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ALDO MUSACCHIO
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Sovereign Wealth Funds: Barbarians at the Gate or White Knights of Globalization?

Sovereign wealth funds are not a big bad wolf at the door. They have injected liquidity and helped stabilize financial markets. They can offer reliable long-term investments our companies need.

— Jose Barroso, President of the European Commission[1]

I'd like nothing more than to get more of that money.

— Henry Paulson, U.S. Treasury Secretary[2]

What about the day when a country joins some "coalition of the willing" and asks the US president to support a tax break for a company in which it has invested? Or when a decision has to be made about whether to bail out a company, much of whose debt is held by an ally's central bank?"

— Lawrence Summers, Director of the US National Economic Council[3]

While foreign governments may invest money in our country to make a profit, they may also do so in order to further their foreign policy ambitions, to acquire national security assets or to purchase a stake in strategic industries,"

— Virginia Senator Jim Webb[4]

2007 saw the first slump in housing prices in the US in five decades. Some of the largest financial institutions in the world were in dire need of fresh capital to shore up their suddenly fragile balance sheets. Few had the necessary billions of cash available to readily invest quickly in the ailing Wall Street giants. That is when sovereign wealth funds (SWFs), a somewhat unknown source of investment up to that point, came to the rescue with a total of $50 billion of investment in less than half a year[5]. At the time, these investments were more than welcome – Treasury Secretary Henry Paulson claimed he would "like nothing more than to get more of that money"[6]. Such enthusiasm was, however, quite recent. Prior to that, a rising wave of direct SWF investment in US and European companies had elicited mixed responses. The foundation and rapid expansion of China's SWF which

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Professor Aldo Musacchio and Emil Staykov (MBA 2011) prepared this case. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

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wasted no time in purchasing stakes in flagship US companies like Blackstone, Morgan Stanley and energy giant AES exacerbated the debate on SWFs.

SWFs were symbolic of two major trends in the global economy in the previous decade: 1) a redistribution of wealth and financial clout from mature to emerging economies; and 2) the return of the state as a major economic player[7] to a level of importance not seen since the chain collapse of command economies in the late 1980s. This time around, governments were embracing rather than denouncing free markets in what was becoming known as "state capitalism".

The increasing activity and size of SWFs fueled heated debates in politics and business. Were SWFs worse asset managers than the private sector, or did they contribute to the stability of the global financial system with large pools of capital and long-term horizons? How should cross-border flows of state-owned capital be regulated? Should foreign states with different cultural and political characteristics be allowed to own major stakes in large domestic enterprises at all? Where was the line between financial protectionism and national security?

What are Sovereign Wealth Funds?

History of SWFs

The term "sovereign wealth fund" was coined by State Street analyst Andrew Rozanov in 2005[8]. Rozanov did not provide a clear definition at the time and ever since the term has been used to describe a group of funds that are highly diverse in geography, capital source, size, age and investment strategies. The Government Pension Fund of Norway ($430 bn of assets under management), the Chinese Investment Corporation (at estimated $330 bn) and Kiribati's Revenue Equalization Reserve Fund ($0.6 bn) all can belong to this group depending on the definition.

While this heterogeneous group was only recently lumped together in the same investor class, some of its members had been around for a while. The first SWF, the Kuwait Investment Authority, was set up in 1953, a good eight years before Kuwait even gained political sovereignty from the United Kingdom. Some of the largest funds, such as the Abu Dhabi Investment Authority (ADIA) and the Government of Singapore Investment Corporation (GIC), dated back to the 1970's. Recently, however, the number and size of SWFs had increased and they had gained unprecedented attention, particularly with the considerable investments in marquee Western financial institutions at the beginning of the global financial crisis and the inception of the China Investment Corporation (CIC) in 2007. The remaining BRIC countries had generally followed suit and either established their own SWFs recently (in Russia and Brazil) or stated their intention to do so soon (in India, Angola, Bolivia, and Thailand).

Following some international pressure and realizing their own growing significance in global markets, SWFs moved to set up their first industry association, the International Working Group (IWG) of SWFs, in 2007. The IWG included most of the biggest SWFs, had the OECD and the IMF as observers and drafted the Generally Accepted Principles and Practices for SWFs, named the Santiago Principles **(Exhibit 5a).**

Definitions

There is no shortage of definitions on what a SWF is. The UK House of Commons says SWFs are "state-owned bodies intended to deliver financial returns from the investment of a country's foreign exchange reserves or other assets acquired through those reserves"[9]. The political and risk consultant

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Ian Bremmer defines SWFs as "state-managed pools of excess cash that can be invested strategically"[10].

SWFs themselves put down a definition in the Santiago Principles that outlined their three key characteristics – they are owned by governments, they invest at least partially in foreign assets and invest to achieve financial objectives with a long time horizon **(Exhibit 5b)**. Some of the funds discussed here have even explicitly stated that they do not consider themselves SWFs, but are still included as they meet these broad criteria.

There has been some confusion between SWFs and other agents of state capital. It is important to distinguish SWFs from large state-owned enterprises (e.g., Russia's Gazprom), privately owned corporations or investment funds that are accused of receiving implicit assistance by states (e.g. some of the Middle Eastern airline carriers), large but privately owned pension funds (e.g. the Canada Pension Plan) and standard central bank reserves.

What makes SWFs important?

Large and concentrated

SWFs controlled very large pools of capital. At $4 trillion in 2007, the estimated size of assets under management (AUM) of SWFs exceeded the combined assets of the private equity and hedge fund industries **(Exhibit 1)**. Following a drop in market value during 2008 and 2009, estimated AUM of SWFs surpassed the $4 trillion threshold in 2010 again. SWFs had smaller assets than pension, mutual and insurance fund assets, and even smaller relative to total global financial assets, estimated at US$190 trillion[11]. However, they were significant relative to total stock market capitalization in both mature and emerging markets[12]. SWFs combined features of all other investor classes. They had the financial prowess of large pension funds but, similar to PE funds and hedge funds, often had greater flexibility with regards to the risk profile of their investments. SWFs were also unique in that they only reported to a single shareholder – the respective national government.

Furthermore, the SWF industry was significantly more concentrated than other investor classes **(Exhibit 2)**. At the financial markets peak in 2007, the Abu Dhabi Investment Authority (ADIA) was said to manage close to $900 billion[13], or about a quarter of all SWF assets. When the Chinese government set up the Chinese Investment Corporation in 2007, it did so with a capital infusion of $200 billion overnight, about four times the size of the largest hedge fund at the time. The assets of the largest hedge funds and private equity firms still barely exceed $50 billion. Despite the shortage of publicly available data and the recent proliferation in the number of SWFs, one can safely assume that 50-70 percent of sovereign wealth is still concentrated in the five largest funds[1]. The five largest players in the PE and hedge fund industries make up for less than 10% of total industry assets.

Bound to grow larger

The Financial Times announced in 2007 that SWFs were "rapidly becoming a huge force in global markets and economies"[14]. The latest growth rates of SWF assets were impressive **[Exhibit 3a]**, albeit likely generated through government deposits and still not mostly through financial returns. Rozanov conservatively estimated the size of SWF assets at close to 900 billion in 2005. The IMF reported that "total size worldwide has increased dramatically over the past 10–15 years"[15].

[1] Assuming SWF assets of $4 trillion; 4 of the 5 largest SWFs (ADIA, SAMA, SAFE, GIC and CIC) do not disclose the size of AUMs.

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International Financial Services London (IFSL) supported that estimate saying SWF assets more than doubled between 2001 and 2007[16].

The trend of increase in size was likely to persist. First, there was potential for immediate growth in SWF assets through the vast holdings of foreign currency already available in some central banks. Net exporters in emerging markets accumulated up to $6 trillion of foreign exchange reserves; China alone controlled at least a third of that[17]. If China deposited most of its foreign exchange holdings in the CIC, it could become one of the top three asset managers in the world overnight. Second, the current account imbalances and high commodity prices that funded some of the rapid growth of SWFs in the past ten years were expected to continue in the short term. Lastly, SWF assets could grow organically too through appreciation of already existing investments. SWFs assets were forecast to grow to $13.4– 17.5 trillion by 2017[18]. SWFs were expected to account for one eighth of world's investment flows by 2012.[19]

The different types of SWFs

The industry was certainly diverse. Allocating different funds to specific categories was, unfortunately, often done on the basis of limited information given the widespread lack of transparency in the industry. In general, SWFs could be classified in four categories based on their investment mandate and the source of funding: stabilization funds, savings/ pension reserve funds, economic development funds or reserve investment corporations depending on their primary objective. Some SWFs had multiple objectives (e.g. Kuwait Investment Authority and Norway's Government Pension Fund-Global), and a number of countries also had more than one SWF, including Chile, Russia, the UAE and Singapore.

The majority of established SWFs are either savings funds for future generations or fiscal stabilization funds. There are only a handful of traditional pension reserve funds operating today that are owned by governments, and even fewer reserve investment corporations.

Saving and pension reserve funds

These funds have been set up with the primary purpose of capital preservation for future generations. They are generally large, relatively old funds that invest in minority holdings in public stocks, as well as fixed income securities, and are primarily focused on developed markets. Notable examples include the Abu Dhabi Investment Authority (ADIA), Norway's Government Pension Fund - Global (GPF) and Chile's Pension Reserve Fund.

Stabilization funds

These funds had mostly been set up in the past 20 years with the primary purpose of providing a fiscal stabilization mechanism for their countries (spending during recessions and accumulating reserves during times of growth). They were often similar to savings SWFs in their investment strategies but had formally outlined responsibilities to engage in countercyclical investment activities. Chile's Economic and Social Stabilization Fund and Mexico's Oil Income Stabilization Fund were typical examples of such funds.

Economic development funds

These were also mostly young funds whose goal is to promote economic development and, in the case of resource-rich countries, economic diversification away from the dependence on a single

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commodity. These funds generally preferred direct investments with some focus on the domestic economy and often held majority shares of both public and private companies. To distinguish themselves from other, more traditional state-owned investment vehicles, economic development funds sometimes explicitly stated they were not SWFs. The first and largest fund of this type is Singapore's Temasek Holdings, which was set up in 1975. More recent funds include Mubadala Development Company in the UAE, Khazana and 1MDB in Malaysia, and Brazil's BNDESpar.

Reserve investment corporations

These were funds created as a result of the accumulation of large foreign exchange reserves by national banks. They typically sought to invest these reserves in liquid assets that provided higher returns than money market and government bonds, and could also help manage currency risk. While smaller in number, reserve investment corporations were some of the largest SWFs. The most famous reserve corporation was arguably the Chinese Investment Corporation, which was set up in 2007 to manage around $200 billion (at the time) of China's $2.5 trillion in dollar-denominated securities in the context of increasing expectations for dollar depreciation. Other large reserve corporations included the Saudi Arabia Monetary Authority (SAMA), the Korean Investment Corporation (KIC) and the Government of Singapore Investment Corporation (GIC).

Benefits of SWFs

A solution to the resource curse

There was a tendency to discuss the importance of SWFs in terms of their influence on global financial markets and, more broadly, the world economy. This often resulted in neglecting the primary reason for their existence – the benefits they brought to their own nations.

First, SWFs were a natural solution to the "resource curse" problem. In countries that had large reserves of natural resources (such as oil, gas, or metal ores), the strong world demand for that resource could lead to real exchange rate appreciation through either nominal appreciation, inflation, or a combination of both. This lowered the competitiveness of other exports and could leave the national economy dependent on a single commodity that was both impossible to replenish and vulnerable to unpredictable price fluctuations.

This was where SWFs were particularly useful. They could convert finite, expendable natural assets into financial assets that generated returns in perpetuity. For instance, the oil reserves of some of the GCC countries had already run out (e.g. in Bahrain and Dubai) and while others had reserves that can last a few decades, oil and gas could not be replenished in the short run. Furthermore, a technological breakthrough in alternative energy sources might cause the demand for oil and gas to greatly diminish long before that. Thus SWFs allowed resource exporters to switch from a relatively unpredictable cash inflow that is limited in time to a well-diversified and more stable cash inflow in perpetuity through a portfolio of financial and real assets.

SWFs helped to maintain export competitiveness as well. In an environment of high commodity prices, the sudden inflow of cash from export earnings or fiscal surpluses into the real economy could overheat the economy through consumption bubbles and rising inflation. Channeling that excess cash into a SWF was a form of sterilization that kept a lid on inflation (and real exchange rate appreciation) and preserved the competitiveness of non-commodity exports.

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Protection against domestic economic shocks

SWFs, particularly stabilization funds, also helped governments of resource-rich countries manage rapid falls in commodity prices and smooth out economic cycles. SWFs could provide the necessary financing for fiscal stimuli and the ensuing boost in demand, saving jobs and protecting against speculative attacks on national currencies.

During the prolonged hike in oil prices in the 1970s, GCC countries chose to drastically raise government spending. Those without well-developed SWFs suffered serious budget problems in the 1980s when oil prices fell back to levels unseen for a decade. In the latest oil and gas price hike, governments diverted excess earnings into SWFs and kept a lid on spending increases. As a result, they went through the rapid drop in oil prices from $147 per barrel to $46 per barrel in 2008 largely unscathed and preserved balanced or surplus budgets.

Bolstering national security

SWFs could be a mechanism of national defense for smaller countries in politically unstable regions since their assets were difficult to seize. The reason behind setting up SWFs in places like Qatar, the UAE, Kuwait and Singapore might have partially been the realization of national leaders that their countries are geographically indefensible. Investments abroad represented a reliable insurance policy against a hypothetical foreign attack. The Iraqi invasion in Kuwait in 1991, for instance, did not hurt the Kuwait Investment Authority. The fund was able to provide considerable assistance to the local government in re-building the national economy after the end of the war[20].

A caterpillar of global financial markets

SWFs were, in some respect, the embodiment of the stereotype of the large and patient institutional investor. Such investors are crucial to the long-term health and performance of global capital markets for a number of reasons.

First, large institutional investors can help to increase capital market returns. They often take a significant part of the shares of a company or take it over entirely, which gives them incentives to monitor firm activities, reduces agency problems and leads to better corporate governance focused on long-term sustainability. They can also enhance firm values by facilitating beneficial takeovers. The global scope and connections of some SWFs in particular entails greater access to exit opportunities for companies and can lower transaction costs in deals.[21] Large investors can also benefit its shareholders as they are able to enter investment opportunities with illiquidity discounts. The larger the size of the necessary capital deployment, the fewer investors can afford it. This can leave SWFs as the sole potential investor in some opportunities resulting in favorable acquisition prices. Market players can also think of large institutional investors as possessing superior information as these institutions usually hold well diversified portfolios allowing access to multiple industries and geographies. An investment by a SWF in a firm could then positively affect a firm's value through signaling[22].

In addition, large investors with long-term horizons are also more immune to "animal spirits" and could more easily withstand market panic. Even the biggest investments are a relatively small fraction of their portfolios – for instance, ADIA's much criticized investment in Citibank in late 2007 was less than a percent of its estimated assets under management. Besides, without any short-term pressure to return a significant portion of assets in cash to their governments, SWFs could afford to stay in their investments during market troughs. SWFs have demonstrated that they can have a stabilizing influence on markets in the recent financial turmoil. The rise of SWFs might not simply

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lead to the decrease in power in 'incumbent' financial centers such as New York and London[23]. SWFs played an important role in enabling the survival of the financial services system in many incumbent centers during the financial crisis, by capital infusions totaling over US$50 billion over less than six months in late 2007 and early 2008 (**Exhibit 4**). Furthermore, SWFs were pretty much the only ones investing in late 2007 – 75% of all investments made between November 2007 and January 2008 at the height of the financial crisis were by SWFs[24] making them somewhat of an international lender of last resort.

Successful removal of capital constraints

The amount of capital at the disposal of SWFs made them very suitable for large risky investments with expected late returns that would otherwise remain outside the scope of most funds. Large infrastructure projects in particular were a preferred domain of some funds (e.g. Temasek Holdings) long before they attracted the attention of college and university endowments in the West. For instance, the capital available to SWFs vastly exceeded that of traditional sources of financing in emerging markets such as the World Bank and the Asian Development Bank.

Not at fault for their size

Even if the size of SWFs indicated a problem with the global economy, their prominence was more of a symptom than a root cause. Goldman Sachs pointed out that the rise of is due to global imbalances in the world economy, and that SWF investments in developed markets restored balance.[25] In the past it had been primarily countries with oil and gas reserves, such as Norway and the Gulf States, or other commodities that had operated SWFs, sourced from their foreign exchange earnings. China's fund (like Singapore's funds) was based on the rapid growth of foreign exchange from exports of goods, and in particular its current account imbalance with the U.S. That could be blamed on factors like China's alleged manipulation of its exchange rate, the persistent reluctance of U.S. households and governments to spend within their means, or simply on the increasing productivity of Chinese labor. However, the SWFs of the People's Republic were beneficiaries of imbalances rather than their cause.

Criticisms against SWFs

Bad investment managers

A common criticism of SWFs was that, as other state-owned institutions, they were poorly run and generated less value than a private sector alternative would. Economic research abounds with evidence that governments, on average, are not very good at capital allocation. Indeed, the recent experience of SWFs that made large investments in Western financial institutions in the months preceding Lehman Brothers' bankruptcy was mixed. The $127 billion of SWF investments in publicly listed companies suffered close to 57 billion in mark-to-market losses through March 2009 at the trough of stock markets (although it is unclear how much of the value has been recovered)[26]. The CIC's investment in Blackstone at $35 per share at its IPO in 2007 was still to pay off in 2011 - the stock was currently trading at $19 after hitting a low of $4 in February 2008. ADIA's investment in Citigroup turned acrimonious – the SWF agreed to buy a minority holding at $32 per share only to see the stock price fall below a dollar within a year. Despite the partial recovery of the stock, ADIA was now in the middle of a lawsuit against Citibank for fraudulent representation.

This, however, was only anecdotal evidence, and it did not really distinguish SWFs from other asset managers who suffered large losses in 2008 and 2009. Some funds seemed highly successful. In

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contrast to ADIA, GIC and KIA made $1.6 bn and $1.1 bn in profit by selling their stakes in Citigroup in 2009[27]. The disclosures by some of the biggest SWFs seem to indicate that they are fulfilling their mandates with at least moderate success. The capital preservation funds of Singapore, Abu Dhabi and Norway posted long-term annualized returns in the range of five to eight percent. Singapore's Temasek, which was founded with riskier investments in mind, reported a respectable 17% annual return since inception **(Exhibit 7)**.

A cause of asset bubbles

SWFs were accused of being partially responsible for financial bubbles (e.g. the Latin American sovereign debt crises of the 1980s and the stock market crash in the US in 2008). For instance, following the oil price hikes of the 1970's, SWFs from oil-exporting countries invested their money with global investment banks, which channeled a lot of the capital into Latin American government debt. In response to the high inflation caused by the oil price increase, the U.S. Federal Reserve and European central banks raised interest rates in the 1980s. Latin American governments saw their currencies quickly depreciate against the US dollar and ended up with untenable debt payments. A similar pattern took place during the oil and gas price rises in the 2000's. This time, however, the recipients of SWF capital were largely publicly listed companies in developed markets, as well as hedge funds and private equity firms. Such events lead to concerns that SWF investment failures would not just hurt their domestic constituencies but could actually jeopardize the global financial system instead of contribute to systemic stability.

Too big to fail… too

If banks and insurance companies should not be "too big to fail" because of systemic risks, why should regulators treat other large financial institutions more leniently? In the case of a troubled large SWF that could spread contagion throughout the entire world, who would address the resulting systemic threat? Private financial institutions faced regulatory regimes that could limit their size and closely monitored their exposures to risky assets. What could guarantee that SWFs will not commit the same mistakes that the private sector did in the build up to the global financial crisis?

Some SWFs, for instance, relied partially on debt financing by international private sources. These were typically funds with portfolios with a substantial proportion of real assets—stakes in government-owned companies (GLCs), joint ventures or fully-owned corporate entities, and real estate holdings. Debt financing from the private sector made a fund responsible to various stakeholders with potentially diverging interests and attracted criticism – that is, it made SWFs no more truly sovereign. SWFs justified their use of debt financing with the very favorable interest rates (and, respectively, greater returns on equity) they could obtain. In addition, debt financing had clear benefits in bringing market discipline to the funds, forcing them to improve corporate governance and solidify their risk management practices.

But what if, in the course of trying to maximize returns to their shareholders, they took on more debt and became highly levered investors? In 2008, Dubai World came within hours of defaulting on its debt payments as a result of highly levered investments in real estate that suddenly faced a shortage of buyers. Dubai World was technically a private company and was much smaller than the biggest SWFs. However, its connections to government officials and the lack of transparent corporate structure raised concerns that similar issues could occur with a SWF. The appropriate level of leverage for a SWF remained largely a subjective decision made by the fund managers themselves or by government officials. SWFs could become indistinguishable in capital structure from hedge funds, but their much larger size bore greater systemic risks.

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Political motivation behind investments

The attempted purchase by Dubai Ports of the rights to operate major US ports in 2006 and the rapid expansion in Europe by Russia's Gazprom fueled concerns about the possibly political motivation of such investments. [28] Such concerns ignored the fact that Dubai Ports and Gazprom were not SWFs but state-owned companies. In fact, empirical studies confirmed that there was no statistically significant difference between the investments of publicly known SWF investments and a control group of mutual funds[29]. Unsurprisingly, SWFs have almost unanimously denied that they invest with political objectives in mind.

Some evidence, however, seemed to support such fears. For example, in a recent transaction China's State Administration of Foreign Exchange (SAFE) agreed to purchase $300 million in bonds from Costa Rica on the condition that Costa Rica switch diplomatic recognition from Taiwan to the People's Republic of China. The CIC's investments into iconic global financial institutions (e.g., Morgan Stanley in 2007) and energy and resource assets (e.g., in Australia and Canada) of strategic importance to China's national development caused some backlash and raised concerns about national security in the West. These concerns had less to do with the effectiveness of governments as financial investors than with the specific governments in question. The Washington Post unequivocally concluded that ownership of US assets by foreign governments was "a benign prospect if the buyer is Norway, a member of NATO. It is more troubling if the government behind it is that of China, Russia, or Venezuela."[30]

SWF deals also came under scrutiny for placing both too little and too much importance on ethics. In 2006, Temasek purchased a controlling stake in Shin Corporation – the family business of Thailand's prime-minister Thaksin Shinawatra who was later indicted with crimes against humanity and had his assets frozen by the next government. The portfolio of the Libyan Investment Authority (LIA) drew much attention during the civil unrest in the country in the first half of 2011 when it was widely publicized that LIA held a stake of 2.5 percent in UniCredito, Italy's largest bank by assets (other Libyan state vehicles held an additional five percent). The resulting unrest among Italian shareholders after LIA's investment was said to have cost UniCredito's CEO his position. At the other end of the spectrum, Norway's GPF explicitly stated that in addition to financial objectives, it imposed ethical standards on investments. Its list of companies that did not meet its ethical standards included aeronautics giants EADS and Boeing. GPF famously disinvested from Wal-Mart because of its labor practices in Mexico, drawing criticism by the US Ambassador in Oslo.

Insufficient transparency

Accusations of politically motivated investing by SWFs went hand in hand with criticism about their lack of transparency. SWFs were generally as transparent about their activities as their governments[31]. The SWF Institute, an independent research organization, developed an index to measure the level of transparency in different funds based on best practices in disclosure. Some funds like Norway's GPF were exemplary in terms of transparency – in fact, GPF has received praise even from SWF skeptics as it is "more transparent, more accountable and has clearer governance structures than many private institutional investors"[32]. Others were more opaque and were persistently reluctant to disclose information.

SWFs initially met calls for greater transparency by OECD governments and the IMF with caution and found them perplexing. After all, they often disclosed even more information than hedge funds and private equity firms which seemed to be exempt from such criticism. Furthermore, transparency might actually diminish long-term returns. It could discourage fund managers from taking up good

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investment opportunities if they involved short-term risk and subsequent pressure from the public. The media backlash against large pension fund and endowment managers in the West after the stock market crash in 2008 seemed to justify that. Managers of some of the most successful funds (such as the Canada Pension Plan Investment Board and the Yale Endowment) came under heavy criticism for unrealized losses in 2008 that neglected decades of over-performing the markets. The possibility of such pressure may have lead managers to skip good investment opportunities. Norway's GPF, the leader in transparency, reported annualized returns of 5% since 1998 – a not too glamorous performance that would look even less impressive if adjusted for inflation. On the other hand, ADIA, which had long shunned disclosure and was still far from the level of transparency of the GPF, reported annual returns of 8% for the past 30 years **(Exhibit 7)**.

Recently SWFs had warmed to the idea that greater transparency was desirable and embraced some of the requirements of Western governments and the IMF in the Santiago principles (**Exhibit 5a)**. Most published annual reports and an increasing number were reporting the size of assets under management. Very few of the largest ones, though, disclosed all of their investments.

A trigger of financial protectionism

Free-market advocates warned that SWFs might inadvertently encourage capital account protectionism, through which countries "pick and choose who can invest in what"[33]. Indeed, protectionist sentiment stating that foreign governments should not be allowed to own the "commanding heights" of a national economy was as old as international investment itself. Even governments that traditionally supported the free flow of capital had been prone to protectionist intervention. When the Kuwait Investment Authority (KIA) purchased 20 percent of British Petroleum in its IPO in 1989, Margaret Thatcher's government famously intervened and ordered KIA to reduce its holding to less than 10 percent. More recently, the French government had considered launching its own SWF as a defensive measure against foreign SWF investment. Financial protectionism could hurt the effectiveness of global capital markets and result to inefficient capital allocation, thus slowing global growth. While the blame hardly lay with SWFs only, their critics argued that greater transparency would go a long way in fending off protectionism.

The road ahead

Sovereign wealth had gradually become a controversial but increasingly important part of the global financial system. Their recent dynamism raised multiple questions in the minds of policy makers and businessmen alike. Should SWFs be regulated at all? One option was to let countries decide individually and rely on bi-lateral agreements, similar to the 2008 agreements the U.S. struck with Singapore and Abu Dhabi[34]. Even those agreements were, however, very broad and simply stated that investments were not made with geopolitical purposes, without specifying monitoring or penalty mechanisms. Another option was to involve (or create) a global regulatory body regulating cross-border investment similar to the World Trade Organization which regulated cross-border trade. Would either option prove effective? Were SWFs a source of stability in global finance or just political vehicles and a new source of systemic risk? Ultimately, what role should states have in a globalized economy? Could they succeed on a global level in the 21st century having largely failed in their national economies in the previous century?

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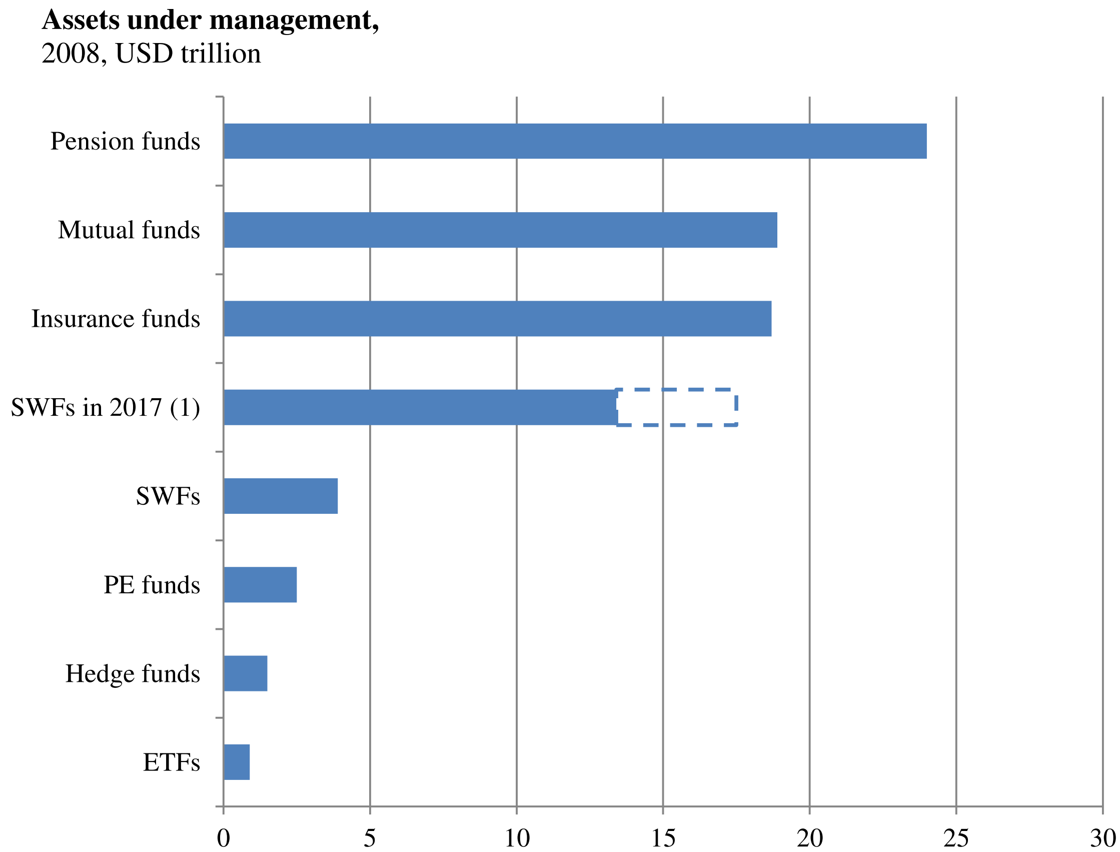
Exhibit 1 Global AUMs by type of fund manager



Source: Compiled from IFSL Research, "Sovereign Wealth Fund Investment Behavior", (PDF file), downloaded from Les Echos' website, http://bit.ly/fxgMKq , accessed April 2, 2011.

(1) A range of projections by Morgan Stanley, Standard Chartered, Merrill Lynch, and the International Monetary Fund cited by the World Bank (http://bit.ly/gaygdU).

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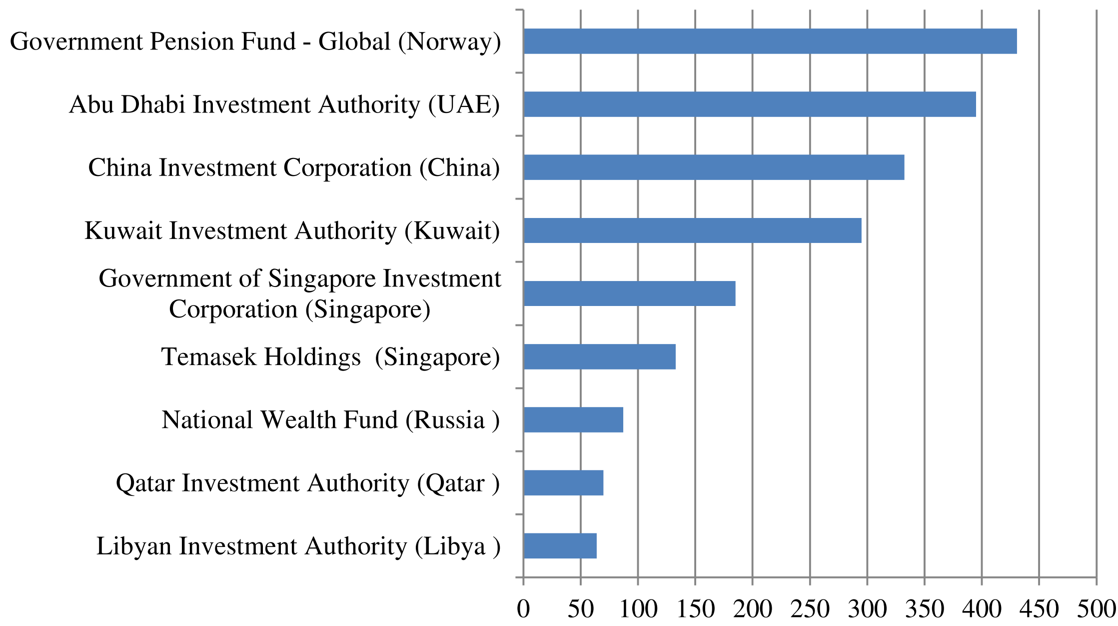
Exhibit 2 Largest SWFs by assets



Source: Adapted from Monitor Group, "Sovereign Wealth Fund Investment Behavior", (PDF file), downloaded from Monitor Group's website, http://bit.ly/gNWGdE , accessed March 15, 2011.

[1] The data represent estimates based on publicly available information and Monitor's analysis. Monitor Group does not track two of the largest SWFs in the world, the Saudi Arabia Monetary Authority (SAMA) and China's State Agency for Foreign Exchange (SAFE). Both SAMA and SAFE invest at least a portion of their assets in public and private equity and could be classified as SWFs. The SWF Institute estimates SAMA's assets at $439 bn and SAFE's at $347 bn.

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Exhibit 3a SWF investments over time[1]

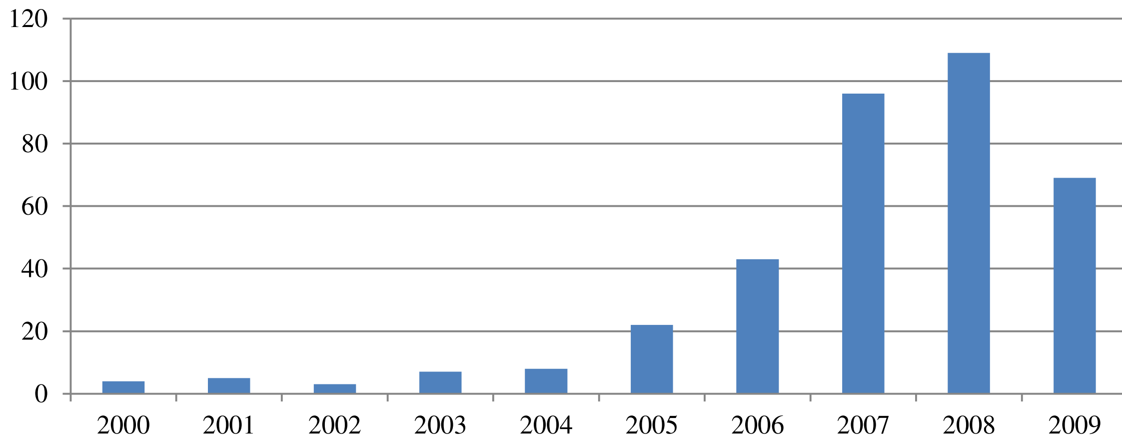
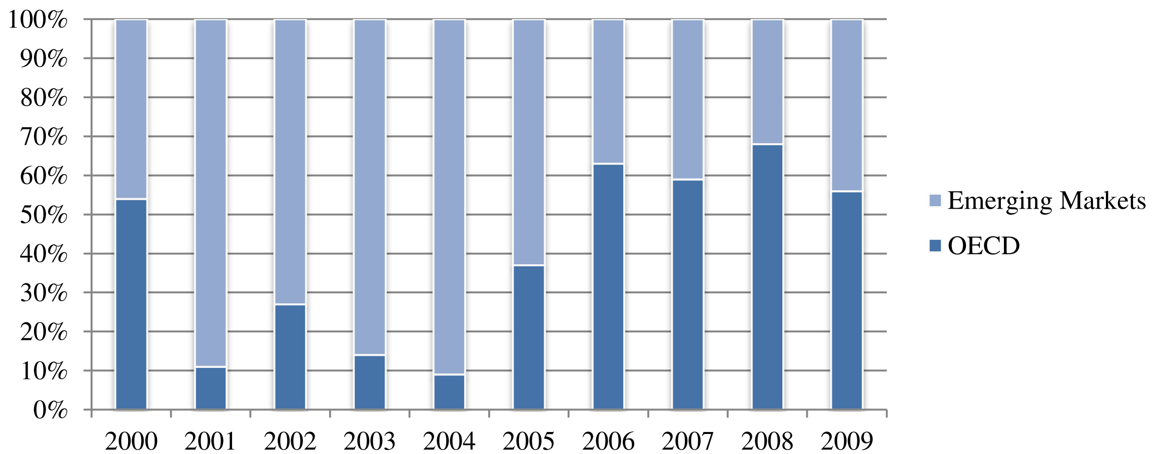


Exhibit 3b SWF investments by destination- developed vs. emerging markets



Source: Adapted from Monitor Group, ""Sovereign Wealth Fund Investment Behavior", (PDF file), downloaded from Monitor group's website, http://bit.ly/gNWGdE , accessed March 15, 2011.

[1] The data is restricted only to the publicly available investments of 33 SWFs tracked by Monitor group. The size of the investments may be significantly larger.

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Exhibit 4 Selected SWF investments in Western companies

Date	Fund	Country	Target	Stake	Value (USD bn)
Stakes in investment banks:					
2007	ADIA	UAE (Abu Dhabi)	Citigroup	4.6%	7.6
2007	GIC	Singapore	Citigroup	4.2%	6.8
2007	KIA	Kuwait	Citigroup	4.7%	7.7
2007	Temasek	Singapore	Merrill Lynch	10.8%	5.0
2008	KIC	South Korea	Merrill Lynch	4.3%	2.0
2008	KIA	Kuwait	Merrill Lynch	7.4%	3.4
2007	CIC	China	Morgan Stanley	9.9%	5.0
2007	GIC	Singapore	UBS	9.8%	9.8
2007	SAMA	Saudi Arabia	UBS	1.8%	1.8
2008	QIA	Qatar	Credit Suisse	2.0%	0.6
Stakes in private equity and hedge funds:					
2007	ADIA	UAE (Abu Dhabi)	Apollo	9.0%	n.a.
2007	ADIA	UAE (Abu Dhabi)	Ares	20.0%	n.a.
2007	Mubadala	UAE (Abu Dhabi)	Carlyle	7.5%	1.4
2007	CIC	China	Blackstone	9.9%	3.0
2007	DIC	Dubai	Och-Ziff	9.9%	1.3
2011	KIA and GIC	Kuwait, Singapore	TPG	5.5%	0.6

SWFs also owned stakes in Daimler, Sony, EADS, Harrods, Volkswagen.
The list is not exhaustive.

Source: United States Government Accountability Office (GAO), *Sovereign Wealth Funds: Publicly Available Data on Sizes and Investments for Some Funds Are Limited.* Report to the Committee on Banking, Housing, and Urban Affairs, U.S. Senate, September 2008; author's research.

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Exhibit 5a "Santiago" principles

1. The legal framework for the SWF should be sound and support its effective operation and the achievement of its stated objective(s).
    1.1. The legal framework for the SWF should ensure legal soundness of the SWF and its transactions.
    1.2. The key features of the SWF's legal basis and structure, as well as the legal relationship between the SWF and other state bodies, should be publicly disclosed.
2. The policy purpose of the SWF should be clearly defined and publicly disclosed.
3. Where the SWF's activities have significant direct domestic macroeconomic implications, those activities should be closely coordinated with the domestic fiscal and monetary authorities, so as to ensure consistency with the overall macroeconomic policies.
4. There should be clear and publicly disclosed policies, rules, procedures, or arrangements in relation to the SWF's general approach to funding, withdrawal, and spending operations.
    4.1. The source of SWF funding should be publicly disclosed.
    4.2. The general approach to withdrawals from the SWF and spending on behalf of the government should be publicly disclosed.
5. The relevant statistical data pertaining to the SWF should be reported on a timely basis to the owner, or as otherwise required, for inclusion where appropriate in macroeconomic data sets.
6. The governance framework for the SWF should be sound and establish a clear and effective division of roles and responsibilities in order to facilitate accountability and operational independence in the management of the SWF to pursue its objectives.
7. The owner should set the objectives of the SWF, appoint the members of its governing body(ies) in accordance with clearly defined procedures, and exercise oversight over the SWF's operations.
8. The governing body(ies) should act in the best interests of the SWF, and have a clear mandate and adequate authority and competency to carry out its functions.
9. The operational management of the SWF should implement the SWF's strategies in an independent manner and in accordance with clearly defined responsibilities.
10. The accountability framework for the SWF's operations should be clearly defined in the relevant legislation, charter, other constitutive documents, or management agreement.
11. An annual report and accompanying financial statements on the SWF's operations and performance should be prepared in a timely fashion and in accordance with recognized international or national accounting standards in a consistent manner.
12. The SWF's operations and financial statements should be audited annually in accordance with recognized international or national auditing standards in a consistent manner.
13. Professional and ethical standards should be clearly defined and made known to the members of the SWF's governing body(ies), management, and staff.
14. Dealing with third parties for the purpose of the SWF's operational management should be based on economic and financial grounds, and follow clear rules and procedures.
15. SWF operations and activities in host countries should be conducted in compliance with all applicable regulatory and disclosure requirements of the countries in which they operate.
16. The governance framework and objectives, as well as the manner in which the SWF's management is operationally independent from the owner, should be publicly disclosed.
17. Relevant financial information regarding the SWF should be publicly disclosed to demonstrate its economic and financial orientation, so as to contribute to stability in international financial markets and enhance trust in recipient countries.

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18. The SWF's investment policy should be clear and consistent with its defined objectives, risk tolerance, and investment strategy, as set by the owner or the governing body(ies), and be based on sound portfolio management principles.
    - 18.1.The investment policy should guide the SWF's financial risk exposures and the possible use of leverage.
    - 18.2.The investment policy should address the extent to which internal and/or external investment managers are used, the range of their activities and authority, and the process by which they are selected and their performance monitored.
    - 18.3.A description of the investment policy of the SWF should be publicly disclosed.
19. The SWF's investment decisions should aim to maximize risk-adjusted financial returns in a manner consistent with its investment policy, and based on economic and financial grounds.
    - 19.1.If investment decisions are subject to other than economic and financial considerations, these should be clearly set out in the investment policy and be publicly disclosed.
    - 19.2.The management of an SWF's assets should be consistent with what is generally accepted as sound asset management principles.
20. The SWF should not seek or take advantage of privileged information or inappropriate influence by the broader government in competing with private entities.
21. SWFs view shareholder ownership rights as a fundamental element of their equity investments' value. If an SWF chooses to exercise its ownership rights, it should do so in a manner that is consistent with its investment policy and protects the financial value of its investments. The SWF should publicly disclose its general approach to voting securities of listed entities, including the key factors guiding its exercise of ownership rights.
22. The SWF should have a framework that identifies, assesses, and manages the risks of its operations.
    - 22.1.The risk management framework should include reliable information and timely reporting systems, which should enable the adequate monitoring and management of relevant risks within acceptable parameters and levels, control and incentive mechanisms, codes of conduct, business continuity planning, and an independent audit function.
    - 22.2.The general approach to the SWF's risk management framework should be publicly disclosed.
23. The assets and investment performance (absolute and relative to benchmarks, if any) of the SWF should be measured and reported to the owner according to clearly defined principles or standards.
24. A process of regular review of the implementation of the GAPP should be engaged in by or on behalf of the SWF.

Source: Adapated from International Working Group of SWFs, (PDF file) http://www.iwg-swf.org/pubs/eng/santiagoprinciples.pdf, accessed April 2, 2011.

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Exhibit 5b Definition of SWF in the Santiago Principles

1. SWFs are defined as follows:

2. SWFs are defined as special purpose investment funds or arrangements, owned by the general government. Created by the general government for macroeconomic purposes, SWFs hold, manage, or administer assets to achieve financial objectives, and employ a set of investment strategies which include investing in foreign financial assets. The SWFs are commonly established out of balance of payments surpluses, official foreign currency operations, the proceeds of privatizations, fiscal surpluses, and/or receipts resulting from commodity exports.

3. This definition excludes, inter alia, foreign currency reserve assets held by monetary authorities for the traditional balance of payments or monetary policy purposes, operations of state-owned enterprises in the traditional sense, government-employee pension funds, or assets managed for the benefit of individuals.

4. Three key elements define an SWF:

- *Ownership*: SWFs are owned by the general government, which includes both central government and sub-national governments.
- *Investments*: The investment strategies include investments in foreign financial assets, so it excludes those funds that solely invest in domestic assets.
- *Purposes and Objectives*: Established by the general government for macroeconomic purposes, SWFs are created to invest government funds to achieve financial objectives, and (may) have liabilities that are only broadly defined, thus allowing SWFs to employ a wide range of investment strategies with a medium- to long-term timescale. SWFs are created to serve a different objective than, for example, reserve portfolios held only for traditional balance of payments purposes. While SWFs may include reserve assets, the intention is not to regard all reserve assets as SWFs.

Source: Adapted from International Working Group of SWFs, (PDF file) http://www.iwg-swf.org/pubs/eng/santiagoprinciples.pdf, accessed April 2, 2011.

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Exhibit 6a SWF transparency index

The Linaburg – Maduell Transparency Index allocates a point for each of the practices that is considered key to corporate transparency. Index value vary from 0 (least transparent) to 10 (most transparent)

Point	Principles of the Linaburg-Maduell Transparency Index
+1	Fund provides history including reason for creation, origins of wealth, and government ownership structure
+1	Fund provides up-to-date independently audited annual reports
+1	Fund provides ownership percentage of company holdings, and geographic locations of holdings
+1	Fund provides total portfolio market value, returns, and management compensation
+1	Fund provides guidelines in reference to ethical standards, investment policies, and enforcer of guidelines
+1	Fund provides clear strategies and objectives
+1	If applicable, the fund clearly identifies subsidiaries and contact information
+1	If applicable, the fund identifies external managers
+1	Fund manages its own web site
+1	Fund provides main office location address and contact information such as telephone and fax

Developed by Carl Linaburg and Michael Maduell

Source: Adapted from SWF Institute, "Linaburg-Maduell Transparency Index," http://bit.ly/fBJ8tx , accessed March 10, 2011.

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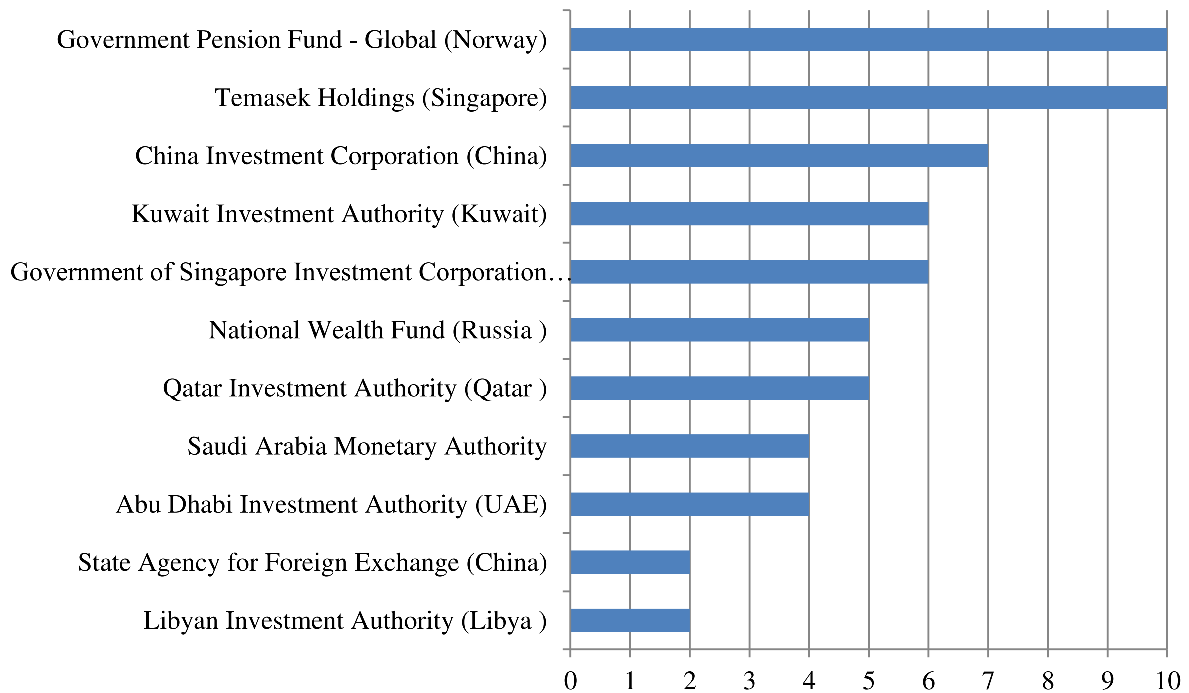
Exhibit 6b SWF transparency rankings of top funds by assets



Source: Adapted from SWF Institute, "Linaburg-Maduell Transparency Index," http://bit.ly/fBJ8tx , accessed March 10, 2011.

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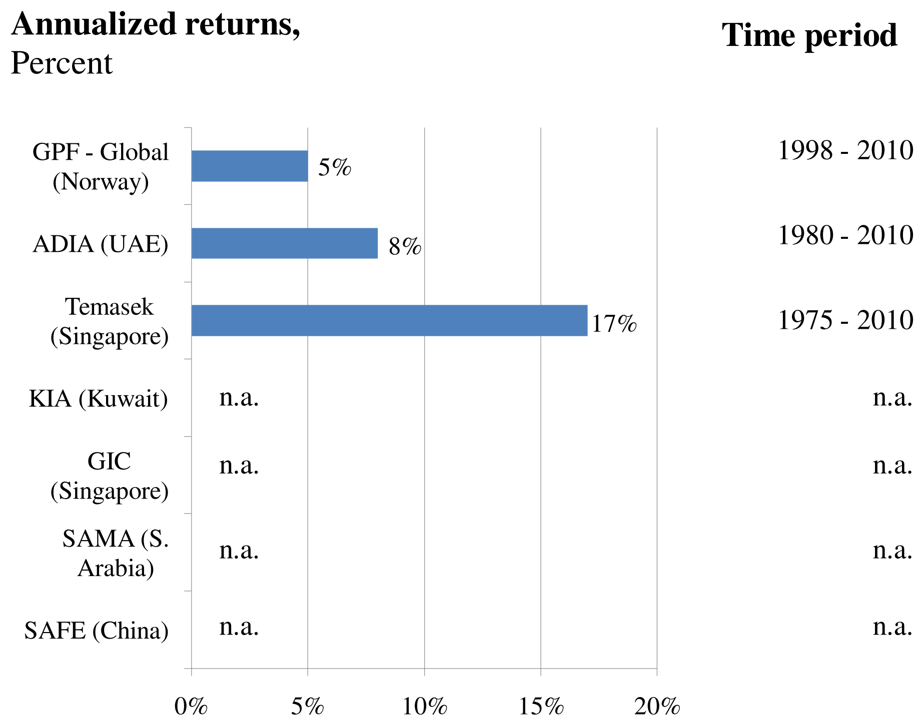
Exhibit 7 Long-term returns of selected SWFs



Source: Adapted from Annual reports, accessed April 10, 2011.

The funds are selected based on two criteris: 1) age (in operations for more than 20 years) and 2) size (estimated AUM > $100 bn).

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Appendix: Abbreviations

ADIA – Abu Dhabi Investment Authority

AUM – Assets under management

CIC – China Investment Corporation

GIC – Government of Singapore Investment Corporation

GPF – Government Pension Fund – Global (Norway)

KIA – Kuwait Investment Authority

KIC – Korea Investment Corporation

LIA – Libya Investment Authority

SAFE – State Administration of Foreign Exchange (China)

SAMA – Saudi Arabia Monetary Authority

QIA – Qatar Investment Authority

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[22] Ibid.

[23] Faulconbridge, James. 2010. "Rebalancing the geographies of financial services power: the role of sovereign wealth funds". Environment and Planning A 42, 2280-2283. Available at http://bit.ly/hvKNRF , accessed March 11, 2011

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9B15N030

STANDARD CHARTERED BANK: VALUATION AND CAPITAL STRUCTURE[1]

Ruth S. K. Tan, Zsuzsa R. Huszár and Weina Zhang wrote this case solely to provide material for class discussion. The authors do not intend to illustrate either effective or ineffective handling of a managerial situation. The authors may have disguised certain names and other identifying information to protect confidentiality.

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In November 2014, Standard & Poor's (S&P) — a major U.S. credit rating agency — downgraded Standard Chartered Bank's long-term debt from AA– to A+, and its short-term debt from A-1+ to A-1.[2] The new rating meant that Standard Chartered Bank (SCB) had a "strong capacity to meet its financial commitments, but was somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions."[3] The downgrade came after a string of profit warnings issued by the bank, and was the first downgrade for SCB in 20 years since S&P started rating the bank in 1994.[4] According to the rating agency, SCB remained one of the most creditworthy in its class, but "the group [was] no longer materially less exposed to unexpected losses than [its] peers."[5]

There were reasons to be bearish about SCB's outlook. Its shares had been amongst the worst performing stocks of the 30 global, systemically important banks (G-SIBs).[6] G-SIBs were banks that, should they fail, might trigger a financial crisis. The list of such banks was published by the Financial Stability Board in 2014.[7] SCB's large exposure to emerging markets in Asia, Africa and the Middle East weighed heavily on the minds of investors as interest rates started to creep upwards along with the recovery of the U.S. economy.[8] The threat of large-scale defaults in these emerging markets, coupled with slowdowns in China and India, had increased the vulnerability of the bank's balance sheet.

In October 2014, U.S. authorities had reopened investigations into whether SCB had withheld prohibited transactions from investigators in 2012, when it paid a total of US$667 million.[9] Portions of this total were paid to the New York State Department of Financial Services ($340 million), the New York City District Attorney and Department of Justice ($95 million), the Treasury Office of Foreign Assets Control ($132 million) and the Federal Reserve ($100 million).[10] The authorities also signed a deferred prosecution agreement to resolve a criminal case of sanction breaches in Iran, the Sudan and Myanmar.[11]

Some of the bank's largest investors pushed for radical changes, such as the departure of its chairman, Sir John Peace, as well as its chief executive, Peter Sands.[12] They also pushed for the relocation of its London, England, base of operations to either Hong Kong or Singapore, for tax purposes.[13]

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TEMASEK'S STAKE IN SCB

The Singapore investment fund Temasek Holdings became the single largest shareholder of SCB in March 2006, after its purchase of an 11.5 per cent stake in the company (worth about $4 billion) from the estate of the hotelier Khoo Teck Puat. Khoo was a reclusive Singaporean billionaire who had died in 2004. By December 2007, Temasek had increased its investment to 18 per cent, and its stake hovered between 18 and 19 per cent thereafter.[14]

Investment in a bank which specialized in emerging markets with a strong Asian focus placed Temasek in a position to benefit from Asia's economic growth. From 2008 to 2013, SCB benefited from its Asian focus because these emerging markets grew faster than the U.S. and European economies did.[15] As a result, SCB weathered the financial crisis relatively unscathed.[16]

When Asia started experiencing slower economic growth in 2013, SCB's fortunes took a turn for the worse. The slower growth and the U.S. investigations caused SCB's stock price to plummet. As of March 31, 2014, Temasek had a net debt-to-equity ratio of 0.02[17] and a risk-adjusted aggregated hurdle rate of 8 per cent.[18]

EFFORTS TO IMPROVE FINANCIAL PERFORMANCE

SCB had made deliberate moves to cut costs and increased its business focus. In early January 2015, the bank dismantled its stockbroking, equity research and equity listing desks worldwide, becoming one of the first global banks to get out of the equity capital markets business completely. A total of 200 jobs were cut — almost all of them in Asia. SCB also announced plans to cut 4,000 jobs in retail banking, which represented approximately 5 per cent of the bank's 86,000 employees.[19]

VALUATION

On the London Stock Exchange,[20] SCB's adjusted closing share price stood at $13.08[21] on March 1, 2006, around the time of Temasek's initial purchase. It hit a peak of $24.35 on March 14, 2013, and was on a downward trend thereafter. The share closed at $14.71 on February 16, 2015. The decline of SCB's share price raised concerns that it might in fact be oversold and under-priced. However, it was obvious that bearish sentiments regarding the share remained.

As far back as October 2011, there were some signals that Temasek might move away from its SCB stake when it raised $502 million by selling a zero-coupon bond that could be exchanged for SCB shares if the bank shares rose beyond the requisite 27 per cent premium to the then share price of $21.98.[22] The poor record in 2014 re-ignited speculation that Temasek might offload its stake.

If Temasek decided to sell a part of, or all of, its stake in SCB on February 16, 2015, what would be a reasonable valuation for SCB's shares based on its past financial performance and other relevant market information? Summaries of the historical financial statements are provided in Exhibits 1 and 2.

Some assumptions and projections of the free cash flow to equity for 2014 through to 2024 and beyond are available in Exhibit 3. Corresponding projections with attendant assumptions that would be useful for a dividend discount model valuation are presented in Exhibit 4. This includes information on the required return on equity, and the estimated dividends from 2014 through to 2024 and beyond.

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For a relative valuation analysis using a peer comparison, data had been collected, but a suitable peer group had yet to be identified (see Exhibit 5). Stock charts that show the price performance of SCB relative to its competitors are offered in Exhibits 6 and 7.

NEW CAPITAL RULE UNDER BASEL III

Under Basel III[23] regulatory rules, banks that held "significant" investments in other financial groups (classified as more than 10 per cent of their total equity) would have to hold more capital against these investments. Specifically, the investments in excess of the 10 per cent threshold were to be excluded in the calculation of Tier 1 capital. The Tier 1 capital ratio is defined as the ratio of a bank's core equity capital (common stock and retained earnings) to its risk-weighted assets.

This new rule made it more expensive for banks to hold investments in other banks.[24] It trapped capital on the balance sheet and could force banks to shrink if they chose to dump these investments. Holding more capital against these investments, on the other hand, would cause a bank's returns to decline and might also hurt share prices.

Because Standard Chartered held significant investments in the Agricultural Bank of China ($621 million),[25] PT Bank Permata ($638 million), Vietnam's Asia Commercial Joint Stock Bank ($105 million), and China Bohai Bank ($123 million),[26] it would have to raise funds equivalent to the total excess investments in these financial institutions. Thus, SCB might find it unattractive to hang on to these bank investments.

Assuming that SCB decided to hold on to these bank investments and to raise funds to satisfy the higher capital requirement, what could be some possible financing alternatives? Would it help to attract more bank deposits? Should it raise debt? Should it go for a seasoned offering? What would be the impact of these financing alternatives? What would be a suitable recommendation on how to raise the funds if one took the valuation results into consideration?

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EXHIBIT 1: INCOME STATEMENT FOR STANDARD CHARTERED BANK (US$)

	2008	2009	2010	2011	2012	2013
Interest income	16,378	12,926	13,500	16,584	17,827	17,593
Interest expense	8,991	5,303	5,030	6,431	7,046	6,437
Net interest income	7,387	7,623	8,470	10,153	10,781	11,156
Non-interest income	6,581	7,561	7,592	7,484	8,002	7,621
Total income	13,968	15,184	16,062	17,637	18,783	18,777
Provision for credit losses	1,321	2,000	883	908	1,196	1,617
Gross income	12,647	13,184	15,179	16,729	17,587	17,160
Non-interest expense	7,611	7,952	9,023	9,917	10,722	10,193
Others (other impairment and profit from associates)	-468	-81	-34	-37	-14	-903
Profit before tax	4,568	5,151	6,122	6,775	6,851	6,064
Provision for income taxes	1,224	1,674	1,708	1,842	1,866	1,864
Net income	**3,344**	**3,477**	**4,414**	**4,933**	**4,985**	**4,200**

Source: Standard Chartered PLC, "Standard Chartered PLC Annual Report 2013: Driving Investment, Trade and the Creation of Wealth across Asia, Africa and the Middle East," 2014, http://reports.standardchartered.com/annual-report-2013/pdf/2013-Annual-Report.pdf, accessed February 16, 2015.

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EXHIBIT 2: BALANCE SHEET FOR STANDARD CHARTERED BANK (US$)

	2008	2009	2010	2011	2012	2013
Short-term assets						
Cash and due from banks	46,583	50,885	52,058	65,981	67,797	83,702
Federal funds	24,161	18,131	32,724	47,364	60,537	54,534
Other short-term investments	92,575	67,327	79,709	88,845	80,422	93,965
Investment securities held available-for-sale	61,849	69,040	70,967	79,790	95,374	99,888
Total investment	225,168	205,383	235,458	281,980	304,130	332,089
Customer loans						
Commercial loans	89,817	98,563	118,172	133,229	138,733	149,312
Real estate construction loans	2,325	2,523	2,454	3,804	4,645	3,967
Residential mortgages	47,567	57,637	70,662	72,574	72,627	69,789
Consumer loans	33,097	36,946	46,488	52,676	57,790	60,013
Lease financing (commercial real estate)	6,357	7,008	9,388	10,255	11,543	13,630
International loans						
Total customer loans	179,163	202,677	247,164	272,538	285,338	296,711
Impairment provision, customers	4,985	4,385	6,806	5,748	5,700	6,003
Loans and advances to customers	174,178	198,292	240,358	266,790	279,638	290,708
Other assets						
Premises and equipment	3,586	4,103	4,507	5,078	6,620	6,903
Customer liability on acceptance outstanding	2,574	3,080	4,847	5,485	4,957	5,501
Accrued income and prepayments	3,466	3,241	2,127	2,521	2,552	2,510
Other assets	26,096	22,554	29,263	30,832	33,311	36,669
Total assets	435,068	436,653	516,560	592,686	631,208	674,380

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EXHIBIT 2: (CONTINUED)

	2008	2009	2010	2011	2012	2013
Deposits						
Non-interest-bearing deposits	24,195	30,572	40,820	38,510	42,230	45,482
Saving deposits	93,092	126,726	137,255	153,185	173,103	181,159
Customer certificates of deposits	145,206	133,882	162,652	193,035	201,123	200,142
Institutional certificates of deposits	12,084	4,509	5,249	6,502	6,056	8,714
Total interest-bearing deposits	250,382	265,117	305,156	352,722	380,282	390,015
Total deposits	274,577	295,689	345,976	391,232	422,512	435,497
Financial liabilities held at fair value through profit or loss	8,660	5,984	10,433	10,210	13,211	10,914
Total deposit liabilities	265,917	289,705	335,543	381,022	409,301	424,583
Other liabilities						
Short-term borrowings						
Acceptances outstanding	2,539	2,963	4,774	5,473	4,900	5,501
Accruals and deferred income	4,132	4,113	4,528	4,458	4,811	4,668
Other liabilities	139,785	111,952	132,850	160,358	166,141	192,787
Total liabilities	412,373	408,733	477,695	551,311	585,153	627,539
Share capital	948	1,013	1,174	1,192	1,207	1,214
Share premium account	4,743	4,828	5,386	5,432	5,476	5,493
Capital and capital redemption reserve	18	18	18	18	18	18
Merger reserve	5,450	7,284	12,421	12,421	12,421	12,421
Available-for-sale reserve	-5	-93	306	-109	478	446
Cash flow hedge reserve	-83	15	57	-13	81	15
Translation reserve	-1,784	-1,185	-412	-1,394	-885	-2,106
Retained earnings	12,853	15,460	19,260	23,167	26,566	28,745
Parent company shareholders' equity	22,140	27,340	38,212	40,714	45,362	46,246
Non-controlling interest	555	580	653	661	693	595
Total equity	22,695	27,920	38,865	41,375	46,055	46,841
Total equity and liabilities	435,068	436,653	516,560	592,686	631,208	674,380

Source: Standard Chartered PLC, "Standard Chartered PLC Annual Report 2013: Driving Investment, Trade and the Creation of Wealth across Asia, Africa and the Middle East," 2014, http://reports.standardchartered.com/annual-report-2013/pdf/2013-Annual-Report.pdf, accessed February 16, 2015.

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EXHIBIT 3: DISCOUNTED CASH FLOW VALUATION ASSUMPTIONS

1. Interest income is expected to grow at the rates shown in the table below. From 2014 to 2016, with SCB's downturn, modest growth using the average growth rate from 2008 to 2013 of 2.48 per cent is projected. From 2017 to 2023, SCB will enter a higher growth phase and a 4.5 per cent growth is assumed. Beyond that, the terminal growth rate is estimated to be 5 per cent. The base interest income at Year -1 (FY2013) is $17,593. Year 0 is FY2014. Discount the free cash flows starting from 2015.
2. Other items are assumed to grow proportionately with interest income. Interest expense, non-interest income, provision for credit losses, and non-interest expense are estimated to be 41.35 per cent, 48.04 per cent, 8.58 per cent and 58.47 per cent of interest income, respectively. Tax is applied at 28.714 per cent on taxable income.
3. As SCB's interest expense is considered a "cost of goods sold" due to the nature of the banking business, the free cash flows are calculated after deducting interest expense and therefore are essentially cash flows to equity.
4. The valuation assumes that capital spending and net operating working capital are negligible.
5. No adjustments for outstanding warrants and share options are made in calculating value per share.

Year-on-Year Interest Income Growth

Year (estimates)	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Interest income (%)	2.48	2.48	2.48	4.5	4.5	4.5	4.5	4.5	4.5	4.5	5

Source: Created by the authors based on assumptions stated above.

EXHIBIT 4: DIVIDEND DISCOUNT MODEL VALUATION ASSUMPTIONS AND OTHER SELECTED FINANCIAL DATA

Financial Year End:	December 31
Ordinary Shares Outstanding:	2.427 billion
Equity Beta:	1.23
U.K. Government Bond Yield:	2.62%
Market Risk Premium:	6.35%
Dividend per Share in 2014 (Year 0):	US$0.86
Book Value per Share:	US$19.05

Dividends are expected to grow at the rates shown in the table below. From 2015 to 2017, with SCB still working towards recovery, modest growth of 3 per cent is expected. From 2018 to 2023, SCB will have rebounded and with its retail banking growth potential, a higher growth of 5 per cent is assumed. The terminal growth rate is estimated to be 7 per cent.

Year-on-Year Dividend Growth

Year (estimates)	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Dividend growth rate (%)		3	3	3	5	5	5	5	5	5	7
Dividend per share ($)	0.86	0.89	0.91	0.94	0.99	1.04	1.09	1.14	1.20	1.26	1.35

Source: Created by the authors based on assumptions stated above.

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EXHIBIT 5: KEY FINANCIAL FIGURES AND MARKET-COMPARABLE MULTIPLES OF SELECTED PUBLICLY TRADED FIRMS

	SCB	Royal Bank of Scotland	Barclays	HSBC	UBS	ING	Deutsche Bank
Ticker	STAN	RBS	BARC	HSBA	UBS	ING	DB
Stock exchange	London	London	London	London	New York	New York	New York
Share price	956.40*	385.60*	257.87*	602.2*	17.19	14.03	32.29
Market capitalization	23.21B	43.73B	53.80B	121.52B	64.53B	54.08B	44.52B
Employees	86,000	110,800	139,600	254,000	60,205	84,718	98,138
Qtrly revenue growth (yoy) (%)	-9.20	58.90	9.10	11.30	7.00	14.90	23.80
Revenue (ttm**)	16.18B	14.3B	24.19B	58.36B	30.23B	29.02B	35.14B
Gross profit (ttm):	17.03B	11.43B	24.87B	58.96B	N/A	3.89B	N/A
EBITDA† (ttm)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Operating margin (ttm) (%)	35.63	-14.71	26.93	32.25	9.55	34.47	16.01
Net income (ttm)	4.17B	-6.43B	1.03B	15.32B	3.84B	3.03B	1.90B
EPS (ttm, diluted)	1.70	-0.57	0.06	0.81	0.99	0.37	1.49
P/E (ttm, forward)	9.23	0.12	0.10	6.69	11.16	10.02	21.77
P/S (ttm)	2.23	3.08	2.21	2.07	2.11	3.39	1.24
P/B (mrq***)	0.74	0.71	0.89	0.62	1.17	0.92	0.55
Total cash	146.8B	486.5B	717.2B	964.52B	N/A	178.26B	1,170B
Total debt	143.8B	463.4B	647.7B	541.46B	N/A	205.87B	918B

Note: SCB's balance sheet and income statements are in USD, but the share prices are quoted in GBP. Use exchange rate of 1 USD = 0.65 GBP on February 16, 2015.
† Earnings Before Interest, Taxes, Depreciation and Amortization.
**share price quoted in GBP (pence).*
***ttm = trailing 12 month*
****mrq = most recent quarter*

Source: Yahoo! Southeast Asia Pte. Ltd., "Standard Chartered PLC (STAN.L) — Key Statistics," https://sg.finance.yahoo.com/q/ks?s=STAN.L, accessed February 16, 2015; Yahoo! Southeast Asia Pte. Ltd., "Royal Bank of Scotland Group plc (RBS.L) — Key Statistics," https://sg.finance.yahoo.com/q/ks?s=RBS.L, accessed February 16, 2015; Yahoo! Southeast Asia Pte. Ltd., "Barclays PLC (BARC.L) — Key Statistics," https://sg.finance.yahoo.com/q/ks?s=BARC.L, accessed February 16, 2015; Yahoo! Southeast Asia Pte. Ltd., "HSBC Holdings plc (HSBA.L) — Key Statistics," https://sg.finance.yahoo.com/q/ks?s=HSBA.L, accessed February 16, 2015; Yahoo! Southeast Asia Pte. Ltd., "UBS Group AG (UBS) — Key Statistics," https://sg.finance.yahoo.com/q/ks?s=UBS, accessed February 16, 2015; Yahoo! Southeast Asia Pte. Ltd., "ING Groep N.V. (ING) — Key Statistics," https://sg.finance.yahoo.com/q/ks?s=ING; Yahoo! Southeast Asia Pte. Ltd., "Deutsche Bank AG (DB) — Key Statistics," https://sg.finance.yahoo.com/q/ks?s=DB, accessed February 16, 2015.

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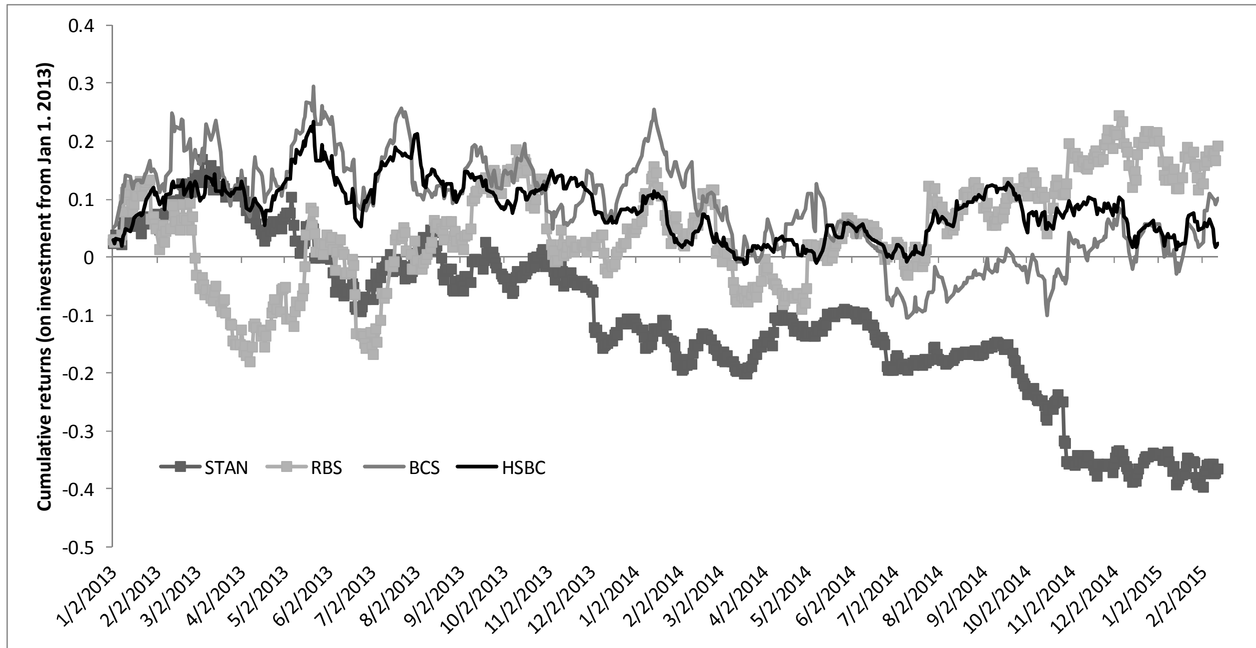
EXHIBIT 6: STOCK CHART FOR SCB AND MAJOR COMPETITORS ON LSE, JANUARY 2013–FEBRUARY 2015



Source: Yahoo! Southeast Asia Pte. Ltd., "Standard Chartered PLC (SCBFF)," https://sg.finance.yahoo.com/q/hp?s=SCBFF, accessed August 25, 2015; Yahoo! Southeast Asia Pte. Ltd., "Royal Bank of Scotland Group plc (RBS.L) — Historical Prices," https://sg.finance.yahoo.com/q?s=RBS.L, accessed February 15, 2015; Yahoo! Southeast Asia Pte. Ltd., "Barclays PLC (BARC.L) — Historical Prices," https://sg.finance.yahoo.com/q/hp?s=BARC.L, accessed February 15, 2015; Yahoo! Southeast Asia Pte. Ltd., "HSBC Holdings plc (HSBA.L) — Historical Prices," https://sg.finance.yahoo.com/q/hp?s=HSBA.L, accessed February 15, 2015.

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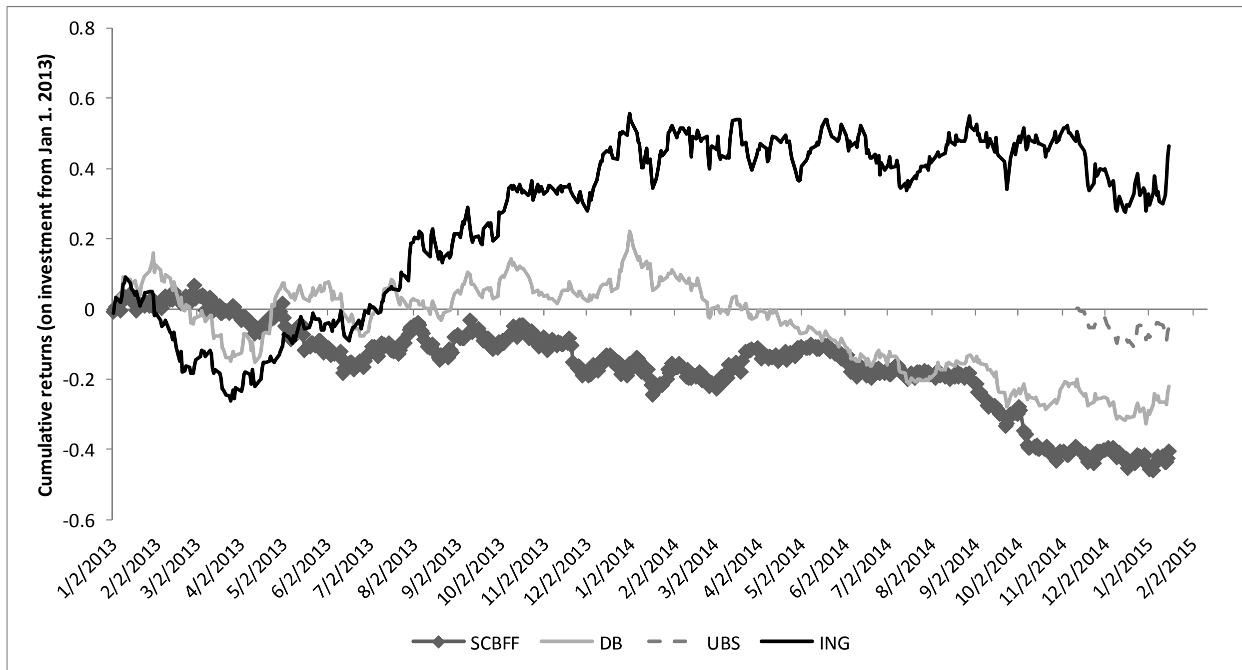
EXHIBIT 7: STOCK CHART FOR SCB (CROSSLISTED AS SCBFF) AND MAJOR COMPETITORS ON NYSE AND NASDAQ, JANUARY 2013–FEBRUARY 2015



Source: Yahoo! Southeast Asia Pte. Ltd., "Standard Chartered PLC (SCBFF)," https://sg.finance.yahoo.com/q/hp?s=SCBFF, accessed August 25, 2015; Yahoo! Southeast Asia Pte. Ltd., "Royal Bank of Scotland Group plc (RBS.L) — Historical Prices," https://sg.finance.yahoo.com/q?s=RBS.L, accessed February 15, 2015; Yahoo! Southeast Asia Pte. Ltd., "Barclays PLC (BARC.L) — Historical Prices," https://sg.finance.yahoo.com/q/hp?s=BARC.L, accessed February 15, 2015; Yahoo! Southeast Asia Pte. Ltd., "HSBC Holdings plc (HSBA.L) — Historical Prices," https://sg.finance.yahoo.com/q/hp?s=HSBA.L, accessed February 15, 2015.

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ENDNOTES

[1] *This case has been written on the basis of published sources only. Consequently, the interpretation and perspectives presented in this case are not necessarily those of Temasek, Standard Chartered or any of their employees.*
[2] *The Telegraph, "S&P Downgrades Standard Chartered for the First Time in Bank's History," November 28, 2014, www.telegraph.co.uk/finance/newsbysector/epic/stan/11260273/SandP-downgrades-Standard-Chartered-for-the-first-time-in-banks-history.html, accessed February 15, 2015.*
[3] *Standard & Poor's, "Standard & Poor's Ratings Definitions," June 22, 2012, www.standardandpoors.com/spf/general/RatingsDirect_Commentary_979212_06_22_2012_12_42_54.pdf, accessed February 15, 2015.*
[4] *The Telegraph, "S&P Downgrades Standard Chartered for the First Time in Bank's History," op. cit.*
[5] *Reuters, "Standard Chartered Hit with First S&P Downgrade in 20 Years," November 28, 2014, www.businesstimes.com.sg/banking-finance/standard-chartered-hit-with-first-sp-downgrade-in-20-years, accessed February 15, 2015.*
[6] *Financial Stability Board, "2014 Update of List of Global Systemically Important Banks," November 6, 2014, www.financialstabilityboard.org/2014/11/2014-update-of-list-of-global-systemically-important-banks, accessed February 15, 2015.*
[7] *Financial Times, "Temasek Should Sit Tight on Troublesome Stake in StanChart," January 1, 2015, www.ft.com/intl/cms/s/0/1c0175de-90f9-11e4-914a-00144feabdc0.html#axzz3f4qsC5dI, accessed February 16, 2015.*
[8] *Ibid.*
[9] *All dollars amounts are in U.S. dollars. The exchange rate on December 10, 2012, was US$1 = GBP£0.62241.*
[10] *The Wall Street Journal, "Standard Chartered's Fine Tally Runs to $667 Million," December 10, 2012, http://blogs.wsj.com/deals/2012/12/10/standard-chartereds-fine-tally-runs-to-667-million, accessed February 26, 2015.*
[11] *Financial Times, "Temasek Should Sit Tight on Troublesome Stake in StanChart," op. cit.*
[12] *The Telegraph, "Standard Chartered Chief and Chairman to Leave in Dramatic 6-man Board Exodus," February 26, 2015, www.telegraph.co.uk/finance/newsbysector/epic/stan/11436307/Standard-Chartered-chief-and-chairman-to-leave-in-dramatic-director-exodus.html, accessed March 30, 2015.*
[13] *Financial Times, "StanChart Investors Press Bank to Consider Leaving London," March 20, 2015, www.ft.com/intl/cms/s/0/0dd8924a-ce65-11e4-900c-00144feab7de.html#axzz3f4qsC5dI, accessed March 30, 2015.*
[14] *Bloomberg, "Temasek Raises Stake in Standard Chartered to 18 Percent," December 24, 2007, www.bloomberg.com/apps/news?pid=newsarchive&sid=a9kK9GTD37GU, accessed February 16, 2015.*
[15] *Reuters, "StanChart Eyes Bank Stake Sales as It Tries to Slim Down," January 16, 2015, www.reuters.com/article/2015/01/16/stanchart-restructuring-idUSL3N0UU18Y20150116, accessed February 16, 2015.*
[16] *Reuters, "Standard Chartered Considers HK Consumer Finance Unit Sale: Sources," February 19, 2014, http://wincountry.com/news/articles/2014/feb/19/standard-chartered-considers-hk-consumer-finance-unit-sale-sources, accessed February 16, 2015.*
[17] *Temasek, "Temasek Review 2014," http://tr14.temasekreview.com.sg/content/dam/temasek/annual-review-2014/documents/en/Temasek_Review_2014_en.pdf, accessed February 15, 2015, p. 83.*
[18] *Ibid., p. 19.*
[19] *Singapore Press Holdings Ltd., "Standard Chartered Axes Equities Business, Cuts 4,000 Jobs," AsiaOne, January 9, 2015, http://news.asiaone.com/news/business/standard-chartered-axes-equities-business-cuts-4000-jobs, accessed February 16, 2015.*
[20] *Share prices for SCB were taken from the London Stock Exchange.*
[21] *All original share prices were in GBP and converted using the exchange rate of US$1 = GBP£0.65.*
[22] *Financial Times, "Temasek Reconsiders StanChart Stake," September 24, 2012, www.ft.com/intl/cms/s/0/a27e3094-0671-11e2-bd29-00144feabdc0.html#axzz3XLPXccKc, accessed February 16, 2015.*
[23] *KPMG LLP, "Basel III: Issues and Implications," www.kpmg.com/Global/en/IssuesAndInsights/ArticlesPublications/Documents/basell-III-issues-implications.pdf, accessed February 15, 2015.*
[24] *Financial Times, "BBVA Raises £1 Billion from Citic Bank Stake Sale," October 17, 2013, www.ft.com/intl/cms/s/0/6341974c-36f7-11e3-b42e-00144feab7de.html#axzz3hLn2ahxE, accessed February 15, 2015.*
[25] *US$1 = GBP£0.65071 on February 16, 2015.*
[26] *Reuters, "StanChart Eyes Bank Stake Sales as It Tries to Slim Down," op. cit.*

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Cutting through the Fog: Finding a Future with Fintech

Then comes a strange moment, the sort of thing that happens often at Microsoft, which seemingly within moments turns disaster into salvation. Talk has turned to broader trends in banking. Where's it going, what's in it for us? Banks are dinosaurs, says Gates. We can "bypass" them. The Raptor is unhappy with an alliance involving a big bank-card company. "Too slow." Instead he proposes a deal with a small—and more easily controllable—check-clearing outfit. "Why don't we buy them?" Gates asks, thinking bigger. It occurs to him that people banking from home will cut checks using Microsoft's software. Microsoft can then push all those transactions through its new affiliate, taking a fee on every one. Abruptly, Gates sheds his disappointment with Money. He's caught up in a vision of Microsoft at the center of the "transformation of the world financial system." It's a "pot of gold," he declares, pounding the conference table with his fists, triumphant and hungry and wired. "Get me into that and goddamn, we'll make so much money!"[1]

Carolina Costa was a consultant at Florida Optimum Group (FOG), which, funnily enough, aimed to "help our clients cut through the fog." She was working on engagement, advising a large global bank.

The weather had turned and after leaving the client's office at 7:00 p.m., Costa was able to enjoy a walk to both clear her head and synthesize her thoughts. To many, fintech was still a buzzword with foggy definitions and an unclear path forward. Luckily, Costa had caught the itch to learn more about fintech during the second year of her MBA at a major business school. She had been asked to lead a team to advise Alex Linger-Turpin, a senior managing director, on the strategic path that the bank should take in the wake of fintech growth.

A few choices were becoming clear, though she wanted to make sure she analyzed the various options. She also wanted to make sure she had the right context to share with her client—Linger-Turpin and his colleagues knew *something* was bubbling beneath the surface, but they could not quite figure it out. Costa was ready to help them put their finger on fintech.

[1] Newsweek staff, "Culture Club," *Newsweek*, July 10, 1994, http://www.newsweek.com/culture-club-189982 (accessed Oct. 27, 2016).

This public-sourced case was prepared by Kayla Cartwright (MBA '16); and Yiorgos Allayannis, Professor of Business Administration and Associate Dean for Global MBA for Executives. The assistance of Daniel Gavino is greatly appreciated. It was written as a basis for class discussion rather than to illustrate effective or ineffective handling of an administrative situation. Copyright © 2016 by the University of Virginia Darden School Foundation, Charlottesville, VA. All rights reserved. *To order copies, send an e-mail to* sales@dardenbusinesspublishing.com. *No part of this publication may be reproduced, stored in a retrieval system, used in a spreadsheet, or transmitted in any form or by any means—electronic, mechanical, photocopying, recording, or otherwise—without the permission of the Darden School Foundation.* Our goal is to publish materials of the highest quality, so please submit any errata to editorial@dardenbusinesspublishing.com.

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The Fintech Landscape

In the aforementioned *Newsweek* quote, Bill Gates forecasted the convergence of technology and the financial-services industry in 1994.[2] Over 20 years later, fintech had become an industry segment of its own, garnering global funding of more than $11.2 billion for fintech start-ups in the first three quarters of 2015.[3] Despite becoming a more common term, the definition of fintech was still nebulous. A few sources, however, began to paint a more vivid picture:

- "As a definition, Fintech is usually applied to the segment of the technology start-up scene that is disrupting sectors such as mobile payments, money transfers, loans, fundraising and even asset management."[4]
- "The answer seems obvious at first: technology that relates to conducting financial services activities, with the end client/user being a financial institution. But after many, many meetings, I've realized that the currently held definition of fintech is not only stale, but also unrepresentative of the opportunity in this industry."[5]
- "It's time for a new definition of fintech: technology that serves the clients of financial institutions, covering not only the back and middle offices but also the coveted front office that for so long has been human-driven."[6]
- "Use of technology in finance is not new, nor are many of the products and services that are offered by new entrants to the sector. Rather, it is the novel application of technology and its speed of evolution that make the current wave of innovation unlike any we have seen before in financial services."[7]
- "Fintechs have two unique selling points: better use of data and frictionless customer experience."[8]

This amalgam of definitions showed that the horizon of fintech was indeed foggy, though it tended to be much easier to say what fintech was than what fintech was not.

Take the breadth of organizations that occupied the fintech space. **Figure 1** shows the wide distribution of fintech companies across markets and service offerings. In addition, **Exhibit 1**, a sample list of fintech companies, could span tens of pages if all-encompassing given the rise of new start-ups.

[2] http://www.newsweek.com/culture-club-189982.
[3] Steve Davies, Manoj Kashyap, and Joerg Ruetschi, "Meeting the Fintech Challenge," *strategy + business*, April 18, 2016, http://www.strategy-business.com/article/Meeting-the-Fintech-Challenge?gko=bd900 (accessed Oct. 27, 2016).
[4] Jens Munch, "What is Fintech and Why Does it Matter to All Entrepreneurs," Hot Topics: Tech Stories, https://www.hottopics.ht/stories/finance/what-is-fintech-and-why-it-matters/ (accessed Oct. 27, 2016).
[5] Karl Antle, "The New Definition of Fintech," ValueStream, September 30, 2013, http://www.valuestreamlabs.com/blog/2013/the-new-definition-of-fintech (accessed Oct. 27, 2016).
[6] http://www.valuestreamlabs.com/blog/2013/the-new-definition-of-fintech.
[7] World Economic Forum, prepared in collaboration with Oliver Wyman, "The Role of Financial Services in Society," April 2016, http://www3.weforum.org/docs/WEF_FS_RoleFinancialServicesSociety_Stability_Tech_Recommendations_2016.pdf (accessed Oct. 27, 2016).
[8] Maria Aspan, "Why Fintech is One of the Most Promising Industries of 2015," *Inc.*, September 2015, http://www.inc.com/magazine/201509/maria-aspan/2015-inc5000-fintech-finally-lifts-off.html (accessed Oct. 27, 2016).

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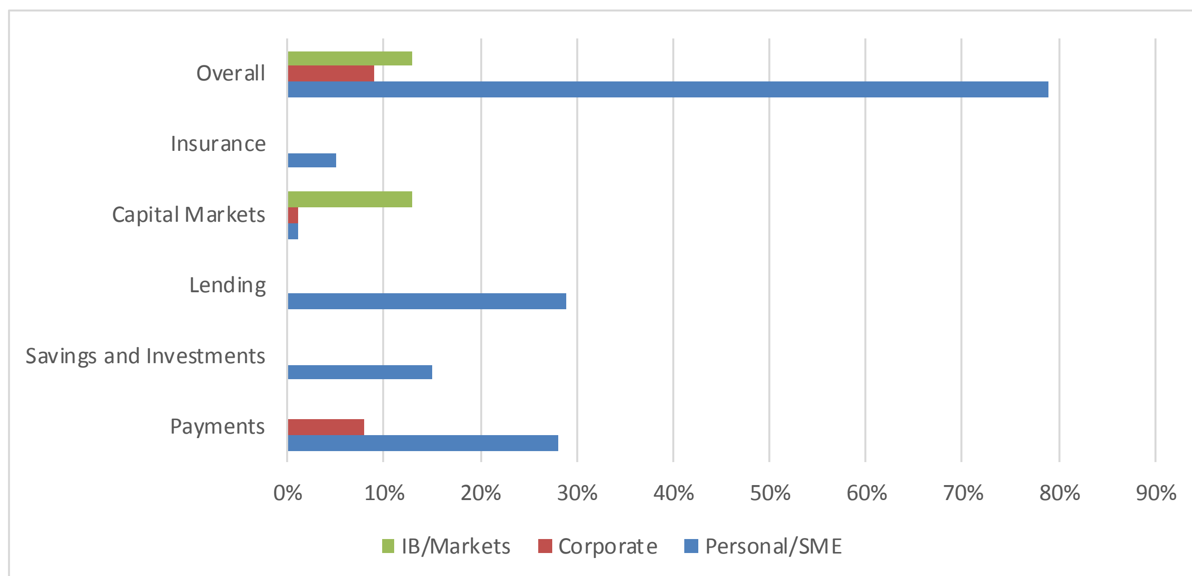
Figure 1. Percent of fintech companies by product and customer segments.



Data source: Citi Global Perspectives Solutions, "Digital Disruption," Citi, March 2016, https://ir.citi.com/D%2F5GCKN6uoSvhbvCmUDS05SYsRaDvAykPjb5subGr7f1JMe8w2oX1bqpFm6RdjSRSpGzSaXhyXY%3D (accessed Nov. 1, 2016).

A December 2015 *Forbes* article spoke to the abundance of companies in the fintech domain:

> The number of fintech start-ups is difficult to pinpoint, but data sources and industry watchers estimate that Asia has approximately 2,500 fintech start-ups while the U.K. and the U.S. have a combined total of 4,000. Even these estimates are best guesses and underestimate the true count, since fintech start-ups that haven't received funding are likely not to be documented in any database.[9]

The Evolution of Fintech

It was not quite known when exactly fintech started. Some analysts said that the first fintech start-ups began in 2005,[10] however, the *New York Times* reminded the public that PayPal, the first major fintech company, was founded in 1998, paving the way for others to disrupt the financial-services industry.[11] Records from Mountain View, California, technology incubator Y Combinator indicated that the first significant wave of fintech innovation began in 2005, with the creation of the incubator's first fintech company, TextPayMe, a service that enabled payments through SMS. TextPayMe was quickly acquired by Amazon in 2006, and the acquisition served as an early indicator of how the industry might evolve over time.[12]

Since 2005, with the exponential growth of mobile technology and the 2008 crash of the financial markets, the environment ripened for the emergence of fintech. One indicator illustrated the growth: between 2013 and

[9] Falguni Desai, "The Fintech Boom and Bank Innovation," *Forbes*, December 14, 2015, http://www.forbes.com/sites/falgunidesai/2015/12/14/the-fintech-revolution/#1fb09ef336da (accessed Oct. 27, 2016).
[10] Ryne Landers, "How FinTech is Changing Business (and Bank Accounts)," Business.com, January 7, 2016, http://www.business.com/finance/how-fintech-is-changing-business-and-bank-accounts/ (accessed Oct. 27, 2016).
[11] "Ranking the Top Fintech Companies," *New York Times*, April 6, 2016, http://www.nytimes.com/interactive/2016/04/07/business/dealbook/The-Fintech-Power-Grab.html?_r=0 (accessed Oct. 27, 2016).
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2015, the number of fintech start-ups emerging from Y Combinator doubled, and fintech became the trendiest idea in Silicon Valley.[13] Maria Aspan, senior editor at *Inc.*, set out to describe the conditions that allowed fintech to be the darling of the start-up world in 2015:

> Long seen as a highly technical, highly regulated industry dominated by giant banks that resist disruption—other than the occasional global meltdown—finance is now riding an entrepreneurial wave. Demand for upstarts' services is strong, piqued by widespread frustration with big banks; supply is growing, fueled in part by financial types itching to do something other than toil inside those same megacorporations…And low interest rates have made capital, the raw material for many money-related startups, cheap and plentiful.[14]

In that same September issue of *Inc.*, Pat Grady, a partner at Sequoia Capital, described the broader conditions that allowed fintech to flourish:

> The world is far more connected today than it was 15 or 20 years ago. The tools that are available—cheap storage, cheap computing, and wonderful analytics—have changed, the regulatory environment has changed, and people are way more comfortable managing their money and business online.[15]

The history made sense, and naturally the next question was "Where were we in this cycle?" Rob Frohwein, of the online lending platform Kabbage, stated, "We're just at the beginning of this renaissance in alternative lending—and I look forward to the day it's not called alternative."[16] On the other hand, Ryne Landers, of digital marketing agency Reap Marketing, suggested that fintech was beyond its infancy and that companies would come to maturity in 2020.[17] Given the actual growth rate of the market for fintech, the aforementioned suggestion of maturity seemed to be a more pessimistic outlook than many analysts suggested. An article by analysts from PricewaterhouseCoopers (PwC) stated that "global funding of fintech start-ups in the first three quarters of 2015 reached $11.2 billion, nearly double the funding of the full year before, according to CB Insights."[18] Goldman Sachs also offered an optimistic view of market cap growth: "Goldman Sachs estimates that upstarts could steal up to $4.7 trillion in annual revenue, and $470 billion in profit, from established financial services companies."[19] The room for growth was there, as noted in *Inc.*'s coverage of the changing world of fintech:

- Even a fraction of a point of market share represents significant business, so investors are eager to back new entrants. Or to get in themselves: Goldman has embraced fintech and is launching its own online lending operation.
- Venture capitalists invested $23.5 billion globally in fintech in the past two years, according to estimates by Santander, Oliver Wyman, and Anthemis Group.
- The financial-services "industry is currently the second-biggest target for disruption, after health care, according to a survey of this year's *Inc.* 500 CEOs"[20]

Citigroup, Inc., (Citi) also put itself at the optimistic forefront of fintech, and believed that the industry was still in its infancy. Its March 2016 Global Perspective & Solutions report on Digital Disruption showed that, when

[13] Jim Bruene, "The 85 Fintech Graduates of Y Combinator (YC): 2005 to 2016," *Finovate* (blog), April 18, 2016, http://finovate.com/51295-2/ (accessed Oct. 27, 2016).
[14] http://www.inc.com/magazine/201509/maria-aspan/2015-inc5000-fintech-finally-lifts-off.html.
[15] http://www.inc.com/magazine/201509/maria-aspan/2015-inc5000-fintech-finally-lifts-off.html.
[16] http://www.inc.com/magazine/201509/maria-aspan/2015-inc5000-fintech-finally-lifts-off.html.
[17] http://www.business.com/finance/how-fintech-is-changing-business-and-bank-accounts/.
[18] http://www.strategy-business.com/article/Meeting-the-Fintech-Challenge?gko=bd900.
[19] http://www.inc.com/magazine/201509/maria-aspan/2015-inc5000-fintech-finally-lifts-off.html.
[20] http://www.inc.com/magazine/201509/maria-aspan/2015-inc5000-fintech-finally-lifts-off.html.

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measured by transaction value, P2P transfers (i.e., transferring money from one person to another) dominate mobile money usage and that when measured by volume, airtime top-up (i.e., purchasing prepaid mobile phone airtime) dominates mobile money usage (**Figures 2** and **3**). These were relatively basic transactions, suggesting that mobile money's potential had yet to be fully tapped.[21]

Figure 2. Global mobile money product mix by value, 2014.

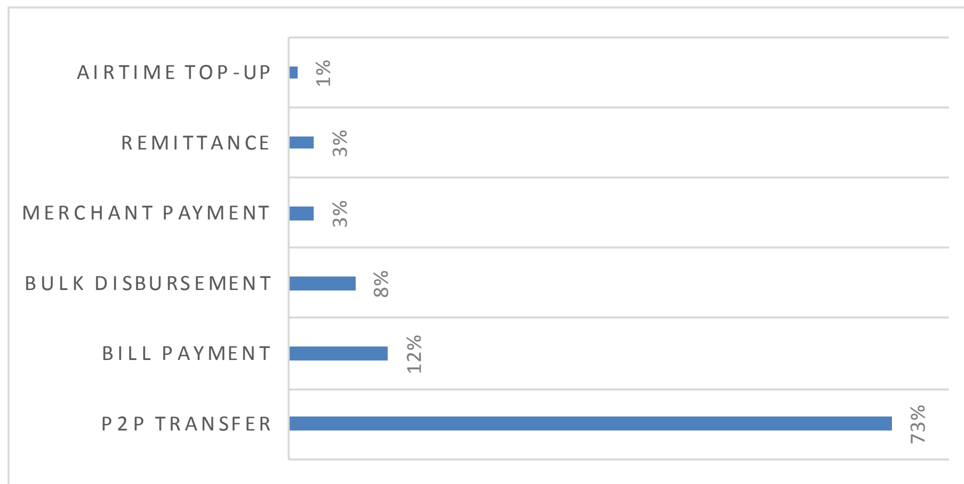

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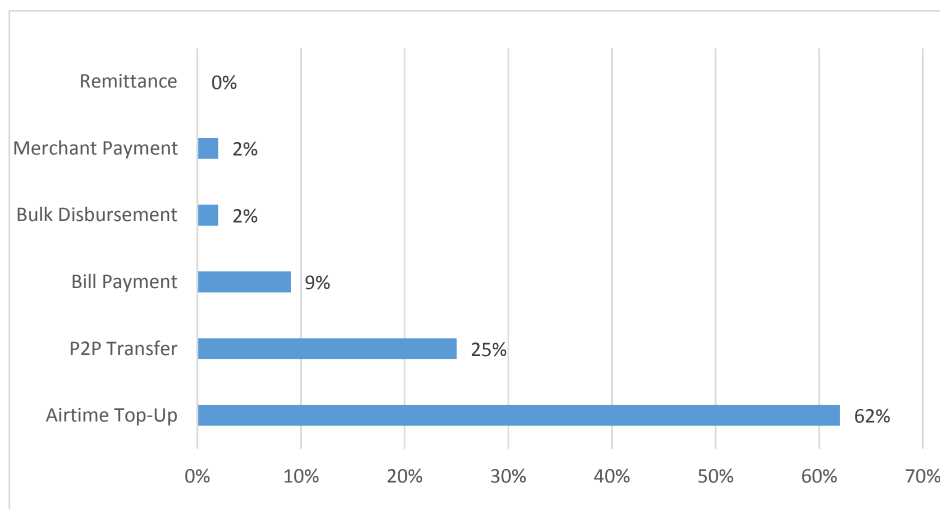
Figure 3. Global mobile money product mix by volume, 2014.



Data source: https://ir.citi.com/D%2F5GCKN6uoSvhbvCmUDS05SYsRaDvAykPjb5subGr7f1JMe8w2oX1bqpFm6RdjSRSpGzSaXhyXY%3D.

Citi, like Goldman Sachs, also believed that the current wave of fintech was just the tip of the iceberg, and that by 2023, 17% of U.S. consumer bank revenues could be based on fintech and digital business models.[22] **Figure 4** shows the breakdown over time.

[21] https://ir.citi.com/D%2F5GCKN6uoSvhbvCmUDS05SYsRaDvAykPjb5subGr7f1JMe8w2oX1bqpFm6RdjSRSpGzSaXhyXY%3D.
[22] https://ir.citi.com/D%2F5GCKN6uoSvhbvCmUDS05SYsRaDvAykPjb5subGr7f1JMe8w2oX1bqpFm6RdjSRSpGzSaXhyXY%3D.

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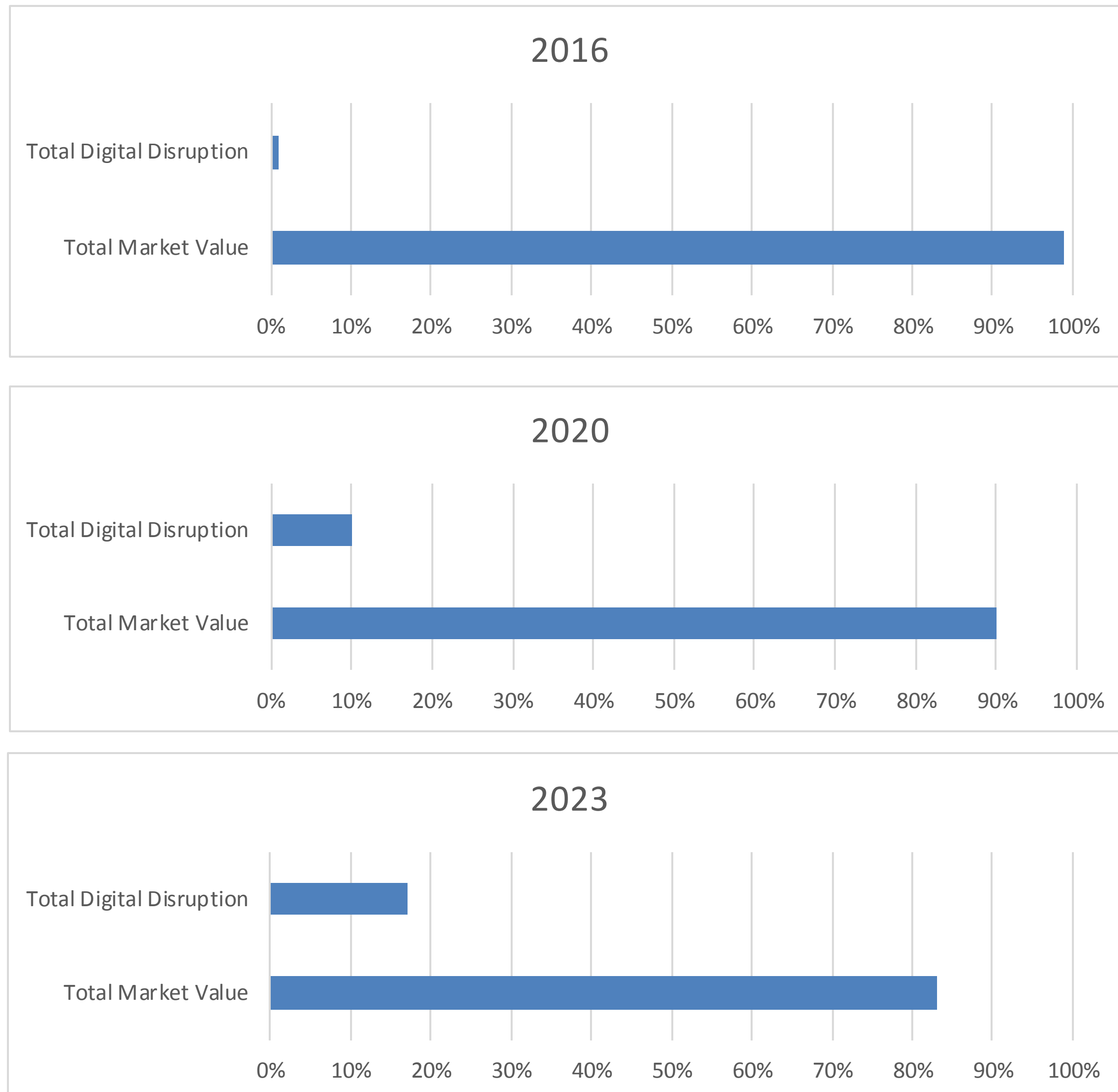
Figure 4. North American consumer bank case study on potential market disruption as percentage of the total market value.



Data source: https://ir.citi.com/D%2F5GCKN6uoSvhbvCmUDS05SYsRaDvAykPjb5subGr7f1JMe8w2oX1bqpFm6RdjSRSpGzSaXhyXY%3D.

Data suggested a positive outlook for the growth of fintech. This opened the door to another question—who would capture this growth? Fintech start-ups, evolving technology companies, or adaptive incumbent financial institutions?

Who Will Win the Battle?

Though there was much room for growth, one wondered who would emerge as the winner and take the biggest piece of the pie—fintech start-ups that remained autonomous, massive technology companies that acquired or built their own fintech services (as suggested by Bill Gates in 1994), or large financial institutions that overhauled their IT infrastructure and created or acquired fintech products and companies. Given the rapid

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growth since 2014, fear seemed to be rising, though panic from at least the big U.S. banks was probably not as justified as one would think, given a miniscule 0.7% penetration rate of fintech in the U.S. financial-services market.[23] However, there were three areas that banks might begin to feel fintech's impact: loss of data from payment transactions, loss of customer depth, and fee revenue reductions.[24]

One of the key ways banks developed new products and services was by using data generated from payments and other primary transactions. The proliferation of payment-based fintech companies (see **Exhibit 1**), resulted in data loss that made an immediate impact on banking operations. Reuters cited Richard Eldridge, CEO of Lenddo, a fintech company "which provides credit scores using non-traditional data in the developing world." Eldridge described, "a few years ago big banks were 'stand-offish' about fintech. Now they are embracing it to serve more people and the industry is experiencing 'exciting times.'"[25]

Would banks be put out of business, or would they evolve into fintech companies? For example, would robo-advising (automated computer algorithm–based investing advising), which grew significantly over the last decade, overtake the investment-management space? Citi argued that robo-advisors would not replace personal relationship–based advisors for private wealth clients; robo-advisers would be better employed for new or smaller-asset investors who wanted diversification and nearly automatic rebalancing of portfolios.[26] PwC identified three trends of responses from traditional institutions:

> The first group has adopted a wait-and-see approach, conserving resources until clear technology winners emerge. These firms risk being caught unprepared when the threat to their business becomes more imminent. The second group has acquired fintech firms to gain access to new technologies. But they have often had trouble with integration. The third group includes companies investing significant time and money in fixing their own existing IT landscape, which is typically fragmented and complicated by legacy systems that are hard to maintain, upgrade, and improve.[27]

Incumbent banks had three advantages as they pursued the second and third options—they knew the space deeply, had access to large amounts of data, and possessed sizeable capital. PwC described how several financial institutions were creating internal innovation teams to create new products and services in response to consumer trends. However, it also mentioned that "these internal teams are saddled with decades-old infrastructure, regulatory burdens, and entrenched interests."[28]

Rather than pursuing a significant restructuring of their IT, should big banks instead pursue fintech acquisitions? With hundreds of start-ups, there was certainly supply. *Inc.* reported: "Still, the fintech world is signposted with start-ups that were swallowed by bigger fish (Mint, Venmo, Braintree) or sank."[29] To further illustrate the size of the pool of fish to be swallowed, Grady of Sequoia Capital said, "If you want to dream a little, the entire financial system could be remade with these companies."[30]

[23] https://ir.citi.com/D%2F5GCKN6uoSvhbvCmUDS05SYsRaDvAykPjb5subGr7f1JMe8w2oX1bqpFm6RdjSRSpGzSaXhyXY%3D.
[24] https://ir.citi.com/D%2F5GCKN6uoSvhbvCmUDS05SYsRaDvAykPjb5subGr7f1JMe8w2oX1bqpFm6RdjSRSpGzSaXhyXY%3D.
[25] Lisa Lambert and Bill Trott, "Political, Business Leaders Size Up Stability Risks from Fintech Growth," *Reuters*, April 19, 2016, http://www.reuters.com/article/banking-fintech-idUSL2N17M01X (accessed Oct. 27, 2016).
[26] Julie Verhage, "Citi: Robo-Advisers Will Never Take the Place of Traditional Investment Managers," *Bloomberg*, March 31, 2016, http://www.bloomberg.com/news/articles/2016-03-31/citi-robo-advisers-will-never-take-the-place-of-traditional-investment-managers (accessed Oct 27, 2016).
[27] http://www.strategy-business.com/article/Meeting-the-Fintech-Challenge?gko=bd900.
[28] http://www.strategy-business.com/article/Meeting-the-Fintech-Challenge?gko=bd900.
[29] http://www.inc.com/magazine/201509/maria-aspan/2015-inc5000-fintech-finally-lifts-off.html.
[30] http://www.inc.com/magazine/201509/maria-aspan/2015-inc5000-fintech-finally-lifts-off.html.

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Regulation

Given a pattern of bubbles, including the dot-com bubble in 2000, and the fall of the financial system in 2008, one wondered, would there be a fintech bubble/ crisis? U.S. senators described the ingredients that could lead to a crisis once again: "As we saw during the crisis, gaps in understanding and regulation of emerging financial products may result in predatory lending, consumer abuse, or systemic issues."[31]

After flying under the radar for some time, fintech caught the eyes of government officials. On April 18, 2016, political leaders and members of the private sector convened at the World Economic Forum in Davos, Switzerland. They issued a position paper arguing "that there is an 'urgent need' to do more to ensure the rapid growth of fintech does not become a risk to 'systemic stability,'" especially prompted by fear that "traditional finance companies will take excessive chances as they race to keep up with newcomers."[32] Three overall desires emerged from the report: "[There needs to be a] new forum for the public and private sector to prioritize the most promising fintech areas…A debate on the ethical use of financial data [for commercial purposes]…and a set of industry standards for fintech."[33] Would standards, regulations, and a watchdog mentality hamper the agility and growth of fintech?

As an example of a laissez-faire approach, government support and less regulation had made a significant impact on fintech growth in China, Kenya, and the United Kingdom.[34] Pro-regulation constituents raised concerns about the risk of data abuse and lack of transparency, citing "how fast and obscurely money can move."[35] Additionally, they described that "lending is always likely to carry the danger that borrowers won't be able to pay...Insufficient regulatory oversight could allow mountains of bad debts to pile up. The risk could be compounded given that the vast majority of these startups launched during a period of historically low default rates."[36] These risks, along with those listed in **Figure 5**, could cause investors to think twice before investing in fintech. To assuage such concerns, the World Economic Forum encouraged self-regulation by fintechs, since they had the best insight into the direction of the technology and user needs.

Figure 5. Additional concerns raised at the World Economic Forum.

- Alternative sources of finance could shift risk to the consumer and have damaging ripple effects
- Market electronification/appropriate use of trading algorithms
- Security of data
- Industry conduct ("For example, the line between enhanced risk analysis and use of data to deny service to a particular customer must be defined.")
- Payments effectiveness (typical clearinghouse payment system versus blockchain)
- Regulatory arbitrage (since regulations are not consistent across countries)

Adapted by author from: http://www3.weforum.org/docs/WEF_FS_RoleFinancialServicesSociety_Stability_Tech_Recommendations_2016.pdf.

Given the benefits for the consumer, the evolution of the financial service industry, and the potential market size, banks would need to make decisions about their operating model going forward. Which model should they embrace? This was most certainly a question without an easy answer.

[31] http://www.reuters.com/article/banking-fintech-idUSL2N17M01X.
[32] http://www3.weforum.org/docs/WEF_FS_RoleFinancialServicesSociety_Stability_Tech_Recommendations_2016.pdf.
[33] http://www.ft.com/intl/cms/s/0/0e992e84-056d-11e6-a70d-4e39ac32c284.html.
[34] https://ir.citi.com/D%2F5GCKN6uoSvhbvCmUDS05SYsRaDvAykPjb5subGr7f1JMe8w2oX1bqpFm6RdjSRSpGzSaXhyXY%3D.
[35] http://www.reuters.com/article/banking-fintech-idUSL2N17M01X.
[36] Dominic Elliott, "Fintechnicalities," BreakingViews.com, April 19, 2016, http://www.breakingviews.com/finance-wakes-up-to-fintechs-systemic-dangers/21243895.article (accessed Oct. 27, 2016).

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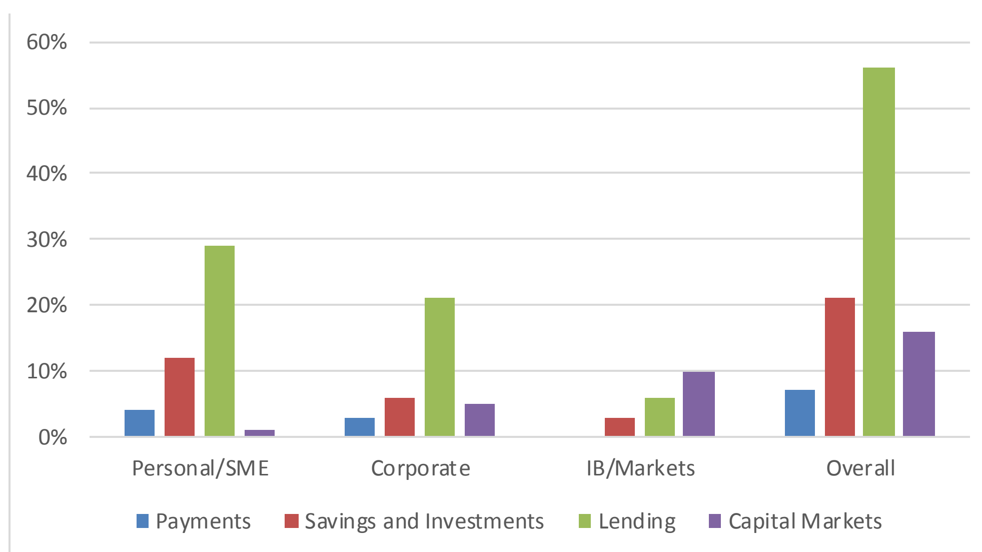
The Menu of Choices

The changing landscape had left legacy banks, including Costa's client, with choices to make. After enjoying her evening recharge time, she realized that there were many options that she could present to her client. She began to compile insights to guide the decision making. From her perspective, there were four choices she could advise her client around: do nothing, acquire fintech firms, overhaul the bank's current IT and strategy to become a fintech company, or partner with fintech companies to create an ecosystem for customers.

Option 1: Do nothing

Costa knew that the simplest option to advise would be for her client, the large global bank, to do nothing—to continue with its current business model. History pointed to the need for adaptation, but Costa wanted to be thorough before ruling out this option. She sought out perspectives from big banks and was happy to find a bit of disconfirming evidence: Citi described that branches were a key presence and necessity for attracting new clients and also wanted to keep branches open but make them more advisory focused and lounge-like.[37] She found this surprising, given an article from Reuters that included this point; "Citigroup Inc. in China is looking to expand its digital platform after data showed 95% of its clients' transactions are not made through a branch."[38] Beyond the decision of whether branches should stay open or close, Costa wanted to compare the profitability structures of banks to see if there was overlap with where fintechs were most likely to disrupt legacy banks. **Figure 6** shows analyst estimates for profit breakdown across segments of big banks.

Figure 6. Global banks' profit breakdown by product and customer segments.



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In her research, Costa continued to find data suggesting a downturn in the number of employees, even in cases in which banks did not say outright that they would become more digital. An article in *Fortune* described, "Antony Jenkins, the former CEO of Barclays, said in a recent speech in London; 'I predict that the number of branches and people employed in the financial services sector may decline by as much as 50% over the next

[37] https://ir.citi.com/D%2F5GCKN6uoSvhbvCmUDS05SYsRaDvAykPjb5subGr7f1JMe8w2oX1bqpFm6RdjSRSpGzSaXhyXY%3D.
[38] http://www.reuters.com/article/banking-fintech-idUSL2N17M01X.

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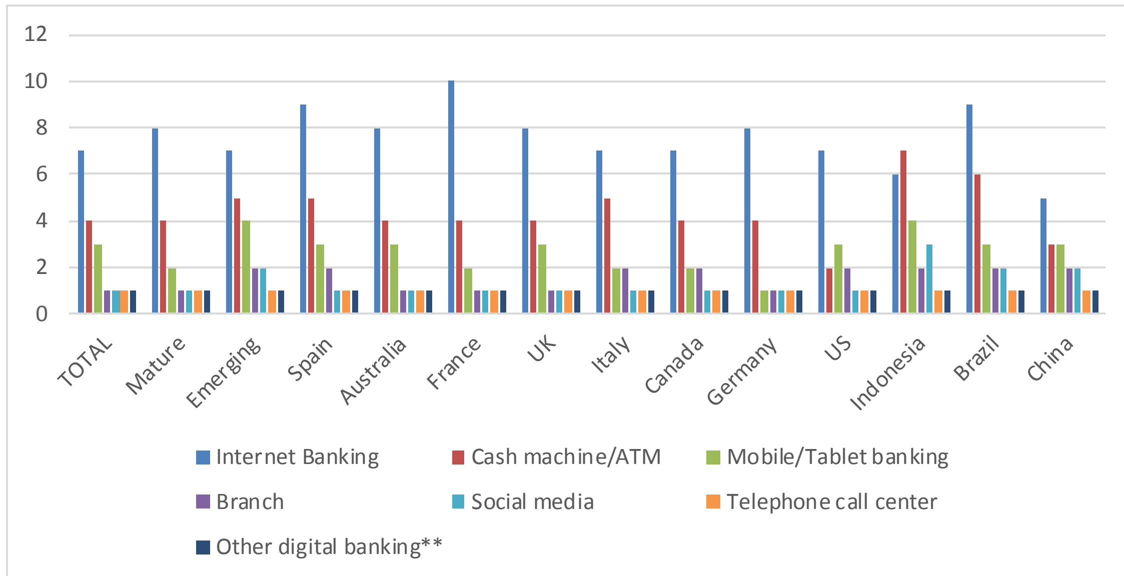
10 years, and even in a less harsh scenario I expect a decline of at least 20%.'"[39] She wanted to compare this type of forecast and other data she had collected with information about how the consumers of today interacted with their bank. **Figure 7** shows the spread and quantity of interactions clients have with their bank.

Figure 7. Number of interactions with main bank every month by channels.



Data source: https://ir.citi.com/D%2F5GCKN6uoSvhbvCmUDS05SYsRaDvAykPjb5subGr7f1JMe8w2oX1bqpFm6RdjSRSpGzSaXhyXY%3D.

Finally, Costa wanted to combine this data with data she discovered comparing banks' various business lines against their potential and likelihood of disruption (**Figure 8**). She hoped all of this information would help her form an opinion on this first option of "doing nothing."

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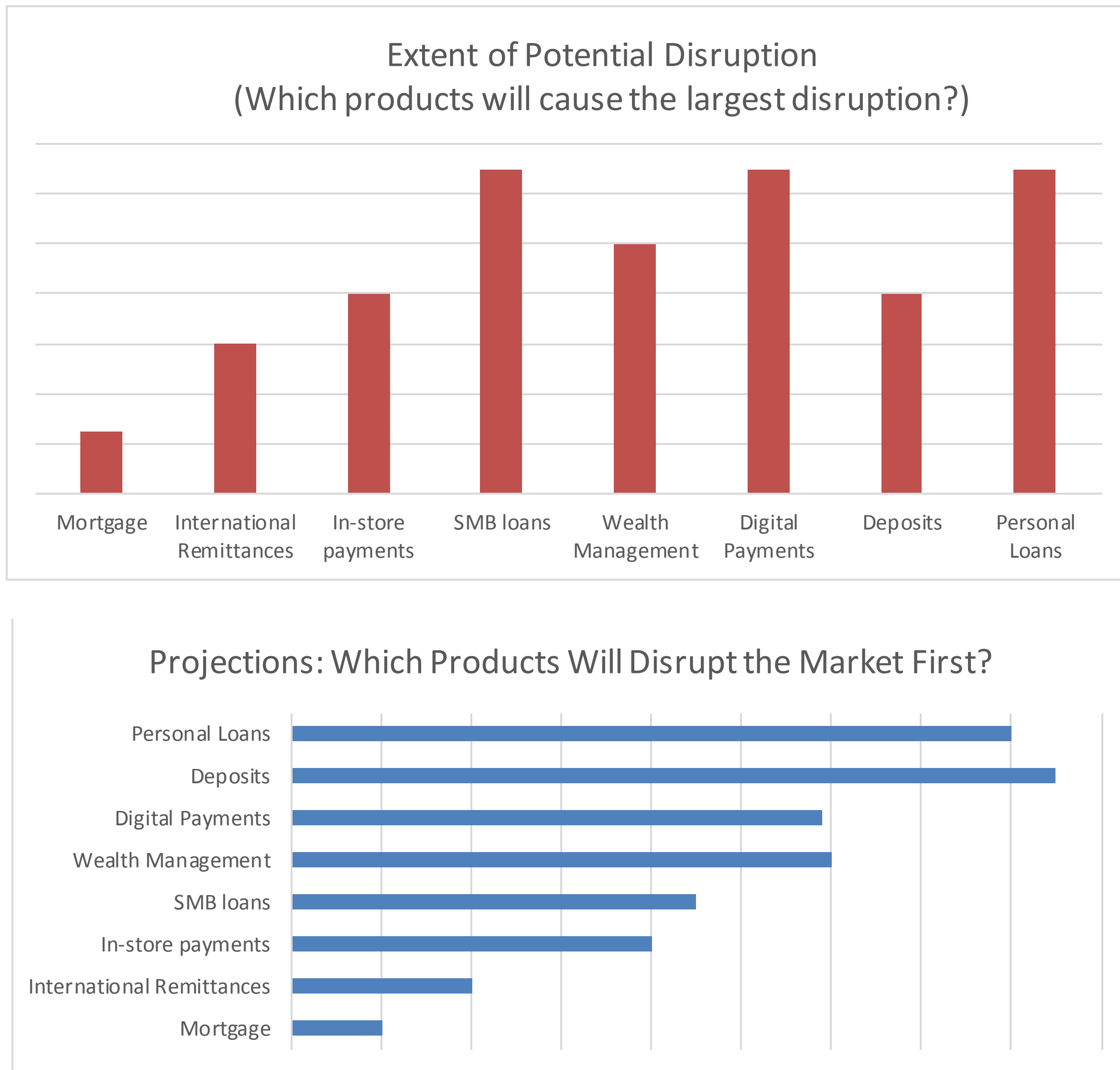
[39] Ian Mount, "Your Neighborhood Bank is About to Have Its 'Uber Moment,'" *Fortune*, March 31, 2016, http://fortune.com/2016/03/31/citi-bank-staffing-uber-moment/ (accessed Oct. 27, 2016).

Figure 8. Next big disruption: impact of digital disruption by business line.



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Option 2: Acquire fintech firms

Although doing nothing would be the easiest for her client, Costa's research had revealed that banking as a consumer experience was evolving and that banks were going to need to become more technology driven. The next option would be for her client to acquire fintech companies to better serve customers. Banks could choose to acquire companies with either technology or financial roots.

There were indeed technology companies that were developing products and services in fintech. The human capital that technology companies had to offer could be a great incentive for banks to acquire technology-based fintechs. What Costa quickly discovered was that many pure technology companies—as in

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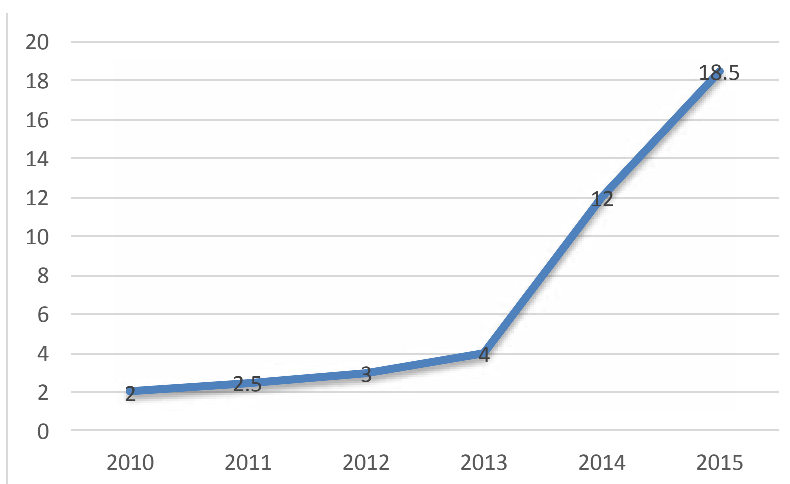
those that did not set out to be fintechs, but instead set out to serve customers in other ways—were also the largest companies and were likely too big to be bought even by the world's largest banks. According to PwC, five of the largest tech companies—Google, Apple, Facebook, Amazon, and Samsung—had all begun making plays in the fintech space.[40] Not only could banks not acquire pure technology companies due to costs and regulations, they also needed to watch out, as the big four (Google, Amazon, Apple, and Facebook) could be in banks' blind spot as competitors in the fintech evolution. *Business Insider* described the context best, saying, "But it's not just banks that are trying to conquer the fintech space. Amazon is about to try its hand in this market, as the e-commerce giant's head of payments, Patrick Gauthier, recently announced that the company is considering making some fintech acquisitions as valuations in the space start to decline and fintech becomes a more affordable investment."[41] Globally, big technology firms, such as e-commerce giant Alibaba Group (Alibaba) in China, were developing their own bank-like subsidiaries. Alibaba had created Ant Financial Services, which, according to *Fortune*, was now valued around $60 billion, and had recently closed a $4.5 billion funding round, making that fundraising the largest ever for a private technology company.[42] Clearly, there was evidence that technology companies could make the leap and capture market share from traditional financial institutions. Given this, banks needed to be conscious of their blind spots and mindful of the acquisitions they sought to make.

Banks might be interested in pursuing smaller companies that were leveraging technology as they tried to address other customer needs (rather than pure Internet services). PwC described an example: "One fintech innovator has engineered a new method for capturing and sifting data to spot fraud and monitor trading activity—a formula it had originally designed for medical cancer screening."[43] **Figure 9** shows data on private investment in global fintech companies; **Figures 10** and **11** show the various types of fintech companies that had received capital injections. Of course, in the acquisition scenario, a very important consideration would be the prevailing valuation multiples of fintech companies (**Exhibit 2**); for historical data on fintech acquisitions, see **Exhibit 3**. In her research, Costa found a variety of perspectives on both the successes of fintech acquisition (**Figure 12**), and the challenges that banks had when integrating fintech start-ups (**Figure 13**).

Figure 9. Private investment in global fintech companies (in billions of dollars).



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[40] http://www.strategy-business.com/article/Meeting-the-Fintech-Challenge?gko=bd900.

[41] BI Intelligence, "Understand Fintech - Amazon's Next Possible Frontier - with this Report," *Business Insider*, July 11, 2016, http://www.businessinsider.com/amazon-thinking-about-fintech-acquisitions-2016-4 (accessed Oct. 27, 2016).

[42] http://www.reuters.com/article/banking-fintech-idUSL2N17M01X.

[43] http://www.strategy-business.com/article/Meeting-the-Fintech-Challenge?gko=bd900.

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Figure 10. Target of capital deployed in private fintech companies.

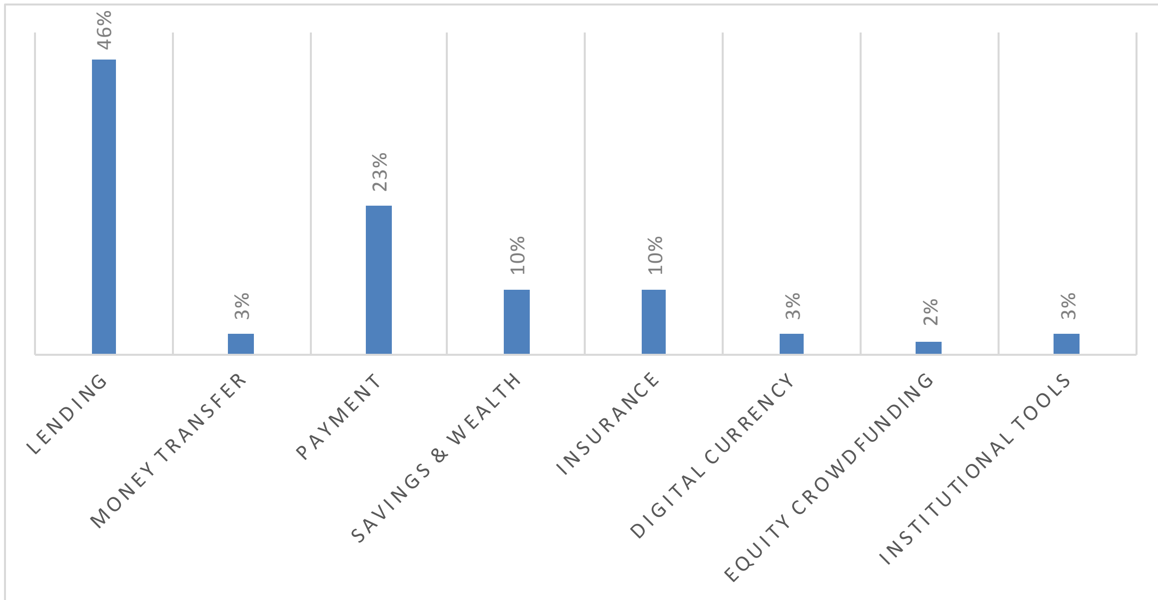

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Figure 11. Percent of private fintech companies by business area.

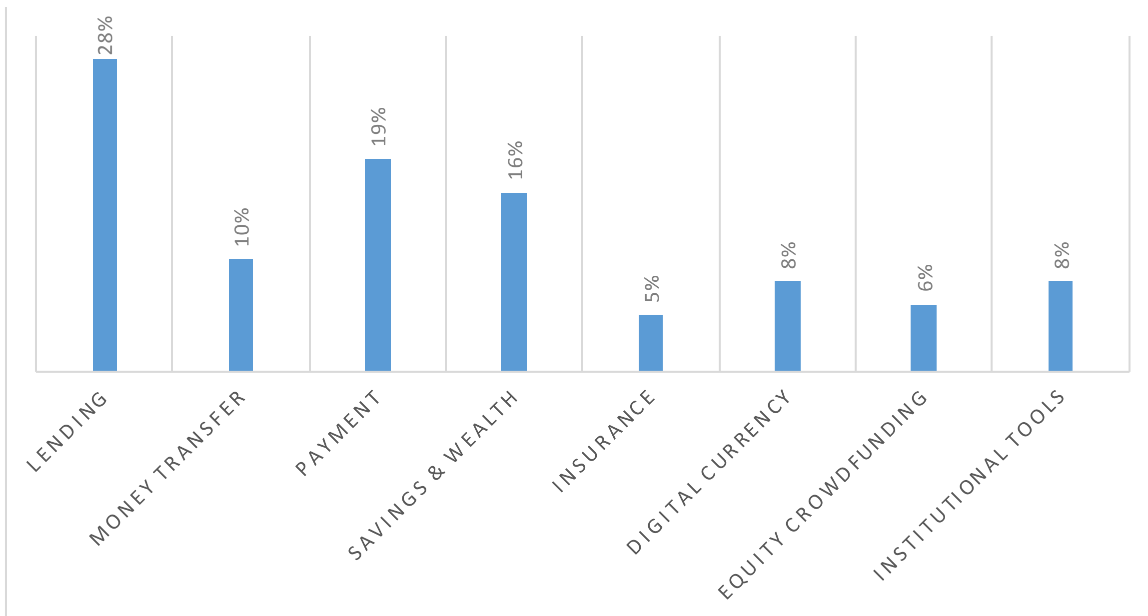

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Figure 12. Examples of successful approaches to acquisitions and partnerships.

"Capital One has snatched up a handful of money management start-ups, including spending tracker Bundle in late 2012, BankOns, and more recently, it bought San Francisco–based design and user experience consultancy, Adaptive Path.

"Asked how Capital One plans to monetize its new investment, it didn't reply with a direct answer, only saying that Level Money is 'one of many steps that Capital One is making to deliver a next-generation banking experience.'"[44]

———

"In recent weeks, Santander invested in mobile operating system Cyanogen. BBVA bought a user-experience and design firm. And Capital One, which grooms start-ups in its innovation lab, is testing an app that recommends deals to its customers.

"For its latest batch of partners, Wells Fargo sought start-up tech firms that were built for purposes other than banking but whose products had potential to help improve digital banking nonetheless.

"'If we look at the vendors we already know, we are really limiting ourselves,' said Braden More, head of enterprise payment strategy for Wells Fargo. 'There are a lot of great ideas out there in the marketplace.'"[45]

————

"On one side we find traditional financial entities buying fintech (Simple acquired by BBVA; FutureAdvisors acquired by Blackrock) and integrating them into their global strategy. They provide them the resources needed to expand their activity, and try to assimilate their culture and way of doing things in order to feed their own core business.

"On the other hand, some banks are supporting fintech development by putting in place VC structures specialized in fintech like Santander and/or fintech incubators like Barclays or Visa."[46]

Source: created by author.

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[44] Sarah Perez, "Capital One Acquires Budgeting App Level Money," TechCrunch.com, January 12, 2015, http://techcrunch.com/2015/01/12/capital-one-acquires-budgeting-app-level-money/ (accessed Oct. 27, 2016).
[45] Mary Wisniewski and Bailey Reutzell, "Wells Fargo Adopts Three Tech Startups from Outside Finance," AmericanBanker.com, April 22, 2015, http://www.americanbanker.com/news/bank-technology/wells-fargo-adopts-three-tech-startups-from-outside-finance-1073945-1.html.
[46] Alexandre Lima, "Are Banks the Future of Fintech?," Untapt.com, September 14, 2015, https://www.untapt.com/blog/2015/09/14/are-banks-future-of-fintech/ (accessed Oct. 27, 2016).

Figure 13. Examples of challenges from integration of targets.

"Banking startup Simple has been acquired, the company announced today. The acquiring company, BBVA, is a 150-year old financial services corporation that operates in a number of markets, and a leading player in the Spanish market, as well as one of the top 15 banks in the U.S. and a strategic investor in banks in Turkey and China.

"Simple will continue to operate as it has done to date, and promises that nothing will change for customers who are already on the platform…

"Customer accounts will remain at Bancorp for now, which is Simple's current FDIC-insured partner, but the implication is that eventually customer accounts will be migrated over to BBVA so that Simple can have total control over the entire banking experience, another perk of the acquisition."[47]

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"Of course, the most important acquisition in the network space is Visa's proposed acquisition of Visa Europe. Banga addressed this, too. There will be ramifications for pricing and yield, he said, but hearkened back to MasterCard's acquisition experience to discuss possible challenges:

"'We've done the Europay acquisition quite some years ago, and integrating that into MasterCard did pose some amount of challenges in terms of the cultures of the two companies. You've also got the technology to be brought together. Remember that simple things like V.me and Visa Checkout are two different things, and that goes into their credit and debit technologies, and there's going to be a lot of stuff to be done.'"[48]

Source: created by author.

Given the evidence, it was clear to Costa that acquiring a fintech company or two could be a feasible and useful option; however, she still wanted to understand the other options available—conversion to a technology or fintech company or creating networks of partnerships (rather than pure acquisitions) with fintech companies.

Option 3: Convert current IT and strategy to become a fintech company

Costa observed that the third option on the menu presented a more daunting task: banks could shift their ambitions, overhaul their infrastructures, and become fintech or technology companies. Some financial institutions had already taken this charge to heart; Goldman Sachs CEO Lloyd Blankfein said "we are a tech company."[49] Banks were indeed working to become more nimble. An excerpt from the Citi GPS report gave more insight:

> According to *Business Insider* (April 2015), 9,000 or close to 30% of Goldman's 33,000 employees are engineers and programmers, a level similar to Facebook's total employee base and larger than the entire payroll of Twitter or LinkedIn. Goldman is not alone in this. Banks' executives have long realized the

[47] Darrell Etherington, "Banking Startup Simple Acquired For $117M, Will Continue to Operate Separately," Techcrunch.com, February 20, 2014, http://techcrunch.com/2014/02/20/simple-acquired-for-117m-will-continue-to-operate-separately-under-its-own-brand/ (accessed Oct. 27, 2016).

[48] Philip Ryan, "MasterCard Beefs up its Fintech Acquisitions," BankInnovation.net, July 29, 2015, http://bankinnovation.net/2015/07/mastercard-beefs-up-its-fintech-acquisitions/ (accessed Oct. 27, 2016).

[49] https://ir.citi.com/D%2F5GCKN6uoSvhbvCmUDS05SYsRaDvAykPjb5subGr7f1JMe8w2oX1bqpFm6RdjSRSpGzSaXhyXY%3D.

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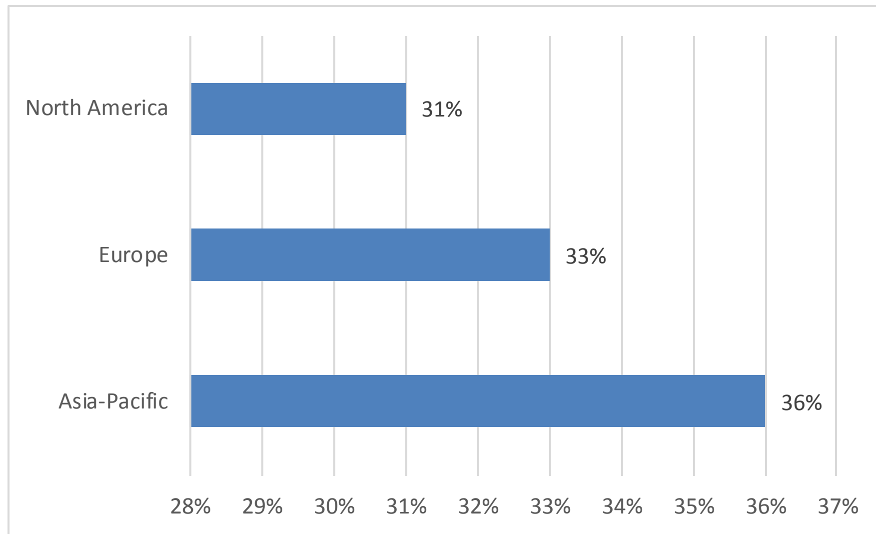
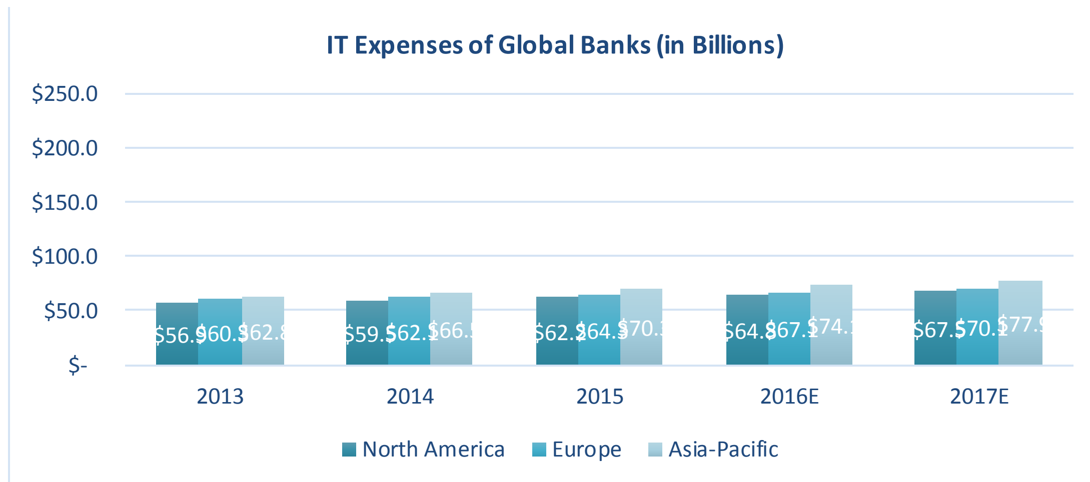
importance of technology and have invested heavily in IT. More than a decade ago, the chairman of Swedbank, the largest retail bank in Sweden, told analysts that Swedbank was an IT company.[50]

In her mind, Costa had a hard time comparing Goldman Sachs and Google, but she was curious to glean more insights about this third option. She found data about banks' current and expected future expenditures on technology (**Figure 14**)—she thought that this would reveal the extent to which banks realized the importance of making a shift toward being technology-centered companies. Despite the optimistic outlook presented by the banks described in the Citi report, Costa knew a fair amount about the red tape and bureaucracy that might continue to saddle financial institutions. She sought out more perspectives, and some of them can be found in **Figure 15**.

Figure 14. Estimated bank IT expenses as a percentage of total expenses, 2015 (in billions of dollars), and IT expenses of global banks (in billions of dollars).





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[50] https://ir.citi.com/D%2F5GCKN6uoSvhbvCmUDS05SYsRaDvAykPjb5subGr7f1JMe8w2oX1bqpFm6RdjSRSpGzSaXhyXY%3D.

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Figure 15: Select examples—perspectives on bank culture versus start-up culture.

"'Banks aren't really used to [failing] but it's gospel in start-up culture,' says Jacob Jegher, a senior analyst with Celent.

"Likewise, entrepreneurs don't usually want to work under a financial institution brand that conjures images of corporate attire and rigid rules. PerkStreet's founder and Capital One veteran Dan O'Malley admits he had reservations about joining a mainstream bank after running a start-up for five years."[51]

——

"In an effort to attract tech-savvy new talent, some of the big Canadian banks are modifying their workplaces to bring them more in line with what one might see in Silicon Valley.

"'When we want to make a change we talk about it in the morning and we're building in the afternoon,' says Darryl Knopp, who took a job with Vancouver-based online lender Grow after more than 20 years in the financial services industry.

"'That's an inspiring environment. It's very difficult to do that at large institutions,' he adds."[52]

——

"The situation is a bit more ambiguous. We are seeing more interdependency than clear opposition. And banks are actually playing an active role in fintech start-up development. Fintech companies are innovative, flexible and are able to make the most of new technologies.

"Certainly most of them have decided to not to engage on the field of play, simply because they can't (too old, too slow…). But at the same time they may very well choose to take on the role of coach or agent, following and shaping the game from the bleachers."[53]

Source: created by author.

Option 4: Partner with fintech companies to serve customers

Given the variety of sizes and types of start-up targets, it would take quite a bit of capital, as well as a finely tuned integration system, to make a series of acquisitions truly meaningful for a bank and its clients. Costa had read a most interesting perspective from PwC, and for the first time, a new solution emerged from the smog of confusion:

> If you are a financial-services executive, you may be wary—and rightfully so—of all these tactics. There is, fortunately, one more strategy you can employ that will borrow certain useful aspects of these approaches while putting your company in a better position to succeed:
>
> - Reorient your firm as the dynamic center of a fintech ecosystem.
> - Instead of managing the entire customer experience through your bank's legacy systems and processes, you should make the most of your position of trust with your customers, your access to customer data, and your knowledge of the regulatory environment.

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[51] Mary Wisniewski, "Eastern Bank Turns to Disruptors to 'Transform Culture,'" *American Banker*, April 29, 2014, http://www.americanbanker.com/issues/179_82/eastern-bank-turns-to-disruptors-to-transform-culture-1067196-1.html (accessed Dec. 6, 2016).
[52] Alexandra Posadaki, "Canadian Banks Aim to Emulate Startup Culture to Attract Talent," *Financial Post*, January 11, 2016, http://business.financialpost.com/executive/careers/canadian-banks-aim-to-emulate-startup-culture-to-attract-talent (accessed Oct. 27, 2016).
[53] https://www.untapt.com/blog/2015/09/14/are-banks-future-of-fintech/.

- Explore the financial technologies around you with an eye to finding new products that you can fit together distinctively and make available to your consumers.[54]

Costa was quite intrigued by this idea of creating an ecosystem of fintech for customers, positioning the traditional bank—her client—as the keystone of the ecosystem. She began to search for examples (**Figure 16**) of where this had happened—both in the financial-services industry as well as in other analogous scenarios.

Figure 16. Examples of banks partnering with fintech companies.

"Lending Club, the world's largest online marketplace connecting borrowers and investors, and Citi are launching a pioneering new partnership with Varadero Capital L.P., an alternative management firm focused on specialized credit investments, to facilitate up to $150 million in loans designed to provide more affordable credit to underserved borrowers and communities.

"Renaud Laplanche, founder and CEO of Lending Club, said, 'Many banks across the country are looking for opportunities to enhance their community lending efforts for low- and moderate-income families. We're excited to expand the use of the Lending Club platform to make this process easier for Citi and other banks, and help lower the cost of credit for borrowers.'"[55]

——

"Along the way it [Lending Club] has signed deals with regional lenders such as Union Bank of California and BancAlliance, a national consortium of 200 community banks, allowing them to offer co-branded personal loans to their customers through the Lending Club platform.

"While groups such as Lending Club, Prosper and SoFi have since attracted plenty of interest from hedge funds and Wall Street bigwigs—John Mack and Vikram Pandit, the former chiefs of Morgan Stanley and Citi, have backed several ventures—it is only recently that bigger institutions have come on board.

"Last week Prosper, the second-biggest online lender by assets, said it had received a $160m cash injection from investors including Credit Suisse, JPMorgan and BBVA Ventures, the venture arm of the Spanish bank.

"Also on Tuesday, LendKey—a private New York-based company that connects borrowers with local banks and credit unions—said that Apollo Global Management, a private equity firm managing about $160bn in assets, had agreed to buy up to $1bn of student loans refinanced via its platform.

"'When we say we are transforming the banking system we don't mean it in a confrontational way,' he said. 'We believe banks can benefit from the transformation.'"[56]

Source: created by author.

If her client were to put itself at the center of a fintech ecosystem, or to engage in "fintegration,"[57] it would need to know which products and customer segments were currently being served and which were underserved. This knowledge would allow her client to seek the right partnerships—both serving known customers' needs and capitalizing on the functions that customers did not yet know could be fulfilled through fintech. **Figure 17** shows where funding is currently invested, and **Figure 18** shows segments where many partners already exist. The matrix presented in **Figure 19** would help Costa and her client consider the areas where the bank needed to find fintech partners to best serve its customer base.

[54] http://www.strategy-business.com/article/Meeting-the-Fintech-Challenge?gko=bd900; quotes formatted in bullets for this case's purposes.
[55] "Lending Club and Citi Team up on Community Lending," PRNewswire.com, April 14, 2016, http://www.prnewswire.com/news-releases/lending-club-and-citi-team-up-on-community-lending-300065289.html (accessed Oct. 27, 2016).
[56] Ben McLannahan, "Lending Club Strikes $150m Deal with Citigroup," *Financial Times*, April 14, 2015, http://www.ft.com/cms/s/0/8602eb62-e29c-11e4-ba33-00144feab7de.html#ixzz4ARRZAdAe (accessed Oct. 27, 2016).
[57] "Banks vs. Fintech: 'Fintegration' is the Smartest Move," Fintechnews.ch, December 10, 2015, http://fintechnews.ch/fintech/banks-vs-fintech-fintegration-smartest-move-says-new-survey/2043/ (accessed Oct. 27, 2016).

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Figure 17. Capital deployed in private fintech companies by segment.

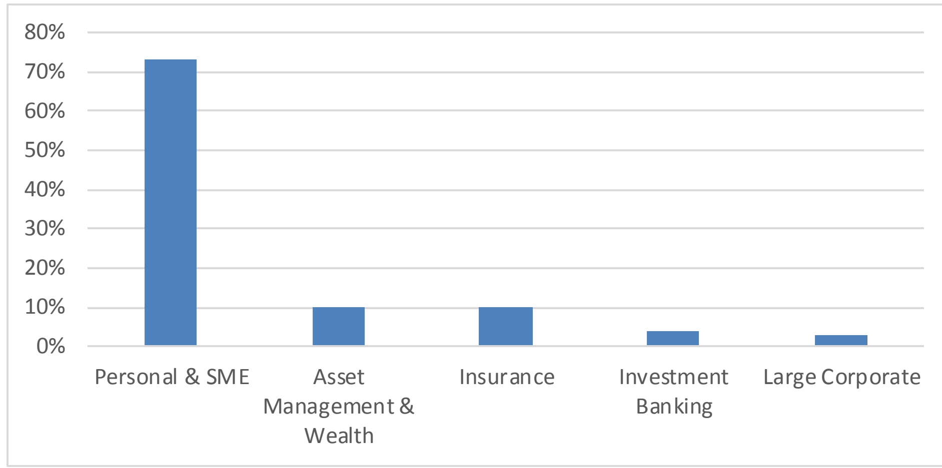

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Figure 18. Percent of private fintech companies by segment.

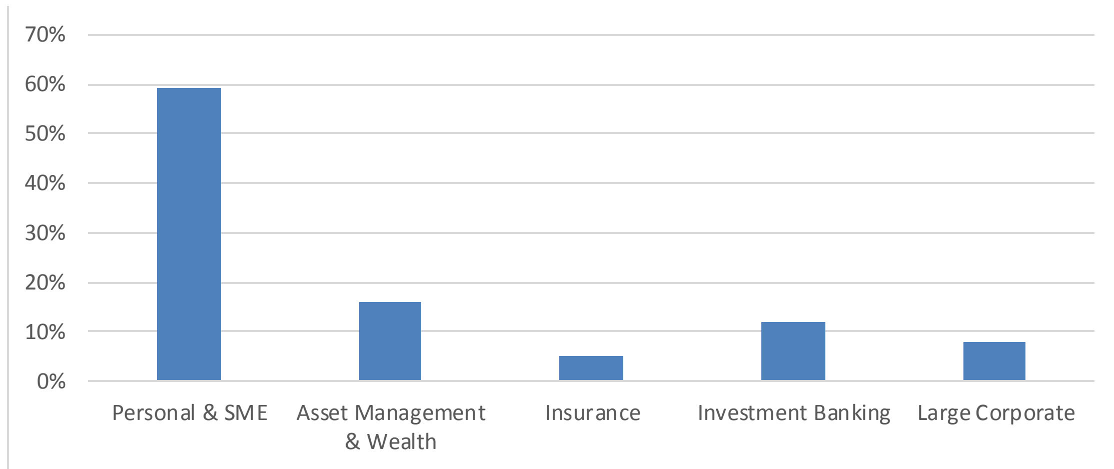

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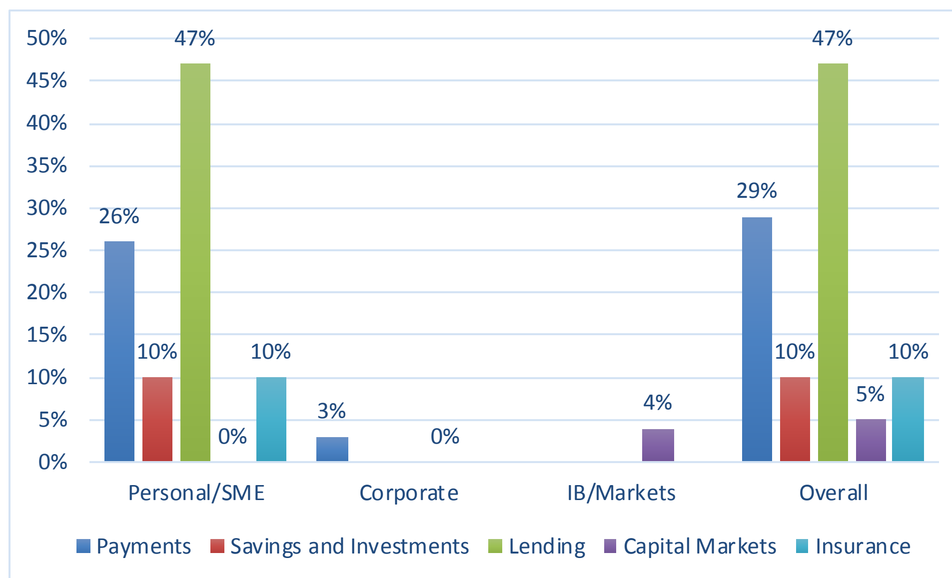
Figure 19. Percent invested in private fintech companies by product and customer segments.



Data source: https://ir.citi.com/D%2F5GCKN6uoSvhbvCmUDS05SYsRaDvAykPjb5subGr7f1JMe8w2oX1bqpFm6RdjSRSpGzSaXhyXY%3D.

If a bank were to become the center of an ecosystem of partnerships, it would be able to best serve customers' needs by focusing on each partner's competitive advantages. A recent partnership between Citi and Lending Club illustrated a strategic approach to fintech partnerships:

> The other answer is a division-of-labor story, in which Lending Club is better at sourcing loans and algorithmically evaluating them, and Varadero is better at choosing which loans to invest in, than Citi is. So it's worth it for Citi to incur the frictional costs of outsourcing that work… The Internet might well be a better place than a Citi branch to find borrowers, particularly lower-income borrowers in neighborhoods that are not full of Citi branches.
>
> In this model, Citi has one job, but it's an important one: It has deposits that can be used to fund loans…You could even tell a story in which Lending Club and Varadero and whoever are better at evaluating and managing risks because they can't rely on subsidized deposits of other people's money. But Citi still has a role to play even in Lending Club lending: That lending requires money, and Citi is a bank, and banks are—still—where the money is.[58]

Partnerships, done strategically, could surely position big banks as customer serving, and, by lessening the amount of capital needed, banks could reap financial benefits. Timing would be critical with this decision, as her client could become the exemplar for positioning itself, as a legacy bank, at the center of a fintech ecosystem for its customers—and it would not want another firm to beat it to this finish (or starting) line.

Costa's Recommendation

Costa had begun to cut through the fog of fintech and had delineated a range of options that her client could choose from to remain a successful global company. There was little doubt that disruption was coming—

[58] Matt Levine, "Citigroup Joins the Lending Club," Bloomberg View, April 14, 2015. https://www.bloomberg.com/view/articles/2015-04-14/citigroup-joins-the-lending-club (accessed Nov. 2, 2016).

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albeit in a different form than Uber, the often-cited model of disruption. *Inc.* highlighted a warning signal of sorts: "Now [Max] Levchin [founder of PayPal] is among those betting that this new crop of start-ups, his own included, can reorder the money universe—and make it more transparent and consumer-friendly in the process. His [company] Affirm, launched in 2013, has big ambitions: 'We ultimately see ourselves as a full-service bank,' he says."[59] However banks decide to react to this awakening of fintech, the change was coming, and banks needed to prepare to best serve their customers and other stakeholders. Executive survey results in **Exhibit 4** offer more perspectives on how banks were approaching the need to deal with the growth of fintech, and the survey results made Costa think even more.

After days of research, Costa once again went for a walk around the city park seeking clarity, this time armed with her menu of four options. She had analyzed the data, and could make good points for each case. The next morning she was meeting again with Linger-Turpin and his team. What should she advise them to do? How would her suggestions affect the future of the financial-services industry? If only the decision were as clear as this sunny afternoon; the weather had cleared up after many days of fog.

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[59] http://www.inc.com/magazine/201509/maria-aspan/2015-inc5000-fintech-finally-lifts-off.html.

Exhibit 1

Cutting through the Fog: Finding a Future with Fintech

Examples of Fintech Companies

Payments, Money Transfers and Remittances, Digital Currency	**Savings, Investment, Wealth Advising, and Asset Management**	**Lending/ Equity Crowdfunding**	**Capital Markets/ Credit Scores**	**Insurance, Institutional Tools, and Other**	**Tech or Financial-Services Incumbents Playing in the Fintech Field**
Square PayPal/Venmo Fiserv Xoom Express Stripe First Data Corp. MobilePay Danske Vipps DNB SWIFT iZettle Bitcoin Klarna Alipay Betalo Adyen One97 Zuora TransferWise Mozido WePay Clinkle Swish Nooch	Nutmeg Wealthfront Betterment Personal Capital SIGFIG Hedgeable BlackRock/Future Advisor Vanguard Schwab Intelligent Portfolios	Lending Club OnDeck SoFi Funding Circle Kabbage Lufax Propser Housing.com Qufenqi Jimubox Upstart Dealstruck Kickstarter Indiegogo Circle Up ZestFinance Swift Capital Avant Affirm SocietyOne Spotcap Jimubox	FICO Lenddo Credit Karma Credit Sesame WeCash Afritrade Robinhood Motif Investing Stockpile eToro	Yodlee Oscar VivaReal Zenefits Oscar Health FinancialForce.com PaySail Meniga BitInstant Coinbase CoverFox Valuraha Chamasoft Knip Prospa FangDD Atom Bank (full digital banking) **Bank-facing institutional companies to watch:** Ripple Trunomi Feedzai Fenergo	Visa Mastercard American Express Google Apple Facebook Amazon Samsung Citigroup Goldman Sachs Chase Capital One Barclays Alibaba Baidu Tencent/WeChat

Source: Created by author.

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Exhibit 2

Cutting through the Fog: Finding a Future with Fintech

Valuation Multiples for Fintech Companies

Valuation Multiples

As of December 31, 2014

Segment	Price/LTM EPS	Price 2015 (E) EPS	Price/2016 (E) EPS	Dividend Yield
FinTech-Payments	27.7	23.8	18.5	0
FinTech-Solutions	29.9	25	21.2	0
FinTech-Technology	24.4	28.2	24.6	0

Segment	Ent´p Value/LTM EBITDA	Ent'p Value/FY 15 (E) EBITDA	Ent'p Value/FY16 (E) EBITDA	Ent'p Value/LTM EBIT	Ent'p Value LTM Revenue
FinTech-Payments	13	11.2	10	19.3	2.3
FinTech-Solutions	16.7	11.6	10.2	21.5	3
FinTech-Technology	15.6	11.2	10.2	28.3	4

Data source: SNL Financial.

Consistent with recent historical growth patterns and outlook near-term, fintech companies are generally priced at a premium to the broader markets with the median S&P 500 company priced at 19.6× forward earnings at year-end 2014.

EBITDA Margin			EV/Revenue			EV/EBITDA	
Processors	18%		Processors	2.25		Processors	12.5
Software/Hardware	11%		Software/Hardware	3.4		Software/Hardware	12
Bank	17%		Bank	4		Bank	19.5
Investments	31%		Investments	4.75		Investments	15
Insurance/Health care	6%		Insurance/Health care	3.1		Insurance/Health care	12.5
Outsourced	22%		Outsourced	2.75		Outsourced	13.5
Payroll/Administrative	10%		Payroll/Administrative	2.25		Payroll/Administrative	19.5
Content	22%		Content	3.6		Content	16.5

Data source: Mercer Capital, "Value Focus: FinTech Industry," 2015, http://mercercapital.com/assets/Mercer-Capital-2014-Q4.pdf (accessed Nov. 2, 2016).

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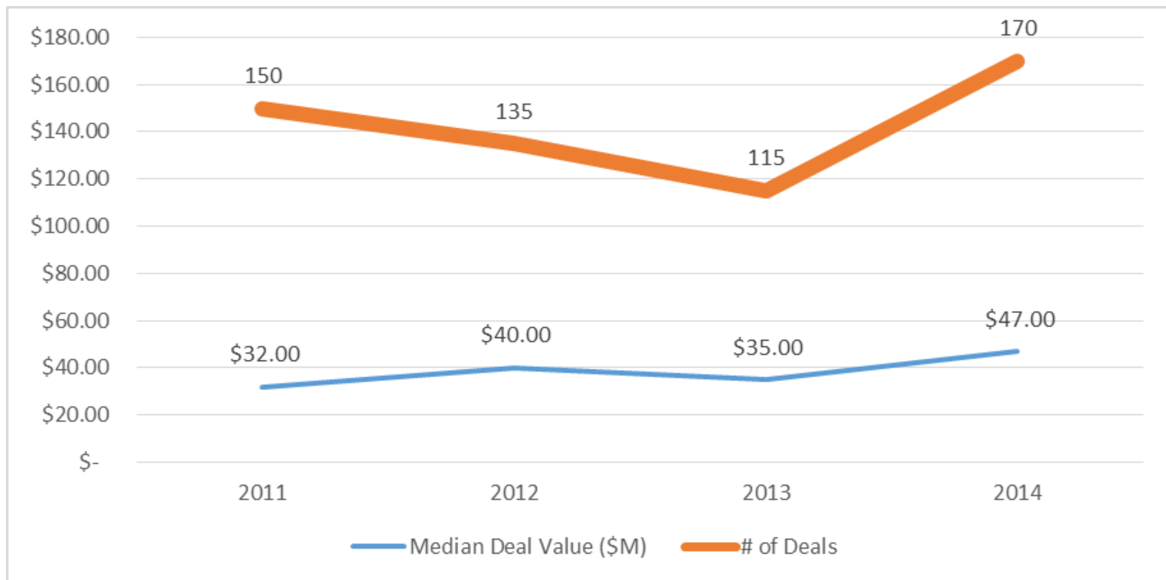
Exhibit 3

Cutting through the Fog: Finding a Future with Fintech

Historical M&A Transaction Overview

M&A Activity per Subsector			
	2014	2013	% Change
Payment Processors	38	28	
Payroll & Administrative Solutions	4	1	
Payments Total	53	37	43%
Bank	6	10	
Investments	18	17	
Insurance/Health care Solutions	44	23	
Technology Total	68	50	36%
Outsourcing	28	16	
Processing Software & Hardware	15	9	
Financial Media & Content	16	11	
Solutions Total	59	36	64%



Data source: http://mercercapital.com/assets/Mercer-Capital-2014-Q4.pdf.

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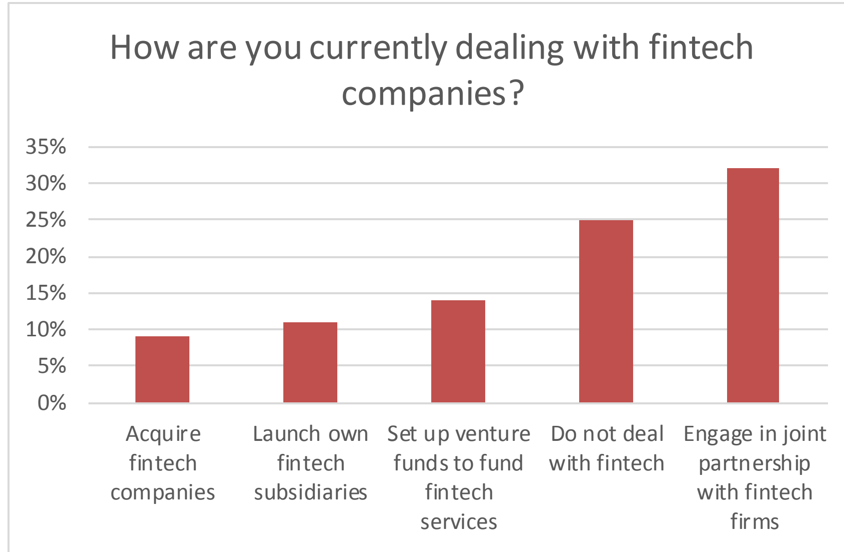
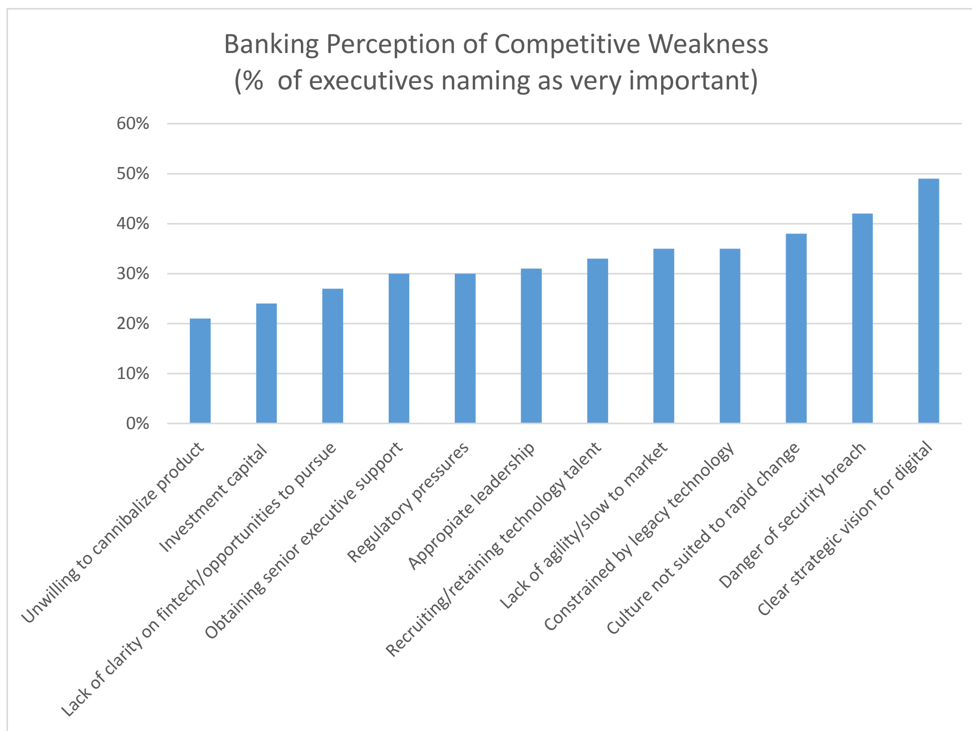
Exhibit 4

Cutting through the Fog: Finding a Future with Fintech

Survey Opinions of Financial-Services Executives



Source: Adapted from BI Intelligence: "How Are You Currently Dealing with Fintech Companies?," Survey of Global Financial Services Executives, 2015, http://www.businessinsider.com/bi-intelligence-debuts-fintech-vertical-covering-financial-technology-news-20164 (accessed Nov. 2, 2016).



Source: Adapted from Jim Marous, "Banking and Fintech: An Uncommon Partnership," *The Financial Brand*, November 30, 2015, http://thefinancialbrand.com/55543/partnership-competition-fintech-banking-disruption/ (accessed Nov. 2, 2016).

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