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BILL CLINTON'S VISION FOR FUTURE GROWTH p 10 **THE NEW FINANCIAL MOJO** p 22

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2011

Volume 7 Issue 1

“Changing the way we produce and consume energy, if we do it in the right way, will create more jobs and more new businesses in less time than any other single strategy.”

BILL CLINTON

FORMER U.S. PRESIDENT



ON THE COVER

From renewable energy to healthcare, education to tackling the budget deficit, former president, Bill Clinton, considers both the obstacles and opportunities currently facing the United States as he outlines his personal vision for the future.

Cover photography by Nigel Parry/CPI Syndication

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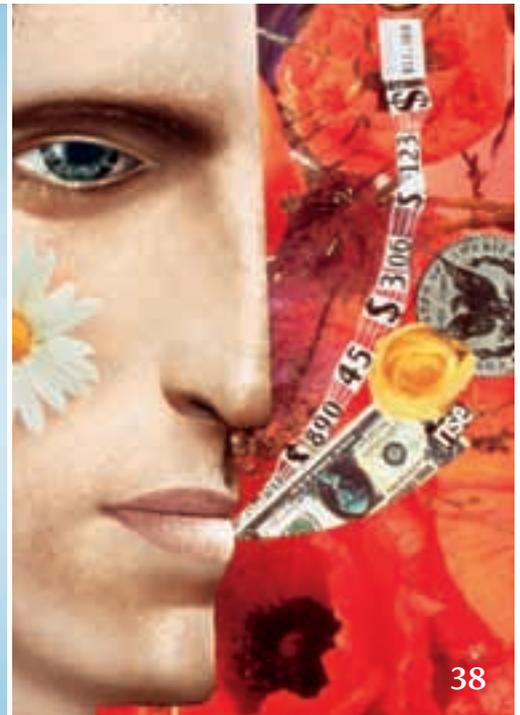
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Exclusive on cmegroup.com/magazine

CME Group's Global Command Center aimed to locate key technology groups in one place. But its goals reach far beyond a NASA-like control room.



Craig Donohue (left) and Terry Duffy (right)

FROM THE TOP

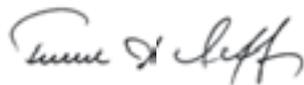
At CME Group, we take pride in our role as an innovator in the financial services industry, and we constantly seek new ways for our business to help advance the global economy.

To offer our customers and industry leaders a holistic perspective on the world's financial landscape, we presented our third annual Global Financial Leadership Conference in Naples, Fla., this past October. Thought leaders from various disciplines discussed and debated emerging geopolitical trends and critical economic issues, and offered illuminating perspectives on future developments in the financial marketplace.

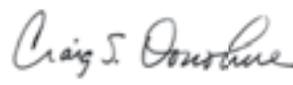
Former U.S. President Bill Clinton delivered the event's keynote address, sharing his vision for the United States and the world economy. Other speakers presented varied perspectives from a wide range of backgrounds and industries, and we are pleased to share some of the highlights with you in this issue of *CME Group Magazine*, including:

- Robert Rubin, former U.S. secretary of the Treasury, giving his short- and long-term views of the U.S. economy;
- Bestselling author Michael Lewis's account of the financial crisis from his new book, *The Big Short*;
- Dwight Anderson, founder of Ospraie Management, discussing three major economic elements that will drive commodity prices; and
- Insights from global experts on the topic of developing countries and opportunities within their evolving economies.

You can also read our magazine online at www.cmegroup.com/magazine. As always, we strive to keep *CME Group Magazine* at the forefront of global economic thought leadership.



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C

William "Bill" Clinton, who served as the

L I N

42ND president of the United States, still has a plan

T O N ' S

for what ails the United States. He delivered his vision for

G R A N D

the country as the keynote speaker at CME Group's Global

V I S I O N

Financial Leadership Conference in October 2010.

IT'S

since Bill Clinton has been a president. But as he travels around

BEEN A

the country and the rest of the globe, people want to hear what the

DECADE

man has to say – on just about anything. And he's happy to tell them.

From green power to healthcare to the budget deficit, Clinton has an amazing ability to analyze a subject, break down key parts and deliver a solution in a way that seems practical, pragmatic and, well, easy.

Clinton has been busy since he left the White House in 2001, having served two terms in office. He departed with the highest approval rating of any U.S. president since the Second World War, largely in the wake of a strong economy, eliminating the budget deficit during his term and posting a budget surplus in 2000. The national debt clock in New York City, which now tops \$14 trillion, was turned off.

Today, he tackles international issues such as the treatment and prevention of HIV/AIDS and global warming through his organization, the William J. Clinton Foundation. And he is serving as the United Nations' special envoy to Haiti, helping to rebuild that country after its devastating earthquake in January 2010.

While Clinton has been a lightning rod for criticism and debate, the former president has a way of winning grudging respect from opponents. Now 64, Clinton still engages crowds with his southern drawl and

smooth delivery of ideas, facts and vision. He remains acutely tuned into the myriad problems in the United States, among them the ongoing recession, healthcare and market reforms, education and the United States' ability to compete as the 21st century rolls on.

... IF I WERE PRESIDENT ...

Clinton, who brokered the North American Free Trade Agreement, still believes strongly in the concept of "interdependence" within the world. He admits the global network of trade, economics and information has both positive and negative consequences. Nonetheless, the United States must be able to function and compete in this global dynamic.

Clinton says the challenge for the United States today is to spur new job development through innovation. In his view, it is critical for countries to develop new job sectors every five to eight years. During his administration, the Internet and IT job sector exploded, thus creating a whole new area of job growth, not to mention new ideas and businesses. The IT sec-

tor then represented eight percent of U.S. employment, 30 percent of the country's job growth and 35 percent of U.S. wage growth, Clinton says.

The next sector that could bolster job-growth and greatly aid the economic recovery, he adds, is renewable energy.

"I personally believe changing the way we produce and consume energy, if we do it in the right way, will create more jobs and more new businesses in less time than any other single strategy that any wealthy country could pursue, especially the United States," he says. "In last year's annual rankings of the capacity to change your energy production, the United States ranked second in the world in wind potential and third in the world in solar potential of all major countries."

Germany is an example of a country that has focused on renewable energies such as wind and solar power over the past decade. Prior to the recession, the country was outperforming the U.S. economy in part because it became the world's leading producer and consumer of solar power.

Clinton says renewable energy is not a tree-hugging, Greenpeace type of initiative, but one with real economic benefits. He cites Deutsche Bank's recent report that says Germany's goal of 20 percent renewable energy by 2020 has created 300,000 jobs and now provides 13 percent of the country's overall electricity. With solar costs falling, future solar prices are expected to be on par with traditional energy sources by 2013. Clinton believes the same growth trend could occur in the United States with a commitment from Congress.

"The United States ranked second in the world in the capacity to grow solar power," Clinton says. "That means we'd get two-and-a-half or three million more jobs if we just did what the Germans did."

... STAYING COMPETITIVE ...

If new energy is going to boost job growth and innovation, healthcare reform and education need to be part of keeping the United States competitive globally, according to Clinton. The current healthcare reform bill is a step in the right direction, he thinks, adding that while it still requires work, recent calls to repeal the bill would be a mistake. He says the real issue in healthcare is that the rising costs are putting U.S. businesses at a major competitive disadvantage against countries such as Germany or France, which spend about 10 percent of their GDP on healthcare costs, compared to the United States, which spends 17 percent.

"You do the math," Clinton says. "They both spend 10 percent of their income. Seventeen percent of a \$14.8 trillion economy is a trillion dollars a year. We are spotting our competitors a trillion dollars a year."

For Clinton, such numbers provide a backdrop to shape an issue and ultimately give reason to act on a solution. He's equally concerned about the drop in college student numbers in the United States, where the country fell from first to ninth in the percentage of young adults with four-year degrees. Oddly, the United States still ranks first in terms of sending kids to college, but the drop in graduation rate suggests a growing number of them are dropping out of college because of the cost.

Clinton applauds the Obama administration for pushing through legislation that would allow graduates to pay off their college loans as a fixed

“

I think the biggest, short-term threat is that we get stuck in a decade of slow, slow growth because of our version of what the Japanese went through when they had their commercial real estate collapse.

”

percentage of their income, never surpassing 10 percent. To Clinton, such education policies are keys to keeping the United States competitive.

"It means that, within a very few years, we can return to the ranking we had since the G.I. Bill after World War II," he says. "It has enormous, enormous competitive implications for us."

... BALANCING ACT ...

Today, Clinton says, all of these issues play a role in bringing the economy back so the White House and Congress can focus on bringing down the deficit. He says the other key would be to bring back pay-as-you-go, which his administration adopted but was repealed by Congress during the Bush administration.

"I think the biggest, short-term threat is that we get stuck in a decade of slow, slow growth because of our version of what the Japanese went through when they had their commercial real estate collapse," he warns. "We have to find a way to clean up these balances and flush this debt quicker."

This requires that Congress and the president work together on practical terms, rather than ideological terms. Clinton has watched the rise of criticism and partisanship about Obama over the past two years. But he insists the current president can bridge the gaps with a wary business community and leery financial sector.

"None of us, no person who ever took that job, knew everything that he needed to know, and had all the experience he needed to have," Clinton says. "The key to succeeding is knowing either what you're not good at, or what your team doesn't have on it yet."

Clinton is also a competitor and, while he sees America's competitiveness waning, he sees potential for the United States. Just ask him, he'll tell you all about it.



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A LOOK TOWARD THE FUTURE

India's trading exchanges stand out as major contributors to the country's ongoing economic growth. Although progress is not always uniform across the subcontinent's financial markets, this "nation of traders" appears ready and willing to take a leadership role.



Every boom era has its star performers. In the go-go era of the 1960s U.S. stock market, it was the “Nifty 50,” an informal grouping of 50 popular large-cap stocks considered excellent buys for their stability and solid earnings growth.

Today, it could be another Nifty 50 that sets the standard. This one, however, doesn't feature such American stalwarts as Xerox, Coca-Cola and General Electric. Instead, it consists of India's blue-chip companies, such as Infosys, ICICI Bank and Bharti Airtel.

The new Nifty 50 – or Standard & Poor's CRISIL NSE Index 50, as it is actually called – is the key index for India's National Stock Exchange (NSE). It is also a bellwether for the tremendous strides made in recent years by Indian financial exchanges and the corporations listed on them.

The Nifty 50's largest listing, energy company Reliance Industries Ltd., for example, has a market capitalization of \$41 billion. Infosys Technologies Ltd., the next-largest listing, comes in at \$27 billion. Both are major global players with holdings around the world – and both are based in a country that had no international companies to speak of 20 years ago.

FIRST REGIONAL STOCK EXCHANGE The growth and evolution of India's capital markets have also been impressive. The region's first trading venue, the Bombay Stock Exchange (BSE), has been around since 1875, predating even the Tokyo Stock Exchange. Although the BSE brought several milestones to the Indian financial market throughout its history, the exchange tended to be non-transparent regarding pricing and membership.

That changed in the 1990s with the advent of a new exchange. Under the aegis of the national government and through the efforts of several dedicated economists, the NSE was born in 1994, ushering in two revolutionary concepts: electronic trading and an ownership structure independent of the member brokers.

Inside of a year, the NSE eclipsed the BSE in volume and today accounts for the lion's share of India's stock trading, as well as nearly all of its derivative trading on stock indexes and individual stocks. The NSE currently ranks as the third-largest stock exchange in the world in terms of equity volume, and was the seventh-largest exchange in terms of derivatives volume in 2009, growing 52 percent, according to the Futures Industry Association.

“Naturally, the success of the NSE got the BSE's attention, and the BSE started to clean up its act,” says Michael Gorham, industry professor and director of the IIT Stuart Center for Financial Markets at the Illinois Institute of Technology and co-author of the book *India's Financial Markets: An Insider's Guide to How the Markets Work*. “It realized it had to be electronic, and it made a lot of changes. The BSE has hired some very good people recently and is attempting to give the NSE a good competitive fight. It's a very healthy situation.”

MAJOR LEAP FORWARD In 2003, India's financial sector took another major leap forward with the establishment of two commodity exchanges: the Multi Commodity Exchange (MCX) and the online National Commodity and Derivatives Exchange (NCDEX). The larger, MCX, cleared \$1.24 trillion in contracts in 2009, making it the world's sixth-largest commodity exchange.

“The situation in India reminds me of what the United Kingdom looked like in the mid-80s before the Big Bang, right after the launch of the LIFFE exchange [London International Financial Futures and Options Exchange],” says Alex Lamb, executive board member of RTS Realtime Systems Group, a trading solutions software firm with extensive ties in the region. LIFFE greatly expanded financial futures trading in the United Kingdom.

“Just as in the U.K., we're seeing a rapidly growing awareness as people examine the new products, platforms and distribution tools now

available,” Lamb says. “We also see a lot of new firms springing up as entrepreneurial employees split off and build their own businesses.”

Lamb notes that the Indian market is still “somewhat isolated” and that Indians face similar challenges to those confronted by western economies when currency movement was more restricted. Additionally, he points out, India must deal with major challenges regarding infrastructure, bureaucracy and socioeconomic barriers.

NATION OF TRADERS On the whole, however, Lamb finds many reasons for optimism. He sees the subcontinent drawing on its skills as a “nation of traders,” whose physical presence around the world makes Indians natural participants in the global economy. He also takes note of a “vast population” of motivated, well-educated professionals. And he is particularly impressed by the proportion of private money invested in the country's development, compared with other emerging nations.

“Indians use their own money, typically, as opposed to some bank's money or, as in some places, government money,” Lamb says. “So they're very prudent in their financial management, but they're also very aware of the fact that if they take reasonable risks, they can do very well.”

Ajay Shah, one of India's foremost economists, attributes the country's recent success to four major drivers: integration into the world economy, major advances in finance and infrastructure, and deregulation.

“Economic policy reform in all four areas has chipped away at the barriers to rapid growth over the years,” Shah observes. “The pace in each of the four areas has varied, but it is this continuous process of policy reform which has given us the high growth.”

Shah, who helped advise the NSE in its early years, acknowledges that bureaucracy and inertia have often held India back, and he foresees an immediate future “where progress will be slow.” But he quickly points out that “the glass is half full, in that few other developing countries have comparable success in obtaining liquidity with equity and currency derivatives markets on exchange.”

CME GROUP AGREEMENT Shah is also encouraged by the CME Group and NSE agreement signed in March 2010 to list the Nifty 50 Index on CME Group's Globex electronic trading platform as the E-mini S&P Nifty Futures, with the NSE offering CME Group's S&P 500 futures and Dow Jones Industrial Average futures.

“The agreement is particularly important because the average foreign investor, whether individual or institutional, does not have direct access to the Indian market,” Shah says. “And, conversely, the typical Indian investor does not have direct access to the S&P 500. So these listed products could be particularly important in overcoming the barriers to cross-border investment.”

RTS's Lamb adds, “A trader who trades the Nifty 50 and who wants to now start trading the S&P 500 can continue with his basic investment strategy, whether it be trend-following or a basket arbitrage formula. And he can potentially deploy his existing formula onto a new market without necessarily having to add to his overhead.”

On a macro scale, despite its sometimes balky progress, many see India taking a leadership position in international finance.

“The government is gradually and slowly pushing reforms to make India a global financial hub,” notes Saurav Arora, director of Jaypee Capital Services Ltd., India's largest derivatives trading firm and one of the country's leading brokerages.

As evidence, Arora points to the recent opening of India's markets for currency derivatives and the drafting of new guidelines for exchange ownership and market infrastructure institutions. The guidelines aim to make financial institutions more transparent and more responsive to the needs of customers.

“With the government drive for financial inclusion, the financial sector has a bright future,” Arora says.



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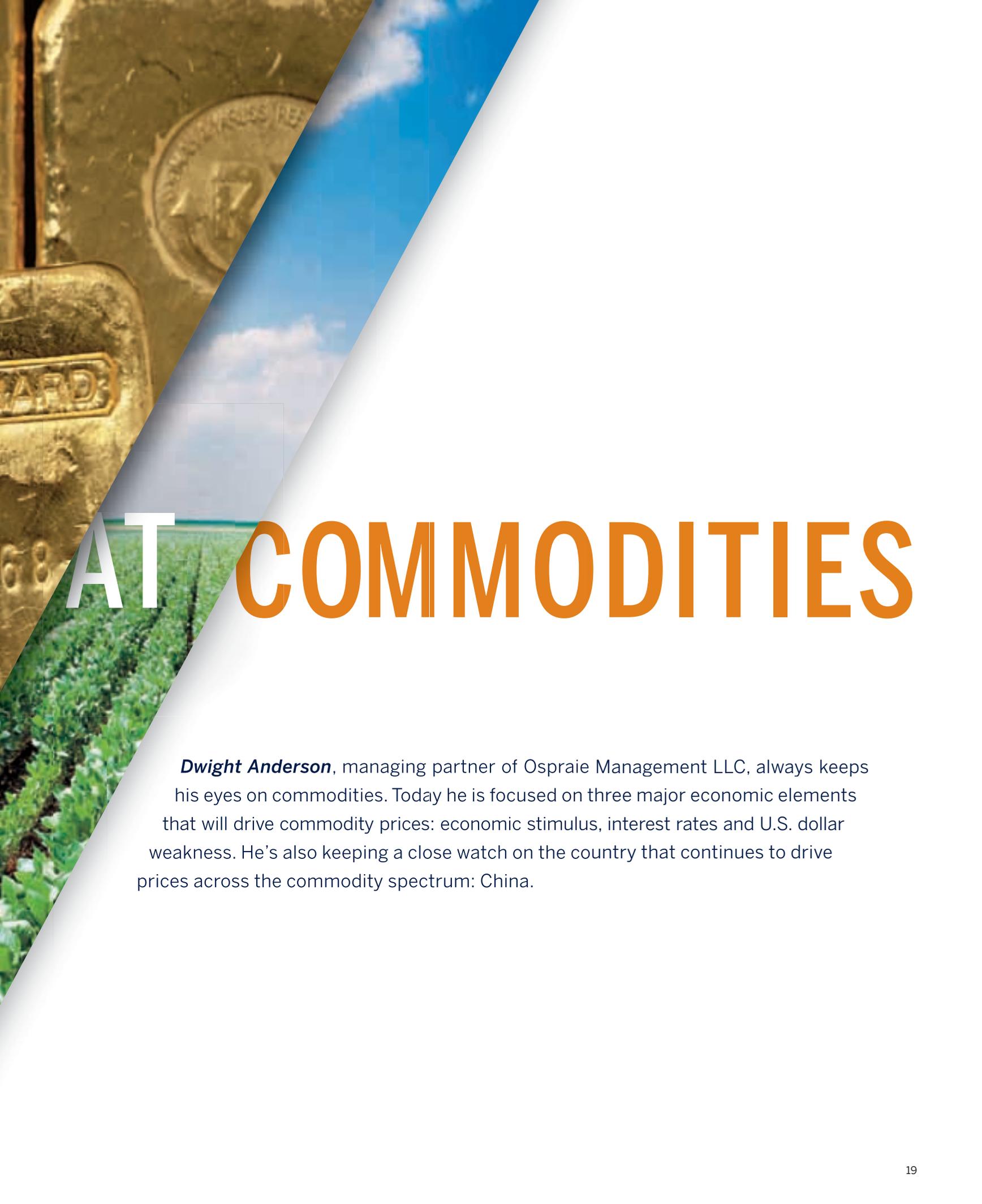
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THE LONG LOOK



AT COMMODITIES

Dwight Anderson, managing partner of Ospraie Management LLC, always keeps his eyes on commodities. Today he is focused on three major economic elements that will drive commodity prices: economic stimulus, interest rates and U.S. dollar weakness. He's also keeping a close watch on the country that continues to drive prices across the commodity spectrum: China.



F

OR ALL THE TALK about the effects of the Federal Reserve Bank's stimulus efforts—inflation and fiscal debt woes—the value of storable commodities is getting remarkably little attention.

Dwight Anderson, managing director and founder of Ospraie Management, says the flood of stimulus money into the U.S. economy means investors need to consider holding storable commodities as a way to retain purchasing power.

A combination of a supportive monetary backdrop and demand from emerging markets has created an environment for commodities that encourages investment in storable resources. These include platinum and palladium—known as the platinum group metals—and cotton on the agricultural side.

Despite the financial opportunities that commodities provide, many investors have little exposure in their portfolios to this sector. For those who are looking to increase exposure, the best chances for solid returns in commodities reside in select markets that have strong fundamental demand and the potential for supply constraints in the coming months and years.

Speaking at CME Group's Global Financial Leadership Conference, Anderson says there are three "tailwinds" pushing commodities higher: monetary policy, demand, and supply constraints/supply shocks.

While most market watchers cite the Fed's decision to expand the balance sheet after the 2008 financial crisis as the linchpin to the current commodities rally, Anderson looks further back to understand the genesis of today's financial situation.

"I don't think people really appreciate how disruptive the exogenous shock of 9/11 back in 2001 has been to our economic cycle and to our monetary system," Anderson says.

Fearing the terrorist attacks on New York and Washington would cause a recession, the Fed lowered interest rates immediately. That resulted in a "materially looser" monetary policy that affected the U.S. economic cycle, from housing to interest rates to currencies, he says.

The combination of general "stimulative liquidity" and the Fed's interest-rate policy has driven real interest rates to a negative level, all the way to the five-year note in the bond market, as recently as late 2010. What that means is the financing and opportunity cost of holding storable commodities is lowered, which makes commodities an attractive asset, he says.

What's more, this policy and liquidity translate into a significantly weaker dollar, and that is a positive for commodities. As most commodities are denominated in dollars, buyers using other currencies find these staple goods are now at a lower price, which helps to stir demand. Demand, es-

pecially lately, has come from emerging markets, and the biggest driver of demand is China.

"If you combine this monetary and currency backdrop with the stunning rates of Chinese demand growth, you have the six-and-a-half-year bull market that was temporarily interrupted by the financial market crisis of 2008," he says.

When the Fed tried to withdraw liquidity in April, financial and commodity markets fell, so the Fed pumped more money back into the system, allowing rallies in bond markets and storable commodities, according to Anderson.

"The conclusion for this is pretty clear: as long as the Fed is this stimulative, you need to stay in net-long, storable commodities if you want to preserve your purchasing power," Anderson says.



**"THAT GOLD PRICE ALONE ISN'T SO MUCH
A COMMODITY. IT REALLY JUST TELLS US
WHAT PAPER MONEY ISN'T WORTH."**

The top market beneficiary of this monetary policy has been precious metals. On Sept. 11, 2001, gold was trading at \$260 an ounce. While some market participants say gold is rallying because of Federal Reserve Bank-driven inflation concerns, Anderson disagrees.

"Currency fear and purchasing-power fear have been driving the flight to precious metals and gold, not the second derivative effect of possible future inflation," he says. "That gold price alone isn't so much a commodity. It really just tells us what paper money isn't worth."

Gold prices have risen to all-time nominal highs, but overall there has been scant participation in the commodities rally, according to Anderson. For example, over the past decade \$300 billion has been invested in commodities, but, comparatively, from January 2010 to July 2010, more than \$185 billion flowed into bond funds, even with negative interest rates.

In other words, Anderson says, the commodity sector is woefully "under-invested" compared to interest rate markets.

China buffet

Liquidity is one price-support for commodities and demand is the second, Anderson says. And no discussion about commodities demand is complete without including China.

China has grown to become the world's largest market for automobile production and consumption, which hits on many commodities: aluminum, iron ore, steel, and the platinum group metals. As an example, China's demand for aluminum has grown by 500 percent in 13 years, while the rest of the world, including other emerging markets, has increased by 15 percent, he says. China consumes 50 percent of the world's iron-ore market.

On the agricultural side, China's consumption of soybeans has led the country to become the world's largest importer. That appetite enabled Brazil to turn pastureland into farmland and supply this need. For supply to continue to grow, strong prices must continue to incentivize farmers to produce crops and feed the world.

Anderson says it is critical to have prices rise to provide producers with an incentive to create more supply, so they can remain profitable on existing capacity. Otherwise prices need to go up in order to kill demand, or supply shocks occur.

Supply constraints and, on the more extreme end, supply shocks can come from numerous external forces, such as nature and political issues, Anderson says.

In 2010, the world saw the impact that weather can have on crops, particularly with summer droughts and fires in Russia and the former Soviet Union states that hit wheat and sugar-beet crops. Anderson says cotton is one agriculture market he is watching closely for supply shocks. He says supplies have dwindled, even as consumers purchased fewer materials during the economic downturn.

"People wouldn't normally think that a row crop is supply constrained, but cotton is unique," he says.

Since the equipment used in cotton production differs from soybean or corn production, farmers can't easily switch without buying expensive new machines. That limits how quickly farmers can enter the market, notes Anderson. Furthermore, several farms are needed to be able to support a cotton gin, which means consensus view and cooperation are needed. Those factors have helped cotton move into a supply deficit for four years, he says.

Anderson is watching the platinum group metals—platinum and palladium—for potential rallies. These metals serve dual roles: industrially, as part of a catalytic converters in cars, and as currency.

He says it is possible that platinum production reached a peak in 2006, and that prices will need to rise over the next few years to ration demand. Additionally, platinum is mined primarily in South Africa and in Zimbabwe, where political and investment landscapes are tenuous.

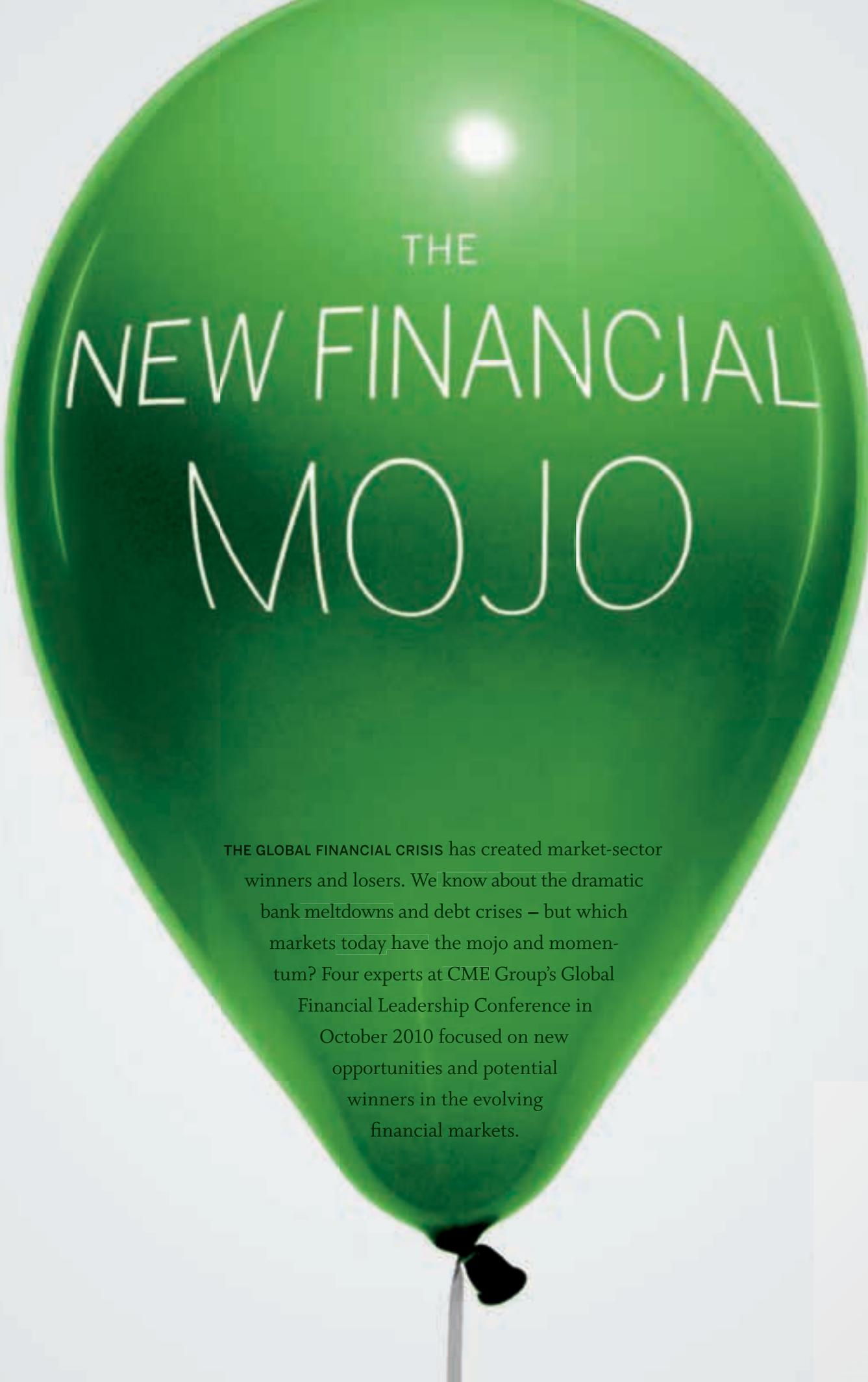
Commodity risks

Still, there are risks. If inflation picks up because of quantitative easing and the Fed raises interest rates, commodity prices could suffer. Another concern is competitive devaluation by other countries trying to kick-start their economic growth.

But, fundamentally, Anderson sees several elements pointing the way for the bullish commodity market.

"The U.S. government, especially the Federal Reserve, has driven real interest rates negative," he says. "And they pumped a massive amount of liquidity into the system. So when you combine negative real interest rates, plus that much money in supply growth—open any economics textbook and it says it flows to the hard assets, commodities, especially precious metals, most of all."





THE
NEW FINANCIAL
MOJO

THE GLOBAL FINANCIAL CRISIS has created market-sector winners and losers. We know about the dramatic bank meltdowns and debt crises – but which markets today have the mojo and momentum? Four experts at CME Group's Global Financial Leadership Conference in October 2010 focused on new opportunities and potential winners in the evolving financial markets.

In the wake of every crisis comes opportunity. To hear experts across the spectrum of financial markets tell it, opportunity may be found in everything from zeroing in on fiscally strong U.S. states, to dialing in investments in emerging economies to identifying beneficiaries of financial reforms. In other words, it's a matter of looking at the world through a different market lens.

Take Meredith Whitney, former Wall Street bank analyst, who earned fame in 2007 by warning investors about the impending financial crisis and government bailout of the banking system. Now, as president of her own firm, Meredith Whitney Advisory Group LLC, she has turned her attention to choosing winners and losers by state. Quite simply, she believes that U.S. states, many of which are in rough financial shape, could be barometers for the U.S. financial recovery and future investments.

"Over the past decade, about 22 percent of the U.S. economy was tied to real estate," Whitney says. "What's more, many states have been growing their expenditures faster than their revenues. Expenditures over the past 10 years have grown more than 60 percent, but revenues in these states have grown just over 40 percent. How have they maintained balanced budgets? They have dipped into their pension funds. So, you've reached an inflection point where this cannot go on much further because their 'rainy day' funds are depleted. If you are investing within the United States, the clear beneficiaries are the states that have run conservative governments and have tax flexibility," Whitney says. Texas, Virginia, North Carolina and Maryland are among the strongest states, with big-deficit states such as California, Florida, Illinois and Ohio among the weakest. The next moves for weak states include both raising taxes and cutting programs. And she identifies a further danger from municipalities that default on debt and require money transfers by state governments. Another likely result: strong states will further accelerate their growth by attracting businesses and individuals from higher-tax locations within the United States. Ultimately, the United States represents an investment opportunity for Whitney, but targeting the right locale will be key.

"The United States is still 40 percent of global wealth," she says. "The other fabulously promising, developing countries remain too small in which to park a ton of dough. My point is that any investor has to invest in the United States."

DEVELOPING COUNTRIES: BRAZIL

Experts also agree that developing nations will continue to outperform the developed nations. Persio Arida, BTG Pactual managing partner, recommends that investors consider long-term Brazilian bonds. This somewhat surprising recommendation is based on his knowledge of Latin American economies – Brazil's BTG Pactual is the largest independent investment bank located in an emerging market – and his experience as governor of the Central Bank of Brazil in 1995.

"The recommendation may look weird because this asset is at its highest now," Arida admits. "Brazil is much in fashion, and investors may think there is a bubble in emerging markets caused by quantitative easing. My answer is that old habits of thinking die hard. Brazil has a very diversified economy and a very sophisticated financial sector, but financial horizons have always been short because of high inflation. They're still short [even though inflation is much less]. People demand extremely high premiums to buy long-term dated bonds."

REGULATION: OPPORTUNITIES AND RISKS

While some are looking at quality geographies, others believe there is opportunity emerging from the host of regulatory rules being implemented across the financial sector. The Dodd-Frank Wall Street Reform and Consumer Protection Act is likely to change the playing field for most swaps participants, as those instruments are set to be cleared starting in July 2011.

"I firmly believe that, by encouraging or requiring more products to be cleared, you will see a reduction in systemic risk," says Don Wilson, founder and CEO of DRW Trading Group. "But the main reason for that reduction in systemic risk is not so much because these things are now in clearing houses – instead of traded between financial institution and large bank counterparties – but because of the democratization of the markets that can take place once these products are cleared. That creates a whole opportunity to bring in more competitors to price interest-rate swaps, CDSs, foreign exchange products, which will create all sorts of new types of businesses."

Jan Bart de Boer, director, ABN AMRO Clearing Bank (formerly Fortis Clearing), agrees.

"We see that as a major change not only to our business model, but also the business models of our clients," de Boer says. "Many products and many markets were not open to everyone before. We see an increase both in listed trading and in OTC trading and opportunities for sovereign wealth funds that provide investment or seed capital for proprietary traders, seed capital for people who want to start their own local asset-management firms."

Brazil's Arida adds, "There's this deep concern that increased regulation of the world financial industry is going to make business more difficult. I can tell you, based on the Brazilian experience, that this is not true. All Brazilian banks were subject to central bank supervision powers from the very beginning – no OTC market, all swaps are registered – and we have a very competitive environment with plenty of opportunities for business."

Are we experiencing a new financial paradigm in a post-financial-crisis world, or are we merely seeing a hiatus between crises? The answer will depend in part on the assumptions that investors make when choosing among market sectors and geographies. But investors are on the lookout for the next mojo for the markets.



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AUTHOR OF
THE BLIND SIDE



MICHAEL
LEWIS

THE BIG SHORT

INSIDE THE DOOMSDAY MACHINE

A SHORT

CONVERSATION

Bestselling author Michael Lewis, who wrote Liar's Poker and his latest title, The Big Short, tells the story of the handful of investors who were right about predicting the financial market going terribly wrong – and how they profited beyond anyone's expectations.



A COMMON THEME OF FAIRY TALES is that treasure exists somewhere in the world, if we can only find it. A common theme of business success stories is that treasure resides right under our noses – again, if we only know where to look.

Speaking at CME Group's Global Financial Leadership Conference, author Michael Lewis points out the latter form of treasure hunt during an informal talk about his latest book, *The Big Short*. The book describes the financial visionaries who anticipated the subprime mortgage meltdown and, subsequently, shorted mortgage-backed securities.

Among his revelations: only 15 investment firms worldwide actually foresaw the meltdown and substantially profited from it. A number of these investors expect additional economic meltdowns in the future. Ironically, several traders on the wrong side of the subprime bet were inspired to make a career of financial trading after reading Lewis's first bestseller, *Liar's Poker*.

THE DUMB MONEY

Lewis notes that one of the factors that motivated him to write *The Big Short* was the irony that the major Wall Street firms had become "the dumb money at the table" when it came to mortgage-backed securities.

"I'd worked at Salomon Brothers, and you can say a lot of things about Salomon Brothers, but you never wanted to be on the other side of the zero-sum bet from Salomon Brothers," Lewis says.

The investors who called the big short on collateralized debt obligations (CDOs) correctly, however, were clearly running against the tide of opinion, Lewis says. In the face of a Wall Street culture that was "very conformant" and very confident, these "outliers" adopted an "apocalyptic view of the world that was proved right."

One example Lewis gives is the case of two young businessmen, Jamie Mai and Charlie Ledley, who founded Cornwall Capital Management with \$110,000 and went on to make millions through credit-default swaps (CDSs).

MIRACLES AND CATASTROPHES

"Basically, they acquire a theory about how markets function or malfunction," Lewis explains. "They think that markets dramatically underestimate the likelihood of uncertain events in both directions – on both 'miracles' and 'catastrophes.' So they scour the world looking for a long shot where the odds were better than the market was giving them."

What they found was that the markets were selling an abundance of cheap catastrophe insurance, according to Lewis, especially in the subprime mortgage

bond market. Although Mai and Ledley knew nothing about this niche market, they were amazed that 80 percent of subprime CDOs were given AAA ratings.

"It doesn't seem to make any sense, especially when you look at the nature of the loans," Lewis says. "So they poked around the rating agencies, they poked around the Wall Street banks, in the way that a journalist would, and at some point they say to themselves, 'Oh, my God, this is unlike anything we've seen because not only are the odds skewed, not only are we getting better odds from the market than we should for this very remote, this very long-shot bet, but it looks like it's going to happen.'"

Their first impulse was not to invest but to sound the alarm. However, when they contacted the SEC and the rating agencies, nobody was interested, according to Lewis. So they bought CDSs on the "absolute worst pools" of subprime mortgages and waited for what they felt was the inevitable.

Lewis was able to identify exactly who benefited extensively from the meltdown by examining hedge-fund returns at the end of 2007.

OFF-THE-CHART RETURNS

"It was a very small handful of people who did it in a big way – 15 investors worldwide," Lewis says. "And it wasn't hard to crack the community, because there were a handful of these hedge funds that had these off-the-charts returns, and they invariably did this trade."

Lewis notes these investors were able not just to perceive a potentially apocalyptic event, but to believe in its probability. To this day, many of the same investors continue to anticipate major downturns.

Lewis cites the example of Kyle Bass, one of the successful CDS investors mentioned in his book, who is currently "betting on the world coming to an end." Bass, Lewis says, is stocking up on "gold and guns basically." Others, however, such as John Paulson, another investor he reported on, are betting on more mundane conditions, such as inflation.

One fear Lewis had in undertaking the book was that those traders on the losing side of the subprime meltdown would not be willing to talk. But to his surprise, they opened up to him.

"They would say, 'I don't usually talk to journalists, but the reason I'm talking to you is because I read *Liar's Poker*,'" he says. "I realized after a while that, in some strange way, my book had caused this catastrophe – that these people who had made these horrific decisions for these Wall Street firms had gotten into the game because *Liar's Poker* got them so excited about it."



RIDING THE

FOREX WAVE

Today's uncertain economic picture has helped to boost FX futures volumes, as investors seek ways to hedge risk and utilize exchange-traded clearing.

What, me worry? You bet.

Markets reflect ongoing worries and confidence. And, today, FX futures continue to illustrate the ongoing concerns about economies around the globe.

Anxiety about the creditworthiness of several European Union countries –including Ireland, Portugal, Italy, Greece and Spain – drove volumes in global forex trading throughout much of 2010, notes Steve Youngren, associate director of research and product development at CME Group.

Global futures and options volume in currency products rose by 252 percent to 1.23 billion contracts in the first half of 2010, compared with the first half of 2009, according to Futures Industry Association figures.

A considerable part of that growth was in CME Group FX products. CME Dollar-Euro futures volume rose 81.9 percent in the first half of the year, while Dollar-Pound futures rose 57.1 percent, Dollar-Yen futures rose 59.5 percent, Dollar-Aussie Dollar futures rose 131 percent and U.S.-Canadian Dollar futures rose 79.7 percent over the same period.

The mixture of transparency, low fees and central counterparty clearing services makes CME Group exchange-traded forex products an attractive trading tool. Volatility in the U.S. dollar against other key currencies and concerns over currency manipulation mean the currency sector will likely continue to be an area of interest for traders.

Also, over-the-counter (OTC) forex volume has been largely stimulated by changing expectations concerning the future of the euro. Meanwhile, worldwide financial markets continued to digest the lingering effects of the 2008 global financial crisis, Youngren writes. And regulatory change by the Commodity Futures Trading Commission (CFTC) could push more OTC volume onto exchanges and clearing houses.

SEEING TRANSPARENCY

Cornelius Luca, president of LGR, notes that exchange-traded currency futures are appealing in part because there are no hidden costs. Market participants have the ability to trade next to professional traders and have access to volume and open interest data.

CME Group has provided “all possible vehicles of trading FX to all types of traders,” notes Luca. The classic currency futures contracts were complemented by the exchange’s E-micro Forex futures contracts in October 2010. “Surely, at only one-tenth of the size of a regular contract, any serious FX retail trader can afford to trade on margin,” Luca says.

In addition, the ability of Interbank traders to execute transactions just as in the cash market in CME Group’s side-by-side set-up “has proven to be a shot in the arm for volume.” And the last, but certainly not least, driver of growth is that there is limited credit risk “thanks to the existence of a clearing house.” This has always been valued, but “since 2008, when the world financial system came close to a meltdown, the lack of credit risk has found a special place in traders’ hearts,” Luca says.

Richard Regan, a 12-year veteran of forex trading and a floor trader in futures at CME Group, says proprietary traders who engage in arbitrage trading currently account for a good part of the business being done in currency futures. For example, they may enter a buy order in the futures market and a sell order in the cash market, and then get out of those positions at a later time. He notes that this is just the type of activity that helped CME Group’s Dow Jones Index futures to take off, as market participants traded the cash market against the futures contract.

Volatility in the U.S. dollar against other key currencies and concerns over currency manipulation mean the currency sector will likely continue to be an area of interest for traders.

A GROWING MARKET

There is also evidence that some OTC market participants are leaving the spot forex market for the transparency and safety of the exchange-traded market in forex. CME Group FX options turnover grew by 229 percent to average \$6.9 billion per day, while the OTC FX options turnover declined by 2.4 percent over the period 2007 to 2010.

Many in the industry believe that growth in global exchange-traded forex products can only continue. Some point to the fact that the CFTC is now imposing new restrictions on the spot currency market, causing some market participants to look into opening accounts for exchange-traded products.

In early 2010, the CFTC was given clearer authority to investigate cases of forex trading fraud in the unregulated OTC market. Employing this power, the CFTC ruled to limit the leverage available to retail customers on forex transactions at a ratio of 10-to-1, down from about 100-to-1.

With the new ratio, investors would have to invest a larger amount in order to place trades of the same size, which would result in a smaller return or loss. At the same time, it would make the market less accessible to individual and smaller investors.

SLAPPING DOWN A DOLLAR INDEX

With a focus on the increased demand for exchange-traded FX products, in July 2010 CME Group rolled out the FX\$INDEX, the first index from Dow Jones Indexes and CME Group following the latter’s acquisition of the indexes.

While other dollar index futures have been developed based on factors such as the competitiveness of U.S. goods in foreign markets, CME Group’s Dow Jones CME FX\$INDEX is weighted by currency to reflect current economic realities, as indicated by the Fed’s data on the world trade.

The futures offer targeted risk management against a basket of major world currencies, all in a single contract. The contract focuses on the most frequently traded CME FX futures: the euro, Japanese yen, British pound, Swiss franc, Canadian dollar and Australian dollar contracts, traded against the U.S. dollar. The basket is weighted to reflect world trade, but also refined to allow more precise hedging.

Luca says the beauty of the construction of the FX\$INDEX is that traders can easily remove component risk or leverage component risk. For example, traders can extract elements of the index in exactly the same size in various key dates, such as earning days.

“Say you are long in the index, but feel that Japan is ready to devalue its currency. You can hedge out that exposure and remain long in the other components versus the dollar,” Luca says.

The index is quoted in U.S. dollars per foreign currency unit, in an inverse relationship. When the U.S. dollar strengthens against the basket of currencies, the FX\$INDEX goes down, reflecting the relatively lower values of the currencies in the basket. Other benefits of the index include less sensitivity to volatility and cleaner technical analysis and systematic model signals.

In addition, when integrated into a complete portfolio of CME Group FX futures and options, FX\$INDEX futures allow for margin synergies with underlying products.

“Market participants have long shown an interest in trading a basket of currencies against the U.S. dollar as a means of managing their risk,” says Derek Sammann, CME Group’s managing director of FX and interest-rate products. “This new contract provides an easier way for customers to more precisely and conveniently lay off global currency risk with a single index. Additionally, portfolio managers can dynamically hedge their positions against the index using the six most liquid currency contracts traded at CME.”

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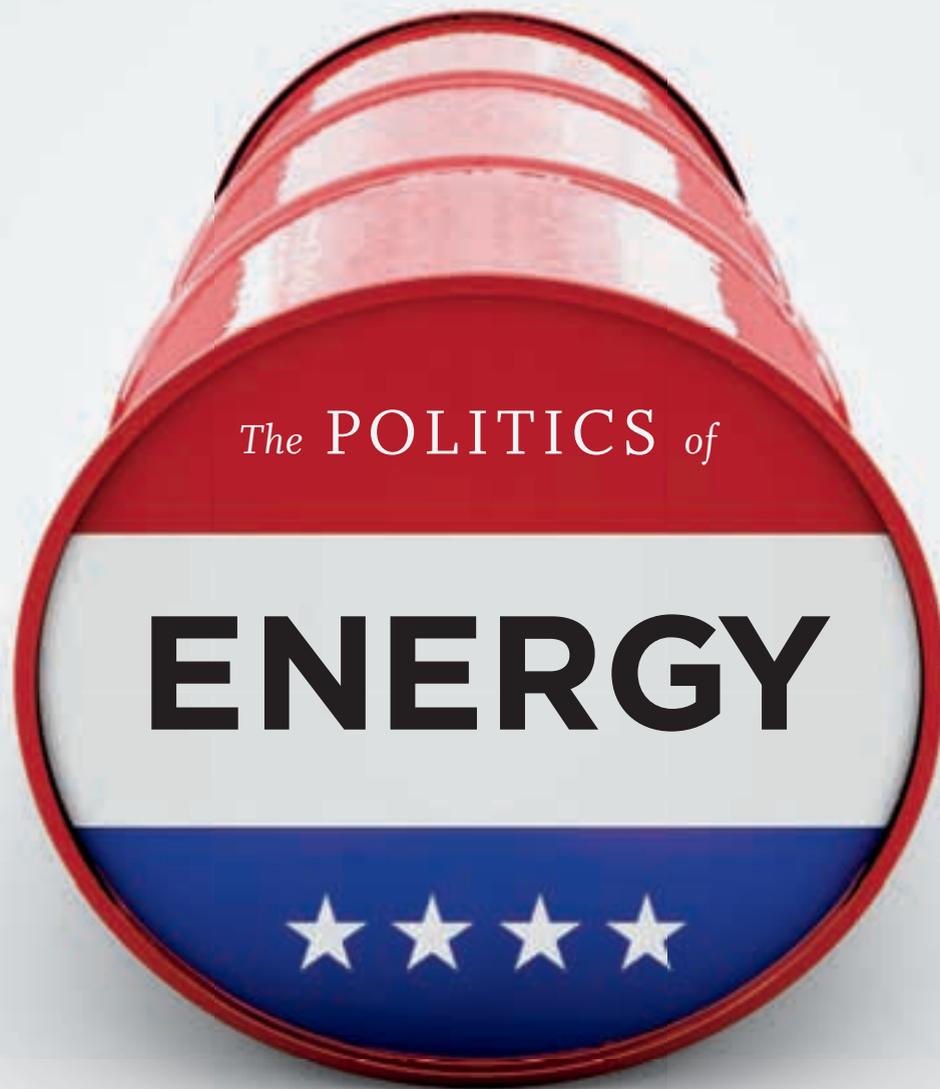
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WHEN DANIEL YERGIN SPEAKS ON ENERGY,

★★★ *people listen.* ★★★

Chairman of Cambridge Energy Research Associates, Pulitzer Prize-winning author and former chair of the U.S. Department of Energy's Task Force on Strategic Energy Research and Development, Yergin says oil will continue to be just as important in 20 years as it is today. *Here's why.*

★ ★ ★ **RENEWABLE ENERGIES** have enjoyed immense attention in recent years, with billions of dollars in government subsidies and investor capital pushing clean energy to the forefront. Yet despite this financial support and all the talk of a new wind blowing in the industry, one simple fact has not changed: oil is here to stay.



"By 2030, hydrocarbons will still be over 70 percent of the world's energy source," says Daniel Yergin, chairman of Cambridge Energy Research Associates.

Thanks to sustained growth in China, India and elsewhere, he projects global energy demand will grow over these next two decades on a trajectory nearly identical to the past two decades: growth of 32 to 40 percent. That means new sources of oil and other energies need to be discovered alongside strides in energy efficiency. It also means oil will continue to exert a tremendous influence on the political and social climate for years to come.

Continuing another trend the industry has seen in recent years, energy will increasingly be swayed by what Yergin terms "above-ground risks" such as nationalized control of reserves, trade imbalances and political interference, as seen with Congress's ill-focused 2008 investigation into so-called oil "speculators." Despite the many characters on the world energy stage, to divine the future of the market "there are only two characters that matter," Yergin says. "One is demand and one is supply."

SUPPLY AND DEMAND

Speaking at the 2010 CME Group Global Financial Leadership Conference, Yergin debunked a notion that has become fashionable in some circles: peak oil. "Inventories are high; there is almost historic shut-in capacity in OPEC, and OPEC itself says ... 'market fundamentals are weak,'" he explains. A field-by-field analysis shows there is more than enough oil to meet global demand for several years.

Despite weak fundamentals, oil prices stayed remarkably stable in 2010, trolling a range between \$70 and \$85 a barrel for the vast majority of trading days. This indicates oil has returned to being an asset class investors such as hedge funds and endowments see as an alternative to stocks, bonds and real estate.

While that shift supported prices last year, the cost structure of the energy industry is quickly making those price levels a necessity. Since 2004, key industry costs have doubled, from steel and capital equipment to the commanding salaries brought about by a dearth of engineers. The Saudis now have signaled \$75 to be a "fair" price for oil, a level Yergin's research largely agrees with. To fund the new megaprojects required to pull fresh supply to market, oil needs to be at least \$60 to \$80 a barrel, he says.

Yergin, who won a 2007 Pulitzer for his book *The Prize: The Epic Quest for Oil, Money & Power*, also sees increased demand bolstering prices in 2011, as a recovering world economy pushes demand past its 2007 peak. Leading the charge is China, which will see demand growth of 600,000 barrels a day. Such demand likely means oil prices will find equilibrium in the low to mid \$80s. But significant risk factors exist, Yergin warns. Currency devaluations could propel oil higher, since historically a weaker dollar translates into stronger oil prices. On the other hand, largely overlooked is the fact that Iraq has significant oil resources that hit the market in 2011 and could depress prices. In the longer term, Iraq recently raised its reserves estimate by 25 percent. However, that figure may be inflated by national pride to appear superior to Iran which, in response, raised its own reserves estimate.

GEOPOLITICAL JOCKEYING

The Iraq-Iran dynamic is just one long-term factor to keep an eye on, Yergin advises. With 80 percent of the world's reserves now under control of governments and their national oil companies, above-ground decisions will have a greater effect on price in the coming years, especially as demand growth presses on the market.

Meeting fresh demand means an increasing share of oil will be from challenging environments such as ultra-deep offshore wells, the Arctic and the Canadian oil sands, Yergin explains. Many of these non-traditionals are more complex, difficult and expensive to bring into the market. Some project this to mean there will be a clash between the United States and China for oil resources.

"In reality, unless we all play our cards very badly, it will remain a competition among commercial oil entities, not national forces," Yergin says.

The bigger risk may be Iran's nuclear program and the world's response, which could spark, at the very least, a significant supply disruption.

THE NEW WILDCARDS

Those in the industry are just beginning to wrap their arms around two other factors. One is what Yergin terms the "shale gale" of U.S. natural gas supply. As recently as 2006, the United States was expected to become a net natural gas importer, but the discov-

ery of extensive fields stretching from New York to Michigan and Texas means there is enough supply to satisfy more than 100 years of consumption.

"It is simply the most significant energy innovation so far this century," Yergin proclaims.

In all likelihood, it opens up the potential that many yet-to-be-built U.S. power plants could be powered by natural gas, rather than coal or oil. Not to be overlooked, natural gas is relatively clean and low-carbon compared with those alternatives.

The broader move toward clean energy is the other major factor to take into account, Yergin points out. Along with greater energy efficiency, clean technology has emerged as a major policy objective in countries around the world. Looking to forestall supply problems, China is enforcing energy efficiency "with an iron fist," Yergin notes, through government-mandated closures of inefficient factories. While the industrialized world is already twice as efficient as it was in the 1970s, it continues to need increasing amounts of resources. To that end, the controversial stimulus bill included the largest energy bill the United States has ever passed, with more than \$100 billion directed toward energy efficiency or new energy. The results are just now becoming evident.

"I have never seen such an emphasis on innovation across the energy spectrum," Yergin notes.

Both in China, where wind and solar power are mandated to more than quintuple in the next decade, and in the United States, where 40 percent of recent energy capacity has come online in the form of wind, renewables are significant, but not so much as to displace much, if any, of the demand for oil, Yergin surmises.

"Renewables have grown substantially in the past couple of years, and the overall energy system is so large that wind and other clean energies can grow," Yergin says. "But they are still a relatively small part of the mix."

Yergin believes today there is a great race being played out worldwide for determining what the energy supplies will be in 2030 and beyond. Markets are an important part of that equation and, as Congress's ill-directed and ultimately refuted attack on speculators demonstrates, it is up to the industry to meet the challenge of communicating and educating the rest of the world on the security and stability markets bring, Yergin asserts.



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RUBIN'S



CUBE



Robert Rubin, former U.S. secretary of the Treasury, says the U.S. economy is still likely to “face enormous headwinds.” Speaking at CME Group’s Global Financial Leadership Conference in Naples, Fla., Rubin takes a look at the economic Rubik’s Cube of unemployment, fiscal deficits, currencies, trade and the prospects of putting the U.S. economy back together again.

ROBERT RUBIN IS AT IT AGAIN, trying to figure out the puzzle that is the U.S. economy. The man who played a leading role in many of the economic policies during the Clinton administration says that what this economy needs is a good dose of confidence and serious attention to policy on fiscal matters and public investment.

Even with some recent indications of improvement, growth is likely to be sluggish relative to post-Second World War recovery, and bumpy, with unemployment high for an extended period of time, Rubin says. Federal deficits are still on an unsustainable trajectory, and large state and local budget gaps must be closed.

"I think the prospects for the United States economy for both the short term and the long term are the most complex and uncertain of my adult lifetime," Rubin says. "That obviously creates an extremely difficult decision-making environment for investors, for business people, for policymakers and for our people."

Rubin notes that the government's macroeconomic tools, fiscal policy and monetary policy may all have been pushed to the limits of prudence.

"I think the administration was right in proposing specific and limited measures that might be particularly powerful in generating economic activity," Rubin says, citing the proposal for small-business lending.

The recently enacted year-end fiscal measures are estimated to have cost roughly \$250 billion to \$300 billion, or one percent of GDP in each of two years – counting only what was not expected to be done in any case, and attributing little cost to business expensing that just defers taxes in a near-zero interest-rate environment. The total effect of the stimulus remains to be seen.

While Rubin believes that an additional stimulus initiative tied to structural fiscal reform could be constructive, he says that a major new stimulus on its own is likely to be counterproductive. Piling sizeable new deficits on top of the current debt could harm already troubled business confidence. "Substantial new deficits could also lead to sudden and unexpected disruptions in market psychology and, following from that, disruptions in the bond market," he says.

Even if a major additional stimulus unassociated with subsequent fiscal reform worked

initially, it could fail to generate ongoing momentum, given the enormous macroeconomic challenges, Rubin says. The debt-to-GDP ratio would be worse, and that in turn would increase the likelihood of market disruptions, forcing us to deal with them in worse circumstances.

He is also doubtful about additional quantitative easing, the Federal Reserve Bank's plan to buy \$600 billion of U.S. Treasuries. On the one hand, it could reduce already low interest rates, which in turn could stimulate consumption and investment. It could also weaken the dollar, promoting exports and strengthening the stock market. (However, so far at least, 10-year rates are higher now than they were before the proposal was either floated or formally announced.)

"On the other hand, even if the positive effects occur, they are likely to be quite limited," he says.

"A weaker dollar could lead to dangerous competitive devaluations," Rubin says, and those devaluations could lead to financial chaos, or restrictive trade measures elsewhere in the world. Commodity prices are already increasing as a result and could undermine the development of additional demand. But the most serious problem is that the new program has heightened existing concern that we might, at some point, monetize our debt to try to inflate our way out of our fiscal problems.

CONFIDENCE BOOST The current lack of business confidence also concerns Rubin, who points out that there is considerable strain between the administration and the business community. He believes that the administration should work closely with businesses and all other interested parties on regulations that offer strong protection, but which also factor in economic impacts.

With regard to trade, Rubin says new trade treaties could improve business confidence. But current account imbalances based on non-market exchange rates, subsidies and

trade barriers pose artificial risks to U.S. producers of goods and services. "It seems to me it is in the interest of all the countries involved to find non-unilateral ways of resolving these issues," he says. "To resort to unilateral remedies has the risk of creating trade wars that could be enormously harmful to all concerned."

Rubin, who served in the Clinton administration from 1995 to 1999 and helped erase the U.S. federal deficit, recognizes the difficulties involved with today's large and rapidly growing debt. He advocates that the administration and Congress work together to develop and enact the first phase of a serious deficit-reduction program to take effect in two to three years, including room for public investment in competitive areas such as education, infrastructure and research.

Rubin notes that the politics of deficit reduction are enormously difficult, because the American people do not want tax increases or spending reductions that would affect them. He does believe that the 2001 to 2003 tax cuts for people earning more than \$250,000 should have been allowed to expire.

"By not doing that, we sent a signal that we can't deal with even the politically simplest and least difficult of budgetary constraints," he says, adding that he agreed with extending tax cuts for people earning less than \$250,000 by two years. Now he would work out a permanent solution in the context of a first phase of deficit reduction.

The most important challenge the United States faces, says Rubin, is moving from its current unsustainable fiscal trajectory. Without a trend change, business confidence will continue to be adversely affected, capacity for public investment will be constrained, and resilience for dealing with economic emergency will be restricted. Most dangerous and most disruptive, however, would be having the country developing significant deficit premia in bond markets that, in turn, could lead to a long period of slow growth, or worse.

Rubin believes there is hope, despite the gloomy picture and hurdles ahead. But it will take good policy and confidence. He says "an investment-led recovery," similar to that which occurred in 1993, could provide a boost to consumption, and "this could build the needed momentum."



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David Ferrucci, leader of the Semantic Analysis and Integration department at IBM's Watson Research Center and winner of CME Group's 2010 Fred Arditti Innovation Award, has built a computer system that can listen to your spoken question and give you an answer as fast as a game-show contestant. In fact, the computer will be a contestant on *Jeopardy!* But the real story is what so-called "intelligent systems" can do for the rest of the world.

Most traders insist they are at their best when they can invest without emotion. That may be easier in the future with IBM's Watson.

Named after Big Blue founder Thomas J. Watson, this intelligent system, created by Dr. Ferrucci and his team, is born out of the same IBM research department that created chess-playing Deep Blue. Now, Watson is taking on flesh-and-blood challengers from television game show *Jeopardy!*

Lightning-quick data recall and natural language-processing capabilities allow Watson to decipher not only the facts, but also the irony and puns that are often part of the show's "answers." Some four years into development, what's known as a Question Answering (QA) system among computer scientists is still a work in progress; like its human competitors, Watson (a.k.a. Deep QA) failed to answer some questions correctly in trial runs.

But Ferrucci and IBM see far less trivial roles for continually evolving intelligent systems, which are part of the broader category of Artificial Intelligence found in both scientific fields and popular culture. Ferrucci and his team believe new technology that can sift, filter and answer questions from huge reams of data could have applications in healthcare, science, business and financial markets.

"When you think of financial decision-making, there are just droves and droves of data to consider, a huge number of variables, lots and lots of transactions happening," Ferrucci says. "How do you consider all of that at once? How do you make informed, intelligent decisions when you have that much data to consider? The value is, in some sense, beyond any one investor's imagination."

WE CAN BUILD IT

But the value may be unlocked by Watson. The system's hardware is an IBM Blue Gene/P, one of the fastest supercomputers available. Speed is only part of the formula, however. Eventually, the computer must be "confident" in its answers.

"What's happened in more recent years is we are learning how to use machine-learning techniques, statistical techniques where we take the data in and we find patterns in the data," Ferrucci says. "We look

at what the truth is. What are the types of questions? What are the correct answers? What are the wrong answers? And we program the computer to start to learn on its own about what the necessary features are and how they have to be organized and weighed to predict the right answer – to behave intelligently."

Ferrucci explains that, when given a question or problem, Watson begins generating its many hypotheses and gathers an evidence thread for each. Then it puts together an ensemble of hundreds of algorithms to analyze evidence "answer pairs," eventually assigning percentages. For example, Watson might assign a confidence of 75 percent that a given piece of evidence supports a particular hypothesis, or is 20 percent sure that a piece of evidence refutes another hypothesis, and so on.

"Then the machine combines all of these, comes up and says, 'this is my best hypothesis, my best answer, and I have a confidence of 75 percent,' or whatever, and it's above threshold," Ferrucci says. "Above threshold means 'I want to take a bet on it, right?' It's worth the risks."

Certainly, the need to make quick, informed decisions exists in financial markets and other industries, but it is perhaps nowhere more important than in medicine.

"One of the things I get excited about is in healthcare, when you think about coming up with the differential diagnosis," Ferrucci enthuses. "More and more it's just an enormous wealth of medical knowledge that's evolving. How do we leverage all of that? How do we fit that into one person's mind? I think, ultimately, we can't. Information comes to us in so many different forms: patient history, family history, symptoms – reported symptoms or findings from lab tests, aggregate data from a vast number of populations, weblogs or various kinds of documents."

Technology and human decision-makers continue to function side-by-side in healthcare and financial markets. And Ferrucci is quick to shoot down any notion of machine overtaking man, even when considering growth in intelligent systems.

"At the extreme, people think, 'what about machines that are going to take over the world?' And I think that's more science fiction than ultimate reality," Ferrucci says. "Machines ultimately do what humans program them to do. We manage that and we give them algorithms. We program them to perform certain tasks, perhaps to perform them more quickly, perform them more completely in terms of the amount of data that they consider in making decisions. But, ultimately, it's humans programming the computers to behave in a way that we consider intelligent."



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CONNECTING YOU NOW

CME Group's Globex electronic trading platform can be accessed from almost anywhere in the world. The key to that access comes from CME Group partnerships with telecom companies that help provide the backbone of the network, offering local access to firms around the globe. Here's how.

SINCE 2004, CME GROUP HAS OPENED LOCAL ACCESS HUBS FOR CUSTOMERS IN MAJOR CITIES INCLUDING LONDON, MILAN, AMSTERDAM, PARIS, DUBLIN, SINGAPORE AND SEOUL.

The old axiom “think global, act local” is a pretty good strategy when putting together a global exchange network.

CME Group, in partnership with major global telecommunications carriers such as Verizon Wireless and NTT Communications, maintains “local access hubs” that allow overseas trading firms to connect directly with CME Group’s network through dedicated sites in the firms’ own cities. Since 2004, CME Group has opened local access hubs for customers in major cities worldwide, including London, Milan, Amsterdam, Paris, Dublin, Singapore and Seoul – with plans to roll out more soon.

For CME Group, these hubs ease the way for international expansion, making it easier and more cost-effective for the exchange to connect with trading firms in cities outside the United States. For customers in these locations, the benefits include lower latency, greater reliability and more scalability as business grows.

“The quality of our global network is one of the key elements for CME Group because our business provides a trading environment to our customers around the world approximately 24 hours every trading day,” says Kevin Fortcamp, associate IT director.

Consisting of data cabinets established within a larger, well-secured data center, these hubs also tend to be more stable, better protected and easier to service than traditional co-location site arrangements.

CME Group relies on Verizon Business not only to provide the critical telecommunications technology supporting these hubs, but also to act as a partner in analyzing which cities and local carriers might be the best fit for local access hubs.

MESHING TOGETHER CME Group first came up with the local access hub concept in late 2003 and, through its partnership with Verizon Business, developed its first hub in February 2004 in Frankfurt, although that one is no longer active.

“This was a first for Verizon Business in terms of partnering with CME Group to meet its requirements,” says Mark Lira, sales engineer director for Verizon Business, which operates in 159 countries, with staff in 79 countries. “We were able to offer them people on the ground in multiple countries, as well as analysis of the marketplace, right down to the architecture of the co-location space.”

In developing the local access hubs, CME Group’s partnership has drawn not only upon Verizon’s depth and breadth of experience in these foreign markets, but also on the advanced technological infrastructure that the telecommunications giant has built around the world. Verizon Business utilizes a modern and resilient “mesh” network, which, according to Lira, guarantees foreign trading firms higher availability and lower latency than previous ring-architected systems.

This kind of scalable and resilient architecture is important when dealing with the potential for outages that can result from disasters across the globe, natural or man-made. For example, in August 2009, when a typhoon and earthquake centered near Taiwan knocked out much of the communications grid in that region of the world, the mesh network continued to function and route communications – a necessity in the always-on world of global trading.

BINDING IT TOGETHER More recently, CME Group teamed with NTT Communications to establish local access hubs in the Asia Pacific region.

“The communications network is becoming a more and more important element to accommodate the financial industry’s needs,” says Takashi Ooi, senior vice president and head of the global solutions department for the global services business division of NTT.

Aside from its expansive networks throughout Asia, NTT also boasts an undersea PC-1 cable, purchased in 2009, that provides a direct hard-line connection between Japan and the west coast of the United States, specifically from Tokyo to Seattle. It lays the groundwork, quite literally, for levels of connectivity and reliability that make it much easier for CME Group to accommodate trading firms throughout the Pacific Rim, including Korea, Singapore, Vietnam and Malaysia.

“This provides the low latency that is important for financial institutions and the reliable network that is so important for security,” Ooi says of the technology underpinning the local access hubs.

“NTT Communications takes a very unique approach to the challenging task of controlling and improving the quality of the network across the globe by hosting the Arcstar Carrier Forum and sharing their experience and expertise with partner providers,” CME Group’s Fortcamp says. “Their continuous commitment to quality, involving their partners in overseas countries, certainly qualifies them as a valuable partner of the exchange.”

CME Group plans to continue building out the hub network, and giving even more local firms a chance to trade on a global platform.



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CURRENT PULSE



Manage Risk, Rain or Shine

CME Group began listing and trading rainfall futures, options on futures and binary options on October 31. The futures and options on futures contracts enable market participants to manage exposure to rainfall. The binary options enable users to manage the ramifications for businesses or other operations if rainfall is more or less than anticipated. Binary options provide the options holder with a fixed-dollar payout upon exercise. If the option expires without being exercised, the holder's losses are limited to the amount paid for the binary option.

"We see the impact of weather every day in our lives and we know how it can influence regional and local business decisions – whether to raise prices, divert inventory or result in temporary closures," says Tim Andriesen, CME Group's managing director of agricultural commodities and alternative investments. "A significant number of industries, from agribusiness to recreation, are reliant on good weather, but also are at the mercy of bad weather. Rainfall contracts, in conjunction with our existing suite of weather products, will allow these businesses to manage the resulting risk."

The rainfall contract locations include Chicago O'Hare International Airport, Dallas-Fort Worth International Airport, Des Moines International Airport, Detroit Metro Airport, Jacksonville (Fla.) International Airport, Los Angeles Downtown USC Campus, New York LaGuardia Airport, Portland (Ore.) International Airport, and Raleigh-Durham International Airport. For more information about CME Group weather products, visit www.cmegroup.com/weather.

Volatile Mix

CME Group now offers futures and options contracts based on volatility indexes that combine CME Group's options market data with the Chicago Board Options Exchange (CBOE) Volatility Index (VIX) methodology.

The CBOE/NYMEX WTI Volatility Index and CBOE/COMEX Gold Volatility Index are the first to launch since CME Group entered a seven-year licensing agreement with CBOE, which gives CME Group worldwide rights to list futures and options on futures for volatility indexes on a variety of asset classes. In addition, futures on corn and soybean VIX indexes are expected to launch in the first quarter of 2011.

The new indexes provide a direct and effective way to track volatility in a variety of benchmark asset classes by leveraging the liquidity of CME Globex options on futures markets. Data for the indexes is being distributed and can be viewed online at www.cmegroup.com/vix.



Funding the Future

CME Group Foundation recently launched a four-year initiative to help address the gaps in performance for lower-income Chicago students. The foundation endowed a multi-year grant of almost \$3 million, dispersed to multiple organizations to enable young children to become proficient in mathematics at the appropriate grade or developmental level. The programs will reach nearly 800 Chicago educators and 15,000 Chicago students.

The breakdown of the funds is as follows:

- \$1 million over four years for Erikson Institute Early Mathematics Education Project
- \$1 million over four years for Ounce of Prevention Fund Early Math Initiative
- \$750,000 over three years for Big Shoulders Fund Early Childhood Math Intervention Program
- \$33,000 in 2010 for Chicago Children's Museum Playful Approaches to Learning in Math

Visit www.cmegroupfoundation.org to learn more about the grant and its recipients.

Adopt-a-School

CME Group's New York office has partnered with the New York City public elementary school PS 277 and will donate school supplies, raise funds, and provide volunteer services. As the partnership grows, CME Group will provide resources for the school's technology systems, including donating and installing four LCD screens and 10 laptops. Plans also include hosting a health fair, developing school fitness programs and planning a community service day. Additionally, CME Group president Phupinder Gill served as principal of the school for a day on October 7 last year.

In Chicago, CME Group partners with Washington Irving Elementary School to provide volunteer services, educational materials and supplies. Through the Adopt-a-Classroom program, CME Group departments volunteer for individual classroom events.



Honoring Brazil's bank chief

On November 5, 2010, His Excellency Henrique de Campos Meirelles, governor of the Central Bank of Brazil (right, with CME Group CEO Craig Donohue), visited the CME Group Global Command Center and was recognized for distinguished leadership of the Central Bank of Brazil and excellence in the management of the Brazilian economy.



Leo Melamed: A Chicago Groundbreaker

CME Group Chairman Emeritus Leo Melamed was ranked fourth in *Chicago* magazine's list of "Top 40 Chicago Pioneers: Visionaries from 1970 to 2010." Melamed is ranked among Chicago greats such as Milton Friedman, President Barack Obama, Mayor Richard M. Daley and Oprah Winfrey. The piece states "...Melamed shifted the Merc's focus from butter and eggs – its original commodities – to currency futures with the creation of the International Monetary Market, maintaining the city's position as a financial powerhouse."

In the Clear

CME Clearing Europe received regulatory approval in December from the U.K.'s Financial Services Authority, paving the way for the clearing-house's launch in early 2011.

Initially, the London-based CME Clearing Europe, a wholly-owned subsidiary of CME Group, will focus on clearing OTC commodity products, with clearing solutions for OTC financial products coming soon after launch. The goal is to offer multi-asset OTC clearing and build on CME Group's European presence and geographical reach.

"Through this new London-based subsidiary, we will provide locally relevant clearing services to meet the needs of our European customers, a key CME Group market," says Andrew Lamb, CME Clearing Europe chief executive officer. "Our London team will continue their work to ensure potential clearing members and customers are ready for our launch."

CME Clearing Europe will feature Barclays Bank and J.P. Morgan as its first settlement banks. J.P. Morgan will also provide custody and liquidity services.

"J.P. Morgan is very pleased to provide an integrated settlement banking, custody and cash liquidity solution to CME Clearing Europe and its member firms as part of our long-standing commitment to supporting European and global exchanges and clearinghouses," says Paul Wilson, international head of client management and sales for Financing and Markets Products at J.P. Morgan.

CME Clearing Europe is designed to ensure stability and increase transparency in the markets cleared, helping to reduce and contain systemic risk.

"As the market looks for ways to meet the new regulatory requirements and manage portfolios, we look forward to working with the CME Clearing Europe team in providing their clearing members with excellence in operational banking services," says Andy Reid, head of non-bank financial institutions at Barclays Corporate.

Separately, CME Clearing Europe has applied to the U.S. Commodity Futures Trading Commission (CFTC) to become a registered Derivatives Clearing Organization (DCO).



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