Sovereign wealth funds: form and function in the 21st century

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Abstract. As representatives of nation-states in global financial markets, sovereign wealth funds (SWFs) share a common form and many functions. Arguably their form and functions owe as much to a shared (global) moment of institutional formation as they owe their form and functions to the hegemony of Anglo-American finance over the late 20th and early 21st centuries. We distinguish between the immediate future for SWFs in the aftermath of the global financial crisis, and two possible long-term scenarios; one of which sees SWFs becoming financial goliaths dominating global markets, while the other sees SWFs morphing into nation-state development institutions that intermediate between financial markets and the long-term commitments of the nation-state sponsors. If the former scenario dominates, global financial integration will accelerate with attendant costs and benefits. If the latter scenario dominates, SWFs are likely to differentiate and evolve, returning, perhaps, to their national traditions and their respective places in a world of contested power and influence. Here, we clarify the assumptions underpinning the conception and formation of sovereign wealth funds over the past twenty years or so in the face of the 'new' realities of global finance.

Keywords. Sovereign wealth funds, crisis, market performance, long-term investment

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Introduction

The global financial crisis has challenged those who believe in the integrity of financial markets, those who hold the commonplace presumption in favour of 'light-touch' regulation, and those who believe that markets are valuable mechanisms for managing and distributing risk. Greenspan's recanting of his hitherto unquestioned belief in the rationality of market agents is emblematic of the re-regulation of banking institutions as well as the compensation practices of the global financial industry.[1] Notwithstanding the scope and depth of the global financial crisis, and the debate over the causes and consequences of the crisis, recent years have also seen the continued growth and development of sovereign wealth funds (SWFs). As these funds indicate, nation-state sponsors have not lost faith with financial markets. In fact, some would say the appeal of these financial institutions has risen over the past few years. For example, Merton (2009) has suggested that the US should establish a SWF to "hold and manage" assets acquired through the crisis, eschewing government management in favour of "autonomous investment" so as to realise the value of those assets as markets recover.

The rationale underpinning Merton's recommendation is a firmly held belief that there are governance pitfalls associated with public investment. For Merton, the recent experience of the US Pension Benefit Guarantee Corporation (PBGC) is a salutary lesson in how not to design and govern investment strategy, noting that approval by the PBGC Board and the Secretaries of Commerce, Labor, and the Treasury for increased equity exposure came in February 2008 (nine months short of the notional trough of the crisis; see French et al. 2010). By implication, and by reference to the logic justifying the establishment of SWFs around the world, there is something special about the form and functions of SWFs that distinguish this type of institution from its close 'cousins' within government, including the currency reserve funds of central banks. As we have noted elsewhere, one claimed virtue of SWFs is to be found in their relative isolation from political influence (Monk 2009). Moreover, the quasi-government status of these institutions facilitates a level of sophistication in investment and operations typically not found within government, thanks to SWFs' claimed commitment to best-practice standards of governance and transparency (including the Santiago Principles).

Sovereign sponsors often have a specific purpose (or purposes) when establishing a SWF (Clark and Monk 2011). For example, the Singapore government established the GIC so as to insure the welfare of its citizens against global economic and financial instability and regional political instability. The Norwegians established the NBIM so as to manage resource wealth and underwrite government pension obligations on behalf of future generations. Similarly, Australia established the Future Fund so as to promote inter-generational equity while ensuring macroeconomic stability in the face of burgeoning public and private wealth. For the Gulf states, SWFs were established, in part, to preserve their resource wealth given past experience of 'windfalls' lost to corruption, poor investment, and arbitrary decision-making. China has sought to realise value from its US dollar holdings through the China Investment Corporation, while maintaining a modicum of domestic economic stability. Sovereign sponsors have sought, through their SWFs, rates of return above the notional risk-free rate of return on government-backed securities or, more precisely, a real rate of return on financial assets higher than the rate of national economic growth.

These goals and objectives are to be realised through the medium of global financial markets and, in particular, the core markets of the west: London and New York. Whereas many nation-states are wary of emerging markets, western markets promised the opportunity to realise their ambitions through markets deemed highly efficient, well-regulated, and relatively transparent in terms of the rights of minority shareholders (La Porta et al. 1997, 1998).[2] As is widely recognised, the post-1945 map of 20th century economic crises was biased towards Latin America and Asia; these crises were managed in ways that sought to discount the flow-on effects to the core financial markets (Barro 2006). Recent history suggests, however, a rather different 'geography' of financial crises wherein the core markets of developed economies may also drive financial instability: "financial liberalisation may have made it *more likely* that financial factors in general, and booms and busts in credit and asset prices in particular, act as drivers of economic fluctuations" (Bario 2006, 3408).

Having invested heavily in the integrity of western financial markets, the global financial crisis could have sapped the confidence of sovereign sponsors such that SWFs may have turned away from those markets in favour of other kinds of investment institutions and

opportunities. The financial crisis did prompt a number of funds to pull-back their exposure to western markets and return assets to their sponsors to stabilise macroeconomic circumstances (as in Singapore). But some sovereign wealth funds took the opportunity to raise their stakes in markets otherwise subject to diminished expectations and uncertainty. Looking forward, then, it is important to gauge the likely impact of the global financial crisis on sovereign wealth funds' form and function. Accordingly, we need to look beyond the crisis to consider the various options open to these institutions in the context of markets subject to more stringent regulation and low-growth economic prospects. After all, SWFs were conceived at a time when western financial markets appeared to define the frontiers of investment. One of the challenges facing SWFs is whether they will continue to rely on western markets and adopt western institutional forms or if they will instead create new pathways for investment of sovereign wealth.

The form and functions of SWFs represent a shared commitment, deliberate or otherwise, to a certain kind of institution and a particular view of the proper governance of investment separate from the sovereign. Indeed, it might be reasonably suggested that the SWF phenomenon is yet another instance of the hegemony of financialisation. As such, SWFs may be taken to represent the 'high-water mark' of this phenomenon and, if they are to prosper in the aftermath of the global financial crisis, must evolve on their own account. After all, the establishment of any SWF is likely accompanied by rhetorical gestures and political commitments; nation-states are hardly disinterested principals when they put at arm's-length an important lever in global financial markets. As such, the formation of any SWF represents, inevitably, a political moment in the life of a nation-state, which means that these institutions carry with them those interests whether explicitly or implicitly represented in the governance and organisation of the institution.

This paper rehearses the argument about form and function, recognising that today's ideal form of the SWF is based on two sets of rules: those related to who is responsible for investment decision-making and those related to the conceptual foundations of investment practice. Thereafter, the paper suggests that the form of SWFs may not be stable over the long-term; the challenge facing SWFs is, in part, about transcending traditional forms of investment management in favour of a genuine commitment to long-term investment in the interest of both the SWF and the sovereign. We suggest, in fact, that transcending the

current paradigm may necessitate the transformation of the 'form' of SWFs such that they become strategic investors rather than portfolio investors, knitting together their sponsors' geopolitical interests with investment management.

Form and Function

The form of an institution refers to the blueprint or principles underpinning its establishment. In theory, institutional form provides a certain identifiable shape or structure to an organisation such that it can be copied or imitated by others. Ostrom (2000, 149) identifies several important principles of institutional design that help us to better understand the current form of SWFs. She begins with the most obvious but crucial design principle: setting the boundaries of an institution such that it is clear "who is in and who is out of a defined set of relationships". Broadly interpreted, this can be applied to SWFs for distinguishing their mandates, the roles and responsibilities of governing boards, and the delegated powers of investment executives. A related design rule refers to the source and volume of resources available for institutional decision-making, while another rule refers to the mechanisms by which members of an institution can modify its formal structure and organisation. In many respects, SWFs begin with a set of resources from their sponsors and, over time, effectively generate their own resources for decision-making from assets under management and investment performance. Few, if any, SWFs have the authority to vary their responsibilities and organisational structure. In other words, their intended function is often as rigidly defined as the fund's form is designed.

It is commonplace to suggest that form and function are intimately related such that function follows form and form is conceived in relation to planned functions. So, for example, recognising that most SWFs were conceived to isolate or 'ring-fence' the management and investment of national assets from direct political influence, this function has obvious implications for the formal design of the institution and, in particular, the boundaries of SWF institutions relative to their nation-state sponsors. At the same time, having established the formal constitution and membership of an institution, its functions could be thought to follow from its original purpose, assuming that those responsible seek to match their formal responsibilities with their apparent competencies. That is,

institutional form can effectively set boundaries on the scope of functions consistent with the inherited form of an organisation. For Merton and Bodie (2005), functional efficiency is the hallmark of an effective "institutional environment".

Their manifesto for institutional design has the goal of producing individual and collective decision-making consistent with accepted theories of financial market structure and performance. So, for example, acknowledging behavioural constraints on effective individual decision-making, they argue institutional design can compensate for biases and anomalies such that collective decision-making may dampen or even eliminate those biases. In effect, they assume that collective decision-making tends to exclude extremes, relying upon the search for consensus to evaluate the options while applying expert judgement about causes and consequences in ways that tend to exclude individual prejudice. Whether this is, in fact, a plausible argument is subject to debate especially in the area of pension fund and endowment fund investment management (see Clark et al. 2006, 2007 disputing the claimed 'wisdom of crowds'). Nonetheless, it is a crucial argument made in favour of separating the management of sovereign assets from the political process—it is presumed that expert investment boards are not subject to the same pressures as their political masters and are, as a consequence, more 'rational'.[3]

Merton and Bodie idealise institutional design and the process of collective decision-making. Those knowledgeable about the process of designing and establishing financial institutions reject idealism in favour of a more realistic conception of the bargains struck and the compromises made to produce an agreement to establish a certain type of institution for an agreed set of purposes (Roe 2006). Considering the establishment of sovereign wealth funds, we have shown that the political process remains connected with the institution even if that institution was conceived to be relatively autonomous. In some cases, moreover, these institutions are thoroughly integrated with the political process or, at least, with the machinery of government (as in Norway and China). Whereas Merton and Bodie suggest that institutions can, if properly designed, mediate or eliminate decision biases, the design process itself is likely implicated in the relationships and commitments that were the basis of establishing the institution. As such, the design process tends to produce imperfect institutions that, in some cases, may actually amplify decision-making biases and anomalies and reinforce the compromises that the institution was intended to avoid.

In this context, the approach taken by Clark and Urwin (2008a, 2010) has been to accept as 'given' institutional form (the inherited constitution and structure of the organisation) and to focus upon their governance in the hope that 'effective' governance can compensate for both imperfections in the design process and apparent biases and anomalies in individual and collective decision-making. Here, we assume that effective financial institutions have well-defined purposes, even if there may be conflict or at least tensions between stated purposes. We also contend that 'reform' is always difficult given an institution's heritage and that a 'governance' approach focused upon the coherence of decision-making may be able to improve the functional performance of financial institutions and thereby better realise their goals. Most importantly, we accept that institutional form tends to be rather static compared to the pace of innovation in financial markets (Merton 1995); governance can compensate for the fixed form of institutions by adapting to the imperatives driving financial markets (see Lo 2004). Elsewhere, we suggest that the decision-making process be hierarchically-ordered so as to allocate responsibility for decision-making between different tiers of financial organisations according to their time-sensitive and resource-intensive characteristics (Clark and Urwin 2008b).

This approach has certain advantages, notably its instrumentalist conception of agency over inherited structure and its recipe for effective policies and procedures (standards of best-practice). It does depend on a couple of unstated assumptions, however. Most obviously, our governance perspective assumes that institutional form is neither determinate of behaviour nor an outright impediment to incremental adaptation. This two-part assumption cuts against standard treatments of bureaucracies which assume that bureaucracies are static and antithetical to reason (see Wilson 1989). Further, it suggests a degree of separation from political sponsors that may not be plausible in some cases (as in the China Investment Corporation). Institutional form could limit incremental adaptation and governance could be captured by vested interests. Even so, our governance perspective assumes that functional effectiveness is a necessary (but not sufficient) condition for any institution's claim of legitimacy; as such best-practice governance can be seen, in some cases, as a gesture designed to claim institutional legitimacy.

There is, however, a larger unstated assumption shared by Merton and Bodie, Clark and Urwin, and political elites that believe in the mission of SWFs: that is, financial institutions

offer a viable means of realising a premium on sovereign states' financial assets.[4] More generally, there is a common belief that financial markets are an efficient mechanism for pricing and distributing risks and that failures in these markets can be reasonably explained by reference to market maturity, idiosyncratic factors having to do with the failures of particular institutions (like Long Term Capital Management), and poor governance and regulation. Otherwise, financial markets are an efficient mechanism for allocating resources, representing an institutional innovation consistent with long-term development (King and Levine 1993). Recognising the advantages of financial markets for investing sponsor's assets, the adoption of a SWF model based on accepted institutional designs and combined with a commitment to best-practice governance is likely to realise a premium on a country's resources.

SWFs as Market Makers

SWFs will be a force to be reckoned with as financial markets recover from the global financial crisis. Renewed commitments made by many sovereign entities to their SWFs as well as the recently established SWFs suggest that the institution has not been as compromised by the turmoil in global markets as other types of funds. If anything, it seems that their significance has been strengthened by the increasing reliance of the financial services industry on their growing assets and their commitment to portfolio investment. In their latest survey of the global investment industry, Towers Watson (2010) charted the relative growth in assets held by SWFs as the volume of assets held by conventional pension funds and insurance companies have declined in absolute and relative terms. Most importantly, the growing volume of assets is held by a small number of institutions when compared to the number of similarly-sized pension and insurance funds and the average size of a top-1000 listed pension fund (see Table 2 in Towers Watson 2010).

Not surprisingly, then, there is a close relationship between these institutions and the global investment industry, as the average size and commitment of SWF assets is crucial for asset managers' profits. But there is more to the relationship than size and profit: because SWFs are not constrained by burgeoning liabilities, as is the case with defined benefit pension plans; because they are not managed in relation to participants' account balances, as is the

case with defined contribution pension funds; and because they are not subject to increasing solvency requirements, as is the case with insurance companies and banks, SWFs can be thought to have greater discretion over tactical and strategic asset allocation (Campbell and Viceira 2002). This can be thought to affect the nature of the risks SWFs are willing to bare, the time horizon of investment, the benchmarks (if any) used to evaluate performance, the demand for innovation in investment management, as well as the nature of 'products' offered to SWF clients. If otherwise risk-averse in relation to the possible political costs (borne directly or indirectly) of high-profile failures of investment strategy, SWFs have the power and position to drive the frontiers of global investment management.

As suggested above, our assessment of the prospects for SWFs in the global economy is based upon the supposition that the 'form' of SWFs is an essential element of the story. That is, as SWFs mimic and match the institutional logic and organisation of related institutional investors, they also rely upon what Mackenzie (2006) and others have referred to as the shared norms and intellectual foundations of investment practice. The standard example illustrating this argument is, of course, the Black-Scholes option pricing model which is used throughout the western financial sector to set market prices of future positions. For many institutions, it is the reference point, as well, for exchange and trading under risk and uncertainty. So widely accepted is this model that it has morphed from being an 'instrument' to being a 'constitutive' element of institutional decision-making and market behaviour. It is no less important for the inherited form of investment management than the bricks and mortar of financial markets like London and New York, and the electronic architecture of internal and external networks (see also Merton and Bodie 2005).

More generally, we contend that the SWF form is an intellectual edifice perched on three pillars. The first is modern portfolio theory (MPT). Owed to Harry Markowitz (1952), MPT provides a recipe for investors in constructing their investment portfolios, distinguishing between the risks associated with any one investment and the risks associated with the entire portfolio. At the limit, the total portfolio of an institutional investor could be the 12,000 or so traded securities available on global financial markets. More often, portfolios are constructed by jurisdiction and market capitalisation where, for example, the FT100, the S&P500, and the DAX30 represent the major stocks traded, respectively, on the London, New York and Frankfurt stock markets.

The second pillar is the so-called efficient markets hypothesis (EMH), which represents the fact that markets are information-processing machines (Wilhelm and Downing 2001), and that market prices reflect the available information about individual stocks (Fama 1970). In combination, MPT and the EMH are the foundations for what Merton and Bodie (2005, 4) termed as the "neoclassical model" or "approach" to investment management.[5] If widely disputed and deeply implicated in both the LTCM and the global financial crisis (Lowenstein 2000, 2010), these two pillars are the norms underpinning the management of investment risk and the integrity of market prices. For institutional investors like SWFs, these propositions frame the nature of institutional decision-making, how they manage the investment process, and their reliance upon the market pricing of assets.

The third pillar reinforces the two previous pillars: asset allocation is deemed the crucial strategic decision when setting funds' investment programmes. This is justified by reference to MPT in that the diversification of assets amongst more or less correlated asset classes is believed to be an efficient way of managing total portfolio risk. It is also justified by reference to the long-run returns on different asset classes, often-times looking back over 50 to 100 years comparing equities against bonds (for example). In this respect, Dimson et al. (2002) provided the seminal academic treatment of the issue setting out the case for the existence of a long-term equity premium.[6] Notice, strategic asset allocation is also deemed consistent with the investment goals of many SWFs; it is a recipe for long-term investment.

So, the form of SWFs is a mixture of the rules governing institutional decision-making and the rules governing the investment process. As such, there is a close, reinforcing relationship between these two sets of rules in that the rules governing decision-making are legitimated by the expertise and knowledge believed to underpin the rules governing investment. Consequently, it should not be surprising that many SWFs have seen the global financial crisis as an 'opportunity' to realise their long-term investment objectives. The alternative, which would be to abandon global financial markets and discount the value of the three pillars of "neoclassical finance", would be an attack on the very rules justifying their existence and the relative autonomy this type of institution enjoys from their political sponsors. Importantly, the rules governing decision-making combined with the rules of investment are also a means of justifying a long-term perspective against short-term market

volatility and a means of justifying an investment strategy in favour of equities (for example) at a time when markets are beset by pessimism.

More generally, our conception of the rule-based form of SWFs goes some way to undercutting the commonplace assumption of a categorical distinction between this type of institution and global financial markets. We have suggested that SWFs are constituted, in part, in relation to the structure and performance of global financial markets as if SWFs do not have a role in constituting the structure and performance of markets. And yet, given their increasing size and the scope of their investments, financial markets have come to rely (in part) upon the flow-of-assets from SWFs into both the developed markets of the west and, increasingly, the emerging markets of the east and the south. This fact-of-life was noted in a comment made by Gillian Tett in the Financial Times (July 15th 2010, p. 6) to the effect that Asian SWFs were very influential in the decision made by European governments to go-ahead with the 'stress-testing' of their banks despite uncertainty over the prospects of the Euro. Tett cites the purchase by China's SAFE (a quasi-SWF) of Spanish bonds as evidence for the 'market-making' capacity of these government actors in situations where market players from developed countries are unable or unwilling to take risks.

From this discussion, we draw three obvious implications for the future of SWFs. First, to the extent that SWFs are 'constituted' by the rules governing investment, their longer-term prospects depend upon those rules realising expected rates of return on SWF assets. Second, to the extent that SWFs 'constitute' global financial markets, SWFs have an interest in ensuring that the rules-of-the-game underpinning market structure and performance are consistent with the rules of investment that legitimate their institutional form. Third, given their reliance upon financial markets, SWFs also have an interest in promoting the development of emerging markets in ways consistent with the presumed 'optimal' institutional structure of developed markets. In combination, SWFs together and separately have an interest in realising the promise of neoclassical finance, even if this means promoting the institutional design and governance of global financial markets in ways that sovereign governments may find inconsistent with their interests.[7]

New Realities of Global Finance

In the aftermath of the global financial crisis, SWFs may benefit from exploiting the apparent gaps in and between markets, the risk-aversion of established market players, the obvious reliance of nation-states on SWFs as market-makers for government bonds and the increasing reliance of certain companies on SWFs to act as "investors of last resort". Indeed, anecdotal evidence suggests that in the depth of the global financial crisis, some of the worlds' largest SWFs effectively underwrote the liquidity of global equity and bond markets. And, today, it is arguable that SWFs remain a vital element in the core markets of advanced economies and, in particular, the US dollar and the Euro.[8] Being dependent upon major markets for returns on assets invested, some of the largest SWFs have emerged as "universal owners" in the lexicon coined by Hawley and Williams (2007).

As such, some of the largest funds have sought to influence the debate over the global regulatory response to the financial crisis and national regulatory reforms. To the extent that SWFs are constituted in terms of the imperatives driving global financial markets and, in turn, constitute the functional performance of those markets, the responsibility for reform remains in the hands of sovereign nation-states whose interests are, in no small measure, driven by domestic and geopolitical interests (Rajan 2010). Furthermore, those countries whose markets are at the very core of the global market system do not sponsor SWFs and, through the crisis, more often than not opted for short-term solutions to long-term problems. Western governments have recognised that many of the largest SWFs have few options other than investment in core markets. Implicit in nation-state policies that have sought to underwrite short-term macroeconomic conditions is the assumption that SWFs and other private investors like pension funds and endowments are hostages-to-fortune—they cannot retreat from markets and thereby realise losses on their portfolios, nor can they find refuge in ready-made alternatives (whether emerging markets, private placements etc).[9]

Their long-term investment programmes are, in effect, a form of insurance for the short-term prospects of whole nations. It is little wonder that the Chinese government has been resistant to calls to discount the value of the Renminbi. In carrying US government bonds, the government through the CIC and SAFE have underwritten the assumption of debt by the

US government to reflate the domestic economy. For the Chinese government to initiate the revaluation of the Renminbi against the US dollar would simultaneously discount the value of their US government bond holdings while discounting the competitiveness of Chinese producers relative to western markets. The primary beneficiary of such a policy would be the US government. While such reasoning may well be judged to be an expression of self-defeating neo-mercantilism, at odds with 20th century notions of global economic and financial integration, it reflects the dilemma facing large holders of financial assets (made more acute, no doubt, by the geopolitical interests of SWF sponsors).

Through the crisis and now the putative economic 'recovery', the rationale behind western governments' expansionary macroeconomic policies is readily apparent: indebtedness is preferable to precipitating another great depression. If subject to political debate and dispute in the west, it has been accepted by countries such as the PR of China recognising their medium-term dependence upon western consumers for economic prosperity. Accompanying this argument has been another, more controversial, argument to the effect that the financial crisis was an 'event' whose genesis in US subprime housing mortgages provides a rationale for confidence in the long-term prospects of developed economies' financial markets. By this logic, failures of US regulation and market oversight combined with the self-seeking behaviour of financial 'producers' and 'consumers' alike combined to amplify the ever-present but normally benign behavioural biases and anomalies evident in financial markets (Lee et al. 2009). As such, to the extent that the regulatory response is effective in limiting the possibilities of such an event reoccurring in the future, the integrity of financial markets will be protected and the loyalty of investors to financial markets enhanced.

For those convinced that the financial crisis was less of an 'event' than an instance of the disequilibrium effects of global imbalances, recovery from the crisis is a structural problem not simply a short-term macroeconomic 'fix' (Stiglitz 2010). That is, economic and financial stability is to be found by redressing the savings deficit in the US and the savings surplus of China and the exporting countries of the rest-of-the-world (including Germany and Japan). At issue then is the need to reduce leverage: on one side, the leverage of western governments on capital inflows, the leverage of western consumers on future earnings, and the leverage of western banking and investment houses on financial market expectations.

On the other side, the reliance of governments on export earnings, the reliance of the emerging middle classes of east Asian countries on economic growth, and the reliance of surplus 'saving' countries on the developed financial markets of the west for superior rates of return. In this respect, SWFs are more than storehouses of financial assets; they are also representative of unsustainable trade imbalances and expectations as regards the risk-adjusted rate of return to be found in the highly leveraged markets of the west.

Implied, then, is a larger argument to the effect that financial instability is not simply event-driven but is symptomatic of eastern neo-mercantilism and western financialisation. In fact, it is arguable that western financialisation has encouraged asset-driven eastern neo-mercantilism. Consider the thesis advanced by Borio (2006) and his colleagues at the IMF. In essence, their thesis is about the interaction between macroeconomic regulation and the booms and busts in asset prices. The first half of their argument notes that western countries have been "extremely successful in conquering inflation". Not only has this success stabilised growth in output, it has also encouraged a shift in expectations from cyclical to structural change. More to the point, macroeconomic policy success has underwritten the real value of financial assets. Reinforcing this effect, financial liberalisation has given licence to an enormous burst in financial product innovation and the shift in household and business balance-sheets towards financial assets over 'real' assets. Success in the west on these counts, however, has not always been matched by success in emerging markets which are characterised by far greater economic and financial instability and policy and regulation immaturity.

For Borio and his colleagues, financial liberalisation has "greatly facilitated the access to credit" for households and business, reinforcing expectations of wealth supported by leverage in so-called real assets. He notes, moreover, that the risk-appetite of the private sector rises as economic growth accelerates, reinforcing "cross-sectional" expectations in financial markets and drawing into markets even more financial assets in the search for *the* premium on market expectations. As such the equity premium is much less important than the premium on expectations. Asset bubbles are dashed by 'events' that in some way or another expose the fact that these bubbles are unsustainable. Basically, Borio has developed a theory of endogenous booms and busts centred on the developed financial markets of the world. By contrast, much of the history written about financial market

booms and busts over the 20th century shows that bubbles were transmitted from the periphery of the global economy to the core markets of the western world (Barro 2006). As such, financial crises in the west are less about economic under-development and more about the financial and institutional evolution of western economies (see Clark 2000).

In many respects, Borio and his colleagues have challenged the status quo of macroeconomic regulation hitherto dominant in western countries. Whereas it was an article of faith that macroeconomic policy was properly focused on 'real' indicators like employment, inflation and economic growth, Borio suggests that managing the interaction between the real and financial sectors of western economies is an essential role for central banks. Whereas it was assumed that macroeconomic stability was a condition for economic growth and the realisation of investment objectives, financial markets have emerged to rival economic growth as the source of asset appreciation and wealth. In this context, the regulatory response to the financial crisis may have far-reaching implications: if conceived in terms of the 'event' rather than the systemic relationship between the real economy and financial markets in western economies, it seems likely that there will be other booms and busts, financial crises, and market volatility. It is arguable that the patchwork-quilt of national responses to the crisis, focusing on elements of the crisis rather than its underlying causes, will do little to dampen the systemic causes of the crisis (French et al. 2010).

By this logic, the promise of superior returns through well-regulated and stable western markets may not be realised over the long-term for SWFs. Just as importantly, the intellectual foundations of Merton and Bodie's (2005) "neoclassical finance" may not be an adequate recipe for investment management or a justifiable rationale for the current form of many SWFs. If 'trapped' by past commitments, necessitating the deepening of market relationships and investment management, SWFs may have to re-make themselves to cope with the 'new' realities of global financial markets.[10]

SWFs as Strategic Investors

Looking forward, it is useful to remind the reader about the obvious functions of SWFs—the apparent shared goals and objectives of these institutions when first established by their

respective sovereign sponsors. In our case studies, we have identified five common functions more or less shared between the SWFs according to their host countries' particular circumstances, political traditions, and places in the world. These functions can be listed in the following order (a logical order though not necessarily the order relevant to specific countries).

- SWFs are a means of realising a long-term *premium* on a nation's wealth over and above the projected real rate of national economic growth. This premium is realised through financial assets invested in a broad portfolio of assets, representing the potential of global economic integration rather than the potential of one country or region.
- SWFs are a means of separating a portion of a nation's accumulating wealth from the real economy by placing those assets 'outside' of the economy so as to promote long-term *macroeconomic stability*.[11]
- SWFs are a means of *insuring* the future economic prosperity of a sovereign entity in the context of global economic and financial instability and the limits of nation-state power in the international community of nations.
- SWFs are a means of *storing* a nation's wealth separate from the short-term exigencies and political commitments that characterise the life of a sovereign nation; in this sense, SWFs are an endowment fund for the conservation of wealth.
- SWFs are a means of distributing current national wealth, often due to the exploitation of finite resources, to *future generations* either through discounting the value of accumulated liabilities or by maximising the future value of current assets.

These five functions do not, of course, exhaust the list of possible SWF functions. For example, some SWFs *underwrite* the current welfare of citizens over-and-above that which is possible through the local economy. Other SWFs underwrite certain government commitments, especially in circumstances where cycles in government revenue and expenditure are so severe that realising spending commitments can only be found in *insulating* government from the local economy. Do these functions necessarily imply a certain institutional form? Can these five common functions be realised through another institutional form or forms? For that matter, do these functions require SWFs that invest in global financial markets? Consider the options.

Each of these five functions makes a distinction between the short-term and the long-term, local commitments as opposed to global commitments, and the investment returns to be found in the global economy as opposed to the sovereign sponsor's economy. Does this mean that SWFs should be or are by necessity portfolio investors in the manner suggested by Merton and Bodie's (2005) "neoclassical finance"? Surely, there are alternatives. For example, instead of 'owning' a global portfolio of traded securities conceived in terms of the 'efficient frontiers' of modern portfolio theory, SWFs can take large stakes in relatively few companies either on the equity (ownership) side or on the debt (creditor) side. Having a controlling interest in a relatively small number of global corporations would allow the SWF to realise the sovereign's needs, while allowing it to take long-term positions without being captive to the ever-present threat of turmoil in global financial markets (see the Qatar Investment Authority as an example of a SWF that has moved in this direction).

Here, we can discern a 'gap' between the touted goals and objectives of SWFs and their market behaviour. While committed, as noted above, to realising long-term rates of return at a premium on sovereign sponsors' expected rate of national economic growth, being in the market means, more often than not, acting as portfolio investors in relation to short-term market movements. Moreover, ambiguity over the desired premium on national economic growth in many countries often translates into an objective function that matches the objective function of many other institutional investors: maximisation of the risk-adjusted rate of return against accepted market benchmarks. This is, of course, consistent with the ideal 'form' of institutional investment that dominates western markets. It is also consistent with the expectations and expertise of the global financial services industry. But, as a practice, it may be judged to be inconsistent with the putative functions of many if not most SWFs.

Long-term investment is more than a beta strategy—that is, a market-following strategy based upon the changing composition of traded securities. It is also a strategy that seeks refuge from 'events', is cognisant of cycles in the real economy, and is aware of the underlying structural trajectory of industries, regions, and the global economy. Put slightly differently, a long-term investment strategy seeks to realise the benefits of technological innovation and the fundamental drivers of economic competitiveness rather than patching together the long-term out of successive (and often volatile) short-term positions. If

conceived in this manner, the related commitments of sovereign sponsors to issues such as 'ethical investing' as well as global concerns such as climate change can be seen as reflections of long-term value. So, for example, climate change can be a long-term investment opportunity instead of an ineffective short-term screen on the global portfolio of an investment manager (service provider). At issue is the technological frontier rather than the immediate environmental costs of resources.

This topic has garnered considerable attention in the aftermath of the global financial crisis (Stern 2009). Its popularity is, in part, a function of what it seeks to avoid: dependence upon an industry and its markets that many believe are subject to incentives and recurrent events that discount value. At this point, it is not important to set-out in detail the logic and character of long-term investment. Rather, our point here is to simply suggest that if SWFs are to be long-term investors in a manner consistent with the five functions listed above, it may be the case that the current form of many SWFs is antithetical to realising in a systematic fashion those functions. If so, the future form of SWFs will look less like that which has been inherited from modern financial theory and practice and more like merchant banks whose relationships with their 'clients' are framed by reciprocal commitment rather than anonymity. Put slightly differently, the future form of SWFs may have the depth of expertise and knowledge consistent with their commitments rather than their relationships with the financial services industry.

There are three obvious objections to this model of the future. One is simply that the depth of expertise and knowledge needed to be effective strategic investors is in short supply and, in any event, would not be attracted to SWFs because of their complex structures of decision-making. Both aspects of this argument are credible although we should note that through the crisis SWFs have strengthened their human resources considerably (Clark and Monk 2009). But it is also apparent that the type of expertise and knowledge consistent with long-term investing is different in type than the expertise and knowledge currently demanded by global portfolio investors. Equally, it is arguable that the autonomy sought by market traders, typical of some of the largest global banks over the past decade or so, is both inconsistent with risk-management and inconsistent with the significance of individual investments taken in an institution committed to selected long-term stakes.

Another objection is that once an institution moves away from the norms and protocols of "neoclassical finance", it becomes much harder to govern the investment process against third-party standards of performance. This may be true; it is a challenge that faces a number of larger institutions in moving from benchmark measures of performance to absolute measures of performance based upon a priori target rates of long-term return. Assessment of performance in this model of institutional investment becomes a data-intensive and time-intensive process governed by investment beliefs and tests of competence rather than the virtual and often-times automatic peer-group measures of performance that currently dominate the investment management industry.

A third objection would be that once a SWF makes a commitment to long-term investment based upon a small portfolio of projects, the way is opened for the SWF to become non-commercial (i.e. 'strategic' instead of 'portfolio'). Here lie, then, the anxieties of many in the west that believe SWFs are an extension of sovereign interests, legitimated today only by their apparent acceptance of the 'form' of the modern institutional investor (see Santiago Principles). But if the price of legitimacy is reliance upon western financial markets and providers, the price (returns discounted by volatility) may be too high when set against the desired functions of SWFs (including inter-generational equity). Some of the world's largest pension funds, especially those from Canada and Australia, have become strategic investors with significant stakes in selected firms and industries. In a similar manner, but perhaps more hidden behind the veil of ignorance, Chinese development banks, the CIC and related institutions have taken significant stakes in African resource companies and countries (Clark and Monk 2011). At base, the objection is geopolitical and reflects the strains on the global hegemon as it comes to terms with the changing balance of power in the global economy.

In short, if a form of SWFs was to be adopted that met its functions, we would expect to see a slow but profound shift in the geographical locus of investment. Instead of relying upon western financial markets, the premium would be on those firms, industries and regions that fit with national development strategies, such as those at the centre of the 'emerging' global economy of the 21st century (Scott 1998). Of course, these opportunities may be found in the west. But, given the trajectory of western economic growth, population, and development their 'home' jurisdictions would be less important than their integration with the east and, to a lesser extent, the south. In these ways, the withdrawal of SWFs from

western markets is likely to discount the significance of these market institutions as the "hubs" to global capital "spokes". As such, the short-term response of SWFs to the crisis will prove to be a false dawn.

Conclusions

Sovereign wealth funds can be seen as a reflection of global economic integration—being the stores of assets derived from trade and exchange. For some countries, resource endowments have provided 'windfall' revenue flows to nation-state coffers. For other countries, the export of produced goods and services has created public and private wealth, some of which has been diverted from consumption to capital appreciation. For yet other countries with high levels of domestic saving and a geopolitical location at the interstices of global trade, SWFs have been created to smooth the ups and downs of the global economy. For some countries, their SWFs are at the very heart of their long-term plans for economic development; the assets held and invested by their SWFs are a means of reconciling current generations' commitment to sovereign autonomy and the welfare of future generations. For other countries, however, their SWFs might as well be savings banks rather than strategic instruments bound up with the aspirations of their political masters.

As we suggested, SWFs can be characterised and distinguished according to their shared functions. For example, the Australian Future Fund shares with a number of other SWFs the function of holding financial assets that would otherwise over-whelm macroeconomic stability. We think of this function as a 'default' function in that it reflects the limits of nation-state policy making and economic conditions. Significantly, though, the Australian Future Fund was conceived to enhance the interests of future generations by paying-off the accumulated liabilities associated with current generations of federal government employees. As we demonstrated, future generations have a financial stake in the future; they also have a broader interest in the sustainability of the 'Australian way of life'. As such, it is not surprising that a number of SWFs that have a future-seeking mandate have come to read that mandate in broader ways than perhaps financial professionals find congenial. In this respect, the legitimacy of a SWF may well be based upon national values and commitments (as in the Norwegian NBIM).

These functions are matched with a shared institutional form: it is the relationship between form and function that defines what is and what is not a SWF. In its simplest conception, SWFs share many of the attributes of large pension funds, endowments, and insurance companies: being institutional investors, these entities combine asset management with the discipline imposed by accepted theories of portfolio investment—especially those related to what Merton and Bodie (2005) termed as "neoclassical finance". We sketched the principles and practices consistent with the accepted form of SWFs to emphasise the distinctiveness of SWFs (compared to other nation-state asset management) and their reliance upon the structure and performance of global financial markets. In many cases, an important shared function of SWFs is their search for a premium on assets invested over-and-above that which is available in their home jurisdictions due to capacity constraints, economic growth and development. That there is, or should be, such a premium is one of the beliefs that justified the formation of SWFs in the first place.[12]

Textbooks abound on related topics such as the equity premium, the historical significance of asset allocation for portfolio investors, and tactical and strategic investment (Goetzmann and Ibbotson 2006). These topics are representative of the global financial services industry and the academic establishment that sustains it; these topics also represent the type of conceptual discipline often imposed on SWF investment by managers and consultants alike. In this manner, the form of SWFs is constituted by the enabling legislation or administrative orders that established these institutions and by the intellectual foundations of investment management that provide protocols for behaviour and decision-making. As constituted, SWFs rely upon global financial markets for the opportunities to place investments and realise their goals and objectives. Indeed, the intellectual foundations of investment management match in form and substance related expectations as regards the structure and performance of developed financial markets. Hence, the form and functions of SWFs are intimately related to finance-led capitalism.

It should not be surprising that in the aftermath of the global financial crisis it would appear that SWFs may well strengthen their relationships with the global financial services industry. At one level, these relationships are vital if SWFs are to take advantage of the market turmoil occasioned by the crisis. At another level, though, given the form and functions of

SWFs, it would seem inevitable that their response would be to realise their commitments in the form of a deepening relationship to markets and service providers.

We have also sought to suggest that the future of SWFs is more open, and more in flux than this logic would suggest. One lesson of the crisis has been that SWFs, despite their status of investors without liabilities, can be extremely vulnerable to market ups and downs. In fact, when considered over the past 15 years or so, it is arguable that financial markets have hardly returned anything more than the global real rate of economic growth (taking account of volatility, inflation, and the costs of investment management). In this context, it is not obvious that a traditional financial institution, which is how we would label the current form of SWFs, remains the only form consistent with sovereign interests.

Accordingly, we foresee an eventuality whereby SWFs, cognizant of the fact that western markets no longer offer a reliable investment risk premium, will evolve into different institutions in the coming decades. In effect, we envision SWFs transforming themselves into long-term investors whose holdings are selected on the basis of their strategic interests (of the fund and the nation) rather than the principles underpinning modern portfolio theory. If so, the future of SWFs will be more like that feared by their critics in the west than the ideal form argued to be consistent with a symbiotic relationship with the west. The costs of this transformation will be felt by global financial markets as liquidity ebbs away and SWFs make their own ways in the world of economic development rather than market arbitrage and speculation.

Endnotes

[1]/. Reported in The Wall Street Journal (July 2009) by Kara Scannell and Sudeep Reedy "Greenspan admits errors to hostile House panel" available at the http://online.wsj.com website (accessed October 7th 2009).

[2]/. The claimed virtues of western financial markets, and especially Anglo-American markets, were widely cited as reasons for the apparent success of the USA in technological innovation, economic growth, and the attraction of talent (on a global scale) through the 1980s and 1990s, and up to the financial crisis. Continental European nations were deemed far less competitive as a consequence, driving 'reform' in financial systems and investment practice that can be thought partly responsible for the vulnerability of German regional banking systems to the US sub-prime crisis. See Clark and Wojcik (2007) on this debate.

[3]/. Whereas much of the relevant literature is pre-occupied by the issue of rationality, we argue that it is a matter of competence rather than rationality or irrationality. Financial markets are remarkable environments; being subject to risk and uncertainty, effective decision-making requires a level of expertise and judgement well-beyond that found in everyday life (Kahneman and Tversky 1979).

[4]/. Embedded in many accounts of the theory and practice of investment management is the belief that "neoclassical theory is approximately valid for determining asset prices and resource allocations" (Merton and Bodie 2005, 6).

[5]/. The efficient markets hypothesis has been subject to a great deal of debate, especially in relation to the global financial crisis (Ragan 2010, 146). For some, the global financial crisis is evidence that the EMH was at best misleading and at worst the motivating logic of corporate and governmental hubris. At this point, we should note that the EMH does not necessarily promise socially-desirable outcomes. Moreover, to the extent that market pricing is information-sensitive, the quality, quantity, and price of the available information are obviously crucial variables affecting the decisions of market agents (who may be also subject to behavioural biases and anomalies; see Hilton 2003).

[6]/. For the latest instalment, see Dimson et al. (2010) on the recovery of markets since the global financial crisis. They emphasise the relationship between developed and emerging financial markets, and the relationship between economic growth and market performance (arguing that the former drives the latter). They also emphasise continuity with the past and the ever-present tendency of markets (within and between) to mean-reversion.

[7]/. The failure to produce a coherent global regulatory response to the financial crisis will have a number of pernicious consequences, one of which may be the re-emergence of inter-jurisdictional arbitrage. Banking institutions may, in effect, side with their SWF consumers rather than their 'host' nations, using differences between countries' banking and financial regulation to claim advantage either through the threat of re-location in favour of their clients or by leveraging the reliance of their host nations on the flow-of-funds generated by SWF investment for special consideration.

[8] / SWFs' growing power in global financial markets carries risks as well as rewards—there is a danger that public recognition of SWF market-making may prompt the same kind of reaction as when Middle-Eastern public investors sought to buy so-called US strategic infrastructure assets in 2006. Similarly, we are reminded of a case whereby a large SWF's trading position in a certain country's sovereign debt brought it into conflict with its political masters as well as its intended targets. It is not surprising then that some SWFs have generated anxieties among western nation-states. And, in our view, it is reasonable to expect that sovereign sponsors, over the long term, may seek to integrate their SWFs' investment strategy into their geopolitical ambitions; even if in doing so the sovereign would be violating the rules of classic financial institutional form. In short, the autonomy claimed by SWFs would give way to the absorption of SWFs into government treasuries.

[9]/. A thread in public commentary on the causes and consequences of the global financial crisis emphasises the close relationships between US political and financial elites, arguing that they were able to exploit the reliance of foreign investors on western (and especially US markets) to the benefit of US banks and financial service companies (and indirectly, political elites). The prices charged other investors, and the perception that US

banks trading on their own account were able to benefit at the expense of 'external' investors, has encouraged SWFs to look more closely at the 'value-for-money' proposition underpinning continuing commitment to western markets and service providers. See generally Simon Johnson "The quiet coup" in The Atlantic Monthly, May 2009 available at www.theatlantic.com (accessed August 5th 2010).

[10]/. In a related vein, Clarida (2010) and El-Erian (2010) disparage the idea that markets will return to 'normal'; a world characterised by relatively low market volatility and low-impact events that do little to disturb confidence in market pricing. Their world of the 'new' normal is anything but normal: historical low rates of economic growth, periodic bursts of price inflation, and sovereign defaults where "the distribution of outcomes is flatter and the tails are fatter" (Clarida 2010, 2). At one level, their argument is informed by investment practice. At another level, it is informed by a *realist* conception of the unthinkable.

[11]/. See Bernanke's August 2nd 2010 comments to a group of southern (US) state governors suggesting that, in the future, they may wish to build-up sizable reserve funds so as to deal with the prospect of greater economic volatility. This has been characterised by some as a 'save for a rainy day' strategy and is found in the motives of some nation-states when establishing sovereign wealth funds. This point was put as advice 'on camera' by the previous President of Chile to the then Prime Minister of Great Britain Gordon Brown. See Rajan (2010, 201-202) for related advice. Presumably any such strategy would require an institution like a SWF insulated from political pressures. See www.marketwatch.com (accessed 3rd August 2010).

[12]/. In the literature this premium is typically identified as the equity risk premium (see Dimson et al. 2002). Recent research on the nature and value of such a premium has cast doubt on its size (Fama and French 2002), how best to estimate it (Campbell 2008), and its characteristics by jurisdiction (Gregory 2007). In their assessment of investment strategy for the Norwegian SWF, Ang et al. (2009) suggest that it may be better to refer to the risk premium on investment than an equity risk premium.

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