



# Options on Futures:

## A Market Primed For Further Expansion

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Since their launch more than 30 years ago, options on futures (OOFs) — also known as “futures options” — have gained steady traction, as evidenced by increasing year-over-year volumes and new product launches. But the market can become much larger. Going forward, rising demand from institutions, electronification and improved market access will drive constant volume growth.

Over the next few years, TABB Group expects continued growth across products. Markets will grow as interest rate policies change, alternative energy sources emerge and underlying reference futures markets appeal to a wider audience. As the markets increase – and entering and exiting them becomes easier to manage – futures options will become even more attractive to investors.

## Introduction

Futures options trading has exploded in recent years as a number of forces have merged to create an enticing proposition for investors. Market participants have been drawn to both growing liquidity and market characteristics that have evolved to turn the market into a trading arena that today can support increasingly sophisticated investment strategies.

Yet the futures options market remains in relative infancy and has not enjoyed the growth experienced in equity and index options markets. Nonetheless, TABB Group expects that futures options activity will continue to grow strongly as financial market participants increasingly use these products as part of their investment and hedging strategies (see Exhibit 1).

### Exhibit 1:

#### Major Factors Driving Increased Adoption of Futures Options by Market Participants

Factor	Description	Results
Electronic Accessibility	<ul style="list-style-type: none"> <li>Participants have the ability to access OOFs through updated exchange mechanisms and more sophisticated trading systems.</li> </ul>	<ul style="list-style-type: none"> <li>Shift from pit-oriented and bilateral negotiated trades to screen-based trading.</li> <li>Market participants trade options and underlying hedges on the same platform.</li> </ul>
Adoption of Option Strategies	<ul style="list-style-type: none"> <li>Investors seem more willing to use OOFs instead of other products (e.g. forwards, ETFs).</li> </ul>	<ul style="list-style-type: none"> <li>More diverse ecosystem of market participants, including asset managers, hedge funds, and banks.</li> <li>Liquidity provisioning firms include fewer, more active market-makers and prop trading firms.</li> <li>Retail usage increases via retail brokers.</li> </ul>
Product Relevance	<ul style="list-style-type: none"> <li>Wide range of standardized products effective for hedging or speculating in volatile or stable market conditions.</li> </ul>	<ul style="list-style-type: none"> <li>Transfers from an “untapped” market: competition in futures, options, and cash-equity markets have been the primary go-to markets.</li> <li>Global investors familiar with underlying reference markets begin running more complex strategies.</li> </ul>
Regulatory Environment	<ul style="list-style-type: none"> <li>New rules are incentivizing derivatives traders to shift from OTC to exchange-traded products.</li> </ul>	<ul style="list-style-type: none"> <li>New product opportunities due to updated margin and reporting thresholds for swaps and OTC markets.</li> <li>Securities options (“equity options”) markets lose favor from firms providing liquidity with complex market-making and order preference rules.</li> </ul>

Source: TABB Group

The regulatory environment is also fostering demand as regulators continue to push the industry away from bilateral, over-the-counter instruments to centrally-cleared, exchange-traded markets. With derivatives users exploring different investment alternatives, existing Securities and Exchange Commission regulations have contributed to a very complex framework for cash equity and equity options markets. By comparison, the framework for

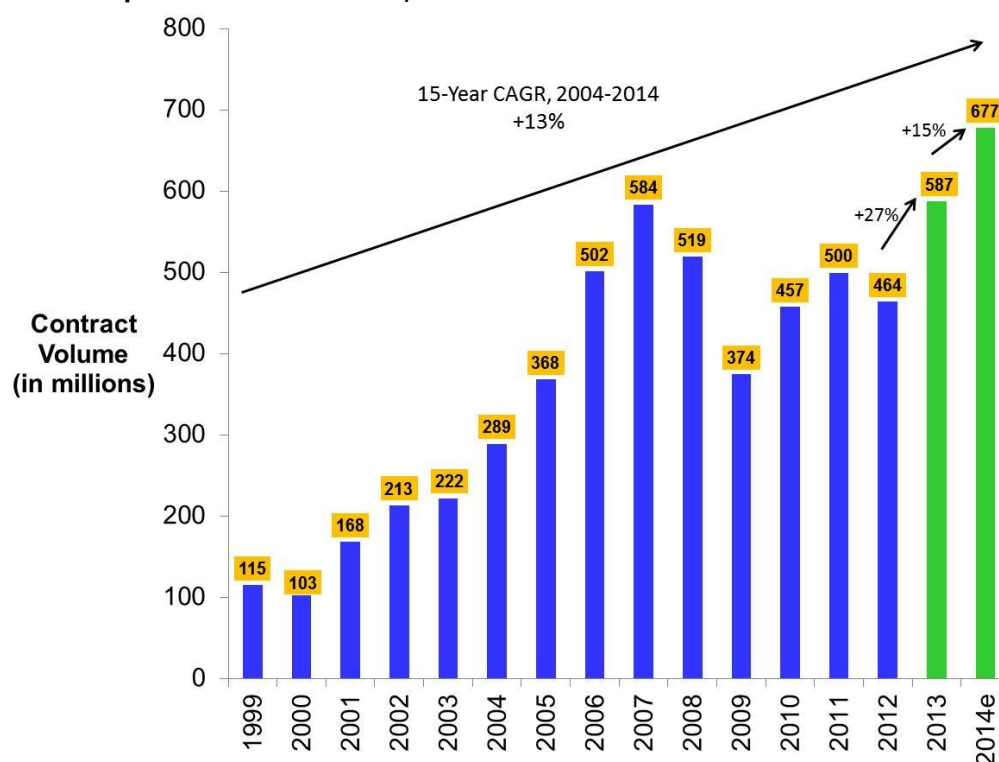
futures options market participants is easier to navigate. In addition, the futures options market has less competition and fewer rule changes to grapple with.

## Futures Options' Recent Volume Spark

Since 1999, futures options volumes have climbed steadily, but volume suffered in the aftermath of the 2008 financial crisis, with both macroeconomic factors and volatility swings affecting volumes. As volatility reached extreme highs and lows, the economics of using futures options took hedgers out of the market and made it more challenging for speculators and investors to pick their spots. In 2011 and 2012, quantitative easing reduced demand for short-term interest rate products, while lower volatility negatively impacted volume in energy and equity markets.

But in 2013, futures options volumes rebounded, increasing nearly 30% over 2012 levels, driven mainly by interest rate volatility in the second quarter and greater demand for underlying reference futures products. Going forward, TABB expects another record year for futures options in 2014, with volume growth at least 15% year over year (see Exhibit 2).

**Exhibit 2: Futures Options Contract Volume, 1999-2014e**



Source: Futures Industry Association (FIA), TABB Group

## Expected Volume Growth

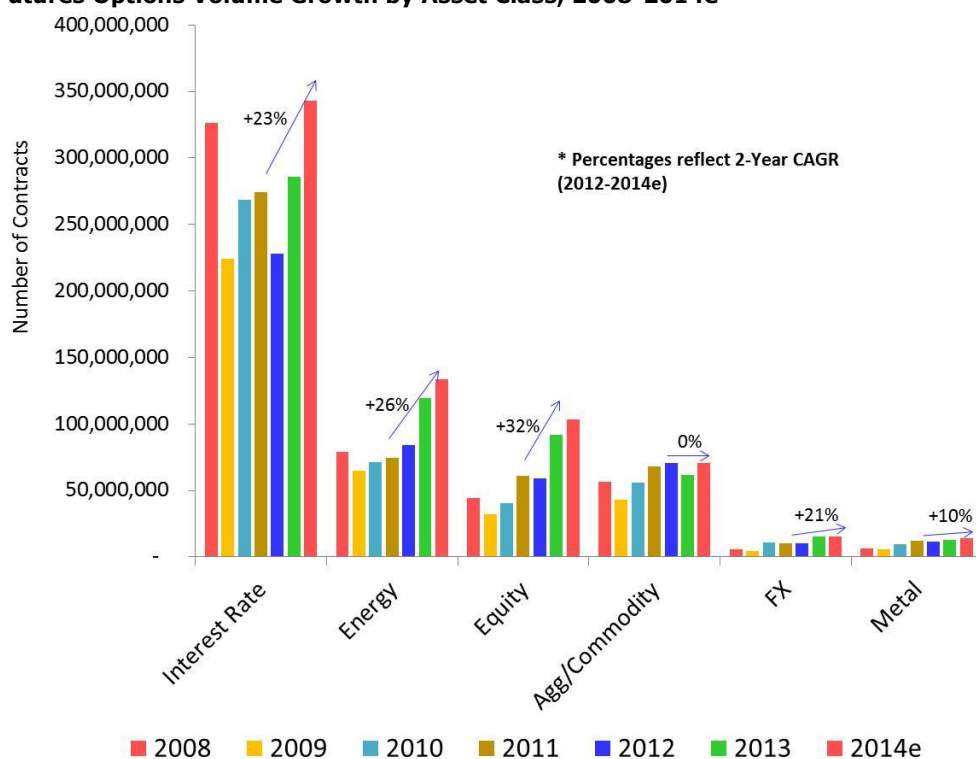
In conversations with firms that currently trade futures options and those considering trading the products, TABB Group has identified a developing consensus around greater adoption of futures options within investment strategies. Market progression is very likely to

include greater participation by existing players, and, as markets become more electronic, new users and trading opportunities will emerge.

In the most active asset type, the end of quantitative easing will cause institutional fixed income portfolio managers to consider using longer-term interest rate products (see Exhibit 3). Dodd-Frank regulation and central clearing of interest rate swaps will push managers to search for products with lower costs for margin requirements. Futures and futures options are logical product alternatives because they require less capital than OTC swaps and can still provide sufficient exposure to meet portfolio managers' needs.

Similarly, in energy markets, the focus on hedging underlying physical markets with listed products will drive futures options demand. Energy futures options help mitigate both delivery risks and risks associated with rolling the underlying futures contracts. As energy markets heat up, futures options will become an increasingly attractive tool for managers to manage these risks.

**Exhibit 3: Futures Options Volume Growth by Asset Class, 2008-2014e**



Source: Futures Industry Association (FIA), TABB Group

To best understand where volume growth is occurring, the diversity of product types within each asset type must be recognized (see Exhibit 4). Volume and relative open interest is increasing across a wider product range. As demand builds in different product types, TABB Group expects to see investors who historically have not paid attention to certain products to change their tune.



**Exhibit 4: Futures Options Asset Classes and Example Product Types**

Asset Class	List of Example Product Types	1-Year Volume Change (%) 2013/2012
Interest Rate	Eurodollar, Fed Funds, 30-Year Treasury Bond, 2-, 5-, and 10-Year Note, U.S. T-Bond, Ultra T-Bond	+25%
Energy	Brent Crude Oil, Crude Oil, Carbon, Coal, Ethanol, Heating Oil, Jet Fuel, Natural Gas Physical, Natural Gas, RBOB Gasoline, Nitrogen, Regional Greenhouse Gas	+41%
Equity Index	S&P 500, E-mini S&P 500, NASDAQ 100, E-mini NASDAQ 100, Russell 1000 Mini Index, Russell 2000 Mini Index, Nikkei 225, Mini Dow Jones Ix	+54%
Agricultural / Commodity	Apple Juice Concentrate, Butter, Cheese, Cocoa, Coffee, Corn, Cotton, Cattle, Lean Hogs, Lumber, Milk, Oats, Pork Bellies, Rice, Soybeans, Sugar, Wheat, Whey	-10%
Foreign Exchange	Australian Dollar, British Pound, Canadian Dollar, Euro, Japanese Yen, New Zealand Dollar, Swiss Franc	+46%
Metals	Copper, Gold, Iron Ore, Palladium, Platinum, Silver, Steel	+17%
Other	Hurricane, Real Estate, Snowfall, Weather	-19%

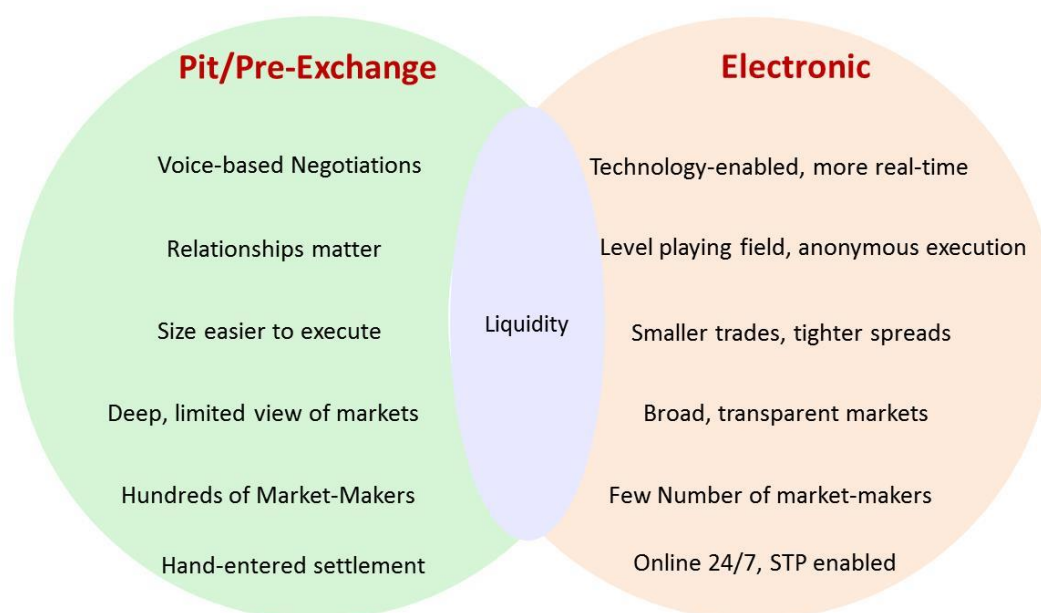
Source: TABB Group

TABB Group also expects volume growth in markets beyond energy and interest rates to continue over the next two years, particularly equity index, foreign exchange, and other new products. Continued positive equity market performance will drive growth in the equity options segment while improving economies around the globe will drive international trade as well as cross-border investment, increasing demand for options on currency futures to hedge FX risk.

## E-Trading: Market Catalyst

Futures options trading has only recently transitioned to electronic platforms from traditional floor-based trading environments. Low volumes, relatively narrow user constituencies and resistance from floor traders have all conspired to keep the floors alive. However, as CME Group and IntercontinentalExchange transitioned much of their derivatives trading to electronic platforms, it was inevitable that futures options would eventually transition as well (see Exhibit 5).

**Exhibit 5: Futures Options Wholesale Markets, Comparison between Electronic & Pit/Pre-Exchange**



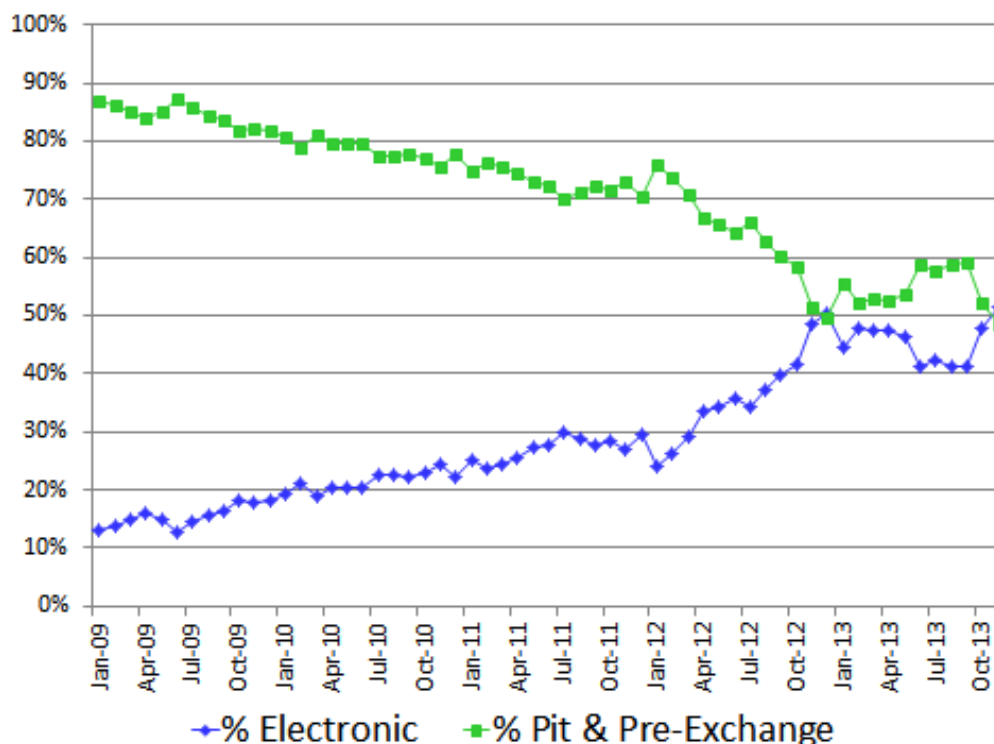
Source: TABB Group

While exchange pits remain an important source of options liquidity, the transition to an electronic market becomes a natural part of market progression. ICE's end to open outcry floors in 2011 and the CME Group's acquisition of the Kansas City Board of Trade (KCBT) in 2013 both reflect a gradual shift from voice-enabled floor-based activities to electronic markets. However, KCBT products today remain available to trade on the floor of the CME's Chicago Board of Trade. In this regard, market progression requires time for market participants to accept and requires the benefits of streamlined processes and automation to outweigh existing practices before a full transition can occur.

## Wholesale Markets Become Electronic

Electronic markets now offered by exchanges provide many wholesale market benefits including an open playing field that leads to more efficient and seamless executions. Electronic trading currently accounts for more than half of total futures options volume, up from just 13% in 2009 (see Exhibit 6). As trading increases, markets tighten and better execution tools facilitate automated executions, electronic trading will continue to dominate overall futures options volume.

**Exhibits 6: Percentage of Overall Volume (Electronic vs. Pit & Pre-Exchange)**



Source: CME Group, TABB Group

Exchanges will also continue to educate market participants about products and technology developments to help them bridge the gaps between voice and electronic trading. This transition will include the adoption of trading systems that provide access to market data and analytics tools that assist with the decision making process across both popular and up and coming products.

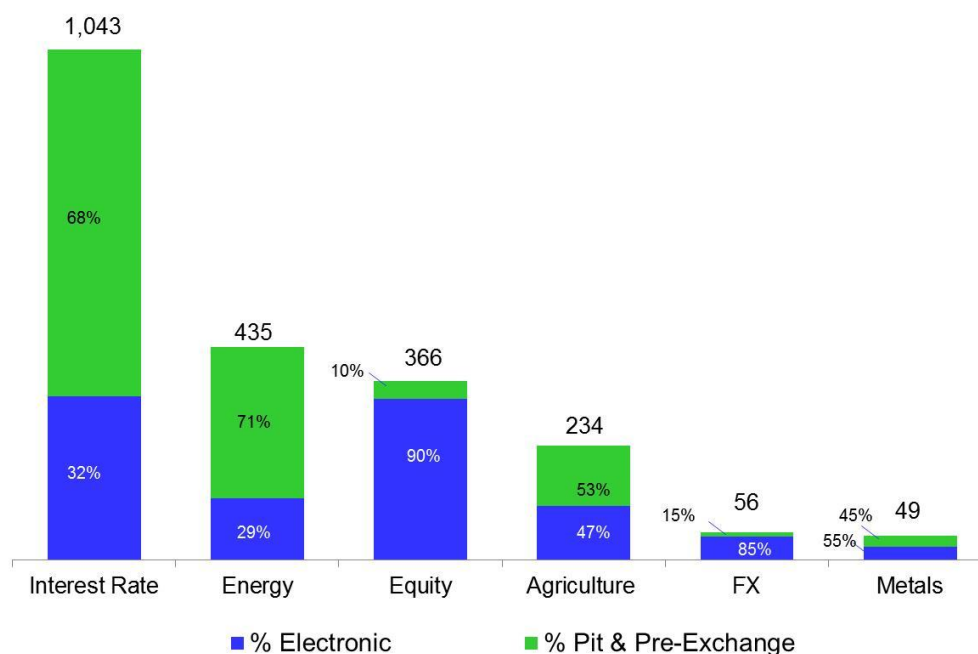
## Electronic Adoption by Asset Class

Having confidence in when and where to trade – as well as access to reliable price data – will encourage buy side institutions to participate in futures options markets. Similarly, dealers and technology providers will become eager to provide technology that can help facilitate decisions. Up until now, however, brokers have been slow to invest in systems and tools that provide information and access because of historically low trading volumes and weak client demand. As the transition from voice to electronic marketplaces occurs,

electronic markets will help attract smaller liquidity providers including high frequency traders and proprietary trading firms that depend on direct market access.

Interest rates – the most actively-traded asset class – have the most focus on them as OTC markets migrate from voice brokered dealer desks to electronically-facilitated exchange-traded instruments (see Exhibit 7). The reasons for trading interest rate products varies significantly by product and user type. This variance influences both the decision of which products to trade as well as whether to use electronic trading within a strategy. For example, Eurodollars are the most actively traded product in the interest rate category, but the amount of electronic trading in Eurodollars averaged only 11% during 2013, compared with Treasury options, which averaged 55-60% over the same period. This divergence is due to many reasons including larger structured deals around Eurodollar trades compared with more straightforward Treasury options requirements of corporate and fixed income traders.

**Exhibit 7: Percentage of Electronic Volume by Asset Type, in Average Daily Volume (ADV)\*  
January – December 2013**



\*Percentages are based on average contract volume during 2013.

Source: CME Group, TABB Group

When traders and investors have the opportunity to choose technology, the rise in liquidity becomes a virtuous circle. As volumes increase, larger accounts are able to trade in size and are drawn to the market. As this transition occurs, some very active contracts that today are less electronically traded will be a main focus. Another prime example is crude oil options, which recently traded 50% electronic, up from 15% just three years ago. Conversely, only 15% of natural gas options trade electronically today, but that could well



change, with trading eventually mimicking the growth story of electronic trading in crude oil options markets as products are accepted by a wider institutional audience.

In this regard, the amount of electronic trading in a product can become the tipping point for trading on a screen. Simply put, some traders will be turned away from participating in a market until a certain amount of liquidity is reported electronically. Equity products, such as the E-mini S&P 500 contract, and dollar-denominated pairs, such as Euro or Japanese FX contracts, have already transitioned to all-electronic markets in this manner. As electronic markets become both the catalyst and enabler to market activity, equity and FX products are expected to enjoy volume growth. Other products will follow a similar path.

## **Electronic Adoption by Institutions**

A faster paced trading environment will cause traders to seek out products that assist their firms with managing market risks. As traders gravitate to futures options, they will adopt more electronic trading tools, which, in turn, will lead to broader, more transparent markets with easier entry and exit points and more streamlined operational efficiencies for execution and clearing.

This cycle will attract buy side firms as they find markets easier to access via electronic trading capabilities within their trading systems. All that will be required to establish an electronic trading presence will be a single API, a brokerage clearing relationship and an electronic trading platform that makes products and markets accessible. In the most active assets – interest rates and energy – there has already been a measurable shift toward automation as markets see greater participation and demand for exposure to new asset types.

## **OTC Market Participants: Creatures of Habit**

Even with all the electronic trading advancements, a significant amount of trading is still done either over the phone or through bilateral OTC agreements. Many orders are called in to the pits by order clerks and matched on the floor of the exchange. OTC contracts are traded bilaterally but then cleared post-trade as a block trade.

Still, in the case of OTC trades, brokers have advanced to the point at which clients can access them through instant messaging, which facilitates the order. The order entry, or request for market, is partially electronic although trade matching can still be manual. In OTC markets, instances remain in which different prices are available for the same product with multiple brokers (although such price discrepancies are eliminated quickly). In this regard, getting a universal trading system that accommodates all OTC brokers is easier said than done; however, both startup companies and exchanges remain eager to provide solutions that automate the trading process and make connecting to liquidity more efficient.

## **Request for Quote (RFQ)**

The introduction of the Request for Quote (RFQ) system, which allows market participants to get quotes on any market they request, is one solution that may move market

participants away from OTC voice brokered markets. For popular products like the E-mini S&P 500 contract, RFQs represent 10-15% of bids and offers.

A major benefit of RFQ functionality is that even during times of low market activity, participants can get competitive quotes. Representing a more efficient and economic alternative to using sales traders, RFQs will move traders away from voice brokered markets and attract new users. RFQs offer a more efficient way to communicate trade details among market participants and can broaden the audience that can act on the RFQ, enhancing price discovery and building liquidity.

## Expanding the User Base

The most active institutional market participants in futures options markets include large hedge funds, asset managers, prop trading firms and banks. Institutions see new opportunities in futures options because they are an effective tool for managing exposure to critical markets that may otherwise be difficult to access. In addition, corporate hedgers, such as airlines or oil producers, which seek to mitigate price risks of the resources they use to support operations, have adapted to using futures options to hedge and manage price risk.

**Exhibit 8: Futures Options Market Strategies**

Strategy	Description
Hedgers	<b>Purpose:</b> To hedge a natural underlying risk
	<b>Examples:</b> <ul style="list-style-type: none"> <li>Firms impacted by fluctuations of interest rates, such as mortgage holders, to hedge their prepayment or extension risks</li> <li>Natural gas users for price changes due to geopolitical or international risks—typically by buying puts and selling calls</li> <li>Interest rate swap users to protect swaptions, rate locks or other corporate deals</li> <li>Commodity traders, including farmers or the Exploration &amp; Production (E&amp;P) producers for weather and agricultural risks</li> </ul>
Investors	<b>Purpose:</b> To manage market risks of a portfolio
	<b>Examples:</b> <ul style="list-style-type: none"> <li>Long only firms managing duration risks of fixed income portfolios while still keeping credit or spread risks</li> <li>Eurodollar bank traders wanting to trade the option and underlying future for capital efficiency reasons</li> <li>International hedge fund managers looking to add or reduce a specific part of market risk to their portfolio</li> </ul>
Directional	<b>Purpose:</b> To profit from a specific view of the market
	<b>Examples:</b> <ul style="list-style-type: none"> <li>Hedge fund portfolio managers making a call on a sector, but wanting to limit downside risks</li> <li>Options traders wanting to expose a view on vega and/or gamma</li> </ul>
Arbitrageurs	<b>Purpose:</b> To profit from price discrepancies
	<b>Examples:</b> <ul style="list-style-type: none"> <li>Trading companies that specialize in automated market-making and risk taking</li> <li>Prop trading firms entering into transactions in two or more markets</li> </ul>

Source: TABB Group

Going forward, corporate hedgers will remain an important constituency for the market; however, components within the Volcker Rule could cause proprietary trading desks at banks to reduce their activity. These desks, which often take the other side of positions, are being forced out of the market, leaving a liquidity vacuum in a number of products. This vacuum will open up opportunities for smaller, more automated market participants, especially as electronic liquidity continues to build.

There is particularly strong interest in futures options from the volatility trading crowd as they look for various ways to exploit short-term trading opportunities. In addition, the use of options by traders/investors implementing delta-neutral strategies and futures traders should continue to support new strategies and firms entering the futures options markets. On the other hand, futures options are complex instruments that require users to have familiarity with how both futures and options markets operate. While many firms have the personnel, operations and technology to support using futures options, others may need to change their strategy or invest more in the necessary technology and human capital before fully realizing the full potential of these products (see Exhibit 8).

## Developing Opportunities

In 2014, futures options volume growth will be driven by, among other things, an increase in volatility, rising interest rates and more electronic trading. Working in the markets' favor is the fact that futures options markets have been amenable to new product development and product enhancement. For example, volatility contracts introduced by the Chicago Board Options Exchange in 2006 continue to be a useful product for traders who want to hedge secular macro risks. In addition, short-dated options, such as weekly or monthly contracts, provide market participants with flexibility for targeted investment opportunities and lower upfront premium costs (see Exhibit 9).

**Exhibit 9: Futures Options Market Developments**

Factor	Description	Examples
Existing Products / Increased Volumes	<ul style="list-style-type: none"> <li>Concentrated market activity expands to a longer list of available products</li> </ul>	<ul style="list-style-type: none"> <li>Use of more interest rate products along the yield curve</li> <li>Commodity and agricultural products gain global relevance (e.g. Corn, Sugar, Wheat)</li> </ul>
Product Innovation	<ul style="list-style-type: none"> <li>Introduction of new options products and complex order types</li> </ul>	<ul style="list-style-type: none"> <li>Short-term and targeted maturity options (e.g. weekly, daily, month-end options)</li> <li>Spreads, calendars, straddles, average price options</li> </ul>
Market Competition	<ul style="list-style-type: none"> <li>Similar products offered by foreign exchanges, or incentives to increase trading activity on exchange</li> </ul>	<ul style="list-style-type: none"> <li>Chinese &amp; Pacific Rim investors hedging consumption and growth of markets</li> <li>Fee reductions for traditionally voice-brokered options traded on exchange</li> <li>Electronic trading of financially settled products</li> </ul>
Regulatory Unknowns	<ul style="list-style-type: none"> <li>Additional new rules that could result in firms managing risks differently</li> </ul>	<ul style="list-style-type: none"> <li>Major frameworks (e.g. Dodd-Frank, Basel III, EMIR)</li> <li>Position limits</li> <li>Financial Transaction Tax</li> <li>Mandated controls for liquidity providers</li> </ul>

Source: TABB Group

Because futures products are not fungible, exchanges have competitive advantages in offering proprietary products. In the case of dual-listed products, such as WTI or Brent Crude oil, incentive programs and volume discounts will remain an important way for competing exchanges to build liquidity. In this regard, the only road block in the way of near-term growth of futures options appears to be unexpected regulatory changes that could impact how market participants view existing products, such as position limits or a financial transaction tax. To date, unexpected rule changes have been limited, and rather, futures options markets are primed for further expansion.

## About

### TABB Group

TABB Group is a financial markets research and strategic advisory firm focused exclusively on capital markets. Founded in 2003 and based on the methodology of first-person knowledge, TABB Group analyzes and quantifies the investing value chain, from the fiduciary, investment manager and broker, to the exchange and custodian. Our goal is to help senior business leaders gain a truer understanding of financial market issues and trends so they can grow their businesses. The press regularly cites TABB Group members, and members routinely speak at industry conferences and gatherings. For more information about TABB Group, visit [www.tabbgroup.com](http://www.tabbgroup.com).

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Matt is a Senior Analyst and Head of Futures Research at TABB Group. He joined the company in November 2005, following four years with T. Rowe Price Associates at its corporate headquarters in Baltimore, Maryland. Most recently, Matt authored "Algos in Futures: Shifting into High Gear", "US FCM Business 2013: Posting Margin, Posting Profits", "Energy Futures: Traders' Requirements of Tomorrow", "US Futures Markets: State of the Industry 2013", "US FCM Business: The Listed Part of the Equation", and co-authored "The Outlook for Derivatives: Futurization, FCMs, and Technology."

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