been the case in the United States, which enacted the Glass Steagall Act in 1933.[96] This act was repealed in 1999 by the Gramm-Leach-Bliley Act. However, the importance of this repeal is questionable. For one, the lines between investment banking and commercial banking had become blurred after years of de facto de-regulation by way of weak enforcement.[97] Moreover, investment banks without deposit taking activities and commercial banks were caught in the crisis, as were banks from countries that had never seen a separation of investment and commercial banking and thus could not have responded to the elimination of this separation either.

Prior to the current crisis, investment banks were thought to be immune from the problem of bank runs and systemic contagion effects. They were neither

[96] See Jonathan R. Macey, "The Business of Banking: Before and after Gramm-Leach-Bliley," *Journal of Corporation Law* 25, no. 4 (2000).

[97] Pub.L. 106-102, 113 Stat. 1338, enacted 1999-11-12. Note, however, that The Gramm-Leach-Bliley Act did not repeal all of these provisions. The separation between commercial and investment banking in Sec. 16 is still in place, although both services can now be provided within the same banking group See Ibid. at 716 for details. Whether the Gramm-Leach-Bliley itself had much impact on the organization of the US banking sector is debated. Macey argues that the Act responded to changes that had already taken place with the tacit approval of regulators. See Macey (2000) at 692 and 716-719.

deposit taking institutions,[98] nor covered by the Federal Deposit Insurance Corporation (FDIC). These beliefs were set aside when the US government engineered a subsidized take over of the investment bank Bear Stearn's by JP Morgan Chase in March 2008.[99] The government's intervention was motivated by fears about the likely contagion effect the failure of Bear Stearns would have on markets – a fear that materialized when the government refused a similar bail out for Lehman Brothers in an attempt to shift expectations from bail out with the negative side effects of SBC and moral hazard, to a hardening of the budget constraint. As a result, the government was forced to engineer what some have termed a "bail out of Wall Street",[100] that is, not only an ad hoc rescue of individual banks, but at least conceptually, a rescue of the entire market.[101]

The long-term implications of these and similar measures are still unclear. The model of arms-length regulation of financial markets has become defunct at least for the moment as a result of large-scale nationalization and other forms of direct government support. The corollary of arms-length domestic regulation at the international or global has also been undermined. One of the pillars of global financial market regulation has been the principle of equivalent regulation and regulatory oversight. A host (target) country of an investor does not require full compliance with its own regulatory regime on the premise that the home country of the investor offers equivalent regulatory oversight. However, at least in cases where

[98] Except for exploiting some loopholes in Utah or taking advantage of European regulations [ADD]
[99] ADD Martin Wolf, FT, 15 March 2008.
[100] ADD
[101] The US$700bln made available for the bailout is unlikely to be sufficient for rescuing the entire market. In fact, it is still unclear if and how TARP will work.

this arrangement was not backed by minimum standards and some mechanisms of control that regulation in the investor's home country was indeed effective, this regime has not worked very well. In particular, there is evidence that large investment banks in the United States captured the Securities and Exchange Regulation in a deal that was designed to avoid regulatory oversight by the European Union.[102]

What might replace this patchwork of national regulation with more or less stringent enforcement is still unclear. Yet, it is not inconceivable that the networks described above, and in particular their nature as hybrids between agents of governance and agents of finance, may come to play a critical role in the emergent new governance regime.

To many this prospect raises red flags. It smacks of socialism and at the very least suggests inefficiencies that have been associated with government sponsored organizations, in particular with severe misallocations of resources, or waste. Indeed, a major challenge SWFs face is how to cope with the so-called "soft budget constraint" syndrome, or SBC. Janos Kornai first observed the SBC syndrome.[103]

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[102] As the New York Times reports, the threat of European regulators to oversea investment banks doing business in Europe let to a Faustian bargain between the SEC and the banks. The investment banks would from now on be monitored by the SEC. In return, large investment banks with more than US$5bln under management were exempted from capital adequacy requirements for their brokerage units. See "Agency's '04 Rule Let Banks Pile Up New Debt, and Risk", The New York Times, 3 October 2008, A1 and A23. The relevant rule is "Alternative Net Capital Requirements for Broker-Dealers That Are Part of Consolidated Supervised Entities", Securities and Exchange Commission, 17 CFR Parts 200 and 240 [Release No. 34-49830; File No. S7-21-03], RIN 3235-AI96. Available at http://www.sec.gov/rules/final/34-49830.htm See especially § 240.15c3-1

[103] Janos Kornai, *The Socialist System: The Political Economy of Communism* (Princeton, N.J.: Princeton University Press, 1992). See also Janos Kornai, "Hardening the Budget Constraint: The Experience of Post-Socialist Countries," *European Economic Review* 45 (2001). and most recently Kornai, "Hardening the Budget Constraint: The Experience of Post-Socialist Countries."

Stripped of theoretical complexity[104] the SBC refers to the inability to credibly commit ex ante to impose financial discipline ex post.[105] In principle, an organization is supposed to be able to cover its operation from its initial endowment and revenue. It cannot rely on other organizations to subsidize it or bail it out in the event that it fails to generate initial revenue to cover expenses. A firm that adheres to these principles operates under a "hard budget constraint" (HBC). Raising capital from external sources is compatible with a HBC as long as commitment devices such as contractual or enforcement mechanisms exist that ensure that 'bad projects' will be terminated. When this is not the case and when instead firms expect to be bailed out should they become insolvent, a firm is said to operate under a SBC. Anticipating a future bail-out a firm will adjust its investments already at the ex ante stage. This is the main source of inefficiency in economic systems that suffer form the SBC syndrome.

Janos Kornai first observed the SBC syndrome in the context of the socialist economies where companies were frequently subsidized and received additional allocations of resources even in the aftermath of severe mismanagement. However, the concept has also been applied to capitalist economies, in particular to bank runs and financial crises.[106] In policy circles the close affinity between the SBC concept and state ownership has been used to condemn state ownership as *per se* economically inefficient.[107] In the theoretical literature, by contrast, the focus has

[104] For an overview of the theoretical literature see Eric Maskin, "The Soft Budget Constraint," *American Economic Review* 89, no. 2 (1999). as well as Kornai (2003) supra note [].
[105] Kornai et al (2003) supra note [] at 1101.
[106] See Kornai (2003) supra note []. See also Rizov [2008] ADD
[107] The policy

instead been on designing mechanisms to address the SBC irrespective of a firm's ownership structure. In both discourses the focus of the analysis has been on whether firms (in our case SWFs) operate in an environment in which they can expect central "supporting organizations"[108] to bail them out at a future stage. Support is thought to come primarily from the government as the lender of last resort. Still, there are examples where private organizations that expect to suffer as a result of another firm's demise is willing to come to the rescue. Once such a dynamic is anticipated it undermines financial discipline.

Recent events suggest that financial discipline can not only be undermined by a "supporting organization", but also by factors that are embedded in the fabric of markets. Note that the SBC framework assumes that in the absence of supporting organizations firms internalize risk. At the heart of the recent credit market boom has been what others have called the "atomization of risk".[109] By creating financial instruments that allowed banks to transform their assets of long-term loans into liquid assets that could be re-packaged into securities and sold to investors, they created the (with hindsight illusive) impression that risk had been engineered away. Technically this was achieved by credit derivatives including credit default swaps (CDS) and collateralized debt obligations (CDOs). The exponential growth of this market documents the hunger of market for relaxing their budget constraint in the expectation of future gains, which were deemed achievable by market participants,

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[108] Kornai et al suprt note [] at 1097.

[109] Knight, MDD, "Now you see it, now you don't: Risk in the small and in the large", speech delivered at the Eighth Annual Risk Management Convention of the Global Association of Risk Professionals, 27–28 February 2007 as quoted in Claudia E. V. Borio, "Change and Constancy in the Financial System: Implications for Financial Distress and Policy," (Basel: Bank for International Settlement (BIS), 2007).

investors, and regulators alike. According to the IMF, “issuance of selected structured credit products in the United States and Europe grew from $500 billion in 2000 to $2.6 trillion in 2007, while global issuance of collateralized debt obligations grew from about $150 billion in 2000 to about $1.2trillion in 2007.”[110] Banks have used credit derivatives for transferring risk associated with these loans as well as for gains from trading in these securities, thus further fueling its growth.[111]

The additional liquidity the credit derivatives market has brought to the banking sector has been hailed as stability enhancing, which is why regulators have largely welcomed it. On the negative side, the ability to diversify risk has affected bank behavior by inducing banks to take on ever more risk. In a dynamic scenario, this change in risk behavior by key market actors who create, sell and trade in these assets ultimately let to the very substantial destabilization effects that some observers had predicted.[112] The efficient capital market hypothesis suggests (which is implied in the SBC literature) assumes that the market should have priced the risk of financial destabilization associated with investment banks taking on a multiple of debt relative to their assets and used the debt often to invest in the rapidly growing

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[110] IMF, "Global Financial Stability Report," (Washington, DC: International Monetary Fund (IMF), 2008). According to the US Office of the Controller of the Currency (COC), “from 2003 to 2007, credit derivatives contracts grew at a 100 percent compounded annual growth rate”. See OCC’ Quarterly Report on Bank Trading and Derivatives Activities Second Quarter 2008 at 5.
[111] In the case of the CDS, a bank transfers the risk of its own assets (i.e. long-term loans) to a special purpose vehicle, which creates a new security and sells the tranched notes to investors. The money raised by the sell could then be used by bank for investment or other revenue generating activities, such as trading in credit derivatives. The market for credit derivatives was already huge in 2004. It was further fueled by the inflow of additional billions of dollars released from exemptions granted by the SEC to brokerage units of financial companies with more than US$5bln in assets.
[112] Wolf Wagner, "The Liquidity of Bank Assets and Banking Stability " (ssrn.com, 2004).

market for debt.[113] The fact that it did not do so and instead fueled the further growth of the market to the contrary shows that the atomization of risk has created conditions for an *endogenous* SBC.

The notion of an endogenous SBC is not inconsistent with alternative explanations, including one asserting that actors began to gamble on a bail out when they fathomed the system-wide implications a severe market downturn would have on the stability of the global financial system. This explanation places the blame for the SBC once more on a central supporting organization that is unable to credibly commit ex ante not to bail out ex post. In contrast, the endogenous SBC syndrome shifts to an earlier stage when a government bail out has not become inevitable, namely to the dynamics of unregulated markets that use risk atomization as a means for escaping any meaningful self-enforcing budget constraint.

SWFs, of course, face their own SBC problem, which is more akin to the classic SBC as described in the literature. In fact, one of the major concerns about the rise of SWFs has been that they might introduce the kind of inefficiencies in the governance and investment strategies of major financial institutions that have been associated with the socialist system.[114] This concern is based on the assumption that state actors are incapable of learning from failure and of devising effective governance mechanisms that address the core problems that were associated with government ownership in the socialist regime. Closer inspection of some of the

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[113] According to the New York Times, debt/asset ratios in 2008 prior to the collapse of Bear Stearns, Lehman and Merrill stood at about 25 percent for Goldman Sachs, around 30 percent for Merrill Lynch, and at over 35 percent at Lehman and Bear Stearns. See "Agency's '04 Rule let Banks pile up New Debt, and Risk", The New York Times, 2 October 2008, A1 and A23.
[114] See Larry Summer's reaction quoted supra at note [].

mechanisms already in use by governments that have established SWFs suggests otherwise.

The best evidence comes from the capitalization of CIC. China's central bank, the People's Bank of China, did not simply transfer US$200bln worth of exchange reserves to CIC – which would have been the "normal thing to do" under a socialist model with a mono-banking system simply channeling resources from the central bank to companies.[115] A more sophisticated plan was implemented instead, which created at least the appearance of financial commitments aimed at instilling financial discipline. According to a pre-agreed plan that was carried out over a period of several months, the Ministry of Finance issued long-term bonds worth US$200bl in several tranches. Bonds worth US$26bln were sold to the Chinese public. The remaining bonds were sold to the People's Bank of China (PoBC) using the Agricultural Bank of China (ABC) as an intermediary. The Ministry of Finance transferred the equivalent of US$200bln in yuan it had raised from the bond issue to CIC, which used these funds to purchase foreign exchange from the PoBC. As part of this tripartite agreement between the Ministry of Finance, the PoBC and CIC, CIC assumed the responsibility for servicing the debt held by the PoBC, a responsibility that translates into US$40million per day according to CIC's chairman Lou.[116]

This account suggests that the Chinese government is using rather common debt-financing techniques for imposing financial discipline on CIC. As always, enforcement is critical and the creation of commitment devices does not guarantee

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[115] See Claudia M. Buch, *Creating Efficient Banking Systems*, ed. Horst Sieber, *Kieler Studien* (Tübingen: J.C.B. Mohr, 1996). for an account of the transformation of the socialist banking systems.
[116] See Martin (2008) supra note [].

their enforcement at a later stage. Interestingly, however, the contractual devices are not the only commitment devices the Chinese government is relying on. By ensuring that more than one government agency was involved in engineering the capitalization of CIC, it made it harder for CIC to bargain for future injections of capital should it fail. Indeed, financing by multiple parties is a mechanism common in capitalist systems, particularly in sectors where the return on investments is highly uncertain. A prominent example is venture capital financing. When several financiers join forces in funding a risky project, they increase the probability that the project will be terminated at a later stage when the final outcome is still uncertain. Each financier left to his own device may be prone to throwing additional good money after bad money than multiple financiers.[117] The need to coordinate with other investors reduces the likelihood that this will happen. Venture entrepreneurs anticipate this outcome and are therefore less likely to rely on future capital injections without being able to demonstrate the merits of their project.

Similarly, CIC will have to convince not only its principal (the State Council), but also the PoBC as well as the Ministry of Finance should it need additional capital injections before having proved its merits with the initial endowment.

A another disciplining mechanism that has been used extensively in China is more akin got a carrot rather than a stick. Some commentators have suggested that CIC may eventually be put in charge of managing all of China's currency reserves (a

[117] Mathias Dewatripont and Eric Maskin, "Credit and Efficiency in Centralized and Decentralized Economies," *Review of Economic Studies* 65 (1995).; see also Haizhou Huang and Chenggang Xu, "Financial Institutions and Financial Crisis," (Washington D.C.: IMF, 1998).

total of about US$1.8 trillion), but that this will depend on its performance.[118] To make the threat of withholding assets in the future credible, CIC has received 'in-house' competition. Chinas State Administration for the management of Foreign Exchange (SAFE) has begun to invest abroad. The Financial Times recently reported that SAFE had acquired minority stakes of less than 1 percent in fifty publicly traded UK companies.[119] Note that competition is one of the mechanisms that is associated with a hard the budget constraint.[120] By allowing not only CIC, but also SAFE as well as other entities[121] to invest in the global market the Chinese government can compare the return on assets these different vehicles will generate and use this information to assess CIC's performance.

Using the future allocation of scarce resources as a means for inducing competition by rewarding the best performer is a strategy that China has used throughout its reform process. Pistor and Xu, for eaxmple analyze how in the 1990s the "quota system" was used as a device for screening companies that wished to issue shares to the public and be listed on one of the nation's stock exchanges.[122] ThePoB established an annual quota for the amount of capital *all* enterprises would be able to raise by issuing shares to the public.[123] Each province received a share of this quota. The size of future quotas was made contingent on how companies from

[118] Ibid at 11.
[119] ADD
[120] See Kornay et al (2003) supra note [] at 1117-1122.
[121] China has already licensed several "qualified domestic institutional investors" (QDIIs) that can raise funds form Chinese individual investors to be invested abroad. See Martin (2008) supra at 13-14.
[122] Katharina Pistor and Chenggang Xu, "Governing Stock Markets in Transition Economies: Lessons from China," *American Review of Law and Economics* 7, no. 1 (2005).
[123] As Pistor and Xu suggest, that device was highly imperfect in that the quota was based on the nominal value of shares, not the money that was raised by issuing them.

that province were performing on the stock market. Provinces that brought too many "lemons" to the market received lower quotas in subsequent years.

In sum, banks and SWFs face important governance challenges to avoid negative externalities and misallocations of resources. Both types of organizations can theoretically and empirically suffer from a SBC, albeit for different reasons. Examples from China's economic reform process suggest that China has already experimented extensively with mechanisms that help mitigate the classic SBC in state controlled entities. A viable response to the endogenous SBC that financial intermediaries in the West have suffered from is less apparent. Risk diversification is critical for banks and it will always be difficult to draw a line between risk diversification and risk atomization. Possibly, the answer to this problem lies in a re-balancing of financial activities from risk management to intermediation.

V. Networked Governance Responses

So far this paper has documented the emergence of global network relations among large financial intermediaries located in different parts of the world. It has also explained the need for new governance solutions as well as the rationale for the various actors, or 'nodes' in these financial networks to invest in governance. An open question, which requires further elaboration is whether network are capable of serving as "incubators"[124] for institutional innovation from which a new governance regime might emerge.

This paper argues that networks have indeed governance capacity. This affirmative answer is based on existing evidence about networks as governance regimes; theoretical grounds; and on evidence about how some of the key actors in the emergent global financial network have invested in institutional innovation and governance. We will take up each of these arguments in turn.

First, network relations, company groups and similar organizational structures on the continuum between markets and hierarchy[125] frequently emerge in circumstances characterized by severe institutional or governance uncertainty. Examples include the cartelization of industry in Germany in the post WW I period,[126] or the formation of zaibatsu in Japan during the early period of

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[124] Walter W. Powell, "Organizational and Institutional Genesis and Change: The Emergence and Transformation of the Commercial Life Sciences," *draft MS* (2008). uses this term in reference to network relations in the life science industry.

[125] See W.W. Powell, "Neither Market nor Hierarchy: Network Form of Organization," *Research in Organizational Behavior* 12 (1990). for an argument that networks are organizational configurations distinct from markets and vertically integrated firms.

[126] Gerald Spindler, *Recht Und Konzern - Interdependenzen Der Rechts- Und Unternehmensentwicklung in Deutschland Und Den USA* (Tuebingen: J.C.B. Mohr (Paul Siebeck), 1993).

industrialization.[127] After the zaibatsu were dismantled by the American occupiers they were replaced by new clusters of firms and financial institutions commonly referred to as keiretsu.[128] While there is some dispute in the literature about how extensive or central keiretsu were and what the continuing influence is, [129] the re-emergence of these business groups in post WWII Japan and their influence on the organization of financial markets in Japan has not been questioned. Business groups have also been common in Korea (the chaebol),[130] in Chile, India and other emerging markets[131] and have surged in many transition economies after the introduction of market reforms.[132] Indeed, some studies suggest that foreign investors frequently

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[127] Ken'ichi Imai, "The Corporate Network in Japan," *Japanese Economic Studies* Winter 1988 (1988), Kazuo Ueda, "Institutional and Regulatory Frameworks for the Main Bank System," in *The Japanese Main Bank System: Its Relevance for Developing and Transforming Economies*, ed. Masahiko Aoki and Hugh T. Patrick (Oxford: Oxford University Press, 1994).

[128] Masahiko Aoki and Hugh T. Patrick, *The Japanese Main Bank System: Its Relevance for Developing and Transforming Economies* (Oxford [England]; New York: Oxford University Press, 1994), Ronald J. Gilson and Mark J. Roe, "Understanding the Japanese Keiretsu: Overlaps between Corporate Governance and Industrial Organization," *Yale Law Journal* 102 (1993), James Lincoln, Michael Gerlach, and Peggy Takahashi, "*Keiretsu* Networks in the Japanese Economy: A Dyad Analysis of Intercorporate Ties," *American Sociological Review* 57 (1992), Curtis J. Milhaupt, "A Relational Theory of Japanese Corporate Governance: Contract, Culture, and the Rule of Law," *Harvard International Law Journal* 37, no. 1 (1996), Curtis J. Milhaupt and Mark D. West, *Economic Organizations and Corporate Governance in Japan: The Impact of Formal and Informal Rules.* (Oxford: Oxford University Press, 2004), Maruyama Yoshinari, "The Big Six Horizontal Keiretsu," *Japan Quartely*, no. April - June (1992).

[129] For the critique of the standard account of keiretsu represented especially by Aoki (supra note []) see, for example, Mark J. Ramseyer, "The a-Contextual Logic to the Japanese Keiretsu," in *Corporate Governance Today*, ed. Mark J. Roe (New York City: offset, 1998).

[130] Karl Fields, "Business Organization in Korea and Taiwan," in *Business and the State in Developing Countries*, ed. Sylvia Maxfield and Ben Ross Schneider (Ithaca: Cornell University Press, 1997), Kon Sik Kim, "Chaebol and Corporate Governance in Korea," in *Korean Law in the Global Economy*, ed. Sang-Hyun Song (Seoul: Bak Young Sa Publishing Co., 1996), Richard M. Steers, Yu-gun Sin, and Gerardo R. Ungson, *The Chaebol: Korea's New Industrial Might* (New York: Harper & Row, 1989).

[131] Tarun Khanna, "Business Groups and Social Welfare in Emerging Markets: Existing Evidence and Unanswered Questions," *European Economic Review* 44, no. 4-6 (2000), Tarun Khanna and Krishna Palepu, "Corporate Strategies for Business Groups in Emerging Markets," (Harvard Business School, 1997), Tarun Khanna and Krishna Palepu, "Is Group Affiliation Profitable in Emerging Markets? An Analysis of Diversified Indian Business Groups," *Journal of Finance* 55, no. 2 (2000).

[132] Klaus J. Hopt, Christa Jessel-Hopt, and Katharina Pistor, "Emergence, Behavior and Regulation of Company Groups in Central - and Eastern European Countries in Legal and Economic Perspective," *European Business Organization Law Review* (2001), Juliet Johnson, "Russia's Emerging Financial-Industrial Groups," *Post-Soviet Affairs* 13, no. 4 (1997), Enrico C. Perotti and Stanislav Gelfer,

partner with business groups, which has been interpreted as a means of embedding their investments in business relations, i.e. as a governance strategy.[133]

From a theoretical perspective the integration of firms into company groups has been explained as a response to uncertainties related to the environment in which they operated. Some scholars emphasize the absence of reliable information about contracting parties as a determinant for firms seeking group affiliation rather than independence. Ghatak and Kali[134] develop a model, which shows that firms can resolve serious information problems that may give rise to credit rationing[135] by forming financial links with each other. The reason is that members of the same business group have more information about each other than firms operating at greater arm's length. They can use this information to allocate financial resources to stabilize the network by cross-subsidizing some firms, or for purposes of generating optimal return. Ghatak and Kali emphasize the relevance of their model for firms that rely heavily on external sources of funds rather than retained earnings. This, of course, is pertinent for the banks in the financial networks described in this paper, which prior to the credit market crisis relied extensively on external finance. The severity of information asymmetry has often been attributed to the lack of financial intermediation[136] or the absence of institutions that induce parties to reveal critical

"Investment-Financing in Russian Industrial-Financial Groups," *The William Davidson Insitute Working Paper* 242, no. October (1998), Sinisa Petrovic, "Company Groups in Croatia," *European Business Organization Law Review* 2, no. 1 (2001).

[133] Khanna and Palepu, "Is Group Affiliation Profitable in Emerging Markets? An Analysis of Diversified Indian Business Groups."

[134] Maitreesh Ghatak and Raja Kali, "Financially Interlinked Business Groups," 10, no. 4 (2001).

[135] See Joseph Stiglitz and Andrew Weiss, "Credit Rationing in Markets with Imperfect Information," *American Economic Review* 71, no. June (1981). for an exposition of the problem of credit rationing under asymmetric information.

[136] As suggested by Ghatak and Kali supra note [].

information in order to optimize their own business strategy. The current crisis suggests that even when financial intermediation is highly developed credit rationing can occur once it becomes impossible to assess the viability of contracting parties and their exposure to "toxic assets". The immediate reaction to this has been the freezing of the credit market with the effect that even banks stopped lending to each other.[137] A possible way out of this dilemma is to form clusters of intermediaries, which exchange sensitive information more freely and rebuild the trust necessary to engage in lending relations. [138]

In a different paper Raja Kali suggests that the absence of a viable institutional environment for contract enforcement can trigger the endogenous formation of business groups.[139] Firms flee into network relations when they cannot trust outsiders in particular because they do not have access to enforcement institutions. The more firms join networks the less attractive the remaining non-networked firms become as potential contracting parties.[140] As a result, more and more firms join the network.[141]

The importance of the institutional environment as a likely cause for network formation is also emphasized by the comparative corporate governance literature. In a survey of corporate governance around the world Shleifer and Vishny suggest

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[137] The inter-bank lending rate reached over 6 percent in late September, which was widely interpreted as an indicator for a virtual stand still of this market. ADD

[138] See Ghatak and Kali (2001) supra note []. See also

[139] Raja Kali, "Endogenous Business Groups," *The Journal of Law, Economics and Organization* 15, no. 3 (1999).

[140] This insight is in line with the markets for lemons syndrome. See George A. Akerlof, "The Market For "Lemons": Quality Uncertainty and the Market Mechanism," *Quarterly Journal of Economics* 84 (1970).

[141] A testable prediction would be that after a critical number of financial intermediaries (both banks and SWFs) have entered financial networks, this should accelerate the pace with which other financial intermediaries seek to join such networks.

that countries with an under-developed legal framework tend to have firms with higher ownership concentration than countries with better laws.[142] The intuition for this argument is that when investors can rely on legal institutions to enforce their property rights, they can afford to take smaller stakes and diversify their resources across firms. In the absence of such institutions they are compelled to take larger stakes in order to exercise direct control rights.[143] Ownership concentration can be regarded as an indicator for company group formation as many of the largest owners are themselves large business organizations.[144] Empirical studies using cross-country data to measure the impact of formal legal institutions on stock and credit market development show that countries with a legal regime that is highly protective of property rights tend to have less concentrated ownership and better developed stock markets.[145] The impact on credit markets is less pronounced.

In the above account business groups, or network relations play primarily a negative role. They are depicted as substitutes for an alternative set of institutions that is deemed superior, namely formal law and legal institutions, but which for various reasons may not be available. Still the reasoning implies that networks perform governance functions. They are alternative means for creating trust among members of the network.

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[142] Andrei Shleifer and Robert W. Vishny, "A Survey of Corporate Governance," *The Journal of Finance* LII, no. 2 (1997).
[143] Ibid at []
[144] In fact, Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer, "Corporate Ownership around the World," *Journal of Finance* LIV, no. 2 (1999). document such ownership patterns in large companies around the world.
[145] Rafael La Porta et al., "Law and Finance," *Journal of Political Economy* 106, no. 6 (1998), Rafael La Porta et al., "Legal Determinants of External Finance," *Journal of Finance* LII, no. 3 (1997).

Other researchers have approached networks not only as substitutes or second best to idealized forms of legal governance, but in their own right as viable governance arrangements. They have also sought to further specify what functions network relations perform and what precisely 'flows through' those networks.[146] Examples include dissemination of information and coordination about forms and processes for accessing markets, regulators, or resolving conflicts among network members.[147] In fact, the function of ties or links among nodes that is most widely recognized in various network literatures is information dissemination.

In a seminal paper on the "strength of weak ties" Mark Granovetter suggests that weak ties, i.e. ties among individuals who tend to move in different circles and are only loosely related to each other, are critical for disseminating novel information. An example is information about job opportunities. Granovetter suggests – and subsequent empirical studies have confirmed – not only that finding jobs is frequently a matter of being embedded in social relations, but that new job opportunities are more likely to be disseminated through weak ties. The reason is that the information held by those closest to us – i.e. our friends or family members– is typically known to us as well, whereas more distant acquaintance tend to have information we don't have. This argument has been generalized to suggest that weak ties are critical transmitters of novel scientific information as well as sources

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[146] See Powell, "Organizational and Institutional Genesis and Change: The Emergence and Transformation of the Commercial Life Sciences." for the need to identify the flow through.
[147] See, for example, Brian Uzzi, "Embeddedness in the Making of Financial Capital: How Social Relations and Networks Benefit Firms Seeking Finance," *American Sociological Review* 64, no. 4 (1999).. Note, however, that Uzzi focuses on personal relations between middle market bankers and medium size business. By
contrast, this paper emphasizes formal ties between financial institutions.

of behavioral and institutional adaptations to a changing environment.[148] Indeed, there is some evidence that groups without weak ties to other social groups tend to become isolated and may decline because of their inability to recognize changes in their environment and respond to them.[149] Yet, strong ties too have their advantage. They are a more reliable when quick support is need, such as urgent job search. Thus, strong ties may be characterized as support structures. "The significance of weak ties is that they are far more likely to *be bridges* than are strong ties" (emphasis added).[150]

This information network theory has been extended beyond ties that link individuals in social networks to inter-firm relations and relations between firms and banks. Several studies have explored interlocking directorates in American corporations.[151] One study suggests that in the period prior to World War II strong interest groups, or "cliques" of firms with "strong" inter-firm relations in the form of stockholdings, debts, and other forms of "economic interdependence" dominated.[152] Only the post WW II era witnessed the emergence of "weak" ties that linked firms more loosely in emergent national, and increasingly international networks of firms:

"The extensive national network is formed from weak ties… they do not imply specific inter-firm economic connections; instead they reflect an overall common orientation and interest, the need for common action across cliques, and a

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[148] For a comprehensive review of these literatures see Mark Granovetter, "The Strength of Weak Ties: A Network Theory Revisited," *Sociological Theory* 1, no. 201-233 (1983).
[149] Ibid [ADD]
[150] Granovetter (1983) supra note [] at [].
[151] For an overview of this literature with an emphasis on financial intermediaries see Lisa Keister, "Financial Markets, Money, and Banking," *Annual Review of Sociology* 28 (2002).
[152] See James Bearden et al., "The Nature and Extent of Bank Centrality in Corporate Networks. ," in *Annual meeting of the American Sociolocial Association* (San Francisco: 1975). extensively quoted in Granovetter, "The Strength of Weak Ties: A Network Theory Revisited.". For a formal exposition see Harrison White, "Where Do Markets Come From," *The American Journal of Sociology* 87, no. 3 (1981).

growing sense of national and international interdependence among large corporations."[153]

This account resembles the phenomenon of GNF analyzed in this paper. The relations among financial intermediaries, i.e. the nodes in the network, consist mostly of small stakes that grant neither party direct control rights. They link actors that are deeply embedded in separate domestic or regional financial network, but can now use the newly created weak ties to bridge these networks. Importantly, the function of these networks goes well beyond information sharing and encompasses cooperation and coordination about not only what to do, but *how*. That, of course, is the essence of governance. As suggested above, a governance regime is the commonly held belief about what the rules of the game are and that they are likely to persist.[154] Networks perform governance functions to the extent that they help shape the commonly shared belief of what these rules are. Indeed, as the previous analysis of organizational hedging suggests (see Section III above), network relations can also give rise to new arrangements and produce institutional inventions.[155]

This brings us to the second argument in support of the notion that networks can and do perform governance functions. While we don't have first hand information about what functions the global financial network described in this paper perform, the genesis of network formation and the nature of the ties that link

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[153] ADD
[154] Supra note []
[155] Note that Padgett and McLean differentiate between institutional innovation and institutional invention. They reserve the term innovation of new institutional arrangements that can be transposed to different institutional arenas and as a result have the capacity of triggering systemic change. See Padgett and McLean, "Organizational Invention and Elite Transformation: The Birth of Partnership Systems in Renaissance Florence." at []

the different nodes to each other resembles networks that have explicitly been associated with governance functions. Stark's account of "networks of assets, chains of debt" is particularly apt in this context.[156] The example of Renaissance Florence analyzed by Padgett and McLean has also important parallels. Network relations tend to be formed in the context of a crisis (whether political or economic). Crisis situations intensify the search for network partners outside individual actors' traditional spheres of exchange. Some network theorists use the concept of "structural holes" to depict the formation of ties that link previously unrelated networks.[157] The ability of actors to form bridges across diverse networks has been associated with competitive advantages as it gives those actors access to information and knowledge about governance practices other competitors from its existing network do not possess.

From an institutional innovation perspective ties that bridge different networks are of critical importance, as they facilitate the transposition of institutional practices from one domain into another. The same framework can be applied to the GFN described and analyzed in this paper: The formation of the network has been precipitated by a crisis. Nodes from very different institutional domains have entered into network relations. SWFs have situated themselves as critical nodes that perform such bridging function. Many of the actors participating in these networks already have a track record as institutional innovators, which

[156] See references to this literature supra at []
[157] Ronald Burt, *Structural Holes: The Social Structure of Competition* (Harvard University Press, 1995).

should position them well for using the network relations to pursue a similar agenda.

We have already suggested that the different actors in the newly formed network relations had engaged in important institutional innovation each in its own sphere or institutional domain. Recall the governance mechanisms the Chinese government has developed to monitor and control CIC. Or consider the innovation of the derivatives market with both its upside and downside potential. These different experiences create ample opportunity for re-combining institutional practices in ways that may at present be difficult to anticipate.[158] This is not to say that such institutional innovation, or even invention, will happen. But it does suggest that the emerging configuration of global financial network relations has the potential for developing elements of a new governance regime for financial markets.

Finally, global financial markets would not be the first area in which network relations have evolved into an important organizational form to deal with the challenges of globalization and the increasing interdependence of economic, social and political relations that result from it. Thus, network formations have been described for addressing transnational tasks of state administration and regulation;[159] for developing normative principles by judiciaries in different countries;[160] for transnational trade relations[161]; and for corporations addressing

[158] On the recombination of institutional practices as a source of institutional change, see Stark supra notes [].
[159] Anne-Marie Slaughter, *The New World Order* (Princeton, NJ: Princeton University Press, 2004). for the most comprehensive treatment.
[160] Slaughter supar note [] and Robert O. Keohane, Andrew Moravcsik, and Anne-Marie Slaughter, "Legalized Dispute Resolution: Interstate and Transnational," *International Organization* 54, no. 3 (2000).

issues of corporate social responsibility.[162] Global financial networks may only be an extension of this organizational form to yet another field. There exists already a substantial literature on financial relations as network relations.[163] Yet, much of the finance literature emphasizes the contagion problem and how networks can either exacerbate or help contain contagion.[164] The task of future research will be to extend this research to the governance potential of network relations.

VI. Conclusion

This paper has presented extensive evidence on the formation of financial networks based on equity ties among major financial intermediaries from different parts of the world. These organizations were already entangled in a web of financial relations that move currency and securities around the globe.[165] The emerging equity ties among some of the largest and most influential actors raise the prospect of coordination and investment in institutional innovation in order to help build a new governance regime for the global financial system. This paper has argued that several aspects of the network relations described speak in favor of their governance potential. First, the apparent need for a new regime, without which

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[161] James E. Rauch, "Networks Versus Markets in International Trade," *Journal of International Economics* 48, no. June (1999).
[162] Georg Kell and David Levin, "The Global Compact Network: A Historic Experiment in Learning and Action," *Business and Society Review* 108 (2003).
[163] See the overview by Keister supra note []. See also Ana Babus, "The Formation of Financial Networks," (Milan: Fondazione Eni Enrico Mattei, 2007).
[164] For an excellent overview of the financial network literature see Franklin Allen and Ana Babus, "Networks in Finance," in *Working Paper, Wharton School of Business* (Philadelphia: 2008).. On the ability of “closed” networks to help limit contagion see Franklin Allen and Douglas Gale, "Financial Contagion," *Journal of Political Economy* 198, no. 1 (2000).
[165] See Patrick McGuire and Nikola Tarashev, "Global Monitoring Wiht the Bis Internatinoal Banking Statistics," *BIS Working Paper* 244 (2008). with graphical illustration at 13.

global financial markets are unlikely to recover. Second, the interests of the main actors to partake in shaping the regime that will emerge from this crisis. Third, the diverse governance experience and institutional expertise the various nodes in these networks bring to the table as well as their track record as institutional innovators within their own respective domains. And fourth, evidence that network relations frequently serve as incubators for institutional innovation and governance 'regime change'.

Future research will have to follow up on the growth of network relations and the role different actors might play within these networks. A major data collection effort is clearly warranted. Equally important is the compilation of information about the functions these network relations perform. Last but not least, future research will have to assess the normative implications of Global Network Finance. Who benefits and who loses form a regime based on network relations? What are the costs and benefits of GNF for financial market development in the countries that are home to actors now linked to global networks? What impact will these networks have on financial innovation? And finally, how will they affect the global political economy. As GNF is only emerging, this paper could not address most of these questions. Its goal has been more modest: to document the extent of network relations for global finance and to suggest an analytical framework that may help illuminate the processes of institutionalization and governance change currently under way.

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Appendix 1: Transactions SWFs a/o Government controlled Financial Entities (GcFE) and Foreign Banks (2007/08)

Foreign Bank	Date	SWF/ GcFE	Value US$ (bln)	Stake (%)	Deal features	Subsequent developments/Comments
Blackstone (US)	5/2007	CIC/China	3.0	9.9	non-voting units in limited partnership; 10% ceiling; 3-year lock-in & +3 year divestiture period	
Apollo (US)	7/2007	Abu Dhabi		10		
Barclays (UK)	6/2007	Qatar Investment Authority	3.5	6.42	Common stock by exercising pre-sold rights issues	
	6/2007	Challenger (asset manager of Qatar royal family)		1.92	Common stock	
	7/2007	Temasek		2.6	Common stock	agreed 10 percent ceiling with CDB Added more capital
	7/2007	China Development Bank		3	Common stock	Added more capital to avoid dilution
		SAFE, China		>1	Common stock	
Standard Chartered (UK)	8/2007	Temasek		From 11 to 14	Common stock	Stake further increased to 19 percent
Carlyle Group (US)	9/2007	Mubadala Group Abu Dhabi	1.35		7.5 % equity stake; floor guaranteed	
Bear Stearns (US)	10/2007	Citic/China	1.0		6.6% convertible securities Plan to establish Joint brokerage in Hong Kong	Deal, which had not been improved by Chinese authorities was cancelled in March 2008 when JP Morgan took over Bear Stearns
Citigroup (US)	11/2007	Abu Dhabi ADIA	7.5		4.9% convertible units at 11% interest	
	11/2007	Kuwait Investment Authority	3		2% optional convertible preferred stock; 9% dividend	
	1/2008	GIC (Singapore)	6.88		3.7% optional convertible preferred stock; 7% dividend; non-callable prior to year 7; 20% conversion premium; 6-	

					month lock up	
UBS Switzerland	12/2007	Unidentified ME investor		2	Convertible debt securities @ 9% interest	
	12/2007	Government of Singapore Investment Corporation (GIC)	9.7	8	Convertible debt securities @ 9% interest; must be converted into shares within 2 years	
Morgan Stanley (US)	12/2007	CIC/China	5.0		Convertible units @ 9% interest	18 September: CIC in talks with Morgan Stanley to increase stake to 49%
Merrill Lynch	12/2007	Temasek	4.4	9.4	Mandatory convertible preferred stock; 9% interest; option to buy additionl US$600 mln worth of stock	
	1/2008	Kuwait Investment Authority	2.0	3.3	Mandatory convertible preferred shares; 9% interest	
	1/2008	Korean Investment Corporation	2	3.3	3.3	
	2/2008	Temasek	0.6	1.23	Common stock	
	7/2008	Temasek	0.9		Common stock	9/2008: Merrill Lynch acquired by Bank of America in stock for stock merger
Standard, South Africa	4/2008	Industrial and Commercial Bank of China (ICBC)		20	Common stock	
JC Flowers	/2008	CIC, China	3.2	80	Capital for JC Flowers distressed asset vehicle	
Compagnie Financiere Edmond de Roghschild, France	9/2008	Bank of China (BoC)	.336	20	common stock	

Source: Various news reports compiled by author

Appendix 2: Foreign Investors & China's Largest Banks

Bank	Foreign Investor	Stake	Board Representation & other commitments
Industrial and Commercial Bank of China	Goldman Sachs, Allianz, and American Express	8.5 (combined)	Goldman Sachs to nominate one board member
Bank of China	Consortium led by Royal Bank of Scotland	9.6	RBS to nominate one board member
	UBS	1.6	
	Temasek	4.8	
China Construction Bank	Bank of America	8.5	One board member
	Temasek	6.0	Option to nominate one board member
Bank of Communication	HSBC	19.9	Two board members, one on audit committee, one on personnel & compensation committee

Source: Compiled by author from varies news reports.[47]