

A MONEY and INFORMATION BUSINESS

THE STATE OF THE FINANCIAL SERVICES INDUSTRY 2013

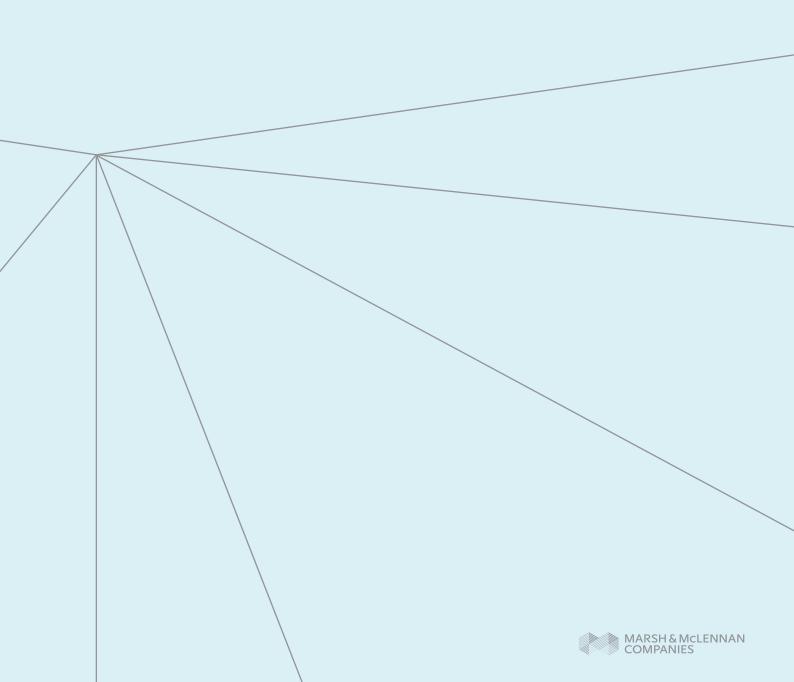


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INTRODUCTION

This year's State of Financial Services examines the industry's greatest opportunity, and its greatest threat: information. But it is not a paper about "big data". Rather, it is a paper about the migration of trillions of dollars of market value, and where that value will settle.

You may be reading this paper on a tablet. You would not have read our 2008 report that way. You may use your smartphone for travel directions, reading the news, getting stock quotes, making bookings and listening to music. You didn't five years ago. You may connect with your friends on Facebook or watch movies on your laptop, streamed from the internet. Again, you probably didn't do those things five years ago.

Yet, if you are a banker or an insurer, your work life has probably been little affected by the rapid growth of information. How do you now set prices, underwrite loans or policies, assess performance, segment customers and measure their satisfaction? Chances are your practices are much as they were in 2008 (or perhaps even 1998 or 1988). Though traditional financial firms produce, consume and transmit vast amounts of information, they have yet to use it to change the way they make their most critical decisions.

Of course, the "information revolution" has not left the financial services industry

untouched. While traditional financial firms largely persist with their historical business models, consumers' preferences and behaviour are changing. And firms have emerged to meet those new consumer needs.

While value growth of traditional balance sheet businesses has stagnated, the value of a new breed of information-based competitors is growing fast. Information firms related to US banking have already achieved nearly half the market value of traditional banks, and are on course to potentially surpass them by the end of the decade.

This is a familiar story. Similar disruptive change has occurred in music, media, travel, telecom and other industries. But, in financial services, the story could still have a very different ending. Banks and insurers continue to control a unique and extraordinarily valuable array of information assets. And, if only because they have been slow to capitalise on the information opportunity, there are many things they can quickly do better.

Traditional financial services firms have two significant problems: they are under near-term earnings pressure and their business model is under strategic threat. Fortunately, both problems have the same solution, and it is a very powerful one: information.

DEFINITIONS

MONEY BUSINESSES are defined here as traditional banks and insurers that depend on their balance sheets to generate earnings.

INFORMATION BUSINESSES describes companies that generate earnings from the sale of products/services related to information including its production, processing, transmission and optimisation.

FINANCIAL SERVICES INFORMATION BUSINESSES include payment networks, merchant acquirers, credit bureaus, rating agencies, data aggregators, exchanges, processors and other businesses, both mature and new, that either help "money" businesses manage and use information, or directly compete against them.

INFORMATION-DRIVEN COMPANIES use data to generate unique insights that improve their core business beyond their conventional competitors. Regardless of industry, or products/services offered, any business can be an information-driven company.

1. MONEY VERSUS INFORMATION

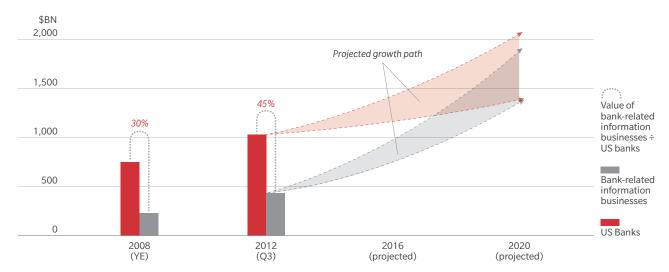
As early as 1984, then CEO of Citibank, Walter Wriston, saw that "information about money has become almost as important as money itself". Citibank's forays into the business of information included competing with Bloomberg and building a "consumer offers engine" that was eerily similar to some of today's internet-based concepts.

These ventures failed. Nevertheless, Mr. Wriston was right about the value of information. Information businesses within financial services may soon be more valuable than the rest of the industry: more valuable, that is, than the balance sheet-based businesses. At current growth rates,

independent payment networks, credit bureaus, rating agencies, exchanges, data providers and other information companies linked to US banking could have a higher market value than US banks by 2020.

We highlight these independent companies because their value is easily measured (as opposed to the information businesses within multi-faceted firms). Our point is not that value has shifted between firms. It is that the source of value in financial services has shifted from balance sheets and physical distribution networks to data: its processing, storage, manipulation and, ultimately, the knowledge it yields.

EXHIBIT 1: MARKET CAPITALISATION OF US BANKS VS. BANK-RELATED INFORMATION BUSINESSES



Note: Projections are based on recent growth trends and are meant to be indicative of a possible future. They are not intended as definitive future estimates. Source: Company valuations are based on market capitalisation values from SNL, Thomson Reuters Datastream, VentureXpert and Oliver Wyman research and analysis.

^{1 &}quot;The Citi of Tomorrow: Today," written by Walter B. Wriston for the Bank and Financial Analysts Association on 7 March 1984, Available from Tufts University. Digital Collections and Archives. Medford, MA.http://hdl.handle.net/10427/36086, accessed 1st August, 2012).

This need not be a cause for despair at traditional banks and insurers, nor should it be a cause for victory celebrations at financial services information companies. Banks and insurers remain producers of some of the most valuable information in the global economy. And, because banking and insurance are risk-based businesses where good decision-making rapidly drives returns, they are also businesses where better information can most readily be converted into profit.

Why, then, have information businesses appreciated while traditional financial services firms have stagnated? Obviously, factors such as regulatory change, monetary policy and the continued economic downturn all place pressure on the core businesses of banking and insurance. But they do not explain all of the difference. The critical factor is that few traditional financial firms have demonstrated

that their earnings are likely to grow along with the growth of information.

Conversations with sell-side analysts indicate that they know banks and insurers have unique information, but also that those banks and insurers don't sell the information or otherwise tie their earnings to its growth.

All companies use information to some degree. Even a local café relies on recipes, a history of customer choices and the prices charged at other local restaurants when setting its menu. But there is no reason to believe its earnings will grow because information does. In short, it is not an information-driven company.

Yet many firms, from a surprisingly wide range of industries, do stand to gain or lose from the growth of information. For example, over recent years many

THE FIVE IS OF CITIBANK

Individual banking lastitutional banking banking banking banking linsurance l

- In the mid 1980s, Walter Wriston launched Citibank on a path that put information on a strategic par with other businesses
- Many of the ideas were revolutionary largely it was deemed to have failed

INITIATIVES PURSUED



Acquired Quattro (a competitor to Bloomberg)



Developed an offers program at a network of merchants



Bought a satellite to facilitate the flow of information

REASONS THEY FAILED



Execution was difficult – and there were mistakes



Information Infrastructure was lacking – and had to be purpose built



Technology Infrastructure was expensive – to the extent that buying a satellite was thought to be cost effective

Source: Zweig, Phillip L. Wriston: Walter Wriston, Citibank and the Rise and Fall of American Financial Supremacy. New York: Crown, 1995. Print. Bleakley, Fred R. "Citicorp's Folly? How a Terrific Idea For Grocery Marketing Missed the Targets" The Wall Street Journal [New York] 3 April 1991: A1.

supermarkets have increased earnings by basing their business models on information. They use information about customers and their purchases to decide what to stock, how to price it and how to run promotions. Many leading supermarkets are now information-driven companies.

One might expect the same of financial firms. They can capture more information about customers than supermarkets can, and extract more value from it. So why have they been slower to embrace the "information revolution"? Why have financial firms not become information-driven companies?

The initial boom of the information era, from the early 90s through the pre-crisis years, happened to coincide with a golden era for financial services. The core, non-information business - which, in homage to Wriston, we will call the "money business" – was booming. High leverage ratios, an interest rate environment that delivered strong deposit and treasury profits and strong growth in relatively low-risk assets drove up the value of the money business. In this environment, financial firms operated profitably without much use of information (by today's standards).

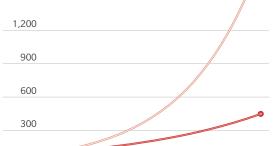
There were certainly decisions that could have been made better, mistakes that could have been avoided. Even before the crisis, loans were sometimes not repaid and some kinds of insurance policies paid-out claims that exceeded the premiums collected from all those insured. But the immature information environment also affected customers' decision-making.

EXHIBIT 2: THE RISE OF INFORMATION

MARKET CAP GROWTH TRENDLINE OF SELECT

INFORMATION-DRIVEN COMPANIES AND GLOBAL FINANCIAL SERVICES FIRMS (INDEXED TO 1991)



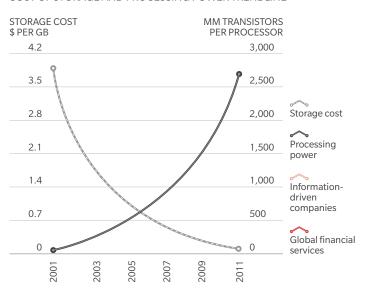


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994

COST OF STORAGE AND PROCESSING POWER TRENDLINE



Source: Information-driven company index based on 18 companies across industries. Selection based on Oliver Wyman analysis. Market capitalisation values from Thomson Reuters Datastream. Global FS index from Thomson Reuters Datastream includes approximately 1,700 global FS companies across banks, insurance, real estate, REITs, financial services and equity investment institutions. Storage cost from Gartner (2012). Data on processing power development from Intel and Oliver Wyman analysis.

Q3. 2012

Paper money, coin, checks and forms made physical locations critical. And a lack of even basic financial information made retail customers dependent on the knowledge of advisors. As a result, customers were willing to pay for advice and locational convenience through higher rates, higher premiums and lower yields – especially when the poor information environment disguised how much they were truly paying.

Financial firms were favoured in this "information-light" environment. Banks and insurers tended to make mistakes about risk. But because economic conditions were good, the underlying chances of credit defaults were held down and the values of collateral were held up. So banks' errors were not nearly as costly as they could have been. Savers, on the other hand, typically failed to appreciate the true value of their money, which was then high. So their choices generated substantial earnings for banks

and insurers, more than compensating for their own risk-related misjudgements.

Meanwhile, better information was costly. The information boom was promising but still in its infancy. The data that people and companies left behind as they traversed the internet were digital breadcrumbs compared with the wealth of information today known as a customer's "digital footprint". Many of the transactions that now provide financial firms with extensive information about their clients were still occurring on paper. You could perhaps learn a little more about your clients by examining the newly available electronic data, but not nearly as much as you can now. And the cost of storing and processing information, though dropping, was still far greater than it is today.

To summarise, the incremental information that was available could do little to improve decisions and was expensive to obtain,

EXHIBIT 3: THE SHIFTING BALANCE OF MONEY AND INFORMATION

EARLY 90s TO MID 00s





- · High risk-free rates
- Low recent losses
- · High leverage



- · High cost
- Low coverage
- Easy decisions

TODAY





- · Low risk-free rates
- · High recent losses
- Low leverage
- Low cost
- · High coverage
- Hard decisions

store and use. Meanwhile, inaccurate foundations for decision-making were not very costly because benign macroeconomic conditions made it difficult to go wrong. In 2000, therefore, growing the money business and limiting focus on information still made sense for a financial firm.

Fast forward to today, however, and the situation is reversed. Macroeconomic uncertainty and stagnant collateral values have increased risk and, hence, the cost of inaccurate decision-making at financial firms. Meanwhile, the value derived by financial firms from the choices of customers is greatly reduced. Those customers are making different choices, favouring price, speed and digital optimisation over physical presence. And even where they do continue to ignore the risk-free value of their money, that value has fallen. Financial firms are now losing in this exchange.

According to one estimate, the average developed country household budget for information increased from 0.75% of income in 1980 (the cost of a landline telephone and a newspaper) to 8.55% in 2010, including internet, cable, mobile subscription services and an annual attribution of the cost of hardware. This spending may primarily satisfy entertainment, telecommunications, and news feeds, but it also provides clients with access to data aggregators, rate boards and other services that increasingly lay bare the market for financial services products. And it makes it easier for them to move their money.

EXHIBIT 4: IMPACT OF THE CHANGING VALUE OF INFORMATION AND MONEY ON FINANCIAL SERVICES MARGINS

	CHANGE IN MARGIN				
US deposits	↓ 1/ ₃				
UK auto insurance	$\frac{1}{2}$ to $\frac{3}{4}$				
US on-line brokerage fees	↓ 1/ ₂				
Global cash equities	↓ 1/ ₂				
US corporate bonds	↓ 1/ ₂				
Source: Oliver Wyman analysis.					

Changing customer preferences and the reduced value of "money" have combined to transform the economics of banking and insurance. For example, in 1992 the net interest margin on deposits in the United States was nearly 3%. By 2007 that margin had fallen by 1/3 to 2%.³ This margin reduction has reduced annual bank revenues by \$65 BN. At a price to earnings ratio of ten, that is equivalent to more than 1/3 of the current market capitalisation of US banks. (On most estimates, the deposit business generated more than half of banks' shareholder value before the crisis.)

Exhibit 4 lists other areas where changes in decision-making by financial services clients or a reduced value of money have eroded financial services margins around the world.

² Howard Rubin, "Technology's Growing Importance to Business Provides an Opportunity", Wall Street & Technology, Oct. 27 2011 (http://www.wallstreetandtech.com/operations/technologys-growing-importance-to-busine/231901734); Oliver Wyman Analysis.

³ Oliver Wyman's United States deposit revenue model estimating net interest income and fees for all US bank deposits from 1992 to present.

If this were the whole story, it would be a bleak one for financial firms. Fortunately, it isn't. These losses are not generally visible because, in many cases, they are already being offset by better use of information. For example, the underwriting and pricing of many kinds of insurance have improved appreciably in recent years. And many exchanges now earn a substantial portion of their incomes by selling data (as the revenue associated with the facilitation of trades has fallen).

Yet, in other cases, the opportunities to evolve have been ignored. Consider deposits again. The interest margin on deposits has declined. But, because transactions have shifted from paper to electronic formats, fewer branches are now needed to serve deposit customers and transactions deliver much more information. Banks must adjust to this dynamic, transforming distribution to reduce cost and finding ways to profit from the information.

In the mid-1990s and early-2000s, the executives of financial firms made a de facto decision to not become information-driven companies, and that wasn't an unreasonable choice. The value of money was high and the value of data was low. Nor could bank and insurance executives devote themselves to becoming better producers and users of information from 2007 until today; the financial crisis made short-term survival an all-encompassing priority.

Now, however, long-term welfare should concern the industry. For most firms, long term prosperity will depend on becoming information-driven companies. And the information businesses that already exist in financial services must continue to evolve.

2. INFORMATION STRATEGY

An information company need not be an internet or "big data" firm. Some of the best informed financial services companies today are among the smallest and least technologically sophisticated. Yet, like Google, Baidu and Facebook, they build their businesses on areas of informational advantage. They understand better than others the risks of particular industries, the needs of particular client segments, or the values of particular properties. These specialist financial firms – for example, banks focused on technology start-ups or on clients from a particular country of origin - compete strategically by confining their ambitions to areas where they have an information advantage.

Large financial firms serving a great number and variety of customers cannot rely entirely on what is inside the heads of their employees. They must rely more heavily on data systems and statistical analysis. Yet the basic strategic issue remains the same. Where can a sustainable information advantage be found?

The first step a firm must take is to understand its information assets.

2.1. INFORMATION ASSETS

The myriad transactions of banks and insurers with households and businesses are sources not merely of revenue and cost but of information (see Exhibit 5). An electronic transfer between a client and another financial institution indicates who the client's other financial services providers are and how much of her spending on financial services each firm captures. A wire is an opportunity to better understand a client's business – its suppliers, customers, needs and exposures. A current account balance and credit/debit transactions are windows into the client's financial health. A series of trades is an indicator of changing beliefs and behaviours.

A vast quantity of information is now available; storing it is now cheap; and the processing power required to understand it is now easily within reach. The advantage financial firms can derive from their information asset is limited mostly by their imaginations. Even the information asset itself is not a serious limit, since financial firms can easily gather more information or partner with others who gather it, such as internet search firms or telematics providers.

Alas, imagination can be hard to unleash. Managers who have been successful in a data-starved environment may struggle to understand the potential value of data. They may lack the time and patience to explore change. And those who do understand data may be unable to identify the most valuable opportunities; they may not understand the economics of the business well enough. Only when these barriers are broken down can a firm understand the potential of its information assets.

Exhibit 6 identifies a small number of opportunities from a single source of

information: consumer payments and deposits. While the information comes from just one source, it can be used by most areas of an institution. The specific initiatives detailed are representative of five kinds of opportunity that we always observe in the profile of financial firms (see Exhibit 7).

Improving offers to clients is the most discussed information opportunity in financial services. It is certainly interesting, but it is only the tip of an iceberg. The same data can be used to better inform cross-sell targeting. It can indicate who your clients' other financial

EXHIBIT 5: THE ECONOMY VIEWED THROUGH FINANCIAL SERVICES DATA

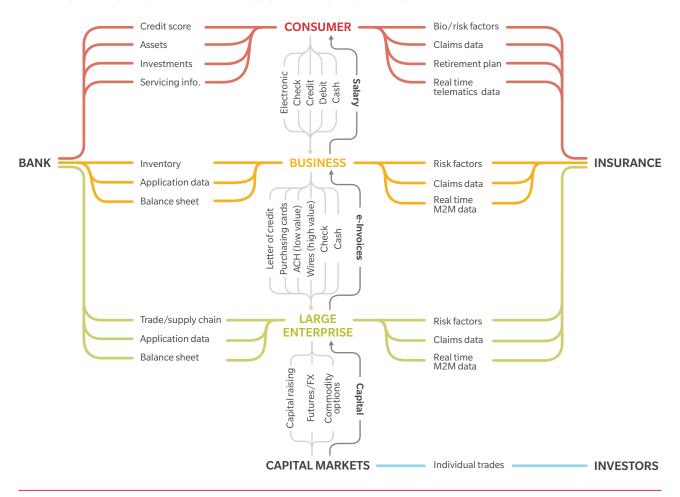
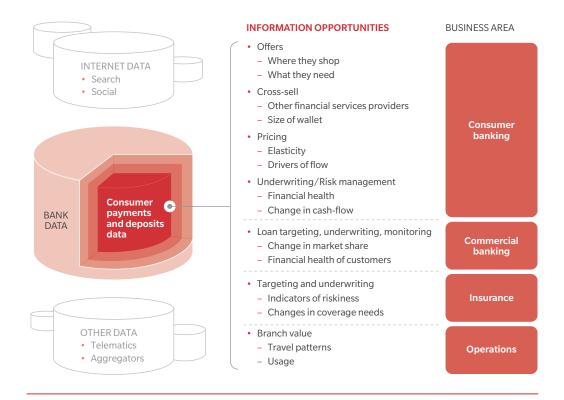


EXHIBIT 6: POTENTIAL INFORMATION OPPORTUNITIES FROM CONSUMER DEPOSIT AND PAYMENT DATA



services providers are and how big their relationships are; it can improve pricing and deposit characterisation; it can improve credit offers, underwriting and monitoring; it can help to better evaluate the true contribution of a branch.

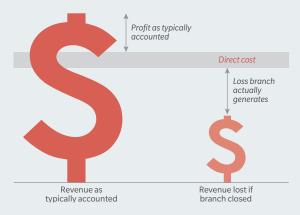
And that's all before stepping outside of consumer banking. The same data can reveal SME market share, changes in that share, and threats that would otherwise be invisible. This allows commercial banks to target the right customers and then to underwrite and monitor risk more effectively.

EXHIBIT 7: INFORMATION OPPORTUNITIES ACROSS FINANCIAL SERVICES



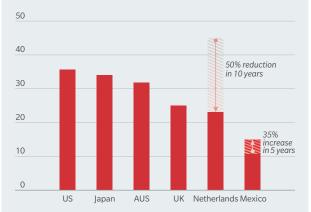
TRUE VALUE MEASUREMENT

EXAMPLE: BRANCH PROFITABILITY METRICS



Note: Illustrative.

Bank branches per 100K adults



Source: The World Bank; World Development Indicators, Oliver Wyman analysis.

Does better understanding of branch profit provide a sustainable strategic advantage?

- Despite representing a substantial portion of regional banking cost, individual branch value is opaque at most institutions. Newly emerging information from client transactions, payments, customer value models, and customer preference research can dramatically clarify the picture.
- >>> Multi-channel distribution, rather than just the branch, is seen as the future at most companies.

VERDICT: Many firms have an emerging understanding of what the future of their distribution should look like. Far fewer have a plan as to how to get there. An advanced understanding of current branch contribution is the key to bridging the gap.

Move beyond banking to insurance and ask whether commercial clients that are suddenly in financial distress may be more likely to take risks that would result in a claim. Ask whether companies making new investments might also need new policies.

Many such cross-business opportunities are lost because large financial firms fail to link the areas that produce information with those that could create the most value by using it. Connections must be made and barriers to collaboration eliminated, for example, by "paying" the internal suppliers of such information. It was not that long ago that many firms failed to transfer price deposits and, as a result, they often underestimated their importance. Could a transfer price for information reveal the true value of data?

There is no shortage of opportunities to use financial services information to create value. They are not limited to the relatively weak and ill-fated CRM initiatives of the past, and instead range across areas of revenue creation, risk management, cost reduction and operational efficiency. To create value, firms must successfully integrate the new use of information into business processes (a common area of failure that must not be underestimated), but they need not develop the necessary technology and analytics on their own.

There is a wide range of firms already leading the way in this area. Some of these firms are clearly allies. Some are clearly competitors. Most could be either.

2.2. "COOPETITION": THE EVOLVING FINANCIAL SERVICES LANDSCAPE

The commercial applications of information presented in Exhibit 6 and 7 are not the future of financial services but the present. In some cases they are being developed by traditional banks and insurers acting alone, intent on creating their own unique information capabilities. Or they are being developed by financial

services information specialists alone, intent on disrupting the industry. But more often they are being developed jointly. Information firms offer their expertise in the production, management, and analysis of data while financial services firms provide their information and opportunities to monetise it through traditional financial services products.

This environment of "coopetitition" may be the most dynamic force in financial services, bringing together the complementary strengths and weaknesses of partnering firms. Traditional financial firms need not be experts in technology or analytics to use information, and firms that are expert at using information can access the tremendous value of financial services without building their own balance sheets.

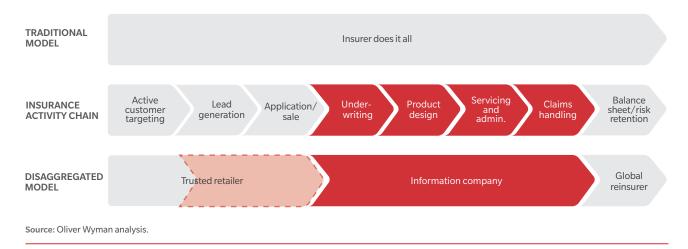
Such partnerships can produce significant tactical earnings opportunities in short periods of time. For example, the pricing

of deposit and lending products is being improved 10%-20% by better understanding customers' price elasticity.⁴ Telematics is improving the targeting and underwriting of auto insurance, delivering 15-20% improvements in the combined ratio.⁵ Lenders have been able to double or triple their micro-business lending approval rates (within existing risk criteria) by analysing digital cash flows and merchant acquiring data.⁶ Similar examples can be found across the financial services landscape.

However, this evolving landscape also has three serious strategic implications. First, with information and analytics disassociated from traditional firms, new entrants can quickly enter and disrupt markets and small firms can compete with the technology platforms of much larger ones (see Exhibit 8 on the Australian life insurance industry). Secondly, there is the prospect that value growth in financial services will accrue to new-form

EXHIBIT 8: STRATEGIC THREAT #1 – COOPERATION WITH INFORMATION COMPANIES REDUCES BARRIERS TO ENTRY AND OPENS THE DOOR TO GREATER COMPETITION

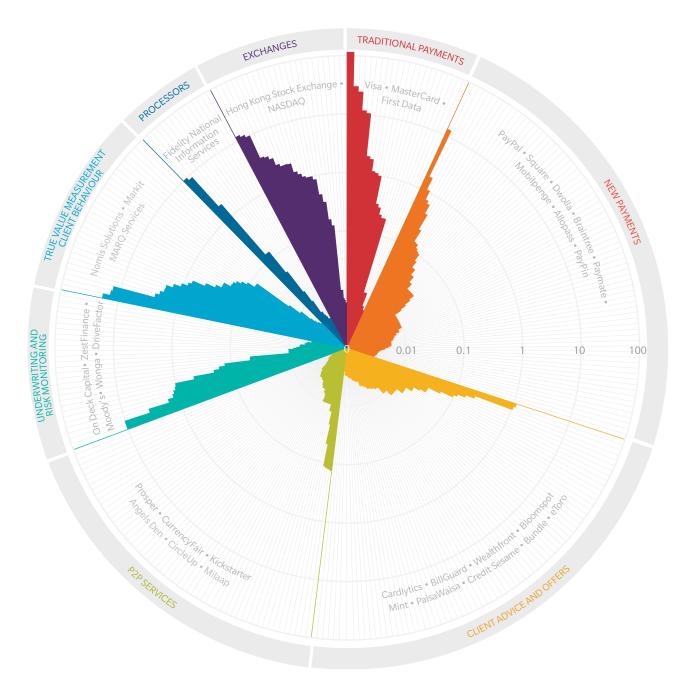
EXAMPLE: THE IMPACT OF "INFORMATION COMPANIES" ON AUSTRALIAN LIFE INSURANCE



4, 5, 6 Oliver Wyman analysis and client work.

EXHIBIT 9: THE GLOBAL FINANCIAL SERVICES INFORMATION COMPANY LANDSCAPE

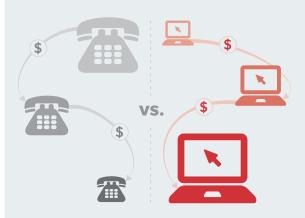
EACH BAR REPRESENTS AN INDIVIDUAL COMPANY, WITH THE LENGTH OF THE BAR INDICATING MARKET VALUE (\$ BN LOG SCALE)



Note: Firms listed in the diagram are representative examples. The chart reflects several hundred companies across the globe. Source: SNL, Thomson Reuters Datastream, VentureXpert, Orbis, Capital IQ, Dealogic, Oliver Wyman analysis.

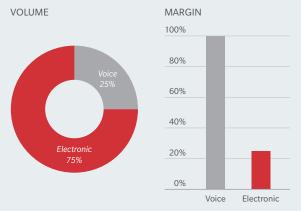
CLIENT SERVICE

EXAMPLE: RISE OF ELECTRONIC TRADING IN GLOBAL CASH EQUITIES



Electronic vs. Voice volumes and revenues

Cash Equities – institutional (dealer to client), 2012 est.



Source: Oliver Wyman analysis.

Do electronic trading capabilities provide a strategic advantage in cash equities trading?

- >> Volume has shifted dramatically in this direction and made these capabilities critical to mid-term relevance laggards have and will lose share of the business.
- >>> Equities trading has been pressured into lower cost execution methods, forcing firms to seek even greater volumes. Those that do not invest in electronic execution are quickly being displaced.

Verdict: As demands of clients (across businesses) shift towards digital needs, traditional firms must decide whether they continue to have a strategic advantage or not. Where their advantage has been eroded, re-thinking the strategy may be more sensible than investing in a technological arms race they are not well positioned to win.

information firms rather than traditional companies (see Exhibit 10 on the global telecom industry). Finally, traditional firms that rely on third parties for data and analytics must evolve their operating models to ensure appropriate controls are in place. Those firms that outsource key components of decision-making must continually remind themselves that they do not also outsource the implications of those decisions.

So, while this competitive landscape offers tremendous near-term opportunity, it also points to the broader long-term threat. Exhibit 9 represents the hundreds of financial services-related information companies now active in the market, including many that help provide the kinds of changes discussed above. They are arrayed across almost all aspects of the industry, from payments to underwriting, client behaviour analysis to exchanges.

Each bar in the array represents an individual company, with the length of the bar varying with the firm's market capitalisation. Some of these firms have a well-established place in the financial services landscape. Many more are still in their infancy and have low or unknown valuations (where unknown, a small valuation has been used to mark a place on the graph).

The greatest concentration of value in the array is in the mature portions of financial services:

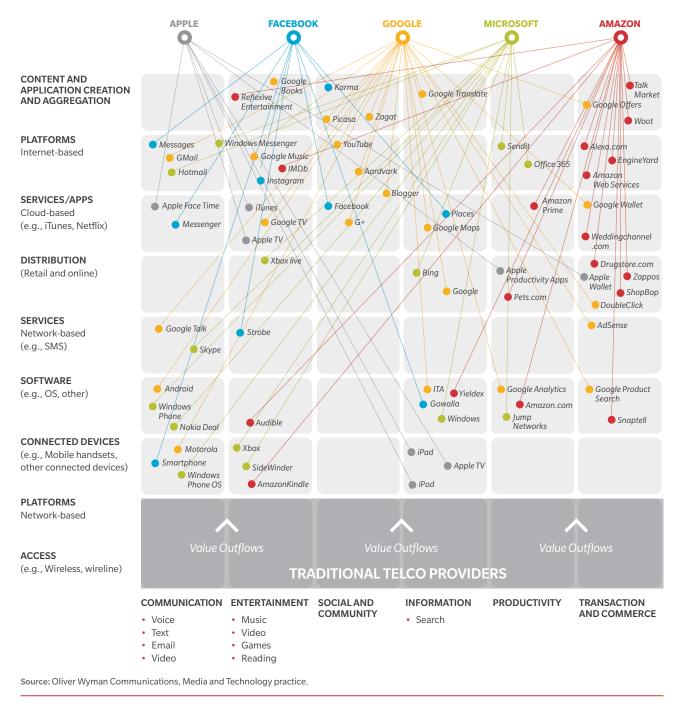
- Traditional payments, including the payment networks and merchant acquirers
- Processors that provide back-end banking and insurance technology platforms
- Providers of information for underwriting, risk management and understanding clients' behaviour and value

But most firms are located in three new areas:

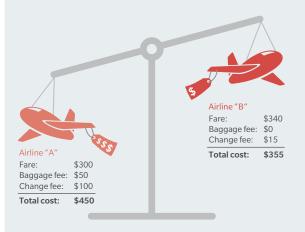
- New forms of payments purpose-built for the internet and mobile world
- Peer-to-peer exchanges
- Client advice and offers

EXHIBIT 10: STRATEGIC THREAT #2 – VALUE MIGRATION FROM TRADITIONAL PLAYERS TO INFORMATION-DRIVEN COMPANIES

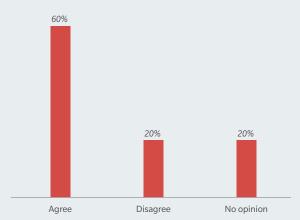
EXAMPLE - GLOBAL TELECOM



CLIENT ADVICE AND OFFERS EXAMPLE: CONSUMER PURCHASE ADVICE



"I would trust my bank to provide a discount at merchants more than I would others"



Source: 2012 Oliver Wyman North American consumer financial services survey.

Can advice and offers be a sustainable strategic advantage for financial services companies?

- Bank clients trust banks to make these offers, consumer regulation is pushing banks towards greater transparency in the future, and many other industries are moving towards less transparency.
- >> US-based banking information companies alone have a market cap that is greater than Google, Baidu, Facebook, and Groupon combined (global leaders in this arena).

VERDICT: Financial services companies possess the data to bring far greater efficiency to buyers and sellers – but the best way of monetising that data is likely not digital coupons. Rather the most valuable uses are yet to be developed.

The prevalence of firms in each of these categories may tell us a great deal about the future of the industry.

The first of these categories – new forms of payments – serves as a reminder of how fast the information world can change. The very payment networks and merchant acquirers that helped fuel the growth of information companies highlighted in Section 1 are themselves facing new competition. Firms must now constantly re-evaluate their information positions, how changes might affect their relevance, and how they can both defend themselves and exploit new opportunities.

The second category – peer-to-peer exchanges – should make the traditional firms question their historical role. Banks have been in the lending business for hundreds of years, employ tens of thousands of skilled analysts and have proprietary information on consumers and businesses that exists nowhere else in the market. Yet dozens of companies have emerged to connect borrowers to what amount to "hobbyist" lenders. These models may never achieve high market share, and they may not even survive. But the simple fact that they exist today must force the industry to ask whether banks' regulatory burdens and complexity to investors may now outweigh their regulatory advantages and informational advantage in separating good credits from bad.

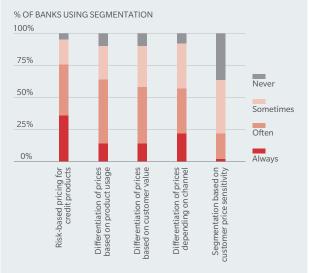
The third category – client advice and offers – should help guide the industry to the future. Competitors and regulators are set to make buyers of financial products more selective. Banks and insurers may suffer margin compression as a result. But they can recover these losses by playing the same role themselves. Financial firms have access to information that can help their clients make better commercial decisions in areas as diverse as mitigating the risk of rising fuel prices to managing supply chains to choosing the best airline.

Once a firm understands its information assets, and how the evolving financial services information landscape can help monetise those assets (or threaten them), it can build its "information balance sheet".

CLIENT BEHAVIOUR EXAMPLE: CLIENT PRICE ELASTICITY



Usage of pricing segmentation at European banks



Source: Pricing at European Retail Banks, 2012, Oliver Wyman & EFMA.

$\label{local-prop} \mbox{Does better understanding of price sensitivity offer a sustainable strategic advantage?}$

- Pricing is one of the least sophisticated areas of bank operations – and one that has shown among the greatest and most immediate impacts on revenue when improved.
- >> The spread of information and regulatory influence continues to erode pricing power across financial services.

VERDICT: Firms that improve their understanding of client price elasticity, as well as their governance of how to use that knowledge, will establish a key sustainable advantage.

2.3. THE INFORMATION BALANCE SHEET

All financial services firms take careful account of their financial positions (assets and liabilities), forecasting how changes to the macroeconomic landscape might affect earnings and change their value. But few do the same for their information positions.

This is a mistake. The way clients and other firms are using information is changing and the quantity of information being produced is growing rapidly. But the economy is not. This means that changes in the information landscape may be more important to the state of financial services over the next several years than changes to what historically have been more important factors, such as GDP growth and unemployment. "Information shocks" may affect earnings as much as interest rate shocks.

An "information shock" is a change in firm, competitor or client information-related behaviour that has a significant impact on earnings. These can be positive: for example, using better information to better price clients. Or they can be negative: for example, clients becoming more price elastic as it becomes easier for them to identify and switch to better priced products. Across the industry, many such shocks are possible as the landscape evolves. Financial firms need a way of recognising and responding to them.

The information balance sheet is conceptually straightforward and designed to give executives and board members a clear view of their firm's opportunities and exposures relative to information. It includes three key components regarding each line of business the firm is in (or could be in):

- What is the firm's information position relative to competitors and clients?
- How is that information position likely to change given shifts at the firm, competitors and clients?
- If that information position changes, what level of earnings or value could be available or at risk?

CURRENT POSITION Disadvantaged < Advantaged Improving/ improvable Improved with use of payment data PROSPECTIVE INFORMATION POSITION Improved due to Auto telematics SME lending telematics Deteriorating if others use Sell-side payment data research Size of bubble represents the value of the business Deteriorating/ at risk

EXHIBIT 11: THE INFORMATION BALANCE SHEET (FOR AN ILLUSTRATIVE FIRM)

 $\textbf{Note:} \ The \ unspecifed \ grey \ bubbles \ represent \ other \ business \ areas \ that \ are \ not \ focused \ on \ in \ this \ example.$

Exhibit 11 presents part of an indicative information balance sheet for a representative universal financial services company. The location of each bubble indicates its current informational position (x-axis) and its potential change in position (y-axis). The size of the bubble indicates the current value of the business to the firm and, hence, how much current value stands to be affected.

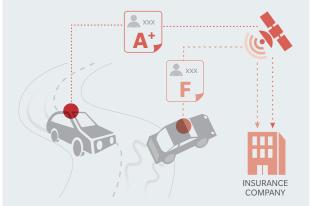
Locating bubbles against the x-axis requires a sober review of where your business uses information in a differentiated way. Locating assets on the y-axis requires analysis of emerging trends in information, including both opportunities and threats.

Consider, for example, sell-side equity research, located in the lower right corner of the balance sheet. This quadrant represents an area of historical and current informational advantage combined with a strong likelihood that this advantage will diminish (along with the earnings that flow from it). Why is sell-side equity research located there, especially when most firms do not explicitly charge for it?

Historically, equity trading desks charged clients a fee for trades that covered not only the cost of execution but also other "value added" services provided, including research provided by the banks' analysts.

UNDERWRITING AND RISK MANAGEMENT

EXAMPLE: TELEMATICS IN AUTO INSURANCE



Europe and Americas auto insurance telematics traction



Source: 2010 Oliver Wyman telematics study and subsequent updates

Does telematics provide a sustainable strategic advantage in insurance?

- >> Telematics more sharply selects good and risky drivers and reduces leakage in the claims process early adopters report improvements to combined ratios of 15-20%.
- As usage of telematics in insurance increases, any relative advantage among insurers will likely erode. While better drivers will be better off, traditional insurance companies could re-set at historical levels of return.

VERDICT: In the near-term, early buyers of telematics technology and information will gain an advantage (at the expense of laggards). As adoption spreads, industry revenue dynamics will re-set to historical levels. Producers of the information asset, exceptional users of that information, and good drivers will be the long-term beneficiaries.

This revenue stream relied on an information advantage in two ways. First, there were few credible independent equity analysts outside of the banks. So the captive analysts had an information advantage over the independent market. Second, there were few trading desks that would provide trade execution without the cost of the value added services. So there was little competition for the bundled model and most clients had to pay for research whether or not they valued it.

In recent years, however, the digitalisation of trading has created desks that will sell simple trade execution without the extra cost of research. And many top analysts have left sell-side firms to become independents and create true competition in research. In other words, both of the informational advantages that supported a revenue stream attached to equity research are deteriorating.

This is but one of many examples. Digitalisation, dis-aggregation and the free flow of information have given consumers in many areas a clearer view of the cost associated with each component of what used to be bundled services and the opportunity to be more selective in their spending. How much, for example, do clients now value a wealth advisor or a bank branch? As the alternatives to these physical attributes, such as automated financial advice and virtual banking become more accessible, the market will make clear just how much customers truly value each separable component of financial services offers.

Now consider a more encouraging example. Auto insurance with telematics is represented in the middle of Exhibit 11. This is a business where most firms have used similar approaches to underwriting. Telematics (GPS and other reporting directly from the car) is now allowing insurers to improve the quality of drivers they attract. This gain comes at the expense of insurers that do not adopt this technology. They are likely to experience adverse selection as better drivers are drawn to the lower premiums offered by insurers using telematics.

2.4. AN INFORMATION STRATEGY

All firms can find ways to create more value from better uses of information, as identified in the information balance sheet exercise. However, this delivers a set of tactics, not an information strategy.

An information strategy must be based on factors that will make your firm successful in the rapidly evolving landscape of "money" and information, and ensure that they are at the core of everything you do.

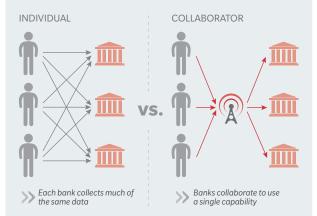
Importantly, these factors may not include information. Some financial firms may rightly decide that their value proposition to clients does not depend upon better use of information – and is not threatened by others' superior use of information. They may, for example, have a distinct value proposition, such as high touch customer service, that will continue to distinguish them in the market.

But many other firms – both those that are currently in the information business and those that are currently in the money business – will come to realise that success in the future will depend on information. They will recognise that they can thrive only by finding ways to grow and monetise their information assets.

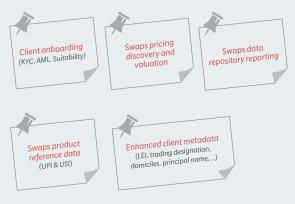
These firms will prioritise the protection, development and growth of their information assets above other opportunities. They will consider the information assets in other strategic and tactical decisions that may not initially appear to be information decisions. For example, they must consider the information gained or lost in businesses that they are considering acquiring or divesting. And they must evaluate the information that they would lose to other parties if they failed to meet a client's need, either because they lose the account or because the client shares her information with another institution.

We have identified eight possible archetypes of information strategy (see Exhibit 12). Most firms will employ tactics that conform to more than one model. But, ultimately, each firm must determine which one of these archetypes their information strategy depends upon most.

STRATEGIC ARCHETYPE EXAMPLE: COLLABORATOR MODEL



Data requirements of Dodd-Frank



Can collaboration provide a sustainable strategic advantage in regulatory response?

- >> Dodd-Frank (among other global regulations) has significant implications for data collection, architecture and processing. In many cases, the costs are common and the data does not present a clear competitive advantage.
- Collaboration across firms is often complex and slow moving.

VERDICT: Utilities will emerge to help deal with many of the data elements required by new regulations – whether traditional firms have an ownership stake in those utilities or are merely customers is yet to be determined.

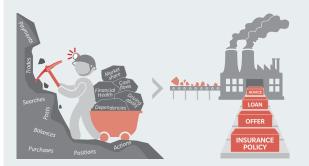
EXHIBIT 12: INFORMATION TACTICS ARCHETYPES

	SUMMARY OF APPROACH	WINS BASED ON
THE CONCEDER	Concedes that it cannot maintain information parity in parts of the business and focuses on a limited set of areas where it believes it can	 Correctly estimates the size of the space where information parity can be maintained Gains maximum value from the sale of businesses that it plans to exit Has true differentiation in its service delivery that clients value
THE BUYER	Buys vended solutions from third parties to address key areas of information need	 Buys discerningly and with good terms Integration of technologies into its business processes Has true differentiation in its service delivery that clients value
THE INVESTOR	Invests in high potential emerging financial services information companies to lock-up the advantage. This may include spinning off its own information assets into separate companies	 Evaluation, acquisition and incubation of new companies and assets Integration of technologies into its business processes
THE COLLABORATOR	Collaborates with other financial services companies (balance sheet or not) to develop information/information technologies that represent a sustainable advantage	 Selection of partners and management of partnership agreements Integration of technologies into its business processes
THE MINER	Mines its proprietary information diligently – and actively develops new sources of information – to develop a sustainable information advantage	 Ability to prospect (identify areas of high potential) and mine data Discipline to focus on areas where it has a true information advantage
THE TECHNOLOGIST	Invents, patents and develops new information technologies that provide a sustainable advantage	 Ability to identify areas of opportunity and execute in technology builds Ability to patent/protect new technologies from competitors
THE INVENTOR	Invents new ways of using information that others have yet to uncover	 Very strong and creative analytical talent Extremely strong controls to prevent mistakes
THE OSTRICH	Ignores the changing information landscape	Loses

While this paper has been focused largely on the power of the information asset, the most critical factor for a successful information strategy is protecting against the information "liability". One lesson of the financial crisis must be that success in using information depends not on the number of "hits" but on the size of the "misses". Large sets of data, algorithms, benchmarking reports and the rapid flow of ideas from organisation to organisation were as responsible as anything else for bringing many firms to their knees.

This inclines some to argue that the best action is therefore inaction. After all, most of the (relative) winners of the past half-decade succeeded because they largely ignored temptations such as subprime lending and CDOs and instead focused on prudence. And it is true that if a firm cannot build the capabilities, controls, and disciplines necessary to safely utilise data to drive good decision-making, limiting the reliance on data must be the correct choice.

EXAMPLE OF STRATEGIC ARCHETYPE MINER MODEL



Who do you think will benefit most and least from payment innovation?

Survey of c. 150 EMEA FS Organisations, 2012



 $Source: Oliver Wyman/EFMA \ report \ ``Advanced \ and \ mobile \ payments: \ what's \ stopping \ you?''$

Can information "mines" be a sustainble strategic advantage for financial services companies?

- >> The information flowing through financial services firms is powerful enough to understand the macroeconomy at a microscopic level. The more information a firm has, the greater the synergies become, and the more the value of the asset grows.
- >> A wide array of firms, from mobile companies to internet search engines to advice providers and new payment networks are now competing for this information. And many of these firms are treating the information itself as an asset. They will readily concede the economics of the banking businesses (e.g., current accounts) to which that information has historically been attached

VERDICT: The future of many banks and insurers will hinge on their ability to mine the information asset and use it as the key raw material in manufacturing differentiated products. However, a wide range of firms is now competing for this asset, and the ultimate owner is yet to be determined.

Were the state of financial services today as it was in the past, with money worth more and information less, the right strategy for a firm without confidence in its information capabilities might indeed be to limit the use of new data sources in decision-making. But it is not. While inaction was proven wise in the past, it is unlikely to be sufficient now. Instead most firms must undertake the hard work to ensure they are capable of safely monetising the information asset. They must continually expand their abilities to use information with the growth of information itself. In 2013, financial services firms must accept that they are information-driven businesses, whether they like it or not.

2.5. A PATH FORWARD

While an information strategy may well be critical, the "critical list" at most institutions is already long. And most management teams are already stretched. Appreciating this, we identify the three most important information-related activities that even the most constrained firms should be able to accomplish:

- Hold one meeting of key business and information executives in each business unit, review your information assets and make one decision. Decide what your differentiating information asset will be. This asset should then be considered in all other tactical and strategic decisions
- 2. Demand that every item on your planned IT investment for 2013 generate earnings. Complying with new regulations is driving much of the IT work in financial services. This work is of course necessary, but firms that treat this spend as a sunk cost rather than an opportunity to become a more effective information-driven business may find that they have met the needs of survival but sacrificed an opportunity to thrive
- Demand one new information-based earnings generator in each business unit, producing material returns by the end of 2013

Given the rapid growth of information and the many ways to monetise it, there is no reason why the financial services industry in late 2013 should be in the state it is today.

INFORMATION-DRIVEN BANKING and INSURANCE

INVESTMENT BANKING INDIVIDUAL BANKING INSURANCE Information

- The information asset has not only the power to improve existing products, but also to transform the nature of the business. Increasingly, financial services companies will have the ability to not only measure risk more effectively but also to help their clients improve performance (and reduce their own level of risk)
- The fuel for this transformation is the information flow not only within but also across individual banking, institutional banking, investment banking and insurance (as originally described in Citibank's five Is of the 1980s)

Reality vs. Science Fiction?

- Nearly all of the information concepts articulated in the example of information-driven SME lending on the right exist in the market today (in some form)
- No institution is currently conducting SME banking in this way, and few institutions have the business scale or scope to try (in its entirety)

VERDICT: The example on the right is science fiction today. Do you believe it is closer in-kind to the Teleporter of Star Trek fame (still quite a way off) or the 3D printer that you can now buy in a High Street store for \$2,000?

EXAMPLE: Advanced SME Lending @ Support

for Joe's coffee shop

DATA SOURCE

CLIENT CASH-FLOW

- Current account transaction and balance flow
- · Merchant acquiring flow

UNDERWRITING

VERIFIED CASH-FLOW

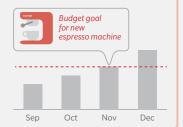
Insight from cash-flow provides efficient, verified and ongoing earnings information to inform underwriting and risk monitoring

DATE	PARTY	AMOUNT
Dec 4	Customer 7	\$20.54
Dec 4	Customer 8	\$23.83
Dec 5	Customer 1	\$15.37
Dec 5	Customer 2	\$6.43
:		:

ONGOING SUPPORT

BUDGETING

Cash-flow data combined with optimisation tools informs client budgeting and helps the client appreciate, manage and reduce liquidity risk



INVESTMENT BANKING INFORMATION AND CLIENT CASH-FLOW

- Client expenditures
- Commodities volatility and forecasts

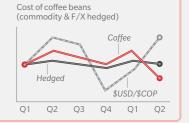
VOLATILITY ASSESSMENT

Insight from cash-flow provides indicators of key supply exposures. Insight from the capital markets indicates the level of potential earnings volatility those exposures introduce



HEDGING

Information on key exposures and their volatility can be used to target and structure hedge products that typically are available only for larger



CONSUMER DEBIT AND CREDIT DATA

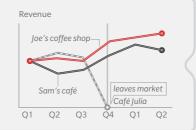
- Aggregated data (market share)
- Individual data (offers targeting)

PERFORMANCE **BENCHMARKING**

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Insight from consumer market share data indicates historical and upcoming changes of fortune for the SME client



CUSTOMER TARGETING

Targeted consumer offers help the client reach new customers and promotes revenue growth

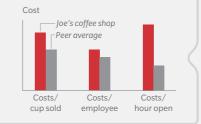


AGGREGATE INSTITUTIONAL DATA

- Peer group merchant acquiring data
- Peer group current account data

OPERATIONAL BENCHMARKING

Insight from similar clients provides performance benchmarking across a range of metrics



SUPPLY SOURCING

Network of suppliers helps the client identify the best vendors for their need and reduce cost



RELATIONSHIP DATA

- Institutional and Individual banking
- Insurance

Insight from across banking

VALUE-DRIVEN **CROSS-SELL**

For example: Information on purchases, new locations, and performance is used to identify additional insurance coverage needs and operational risk factors



RELATIONSHIP VALUE

businesses and similar clients accurately indicates the potential relationship value of the client beyond



SEVEN QUICK TAKEAWAYS FROM THIS REPORT

THE INDUSTRY OVERALL

- Financial services is an information business but many traditional financial services firms have chosen not to be information-driven companies
- 2. The implications of this choice are increasingly apparent. For example, non-balance sheet information-focused competitors now account for nearly 1/3 of total bank-related market value in the United States and are on pace to potentially be worth as much as traditional banks by the end of the decade
- Financial services is a complex business where "misinformation" can easily lead to negative long-term outcomes. The ability to understand and control information must therefore serve as a critical limit on how that information is used

TRADITIONAL FINANCIAL SERVICES FIRMS

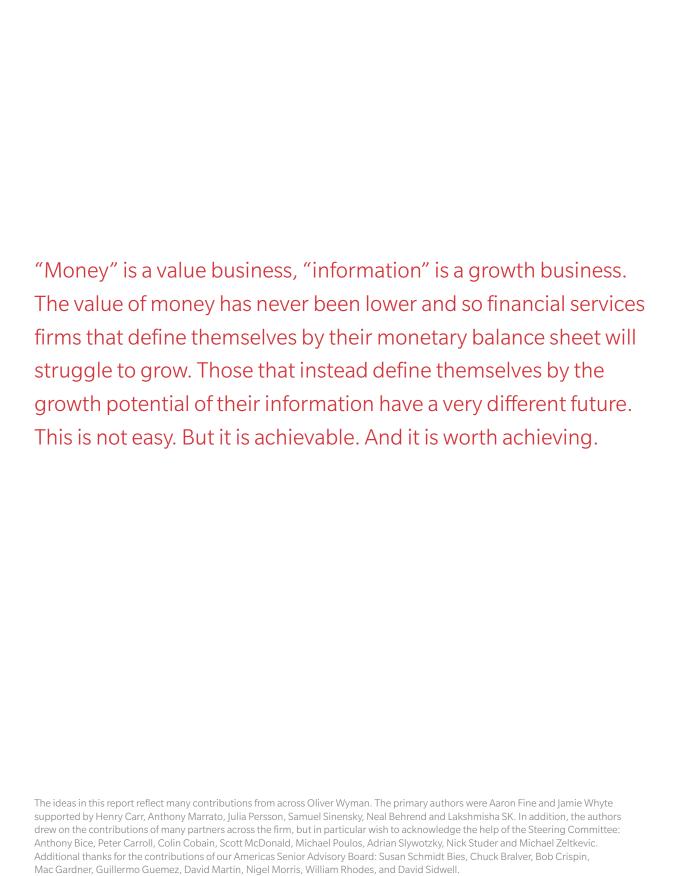
4. You do not need to be an information company like Google or Amazon, but you must realise that you are in an information industry. The choices you make or don't make with regard to information will define a large part of your future

- Changes to information advantages and disadvantages are as likely to dictate your fortunes in the next several years as changes to the macroeconomic environment. Understanding your information balance sheet is critical to success
- 6. Despite the de facto concessions already made, banks and insurers still command the bulk of the financial services information asset and the most valuable ways of deploying it. Given the technology partners available, firms in this space can quickly become information-driven companies (at least in specific areas)

FINANCIAL SERVICES INFORMATION BUSINESSES

7. The information environment in financial services is evolving rapidly, with new sources of value and new sources of competition (including heavyweights from other industries). Those firms that are complacent may quickly find that their information asset has eroded, and unlike traditional firms they will not have the money business to fall back upon

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The design work for the 2013 report was led by Sujin Lee.

DETAILED MATERIAL

Within this report, we were in many cases able to touch only briefly on specific information-related topics. The reports and information assets listed on this page are available to readers that would like additional detail. Please contact the marketing department (info-FS@oliverwyman.com) or your Oliver Wyman relationship partner for follow-up.

REPORTS

TRUE VALUE MEASUREMENT

- Branch flexing: An agile approach to cost management
- Strategic capital: Defining an effective real-world view of capital
- Getting risk-adjusted performance measurement right for Solvency II

CLIENT BEHAVIOUR

- Pricing at European retail banks (in collaboration with Efma)
- The state of interest rate risk management

UNDERWRITING & RISK MONITORING

- 1 March 2011: A starting gun for telematics
- Uneven road ahead: Telematics poised to reshape auto insurance
- Impact of proposed alternatives to credit ratings in market risk capital rules

CLIENT SERVICES

- Advanced and mobile payments: What's stopping you? (in collaboration with Efma)
- Mobile payments: Aligning strategy with opportunity

BROADER INDUSTRY REPORTS

- Perspectives on the UK retail banking market
- Big data: A guide to where you should be, even if you don't know where you are (by Celent)*
- Emerging technologies in retail banking: The long journey to customer centricity (by Celent)*

PROPRIETARY INFORMATION ASSETS

- Oliver Wyman US deposit model
- Global FS information company database
- US consumer and small business financial services surveys
- EMEA consumer financial services survey

 $^{{}^{\}star}\operatorname{Celent}\operatorname{is a member of the Oliver Wyman Group. Reports are available by subscription.}$

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