

The Future of Internet Brokerage

A TEAM PROMETHEUS MoneyMedia™ White Paper

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THE FUTURE OF INTERNET BROKERAGE

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A TIME OF CHANGE AND OPPORTUNITY

The Internet has already changed the nature of the brokerage business. Internet-based brokerage has given clients reduced prices, more convenient trading, greater access to information, and new value-added products and services. A new generation of brokerage companies has arrived on the scene, challenging the established players and changing the rules of the game. The impact of the Internet on the brokerage industry marks a paradigm shift on the order of the introduction of discount brokerage.

What is so exciting, and strategically challenging, is that the changes associated with Internet-based brokerage have just begun. Forrester Research estimates that the number of online accounts will grow from 1.5 million in 1997 to 10 million in 2000 and to 12 million in 2001. It expects the value of assets managed online to rise from \$120 billion in 1997 to \$688 billion in 2002. Along with this massive influx of clients and assets will come growing client demands, continuing aggressive competition, and further advances in Internet capabilities. As a result, financial services companies and other online players will need to consider carefully the future of Internet brokerage and plan accordingly.

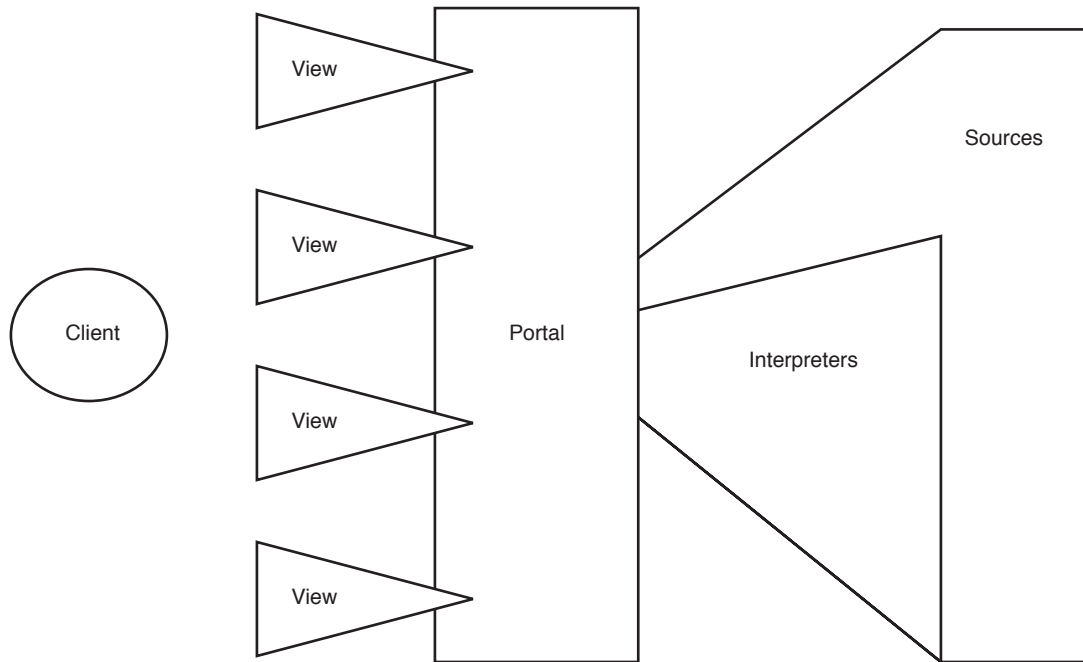
In the next two to three years, the marketplace will look considerably different than it does today:

- The low cost of distribution over the Internet will cause sources of financial information to multiply. Clients will seek to compare and purchase financial products from varied sources quickly and easily.
- As the online financial environment becomes more complex, demand for interpreters—both human advisers and automatic systems—will intensify. Interpretation costs will drop, making personalized service more accessible to a wider range of investors. In turn, interpreters will be important partners in firms' efforts to provide value to their clients.
- Clients will tire of navigating through multiple portals to plan their financial lives and conduct transactions. They will seek enhanced value through greater integration of all aspects of their financial situations. As a result, they may choose one or two portals through which they manage their finances. Providers will compete to make the cut. Providers will also increasingly see advantages in presenting their products and services through each other's portals.
- The transactional model that has dominated the financial services industry will give way to a relationship-based model. Engaging clients in a collaborative conversation will be the key to keeping their loyalty, and customization of products will be easy and affordable thanks to new technologies and capabilities.

THE STRUCTURE OF INTERNET BROKERAGE

Internet brokerage is a mediated system of communication between clients and firms. Companies need to understand the role that each component plays in this new online world (see Figure 1).

Figure 1
A STRUCTURAL MODEL OF INTERNET BROKERAGE



Source: Author

- *Clients*—the online individual investors, or retail financial customers—make trades, purchase financial products, and consume information and services that help them manage their financial positions.
- *Views* are structured perspectives that define the ways firms present information to clients and the ways in which clients can interact with that information. For example, the portfolio displays in most brokerage software are views, as are mutual-fund performance summaries (such as an online presentation of the Schwab Select List), charts describing the allocation of client portfolios to varied asset classes, and electronic checkbook registers. See Table 1 and Figure 2 for examples.
- *Portals* are software-based structures that bring together information for individual clients from a variety of original sources across the network. The portal acts like a smart electronic mailbox for the client. Various sources deliver information for the client to the portal, where the portal software filters, integrates, and enhances it. The client receives the information through the various views that the portal supports, where he or she can interact with the information and its sources. Examples of portals are PointCast, Microsoft Investor, Quote.com, and investor software tools from Internet brokerages such as E*Trade or e.Schwab. Portals can be implemented as pages on World Wide Web (Web) sites, Active Desktop or Marimba channels, personal computer software, or some combination.

Table 1
A MUTUAL FUND SELECTION VIEW

Fund	Average Annual Total Return (Percent)			
	Three Months	One Year	Five Year	Ten Year
Torrance	8.5	36.5	22.1	—
Safeway No Load	1.7	34.3	22.0	19.8
Beechwood	4.0	24.2	21.3	—
Ford Value	-0.1	31.6	20.5	16.7
Thompson	-1.0	28.9	19.7	18.0

* Sorted by five-year returns.

Source: Author

Figure 2
A PORTFOLIO VALUATION VIEW

Symbol	Time	Open	High	Low	Volume	Last	Change
DIS	16:10	110	111 1/8	109	1 455K	110	1 1/4 ↓
DJ	16:00	50 1/2	51 1/4	50 1/2	131K	50 7/8	1/2 ↑
INTC	16:01	93 3/4	94 1/16	92 1/4	13 978K	92 5/16	1 3/4 ↓
MSFT	16:01	85 1/2	85 11/16	84 7/16	15 347K	85 1/2	9/16 ↑

Source: Author

- *Interpreters* are the people, organizations, and automated systems that take products and information from their original sources and adapt them for use by clients. Interpreters advise, educate, and inform their clients—in the process selecting, customizing, augmenting, and consolidating products and information. They include brokers or financial planners working for brokerage firms, independent advisers, navigation software running at online services providers, and Web sites on the Internet. Thus, an adviser might construct a financial plan for a client or help the client choose investments. In turn, an automated service might collect, organize, and summarize the news relevant to a client's investments or search a database for the best rate on a certificate of deposit (CD).
- *Sources* are the people and organizations that provide the fundamental services, capabilities, products, and information that clients consume (perhaps via interpreters). They include brokers, bankers, mutual funds, insurance companies, financial software

companies, information providers, and publishers. This category includes thousands of firms with an enormous asset and revenue base.

- *Media* are the forms, standards, and protocols in which firms encode information on the network. For example, the Open Financial Exchange (OFX) is a protocol for the electronic exchange of financial data between financial institutions, businesses, and consumers via the Internet. (CheckFree, Intuit, and Microsoft created OFX in early 1997. It supports a wide range of financial activities, including consumer and small-business banking, consumer and small-business bill payment, bill presentment, and investments, including stocks, bonds, and mutual funds. See http://www.ofx.net/ofx/ab_main.asp.) Media underwrite the capabilities of views and portals, and the implementations of views and portals assume particular forms of information exchange, or media.

THE COMING INTERNET BROKERAGE MARKETPLACE

In the next two to three years, the Internet brokerage market will look different than it does today. The following sections highlight the key characteristics of this future marketplace: It will be heterogeneous, unbundled, distributed, supermediated, relationship oriented, structured in its communications, influenced by the economics of increasing returns, and dynamic.

Heterogeneity

Clients will consume products, information, and services from many sources and interpreters, through multiple views and possibly through multiple portals. For example, a middle-aged executive with significant assets under management might have two banking relationships, a broker, a personal financial adviser, a tax adviser, and an insurance agent. She might subscribe to several online news services, including Dow Jones, the New York Times, and Inquisit. Though her primary brokerage relationship might be with Charles Schwab, she might also have investments in the FundsNetwork at Fidelity.

Let's assume that this executive uses a single portal that Charles Schwab provides. The portal supports and cross-connects many views, including:

- A portfolio management view from Charles Schwab, which shows the executive's brokerage accounts and activity and allows her to carry out transactions.
- A view for managing her FundsNetwork account at Fidelity.
- A view displaying the Charles Schwab Select List of mutual funds.
- A view containing her overall financial plan—which her financial adviser prepared using a plan-building framework from Sanford Bernstein—that draws information from other views and shows current progress toward her goals.

- A view containing her retirement plan, which Charles Schwab originally provided and her financial adviser then customized. This view tracks her asset accounts in the other views, showing her progress toward her goals.
- A view describing her life insurance policy from Prudential.
- An Intuit TurboTax view, which her tax accountant has customized. This view tracks changes in the value of her portfolio, the income going into her bank accounts, and the checks she is writing to cover expenses; it dynamically computes the tax consequences of these activities.
- A monitoring view that her financial adviser has prepared to track changes in other views. This view recommends timely actions, including calling the adviser.
- A view from ValueLine that compares the performance of the securities in her Schwab and Fidelity portfolios with that of comparable securities.
- Views from each of her banks to help her manage accounts and loans.
- A real estate view from Century 21 tracking the selling prices of houses in her neighborhood.
- A HomeShark view showing the potential benefits of refinancing her home, with a trigger set to notify her when the right refinancing deal becomes available (this view connects to the real estate view from Century 21).
- A consolidating news view from Dow Jones that integrates news stories from the services she subscribes to and organizes them (in part using the structure of her assets, which it determines from the other views in the portal).
- A view from First Global Commerce for finding the best CD rates and executing purchases.

Unbundled Products and Services

Firms will unbundle their offerings to reach beyond their existing client base. They will present their views in others' portals and market their products in others' views.

As we saw in the example above, a broker like Fidelity will be able to present views within a Charles Schwab portal. Moreover, a bank will be able to present information about its CDs through a First Global Commerce view, or a mutual fund will be able to present information about its offerings through the Schwab Select List view.

Distributed Value Creation

Value creation will spread across the entire firm and beyond the firm across the network. Value creators will include centralized development groups, segment-specialized development teams, external product vendors, in-house advisers, external advisers, automated navigation services, and software companies.

Distributed value creation will work in many ways. Consider these examples:

- A development team creates a portfolio-allocation view for use by members of the buy-and-hold investor segment; this view works with other views already in the clients' portals.
- An insurance company creates a view for evaluating life insurance policies; the view constructs new policies on the fly to meet client needs.
- An economics firm creates a forecast of leading economic indicators that advisers and clients can use in their investment planning views.
- A broker constructs a custom product for a client: a mutual fund that automatically liquidates itself over time when the client reaches a certain age. In essence, the product constructs an annuity out of a mutual fund.
- A broker at a full-service brokerage adapts a generic client portfolio view for a particular client's needs, perhaps adding performance analyses or enabling automatic delivery of relevant analyst reports. The broker might also set triggers to watch portfolio allocation and signal the client and the broker if the portfolio becomes unbalanced.
- A financial planner, using views from a variety of sources, constructs a financial plan for a client that will reside in the client's portal and incorporate dynamic updates as the client's financial position changes.
- The client uses a view to access an automated server and search for the best rate on a CD.

Supermediation

As the complexity of the investing environment grows and the possibilities expand for increased returns through more effective interpretation and customization, demand for interpreters will increase. Our examples above show how processes of interpretation will permeate the Internet brokerage environment.

Some interpretative processes will take place directly via human interpreters such as advisers, agents, and brokers. Others will run automatically through views customized by human interpreters. In addition, some views will offer access to automated navigation sites (such as a site for finding the best rate on a CD).

Relationship Orientation

Both firms and clients will seek increased value through stronger relationships with each other. For clients, relationships will create a context for constructing trusted, customized solutions to their specific needs. For firms, relationships will bring new forms of revenue to replace declining transaction commissions and anchor clients in the face of increasing competition.

Structured Communications

People will consume products, information, and services through views in portals. These structured forms of communication will shape clients' perceptions of the market and their communications with sources and interpreters.

For example, a client who uses the Schwab Select List to research mutual-fund performance could perhaps see only those funds on that list. Further, the ways in which the list view categorizes funds and measures performance will guide the client's evaluation.

Increasing Returns

Internet brokerage will display the characteristics of an increasing-returns business: positive feedback loops in which greater acceptance leads to even greater acceptance, interdependent products and services, and learning effects that act as switching barriers. These characteristics produce a dynamic in which the competitor that moves ahead tends to move farther ahead over time. (For background on increasing returns, see W. Brian Arthur, "Increasing Returns and the New World of Business," *Harvard Business Review* [July–August 1996], pp. 100–09.)

A common example that analysts use to illustrate the dynamics of increasing returns is the personal computer operating systems business. In that business, users, applications software, and developers are part of a key feedback loop. Users attract developers, who create the applications software that draws more users. The software and operating system are highly interdependent, and the significant amount of time users have to invest in learning how to operate them makes users resistant to change. Such dynamics of increasing returns help explain the success of Microsoft's operating systems.

The value of portals and views depends heavily on such dynamics. The value to clients of using particular portals and views depends on the richness of the mix of products, information, and services that sources and interpreters make available through these portals and views. In turn, the value to sources and interpreters of participating in particular portals and views depends on the type and number of clients who use them. Not only are views and portals highly interdependent in their functioning, but they also provide rich environments for communication and learning.

Dynamic Environment

Change will be continuous in the Internet brokerage business. Revenue models will shift from transaction-based paradigms to ones based on relationships. Changing cost structures will provide new sources of competitive advantage.

As each new wave of clients comes online, client segments will shift, and clients will move between segments. Traditionally distinct kinds of firms (full-service/commission and discount brokerages) will seek to move into each other's domains. The new category of Internet-only brokerage will expand. New players and capabilities will keep appearing.

FORECASTS

Let us consider how each aspect of Internet brokerage will evolve.

Multiplying Sources

The Internet changes the economics of distribution. Companies can more easily act as sources than they could in the past because a low-cost distribution system that can reach any potential client is already in place. In turn, clients can easily access and take delivery of products and information from multiple sources because the same basic mechanisms drive these sources.

Clients will demand the ability to compare products across sources and will want to mix and match products, information, and services from multiple sources. Firms will not be able to prevent clients from seeking to satisfy these desires. If they do not give clients an open environment, other companies will and take the clients away. Brokerage firms cannot afford to let nonbrokerage companies (such as Microsoft, through its Investor portal, or Intuit, through its Quicken.com portal) be the only places where clients can gain access to a wide variety of sources.

Interpreters

Growing Demand

Network-based financial services will create value primarily through the use of interpreters. Clients can gain value from Internet brokerage in two primary ways. First, the relative openness of market information gives them more choices and forces sources to compete for their business. Second, the Internet brokerage infrastructure enables new products that speak directly to clients' specific financial situations, thereby releasing additional value. Both aspects of increased value will boost demand for interpreters—either to help clients find, evaluate, and decide among alternatives or to help clients construct customized solutions to fit their situations.

Although the value of interpretation will be increasing, its cost will be dropping. The capabilities of the Internet and the developing infrastructure of portals and views will enable interpreters to provide their services more effectively than ever before. More efficient communications will play a role, as will the automation of common interpretative tasks—such as collating, sorting, and filtering information—and automatic monitoring of market or portfolio conditions.

The demand for interpretation will be high whether the client likes to delegate financial planning and investment decisions to advisers or prefers to make his or her own decisions. No one will invest completely independently. People who like to manage their own finances will use views with automatic interpretation services, such as those that help search for appropriate products, automatically construct custom products, filter news, and offer technical analysis.

Competition in Leveraging Interpreters

Interpreters play two key roles. First, they act as gatekeepers between the firm and the client. Much of the firm's access to clients will be through the mediation of interpreters (whether they are advisers or automated services). Products, information, and services will flow through interpreters to clients. In a world of overwhelming choices, clients will choose interpreters first, then portals and views, and only then make specific consumption decisions. To receive clients' consideration at all, firms will have to ensure that interpreters make the firm's offerings available to their clients. To win the most favorable consideration, they will need interpreters that make the firm's offerings available to clients using the firm's own portal and views.

In their second role, interpreters act as the firm's partner in providing value to clients, extending the firm's efforts to satisfy clients' needs. They add value to the firm's raw products, information, and services. In a world of customizable products and services, interpretation is the key to releasing value for the client. The bare, uninterpreted product or service has limited value.

In light of these critical roles, firms will compete actively to develop the most capable networks of interpreters. Some firms will seek to leverage the skills of their in-house advisers; others will seek to leverage external financial advisers. Firms will give advisers client management capabilities that help them serve their clients' interests more effectively than they could otherwise; these capabilities will use the firm's portal and views. All firms will seek to gain advantage through automated interpretation services (which they will provide through online Web sites and online services). Incorporation of these capabilities into their own views and portal will strengthen their position.

Portals

Consolidation in Clients' Use of Portals

Clients today use many portals. For example, a single client might use portals from his or her bank or broker, from financial news sources like the *Wall Street Journal* or CNN/fn, from general news sources like PointCast or the *New York Times*, from general Web guides like Yahoo! or Excite, and from independent investment services like Microsoft Investor or Quote.com. This situation is not sustainable because it fragments clients' attention. Moreover, the multiplicity of portals is incompatible with their primary function: to collect and integrate relevant information from multiple sources. Eventually clients will want to use a single portal that integrates views from all their financial sources and interpreters. As we saw in the client example above, the value of individual views increases if they have access to information in other views.

Portal providers will compete to be the portal (or one of the portals) that survives the cut. Providing the primary portal for a client's consolidation of his or her financial information will be a significant competitive advantage in doing business with that client. The company that provides the client's portal will be in the best position to shape the context within which sales processes take place. The portal provider may also have privileged access to client information in the portal's views, along with an inside track to

communications with the client. Further, the provider of a client's primary portal will be best able to profit from managing others' access to the client and his or her assets.

Shared Views

Today most firms offer portals with a fixed collection of views that they themselves provide. No other firm's views appear. Typically, also, a firm makes its views available only on its own portal. This situation will change as clients begin to consolidate portal use and look for portals that can integrate products, services, and information from trusted sources. A portal can achieve this result by including views from other portals. Some portals will open up their architectures early as a means of winning client attention away from other less-open portals; eventually, all portals will follow suit to prevent their clients from switching allegiance.

If firms keep all their own views bundled with their portal, only clients using that portal will see the views. If they wish to attract new clients or maintain communication with clients who consolidate using other portals, they will have to provide views that operate within competing portals.

For example, today the online version of the Schwab Select List resides inside the Schwab Web site. The content is available at no charge on the Internet, but only people using the Schwab portal can find it easily. By promoting its view through other portals, Schwab could further strengthen its brand and encourage traffic to its portal. Other portals would benefit from making the Schwab view available to their clients (perhaps Fidelity would not, but certainly nonbrokerage portals like Microsoft Investor or Quote.com would). Schwab could even use the Select List as a trading chip in negotiations with other portals.

Promotion of Portals to Investors Who Are Not Yet Clients

Today most brokerage firms severely limit the services they provide to nonclients through their portals. For example, few firms allow investors who are not their clients to maintain portfolios using their portals.

This situation is changing. Recently, both Fidelity and DLJ Direct began allowing nonclients to use their portals to manage portfolios. The reasons seem clear. As new revenue models create ways for firms to profit from the attention of a wider population, these companies have an incentive to open up portal services to nonclients. Every nonclient who uses the firm's portal is a potential investor; opening the portal is a prelude to converting such visitors into more involved trading clients. Winning over an investor who already uses the firm's portal is easier than converting an investor from another portal.

Views

Beyond the Transactional Model

Most views today focus on managing accounting details in portfolios and carrying out transactions. However, transactional views have limited value to clients because their value derives primarily from substituting Internet execution of transactions for other

transaction modes. Internet transactions offer an element of convenience because customers can carry them out at any time and from any location. Firms can pass on the lower costs of processing Internet transactions to the client. But those costs have become so low that even lower costs offer slight value, and that value will continue to diminish as firms' costs drop to near zero.

Transactional views do not build client relationships. They don't have enough substance to engage the client, provide much added value, or build trust between the client and an interpreter or source. Views that help clients think about managing their overall financial position and that more richly support clients' entire financial life cycle are more valuable. These so-called relationship views include views for setting goals, reviewing positions and past performance, generating and evaluating plans for the future, and selecting plans to implement.

To build client relationships, a retirement view could include support for calculating retirement needs, developing investment strategies, forecasting retirement income and assets, managing retirement funds during the working years, managing the distribution of retirement funds, and planning one's estate. Some of this support would come from the original provider of the view, and some would come from subordinate views from other sources.

Interpreters will be able to use relationship views to engage clients in collaboratively constructing and implementing financial plans. Relationship views support the development of customized products and plans, which add value for the client. For instance, instead of offering clients a generic retirement product, a firm could construct a product that adapts itself to the client's specific retirement situation as he or she has described it in the retirement view (including time to retirement, attitude toward risk, desired retirement income, and existing investment structure).

Clients gain trust when an interpreter or a firm repeatedly demonstrates its understanding of their point of view and takes ever more effective actions in support of their goals. By capturing information about the client in a structured way, views make the information accessible for future interaction. Interpreters and firms can go to the client with relevant information and an understanding of the person's history, thus enabling them to construct targeted messages and products of value to the client. In these ways, relationship views can serve as powerful loyalty reinforcers, anchoring clients in their relationships to interpreters and firms and reducing the temptation to switch.

Enhanced Client Communication

Communication is more effective in context. Views provide structured presentations of clients' financial plans, portfolios, and transaction histories, making that information accessible to interpreters and automated interpretative processes. Instead of sending messages to vanilla Internet mailboxes, interpreters or sources can address messages directly to places within clients' views of their financial situations. These messages gain meaning in that context.

With this form of communication, a firm could market a new retirement product by sending an electronic mail (e-mail) message to a prospective client that describes the product and gives the prospect a way to contact a representative for more information. Even better would be the ability to e-mail a computer-coded description of the product

directly to prospects' retirement-planning views. The view could then interpret the product description for prospects, showing them exactly how the product will affect their plans for retirement. It could take prospects through a series of what-if scenarios or allow them to evaluate the product from a variety of perspectives. The sales message would be relevant to prospects' goals and understanding and preserve their privacy as well.

Similarly, prospects or clients could use views or parts of views to ask questions, solicit product pricing or other information, or obtain services. Today, when a client goes to a Web site to search for products or information, the site typically knows nothing about the client other than the information it gleans from the query. As a result, the client often receives a lot of irrelevant information in return. Views carry the information necessary to ask and obtain answers to questions more effectively. For example, a 35-year-old, high-income investor looking at mutual funds for his trading account is likely interested in different information than is a 65-year-old retiree managing the mutual funds in an individual retirement account.

New Capabilities through Client- and Interpreter-Accessible Languages

Today's views by and large have fixed structures and fixed capabilities. As a result, they are not up to the task of helping clients and interpreters work out the details of the nontransactional aspects of the financial life cycle. Meeting such needs is a complex endeavor that is not amenable to cookie-cutter solutions and simple "calculators." Instead, view providers will move to identify core sets of data elements and capabilities, and then define specialized languages that enable interpreters (or clients) to build more nuanced solutions from these components. These languages might be similar to spreadsheet-formula, database-query, or report-writer languages in certain respects and resemble simple programming languages in other respects. Expert interpreters will be able to use these languages to create view templates that less-expert interpreters or clients can then customize.

For example, in a retirement planning view, an expert interpreter could create a specialized bit of functionality on top of the view's basic capabilities to help a client find an appropriate mutual fund. A query-language statement could define a search on an Internet database of available mutual funds. Construction of the query would rely on client information stored in the view. The interpreter could write statements using a spreadsheetlike formula to take the generic information from the database and make it relevant to the client's situation. The formula would refer to attributes of the mutual funds and attributes of the client's retirement plan to compute the relative value of each mutual fund for the client. Then the expert interpreter could compose report-writer-like statements to organize, sort, and present the results. Thus, the interpreter would create a piece of reusable functionality that any client accessing the retirement view could use to obtain a customized experience of the generic database, relating data to his or her mutual-fund purchasing decision.

The expert interpreter could package this functionality into a component offering several optional parameters, such as the name of the database to be searched and the means of sorting the results. Then a less-expert interpreter could apply the functionality

simply by selecting the component and specifying values for the parameters. Clearly, this ability to extend views with languages will increase views' power and flexibility and extend value creation to a wider community.

Emergence of Industry Standards

Views will see the effects of increasing returns. As more clients use them, more sources and interpreters will support them. And as more sources and interpreters support them, more clients will use them. Once unbundled from a specific portal, views will be free to collect clients from the wider investment community. A firm able to establish one of its views as a standard for a specific purpose will gain a powerful advantage in the market. Among other benefits, the firm will be able to use the power of its valued view to negotiate with the providers of other portals (which will want to include it among the views they offer) and with sources (which will wish to deliver products, information, or services to clients through the view).

The Schwab Select List could become a standard in this way. Other candidates include Intuit's Quicken InsureMarket view for insurance products or a HomeShark view for mortgage planning.

Distribution through Other Firms' Views

Firms won't always want to or be able to place their views in other providers' portals. But they may still want to market their products, information, or services through that portal. Such marketing will call for delivering data to a view already in the portal; the foreign view will then handle packaging, presentation, and client interaction.

For example, a firm might wish to list its mutual funds in the mutual-fund comparison views that some other company provides. Or a news service might want an integration service to mix its news reports with reports from other services and present them to the client in a way that fits the structure of the client's portfolio.

Third-Party Developers

Once portals begin to open up their architectures to other companies' views, we can expect a business of "view development" to emerge. Companies will compete either to provide specialized views for use with popular portals or to provide "private-label" views that other companies can market under their own names.

Fidelity's incorporation of a Quote.com view within its portal is a step in this direction, as is Excite's incorporation of Quicken.com into its search engine portal. Companies that are currently creating special-purpose stand-alone Web sites for marketing financial information and products are likely to begin packaging their capabilities as views and delivering them through portals. Potential examples include Quote.com for portfolio tracking and market information, Intuit's Quicken InsureMarket for insurance products and information, HomeShark for mortgages and mortgage information, and Inquisit's news gathering and delivery service. In doing so, view providers will be able to gain stable access to a wider population of clients and to offer clients greater value and usability. Again, increasing returns will apply: Popular portals will stimulate developers to create more views, which will make the portals more popular, and views' ability to work together in a system will attract customers.

Products: Dynamic Assembly and Customization

Traditionally, companies have offered a limited number of standardized products and marketed them to segments of clients with similar needs. Solving client problems called for selecting the best fit from the finite set of available products. We are moving toward a time of an unlimited number of personalized products, which companies will market to individual clients on a one-to-one basis. They will be able to create products on demand to match client-defined needs exactly. This movement grows out of the ability to increase value through customization and reflects the declining costs of customization in the new Internet environment. The earlier example of a mutual fund that liquidates itself over time is one type of customized product, in which the client derives more value than she would from a standard product because the new product fits her retirement plan exactly.

Views will define the context in which customization takes place. In automatic customization, products will be delivered to views, where they will find the information they need to customize themselves. For example, a self-liquidating mutual fund could be delivered into the client's retirement view and draw information from the view to reconfigure itself to fit the needs the view expresses, looking at the client's age, retirement date, retirement requirements, anticipated income, and so on. Manual customization (by an adviser) would similarly use the information in the client's views to direct the customization process and use the linguistic capabilities of those views to describe the results. These considerations emphasize the importance to the firm of promoting its own views. The company that defines the client's view controls the context for creating and evaluating products.

Clients: Value in Relationships

In Internet brokerage, clients take their initial value from inexpensive, convenient trades and ready access to market information. As they search for greater value, they will find it in their relationships with interpreters and sources.

Relationships offer value to clients in the form of trust and understanding. Trust allows clients to rely on guides to help them navigate amid the quantity and complexity of the financial choices available via Internet brokerage. Understanding is critical because only through continuing communication will clients be able to express their needs clearly and interpreters and sources be able to respond effectively.

Firms' revenue models will also begin resting on a relationship base. The fees that firms can earn from commissions are under extreme price pressure. As a result, financial services companies are seeking to strengthen their relationships with clients and then leverage those relationships to generate revenue. The innovation of mutual-fund marketplaces reflects this new paradigm. In this model, the brokerage firm managing the marketplace shifts its income from commissions on trades to a percentage of assets under management.

Media: Formalization of Communication

Standardization of financial communications is a process, not an event. The financial services industry will establish standards for particular kinds of communication, but it will continue to need standards for additional, more specialized aspects of financial management, and standards will need to evolve to meet changing marketplace needs.

Standards are in place for the interactions necessary to support transactional views. Soon to appear will be standards for communications via relationship views.

STRATEGIC QUESTIONS FOR THE FUTURE

Greater understanding of the changes ahead for Internet brokerage can provide a springboard for thinking creatively about routes to competitive advantage. The following questions are among the more interesting and potentially fruitful questions that arise from this study.

- *How should the firm view the client relationship?* Changes in the revenue models and cost structures of Internet brokerage may lead firms to reexamine their conceptions of clients and their value to the firm. For example, as transaction commissions decline, the emphasis may shift from evaluating clients by their trading volume to considering the amount of assets under management. New revenue opportunities may encourage companies to expand their idea of what constitutes their client base, perhaps to include all investors who use company portals or views.
- *How can firms leverage the infrastructure of Internet brokerage to build client relationships?* Clients and firms desire better relationships with one another. The Internet brokerage infrastructure of sources, interpreters, portals, and views can help companies strengthen these relationships—for example, by providing relationship views, opening the firm's portal to valued views, extending the firm's views with interpreter-accessible languages, and leveraging the value-adding capabilities of interpreters. The key is to provide value by providing context. Instead of offering bare transactions at the lowest possible price, companies can create and leverage structures that allow clients to communicate more naturally with the firm and its interpreters, as well as provide ready access to products, information, and services that more closely match clients' needs.
- *What new products will be possible in the Internet brokerage market?* Internet brokerage opens up a new range of product possibilities. Because views in portals capture information about client situations in a structured and well-defined way, customization of products will be easier than it has been in the past. Companies need to consider how best to apply those capabilities. The mutual fund that liquidates itself over the client's retirement years is one possibility among many. Mutual-fund marketplaces also illustrate the potential to take advantage of technological advances to deliver new kinds of financial products.

- *What steps might make interpretation more effective?* Identifying common elements in processes of interpretation is the first step toward making advisers and automated interpreters more effective. Common activities include interviewing clients, constructing plans, filtering news or product information, monitoring portfolios, reporting results, and communicating with clients. Companies can build capabilities supporting these activities into their views.
- *What capabilities can companies market most effectively through others' portals?* A number of firms' existing capabilities are candidates for packaging as views to market to a wider community. The success of such efforts will depend both on clients' needs in existing portals and on portal operators' self-interest in providing other firms' offerings to their clients. Possible offerings include retirement planning, high-yield bond selection, mutual-fund selection, options pricing, and portfolio allocation.
- *Which views from other companies will provide the greatest value to portal clients?* Firms can gain advantage by signing up and integrating valued views earlier and better than their competitors do. Thus, companies need to scan for and monitor information that other vendors or potential strategic partners may be willing to provide—and find and contract for these offerings before competitors do.
- *How can companies integrate products, information, and services from outside sources into their views?* Better integration improves value for the client and strengthens the competitive position of the firm's views and portal. It also opens the possibility of greater revenue from some of these outside sources. A company can present products and information from external sources in separate windows. Or it can add value by bringing together content from multiple sources and delivering it into the client's views. This approach streamlines the client's access to and use of products and information; it also strengthens the interpretative processes that take place on the client's behalf.
- *How do media standards influence the competitive position of the firm's portal and views?* The implementations of views, portals, and automatic interpreters all depend on transmission of information via media standards (such as OFX). Firms need to understand how these standards affect the competitive position of their infrastructure components, as well as how they can influence standards to improve their position. The first firm to release views compatible with a new standard is likely to gain an advantage in the relevant application area. Thus, companies are wise to focus development efforts on the areas likely to standardize first, or to try to influence the pace of standardization to reflect their own development schedules.

The next few years will be an exciting time for Internet brokerage. The financial services industry has just begun to tap the possibilities of value for clients and firms. Thinking carefully about the structure of Internet brokerage and its likely evolution can help firms make the most of this time of opportunity and growth.

Table 2
WEB SITES OF COMPANIES IN THIS TEXT

Century 21	http://www.century21.com
Charles Schwab & Co.	http://www.schwab.com
CNN/fn	http://www.cnnfn.com
DLJ Direct	http://www.dljdirect.com
Dow Jones	http://www.dowjones.com
Etrade	http://www.etrade.com
Excite	http://www.excite.com
Fidelity	http://www.fidelity.com
First Global Commerce	http://www.hp.com/pressrel/dec97/02dec97h.htm
Home Shark	http://www.homeshark.com
Inquisit	http://www.inquisit.com
Intuit	http://www.quicken.com
Intuit Quicken Insurance Market	http://www.quicken.com/insurance
Marimba	http://www.marimba.com
Microsoft Investor	http://investor.msn.com
New York Times	http://www.nytimes.com
Open Financial Exchange	http://www.ofx.net/ofx
Point cast	http://www.pointcast.com
Prudential	http://www.prudential.com
Quote.com	http://www.quote.com
ValueLine	http://www.valueline.com
Yahoo!	http://www.yahoo.com

Source: Author