

THE RACE FOR SELF-DIRECTED INVESTORS

DEVELOPMENTS IN ONLINE TRADING AMONG BROKERS AND BANKS

Alexander Camargo, Isabella Fonseca

OLIVER WYMAN

A CELENT REPORT PREPARED FOR:



499 Washington Blvd, 11th Floor Jersey City, NJ 07310

toll-free: 866.724.8268 phone: 646.452.0050 fax: 646.452.0049

info@scivantage.com www.scivantage.com

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THE ONLINE BROKERAGE INDUSTRY

DEFINITIONS AND SEGMENTATION

The online brokerage market comprises of investors with a wide range of trading activities, demographic profiles, and risk tolerances. Celent defines investors in the following three categories:

- **Traditional investors.** Long-term investors with sporadic trading activity (<3 trades per month). This defines the largest proportion of self-directed investors.
- Active investors. Investors trading between 3 and 10 trades per month. Active investors tend to use a wider range of tools as compared to traditional investors.
- Active traders. Investors trading over 10 trades per month. This group of investors tends to be more self-directed and is less interested in advice. Occasionally, firms will define a fourth segment for those who trade hundreds of times per month. These "hyperactive traders" tend to consist of individuals who trade for a living or may trade on family accounts.

Active investors and active traders share similar characteristics in that they tend to be more sophisticated and demand enhanced tools. However, their trading frequency differences necessarily affect each segment's preferences. Active investors and active traders both demand advanced trading capabilities, integrated charting features, and real-time market information, however, active traders are more sensitive to commission rates, execution speed, access to a variety of venues, and availability of streaming information. Active investors, on the other hand, put more weight in availability of services such as education, networking, mobility, and the availability of advisory support for trade suggestions. The biggest segment of the active investor and active trader market are 35-to 55-year-old males. However, women are increasingly becoming active investors and active traders, and a sub-segment of older men is emerging within these markets.

Celent has placed online brokers in a taxonomy that groups US brokerage firms by client segmentation, as shown in Table 1. Firms are categorized according to the characteristics of their typical users, focusing on traditional investors, active investors, or active traders. Within the traditional investor segment, firms are classified by business model as publicly traded stand-alone firms, private stand-alone firms, wirehouses, bank broker-dealers, independent broker-dealers, or asset managers. Within the active investor and active trader segments, firms target either quasi-professional traders or non-professional traders. The quasi-professional designation is based on the types of tools and information used by the client set, and includes such things as sophisticated charting and back-testing of investment strategies and the ability to build complex trading strategies across asset classes.

Over the past several years, the number of trading platforms has expanded, leading to a fragmented market. Since 2010, a number of firms targeting the active investors and active traders have emerged. There are now a number of firms focused specifically on options, futures, and equities trading, including eOption, OptionsHouse, OptionsXpress (now owned by Schwab), and TradeMonster. Additionally, a number of bank brokers, insurance groups, mutual fund providers, and private wealth managers have enhanced their online trading capabilities to supplement their other wealth management services. These firms use their online trading capabilities to target their existing customer base and try to capture assets previously held at stand-alone discount brokers via cross-selling into different accounts. These online services are also aimed at banking customers with too few assets to hold advisory-based accounts. The goal is to capture these customers

early, allow their wealth to grow, and then cross-sell into fee-based accounts once they have more wealth.

Table 1: Online Brokerage Taxonomy

PREDOMINANT CLIENT SEGMENT	PREDOMINANT PRODUCTS	BUSINESS MODEL	REPRESENTATIVE FIRMS
Active to hyperactive	Stocks Options Futures FX	Active trader	Cobra Trader
traders (tens- hundreds of trades per month)		platforms	Interactive Brokers
per monun)	ΓA		Just2Trade
			LightSpeed
			MB Trading
			SureTrader
			TradeStation
			thinkorswim platform from TD Ameritrade
Active Investors and lower end active	Stocks Options	Focus on stock and	eOption
traders (3-tens of trades per month)	Mutual Funds ETFs	options trading	OptionsHouse,
liades per month)			OptionsXpress (owned by Schwab)
			SpeedTrader
			TradeKing
			TradeMonster
Traditional Investors and Active Investors	Equities, Mutual Funds	Large Publicly Traded Standalones	Charles Schwab
(<10 trades per month)	ETFs Bonds		E*Trade
,	Retirement products, increased trading in options		TD Ameritrade
		Other Standalones	ChoiceTrade
			Kapitall
			Scottrade
			Sogotrade
		Asset Managers	Fidelity
			Vanguard
		Bank Broker-Dealers (partially advisor dependent) Emerging Bank Broker-Dealers	Merrill Edge (Bank of America)
			WellsTrade
			Sharebuilder (Capital One)
			US Bank

PREDOMINANT CLIENT SEGMENT	PREDOMINANT PRODUCTS	BUSINESS MODEL	REPRESENTATIVE FIRMS
Traditional Investors	funds, ETFs, retirement	Other Bank Brokers, typically regional banks	Examples include: Associated Bank, First Tennessee Bank, Bank of the West
	products	Other wealth managers, insurance groups, etc.	Examples include: American Century, TIAA Cref, USAA

DEVELOPMENTS AND TRENDS

Celent highlights a number of key trends in the evolution of the online brokerage industry:

• Leading indices continue to improve. S&P and Nasdaq indices have doubled since their 2008 lows, as shown in Figure 1. Despite lower volatility since fall 2012, yearly shocks to the financial markets (summers of 2010, 2011, and 2012) have caused drops in the market indices and spikes in volatility indices. Active traders take advantage of market volatility to make short-term investment returns.

130 120 110 100 90 80 70 60 50 40 May-08 May-09 May-10 May-12 May-11 S&P -NASDAO

Figure 1: Equity Markets Indices (Normalized)

Source: Yahoo Finance

- **DART growth is flat.** Despite these significant improvements in the market indices, daily average revenue trades (DARTs) at major online brokerages and active trader firms have fallen within small ranges since 2008.
- Number of accounts is growing across all segments. While each firm's DART metrics are not significantly changed (Figure 2), the number of accounts at brokerages continues to rise. Figure 3 demonstrates that accounts at online brokers have grown, regardless of which customer segment the broker primarily targets. This figure shows that accounts have increased most dramatically at brokers who target active traders, though accounts at brokers whose primary customers are traditional investors and active investors have enjoyed strong growth as well. As accounts have grown, so too have client assets.
- Trade activity per account is decreasing. The fact that accounts have continued to rise but DART growth has remained stagnant at firms suggests that average DARTs per account (measured on a rolling basis) has decreased. The implication of less activity per account is a challenge that online brokers are looking to overcome by adding a diverse array of products that tend to encourage more trades and multiple positions such as options, futures, and FX.

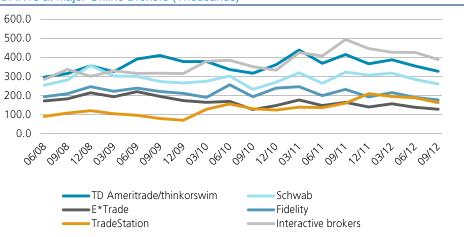
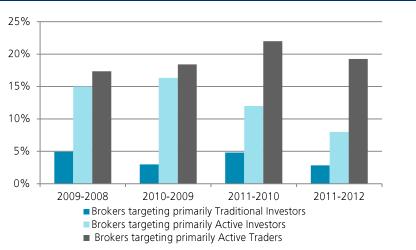


Figure 2: DARTs at Major Online Brokers (Thousands)







Source: Celent, SEC, company reports

- Commission models and rates settle, but promotions continue. After several years of lowering commission rates, many firms have maintained their current commission rates for 12–18 months. However, firms continue to offer promotions so as to attract new investors. For example, brokers with banking accounts offer cash incentives for investors who open bank and brokerage accounts and maintain a certain account balance. Brokers targeting the active trader exclusively emphasize lower commissions per trade or per options contract as compared to other online brokers.
- Increased focus on active investors and active traders leads to acquisitions, platform enhancements, and emerging firms. Starting as early as 2010, there has been a sustained focus on the active investors and active traders. This has resulted in a number of changes from a brokerage landscape perspective:
 - New platforms. To keep up with the market, firms are consistently improving their platforms with new tools focused on the active traders. Some of the latest additions include advanced orders, new charting capabilities, back-testing, access to research, and streaming quotes. Over the past year, many firms have gone beyond merely adding new tools and have made major releases with newly branded platforms. Some examples include: Charles Schwab's development of

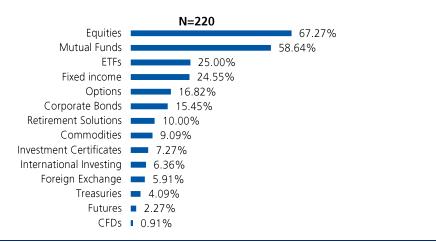
StreetSmart Edge for active traders, TD Ameritrade's Trade Architect for the active investor market, E*Trade 360, and ScottradeELITE, among others.

- Mergers and Acquisitions. Over the past 18 months, there have been a number of mergers and acquisitions among firms looking to consolidate or improve their position in the active investor or active trader market. For example: TradeKing merged with Zecco to create a brokerage with nearly 500,000 accounts. This helps consolidate its position in the active investor market. TradeStation acquired FX broker IBFX to enhance its position in FX market. Charles Schwab acquired optionsXpress, which allows Schwab to offer multiple platforms for options trading, and gives customers the ability to trade stocks, options, and futures through one platform.
- New firms emerge. Several new online brokerage firms have emerged, focusing on stock and options trading for the active investor and active trader. These firms include but are not limited to: eOption, OptionsHouse, Cobra Trader, MB Trader, and SureTrader. The focus on options is based on the assumption that investors who trade options are more active, generating greater commissions through multiple leg positions.
- The percentage of female investors is rising. For nearly five years, the percentage of female account-holders has increased among traditional investors. Over the past 18 months, however, the percentage of female active traders has also grown. By as late as 2010, women frequently made up 3–6% of active trader accounts. Women now make up approximately 7–12% of active trader accounts.
- The average age of the active trader is creeping up, with a large group of individuals aged 45 and over opening active trader accounts. Layoffs on Wall Street and in other financial services sectors have left a large number of middle-aged men seeking sources of income. These individuals have significant knowledge of the financial markets, but cannot find new employment and are too young to retire. As a result, they are opening self-directed investment accounts and are actively trading.
- **Diversification of products.** It is now expected that every trading platform offers some form of options trading; even the .com web trading platforms offer level 1 options trading. Increasingly, brokers are adding futures and international equities to their asset class list. FX remains largely an active trader asset class.
- Diversification of business offerings. To protect themselves against lower commissions and slow growth trade volumes, some firms have expanded their offerings to include related banking and investment solutions including checking, money market, and savings accounts. There has been a particular emphasis on retirement (both products and tools/services), and on fee-based managed account services among the larger online brokerages.
- Bank brokers are becoming increasingly engaged in the online channel. To stem asset outflow to discount brokers, many bank brokers are enhancing online trading tools. Whereas many large online brokers are now adding banking, managed account, and hybrid advisory services to their traditional online brokerage tools, bank brokers are coming from the other end of the spectrum—they already offer banking, full service advisory, and managed account products, and are now looking to enhance online brokerage offerings.

PRODUCTS

Over the past several years, retail investors have demanded an increasingly diverse set of products. In a survey conducted by Celent, retail investors were asked which products they traded through their online brokerage, and the results are in Figure 4. As demonstrated by this figure, equities, mutual funds, ETFs, and fixed income products are common. Trading options products has also become increasingly common. Investors were also asked which products they would like access to, if currently not available through their broker. The results illustrated that investors are looking for greater access to international equities and FX, which are not currently supported by many online brokers.

Figure 4: Survey of Investors "Which Products Do You Trade Through Your Online Brokerage?"



Source: Celent

From 2008-2010, investors preferred to put their money in fixed income securities, with retail holdings of fixed income securities reaching its peak of US\$5.4 trillion. Holdings of fixed income securities have since receded; municipal securities, corporate and foreign bonds, and agency-backed instruments are all lower than last year. Retail holdings in treasuries remain on par with 2010 highs. By Q3 2012, retail holdings of fixed income fell to ~US\$4.6 trillion.

On the other hand, US retail holdings in equities have rebounded from a difficult year in 2011. Both indirect and direct holdings of equity hit five-year highs in Q3 2012 (Direct holdings US\$9.8 trillion, indirect holdings US\$10.5 trillion). It is important to note that while equity holdings have rebounded since the 2008 five-year low, Q3 2012 holdings are still 3% lower than they were in 2007. Furthermore, much of the rebound has to do with improvements in stock values as opposed to increased inflows of direct and indirect equity holdings. Despite recent pull-backs in market indices, they continue to hover near all-time highs.

Retail holdings of mutual funds have increased by over US\$2 trillion since the 2008 lows. After a nearly 30% drop in 2008 from the prior year, retail holdings of mutual funds have increased over 60% since this low and over 5% since last year (as of Q3 2012). It is important to note, however, that this rebound is largely due to improved value of assets as opposed to net inflows. Many investors have preferred to allocate their assets to ETFs, where both inflows and value of assets has led to a significant increase in the value of retail holdings of ETFs. ETFs have doubled since 2007 to reach ~US\$1.3 trillion by Q3 2012, with the vast majority of holdings in corporate equities.

Both options and foreign exchange trading volumes increased rapidly from 2003 through 2008 and leveled off in 2009. After a slowdown in growth in 2009, options volumes from 2010–2012 continue to increase, whereas trading in foreign exchange has leveled off at 2010 level. The price volatility and increased familiarity of options among self-directed investors has driven some of this growth. Brokers have put significant effort in educating their clients on options use. This is not an entirely altruistic endeavor: options investors are more active, generating greater commissions through multiple leg positions.

CLIENT SEGMENTATION

PRODUCT PREFERENCES AND TRADING BEHAVIORS

Table 2 provides a summary of the major differences between customer segments in the self-directed market.

Table 2: Investor Preferences

TYPE OF INVESTOR	PRODUCT PREFERENCES	COMMISSION EXPECTATIONS	EDUCATION PRIORITIES	PREMIUM FEATURES
Traditional Investors	Equities, Mutual Funds, ETFs, Bonds, Level 1 Options Retirement products (IRAs, annuities)	Will tolerate higher commissions for added guidance and advice; prefer clear, flat rates	Increasing familiarity with products, particularly with regards to options	Portfolio analysis Some charting and advanced trading features are increasingly expected. Retirement calculators and goal tracking
Active Investors	Equities, Mutual Funds, ETFs, Bonds, Level 1 & 2 Options Retirement products (IRAs, annuities). Increasingly, FX and Futures	Low commissions, flat rates. Not as sensitive to commissions as active traders.	Complex trading strategy of options, futures. Portfolio analysis with technical tools and peer-driven content	Mobile trading/ account management Advanced charting and advanced trading orders Portfolio analytics tools Real time market information and premium research Highly customizable platform
Active Traders	Equities, Mutual Funds, ETFs, Bonds, Level 1 and 2 Options, Futures, FX, Commodities	Low, flat commissions; Certain number of free trades per month.	Strategy and portfolio analysis from premium research, peer- driven content, and technical analysis tools.	Streaming data Superior execution speed and direct market access with multiple routing choices Automation capabilities Fully customizable platform Advanced market analysis, research, and charting.

Source: Celent

A number of online brokerage firms have entered the FX market so as to compete with the traditional FX online brokers. Active trader firms such as TradeStation, Lightspeed, and Interactive Brokers have allowed customers to trade currencies alongside other

products from a single account. In order to gain traction in the FX market, TradeStation purchased IBFX in November 2011. Increasingly, firms with predominantly traditional and active investor clients, but who are looking to gain greater traction in the active trader market, are offering FX as well. For example, Fidelity, E*Trade, and TradeKing now offer currency trades to their customers. In addition, Schwab has introduced its Global Trading Account where investors can trade stocks on foreign markets in their local currencies. The account also provides real-time quotes during foreign market hours.

As has been noted, many of the larger brokers with considerable size, scale, and a branch presence are expanding their product selection to offer fee-based products such as model portfolios and managed accounts. These products help protect brokers against depressed trading activity. The expansion into managed accounts represents an important shift in the online brokerage world. Firms offering these products are taking advantage of technology to offer a "hybrid" version of service and advice. To complement these products, firms are offering a greater number of tools around portfolio analysis and retirement planning, among others.

RETIREMENT

Starting in early 2011, the first wave of baby boomers turned 65. For the next decade 10,000 baby boomers will turn 65 every day. Such staggering statistics continue to drive the need for retirement products and services. To take advantage of these trends, online brokers have been offering retirement products such as IRAs (traditional, Roth, Rollover IRA) and annuities for several years. Of late, brokers have entered a new phase in offering retirement services and tools for their customers.

Online brokers are now more frequently dedicating extensive resources and tools to bring together a unified "Retirement Center." This center offers a full suite of planning, calculation, portfolio analytics, and product services. In addition, the larger online brokerages (publicly traded stand-alone and asset managers) are leveraging their hybrid model of service (described above) to offer advice through their branches or via call centers. Bank-brokers are also beginning to build out their online retirement tools to complement retirement planning advisory services.

Online brokerages with a retirement center offer robust planning and calculation services. These planning tools are often broken down into subheadings with an eye to the investor's stage of life, as described below.

• Getting Started

- Budgeting tools, calculators, and basic information about retirement products are typically offered. Firms allow investors to create risk profiles and basic model allocations.
- These tools cater to those young investors who are at the start of their careers and who are interested in starting to save for retirement. Calculators determine how much investors need to save based on a variety of factors such as desired lifestyle, current savings/debt, risk tolerance, and current or expected income.
- Maintenance or "On Your Way"
 - Firms offer monitoring tools and portfolio analytics for those investors who already have retirement accounts.
 - These investors tend to be in the middle of their careers and may also be interested in education savings products (529 Plans, ESAs). Online brokerages will often push investors at this stage towards standard self-directed brokerage accounts to maximize profits.
- New Retirement or Near Retirement
 - For individuals who are near or at retirement, firms offer tools to roll over and consolidate accounts, and emphasize upgraded IRAs.

- Monitoring and budgeting tools are also important at this stage to manage cashflows.
- Firms will also offer basic estate planning calculators.

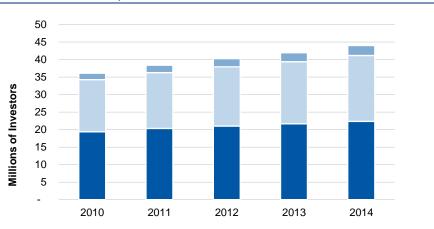
Throughout each of these stages, online brokerage firms have been adding tools around portfolio monitoring and allocation. This allows investors to ensure that current investments remain within risk tolerances and portfolio allocations. Phone-based advice and analysis is also becoming an increasingly important service when considering retirement.

SIZING THE MARKET

Celent estimates that the US self-directed market reached just over 40 million investors in 2012. The number of self-directed accounts continues to increase, despite challenging market conditions for retail investors. Over the past year, Celent estimates that the market has grown at a moderate pace of 5%. Traditional investors make up the bulk of the self-directed population (52%), although this population continues to rebalance towards active investors and active traders.

Traditional investor growth of 3% in 2012 represents a modest rate as compared to active investors and active traders. The active trader segment continues to witness the most aggressive growth rates of 14% and 12% over the last two years. However, this market remains a small segment of the total self-directed population, comprising only 6%. The active investor market has demonstrated growth rates of 7% and 6%, respectively, over the past two years. By end 2012, the active investor market reached nearly 17 million investors, making up 42% of the self-directed market.

Both active investors and active traders present a significant opportunity for firms, with aggressive growth rates as compared to the traditional investors. It should be noted, however, that these growth rates have slowed since 2010, and 2013 will likely be a year of more modest growth in the active investor market. Figure 5 shows the investor population breakdown and growth potential.





Traditional Investor = Active Investor = Active Trader

Source: Celent

TOOLS CHANGING ONLINE BROKERAGE TECHNOLOGY

THE STATE OF TRADING PLATFORMS

In response to demands from more knowledgeable clients, brokers are increasingly supporting a wide variety of different order types. This is particularly important for those trading platforms designed for the active investor and active trader. Table 3 outlines order types commonly supported on web platforms for traditional investors from stand-alone online brokers, bank brokerage online account platforms, and flagship/active trader platforms.

Table 3: Order Types Supported

	ORDER TYPE	WEB PLATFORM (NON-BANK BROKERS)	BANK BROKER ONLINE PLATFORM	FLAGSHIP / ACTIVE TRADER PLATFORMS
Standard	Market, Limit, Stop Loss, Stop Limit	XX	XX	XX
Trailing	Trailing stop loss \$ Trailing stop loss % Trailing stop limit \$ Trailing stop limit %	X X X X	- - -	XX XX XX X
Open/close	Market on open Market on close Limit on open Limit on close	X X X	X X	X XX X X
Linked	Conditional Multi-contingent	X -	-	XX X
Advanced	One Cancels All (OCA) One Cancels Other (OCO), One Triggers All (OTA), One Triggers Other (OTO)	- - -	- - -	X X X X
Advanced	OTOCA , OTOTO, OTOCO, O Market if Touched, Limit if Tou if Touched, Trailing Limit If Tou	ched, Trailing Market	client base is not p	e. Brokers whose

Relative/Pegged, Bracketed, Market to Limit

trader have yet to include these order types, even on flagship platforms.

Source: Broker surveys, Celent

XX = Commonly supported, X = Growing support, - = uncommon support

As more products are being offered to all customer segments, online brokerage firms must find new ways to appeal to their customers, especially to the active investor and trader. The active investor and active trader have access to more sophisticated platforms, offering basic functionalities for standard trading as well as the most complete set of market data, alerts, watchlists, keyboard shortcuts, screeners, and a variety of integrated charting tools trading. All platforms emphasize speed and ease of trading many products. Furthermore, online brokerages have worked on making all platforms more customizable for each user. Downloadable platforms focus almost exclusively on trading and are therefore less likely to include money movement and account opening functionalities. Table 4 outlines the functionality support among online brokers' flagship trading platforms.

Table 4: Functionality Support for Flagship Platforms

FUNCTIONALITY	FLAGSHIP AND/OR ACTIVE TRADER PLATFORMS
Advanced charting	XX
Back-test trading	XX
Portfolio monitoring (profitability of each trade)	XX
Point and click order entry	XX
Allow multiple watch lists open	XX
Access to IPO information	Х
Account opening (real-time)	Х
Money movement: - ACH, Transfers, Wires, Checks, Others	Common in web versions of platforms
Alerts and notifications	XX
Auto trade	XX
Auto invest	Common in web versions of platforms
Block trade	Х
Analysis tools (charting, analytics)	XX
Portfolio reporting	XX (making enhancements)
STP integration to trading	Х
Real-time market information, news	XX (making enhancements)
Overlay management	-
Decision Engine (rules & Workflow): - Approval rules, Options margining, Review and release, Order routing, Booking for settlement, Audit trail to monitor exceptions	XX (options margining, order routing); X (all others)
Account Management: - Real-time access to balances/positions, Account history, Search capability, Cross account views	XX (for all)
Administration console: - Create users, Set up user preferences, Access review and release for operations ,User reports	XX (for all)
Different system access levels depending on of user	XX - common for those who have multiple user types (Schwab, TD, etc)
Market Trading after hours	-
Integration with/link to: - mint.com, hellowallet, sigfig, wikinvest, Tax reporting (TurboTax, H&R Block, etc)	XX (Tax reporting, mint.com) X (hellowallet, sigfig)

Source: Broker surveys, Celent XX = Common support of dedicated app/top priority; X = some support, usually in most advanced apps/in development; - = uncommon

STATE OF CLEARING PLATFORMS

Over the past two years, clearing platforms such as Pershing and National Financial have continued to enhance their offering to include online trading portal functionality for a firm's front end (client-facing UI). For example, Pershing's NetExchange Client latest version was launched in 2008, with a redesigned effort in July 2012, and NFS' myStreetscape released significant enhancements in 2011. Such enhancements have been to the benefit of mid-tier banks and financial services firms who already rely on these vendors' clearing and do not have the internal resources for building out a trading platform.

Table 5 provides a summary of common asset class and order type support at clearing firms. Currently, clearing firms commonly support the basic order types, but are adding support around contingent and trailing orders. As clearing providers look to engage their clients more actively in the online brokerage space, support of new order types and products will be increasingly important.

ASSET CLASSES	ORDER TYPES
Common Equities, Fixed Income, Mutual Funds, ETFs,	Standard: Market, Limit, Stop Loss, Stop Limit;
Options Level 1	Trailing: Trailing stop loss \$/%, trailing stop limit \$/%
Options Level 2, Futures, FX	Open/Close: Market on Open/Close, Limit on open/close
	Conditional.
	Equities, Fixed Income, Mutual Funds, ETFs, Options Level 1

Table 5: Common Order Types, Asset Class Support at Clearing Firms

Source: Clearing firms, Celent

Table 6 outlines functionalities supported at clearing firms. Currently, clearing providers are enhancing their abilities to provide an integrated banking and brokerage experience. Clearing providers have not yet built UIs for banking and brokerage, nor a single dashboard to view both banking and brokerage (though providers can fill data if customer hosts dashboard on its site). Over the next year, clearing providers will continue to enhance the UI experience, and add more portfolio reporting, and analysis tools.

Table 6: Clearing Firm Online Trading Functionality

FUNCTIONALITY	CLEARING FIRM ONLINE TRADING PLATFORM
Single sign-on for banking and brokerage	Х
Single UI for banking and brokerage	-
Dashboard to view both banking and brokerage assets	Х
Account opening (real-time)	Х
Advanced charting	Х
Back-test trading	-
Portfolio monitoring (profitability of each trade)	XX

Point and click order entry	XX
Allow multiple watch lists open	Х
Access to IPO information	XX
Money movement: - ACH, Transfers, Wires, Checks, Others	X
Alerts, notifications and watchlists	XX
Auto trade	-
Auto invest	-
Block trade	-
Analysis tools (charting, analytics)	XX (emphasis on enhancements for 2013)
Portfolio reporting	XX
STP integration to trading	XX
Real-time market information, news	XX
Overlay management	-
Decision engine (rules & Workflow): - Approval rules, Options margining, Review and release, Order routing, Booking for settlement, Audit trail to monitor exceptions	XX
Account Management: - Real-time access to balances/positions, Account history, Search capability, Cross account views	X (Enhancement to search capabilities)
Administration console: - Create Users, Set up user preferences Access review and release for operations ,User reports	XX (for all)
Different system access levels depending on user	XX
Market Trading after hours	XX
Integration with/link to: - mint.com, hellowallet, sigfig, wikinvest Tax reporting (TurboTax, H&R Block, etc)	XX (tax reporting only)

Source: Clearing Firms, Celent

XX = Common support of dedicated app/top priority; X = some support, usually in most advanced apps/in development; - = uncommon

CLOUD

Cloud computing is a general term used to describe hosted services that are delivered over the internet, with the advantage that users can access scalable capacity on demand. In some ways, the cloud is not a new concept for the online brokerage community. Several firms have web platforms that allow users to customize the layout, save it, and access the layout from any computer. There are several advantages to cloud-based trading:

- The ability to store and access configured layouts and preferences on any computer;
- The broker maintains the servers and most recent versions of the platform, as well as customer layouts;

- It does not require any specific operating system. This is important for Mac users who
 no longer have to worry about compatibility issues with downloading software;
- The broker maintains the latest security settings;
- Users can log in directly through the broker's website.

While the cloud is not a new concept, 2012-2013 could be considered the year that many online brokers embraced cloud-based platforms for advanced traders. The next generation of cloud-based platforms is likely to include most of the bells and whistles of the downloadable trading platforms designed for active traders, including streaming data, back-testing, interactive charting, etc. For example, TD Ameritrade's Trade Architect (designed for traditional investors and active investors) allows clients to customize their layouts and save them, and Charles Schwab has launched its previously downloadable active trader platform, StreetSmart Edge, with all the same tools in the cloud.

Thus far, a cloud-based platform with all the available trading tools is a developing concept. Security, execution speed, and availability of tools have been concerns among active investors and active traders about cloud technology. Furthermore, maintaining both a downloadable and cloud-based flagship platform (in addition to the simple, web-based platform) is an expensive and resource-heavy proposition for many brokers. However, as retail investors purchase more devices, and as the younger generation of investors who are comfortable conducting business online enter the market, Celent expects brokers to invest in cloud-based platforms for the active investor and trader.

MOBILE

Among many online brokers, mobile is no longer a nascent technology. Brokers are moving beyond standard trading of equities and the ability to view balances, and are now offering a mobile app that supports trading of stocks, mutual funds, ETFs, and options (simple and complex) in one platform. Some mobile apps even support trading of futures and FX as well. New versions of apps include advanced functionalities around charting, streaming videos, and access to research. Table 7 outlines mobile functionality support.

FUNCTIONALITY	SUPPORT
Trading equities, mutual funds, ETFs, options on one platform	XX
Trading futures, FX, plus above products on one platform	Х
View Balances, Positions, and Transfer Funds	XX
Access news, quotes, charts	XX
Streaming market data	Х
Alerts	XX
Trade Reports/Research, Videos	Х
Remote deposit capture	Х
Bill Pay	In banking apps for bank-brokers with online trading.
Integrated banking/brokerage app	XX for online brokers with banking services; - For regional bank-brokers with online trading

Table 7: Mobile Functionality

Source: Broker surveys and websites, Celent XX = Common support of dedicated app/top priority; X = some support, usually in most advanced apps/in development; - = uncommon

Additionally, brokers have moved to support more operating systems. Table 8 demonstrates support across operating systems for independent online brokers, active trader-focused brokers, and bank brokers. Windows' recent sales efforts and the announcement of Blackberry 10 are likely to influence development of native or hybrid apps on the Blackberry and Windows platforms.

TYPE OF BROKER	IPHONE	ANDROID	BLACKBERRY	WINDOWS PHONE	IPAD
Stand-alone independent brokers	XX	XX	Х	Web-enabled	Х
Active trader brokers	Х	Х	-	-	Х
Bank brokers	Banking app only	Banking app only	-	-	Banking app only

Table 8: Broker Support of Mobile Platforms

Source: Broker surveys and websites, Celent

XX = Common support of dedicated app/top priority; X = some support, in development; - = uncommon

In early 2011, mobile technology generated very little in the way of commissions for brokers; mobile trades frequently made up approximately 1-2% of overall trades. Though current trade volume metrics via mobile apps vary depending on the specific broker, all brokers have reported a significant increase in mobile use and trade volumes via mobile apps. Among online brokers, mobile trades via mobile apps have more than doubled since the beginning of 2011, and have grown 50-70% from year-end 2011 to year-end 2012. Generally speaking, mobile trading has increased from roughly ~1-3% of DARTs in early 2011 to 5-8% by October 2012. Brokers also measure the number of unique log-ins and mobile downloads, which have doubled at many firms.

Over the past year, brokers have considered the strong consumer adoption of the iPad as an indicator that they must get out in front of developing a trading platform for tablets. These assumptions have been buttressed by recent sales figures showing that Apple sold over 22 million iPads in Q4 2012 alone, an increase of nearly 50% over the prior year.

Tablet development should be a welcome opportunity for online brokers since the larger screens are generating opportunities for brokers in the mobile channel. Unlike mobile phones, where the small screen limits the UI, tablet apps are more conducive to viewing videos and technical indicators, accessing analyst reports and research, and using interactive charting tools. In addition, brokers can develop trading platforms that give users the ability (similar to their PC trading platform) to configure the trading screen and set up their preferences. Since brokers have focused on developing native or hybrid apps, some firms are boasting that their upcoming tablet app will be better than their current basic web trading platform.

It is important to note that despite such positive signs, there are still some inherent challenges for trading on mobile devices. Ultimately, mobile trading is limited insofar as the hardware of both mobile devices and tablet place functional limitations on the number of tools an investor can use on the tablet. The use of shortcut keys, larger screens, and ease of using a keyboard make PCs more conducive to powerful functionalities used by

active traders. As Table 8 suggests, mobility for the active traders is still a dubious proposition. Furthermore, measuring success of a mobile app is still a difficult proposition for online brokers, since there are weaknesses in measuring success in terms of DARTs via a mobile device. For example, an investor may get an alert on a stock price sent to his iPhone, but then place the trade once he gets to his PC. This would be tracked as a trade via PC, but it was the alert (on the mobile device) that drove the trade. However, other methods of measuring success have inherent weaknesses as well: tracking the number of user downloads says nothing about use, and tracking log-ins by itself does not indicate whether the log-in created any action. As such, online brokers are tracking DARTs, downloads, log-ins (both recurring and new), and time spent on the app as a way to determine success.

For those brokers offering both banking and brokerage, there is a unique opportunity to differentiate oneself in the mobile channel by further integrating mobile banking and mobile brokerage. This integration will allow users to have a single sign-on, common UI, and the ability to view holdings in various accounts, move money, and utilize functionalities typically seen in either banking apps (such as remote deposit capture) or brokerage apps (place trades, access news and quotes, etc.). Thus far, the large publicly traded online brokers with banking operations such as Charles Schwab, E*Trade, Merrill Edge (Bank of America), and TD Ameritrade have led the way in terms of having an integrated bank-brokerage app. As Table 8 demonstrates, typically bank-brokers have launched a mobile banking app, but have not developed any mobile trading functionality. These firms should consider leapfrogging the initial phase where they maintain both banking and brokerage apps, and begin developing an integrated mobile app.

SOCIAL MEDIA/COMMUNITY

When analyzing the broader financial services industry, online brokerages have been at the forefront of social media and the development of social communities. In some ways, little has changed over the past 18 months as it relates to social media and the online brokerage space. Many of the same firms that were extremely active in developing a complex social media strategy 18 months ago are still very active, whereas many of the same firms that offered little in the way of social media are still offering little. Furthermore, many of the private trader networks have the same functionalities as they did previously. These social networks allow users to create profiles, share trades or trading ideas, follow other investors, and access blogs or daily chat rooms. Lastly, Facebook, Twitter, and Youtube remain common third party social communities on which online brokers participate.

There are, however, a number of ways in which the use of social media has evolved. In the past 12 months we have seen social media evolve in the following aspects:

- Participation on third party social communities has greatly increased. Whereas in mid-2010 online brokers had fewer than 10,000 followers on Facebook and Twitter respectively (in some cases, less than 1,000 followers), the number of participants on these sites has exploded. For example, as of January 2013, Sharebuilder has over 34,000 "likes" on Facebook and 4,500 Twitter followers; and Scottrade has 33,000 "likes" on Facebook, 20,000 followers on Twitter, and over 1 million video views on Youtube.
- Third party social communities as service channels. "...We had a hiccup this morning but everything is cruising along now. Give us a ring if you're still having issues 800-000-000." Facebook, Twitter, and Youtube remain an attractive venue to highlight new tools and promotions, as well as provide news and events. However, strategies have evolved past information dissemination to customer engagement. Online brokers are also recognizing that these sites can become a key customer engagement and service channel. In many cases, firms will start up conversations with customers on given topics and track what clients say or what is "liked." This

provides valuable sentiment data that has been typically reserved for standardized customer surveys. Furthermore, online brokers are engaging on a customer service level as well. Administrators will respond to public inquiries about products and services, or address specific customer inquiries/challenges. Lastly, we have begun to see simple retirement tools such as financial calculators on Facebook pages.

- This increased sophistication in third party social media has created a differentiated strategy between Facebook, Twitter, and Youtube. For example, Youtube has been a particularly useful channel for education in which brokers can post webinars, op-ed and market analysis videos, and platform tutorials. Twitter, on the other hand, has been designed to post news and promotions, as well as engage with customers around specific topics or inquiries. Facebook includes many of the same features as Twitter, but also includes videos, customer reviews, corporate information, information around products, and even simple tools like retirement calculators.
- Online brokers have noted that these customer service initiatives have lowered call volumes, allowing service representatives to acknowledge and address simple inquiries directly from social media sites, whereas the challenging or sensitive questions are addressed over the phone.
- Private social networks have seen increased use and more customer engagement. Although many of the core functionalities within private trader network remain the same, online brokers have seen an increase in unique profiles created. Furthermore, administrators are more commonly addressing concerns and inquiries generated by client discussions on chat forums. This sort of service is similar to the customer engagement seen on Facebook and Twitter, but is done within the private trader network where customer inquiries are not public.

Like mobility, there exist challenges in the social media channel. They include the following:

- Social media remains a channel more for traditional investors, active investors, and the low end of the active trader market. While private social communities that offer blogs, market analysis, and online forums are of some value in generating trade ideas, many active traders are unlikely to simply "follow" the trades of other active traders. Firms targeting active traders should focus on Youtube videos that include market analyses, highlights of new trade platform tools and tutorials as to how to use these new functionalities.
- Ongoing concern about "trolls" and "pump and dump" investors. Online brokers must continue to monitor both third party social communities such as Facebook, as well as their private trader communities. Such monitoring across several social media sites can cause operational and compliance difficulties.
- Bank brokers have been slow to develop social media engagement strategies for online brokerage. Although many bank brokers have social media accounts on Facebook, Twitter, Youtube, etc., these accounts focus almost exclusively on banking and not investments. These firms have yet to create investment-specific or investment-branded social media pages.

BUILD OR BUY SELECTION

When considering whether to build or buy an online trading platform, brokerages must consider the strengths and weaknesses of each choice, and assess their internal talent. Table 9 provides a summary of strengths/weaknesses for build vs. buy strategies.

OPTION	STRENGTHS	WEAKNESSES	
BUILD	Increased flexibility and control over releasing enhancements and upgrades;	It is becoming increasingly expensive, especially with managing new channels such as social media and mobility;	
	Ability to leverage internal talent to create unique brand;	Requires in-house talent;	
	Can respond immediately to client feedback;	It may be difficult to keep up with the	
	Full control over costs	latest technology available in the market;	
		Speed to market is slow;	
		Integration to third party systems may be challenging.	
BUY	Allows brokers to focus on front end while vendors support middleware;	Brokers have less control over enhancements;	
	Access to industry experts is vital especially for those who are just entering the market;	Vendor products are, by definition, r unique, which is a major detractor in	
	Vendor can provide easier connectivity to trade- order systems;	online brokerage market. However, vendor customizations allow brokers to build unique brand.	
	Can support channel expansion and integration;	·	
	Speed to market is typically faster than build approach;		
	Increasingly, a lower cost approach to offering online trading (reduces staff, maintenance cost, etc).		

Table 9: Strengths and Weaknesses of Build vs. Buy

Source: Celent

As online brokerage has progressed, the number of vendor choices and the decisions for build vs. buy have diverged depending on the type of firm, as outlined below.

"STAND-ALONE" ONLINE BROKERAGES

For the brokers who started as pure play online discount brokers (ex. Charles Schwab, E*Trade, TD Ameritrade, TradeStation, TradeKing, etc.), trading pipes and connections are less important than having a unique UI, trading experience, and unique tools. These factors help firms build a unique brand. Thus, few vendors have either the brand/customization support or the customer support to service a large retail brokerage. As such, firms have few options other than to build a trading platform or use a vendor from a very narrow list. Scivantage remains the preeminent online brokerage platform provider for the stand-alone online discount brokerage market.

Chapter: Build or Buy Selection

BANK BROKER-DEALERS AND FULL SERVICE BROKERS OFFERING ONLINE TRADING

For full service brokers and bank-brokers who have traditionally offered online trading at a low cost, building a trading platform is a difficult proposition. As such, the choice is not "build or buy," but rather, "who to buy?" These firms have a number of options, including Scivantage, clearing partners who will build out the front end technology, back office firms, or wealth management/brokerage platform vendors such as Broadridge and SunGard who offer online brokerage as a module within their larger platform.

Table 10 provides a summary of the build vs. buy options for online brokerages.

Table 10: Build or Buy Options

TYPE OF FIRM	DEVELOPMENT CHOICE	THIRD PARTY VENDOR CONSIDERATIONS	
Stand-alone online brokers	Build most common; narrow list of vendors.	Scivantage can provide a prebuilt comprehensive investment portal or allow broker to build out interface and Scivantage provides the data and middleware via web services.	
		Wealth management platform vendors like SunGard (WealthStation) or Broadridge (Aspire Client) are also used, as are clearing platforms providers with online portals	
Full service brokers or bank brokerages Buy most common; clearing partners, back office providers, platform providers, "independent"		Clearing partners, back office providers, platform providers who provide trading portal can reduce the number of vendor relationships and offer a low-cost trading option;	
	platforms, Scivantage	Scivantage can provide a pre-built trading dashboard or allow broker to build out interface and Scivantage provides the data and middleware via web services.	

Source: Celent

As bank brokers continue to segment their clients based on channel preferences, sophistication, and investable assets, online brokerage will become an increasingly important business segment. In order to differentiate their online brokerage offering, a unique branding and trading experience is vital. As such, there will be increasing pressure to abandon "out of the box" dashboards, layouts, and functionalities.

THE BANK BROKERAGE MARKET

As has been noted, over the past 18 months there has been greater interest among bank brokers in the online trading space. For some banks this means reconsidering and enhancing existing tools and strategies, and for others it means adding online brokerage as a new service to existing clients.

DRIVERS

The most commonly identified driver for bank brokers' establishing, maintaining, or enhancing online investments operations remains *client retention*. With many discount brokers offering banking and retirement products to complement their low-commission self-service trading model, many regional banks face competition for their mass affluent customer segment. This is particularly relevant to retaining assets of their Generation X and Y clients. Bank of America/Merrill Edge's 2011 survey of over 1,000 mass affluent customers demonstrated that 75% of individuals between 18 and 34 are avid users of online banking and investing. Such statistics demonstrate the necessity for bank brokers to offer online self-service models of banking and brokerage so as to prevent clients from transferring assets.

Although many banks are nervous that pure play brokerage firms are taking client assets, they are not approaching online trading from a purely defensive standpoint. As bank brokers continue to restructure their wealth management businesses to complement more nuanced segmentation and service models, online trading becomes a key pillar to these strategies. Within this context, the key justifications to developing online brokerage include:

- Capture more of their existing mass affluent clients' assets. Many bank brokers have existing mass affluent clients using retail banking services, but self-directed accounts with a discount broker. While low commissions are an important consideration among these clients, so too is convenience and the ability to view total assets in one place. Online brokerage supports this desire and also allows clients to view performance, and perform portfolio analytics on an aggregated fashion.
- Enabling "hybrid" models of service for mass market and mass affluent customers. The online channel enables "hybrid" wealth management service with low costs. For customers with less than US\$ 250,000, banks can offer a call center PIN, plus online trading. This allows customers to consult representatives for guidance, while still maintaining self-directed trading and low costs of service.
 - Banks can also leverage their branch networks by placing in-branch representatives who provide simple guidance for a higher commission to those who are advice seekers.
- Cross-selling and up-selling. Mass affluent and HNW customers are likely to have more than one investment account—a self-directed account and a more full-service advisory account. Thus, bank brokers can offer the ability to cross-sell between their online trading and advisory-based services. Furthermore, the ability to support online trading will enable bank-brokers to remain the firm of choice as a client transitions from a mass affluent profile to a HNW profile; as the client's investable assets increase, he can use the firm's existing managed account products or financial planning services.
- A long-term strategy to attract GenY customers. As has been previously mentioned, these customers are extremely comfortable using online tools. They are willing to transfer funds for the right technology and correct service options.

Bank brokers are increasingly looking at their clients from a 360-degree perspective of wealth. Online trading at bank brokers must be considered within this framework, as a vital aspect to a broader wealth management strategy. DARTs will remain an important metric for bank brokers who offer online trading, but a more accurate measure of success will be total client assets, retention rates, and fee-generation.

COMMON TECHNOLOGY AND ASSET CLASS SUPPORT

Table 11 provides a summary of common asset class and order type support. This table demonstrates that bank brokerages currently offering online trading will support asset classes most commonly used by the traditional investor. As bank brokers look to target the active investor market and their mass affluent client base, support of options will be increasingly important. Currently, these banks support the most basic order types, rarely supporting trailing, conditional, or cancel/trigger orders. Increasingly, however, banks are supporting market and limit order/close options.

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Table 11	Common	Order 1	V pes	Asset	Class	Support a	at Bank	Broker-Dealers
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FREQUENCY OF SUPPORT	ASSET CLASSES	ORDER TYPES
Common	Equities, Fixed Income, Mutual Funds, ETFs	Market, Limit, Stop Loss, Stop Limit
Burgeoning	Options	Market on Close, Market on Open, limit on close, limit on open.

Source: Firms surveys, Celent

Table 12 outlines functionalities supported at bank brokerages. Currently, very few banks offer an integrated banking and brokerage experience. There is significant room for improvement around integrating these online channels by offering single sign-on, single dashboards, and better support of money movement and cross-account views. Banks will be able to differentiate themselves from other discount brokers by supporting these functions, especially around account and money management. Increasingly, firms are focusing on real time account opening, adding auto-invest and auto-trade tools, portfolio reporting, and analysis tools such as charting.

Table 12: Bank Brokerage Online Trading Functionality

FREQUENCY OF SUPPORT	FUNCTIONALITY
Common	Tools: Point and click order entry, Portfolio monitoring, Alerts, Watchlists, Account management tools, Administrative console tools, Phoned-based money movement between banking and brokerage
Burgeoning	Tools: Account opening (real-time), Manage multiple watchlists, Access IPO information, Auto-trade, Auto-invest, Analysis tools (more advanced charting, analytics), Real-time market information and news
	Bank brokerage integration: Portfolio reporting, STP integration to trading
Uncommon	Bank brokerage integration: Single sign-on, UI, Dashboard for banking and brokerage, cross-account views
	Tools: Advanced charting, Back-test trading, Block trade, Overlay management, Market trading after hours. Integration: mint.com, hellowallet, sigfig, wikinvest, Tax reporting (TurboTax, H&R Block, etc)

STRATEGIC CHALLENGES

Two key strategic challenges exist for bank brokerages. The first challenge relates to client segmentation and service offerings. A firm offering pure play, hybrid, and full service brokerage offerings will need to delineate asset levels to qualify for each of these services. This is particularly important as it relates to cross-selling and upselling. Segmentation based on client knowledge is also important for cross-selling and upselling. For example, an extremely knowledgeable client with an existing managed account may generate more revenue for the firm with a self-directed account (where he may trade frequently) than with a hybrid service model.

The second challenge relates to market positioning. Banks will need to determine who is their target client, whether this is an accommodation business for existing retail banking clients, and how actively they will challenge discount brokers in the pursuit for active investor and active trader clients. This will affect a number of decisions. If firms are looking to target new clients with no existing relationship with the bank, key promotions such as free trades or cash incentives on transferring a specified amount of money are common marketing methods. Such considerations also influence asset class and functionality support, and commission rates. If banks hope to capture active Investors, they will need to support trading of options, which ultimately means greater support of order types, more charting capabilities, and analytics. Furthermore, commission rates must be comparable to other discount brokerages.

TECHNOLOGY AND FUNCTIONALITY GAPS

Table 11 and Table 12 have previously outlined common bank-broker asset class, order type, and functionality support. These tables demonstrate that there are a number of areas in which banks can improve their online trading platform. Bank-brokerages looking to capture more of their client's wallet through online trading must focus on several key functionality areas. These include:

- Expanding market order support:
 - Market on open/close, Limit on open/close, Contingent
- Trading capabilities:
 - Autotrade and Auto-invest
 - More charting and analysis tools, including integrated charting/trading
 - Real-time account opening
 - More watchlist capabilities
 - Access to IPO information and more research
 - Social media presence for investments side of bank
- Capabilities allowing bank brokerages to differentiate themselves
 - Money movement and account management capabilities (online vs. phone)
 - Single sign-on, single UI for banking and brokerage, and dashboard to view both banking and brokerage assets
 - Data automatically generated from banking side into brokerage (i.e., name, address, SSN, etc.) and vice versa
 - Integration to third party financial management or investment sites such as mint.com, hellowallet, sigfig, etc.
 - Mobile investment support (integrated bank-brokerage app)

Many of the capabilities listed under last category (capabilities allowing bank-brokerages to differentiate themselves) ultimately require deeper integration of middleware and back office systems. Currently, investments and banking exist in a siloed fashion, operating

independently from one another, and integration with internal systems for transactional and profile data is limited. This also influences service departments where customer service reps do not get a full view of the client's relationship with the bank, thus limiting the ability to cross-sell or properly resolve client issues.

ADVANTAGES AND OPPORTUNITIES

The biggest advantage for bank-brokers is their pre-existing retail banking customer base. As such, bank-brokers already have a built-in customer base. The initial emphasis, therefore, is not necessarily attracting new clients with whom the bank has no relationship, but cross-selling retail banking clients into their online brokerage services. The ability to offer the convenience of one relationship for both retail banking and brokerage is appealing to many mass affluent and HNW customers. Furthermore, the ability to show an aggregated view of banking and brokerage holdings, make real-time transfers, and apply portfolio analytics to a full view of client assets provides a compelling value proposition.

The secular trend emphasizing the importance of fee-based accounts and retirements also benefits banks. Whereas many of the publicly traded stand-alone brokers and asset managers have been building out their fee-based products and self-directed retirement services, many banks have been offering these products and services for years. Selfdirected retirement calculators are commonplace on many banking websites and wealth management accounts.

To truly leverage these advantages, however, banks must integrate their brokerage and banking operations. The benefit of a single relationship with a bank for retail banking and brokerage is lost if the customer does not receive a unified experience. From a website perspective, this includes single-sign-on and single dashboard. From a tools perspective, this includes providing a retirement center within this unified single-sign on, providing portfolio analysis tools that consider cash, investment, and retirement accounts. From a customer service perspective, this includes automated account opening where client data is transferred automatically into pre-sale applications, and an aggregated view of client accounts from a customer service representative perspective.

Ultimately, such integration empowers marketing departments, customer service departments, and business strategy groups to cross-sell and consider a client from a 360-degree view.

LOOKING AHEAD

The self-directed market remains fragmented with a number of firms offering online brokerage to different customer segments. Celent expects two major trends to dominate the next 18–24 months:

Continued divergence in the "independent" online brokerage market. As has already been noted, the publicly traded stand-alone brokerages and asset managers have been building out hybrid models of service to complement a fully self-directed model. Celent has noted their development of retirement centers that provide a number of self-directed tools. Celent has also noted that in addition to these retirement services, firms are offering more fee-based products such as managed accounts.

Pure play online trading will remain the bread and butter of the large online brokers and asset managers. Over the next two years, however, these firms are likely to position and differentiate themselves not only by the strength of their self-directed trading platforms, but as financial services firms specializing in the self-directed channel. In addition to their online trading platforms, these brokers will offer client-facing tools such as self-directed planning calculators, portfolio analysis, allocation and monitoring, and advisor-led investment recommendations and analysis.

On the other hand, there has been a proliferation of trading platforms that focus solely on advanced trading platforms for the active investor and active trader. These brokers tend to focus on tools that support advanced options, futures, and FX trading strategies. Going forward, these firms will focus on their core business, online trading, as opposed to offering banking services and retirement tools. Though these firms will offer some mobile trading and social community tools, as well as basic retirement products, the majority of their resources will be dedicated to the trading platform.

Convergence in services and products between bank-brokers and large online brokers to target the mass affluent customer. While large independent brokers are expanding their services into online banking, fee-based products, retirement tools, and quasi-advisory models, bank brokerages (which have traditionally offered advisory products and retirement planning services), are developing their online brokerage tools.

In essence, online brokers and bank brokerages will enter the same market from opposite ends; both types of brokers hope to offer a low cost channel of service for the mass affluent customer who is predominantly self-directed, but who also requires some guidance. Given that mass affluent and HNW clients often have more than one type of account, these firms will focus on cross-selling into various accounts and service models.

Based on our research, we can make several additional conclusions about the US selfdirected market:

- Overall annual growth rates in the self-directed investor market will be ~4-5% over the next two years. However, these modest growth rates are due primarily to due slow growth in the traditional investor market. Growth in the active investor and active trader markets will exceed traditional investor growth.
 - This will continue to change the balance of the self-directed market, with 43% of the market comprising active investors, and 6-6.5% comprising active traders by the end of 2014.
- Women will continue to enter the self-directed market at all customer segments, slowly changing the balance of male-female self-directed investors.

- The active trader segment will remain male-dominated, but by 2015 females will approach 12–15% of active trader accounts.
- The average age of the active trader will rise modestly as Wall Street continues to consolidate and experienced former employees open self-directed accounts so as to maintain incomes.
- All brokers will need to focus on enhancing their trading platforms to differentiate themselves. High trading volume and use of complex trading strategies make the active investor and active trader a very profitable segment for online brokerages, and tools to target these segments will be vital to capturing these clients.
 - Firms will build out cloud-based platforms in 2013 and 2014 to support increasing use of Apple devices.
- Many firms will develop and enhance tablet-based trading platforms that allow investors to personalize dashboards and trade equity, fixed income, mutual fund, ETF, options, and futures products on one platform.
 - DART growth via mobile channels is unlikely to match growth rates of the past year (50–70%), but will emerge as a significant and necessary channel, and DARTs via mobility are likely to reach 10% of total trades by Q1 2014.
- Social media strategies will mature. Facebook, Twitter, and Youtube pages will continue to see rapid increases in the number of views, "likes," and followers. Investors should expect to see more frequent customer service representative responses via third parties, videos, and basic tools (such as retirement calculators). Private trader networks will remain largely the same in terms of basic functionality, although investors should expect firms to track and respond to inquiries directly through these networks. Thus, social communities will emerge as a low cost service channel.
- Bank-brokerages will focus on integrating banking and brokerage services. This will
 initially focus on single sign-on, real time money movement, and the ability to view
 holdings across multiple accounts. Further integration will focus on unified banking
 and brokerage performance metrics, pre-filled account data for easier account
 opening, and integrated banking-brokerage mobile apps.

Online brokerage continues to evolve as firms continue to expand their product selection and self-directed capabilities. As investor sentiment turns away from professional advice towards peer-driven content, and firms expand into new channels, the future of online brokerage will remain bright.

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For more information please contact info@celent.com or:

Alexandar Camargo Isabella Fonseca acamargo@celent.com ifonseca@celent.com

NORTH AMERICA

EUROPE

28, avenue Victor Hugo

75783 Paris Cedex 16

Tel.: +33.1.73.04.46.19 Fax: +33.1.45.02.30.01

France

ASIA

Japan

China

India

The Imperial Hotel Tower, 13th Floor 1-1-1 Uchisaiwai-cho Chiyoda-ku, Tokyo 100-0011

Tel: +81.3.3500.3023 Fax: +81.3.3500.3059

Beijing Kerry Centre South Tower, 15th Floor 1 Guanghua Road

Tel: +86.10.8520.0350 Fax: +86.10.8520.0349

Chaoyang, Beijing 100022

USA 200 Clarendon Street, 12th Floor Boston, Massachusetts 02116

Tel.: +1.617.262.3120 Fax: +1.617.262.3121

1166 Avenue of the Americas New York, NY 10036

Tel.: +1.212.541.8100 Fax: +1.212.541.8957

U<u>SA</u>

USA

Four Embarcadero Center, Suite 1100 San Francisco, California 94111

Tel.: +1.415.743.7900 Fax: +1.415.743.7950 Marstallstrasse 11 80539 Munich

Germany

Tel: +49.89.242.68.581 Fax: +49 89.939.495.21

United Kingdom

55 Baker Street London W1U 8EW

Tel.: +44.20.7333.8333 Fax: +44.20.7333.8334 Level 14, Concorde Block UB City, Vittal Mallya Road Banglalore, India 560001

Tel: +91.80.40300538 Fax: +91.80.40300400