

ALTERNATIVE
LatinInvestor

Issue 15 April/May

Renewable
Energy
Focus

**Political Risk
in LatAm**

**Gaining
Exposure
to LatAm
Renewables**

**Brazil
Enterprise
Value Real
Estate Index**

**M&A Trends
in Renewable Energy**



ARIAS RESOURCE CAPITAL FUND II L.P.

.....↓.....

\$504 MILLION

TARGETING CAPITAL CONSTRAINED
METALS & MINING COMPANIES
IN GLOBAL MARKETS

.....↓.....

Greenhill & Co., LLC acted as exclusive global placement agent

Greenhill

No securities are being sold. This announcement appears as a matter of record only.

Contents

Sectors

Renewable Energy

The Argentine Renewable Energies Chamber (CADER).....	47
A Bio-Energy Perspective.....	52
Wind Power Growing in LatAm	58

Hedge Funds

What Hedge Funds Association (HFA) Members Have to Say About LatAm.....	9
---	---

Philanthropy

Providing At-Risk Youth a Way out of Poverty.....	72
---	----

Political Risk

Steps Towards a Critical Juncture in Argentina	68
--	----

Ventures

Mercatrade: B2B Online Marketplace	70
--	----

Art

LatAm Art in 2012: Part One.....	15
----------------------------------	----

Forex

Who Will Win the Currency Wars?.....	64
--------------------------------------	----

Private Equity

The Virtues of Focus	6
----------------------------	---

Regulation

State Monopolies in the Brazilian Mining Market	74
Benefits of the Colombian Free Trade Agreement for Foreign Investors.....	76

47



72



68



64



13

Issue Focus: Renewable Energy

Investing in the Development of Argentine Wind Power (PREMIUM)	22
--	----

M&A Trends in Renewable Energy (PREMIUM).....	24
---	----

Developing Chile's Renewables Sector (PREMIUM).....	28
---	----

Gaining Exposure to LatAm Renewables (PREMIUM).....	30
---	----

Promoting Renewable Energy in the Americas (PREMIUM).....	32
---	----

Institutional Investors Targeting Renewables in Brazil (PREMIUM).....	35
---	----

Feeding the Beast: Ethanol in Mexico (PREMIUM).....	38
---	----

A Roundup of Renewables in LatAm (PREMIUM).....	40
---	----

The Benefits of Small Hydro (PREMIUM)	43
---	----

Renewable Tech Development in LatAm (PREMIUM).....	45
--	----

Cover Stories

Political Risk	
Political Risk in LatAm	12

Renewable Energy	
M&A Trends in Renewable Energy (PREMIUM)	24
Gaining Exposure to LatAm Renewables (PREMIUM).....	30

Real Estate	
Brazil Enterprise Value Real Estate Index	60

28



30



43



12



60



Letter from the Editor

The Chinese use the term “guanxi” to refer to the interconnection of relationships and as an adjunct to the concept of “face”: how a person or firm is viewed and treated with respect. In times of trouble, many people or firms are dedicated to saving face, and these measures are deeply rooted within the business community. While not in the strict definition of the term, you can show respect by knowing that an error exists, but not making it public, saving face for your company and/or boss. This was not so in the case of Greg Smith, the recently resigned Goldman Sachs executive whose op-ed piece has been taking the financial world by storm.

First, to give you an idea of the impact of this resignation, using Google search results as a litmus test of internet popularity:

Evita Peron:	About 804,000 results (0.27 seconds)
Hugo Chavez:	About 4,330,000 results (0.18 seconds)
Greg Smith + Goldman :	About 22,800,000 results (0.17 seconds)

In a move very uncharacteristic of the financial industry, Smith called out senior staff members at the financial giant as “morally bankrupt” for putting the needs of the firm over the needs of their clients and being “toxic and destructive” by putting the firm far from its founding principles. Goldman’s response was dignified. Not trying to fuel the fire, they respectfully disagreed. Smith, though, seems to have the last laugh: He’s reportedly been given a US\$1.5 million advance on a book deal about his former employer.

What does this mean for LatAm? Over the past 5 years there has been a flood of investment advisory services, from one-man operations to multinational investment banks. But how do these firms operate in an environment already fraught with opacity?

It is my most sincere belief that LatAm has an opportunity to learn from the mistakes of its own past and that of the developed world. Take the most recent global banking crisis, from which LatAm emerged fairly unscathed due to the lack of a mortgage market and available credit. Already regulation for hedge funds by the Brazilian CVM is much more stringent than in the US, which leads me to believe at least regulators have investors’ best interests in mind.

But how do large firms operate in LatAm? Do they toe the company lines? Must they act independently from central leadership in order to bridge cultural differences and retain local clients? Has Greg Smith opened the door for other executives to step out into the light to expose their employers’ dirty laundry? What would his LatAm counterparts have to say?

We can only hope that the LatAm investment sector in its most nascent stage is developing with the guidance of a community that truly wants to see it grow around principles of socially responsible investing and best practices, and we here at Alternative Latin Investor aim to nurture that growth to the best of our abilities.

ALTERNATIVE LatinInvestor

Managing Director	Nate Suppaiah
Content Editor	Amanda Carter
Public Relations Director	Tiffany Joy Swenson
North American Director of Business/Content Development	Peter Lenahan
Head Writer	Michael Romano
Staff Writer	Marc Rogers
Copy Editor	Maureen McGrain
Contributors	James Anderson Claudio Freitas James Knight Adler Martins Felix Villalba Mark McHugh
Design	Arman Srna
Social Media Coordinator	Vidhya Narayanan
Consultants	Adam Berkowitz Tyler Ulrich Jennifer Peck

Contact:

info@alternativelatininvestor.com; (202) 905-0378

2011 Alternative Latin Investor. No statement in this magazine is to be construed as a recommendation for or against any particular investments. Neither this publication nor any part of it may be reproduced in any form or by any means without prior consent of Alternative Latin Investor.



Keep your funds on course

Any size fund, fund structure, fund strategy, fund domicile

To ensure your funds stay in front, contact:

Vince Sarullo

Managing Director,
Apex Fund Services (US) Ltd.

1221 Brickell Ave Suite 2410
Miami, FL 33131
Tel: 1-732-539-7746

apexfundservices.com

Abu Dhabi | Australia | Bahrain | Bermuda | Canada | Cayman
China | Cyprus | Dubai | Guernsey | Hong Kong | India | Ireland
Isle of Man | Jersey | Luxembourg | Malta | Mauritius | Saudi Arabia
Singapore | Switzerland | United Kingdom | USA

APEX Personalized Services:

- Global fund structuring and start-up advisory
- Global independent fund administration - done locally
- 24 international offices
- Corporate secretary
- Independent directorships
- Real time, middle and back office technology solution
- Emerging Managers fund platform



The Virtues of Focus

A Profile of Graycliff Partners in LatAm

■ James Knight

Usually, private equity shuns the spotlight. Right now, executives in Europe or the US will do almost anything to avoid having to put their heads above the parapet to justify debt-heavy buyouts that have failed to deliver on juicy IRRs, even juicier incomes that are generously taxed as capital gains, and the prospect of job layoffs for workers in the search for efficiency gains.

South of the Rio Grande, where PE is less of a known quantity, the proposition is a little different. One firm that wants to shout about its strategy and its record is Graycliff Partners, which peeled off from HSBC Capital at the end of last year.

Of USD\$1 billion under management, a little over USD\$200 million is currently invested in LatAm. At the end of January the firm announced its latest deal, a minority stake in the generic drug company Medquímica, operating in Brazil's Minas Gerais state. The capital is being used to double plant capacity, launch new product ranges and strengthen distribution channels inside the country.

At a time when private equity is fragmenting and diversifying on the continent, Graycliff has chosen to focus on a clear market segment. "We're growth equity mid-market investors, and that's been the strategy since 1991," says Cristiano Boccia, who heads up the fund's São Paulo office. "In Brazil that means 10-50 million reals per deal. We're looking at companies with 25-150 million reals of revenue."

Boccia buys into the view that long-term growth in LatAm countries, especially its largest economies, is going to be provided by domestic markets rather than commodities, and this is reflected in the companies in which the fund has invested. Food and beverages, healthcare and education are the sectors of choice. Since 2008, Graycliff has taken stakes in Credivalores, a consumer finance company in Colombia; Brazil's Cereale Indústria e Comércio de Alimentos, which produces food ingredients for branded products; Harmon Hall Holding, the largest English-language school chain in Mexico; Arabela, a Mexico-based direct seller of beauty products across Central America; and Grupo ASSA, a Buenos Aires-based IT service provider of ERP implementation with offices across the region. Further deals are in the pipeline in Colombia and Chile.

However, companies well-positioned in the value chain, comprising industrial and manufacturing plays, IT and service-side operators, are also on the radar. In return for being flexible on taking a minority position, Boccia says he looks to have a "strong say" on adding value, through ap-

pointing a CFO, for example, or improving governance.

The spinoff from HSBC was partly triggered by regulatory reforms sweeping the global banking industry, but management, based in New York and Brazil, has stayed on board for the transition, and the bank remains the fund's main investor, along with third-party capital from institutional investors and family offices, with a focus on the Middle East, Europe and Asia.

Is this a good time for private equity in the region, given a scarcity of capital, ongoing Eurozone uncertainty and fears about the scale of the global economic downturn? At the end of last year, the industry came together in São Paulo for a spot of navel-gazing about what it was trying to do in Latin America. Significantly, in Brazil alone 2011 Q2 activity was down not because cash or appetite wasn't present, but because asking prices were unrealistically high: buyout fever was in full swing, giving rise to double-digit multiples, fierce competition, and rushed due diligence. One lawyer at the conference referred to a deal he had worked on in which a target company had even tried to renegotiate upwards after agreeing a price. "And it wasn't a bad valuation," he added.

Therefore, one problem right now is too much interest in the sector rather than not enough. Boccia's strategy is to avoid the beauty pageants. "The size of the companies we're looking at is at the lower end of the middle market, where the dynamics are a little different. The prices are more attractive, and we don't have a lot of PE funds in that space," he says.



Due to the relatively modest size of its investments, unlike a KKR, Carlyle, or Blackstone Graycliff is also able to hunt smaller deals in frontier markets that don't have to be extravagantly scaled up in order to meet projections. "We're not restricted by size or scalability or region or country. We don't need to think in those terms."

Therefore, the fund is actively looking at Peru and even Argentina, where attractive PE multiples of 6/7, double-digit growth in certain companies and certain sectors, strong, debt-free balance sheets and the presence of good management teams are starting to draw mid-market interest.

With a three-man office to cover the entire Latin American region, sourcing is key. "You have to be proactive," says Boccia. "We work with a group of deal finders and operating partners that focus on the region, or on an industry. We have some affiliations with former executives that are industry experts, and try and tap into that network as much as we can."

However, an ongoing concern for industry watchers is exits. Brazil, for example, has seen no IPO activity in the last six months, and the collapse of the Brasil Travel Turismo Participacoes SA launch in February did little to reassure potential buyers about the health of local companies, despite the gains the BOVESPA has made since the start of the year. GDP growth last year was only 2.7%, way below the government target of 4.5% at the start of the year. FX exposure also remains an issue. In Graycliff's case, debt is usually raised locally, to match operating income, and in the case of international issuance, or companies with revenue exposure to various markets, a hedging structure is employed as a mitigation.

Finally, the industry finds itself both helped and hindered by greater visibility. "The success of some recent deals has created higher awareness," says Boccia. "We used to spend a lot of time explaining what private equity was; we don't have to do that anymore."

But that brings complications, and he admits that "in some quarters there is still an image problem." However, this is far from unique to Latin America – Mitt Romney has had to spend almost as much time in his Republican nomination campaign defending the actions of Bain Capital as he has setting out his platform.

Despite the challenges that buyout firms face, Boccia remains bullish. "There's still an enormous imbalance of supply and demand of capital," he says. "We have dry powder and new opportunities."

James Knight is Director of Pionero Partners (www.pioneropartners.com), a LatAm-based strategic advisory consultancy working with foreign clients across the region.



www.greenpowerconferences.com
+1 971 238 0700



Mexican International Renewable Energy Congress

Featuring:



15-16 May 2012, Sheraton Maria Isabel Hotel, Mexico City, Mexico

Accelerating renewable energy development in Mexico



Platinum Sponsor

SIEMENS

The Mexican International Renewable Energy Congress brings together the Mexican renewable energy community to drive forward this important sector at a time of unprecedented change in the market.

As regulation and legislature change to allow private involvement this is a critical time to create the strategy that will maximise the opportunities presented by Mexico's world-leading renewable resources.

Assembling power producers, Ministers, and energy officials from across the country, MIREC builds on the success of the Wind Power Mexico 2011 event and expands to include the rapidly developing solar market. With Mexico's geothermal market well established but ripe for evolution, GeoPower Mexico is also a crucial part of this comprehensive congress.

Gold Sponsor:



Supported by:



Meet the who's who of Mexican renewable energy

- ✓ Analyze potential new regions in which Mexican wind and solar power will flourish
- ✓ Hear from senior representative from CFE, SENER and CRE who will discuss how renewable energy is being supported?
- ✓ Learn from key case studies from across the industry including the latest self supply deals to help you benchmark your own operations.
- ✓ MIREC will bring together financiers and developers alike to discuss available opportunities
- ✓ Over 8 hours of networking opportunities onsite.

Key note speakers



Jordy Herrera,
Minister for Energy



Mario Molina,
Nobel Prize Winner and
Environmental Spokesman



This event will be simultaneously translated into Spanish & English
La Conferencia será traducida simultáneamente en español y inglés



Quote ALI20
when booking

T: +1 971 238 0700, Email: Samantha.coleman@greenpowerconferences.com
or see www.greenpowerconferences.com/MIREC

Save 20%
as a reader
of Alternative
Latin Investor

What members of the Hedge Fund Association (HFA) have to say about LatAm

■ Andrew H. Jacobus

President and CEO at FINSER Corporation (an SEC registered investment advisor), and the CIO at CONFISER Simi Fund CV. Andrew has over 25 years of experience in the global asset management business in Latin America. Currently FINSER International has over USD\$400 million in AUM from a diverse group of individuals and corporations, including a publicly traded REIT, a re-insurance company, a petrochemical company and a retirement fund for the Catholic church. Andrew holds a B.S. in Mechanical Engineering from Northeastern University, an MBA from ESCP EAP (France), and a Specialization Degree in Entrepreneurial Engineering. He is also a member of New World Angels, a South Florida Venture Capital group and holds a NASD series 65. Andrew lives between New York City, Miami and LatAm.

What is the best way/vehicle for getting LatAm exposure and why?

The best ways for foreign investors to access LatAm markets is via an ETF (like the EWZ in Brazil for example, an Index traded fund), or multi-strategy funds with a

well-known reputable manager. Only after a great deal of experience has been achieved should investors begin looking at long only or individual stock selection.

Legal structures such as setting up offshore entities must be evaluated with appropriate counsel in order to best guarantee:

- Easy exit when desired or needed.
- The confidentiality of the investor, a key issue in many countries, especially for the personal safety of the individuals. You don't want your affairs to be public knowledge for security purposes. It is always best in business to be under the radar with respect to who earns what. Fear of extortion or in some cases kidnapping and issues such as double-taxation treaties must be evaluated in order to determine the best jurisdiction for establishing the investment or special purpose entity that will handle the local investments.

What are the pros/cons of these vehicles?

Setting up an offshore vehicle for the international investor, with the assistance of local counsel, will provide legal solid grounds and protection for the investor who is not

familiar with all the laws and regulations in LatAm. Granted there is a cost associated with setting up the structure, but it is well justified given the protection offered by using it.

In a perfect world _____ would exist making LatAm investment more _____. Why ?

In a perfect world, AN INTEGRATED LATAM CAPITAL MARKET would exist making LatAm investment more COMPETITIVE. Having an integrated market, like the MILA – Mercado Integrado Latinoamericano or Latin American Integrated Market (Chile, Colombia and Peru), creates an economy of scale that will certainly attract international investors. It is said that Brazil and Mexico are very much interested in joining this initiative, thus allowing investors to be able to trade equities from basically the entire region, under one roof with a strong market capitalization able to compete with European or the US markets.

From an investor point of view, Asia versus LatAm, who wins?

1. As markets like India and China get overheated, there is going to be a tendency to come toward an easier market.

It is the same time zone; we have the same culture...

2. LatAm region should recover at a faster pace than other parts of the world because of stronger macro fundamentals and limited structural imbalances. Of course there are few exceptional countries that will fall behind, but with negligible consequences.
3. Higher growth is projected in many of the commodity exporting countries.
 - GDP 2011 average 5% CPI (Inflation) average 6% Debt to GDP is 45% on average
 - Risk of currency fluctuation, but somewhat contained (nothing like what happened back in the early '90s or a possible "bubble" from China)
4. Low to no impact from housing crisis in US or Europe.
5. Low exposure of LatAm banks to European debt.
6. Strong interest in new and high-technology production mechanisms, which brings into the region main investments in the industrial areas.
7. Great opportunities in agriculture and construction sectors.
8. Many Asian countries are investing in the region's commodity sector. For example, China has established alliances with Brazilian partners in the steel and oil industries, or the Germans in the automobile industry in Brazil and Mexico.
9. Less than 10 years ago, fixed income bonds in countries like Argentina (after the default of 2002), Colombia or Brazil were trading at considerable discounts. Now, with the exception of



Andrew H. Jacobus – President – FINSER International
Registered Investment Advisor
ajw@finsergroup.com

Argentina and Venezuela, most country debt trades at premium levels. Still, with coupons about 7% or 8%, yields are far more attractive to investors than T-Bills. And the yield spread for most countries has contracted, making it very attractive.

10. The European Investment Bank has

established an investment fund for Latin America of EUR 2.8 billion specifically for infrastructure development, agro-industry, mining and services. Special emphasis is given to projects that contribute to environmental sustainability (including climate change mitigation), like biofuels for example.

11. Labor cost and tax incentives for foreign investments in LatAm are comparable to Asia, making it an attractive region for so-called maquilas or twin factories or in the bond industry. Mexico is a perfect example of this, where over 1.3 million Mexicans work in over 3000 maquila factories for US parts.
12. Keep in mind that consumption is going to be the most important driver of LatAm economies, making this an attractive area for investors, as rising consumer spending, coupled with low inflation and a young population, is

In a perfect world, local vehicles would be tax neutral to foreign investors.

creating the perfect environment for robust growth. The population of Brazil is about 190 million, of which approximately 50 million are considered middle class. This means that people will eat better and buy better cell phones!

■ Vitor Hugo

Vitor Hugo joined Opus in January of 2006 to lead the company's commercial efforts. He began his career in investment banks in 1992 at Banco Pactual, where he initiated and developed trading/marketing activities in the Mexican, Argentine and Venezuelan fixed income markets. In 1994 he participated in the startup of opportunity asset management as the head of the company's distribution, becoming a partner of the institution in 1996. In corporate finance he was one of the main executives of Marítima Seguros insurance company, responsible for the company's activities in the states of Rio de Janeiro and Minas Gerais. Vitor Hugo is an engineer, having graduated in 1988 from the Universidade Federal de Minas Gerais (UFMG), and also holds a bachelor's in Business Administration from Fundação Mineira de Educação e Cultura (FUMEC) in addition to an MBA in Finance from George Washington University (1992).

What is the best way/vehicle for getting LatAm exposure and why? What are the pros/cons of these vehicles?

The choice in investment vehicles has to do with a trade-off between transparency and regulation, on one side, and tax efficiency on the other. Locally registered investment funds are clearly the best vehicles on the first criteria. Given CVM's strong regulations, investors have unparalleled access to NAV calculation, segregation of functions,



*Vitor Hugo Roquete - Senior Partner – Opus Brasil
Member of the Executive Committee
vroquete@opus.com.br*

audits and even portfolio contents. However, these vehicles are taxed at the local level. Cayman-based structures, on the other hand, investing through jurisdictions such as Delaware, provide the best tax structure, but do not have the advantages of transparency and strong regulation that are present on the local vehicles.

2. In a perfect world _____ would exist making LatAm investment more _____ and why?

In a perfect world, local vehicles would be tax neutral to foreign investors.

From an investor's point of view, Asia versus LatAm, who wins?

Both Asia and LatAm have huge local discrepancies; it is hard to make a blanket comparison. We believe that among LatAm countries, Brazil stands out with very specific fundamentals, both from a macro and from a market structure point of view. Economic growth, however, is a headwind in LatAm when compared to Asia, especially when referring to specific countries such as China.

Locally registered investment funds are clearly the best vehicles on the first criteria. Given CVM's strong regulations, investors have unparalleled access to NAV calculation, segregation of functions, audits and even portfolio contents.

Political Risk in LatAm

■ James Knight

The Inaugural Installment of a Regular Column

Consistently, C-suite executives cite political risk as the second-biggest risk in LatAm, according to participants in the quarterly FT/Economist Global Business Barometer. Above corruption, above inflation, above skills shortages, it is second only to market and economic risk. So it seems appropriate for this magazine to begin a column examining the subject.

Where to start? Well, perhaps with an attempt at a definition. In its broadest sense, “political” risk is potential harm to an operation or transaction arising from political behaviour. This can occur from the interplay of geopolitical tensions, social unrest, security, regulatory change, and reputational and ethical issues.

Two recent examples show just how politically charged the business environment is on the continent. Over the past six months Brazilian President Dilma Rouseff risked conflict with unions and her own party to throw weight behind a privatization strategy for Brazilian airports, which culminated in an auction that raised USD\$14.2 billion for concessions of up to 30 years for São Paulo Guarulhos,

Brasilia and Campinas Viracopos airports. She is backing the private sector’s dynamism in pursuit of commercial returns to meet Brazil’s enormous infrastructure needs in time for the 2014 World Cup, and now feels she has enough political capital to take on the PT.

Meanwhile, in neighboring Argentina, the current administration is accusing the country’s largest oil and gas firm, YPF (57% majority-owned by Spain’s Repsol), of not investing enough in upstream exploration. The firm has had concessions taken away, and rumors of nationalization were rife. This fits a pattern of interference that has included the nationalization of Aerolineas Argentinas in 2008, raiding the national pension fund in 2009 and the ongoing use of Central Bank reserves to pay down debt.

*Political risk in LatAm is complex.
These countries are young, vibrant,
imperfect democracies.*



Regional Specifics

Political risk in LatAm is complex. These countries are young, vibrant, imperfect democracies. That provides much of their verve and opportunity; it also explains much of the uncertainty. One reason many investors are frequently perplexed by the region is because often these markets lack the strong, long-established institutional safeguards of the West, but neither are they easily understood autocracies, in which the center of absolute power is obvious and quasi-permanent (although the Arab Spring has challenged that model). Generally, they suffer from weak institutions, a heavy burden of bureaucracy, cronyism and corruption. But they also tend to have vocal and flourishing civil movements, a functioning

where the reputational record of a company is more likely to come under scrutiny.

What investors should know

Management of these issues can be a thankless task, because a successful outcome is, usually, a negative event: making sure nothing went wrong. Acquisitions take place successfully, regulation and local legislations is complied with, operations continue, taxes are paid, profits are reinvested, dividends are handed out. However, the costs when risk assessment goes wrong can be enormous. In Ecuador, for example, Chevron is still fighting a legal battle that has lasted almost two decades, a hangover from Texaco's environmental liabilities in the country, which currently leaves it on the

A few simple tools always help. First, identify the key risks. Second, to what extent can they be quantified? Are they localized or general? Third, what is the relationship between their likelihood and their impact? Fourth, what mitigations are available? And finally, what is feasible, practical or affordable to implement?

However, a caveat; Human beings are complex animals. And political behaviours are rooted in very human motivations, which makes it difficult to quantify them. This is why it is usually more helpful to deal in terms of scenarios, rather than deal out predictions like candy. For example, mapping what a future administration may look like, who its key players might be and its approach to regulation and business, is more

LatAm's activities will be analyzed and debated. It will have to be prepared to defend its record, and clearly show what it is bringing to the table in terms of investment, employment and productivity.

opposition, some judicial independence, a relatively free press, powerful labor unions and enshrined rights of peaceful protest.

This means that debate is aired between competing interests. Consequently, business needs to tread carefully. Its activities will be analyzed and debated. It will have to be prepared to defend its record, and clearly show what it is bringing to the table in terms of investment, employment and productivity. It will also have to learn to lobby effectively, in markets where populism can determine economic outcomes. This trend means that governments are more likely to change the rules of the game if they need to appease the most powerful, or the most vocal, interest group.

Equally, generalize at your peril. The 13 countries of Latin America are a disparate bunch. In Venezuela, for example, expropriation risk looms far larger than in Chile,

hook for USD\$8 billion of environmental damage of indigenous Amazonian communities. Newmont's USD\$4.8 billion investment in the giant Conga gold mine in Peru's Cajamarca province is under threat after a four-month standstill, in which 6,000 contracts have been cancelled and daily losses initially estimated at USD\$2 million, due to environmental and land rights protests.

Could the ballooning costs and security risks in dealing with both these crises have been brought down by better risk mitigation? Perhaps, although maybe the potential rewards are considered worthwhile. But by defining and studying a full range of qualitative, non-economic, soft-focus issues that complement the number crunching, investors become better aware of the complexities of the financial decisions they are making, and the interplay of unpredictable human factors that are involved.

useful than assigning a probability to the outcome of an election. And sometimes, in the face of genuine uncertainty, of which there is a lot in South America, the most honest answer of all – “I don't know” – is of more value than the most confident of pronouncements.

James Knight is Director of Pionero Partners (www.pioneropartners.com), a LatAm-based strategic advisory consultancy working with foreign clients across the region.

Expert Perspectives

LatAm Art in 2012: Part One *Interview Provided by Artvest LLC*



CM: Carmen Melián, Sotheby's, Senior Vice President, Latin American Art

Carmen Melián joined Sotheby's Latin American Art department in September 1999. She has since been instrumental in a number of important sales, including property from the Estate of Stanley J. Marcus, Property from The Collection of Barbara and John Duncan, the May 2006 sale of Frida Kahlo's *Roots*, which sold for USD\$5.6 million—a record for the artist—and Rufino Tamayo's *El Comedor de Sandías*, which sold for USD\$3.6 million.

Ms. Melián began her career at the Center for Inter-American Relations/Americas Society in New York during the Rufino Tamayo—*Works on Paper* exhibition in 1979. After teaching in Paris for three years, she returned to New York and joined the Nohra Haime Gallery in 1983, serving as Director from 1989 to 1996. As a private consultant, Ms. Melián created and directed the International Client and Visiting Museum directors programs for Art Miami '97.

For several years, Ms. Melián has taught the Latin American Art course for New York University's Appraisal Studies. A graduate of Manhattanville College with bachelor of arts degrees in History of Art and Studio Art, Ms. Melián is fluent in English, Spanish and French.



MS: Mary Sabbatino, Galerie Lelong, Partner

Mary Sabbatino is a partner at Galerie Lelong, a contemporary art gallery in Chelsea, New York City. Under her leadership the gallery has developed a diverse program of international contemporary and modern artists from the United States, Latin America, the Pan-Pacific region and Europe. She has a particular interest in art from Latin America; in 1994 she co-organized “Art from Brazil in New York,” which presented the first solo shows of artists Waltercio Caldas, Cildo Meireles, Helio Oiticica and Neville D’Almeida, Mira Schendel and Tunga in 11 museums and galleries in New York City. She also curated the exhibition and authored the catalogue for Juan Downey: Drawings, Installations, Films at the Museo Bellas Artes in Chile.

Mary Sabbatino has a B.F.A from Parsons School of Design and an M.A. from New York University. She lectures and sometimes writes on contemporary artists; her most recent essay is “Ana Mendieta: A Narrative Biography” in the 2011 exhibition catalogue of the same name.

Mary is an active member of the Art Dealers’ Association of America; she previously served on the ADAA board and wrote the association’s first code of ethics, entitled “Standards and Practices.” She now serves on the ADAA Membership Committee, the Selection Committee for Art Basel Miami Beach and Council for the Elizabeth Sackler Center for Feminist Art at the Brooklyn Museum. She lives in Brooklyn with her husband and two children, ages 12 and 14.



AS: Ana Sokoloff, Sokoloff + Associates, LLC, Founding Partner

Ana Sokoloff is a founding partner of Sokoloff + Associates, LLC Art Advisors, a firm focusing on advising high-profile individuals on collecting Latin American and contemporary art. Before founding Sokoloff + Associates, LLC., Ms. Sokoloff was Vice President–Head of Department for Latin American Paintings at Christie’s Inc., where she was responsible for all business development, expertise, management and administration of the Latin American Paintings Department including the coordination and organization of two annual evening sales.

A champion of contemporary Latin American art, Ms. Sokoloff was instrumental in broadening the market by introducing works of a new generation of artists into Christie’s Inc.’s auctions. Among the figures that she first introduced to the market are Francis Alÿs, Gego, Helio Oiticica and Doris Salcedo.

Prior to joining Christie’s, Ms. Sokoloff was Cataloguer for the Arcade department at Sotheby’s, Exhibition Coordinator at the Americas Society and Director of Exhibitions and Cultural Programs at the Permanent Mission of Colombia to the United Nations, where she oversaw the cultural activities of the Colombian government in the United States and eastern Canada.

In addition, Ms. Sokoloff has curated several exhibitions for international venues, given conferences and written critical essays on Latin American art for international art journals. She is currently on the advisory board of the Americas Society and on the international advisory council for The Museum of Latin American Art, MOLAA. Ms. Sokoloff earned a law degree at Universidad de los Andres, Bogotá, Colombia and received an M.A. in Theory of Art History from Columbia University in New York.



Above: Hélio Oiticica
 Penetrável PN28 "Nas Quebradas" [Penetrable PN28
 "In the Quebradas"], 1979
 Mixed media installation
 140.16 x 113.78 x 174.02 inches (356 x 289 x 442 cm)
 © Projeto Hélio Oiticica, Rio de Janeiro
 Courtesy Projeto Hélio Oiticica, Rio de Janeiro and
 Galerie Lelong, New York

How has the Latin American art market changed over the last decade?

CM: Basically the market has gotten deeper and wider, with the biggest change being that collectors are no longer just buying nationally. 50% of Latin American

art collectors are no longer Latin American, and those who are don't collect only their national artists. This was probably true 20 years ago, when only Mexicans would buy Tamayo and only Venezuelans would buy Soto. Now we are seeing more cross-border collecting. That being

said, the Latin American market doesn't shoot up or shoot down and has historically been a more consistent market. The market has gone up over the years as the world becomes more globalized, but it doesn't have the historical "drastic-ness" of contemporary or impressionist sales.

Antonio Bandeira (Brazilian 1922-1967)

Blue Streets

signed and dated 'BANDEIRA, 55' (lower right) signed and dated again, titled and inscribed 'ANTONIO BANDEIRA, 1955, BLUE STREETS, LONDON' (on the reverse)

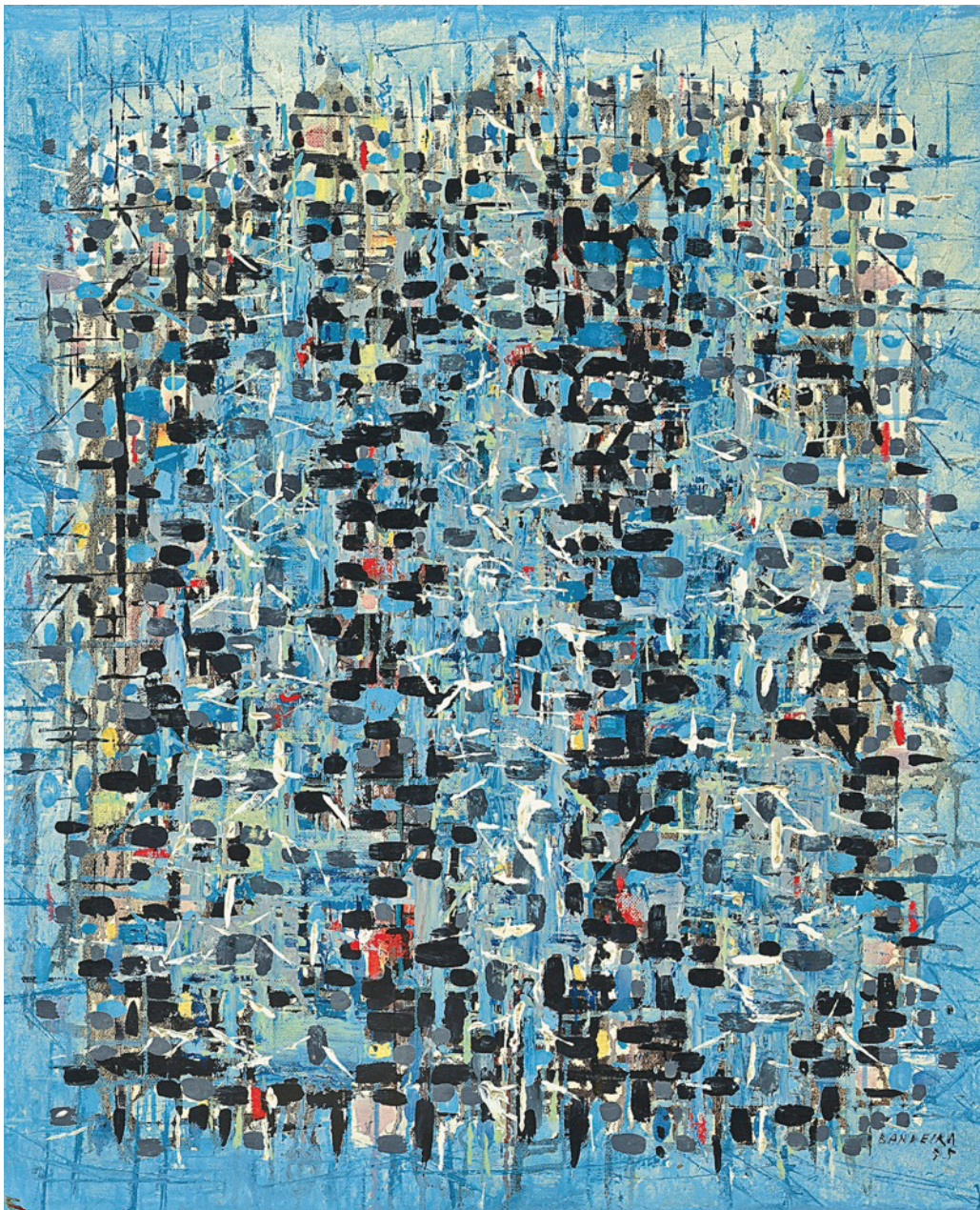
oil on canvas

26 x 22 in. (66 x 60 cm.)

Painted in London in 1955.

Estimate: USD\$70,000 - USD\$90,000

Price Realized: USD\$482,500



This is in part because part of the sales are based on local economies. Brazilian art is doing so well now because of the Brazilian economy as well as the international economy.

AS: The biggest change is the internationalization of the market. Collectors are buying art from all over the world, regardless of geographic origin. This has allowed for contemporary artists from Latin America to be collected by international collectors and for Latin American collectors to collect international artists. Another important factor is that collectors are looking into collecting new, younger artists. This in turn encourages art production locally.

MS: The market has become more global. When I started working in the field in the early '90s, the market was concentrated sharply by countries: Brazilians collected Brazilian art, for example. One of the few exceptions to this was the Cisneros collection; the Cisneros, of course, have been pioneers in collecting, in educating the public, in working with museums and in exhibiting and sharing their collection. From the early to mid-90s, the most serious, and perhaps the only, US collectors in the field were Rosa and Carlos de la Cruz and Bruce and Diane Halle. Because they were both quite early in the field, their collections (the de la Cruz no longer concentrates on this area) have seminal examples and masterpieces. Bernardo Paz started Inhotim as a way to show in-

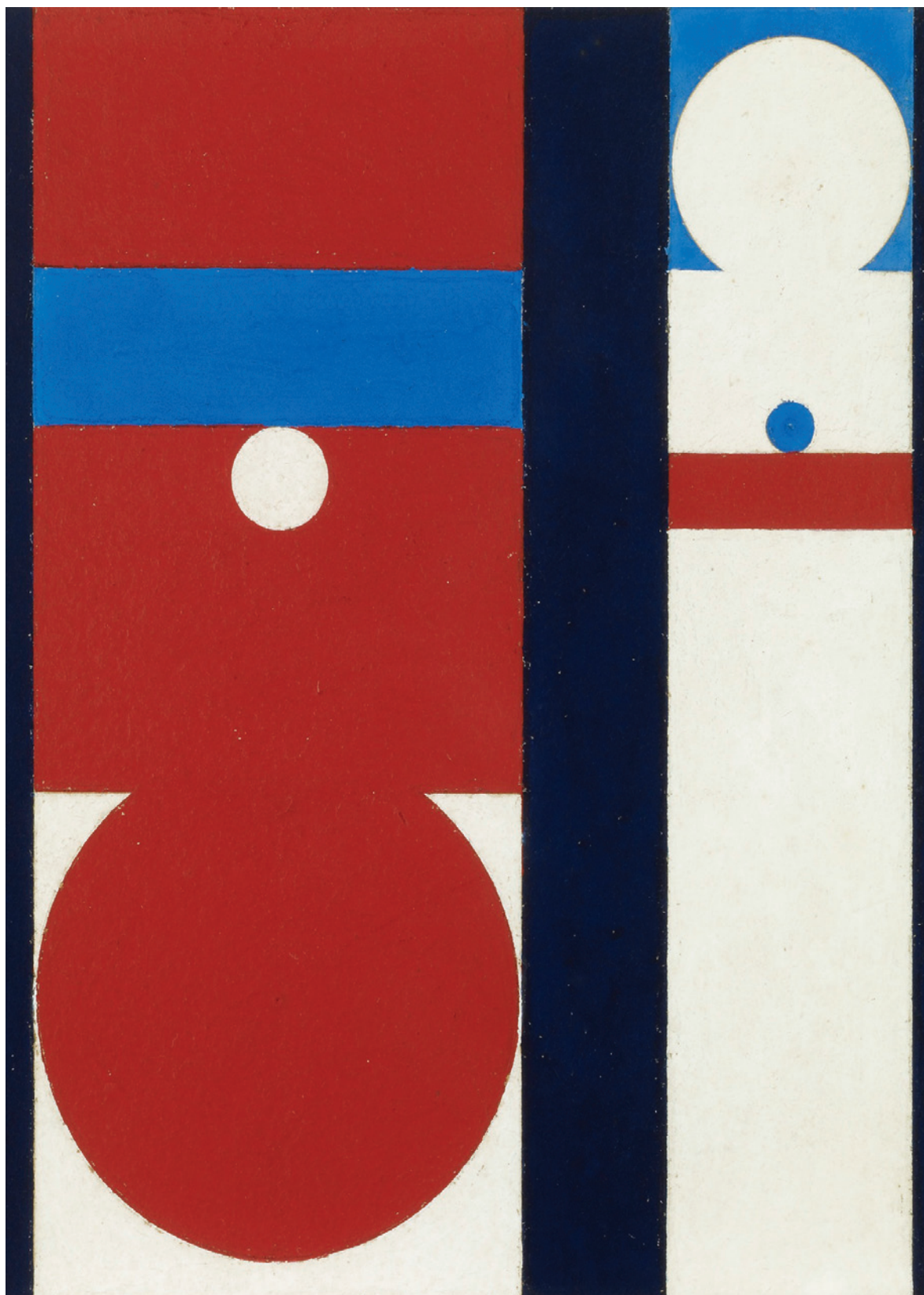


Top Left: Rufino Tamayo
La Tenista
Oil on canvas
Est. USD\$225/275,000
Sold for USD\$398,500

Top Right: Francisco Toledo (Mexican b. 1940)
Vaca roja
oil and sand on canvas
131¼ x 79¼ in. (334.6 x 203 cm.)
Painted in 1975.
Estimate: USD\$500,000 - USD\$700,000
Price Realized: USD\$902,500

Right: Claudio Bravo
Seraphim (White, Yellow, and Green)
signed and dated MXMXCLX lower right
oil on canvas
58 5/8 by 78 3/4 in.
148.9 by 200.02 cm
Estimate: USD\$700/900,000
Sold for USD\$992,500





Left: Hélio Oiticica
Grupo Frente 24, 1955
Gouache on board
7-7/8 x 7-7/8 inches (20
x 20 cm)
© Projeto Hélio
Oiticica,
Rio de Janeiro
Courtesy Projeto Hélio
Oiticica, Rio de Janeiro
and Galerie Lelong,
New York

stallation art and monumental works by Brazilian artists like Tunga and Meireles, and for a time, it was the only place you could see such works installed permanently.

What are the factors driving the increased interest in Latin American art?

CM: If you don't know of an artist, you can't fall in love with him. But the world is getting smaller, and now you can travel the world through your computer.

AS: An obvious one is the BRIC phenomenon. The financial market is looking to Latin America as a secure area for investment, and in doing so, they are also looking at its cultural production. There is more money in the region as well, and the disposable income has permitted new collectors to emerge in the area.

MS: People travel more and information is available more readily. The São Paulo Biennial is one of the oldest biennials (after Documenta and Venice), but it is only in the last 15 years that Americans have regularly visited. It is a major source of current information on the region, and its popularity has spurred other biennials in Bogota, Merosul, etc. A few pioneering institutions like Witte de Witte, Fundacio Tapies and the Walker (who presented Helio Oiticica, Ana Mendieta, Lygia Clark, etc. in the early '90s) formed a foundation for scholarship and research which was taken up by others. There was also key academic research done by institutions, scholars and curators like Dawn Ades, Guy Brett, Mari Carmen Ramirez, etc., which brought the artists and knowledge of this period to wider consciousness. The role of galleries and auction houses can't be underestimated. It is a legendary story that Mary Ann Martin started the Latin American Department at Sotheby's. I feel that our gallery (Galerie Lelong) has made a substantial contribution as well, presenting, for example, Cildo Meireles' first solo show in New York City, and, over the years, introducing and promoting the works of Ana Mendieta, Alfredo Jaar, Waltercio Caldas, Jac Leirner, Juan Downey, Helio Oiticica and Oiticica in collaboration with Neville D'Almeida.

Are there artists, styles or periods of Latin American art that are, in your opinion, undervalued and/or underappreciated?

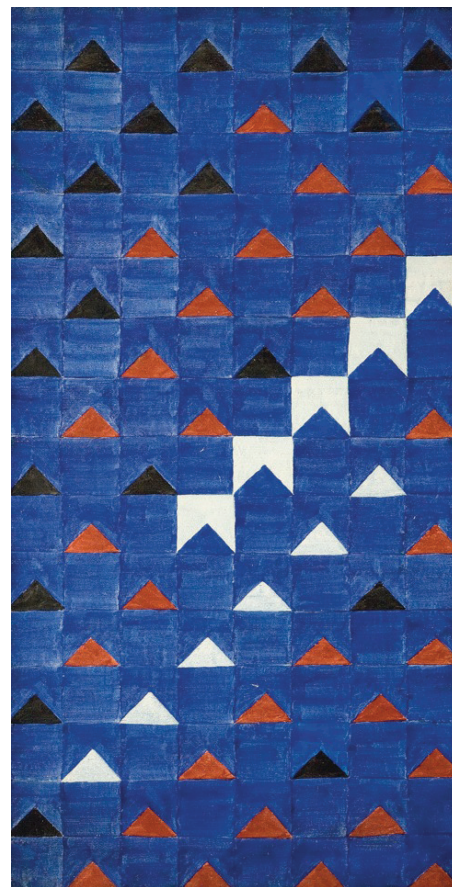
CM: Ms. Melian's department at Sotheby's covers 500 years. She points to the great 19th century landscape painters who are primarily known in their respective countries and traveler painters. She also believes that colonial art is vastly underappreciated, with most people thinking of it as folkloric or purely decorative. There were, however, very fine artists in Mexico, Colombia and Guatemala that were exported to Europe, and that is an area that she says is being revisited.

AS: There are regions that have been poorly researched, for example Central America, and there are many periods that have been overlooked. There are some institutions and individuals that are working on researching and resurfacing these periods, but I believe that most of the art history of Latin America in the 20th century is still poorly documented and there is room for great discoveries.

MS: It gets harder and harder to find pockets that no one has discovered. Though it is hard to believe, less than 10 years ago you could buy extraordinary works of Brazilian Neo-concrete artists for relatively very little. Collectors thought that it was "crazy" to spend USD\$50,000 for a drawing by Oiticica and now most of those collectors wish they had bought all of them!

From where is the interest in Latin American art coming? Is the interest primarily from Latin Americans or Latin American expats or is it more global?

AS: There is a good mix of Latin Americans, expats and other curious people. Many scholars, curators and collectors have developed a keen interest in Latin America. In some cases, they are consciously exploring the art production and history from the region; in others the interest develops without



Top: Alfredo Volpi (Brazilian 1896-1988)
Bandeirinhas estruturadas
signed 'A Volpi' (on the reverse)
tempera on canvas
55½ x 28 3/8 in. (141 x 72 cm.)
Painted circa 1966.

them really knowing it by being exposed to the art and artists in more global contexts.

MS: Today every major museum has a Latin American support group. The interest is quite diversified, but of course there are collectors in each country who collect the artists of their home country. At the same time, US collectors have integrated many contemporary artists into their own collections.

About ArtVest Partners LLC

Artvest is an independent advisory firm that provides investment advice for the art market. With three decades of experience in art and finance, Artvest offers impartial guidance and custom strategies for acquiring and selling art, protecting art wealth and passing it on to future generations. Artvest fills a need in the market by introducing a disciplined financial focus for collectors at all stages.

Investing in the Development of Argentine Wind Power

One of the largest renewable resources in LatAm is the wind of Argentina, particularly in the sparsely populated Patagonia region occupying the southern half of the extremely long and spacious country. Some estimates put the wind-generated electricity potential of Patagonia alone at an astounding 2GW. According to Diego Werner, an engineer and wind energy expert at the Argentine firm AIRES Renewables, the country's other wind-rich regions include the Atlantic coast, especially in the province of Buenos Aires (which alone is the size of France), and the western, wine-producing province of San Juan.

Only a small fraction of this potential, however, has been reached, with current capacity at a mere 32MW, according to Ernst & Young. Yet recent steps taken by the government, mounting domestic attention and increased investment suggests Argentine wind is an industry poised to grow

exponentially, providing ample investment opportunities in specific areas, particularly in development-related equity, Mr. Werner says.

A pivotal moment for Argentine renewables came in 2006, when the federal government announced that 8% of the country's

energy demands had to be supplied by renewable energy by the year 2016; currently the figure stands at about 2%, with most of the country's power coming from natural gas (much of it imported from Bolivia) and large hydro. 2009 saw the launch of the GENREN program, through which the government demanded that the state's utility company contract at least 1GW of renewable energy over 15 years, with wind providing at least half (500MW) of that power.

There are 17 projects in the works, intended to provide 754MW, but only 2 wind farms are operating currently: one in the northern La Rioja province and one in Patagonian town of Rawson, in the province of Chubut. The latter was built by Emgasud, an Argentine company, which has plans to construct another wind farm in nearby Puerto Madryn. Hychicho, also Argentine, is developing another project in Chubut, having recently received a USD\$14 million loan from the Inter-American Investment Corporation (IIC). The government of Chubut has waived all taxes on gross income of wind farms there for the first five years of operations, reducing the exemption to 50% during years 6 through 10, according to Ernst & Young.

The turbines at the Rawson farm were built in Denmark, emblematic of a trend across LatAm: the use of foreign equipment to spearhead renewable development. Turbine-providing countries, such as Denmark and France, says Mr. Brito, “have very strong technology, and at the moment Argentina doesn’t have that kind of development.” He points to IMPSA, the turbine-maker and wind farm developer based in Mendoza, Argentina, as the finest example of a domestic technology developer. And he expects that, as more projects come to the Southern Cone, for-

eign companies will begin to do what they have been doing in Brazil: setting up local manufacturing plants, thereby feeding local development and service industries.

It is in the nascent development side of Argentine wind that Mr. Werner sees the best investment opportunities, and he believes financing from foreign entities will be essential to the industry’s growth.

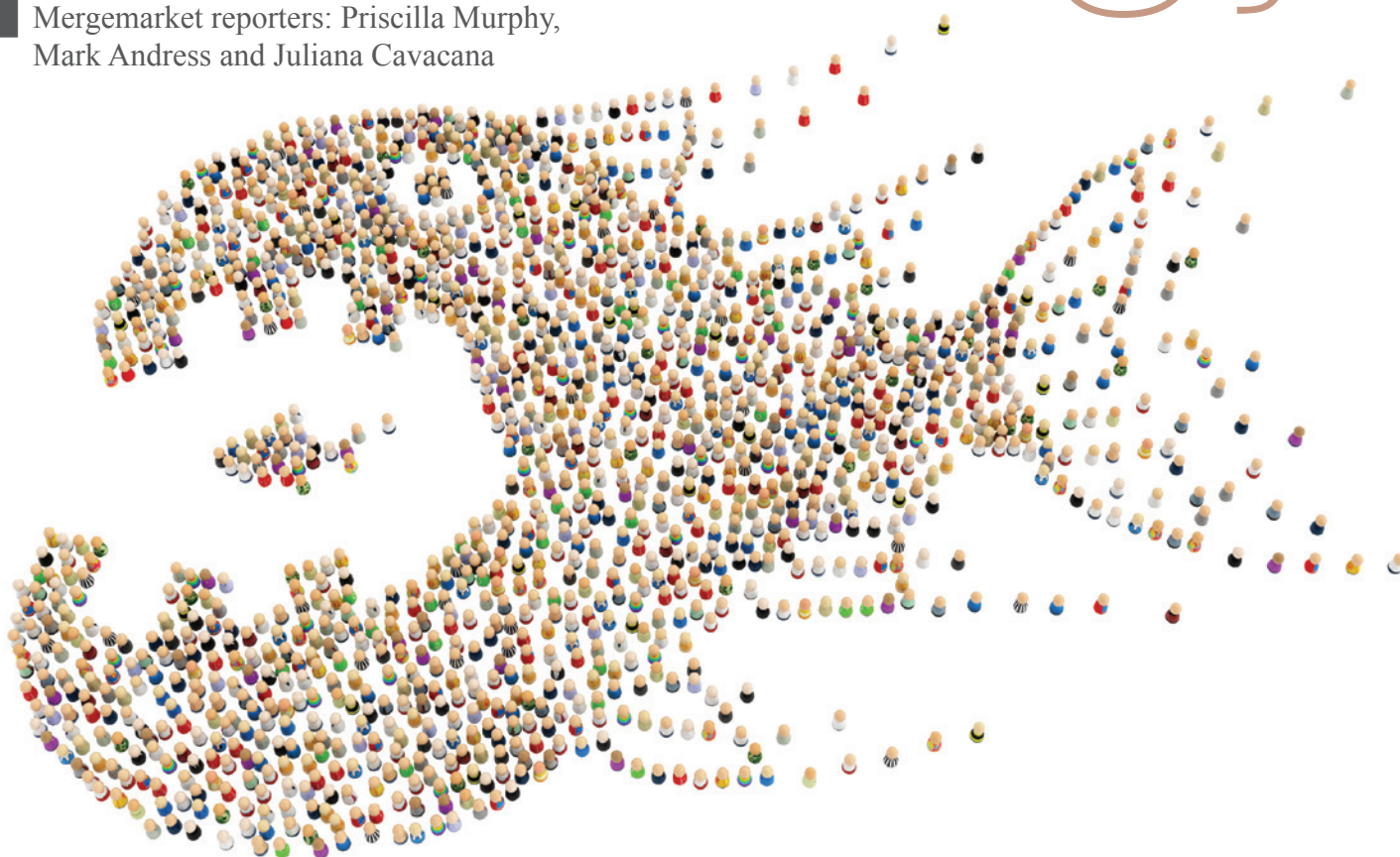
“There are very few Argentine companies working in renewable energy,” he says. “My opinion is that there is an interesting

opportunity for foreign investors to work with local firms that are developing projects and know very well the Argentine energy market. There is very good technical capacity in the region, but we have a strong financial need. I’m sure that, in the near future, Argentina will have lots of wind energy projects throughout the country. We have a lot of available land, strong wind resources, support and interest from national government and technical capacity to grow the wind energy market in the country.”



Alternative bioenergy

■ Mergemarket reporters: Priscilla Murphy,
Mark Andress and Juliana Cavacana



M&A picks up steam in Latin America
while ethanol deals wait for better days

Companies developing non-food energy crops attract investor and partnership interest

Market for ethanol M&A signals recovery in 18-month time frame

Alternative bioenergy crops could drive the next big wave of M&A in LatAm, much as sugarcane drove activity during the ethanol boom in the early 2000s, according to industry sources.

LatAM has been saturated with bioenergy-related joint venture and partnership announcements from energy, food and biotechnology companies, with more deals on the forefront, said Eduardo Ribeiro, partner at the Brazil-based advisory firm BSR. Projects range from second-generation ethanol and biodiesel to jet fuel and biobutanol.

Non-food energy crops are considered important sources of biofuel because they have less potential to affect food prices than traditional biofuel crops such as corn and sugarcane. These energy crops include Jatropha, a tropical tree with oily seeds that can be grown on marginal lands not suitable for

food crops, castor beans, algae and biomass such as wood pellets. Other energy sources such as elephant grass, biodigesters and waste residue technologies are also starting to attract more attention from investors, said Ribeiro.

One crop company is California-based SG Biofuels, which is using biotechnology to develop hybrids of Jatropha, and plans to commercially produce Jatropha crude oil in Brazil and Guatemala within three to five years.

Companies such as SGB are attracting “an incredible amount of interest” from potential investors and partners because they have the potential to make large amounts of sustainable, low-cost, non-food feedstock for biofuels production, said Brian Brokowski, vice president of communications at SGB.

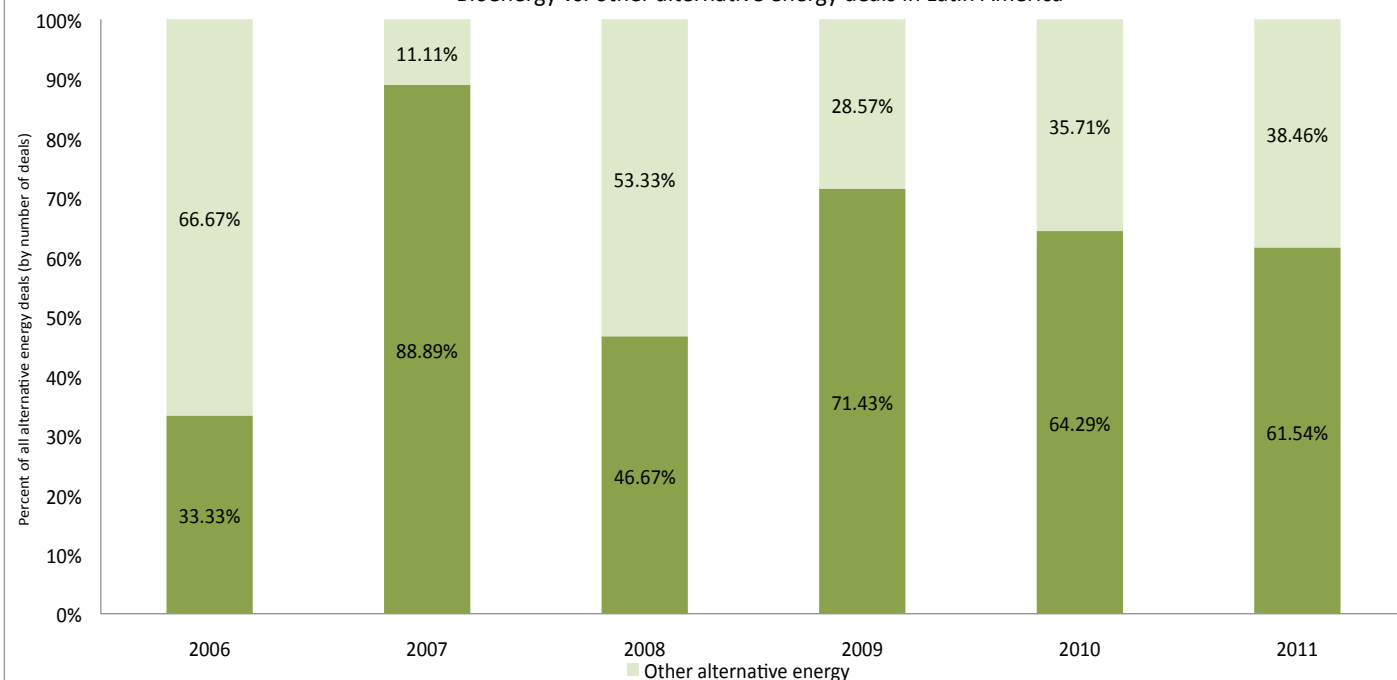
The interest has come from energy players and large agricultural groups active in

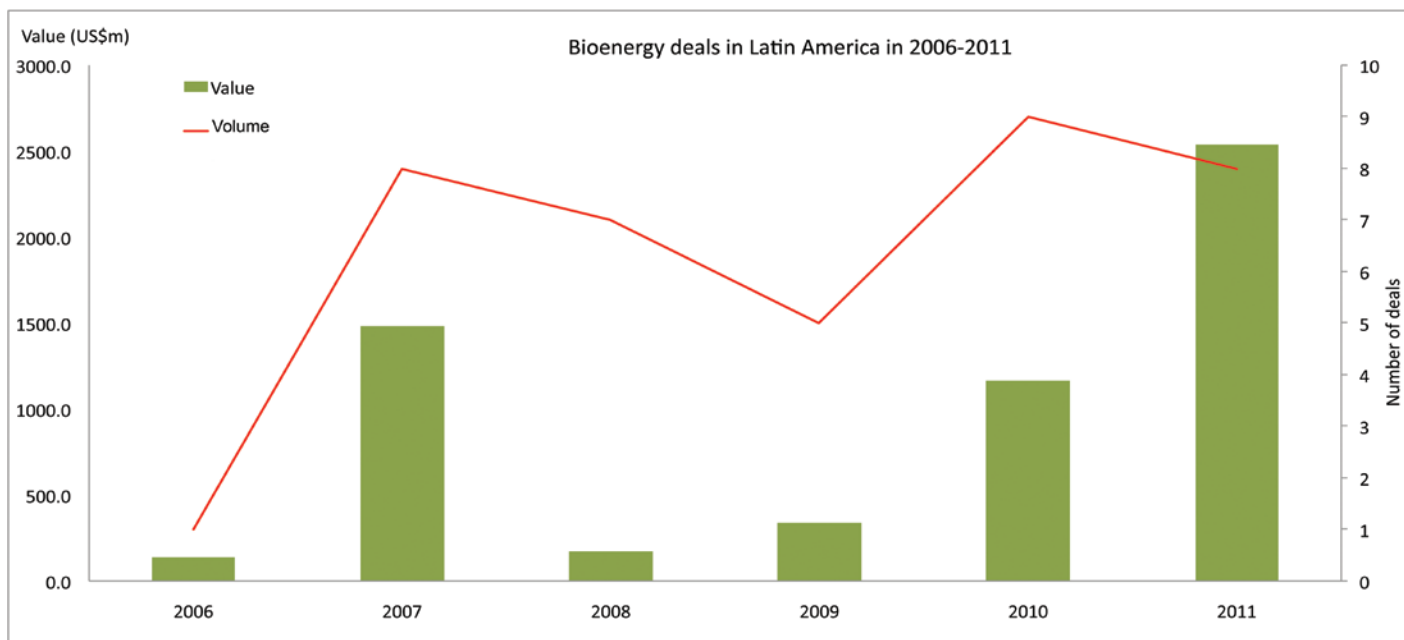
the energy crop space, and mainly revolves around partnerships, such as SGB’s partnership with New York food conglomerate Bunge to research and develop a model to process Jatropha seeds into a biofuel feedstock. But it’s also translating into equity investments: SGB just raised US\$17 million in a Series B round of funding from various backers that included Flint Hills Resources, the 10th largest refiner in the US.

Since mid-2011, several companies from Brazil to Israel have announced high-tech biofuel joint ventures or partnerships involving Latin America. In Mexico, OriginOil and Aquaviridis, based in California and Minnesota, respectively, have announced a commercial agreement to develop algae production, followed by Synthetic Genomics’s JV for genomics and plant breeding with Agradis. Solazyme announced a JV with Bunge to develop algae technologies in Brazil, while Evogene and SLC Agricola launched a partnership to develop castor bean varieties.

Denmark-based Novozymes, which has several collaboration agreements with Brazil-based companies, recently opened a new Brazilian research and development facility.

Bioenergy vs. other alternative energy deals in Latin America





Significant investments are also expected in wood pellets, after Europe signaled a desire to import the biomass from Brazil, Ribeiro said. Brazil-based pulp and paper company Suzano wants to sell a 49% stake in its USD\$800 million capital expenditure project to construct 3 wood pellet plants, according to a Mergermarket report from June 2011.

Better days ahead

Meanwhile, traditional ethanol acquisitions should remain difficult in the short term, said Ribeiro. With valuations as high as USD\$150 per ton of annual sugarcane crushing capacity and a strong Brazilian real, players that led the sector's consolidation from the early 2000s up to the financial crisis in 2008, such as Raizen, will continue to wait for conditions to improve, said Matheus Consoli, an industry analyst at Markestrat.

Though few acquisitions are expected for 2012, at least one relevant deal may close in the short term. According to a recent press report, Spain-based Abengoa has hired Credit Suisse to sell 2 ethanol plants in Brazil for which it paid USD\$684 million because of low returns. Spokespeople for Abengoa did not return calls seeking comment.

Potential bidders in the space include Bunge, which has announced plans to invest BRL 1bn (USD\$555 million) in agriculture in Brazil, noted Consoli. The investment could possibly go to sugarcane or ethanol, he added.

Cargill is another food company that could acquire again in the ethanol industry, Consoli said. In 2011, the Minnetonka, Minnesota-based company announced a joint venture with Brazil-based Grupo USJ to operate in sugar, ethanol and bioelectricity. Large food and ethanol companies such as Bunge, Raizen e LDC may also start acquiring co-generation projects through partnerships with other companies, Ribeiro said.

Some signals, however, may be already pointing to a recovery in market conditions in the next 18 months, Ribeiro said. In recent years, Brazilian ethanol companies, which were severely affected by the financial shock of 2008, have improved their risk profile and governance, and renegotiated debt, instead of investing in expanding their sugarcane cultivation, he explained. "Although asset prices are still high, at least now it is possible to do a due diligence," he added.

Usacucar, Alto Alegre, Carlos Lyra, São Martinho and Tercio Wanderley, which form the second-tier group of ethanol producers with a market share of about 2% each, are examples of companies that recently improved corporate governance and hired external audits, Consoli said. "These companies made small acquisitions to prepare themselves as attractive targets, but were not ready in time for the first wave of consolidation," Consoli explained. "If the market becomes attractive again, they will be priority candidates for players looking to gain scale in Brazil."

Independently of the wave, in the longer term the tide is rising for biofuels in general, as demand tends to increase. LatAm countries such as Paraguay and Colombia are adopting or considering adopting a percentage of ethanol at the gasoline pump, while Brazil is expected to increase its percentage of ethanol at the pump from 18 to 25%, noted Usina Santa Maria Director Roberto Bigatto. Demand for innovative solutions is growing in new markets for biofuels, such as aviation and vehicles in colder climates, and also in the field of traditional biofuels, where companies need to increase productivity and deliver more energy to more people for lower financial, environmental and social costs.

- Based on announced deals, excluding lapsed and withdrawn bids
- Based on the target dominant geography being Latin America
- Data correct as of 16-Mar-2011
- Includes all deals valued over US\$5 million. Where deal value not disclosed, deal has been entered based on turnover of target exceeding US\$10 million
- Activities excluded from table include property transactions and restructurings where the ultimate shareholders' interests are not changed

All Energy Deals

Period	Value (US\$m)	Volume
2006	12992.0	46
2007	17325.0	65
2008	7229.0	48
2009	10660.0	42
2010	27160.0	53

Bioenergy as a percentage of all alternative energy deals (by number of deals)

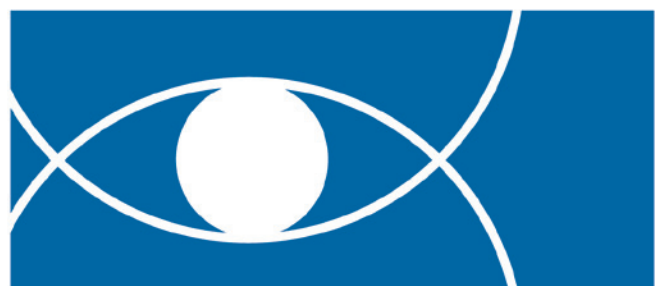
Period	Bioenergy	Other alternative
2006	33.33%	66.67%
2007	88.89%	11.11%
2008	46.67%	53.33%
2009	71.43%	28.57%
2010	64.29%	35.71%
2011	61.54%	38.46%

All Alternative Energy Deals

Period	Value (US\$m)	Volume
2006	327.0	3
2007	1679.0	9
2008	1912.0	15
2009	641.0	7
2010	1154.0	14
2011	2953.0	13

Bioenergy Deals

Period	Value (US\$m)	Volume
2006	141.0	1
2007	1480.0	8
2008	172.0	7
2009	341.0	5
2010	1163.0	9
2011	2536.0	8



mergermarket

mergermarket is the leading provider of forward-looking M&A intelligence and data for M&A professionals and corporates. With an unrivalled network of 300+ journalists based in 65 locations worldwide, mergermarket is the only tool that offers active intelligence on corporate strategy before it becomes public knowledge, and historical data to analyze past deals. mergermarket is part of The Mergermarket Group, a Financial Times Group company. Visit www.mergermarket.com

Great Expectations

Developing Chile's Renewables Sector

Like most of the other large economies in LatAm, Chile is blessed with enormous resources of largely untapped renewable energy, in wind, solar, hydro and geothermal, including excellent winds up and down its slender length and massive expanses of high-level solar radiation in the Atacama Desert. It is unique among these countries, however, in its almost total lack of fossil fuel resources, having relied on imports, mostly of Argentine gas, for years. This dependence was thrown into sharp relief in the middle of last decade, when the Argentine gas crisis temporarily crippled its Southern Cone neighbor. Energy prices remain problematically high in Chile, and several high-profile attempts to alleviate the situation, such as a proposed large hydro project in the far South, have met with fierce criticism from Chile's environmentally conscious public. The protests are the starkest manifestation of a widespread debate in the country over whether the best way to meet its energy needs is through more of the same (coal, large hydro and nuclear) or by developing its tremendous renewable potential; and, if the latter, how to attract the investment needed to develop it.

Chilean President Sebastián Piñera recently sided publicly with the renewable approach, at least in part, when he pushed the so-called 20/20 Law through Congress, mandating an increase in the share of renewable-generated power in the country's matrix to 20% by the year 2020 (a marked revision of his previous, more modest goal of 10% by 2024). It seems that, for many in the government, the desire for energy security and independence is making them look more closely at the country's strongest natural assets.

Renewables currently supply about 4% of the energy matrix, according to Marcos Brito, project manager at Eco Life S.A. and formerly of Chile's Department of Energy, up about 2% from when Piñera took office and challenged the country. "But there are hundreds of projects already approved by the environmental office that investors are not funding," he says. The stalled investment stems in large part from current market conditions and a lack of consensus on how best to proceed: "Piñera made his announcement of the government's goal of reaching 20% NCRE [non-conventional renewable energy] by 2020, and immediately everyone started to discuss whether he was crazy or not. Since

then, there has been a lot of discussion of whether it is technologically and economically possible."

One problem, Mr. Brito says, is that the Chilean energy market is crowded by a few large companies that account for all of the country's power generation, so it's "very difficult to enter with new technology that will compete and affect the results." He also says that there is a general lack of information, and an "excess of confusing information," on the costs of implementing renewable energy into the matrix. "Some say it's expensive, others say it's cheap, and with that uncertainty people aren't putting the necessary money into the technology."

There have been flashes of Chile's potential. According to the Global Wind Energy Council, Chile's installed capacity from wind energy climbed from 2MW in 2002 to 172MW in 2010. Several wind farms are operating up and down the country, developed and by such companies as Norvind (Norway), Suez (France) and Cristalerías Toro (Chile). There is also an interesting trend of large mining companies building wind farms to supply, directly and exclusively, their own operations, including Methanex, Breakwater Resources, Barrick Gold and BHP Billiton.

Solar is another outstanding resource in Chile, though as has been the case globally, it has been slower to develop than wind. Abengoa, the Spanish multinational, announced that it is developing a large concentrating solar power (CSP) plant in the Atacama, to supply the mining company Minera el Tesoro. The Atacama is said to have perhaps the highest levels of solar radiation on earth.

Small hydro is gaining popularity as an alternative to the large hydro projects that have long been a staple of Chilean energy production and that have become increasingly controversial, as evidenced by the massive protests against the proposed 2.6GW HidroAysén in the South. The Inter-American Development Bank recently committed USD\$5 million in funds toward developing Chilean small hydro. Yet the most interesting development is the government's review of the definition of small hydro itself: many in the public and private sectors are calling for the arbitrary cut-off to be raised from 20MW to 50MW, which would immediately increase Chile's renewable production and give developers more leeway – though it will no doubt invite more controversy, as well. "Experts have mentioned this as a possibility and investors want it to happen," says Mr. Brito, adding that this discussion is "clearly critical" for the future of renewable development in the country.

Tech Lack

Mr. Brito insists that the first wave of projects in all renewable energy types is important for demonstrating that the technology works and the economics are there, so that investors can enter and bring the industry to scale. And yet, as is the case across much of LatAm, the technology needed to develop renewables is not Chilean but comes from foreign imports. “Chile is known as for having lots of renewable sources to generate power with; that is one of our advantages,” Mr Brito says. “But we are not a country that produces technology as such, so we are weak there.” This is something the government hopes will change, however: “I think it is changing, but not as fast as it needs. We are importing technology from US, Europe, India and China instead of thinking about how to manufacture copper-made solar panels, windmills or biomass technology right here.” He notes that one important stride was the government’s creation of Chile’s Renewable Energy Center, an incubator for research and development (<http://cer.gob.cl>), whose mission, he says, is to “promote and facilitate the development of a non-conventional renewable energy industry, coordinating the public and private sectors, and optimizing the potential use of the NCRE resources that exist in Chile.” He also believes that Piñera’s mandate, whether or not feasible, is important for inspiring development and innovation. “Personally I think it is important to set the goal and then figure out how to achieve it. Time goes fast, and if you don’t have a clear goal, things won’t get done.”

Footing the Bill

Essential as a domestic tech industry no doubt is, some believe that a more fundamental area for improvement is in finance. “There are a lot of opportunities in renewables,” says Idris Tayebi, an energy finance and strategy consultant focused on renewables and energy efficiency, whose clients have included

Suez and the abovementioned Renewable Research Center, “but right now the market is not mature, especially on the financial side.”

“The engineers are here,” he adds. “We have the human resources.” And yet the situation is a new one for the country. “Things are changing in Chile. Generally the public policy in Chile is very liberal; the state is not used to intervening in the economy.” On the other hand, he says, “financial innovation in Chile is very conservative. There is work to do.”

As an advisor to Suez, he says, he had to advise some smaller developers, and looked into the local market for financing. “We realized that it’s very complicated to get project financing involving local banks: they are expensive, not used to structuring loans in USD, not used to financing in this way.” The venture capital industry is conservative, as well. “When we talk about innovation seed capital and venture capital, everyone is focused on internet technologies. There is no VC fund specialized in cleantech. So the first stage of development for a small developer is very hard.”

As a result, domestic research and development was, for a long time, funded primarily by private actors working at great risk, without incentives or subsidies. “Now the Chilean state is changing its mind, realizing this time that there are opportunities to develop. Chile should be one of the leaders in solar, for instance. But for me the financial sector, financial innovation, should be the primary area of development.”

Toward that end, Mr. Idris himself has been developing a weather insurance product to help renewable developers hedge resource availability, a product type which, he says, was developed in France and has been used in the US and Australia, and which he hopes to introduce to the Chilean market.

Get out of the Shade

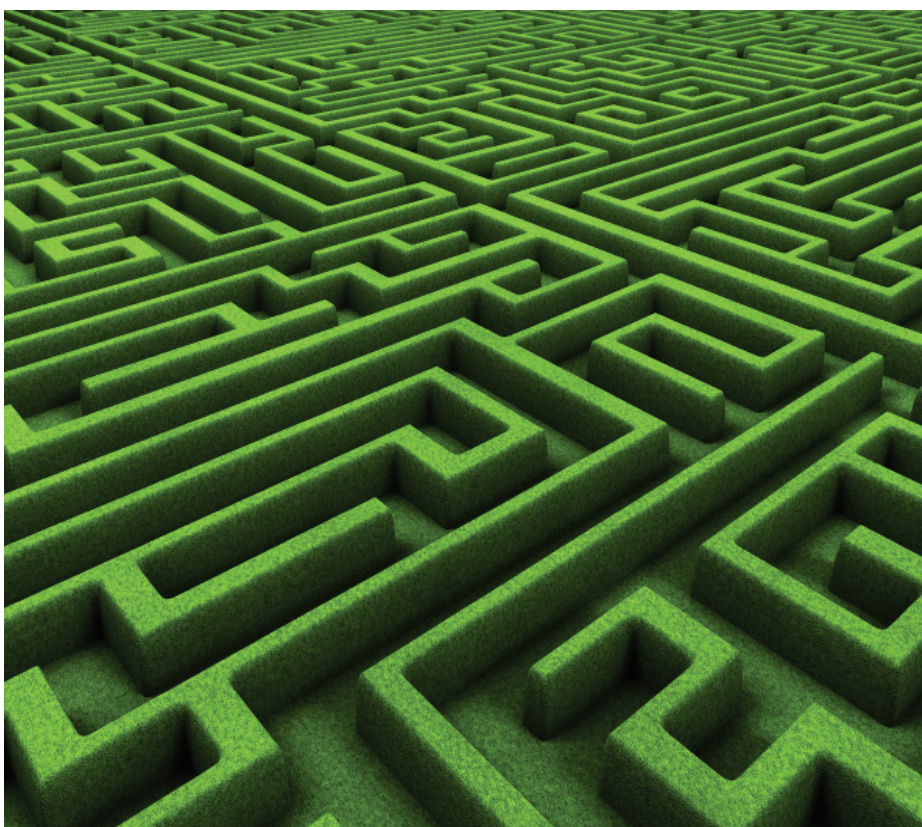
Gaining Exposure to LatAm Renewables

With LatAm's regional renewables sector so nascent, there is a consensus among the industry and investment experts with whom ALI spoke that the best way to gain exposure to its growth is through sector- and region-focused funds and, in some cases, focused equity plays.

"Definitely [I would invest] through a fund," says Juan F. Paez, formerly a partner at Conduit Capital Management and now with REAL Infrastructure, a private equity fund management firm focused on sustainable energy in LatAm. "I haven't seen any publicly listed vehicle other than in Brazil that focuses on renewables generally. For country-specific exposure you can participate in listed development companies that are targeting renewables, but if you want regional exposure the best way is through a fund."

He is bullish on the returns investors can hope to see. "One of the beauties of renewable energy these days in this part of the world is that it has reached, in most cases, 'grid parity,'" he says. "It is a competitive type of energy generation that doesn't require subsidies, so if you have a particular interest, as in the case of my fund, you have a specific target sector where you have certain allocations to the different types of technologies – and that's what fund managers do."

He is attracted to the abundant opportunities and lack of saturation in LatAm. "There is still a very big component of resource availability and the opportunity for wind and hydro is predominant, so that's one of the biggest components. The other big component is that energy depends on growth, and we know where that stands in the developed economies. But if you look at emerging markets such as LatAm, there's real economic growth in these areas of the world, so it's a safer investment in that regard." He adds that LatAm's be-



ing less crowded than the Asian market makes it more attractive.

Fernando Rivas, a Buenos Aires-based fund manager at FE Clean Energy Group, a private equity firm focused on emerging markets, whose clientele has consisted primarily of large institutional investors and large corporations, agrees, saying that funds offer investors such as his the opportunity to get their feet wet in an uncertain market. About a decade ago, he says, a Japanese corporation wanted to invest USD\$20 million in the sector. “For them, USD\$20 million was not too much money, but it was a way that they could jump into a jurisdiction that was new for them, taking into account a profile in their markets. It could be different to jump directly or make the attempt without knowing if the market will have enough attraction to keep them focused on it. It was one way to open the possibility to invest in a totally new market without exposing themselves with their name.”

Mr. Rivas’s fund invests mostly in mature technology, buying equipment from brand name manufacturers instead of committing venture capital to development. The latter, however, is a possibility, he says. Indeed, Mr. Paez expects to see funds emerging that deal precisely with venture and seed capital for research, development and Greenfield projects, which have so far been in the realm of alternative DFIs.

Kevin O’Brien, President of Energy Commercialization, a Bay Area-based firm focused on developing energy projects in Europe, the Middle East and LatAm, says that there has been “huge growth” in renewables-focused funds, but that fund managers bring to them certain requirements and hesitations. “A common theme is that 99% of these folks want to know if you have PPP [public-private partnership] in place and if it’s negotiated. If you don’t have a PPP, the discussion stops; if you do, then they want to know if you have the land secured.

If you have both of those check marks, then there are more and more options out there in terms of funds to work with.” He notes that there is an added comfort level among fund managers because “the finance structure that was new a few years ago is no longer new.” There is a greater understanding of PPPs and typical IRR of projects such as his firm’s.

He adds, however, that subsidies and other incentives, such as feed-in-tariffs, are a large factor in attracting investors to PPPs. “You really need to have government incentives to bring in private investors who want to make that level of investment.” While political risk is a major repellent: “Nationalization is a major risk factor, and in order to get a project financed, one of the important questions is, What’s the level of stability there? Clearly if there is a sense of instability, it’s a given that you’re going to have to do things differently there. You need security around materials coming in and maybe have to deal differently with local labor. But factors like nationalization are deal killers at the end of the day. If you don’t have that stability, you’re not going to get investors.”

While Mr. Rivas believes biomass will see the highest returns in coming years (see the article on ethanol in Mexico, page 36), and wind has seen huge growth in Argentina, Chile, Mexico and Brazil, Mr. O’Brien believes solar is currently the best play. “Across the globe,” he says, “the most attractive FITs [feed-in-tariffs] are typically for solar. Also, there is a lot less restriction, in some countries, and the technology itself is a lot less invasive.” He notes that solar panels can be ground- or roof-mounted, the latter allowing for great exposure without the necessity of buying large plots of land. Lastly, he says, both wind and solar have an advantage over biomass in being more easily scalable. “If you don’t have your biofuel source within 50 miles, it won’t work for you.”

For them, USD\$20 million was not too much money, but it was a way that they could jump into a jurisdiction that was new for them, taking into account a profile in their markets. It could be different to jump directly or make the attempt without knowing if the market will have enough attraction to keep them focused on it. It was one way to open the possibility to invest in a totally new market without exposing themselves with their name.

All Aboard

Promoting Renewable Energy in the Americas

An Interview with Juan Cruz Monticelli
Department of Sustainable Development, Organization of American States

What do you and your department at the OAS do in terms of renewable energy?

At the Organization of American States, the Department of Sustainable Development is implementing a sustainable energy program where we work with all the countries in the Western hemisphere on creating and implementing policies that favor renewable energy and energy efficiency generally. Within that framework we also operate the clearinghouse of the Energy and Climate Partnership of the Americas, a US-led initiative to advance energy efficiency and renewables across the Americas.

Where does LatAm stand globally in the production and use of renewables?

I think this region in general, and each country in the region, is realizing the advantages of renewables. Obviously with crude oil prices being over USD\$100 a barrel, that helps any government understand the advantages. But this region in general has abundant renewable resources – Brazil with hydro, Andean countries and the Caribbean with geothermal, etc. – and in the last 10 years countries have adapted their legislation and adopted new policies to advance different types of technologies needed to tap on

those resources. However, I do believe the implementation, the actual realization of that potential is falling behind. We see changes, but a lot remains to be done in LatAm.

Is it merely implementation that's lacking, or policy in general?

With regard to energy, there is a response generally, except for some countries such as Haiti, which has huge challenges, and that's understandable. I believe the countries have accommodated the need somehow; in the Caribbean access to electricity across the region is over 100%, with the exception of

Haiti, again, where it is probably 12%. So they've obviously been able to supply the demand. But what are the costs? A lot of those countries are paying 50 to 60 US cents per kilowatt/hour of electricity, so the supply is being met, but at a cost. Now they could derive a benefit from tapping geothermal or wind resources, as those costs would clearly go down. So no doubt renewables are an answer that could alleviate the cost of energy. The issue is that the upfront capital costs of renewable are high, as they require substantial infrastructure change, and these countries are often too small to meet those costs or might be too small to receive credit, especially in the Caribbean. So when I say policy is lacking or lagging in terms of implementation, it's mainly with regard to renewables and some energy efficiency measures.

How has the approach to renewables been affected by large discoveries of fossil fuels, such as the so-called presalt oil off the coast of Brazil and shale gas/oil in Argentina?

I think there will be some effect globally. We see it with gas in the US. The price of natural gas is low and will remain so for at least 2 or 3 years and maybe more. But the fact is that fossil fuels remain at a high price, for several reasons: global demand, especially in the growing BRIC countries; political unrest in the Middle East. The fact of

'So when you're talking about changing an energy matrix from one source to another it implies many changes in policy, law, regulation, infrastructure, but in some cases the needs are for now, today, whereas these efforts to develop policies are for down the road.'

the matter is it's a very psychological issue: We see the price of crude at over USD\$100, and that creates a psychological effect and a clear message that fossil fuels are expensive and renewables more competitive. I don't think anyone predicts there will be a major downward trend in crude oil prices in the next 3 or 4 years and governments are coming to the reality that those prices are going to be higher and there is a need for change.

But change is difficult and it takes time, and often when there is an urgent need to supply demand it's easier to do it via traditional conventional sources of energy than it is to deploy the kind of technology we're not used to. With one country in LatAm, we were working some time ago on developing a new policy for sustainable energy and there was need for new sup-

ply and there was an offer for a very cheap dirty plant, and they went for it because it was cheap and would be commissioned in a very short time and generated the electricity that was needed. So when you're talking about changing an energy matrix from one source to another it implies many changes in policy, law, regulation, infrastructure, but in some cases the needs are for now, today, whereas these efforts to develop policies are for down the road.

What is your organization's stance on small hydro vs. large hydro?

There is certainly a differentiation in terms of size of power plants: A micro or small hydro plant can have virtually no impact or a very low, acceptable impact on the environment and society, whereas obviously with a



'In Central America the countries are smaller and there are fewer options, but the benefit in Central America now is that there is greater access to credit for these developments and increased interest from US firms to develop and employ renewable there.'

IGW plant that produces huge amounts of energy there is an impact because you have to create the reservoir. In China people were displaced by the Three Gorges Dam and the World Bank actually changed their assessments after that. In LatAm the politics are different than in China. Brazil has some issues to deal with regarding projects being built, not just environmental issues but social, not just about flooding the biosphere but indigenous communities. It's social, it's hard. There is a price to pay for energy and it's a decision each country has to make. Our organization respects that decision, though obviously we think it's best to go sustainable.

Regarding ethanol, what are your thoughts on the debate over the use of crops as food vs. their use as feedstock for ethanol?

When it comes to the debate of fuel vs. food, it's a complicated matter because you need both; they are both essential to development and growth and human life. Do you want me to cut off my arm or leg? Well, I need both.

With biofuels, is the trend toward domestic use or exportation?

In general it is for internal consumption. The largest producers are in Brazil. The US was historically the largest; last year it was Brazil. The 2 produce 90% of the biofuel worldwide. Most ethanol produced in Brazil is consumed in Brazil – 99%. There is a biofuels protocol signed by Brazil and US in 2007 where the 2 countries are provid-

ing technological assistance to third party countries like Jamaica, Haiti, El Salvador, Honduras, providing technological assistance to help those countries develop their own ethanol production plants.

What countries are the most proactive in taking renewables to the next level?

Brazil, definitely. Mexico has been very good with energy efficiency. With renewables they have some large projects, such as some interesting wind developments in Oaxaca, so even though they produce oil they have been progressive with renewables. Chile, too, is interesting, and Peru is up and coming and I would pay attention to it. In Central America the countries are smaller and there are fewer options, but the benefit in Central America now is that there is greater access to credit for these developments and increased interest from US firms to develop and employ renewables there. But I would say Brazil, Mexico, Chile and Peru have been the strongest.

Is LatAm developing the technology for renewables, or will most of it continue to be imported?

The biofuel technology in Brazil is all domestic, but otherwise most of the renewable technology in the region is imported. Wind turbines in Oaxaca are from Spain. Brazil is developing their own industry, being very smart about attracting investment not only for those projects that import from Spain and Germany but for those who manufacture in Brazil.

What are your department's goals in the coming years?

The major work we are conducting now is under the umbrella of ECPA, The Energy and Climate Partnership of the Americas, a flexible partnership launched by President Obama in 2009 at the Summit of the Americas in Trinidad and Tobago. It initiated major changes compared to prior initiatives of this kind, because what is sought is equal partners, no junior partners; every country participates freely, brings its know-how and takes know-how from other countries. The Organization of American States through the Department of Sustainable Development operates as the clearinghouse of that initiative, and through the initiative the OAS is working on an energy efficiency working group chaired by Mexico to promote the dialogue around energy efficiency in the Americas. Another ECPA initiative promotes dialogue and cooperation among countries of the Caribbean on renewable energy in general, seeking interconnections among the islands. This would be great for the region because one of the issues for the region is the scale of projects: there are very small islands with very small populations, so it's difficult to justify an investment of maybe USD\$150 million for an island where you have 50,000 people. But if you could interconnect those islands, one geothermal plant deployed in Saint Kitts and Nevis for instance could generate electricity and share it with Puerto Rico, Guadalupe or Antigua and Barbuda, we are fostering that dialogue and seeing what we can do on the political level and advance solutions that are more sustainable so that those countries can tap on those resources.

A third interesting initiative is the Senior ECPA Fellows, where the US government has a pool of specialists who are sent to countries throughout the hemisphere to discuss issues of energy and energy efficiency.

Over the next 2 years certainly most of our work will be channeled through ECPA, both as clearinghouse of that partnership and as an incubator of ideas for projects.

Replenished Returns

Institutional Investors Targeting Renewables in Brazil

Global institutional investors have been investing increasingly in Brazil and Brazil-focused funds in recent years, attracted by the country's robust growth and mounting internal demand, its mature investment culture and its promising prospects across sectors, from agriculture to real estate to oil. Now these institutional investors are turning toward Brazil's long established but surging renewable energy industry, as it fortifies its standing as the pre-eminent sugarcane-based ethanol producer in the world while taking aggressive steps in small hydro, wind and other technologies – developments which recently placed Brazil at No. 10 on Ernst & Young's Renewable Energy Country Attractiveness Index.

“Brazil has had a lot more traction and interest from institutional investors from around the globe,” says John Cravenho, Managing Partner at Green Power Funding, an investment firm connecting institutional investors to renewable energy projects in Brazil. “There is a lot of growth potential, and that growth, as in China, is in the lower classes moving up toward the middle class, causing a tremendous demand for energy and energy production.”

Brazil is meeting this demand in large part by building on its already world-class renewable sector. “Brazil has a culture and a

history of renewable energy,” Mr. Cravenho says. “They are a major ethanol producer, from sugarcane, and as of a couple of years ago, approximately 80% of all electricity in Brazil was produced through hydro. So there’s a tremendous legacy and recognition of the benefits of renewable energy even though there are also tremendous finds of offshore oil reserves.”

Mr. Cravenho says his clients are not interested in “greening” their portfolio merely for ethical reasons – though those reasons, of course, count – but are looking to their bottom line. “In juxtaposition to past views of renewables, institutional investors are



not looking for sustainable investments as their purpose. There are some out there, of course, who have that as an objective, but the great majority are looking for good long producing, steady returns, and the attributes of renewable energy are in many cases meeting these interests very well.”

■ On the Ground

Investing successfully in LatAm renewables, Mr. Cravenho says, requires a strong presence on the ground. “Institutional investors understand that you need to have a local presence, be very connected and know how to do business in that locale rather than investing from afar.” His firm’s success in Brazil, he insists, comes in large part from having a savvy and prolific partner there, a renewable energy engineering firm and project developer out of São Paulo with 26 years’ experience.

“Especially since 1998,” Mr. Cravenho says, “when the government opened up more fully to independent power producers of renewable energy and supported the development of renewable energy through a number of programs, our developer was one of the early entrants into that space and has developed 11 different renewable energy projects, delivering excellent risk adjusted returns to private equity investors and taking advantage of development bank financing. He has an excellent track record of getting things done on time in the wind and small hydro and biomass arenas.”

Indeed, he says that the best way to attract institutional investors is to have “an excellent track record and an excellent partner on the ground.” As an example, in the last decade Green Power Funding’s Brazilian developer built 5 different wind farms, grouped them and, about 6 years ago, sold them to a consortium of banks for about half a billion dollars; the consortium has since resold them for multiples of that original price, Mr. Cravenho says. This strategy of rolling-up smaller projects together to scale is one Mr. Cravenho’s firm and its Brazilian developer have exploited successfully. “Individual renewable energy facilities may be on the smaller side. However, you can have wind farms and other facilities that scale up. So there’s a mixture: the five wind

“Our small hydro rollup strategy is very appealing to them, because you can roll it up and get some scale and exit depending on investor needs and the market over time. If you’re looking for very good returns of the PE nature, IRR exceeding 18% or 20% on an annual basis, with a doubling of that on scales of exit, that’s quite appealing for them.”

farms that our development partner put together, for example, range from 4 to 104 megawatts in the individual farms, but total 225 megawatts for the five of them.”

Recently an advisor to some European family offices came to Mr. Cravenho regarding an interest in potential Brazilian renewable energy long-term investments of up to 15 years. “Our small hydro rollup strategy is very appealing to them, because you can provide diversification, gain scale and exit with significant premiums depending on investor needs and the market over time. If you’re looking for very good Private Equity returns in the order of IRR’s exceeding 18% to 20% on an annual basis, with a doubling of that on scaled exits, this type of investing can be quite appealing for them.”

He adds that his firm and the developer currently have a pipeline of small hydro deals that are, he says, “quite unique in some specialized districts of Brazil, offering many benefits including next to no environmental impact and being close to power grids.”

■ New Approach

Green Funding’s approach is distinct from that of many other firms, as it is involved more intimately in project development from beginning to end.

“The primary investment vehicle for institutional investors for infrastructure or renewable energy still tends to be in funds rather than development projects,” Mr. Cravenho says. “They are less interested in taking on development risks, and more interested in, or more used to, investing in private equity pools rather than individual projects or roll-up strategies of projects.”

This preference naturally filters out certain institutional investors from working with his firm, he says, and the ones who do come to him “are interested in what we have to provide: access to superior deal flow and less competition. We’re able to obtain prime greenfield projects and develop them right through from sourcing them to getting fast permitting for them and lining up the long-term power purchase agreement and development bank or other financing.”

Ultimately it is about finding what’s right for the investor. “I think you have to match up the investor needs – what they’re trying to accomplish with their portfolio or a portion of their portfolio – with the attributes of renewable energy,” he says. “In terms of greenfield development, there’s added time for permitting and construction – these are long-term investments. So if you have foundations, endowments, pension funds or family offices, that have more of a long-term need for asset liability matching want to have steady, good returns that can keep producing for years, for them, infrastructure investing and renewable energy development is a great match.”

■ Still the Country of the Future

For the moment, given their success there, Mr. Cravenho says that his firm has no immediate plans to stray from their bread and butter in Brazil. And again he points to his on-the-ground expert partner as the major reason why. “We like the dynamics in Brazil, from the government to the legal structure on through, as well as the growth potential. But the real anchor for us is that the development partner we have in Brazil is a gem, and the core capabilities he has are such a strength that it doesn’t make sense for us to go elsewhere.”

Imagine...

Imagine the fun
Imagine the freedom
Imagine the luxury
Imagine yourself onboard.



Diamond Collection

ONBOARD WITH THE BEST

MY IMAGINE is just one of the hundreds of stunning yachts we have available for charter this summer. Please contact one of our expert charter brokers for more information.

MY IMAGINE | 65m (214') | Amels | 2011 | 12 guests | €465,000 per week

Photography by Marc Paris.

Sales | Charter | Management | Construction | Crew

Mexico City + 52 55 5004 0408
Palma + 34 971 700445
Ft. Lauderdale + 1 954 463 0600
Casa De Campo + 1 809 523 2208
Monaco + 377 93 100 450

Seattle + 1 206 382 9494
Cyprus + 357 25 828911
San Diego + 1 619 225 0588
London + 44 207 016 4480
Viareggio + 39 0584 385090

charter@fraseryachts.com

The Superyacht Experts



FRASER YACHTS

Feeding the Beast

Global demand for ethanol and other biofuels is growing rapidly, with the US and Brazil leading the way in both production and consumption. In LatAm, aside from Brazil, Colombia has taken strides toward becoming a major producer. But Mexico's production is poised to grow as well. According to a recent Latin American Trade and Investment Association (LATIA) report, its potential for biomass-generated production is 119,000MW per year, a big reason the same report declared that the country is "set to become a leader in renewable energy provision."

This growth, says Vincent Cue, Director of Business Development at Modality Solutions and LatAm Advisor at Genesis Biosugars, will be fed primarily by US demand, which is increasing in spite of the US's own robust domestic production.



Ethanol in Mexico

“It is amazing. There are different sources who discuss this, but after reading many, I’ve seen that supply in the US doesn’t even reach 15% or 20%. So companies are trying to approach some of those in different ways to get it from different sources. US investors are having trouble finding projects to invest in and for the projects to find funding, so it’s easier for a lot of them to cross the border and get it from Brazil and Mexico” says Mr Cue. This flight may increase as the US federal government recently ended its decades-long subsidies program to the corn industry to encourage ethanol production.

US investors and producers, however, aren’t the only ones moving into Mexico. Brazil’s Odebrecht recently announced that it would invest USD\$900 million in a sugarcane mill in Mexico. (Brazil produces almost all of its ethanol from sugar, while the US uses mostly corn.)

■ Returns

The returns to be had in LatAm’s ethanol and other biomass industries are perhaps the highest among renewables, according to Fernando Rivas, a Buenos Aires-based fund manager at FE Clean Energy Group, a private equity firm focused on emerging markets whose clientele consists primarily of large institutional investors. “I think biomass projects could offer the best returns. There is risk, of course, with the raw material supply, the feedstock. But in general the return there could be highest.”

The risk derives primarily from the ethanol industry’s dual reliance on the agriculture and energy sectors and markets. “There is the risk of unmatched markets,” he says, “converting across sectors to link raw material and energy prices.”

Mr. Cue provides an interesting insight re-

“I don’t think corn is the best choice, even if Monsanto came up with the best yielding corn. The other sources don’t leave such a big footprint, and many of them, such as agave leaves, aren’t used for anything else, they’re basically waste, and sorghum and switchgrass grow in the wild, so you don’t need a big effort in production and are not really competing with use as livestock fodder. So those three crops are very good feedstock.”

garding these risks in Mexico specifically. “The main issue in Mexico is regulation,” he says. “There is an agrarian reform law that has been there for years, which doesn’t allow ethanol technology owners to find a secure, long-term feedstock source. What happens is that the government in Mexico wants to seem like they are protecting the crop producers, but at the same time they are not allowing investors to feel confident about using feedstock produced by these small producers.” The government’s answer, he explains, has been to introduce new regulations allowing technology investors, including foreign ones, to “extend an invitation to small producers,” allowing the latter to participate in the corporations. “But the problem is there is still not that sense of safety in the investment, as these small producers tend not to understand what it means to own equity in the corporation, and prefer to profit from their feedstock by treating it as a commodity and playing with prices.” Yet both Mr. Cue and Mr. Rivas insist that the returns are there in spite of the com-

plications. “It is still a high-return investment,” says Mr. Cue. “They are exporting to the US and the US can pay higher prices. So even though there are issues on the supply side, on the demand side they are doing well. But it’s different in the US, where you have more producers and they are not getting the right returns and finding the right means of distribution. The returns there are lower than in LatAm.” He notes that, aside from Mexico, there are also burgeoning ethanol industries in Peru, Ecuador and Paraguay.

Overall, Mr. Cue thinks public ignorance is doing much to hold back ethanol development. For example, many people think ethanol is used mostly for transport, but it figures in many other industries, including chemicals and pharmaceuticals. Also, corn and sugar, the two dominant sources of the fuel, are by no means the only sources, and perhaps not even the best, particularly in environmental terms and in their effect on food supply. “I don’t think corn is the best choice, even if Monsanto came up with the best yielding corn. The other sources don’t leave such a big footprint, and many of them, such as agave leaves, aren’t used for anything else, they’re basically waste, and sorghum and switchgrass grow in the wild, so you don’t need a big effort in production and are not really competing with use as livestock fodder. So those three crops are very good feedstock.”

“There is an agrarian reform law that has been there for years, which doesn’t allow ethanol technology owners to find a secure, long-term feedstock source.”

A Roundup of Renewables in LatAm

LatAm has a long history of renewable energy production, particularly in biomass and hydropower. And yet, with the exception of Brazil, the region continues to have minimal installed electrical capacity generation from renewables. Now, however, with the sustained growth of many of the region's economies in recent years, the growing domestic demand in the face of consistently high fossil fuel prices that show no signs of abating, and the commitment demonstrated by several of the region's governments toward promoting renewable production, global investors and fund managers are turning to the region's renewable sector not only for the social and environmental investment it offers but for the solid and long-term returns it promises.

"Although the region is well behind Europe and the US regarding renewable energies," says Sol Graña, senior business analyst at Compañía de Inversiones y Mandatos S.A., in Buenos Aires, "some LatAm countries are showing huge efforts and advances towards making their electric grids cleaner. The potential is clear. With serious energy policies towards REs, great opportunities

will appear in the region at the same time as the industry in developed countries becomes more competitive."

Recently Ms. Graña gave ALI her opinion on the current situation and prospects of 4 of the region's largest economies, including Brazil, by far the region's leader in renewable energy production and use; Chile, which currently has minimal renewable production but outstanding resources in small hydro, solar and wind; Mexico, which, in spite of being a major oil producer, has taken strides with renewable, particularly wind; and Argentina, whose winds, especially in Patagonia, Ms. Graña says, are perhaps the region's greatest untapped resource.

Graña includes solar, wind, biomass and small hydro as renewable energy sources. Unless otherwise indicated, she does not include other sources, such as large hydro. The arbitrary cutoff between small or "run of the river hydro" and large hydro tends to be 30mw of power generation; the real difference, however, is in the environmental and social damage that large hydro can cause by flooding large areas to create res-

ervoirs, often displacing populations and inevitably altering ecosystems. (See the article in this issue on small vs. large hydro investment, page 41.)

The following in Ms. Graña's round-up, in her words:

■ Brazil

Brazil is definitely the leader in RE matters in LatAm. It was ranked by Ernst & Young as the 10th most attractive country in the world regarding renewable energies (REs). Its 10-year energy plan targets to triple its use of renewable energies by 2020, reducing the nation's projected greenhouse gas emissions between 36% and 39%.

The Program for Incentive of Alternative Electric Energy Sources (PROINFA) encourages targets of 27 GW of wind, biomass and small hydropower energy by 2020, representing 16% of the country's electricity supply. This and several other programs establish a special regime of taxation to achieve the target. Financial programs provided by the Brazilian National Bank for Economic and Social Development



“Although the region is well behind Europe and the US regarding renewable energies, some LatAm countries are showing huge efforts and advances towards making their electric grids cleaner.”

(BNDES) play an important role in RE development.

With its extensive coastline, Brazil has a huge potential for wind energy (approximately 350 GW). Together with ABEEólica, the government wants to achieve 10 GW of wind energy capacity by 2020. During 2011, Brazil installed almost 600 MW of wind power, reaching 1.5 GW by year-end. In the last 2011 auctions, wind power prices (USD\$63/MWh) were lower than those of electricity generated by natural gas, proving wind power can be extremely competitive. On the other hand, investors are concerned about lower return margins and are requesting the government to introduce a long-term policy framework to sustain investment in the sector.

Brazil is the global ethanol market leader. The government is developing a national plan to make ethanol the leading fuel of the country's fleet of light vehicles. Only 714 MW were awarded to biomass projects in the 2011 auctions. They were not as strong as expected, probably because of wind and hydroelectric competitive prices.

Brazil's total installed photovoltaic power capacity is between 12 and 15 MW. It has several projects under development but stronger incentives are needed for the sector to boom.

Chile

Today less than 4% of Chile's installed capacity comes from REs. Fortunately, last month, President Piñera announced a new energy plan for the nation. Chile had been quite criticized for not taking advantage of its great RE potential while it imported energy resources at high prices. The plan increases the RE target from 10% by 2024 to 20% by 2020, including subsidies to encourage investments.

Chile has a huge solar potential in the Atacama region, with one of the strongest radiations on the planet. International firms have landed in the country and several big solar projects are under study, driven in part by mining companies in the area, who have expressed their intention to get more of their energy from solar power. Projects for almost 300 MW are under develop-

ment, including a 250 MW photovoltaic plant.

During 2011, 33 MW of wind energy were added to the 172 MW installed by 2010, totaling 205 MW; nearly 3,000 MW more are under study. The extensive Chilean coastline has big potential for onshore and offshore wind projects. The country's largest wind development has been recently announced to begin construction: a 115 MW wind farm that will sell electricity to a mining company for the next 20 years.

Additionally, the government has launched an international tender for 3 state territories for up to 150 MW each in Antofagasta.

Argentina

Less than 2% of Argentina's energy matrix comes from RE sources. Under Law 16.190, however, signed in 2009, Argentina aims to improve the figure to 8% by 2016, including wind, biomass, small-scale hydro, tidal, geothermal and solar. A first step towards this goal was the GENREN program under which ENARSA aimed to contract 1 GW of RE capacity.

The GENREN program awarded 895 MW distributed between 17 wind farms with a capacity of 754 MW, 4 biodiesel projects for 110 MW, 5 small hydro plants of 11 MW and 6 solar PV projects totaling 20 MW. Prices were fixed for 15-year contracts. Resolution 108 awards similar conditions for projects outside GENREN.

The Patagonia region has one of the best wind resources in the world with capacity factors over 45%. Lack of access to finance, due to Argentina's default in 2001, is delaying its development, with only 130 MW installed. Under GENREN, the government agreed to pay USD\$127/MWh, twice the prices of the last Brazilian tender.

Conditions for solar energy are very good in the northeastern region but only 10 MW have been installed so far. By 2020, the government expects to generate 3.3 GW of solar power.

Only 30 MW of small hydropower capacity has been installed, which the government plans to double by 2020.

Argentina is the world's 4th largest biodiesel producer and the No. 1 exporter. It plans to increase its mandate from B7 to B10 in the following years (fuel sold should contain a minimum of 10% biodiesel).

Mexico

Mexico generates almost 4% of its electricity from "green" sources, mainly nuclear and geothermal. It aims to increase this number to 7.5% by 2017. Given the huge wind and solar resources, the target could have been much more aggressive. With the introduction of specific programs and incentives, Mexico could satisfy almost 50% of its electricity requirements from REs by 2025. Initiatives such as the Special Program for Renewable Energy set national targets for wind, mini-hydro, geothermal and biomass, while the Inter-American Development Bank (IDB) has recently announced a USD\$210 million finance boost for RE projects in the country.

Wind will probably lead the RE adoption in Mexico given the vast potential of the Oaxaca region, with winds of almost 9 m/s. During 2011, 354 MW were installed resulting in 873 MW of wind capacity. The targets for 2012 were not achieved but several projects have been announced in the last months, including the development of the largest wind farm in LatAm with 396 MW, backed by funds from the IDB.

Mexico's solar potential is highly unutilized with less than 25 MW installed. Various projects are under development with firms like Skyline Solar and Abengoa wanting to start operations. The China's Risen Energy Co. has signed an agreement to build a 200 MW solar plant in Durango.

We will probably see several biogas projects in the following years due to the country's potential and the government's support to this sector.

Sources:

Ernst & Young, ANNEL Brazil, CNE Chile, Secretaría de Energía Argentina, AWEA.

Returns on the River

The Benefits of Small Hydro

LatAm has some of the best natural hydropower resources in the world, with an abundance of high-volume rivers crossing the continent's steep elevation gradients, and the region has a long history of harnessing this power by damming rivers and forming reservoirs – the classic “large” hydro method. Brazil has done the most to slake its hydro thirst: Already 2nd in the world in hydro production and 3rd in installed capacity, with 83.8% of its energy coming from hydropower, it recently announced plans for the Belo Monte Dam in the Amazon, which, if completed, will be the 3rd largest of its kind in the world.

Yet the intense, much-publicized controversy surrounding the Belo Monte Dam and similar large hydro projects such as the proposed and fiercely contested HidroAysén project in southern Chile (against which tens of thousands of vehement critics recently protested in the streets of Santiago), point to a problem: With the huge social and environmental changes these massive projects engender, they can often do more harm than good.

This hard-to-ignore truth, among other factors, has led to increased investor interest in so-called small hydro projects, also known as

“run of the river” hydro, as they depend on rivers' natural flows instead of altering them with dams. Many experts see huge opportunities in this burgeoning industry, in terms of both the quantity of production, the ease of distribution and the returns to be had.

“From an environmental perspective, it's when you have reservoir that you have the biggest impact,” says Juan F. Pérez, formerly a partner at Conduit Capital Management and now with REAL Infrastructure, a private equity fund management firm focused on sustainable energy in LatAm. “You have to flood areas, there is loss of wildlife, displaced human populations, impact on the quality of

water, issues with oxygenation of water, pollution, the spread of diseases, as well as issues downstream with natural patterns of erosion sedimentation.” He notes that, in many cases, reservoirs can create more greenhouse gases (in virtue of the forests they destroy and which rot inside of them) than are saved by using hydro to begin with.

John Cravenho, Managing Partner at Green Power Funding, an investment firm focused on renewable energy projects throughout Brazil, explains the nature and benefits of small hydro. “The accepted cutoff for small hydro is generally under 30 MW, and one of the distinguishing characteristics is that they are generally run-of-the-river, meaning you place turbines in a river or canal or create an offshoot from that river or canal and the water falls over the turbine, creating electricity, and returns to the river. You don't have to create a dam, so you don't have significant environmental impacts.”

Another potential benefit of small hydro, says Mr. Cravenho, is that it allows for new means of distribution, something he says Green Power has exploited with a unique dealflow model. “Having small hydro specifically closer to metropolitan areas provides easy access to consumers via the grid and large companies with high energy demands. Conversely, many remaining small hydro sites tend to be in rural areas. Typically transporting energy from those centers creates a lot of loss of power and high costs.”

There are myriad possibilities for small hydro in LatAm, the vast majority of them still undeveloped. A report on the website of the Center for International Strategic Studies quotes an analysis by the Inter-American Development Bank saying that Chile has an estimated 772 MW of potential small hydro projects. Brazil, parallel to its large hydro exploits, has spearheaded small hydro development, particularly in rural, off-the-grid areas, according to the same report. Petrobras is among the many investors in the burgeoning subsector.

And the rivers aren't the only ones getting returns. Mr. Cravenho, whose firm serves institutional investors and family offices, insists that his clients are turning to renewables for the best steady and long-term production of energy-sector IRR's. (See the article on institutional investing in Brazilian renewables for more on his firm, page 33.) He describes his firm's roll-up strategy for a small hydro project in Brazil, where each project averages about 6 to 8 MW but are then rolled-up together into quantities comprising between 50 and 200 MW, depending on investor needs. "On a one-off basis, these projects are not large enough to 'move the needle' for an institutional investor, but if you have a pipeline of similar deal flow, which we do, and which we intend to scale between 50 to 200 MW, then it works." He adds that these projects are also attractive because they receive 70% subsidized debt financing and are supported by well-priced, AA-rated, 20-year power-purchase agreements. "When all of these benefits are linked with premium returns from building the facilities and exit premiums from scaled operations, then these are of significant interest to investors."

Mr. Páez agrees that small hydro projects can be "very lucrative," and insists that they are by far the better option in terms of social and environmental damage, which makes it easier to develop projects outside the fetters of governmental interference and regulation. "I would put money toward small hydro in particular because the impact of having run-of-the-river facilities is very minimal, if any. But in terms of displaced [fossil fuel-based or large hydro] energy, its impact is huge. So if you are a socially minded investor, you will favor small hydro."



"On a one-off basis, they're not large enough to move the needle of an institutional investor, but if you have a pipeline of similar deal flow, which we do, then you have 50 or 200 MW, and they are very scalable."

Bringing It Home

Renewable Tech Development in LatAm

Even as the renewable sector in LatAm continues its steady growth, so far it has run, by and large, on borrowed equipment and ideas. Brazil's biofuels sector is an important exception, as that well-established, home-grown industry has been fed by domestic design, manufacturing and production for years. But from the wind farms of Oaxaca, Mexico, to those in Patagonia, Argentina, and from the solar plants in Chile's north to the hydro plants in its south, current machines bear the stamp of pioneering companies in North America and Europe.

There is a consensus, however, that in the next 5 years this situation will change; that countries will follow Brazil's lead in fostering homegrown industries around their renewable sectors; that foreign companies will open more manufacturing plants on the ground in LatAm; and, in a more fundamental shift, that technological advances will come from LatAm itself. And these changes are already presenting opportunities for private equity and venture capital in the technology and development surrounding not only renewable energy production but energy storage and a new paradigm of distribution.

"This is a hot button for us," says Kevin O'Brien, President of Energy Commercialization, a Bay Area-based firm focused on developing energy projects in Europe, the Middle East and LatAm. "Most people right now would look and say the developing markets are just taking existing technology and utilizing it. But it's really a matter of time. The reality is it makes absolutely

no sense to be importing these things in. What's going to drive down the costs and provide regional economic benefit is being able to make them locally, and that's going to happen relatively soon."

Mr. O'Brien thinks technological advances will come primarily in solar energy and in energy storage, with the latter advances causing the greatest impact. "Everyone knows renewables are not always on, so energy storage is going to be a critical factor to move them forward, and there are a lot of things happening in that area."

Other important technological advances, he says, will come in customizing technologies to specific environments, an aspect of development that his firm is especially focused on. "A solar panel in Phoenix is not going to work the same way in Argentina or the Middle East. There's been a great start with the technology in the US and Europe, but you're going to have to fine-tune it for particular areas."

David Osborn M.Sc. Senior Managing Director of North Avenue Research and former President and founder of Advanced Power & Energy Consulting, agrees, saying that some of the most important and rapid technological advances are in the manufacturing process itself, and that these advances are lowering the costs of production. "Manufacturing techniques are improving, costs of materials are, in some cases, plummeting – for solar panels, for example. So the costs of these systems are starting to come down, relative to the steadily increasing costs of fossil fuels: natural gas, oil and diesel."

Home Growing

Mr. Osborn also agrees with Mr. O'Brien's point that real economic and social impact will only begin with the growth of home-grown industries, and he predicts that more foreign companies will begin setting up plants in emerging markets to manufacture their technologies locally. "The opportunity here is to break away from what has traditionally been done - exploiting local resources and using imported material and labor - and instead, as an example, do what General Electric is doing, constructing a factory in Brazil to build wind turbines."

Late last year, GM announced that it would build a USD\$24 million plant in the Brazilian state of Bahia, to open in 2013 and intended to produce 200 turbines a year. Likewise, the French company Alstom, which already has a plant in Brazil, recently announced that it would begin manufacturing turbines to be sold to wind farms in Argentina, Uruguay and Chile. Several other major foreign turbine makers have committed to building factories in Brazil.

The Road to the Interior

Mr. Osborn points especially to rural electrification as an area for technological advances as well as job creation and development, as a long supply chain needs to be created to reach far-flung communities, with accompanying service and maintenance industries. He concedes that the skill set is not there today, but insists that

such development, and the replacement of fossil fuels with renewable energy sources, is essential for social, environmental and economic reasons.

"When you're looking at an isolated community in a developing country, a lot of their electric generation capacity is based on diesel fuel, and not only is diesel expensive to transport and get to these rural sections of countries, but usually the generation equipment are then located in close proximity to where humans are living and working, so there are health issues and other ancillary problems that fall out of it."

■ Paradigm Shift

Both Mr. Osborn and Mr. O'Brien see a new distribution paradigm surrounding renewable energy, with energy sources more distributed, less centralized and often much closer to the end user. That much of the development needed for such a decentralized network is green-field (i.e., not built on or replacing existing infrastructure) may help such development arrive more quickly.

"I see it analogous to mobile phones," says Mr. O'Brien. "In the developing nations mobile penetration grew very fast and is very high, because in many cases they didn't have a whole series of copper out there that they had to overcome. And with these traditional sources, whether it's nuclear or coal fire plants, they are centralized. But when we're talking renewable, we're talking about a distributed generation approach. Rather than having massive transmission and distribution structure, I want to have my generator close by to its needs. That's the beauty of it. When you don't have a lot of existing infrastructure, you can immediately make the jump to distributed generation. That's why you're seeing it in emerging markets."

■ Changing Winds

Mr. O'Brien is of the relatively radical opinion that renewable technology in the developing world will not only catch up to but actually outstrip the technology it currently imports. "We believe that, instead of the flow of technology being from the US and Europe to the developing world, it's going to flow back; we believe the intellectual capital capability is growing there, and we have activities now, including working with universities, to actively enhance that."

The Argentine Renewable Energies Chamber (CADER)

Argentina is blessed with all types of energy sources: biodiesel, wind, solar, geothermal, biomass, hydraulic, biogas, waste for energy, tidal energy, nuclear, etc., as well as fossil oil and gas.

Interview with Alfredo Langesfeld - President

What does CADER do and how can it benefit investors?

The Chamber is a nonprofit civil association whose members are leading companies in alternative energies from Argentina and abroad (we have foreign companies as members). Since its creation, the Chamber has been working to sustain its leadership in all kinds of alternative energies and to play a key role in communicating their great potential.

We have been in biodiesel and alternative energies since 2006, promoting the use of alternative energies and promoting business and more jobs.

I am a founding member of the Chamber and its president since November 2011.

Why/when was it established?

The Chamber was established in 2006 in Buenos Aires to promote the use of alternative energies and also to protect the environ-

ment. Over the last few years the Chamber has grown exponentially.

On April 11th and 12th of this year, we patronized the 2nd Clean Energy Congress in Buenos Aires with over 650 attendees and speakers from all the world and we had a great success.

How is it funded?

It is funded by private companies and individuals, who are convinced of the key role to be played by Argentina and other LatAm countries in developing alternative energies.

Argentina is blessed with all types of energy sources: biodiesel, wind, solar, geothermal, biomass, hydraulic, biogas, waste for energy, tidal energy, nuclear, etc., as well as fossil oil and gas.

In your opinion, where does LatAm rank in terms of renewable energy production?

It is increasing the production year by year. Brazil and Argentina, and since 2010 also Colombia, Peru, Ecuador, Mexico, Uruguay, Paraguay, etc., are producing alternative energies.

Germany is very proactive. France has a lot of nuclear plants, which is the best for the environment. EU does not have enough feedstock for the production of biofuels and their costs are very high. The US is increasing their production.

LatAm has the feedstock, mostly Argentina and Brazil, as well as the human

workforce, which is very well prepared; they have great soils/land for excellent production of renewable energies, same as for food. It has the position to be a very important player in the world and it can position as a lead producer and exporter. Argentina is already the No. 1 biodiesel exporter in the world and 3rd biodiesel producer.

Which countries (governments) are most proactive about renewable energy?

(See accompanying charts.)

How are renewables being affected by recent traditional energy discoveries, pre-salt oil, shale gas, etc.

An annual survey conducted by KPMG referred to “a sustainable energy matrix” for the country as requiring complementation between fossil fuels (oil and gas) and renewable sources, wind and biofuels, and the achievement of this equation requires “financing sources and profitable domestic prices” to produce.

The study found that the state should only intervene in the sector for monetary, fi-



nancial and tax-setting reasons. Domestic future prices are key, given the heavy investments required, for the development of offshore hydrocarbon reservoirs and unconventional gas. (Regarding shale gas: Argentina has the 3rd largest resources in the world, after USA and China). Pre-salt oil and shale gas discoveries will not slow the growth of renewable energies. We have to remember that there's expected to be a human population of 10 billion by 2030.

What is the best way for investors to gain exposure to LatAm renewables, funds, listed stocks, energy investment, etc?

Direct investment is the best way to obtain profits, although it's risky; there are other suitable financial alternatives, as partnerships, participation in funds of energy investment (lower risk). Foreign companies based in Argentina are investing in plants to increase biofuel production capacity. In wind energy, foreign companies are associated with domestic companies to expand the wind market. Foreign and domestic companies are interested in the supply of wind power equipments and in investing and partnering, as the wind market requires an important investment with a return of capital in the long term. Brazil is doing very well and a lot of investments are in wind production.

According to a 2011 report from the Economic Commission for Latin America (CEPAL), foreign private investment reached a strong development after the fall of world economic activity in 2009. Most of the foreign investments in LatAm went to Brazil. In 2010 the moneys went to Brazil, Chile, Peru, Colombia, Argentina. CEPAL expects foreign investment to grow 15-20% in 2012 in LatAm.

How does political risk affect renewable investment, e.g., risk of nationalization?

We don't see it at present in alternative energies. We don't do futurology.

As president of the Argentine Chamber of Renewable Energies, I represented Argentina in commercial missions to Italy, Germany, the Netherlands, China, Malaysia, Hong Kong, Chile, Russia, also as a private

CANADA - USA

Canada	5% renewables. 2% biodiesel BD in: AZ, CA, HI, IA, IL, IN, KS, KY, MA, MD, NE, NH, NJ, NY, OK, SC, SD, VA, WA.
USA	19 states incentives for biodiesel. In: AZ, CO, HI, IL, MI, MO, MS, TN, VA, WA, mandatory biofuels targets for vehicles. B5 Mandates: CA, KS, LA, MO, MS, VA.

EU

European Union	10 percent by 2020 (M proposed by EU Commission in January 2008)
Germany	6.75 percent by 2010, set to rise to 8 percent by 2015, 10 percent by 2020
France	5.75 percent by 2008, 7 percent by 2010, 10 percent by 2015, 10 percent by 2020
United Kingdom	5 percent biofuels by 2010 (M), 10 percent by 2020
Italy	5.75 percent by 2010 (M), 10 percent by 2020
Austria	5.75%
Eslovakia	5.75% renewables
Spain	5%
Finland	5%
Netherlands	5.75% renewables
Poland	5%
Portugal	5.75% renewables
Czech Republic	4.5 %
Sweden	5.75 % renewables

Asia

China	15% of transport energy needs through use of biofuels by 2020
Taipei (China)	State Energy Administration B5 biodiesel standard (Beijing, Shanghai, Guangzhou).
Korea	B5%
Philippine	B10%
India	20% for 2017
Indonesia	B2%
Malasia	B5%
Tailandia	B5%
Taiwan	3%
Japan	500 000 kilolitres, as converted to crude oil
India	Proposed blending mandates of 5/10 % for ethanol and 20% for biodiesel
Israel	Proposed 5% from renewables for 2016

Australia - New Zealand

Australia	proposed 20% renewables 2020
New Zealand	Mandatory 3% renewables/ 5% biodiesel

Asia

China	15% of transport energy needs through use of biofuels by 2020
Taipei (China)	State Energy Administration B5 biodiesel standard (Beijing, Shanghai, Guangzhou).
Korea	B5%
Philippine	B10%
India	20% for 2017
Indonesia	B2%
Malasia	B5%
Tailandia	B5%
Taiwan	3%
Japan	500 000 kilolitres, as converted to crude oil
India	Proposed blending mandates of 5/10 % for ethanol and 20% for biodiesel
Israel	Proposed 5% from renewables for 2016

LatAm

Argentina	B7 from January 2010.
Bolivia	2,5% from 2007 to reach 20% in 2015.
Brazil	20/25% bioethanol mandatory blend Biodiesel 5%
Colombia	10% ethanol
Jamaica	10% ethanol
Paraguay	B5%
Peru	B5%
Venezuela	10% bioethanol
Uruguay	B5%

company, and all the time I have meetings with companies/people interested in investing in energy. China and India are interested in investing in alternative energies.

There is money coming from institutions (World Bank, IDB, CAF, etc.) to LatAm to promote governments and private enterprises addressed to wind energy, thermal energy, biomass, biogas and hydro, etc. The idea of the above institutions and their main objective is to supply energy, electricity to the millions of people in LatAm that don't have it, especially in the rural areas.

Is LatAm trending towards local technology development and manufacturing, or still importing renewable tech from abroad?

A lot of technology is imported from the E.U., the US, and primarily from China (wind power generators/mills, photovoltaic solar panels, refineries), but the domestic productions are increasing rapidly. Investments are needed to develop local technology able to compete with foreign manufacturers.

The local production is a challenge we have to pursue for the coming years. With the adequate investments, it will surely arrive and will generate thousand of jobs, which will push the region to lead the renewable energies market.

What do you see as the largest advantage and barrier to renewable energy development in LatAm?

Our Chamber is actively working to have a future projection of alternative energy sources through the Scenarios 2030 Energy for all LatAm, which aims to communicate and promote alternative energy sources and study their potential development in the coming years.

There are hundreds of projects through LatAm in all kinds of alternative energies, with a lot of possibilities for investors to make profits and help LatAm people to increase their quality of life by getting more work thanks to having more energy produced, etc. Waste (urban and industrial) is part of the future as energy as well as projects of wind and solar parks. There are

also excellent investment possibilities in biomass (waste to energy), biodiesel from soybean and UCO, and ethanol, biogas, nuclear, hydro, wave and tidal energies.

The main barrier is to get larger investments to develop more projects and research.

Alfredo Langesfeld
President

Argentine Renewable Energies Chamber
flang@cader.org.ar
www.ArgentinaRenovables.org

Alfredo Langesfeld, President and Founding Member of the Argentine Chamber of Renewable Energies (CADER) and Founding Member of the Association of Biofuels & Hydrogen (AABH). Member of the US-Argentine Chamber (AMCHAM) and the German-Argentine Chamber of Commerce (AHK) and others. Shareholder and Director of GEA Biodiesel S.A and GEA Consulting Corp. In international business since 1960 as principal, investor, trader, consultant (alternative energies including biodiesel, ethanol, waste, glycerine, feedstocks, commodities). Markets: LatAm, US, Europe, Asia, Africa. At present involved in biodiesel multifeedstock plants (partnership in biodiesel plants of 100.000 TPY in Port San Martin/Santa Fe, one ready to start up by the end of 2012, another 100.000 TPY plant starting up by 2013). Other Projects in LatAm: Ethanol, Energy from Waste. Since 2011 adviser to the Ministry of Foreign Affairs in International Investments for Argentina. Regularly invited as speaker to Conferences since 2003 related to feedstocks, commodities, alternative energies, finances, international trading.



CAMARA ARGENTINA
de Energias Renovables



EMERGING MANAGERS SUMMIT

MAY 30 - JUNE 1, 2012
THE RADISSON BLU AQUA HOTEL
CHICAGO, IL

If you are looking to expand and diversify your asset allocation by investing in emerging managers as well as women and minority owned investment managers, the emerging managers conference will provide the unique opportunity to access a diversified group of up-and-coming performance-oriented managers and manager of managers. The conference will explore the benefits and opportunities offered by investing in emerging managers as well as new strategies for implementing an emerging managers program. If you are an emerging manager, you will learn the procedures used by institutions to launch and maintain successful emerging manager programs. This event will showcase a variety of emerging managers as well as minority-owned manager funds and other high potential smaller investment firms, and it will offer participants invaluable networking opportunities.

SPONSORSHIP AND EXHIBITING OPPORTUNITIES ARE AVAILABLE

If you are interested in attending, sponsoring, speaking or exhibiting at this event, please call 212-532-9898 or email info@opalgroup.net

To register, visit us online at www.opalgroup.net
or email us at marketing@opalgroup.net
REF CODE: EMSA1207

A Bio-Energy Perspective

■ Mark McHugh

Analagous to the emergence of the oil industry over a century ago, we are about to witness the growth of bioenergy into a mega industry. The crude oil of this future global industry will be biomass, and supply will be the key driver for many years to come. Brazil is set to become the Saudi Arabia of the business, and control over supply will be a critical success factor for those destined to become the new energy players. An integrated business, as with the formation of the oil majors, will attain significant cost advantages and leverage in the market. The window of opportunity to start developing such a business is now.

■ Bio-Energies in the Future Energy Scenario

Biomass is the source of bio-energy derived from living or recently living organisms that can be processed into electricity, liquid or solid biofuel and heat. Traditional bio-

mass, which represents about half of total biomass consumption today, is wood fuel, agricultural by-products and dung burned for cooking and heating purposes in developing countries. This is still widely harvested and used in an unsustainable and unsafe way. On the other hand, modern biomass is produced from sustainable wood-based products, energy crops, forestry residues, residual agricultural products and can be broadened to include municipal and industrial waste.

Modern biomass fuels are generally recognized as having far lower net lifecycle carbon dioxide emissions than fossil fuel equivalents and can play an important role in carbon capture and sequestration (CCS). Despite this, significant concerns remain about sustainability in two key areas: some first generation liquid biofuels, which compete with food production; and the forestry management techniques used in production of woody biomass.

Second generation liquid biofuels, based upon lingo-cellulosic feedstocks, hold the promise of sustainable production and overcome most of the criticisms of first generation fuels. Likewise, production of biomass from renewable energy crops can avoid many of the negative issues with woody biomass.

According to the World Bank Development Report, modern biomass has the highest mitigation potential for GHG emissions of all renewable energy sources, but is the area where technology is least developed. Underlying global demand for energy by 2050 could triple from its 2000 level if emerging economies follow historical patterns of development. In broad-brush terms, natural innovation and competition could spur improvements in energy efficiency to moderate underlying demand by about 20% over this time. Ordinary rates of supply growth - taking into account technological, geological, competitive, financial and political

realities - could naturally boost energy production by about 50%. But this still leaves a gap between business-as-usual supply and business-as-usual demand of around 400 EJ/a – the size of the whole energy industry in 2000!

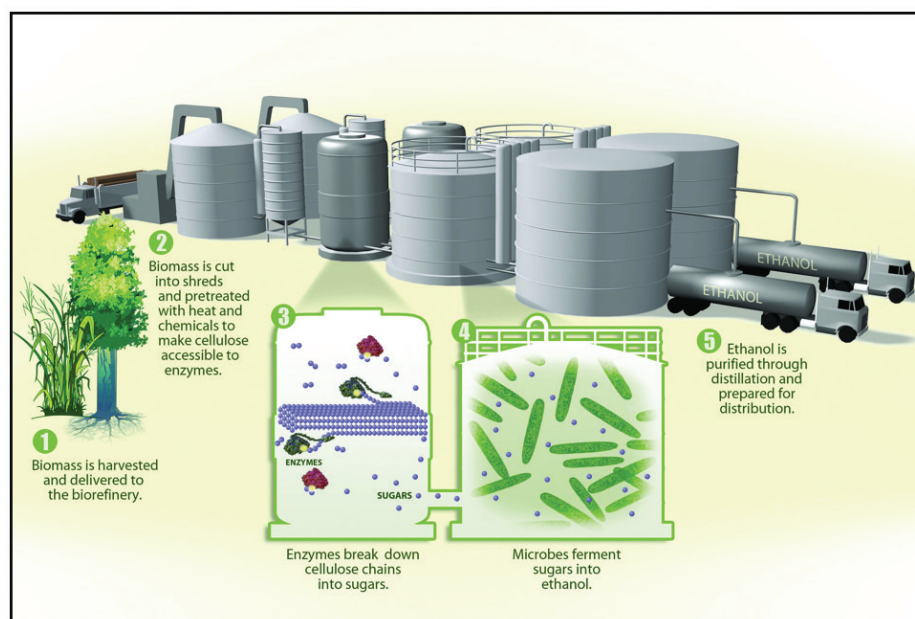
This gap – this Zone of Uncertainty – will have to be bridged by some combination of extraordinary demand moderation and extraordinary production acceleration. New energy technologies must be demonstrated at commercial scale and require 30 years of sustained double-digit growth to build industrial capacity and grow sufficiently to feature at even 1-2% of the energy system. However, unlike electric cars, or hydrogen fueled vehicles, biomass derived biofuels are already industrial scale and can be applied largely within the existing infrastructure.

In the Shell Energy Scenarios 2050 biomass fuels represent around 15% of global primary energy by 2050. Liquid biofuels become a significant part of this, in particular helping to diversify the supply of transport fuel. More optimistically, projections by the WEC, WEA and IPCC estimate that by 2050 bioenergy could supply a maximum of 250–450 EJ/y, representing around a quarter of world primary energy by 2050 - broadly equivalent to the total contribution of the oil and gas industry by that time. Either case implies the creation of a massive global bioenergy industry over the coming 20 to 30 years to achieve the target.

Liquid Biofuels

First generation liquid biofuel for transportation (bioethanol and biodiesel) today represents about a 1% share of equivalent global total oil consumption and on conservative assumptions is projected to rise to over 5% by 2030. Brazil and the US are the two leading liquid biofuel producers in the world. Together they accounted for 76% of global production in 2010. Europe produces comparatively little domestic bioethanol in particular, due to several reasons including a much higher adoption of diesel cars, land availability and climatic differences. Production in Asia Pacific is expected to become increasingly significant.

However, changes in legislation from one year to the next and rising commodity prices



continue to hamper development of liquid biofuels. For example, the US biodiesel market was subject to a major downturn in 2010, when government subsidies were temporarily withdrawn. The fundamental reason for this is that market development remains policy driven and dependent upon government intervention.

For a number of reasons, first generation liquid biofuels and especially corn-ethanol fuel production in the US remains highly contentious—principally related to its inefficiency as a lower carbon alternative to fossil fuels. Corn-ethanol creates 1.3 to 1.6 times the energy expended in its production; vastly different from sugarcane ethanol at 8.3 to 10.2 times. The corresponding reduction in GHG when compared to fossil fuels for corn-ethanol is only 10 to 30%; whereas sugar-cane based ethanol is 86 to 90%. Significantly, when a land use penalty is taken into account, such as with the new California Air Resources Board rules, corn-ethanol is perceived to have little or no benefit in reducing carbon emissions.

Moreover, the competition between biofuels, food production and in particular corn has become an important issue for environmentalists. It is cited as a major cause of rising food prices impacting the world's poor. Although, the true impact of corn-ethanol production on food prices is probably overstated.

The development of second generation biofuels based upon production of both bioethanol and biodiesel from diverse cellulosic biomass feedstock changes this perspective. The transition to new second-generation biofuels technologies is underway, but requires significant political support, investment and time to reach comparable scale to current first generation fuels.

For example, in the US, EPA annual targets by 2022 for different types of fuel include: 16 billion gallons of cellulosic biofuels, 15 billion gallons of conventional biofuels, 4 billion gallons of advanced biofuels, and 1 billion gallons of biomass-based diesel. This indicates it will take 10 years before first and second generation biofuels are expected to reach a rough equilibrium in terms of volume.

More significantly future lingo-cellulosic biofuels production will be based upon the same feedstocks as biomass pellets used for electricity generation. This opens the door for an integrated bio-energy business producing a range of mainstream liquid and solid biofuels based upon common raw material.

Electricity from Biomass

At present, electricity from biomass is gaining greater prominence than originally anticipated, largely due to coal power stations alleviating their CO₂ emissions by co-firing

biomass with coal. Hence, biomass electricity, which combines Carbon Capture and Sequestration (CCS), is critically positioned to close part of the Zone of Uncertainty, especially as biomass pellets can be co-fired with coal in existing power plants without the need to develop a whole new technology and infrastructure.

Utilities in the European Union are leading the trend, consuming more biomass fuel to meet a directive requiring that 20% of member countries' energy comes from renewable sources by 2020. The European market for biomass pellets may expand to as much as 50 million tons a year by 2020 and 100 million tons beyond, from about 10 million tons today. In conjunction with this, there are urgent electricity supply issues throughout the EU and notably in the UK, where a number of coal fired plants will lose their license to operate and aging nuclear plants will be decommissioned leaving a major energy gap within the next 5 years.

Government policy is for "renewables" to fill the gap, although this presents some major challenges - in particular because solar/wave and wind power are intermittent sources, whereas base load capacity is shutting down. In our view this gap can only be filled practically by biomass conversion of existing power plants, and thus demand for biomass pellets are anticipated to continue to outstrip supply for many years to come.

Biomass Fuel Sourcing

Undeniably, the biggest challenge remains long-term reliable supply of sustainable biomass fuel. In particular, the 3 principal bioenergy commodities: bioethanol, biodiesel and biomass pellets. Today most biomass derived fuel is consumed in the region it is produced and international trade is emerging slowly. This is the trigger for the development of an integrated bioenergy business operating on a global scale.

Bioethanol

In the short term, there is a compelling case to develop a global trade in first generation bioethanol for the planet to reap the benefits of sugarcane ethanol, as the most efficient first generation biofuel with the lowest carbon footprint. Nonetheless, a number of

Figure 3 - Energy Crop Productivity

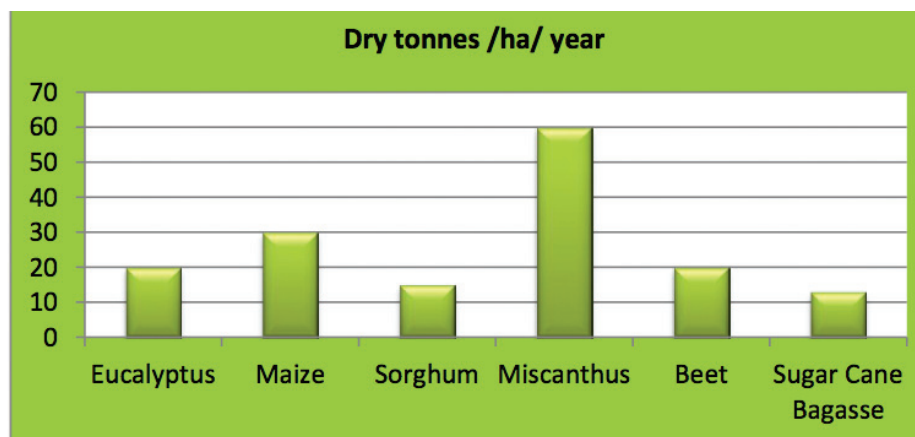


Figure 1 - Bioenergy potential 2050 by region related to Primary Energy Consumption (PEC)

	PEC fossil fuels + hydro	Bioenergy use	Bioenergy potential	Use / potential	Use / PEC	Potential / PEC
	(EJ/year)			%		
North-America	104.3	3.1	19.9	16%	3%	19%
Latin-America & Caribbean	15.1	2.6	21.5	12%	17%	142%
Asia *	96.8	23.2	21.4	108%	24%	22%
Africa	11	8.3	21.4	39%	75%	195%
Europe	74.8	2	8.9	22%	3%	12%
Former USSR	37.5	0.5	10	5%	1%	27%
Total	339.5	39.7	103.1	39%	12%	30%

Source: European Biomass Industry Association

obstacles remain that continue to impede progress in this area. Brazil as the main potential exporter is currently with limited available export capacity, due to strong domestic demand and the impact of high sugar prices - switching production from ethanol into sugar. Meanwhile, powerful vested interests, such as the US farm-lobby, seek to maintain protectionist barriers for corn-ethanol industry in the US. Signs of a changing mood in the US Congress suggest that trade barriers may begin to fall soon, although supply will continue to be limited for the foreseeable future until additional investment in new sugar/ethanol mill capacity occurs.

On the other hand, land availability for fuel crops in Europe is restricted. It is considered that bioethanol development in the EU can only realistically be supported by global trade. From the current 6 million ha of set aside in the EU-15, theoretically, 8.5 – 16 Mtoe of bioethanol could be produced respectively from wheat or sugar beet. This corresponds to 2.1 – 4.7% of transport fuel.

Meanwhile, Brazil, with the right levels of investment, could have a production potential in the region of 100 Mtoe per year by 2020, with corresponding domestic demand of 20 Mtoe per year. From this perspective, countries like Brazil are important stake-

holders in global biofuels. Their advantageous production conditions and also their experience of biofuels at industrial scale will be instrumental for development in markets such as the EU.

The key issue remains supply development and sufficient investment to fulfill future demand, as current efforts in Brazil are focused mainly on industry consolidation and not export capacity. Moreover, there are tentative steps by the major bioethanol producers at the moment to develop second generation cellulosic bioethanol, but the process is slow to develop.

■ Biodiesel

On the other hand there is a growing opportunity to develop a more rational trade in biodiesel. Biodiesel has been subject to major trade distortions in the past, destabilizing the industry. US biodiesel production in 2010 was 285 million gallons, which was less than half production in 2008. Over half a billion gallons of biodiesel produced in 2008 was based upon tax incentives stimulating exports. The “splash and dash” loophole allowed operators to add a small amount of petroleum diesel to imports of pure biodiesel and then export the new blend to take advantage of the US\$1 per gallon blender’s tax credit. “Adding just 1 gallon of conventional diesel to 1,000 gallons of biodiesel was enough to qualify for the tax credit,” an EIA report said. While the loophole was in place, biodiesel imports grew from 4 million gallons in 2004 to 315 million gallons in 2008; in-bound shipments from Asia and Latin America became increasingly large. The United States exported some 677 million gallons of biodiesel in 2008 mostly to countries in the EU. Volumes collapsed, as tax loopholes were closed as part of the Emergency Economic Stabilization Act of October 2008 and the EU imposed new anti-dumping tariff tariffs on US imports of biofuels.

The resulting collapse in the US biodiesel market and the moth-balling of production has created a significant shortfall against the renewable fuels target usage of 800 million gallons of biodiesel this year. The 2011 target has been adjusted downward to 600 million gallons in recent weeks. Against this

background there is an emerging opportunity to profitably supply the deficit in the US market with biodiesel from Latin American sources.

Meanwhile, according to the projections of the Association of Brazilian Biodiesel Producers, in 2011, Brazil will produce and consume 2.8 billion liters of biodiesel, 17% more than last year. Brazil has become the largest consumer globally, overtaking Germany, where consumption will increase from 2.4 to 2.6 billion liters. Germany also lost their position as the largest producer in 2011, as production in Argentina jumped from 2.1 to 3.2 billion liters, largely based upon exports to the EU. Nonetheless, biodiesel remains the Cinderella of the biofuels at less than 10% the volumes of bioethanol consumption. At the same time the barriers to developing international trade are lower and with rising oil prices the economic viability of biodiesel is currently improving. Until now biodiesel has been dependent upon government mandates and subsidies for its development. The production of second generation cellulosic biodiesel also has the potential to de-couple the economics from rising commodity prices.

■ Biomass Pellets

The main source of biomass pellets today is wood fiber. A recent EU wood study offered an estimate of the future potential wood supply in Europe. It concluded that it would be difficult but not impossible in 2020, but certainly impossible in 2030, to supply domestically enough wood to satisfy the needs of industry, as well as to meet the targets for renewable energy. Moreover, there are growing concerns about sustainability and the intensification of forestry management necessary would hinder any increase in biodiversity. The EU currently consumes a majority of global wood pellets. In 2010, the EU imported 2.5 million tons of pellets, roughly one third of which was supplied to the Netherlands.

The UK accounted for a further 20%. Belgium, Denmark, Italy and Sweden also accounted for a substantial share of those imports. The total increased 40 per cent during 2010. In contrast, Finland, Italy and Swe-

den import most of the other residues, wood chips and fire wood.

Canada, and to a lesser extent Russia and the US, currently produce the large majority of the wood pellets imported into the EU. For a number of different reasons, however, the question remains how long these regions will remain important sources. Although there is considerable diversity concerning supplies from North America, competition for suitable wood is also likely to increase there. The availability of wood pellets for export in the US will tend to reduce as a consequence of legislation requiring 25% of the US’s energy to be supplied from renewable sources by 2025. In Canada, a number of provinces also plan to reduce their use of fossil fuel for heating. If these plans are implemented, then local demand will tend to divert supplies away from export markets. Meanwhile, Russia revised its Forest Code in 2006. It seems the revised code is unclear and dysfunctional. Consequently, it will be difficult for those who first place wood-based products from Russia on the EU market to carry out the due diligence that will be required for compliance with the EU’s Timber Regulation from March 2013.

Brazil is considered to be the EU’s most promising potential source of wood-based fuel in the Southern hemisphere, due particularly to its good infrastructure and relative proximity. However, there are many concerns about the sustainability, or lack thereof, of many of the wood plantations in Brazil which account for most of Brazil’s exports of wood-based products. The EU imported a negligible quantity of pellets from Brazil in 2010.

The planning of large power plants or the conversion of coal power plants to biomass in some EU Member States give a clear indication of how imports might increase in the near future. An April 2010 study estimated that UK could start importing wood chips and pellets for new energy plants in the UK from 2012. If all the planned wood energy plants are built, the quantity of imports could rapidly rise to about 27 million tons per annum. The sourcing of large long-term supply contracts overseas will therefore present a major challenge for wood energy plants.

Other plans have been announced since the April 2010 study was produced, suggesting that total imports could exceed the 27 million tons estimated. Recently, RWE has been granted planning permission to convert a coal power station at Tilbury (UK) into a biomass-only plant.

This would translate into over 7 million tons of wood pellets per year. RWE say that most of the wood is to come from North America.

Already, one UK energy company, MGT Power, has signed a non-binding memorandum of understanding with a Brazilian plantation company, Suzano Papel e Celulose, which has invested US\$800 million in 3 projects in Northeast Brazil for the production of 3 million tonnes of eucalyptus pellets per year.

In April 2010, Swedish utility company Vattenfall agreed a €50 million deal with Canadian Baron MacBain to buy 1 million tonnes of wood chips (from rubber trees) from Liberia over the next 5 years (first delivery in the summer of 2010). Vattenfall will need annual supplies of about 7–8 million tonnes of biomass by 2020 to meet its target of reducing hard coal usage by 40% (for its plants in Germany, Poland, Denmark and The Netherlands). They will get the biomass from different supplies but Liberia can play an important role. Vattenfall has so far bought wood chips from Russia and the Baltic States.

Domestic production efforts fall well short of meeting demand. For example, the 2007 UK Biomass Strategy seeks to further expand the domestic supply of biomass through various measures, including the Woodfuel Strategy for England 2007 aiming to bring 2 million green tons and 1 million dried tons of wood onto the market annually by 2020, which will have a marginal impact. While biomass is expected to occupy a central role in the future renewable energy mix of the UK, it is clear that this can be met only if imports will continue to play a significant role, particularly for co-firing (electricity produced from fossil fuels co-fired with biomass). It remains unclear where the majority of this additional supply will be sourced.

Supply Development, Land Use and Sustainable Energy Crops

Climate is the primary determinant of potential biomass productivity. Biomass is most productively grown in 4 main regions of the world, taking into account climate factors and land availability:

- Woody biomass: North America; and Northern Europe/Russia
- Woody biomass, plus biomass from energy crops; Latin America and sub-Saharan Africa

Based upon agricultural yield improvements according to an IEA study, bioenergy production potentials in 2050 are forecast to be highest in LatAm and sub-Saharan Africa, representing together over 40% of projected global supply.

Latin America and Africa are the only regions that have projected significant surpluses in 2050 versus their own PEC and thus are destined to become the major suppliers of biomass fuels and bioenergy.

Most models and projections have been based upon a major component of woody biomass. However there are a number of disadvantages of woody biomass versus a purpose-grown sustainable energy crop such as Miscanthus. Although wood is the major source of biomass today, the majority of forests in the world are not well managed. The area of certified forests gives an indication of the area of forests under “sustainable management.” Currently, only 9% of the world’s forests is certified under PEFC or FSC and there is now a wealth of studies indicating that even these forests are not all well managed, including in countries that are key suppliers of woody biomass to the EU, such as Canada, the US, Brazil and Russia.

Meanwhile, current legislation considers biomass a “carbon neutral” source of energy. This is based on an assumption that the carbon released by the combustion of biomass is recaptured during its regrowth, so that the cycle closes with zero greenhouse gas impacts. Recent studies, however, have demonstrated that this assumption is erroneous, particularly in the case of woody biomass, because it overlooks at least 2 important issues:

- Emissions from biomass extraction and from land-use change (both direct and

indirect), including loss of biodiversity; and

- The time difference between emissions from combustion and reabsorption through regrowth.

In recognition of the potentially detrimental effect of bioenergy policies on climate, particularly biodiversity and the world’s forests, Article 17 of the RED lays down new sustainability criteria. These criteria require that:

- Biofuels and bio-liquids must have a GHG performance which ensures their deployment results in emissions savings vis-à-vis fossil fuels of at least 35% and rising to 50% in 2017 and 60% in 2018 for new installations.
- Biofuels and bio-liquids cannot be produced from lands with high biodiversity value such as primary forest or other wooded land, natural protected areas and highly bio-diverse grassland; and the Directive prevents the conversion of lands with high carbon stock (for example, continuously forested areas).
- Crops grown on agricultural land for bioenergy such as Miscanthus perform much better against these criteria than woody biomass. As a consequence, for example in the UK, ‘Energy Crop’ qualifying fuels attract the advantage of an additional 0.5 ROC / MWh for power generators. Furthermore, Miscanthus helps maintain biodiversity and when grown in tropical regions at over 25°C has superior CCS performance. Productivity of Miscanthus grown in tropical regions is among the highest of all energy crops. Two crops per annum provide 60 tonnes of dry mass per hectare.

Using Miscanthus as an energy crop to produce second generation biofuels is also highly efficient, according to US Department of Energy figures; Miscanthus will produce 1410 gallons per acre compared to 456 from maize.

Key Conclusions

- Bioenergy from biomass is poised for massive growth, creating outstanding opportunities for investments in bioenergy that should bring excellent long-term returns.
- Bioenergy from modern sustainable biomass is set to grow into a global industry over the next 20 to 30 years, the size of the current oil and gas industry.
- The principal biomass fuels will be: bioethanol, biodiesel for transport fuels and biomass pellets for electricity generation.
- Future lingo-cellulosic liquid biofuels production and biomass pellets will be based upon common feedstocks.
- Biofuel's share in the energy mix today is largely determined by government policies and is generally within national boundaries.
- Demand is growing rapidly based upon government targets for energy from renewable sources, as is a general recognition that supply can only be met by a global supply system.
- Demand is expected to outstrip supply for many years; hence, to fulfill its promise, biofuels must eventually evolve into an internationally traded commodity with growth solely determined by economic signals. Although within an "imperfect market" there will be many opportunities to profit in the interim. Latin America, notably Brazil, and sub-Saharan Africa are set to become the principal global supply sources for biomass fuels.
- Within this context there is an opportunity to create an integrated bio-energy business based upon harvesting sustainable biomass crops; developing manufacturing technology for production of cellulosic liquid biofuels and biomass pellets; and participating in the emerging international trading of biofuels.
- Brazil, already world leader in liquid biofuels, is the most favorable environment to develop such a business and benefits today from technology and industrial scale.
- This will require considerable investment and a long-term view. Development must meet rigorous sustainability criteria to be successful, but at the same time can create a major contribution to reductions in GHG.

Author Biography

Mark is Chief Investment Officer of Brazil Investment Advisors, a consulting and investment advisory firm based in NE Brazil. He was until recently, Vice President of Marketing Americas for Shell based in the US. He is skilled in investment strategy, leading new business development initiatives, M&A, and managing new business start-ups. He has a keen interest in emerging cleantech opportunities and the alternative energy market in Brazil.

The premier event for LPs and GPs investing in Latin America

18 - 20 June 2012, The Perry South Beach, Miami, FL

Register now to secure your place.

Join us to meet over 250 top tier local and international LPs and GPs actively allocating in the region. Take advantage of 12+ hours of networking to build relationships and share first-hand experiences on how to execute investment decisions.

Over 60 speakers confirmed including:

Miguel Largacha, President, **AFP Porvenir**

Marcelo Di Lorenzo, Managing Director, **3i Group**

Fernando Borges, Managing Director, Head of South American Buyouts **Carlyle Group**



Register now – on your phone!

Scan this QR pattern with the camera on your smartphone to register for Private Equity World Latin America.

Don't have a QR reader app? You can download one for free from the App Store.

Don't have a smartphone? You can also register online by clicking register now on our website: www.terrapinn.com/pelatam

www.terrapinn.com/pelatam

**PR|VATE
EQU|TYWORLD**
Latin America 2012

2012
sponsors

GT GreenbergTraurig

SMARTER | FASTER | EASIER
**MERRILL
DATASITE**
datasite.com

FLOW ::
HUMAN CAPITAL FOR FINANCE & BANKING

Wind Power Growing in LatAm

Last year, over 41,000 MW were installed worldwide, of which 1,206 MW were made in Latin America, 80% of which in Brazil and Mexico; followed by Honduras, 8.4% with its farm at Cerro de la Hula; Argentina, 6.5%; Chile and the Dominican Republic, both 2.7%; Costa Rica, 1%; and Colombia, Ecuador, Nicaragua, Peru and Uruguay comprising the rest.

■ Fernando Tejeda

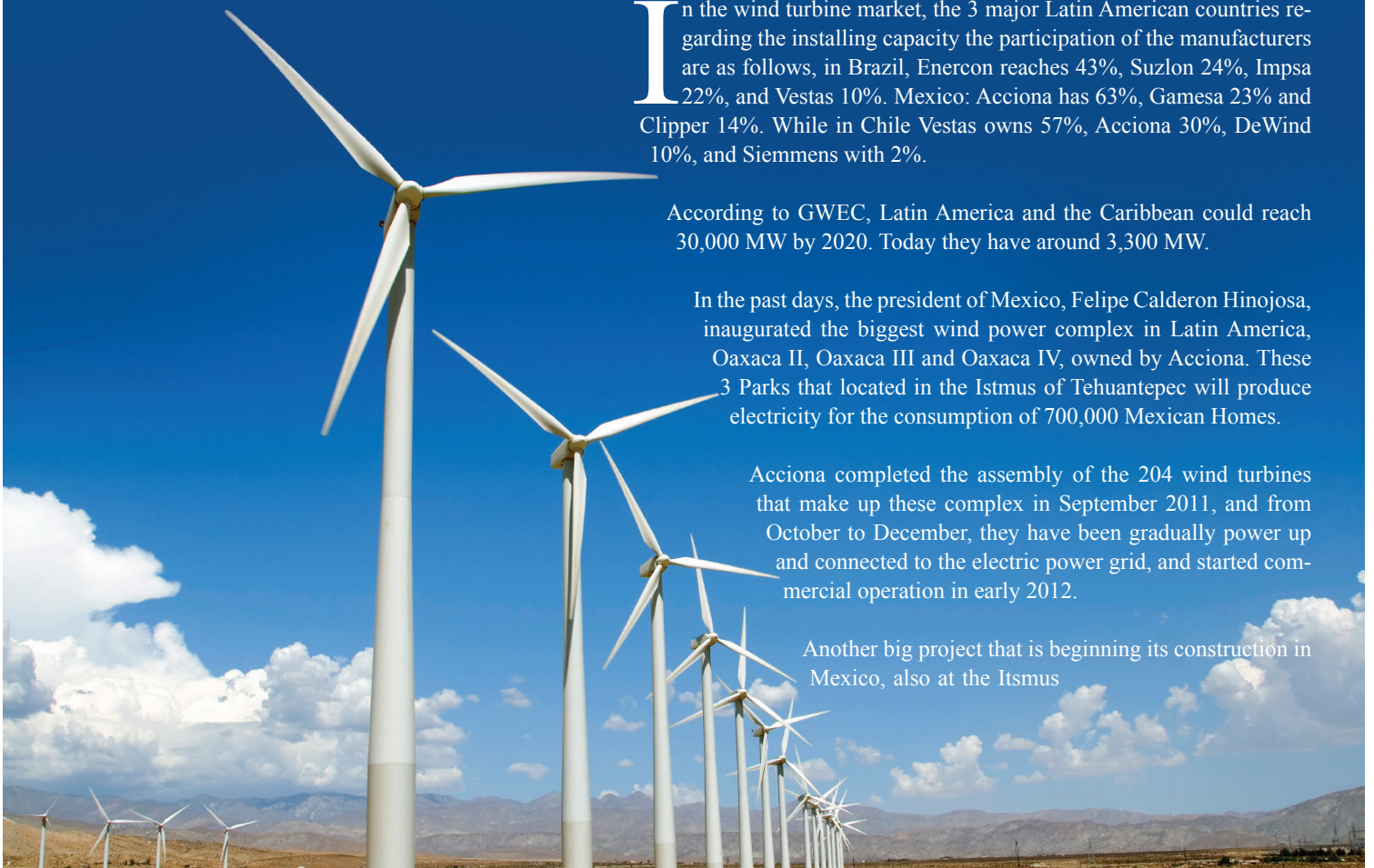
In the wind turbine market, the 3 major Latin American countries regarding the installing capacity the participation of the manufacturers are as follows, in Brazil, Enercon reaches 43%, Suzlon 24%, Impsa 22%, and Vestas 10%. Mexico: Acciona has 63%, Gamesa 23% and Clipper 14%. While in Chile Vestas owns 57%, Acciona 30%, DeWind 10%, and Siemens with 2%.

According to GWEC, Latin America and the Caribbean could reach 30,000 MW by 2020. Today they have around 3,300 MW.

In the past days, the president of Mexico, Felipe Calderon Hinojosa, inaugurated the biggest wind power complex in Latin America, Oaxaca II, Oaxaca III and Oaxaca IV, owned by Acciona. These 3 Parks that located in the Istmus of Tehuantepec will produce electricity for the consumption of 700,000 Mexican Homes.

Acciona completed the assembly of the 204 wind turbines that make up these complex in September 2011, and from October to December, they have been gradually power up and connected to the electric power grid, and started commercial operation in early 2012.

Another big project that is beginning its construction in Mexico, also at the Istmus



of Tehuantepec, is the Marena Renovables Project, that once built will be the largest wind energy project in Latin America.

A consortium comprised of Macquarie Mexican Infrastructure Fund, Mitsubishi Corporation and PGGM, a leading Dutch pension Fund service provider, own the Marena Renovables Project.

Vestas, which has already received a 396 MW order will, supply the turbines for this project; the delivery of the turbines will start in the second quarter of 2012. The project is a turnkey contract which means Vestas will provide the entire range of services to build the wind farm, including civil and electrical works, supply, installation and commissioning of the wind turbines, as well as a 10 year service and maintenance agreement.

This project is expected to be the largest single state wind farm in Latin America when completed.

The project's power generation will be bought by Cuauhtémoc Moctezuma, an operating company of Heineken N.V., the leading global brewer, and subsidiaries of Fomento Económico Mexicano, S.A.B. de C.V. ("FEMSA") under 20-year power purchase agreements. FEMSA is a leading consumer company in Latin America, and controls Coca-Cola FEMSA, the largest Coca-Cola bottler in the region, and OXXO, the largest and fastest growing convenience store chain in Mexico.

And as for Brazil, the Brazilian Development Bank (BNDES) has approved a credit of USD\$389 million for 5 wind farms in the northeast of the country.

There are 4 projects in the state of Rio Grande and one in the state of Bahia, with a total installed capacity of 138 MW. Meoenergia and Iberdrola Renováveis de Brasil will control these wind farms.

The wind farms will require 58 wind turbines from Gamesa, the provider installed

in Bahia, and they will be located as follows:

- Calango 2 and 3 with 30 MW each, located in Rio Grande do Norte.
- Arizona 1 with 28 MW, in the coastal region of Rio do Fogo.
- Mel 2 with 20 MW, located in the coastal region of Areia Branca.
- Caetite 3 with 30 MW, in the municipality of Caetite, situated on a plateau region in Bahia.

For more information visit: www.lawea.org or contact Fernando Tejada - ftejeda@lawea.org or at 001.281.710.745

MAY 7-8, 2012



FINANCIAL RESEARCH ASSOCIATES PRESENTS

THE 10TH ANNIVERSARY FAMILY OFFICE SYMPOSIUM

THE FAIRMONT SOUTHAMPTON PRINCESS, BERMUDA

WWW.FRALLC.COM | 1.800.280.8440

Brazil Enterprise *Value* *Real Estate Index*

■ James Anderson & Claudio Freitas of Tierra Analytics LLC

Tierra Analytics LLC believes the real estate alternatives industry needs better benchmarks, and one of the consequences of a failure to innovate how returns are benchmarked is a general failure to create better products that reflect changing market conditions. This is especially true of Latin America real estate alternatives.

Last year, Tierra Analytics LLC produced original research on using a basket of market cap weighted Brazilian equities which could be used as a proxy for private investors to gain exposure to real estate in Brazil or to simply benchmark real estate alternatives investments. Our analysis suggested that listed real estate equities, like their counterparts in the US, may provide an investor with a gauge that delivers uncorrelated returns and a risk-adjusted premium

relative to other indices. The problem with the market cap weighted index, however, was that it did not generate excess alpha.

Our solution to the alpha problem, and the focus of this article, is to rebalance the portfolio quarterly based on each constituent's change in net debt, or Enterprise Value, instead of market cap alone. This article examines our Brazil Enterprise Value Weighted Real Estate Index ("EV Index").

By using Enterprise Value for rebalancing, the study suggests that compelling excess alpha may be generated, while preserving the uncorrelated nature of Brazilian real estate equities. The EV Index is comprised of all listed real estate equities in Brazil for the period February 2007 through January 2012. We calculated historical enterprise value for each constituent, verifying in the

process that each data set was accurate, and then created a proprietary algorithm for rebalancing the index using the public filings. Finally, we converted each Brazil index into USD using the daily close spot rate. We did this in order to benchmark against the Brazil ETF ("EWZ"), S&P 500 ("SP500"), DJ REIT Index ("^DJR"), NCREIF Property Index ("NCREIF") and the Brazil Real Estate Market Cap Weighted Index ("MC Index").

Our conclusion is an investment strategy that uses the EV Index as a foundation would provide an effective tool for better management for how to invest capital, better liquidity for the investor, more consistent, predictable returns and more accuracy in benchmarking returns. As an example, there is no reason why an active real estate manager couldn't layer a private investment

strategy over the EV Index. By doing so, the manager would have a built-in benchmark to which a preferred equity investment or convertible bond could be underwritten. The manager could then predict with a much higher degree of accuracy what the blended portfolio returns should look like within the broader market and, more importantly, dramatically reduce the reliance on subjective decisions around the evaluation of potential investments.

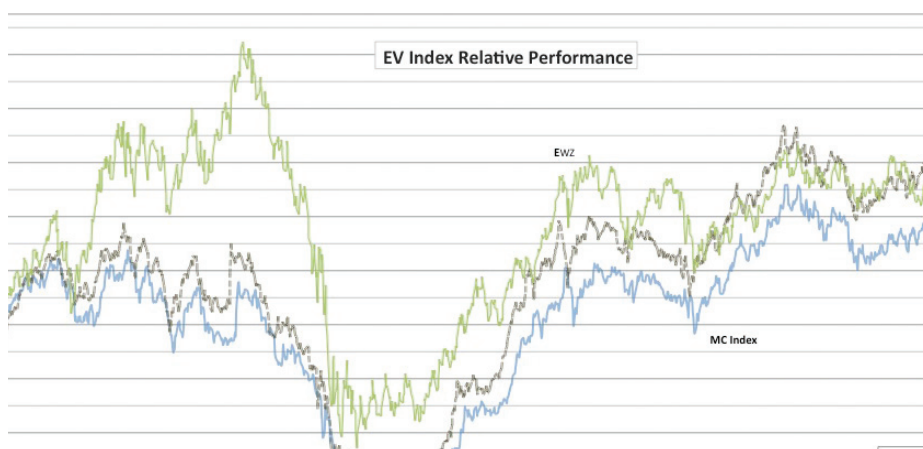
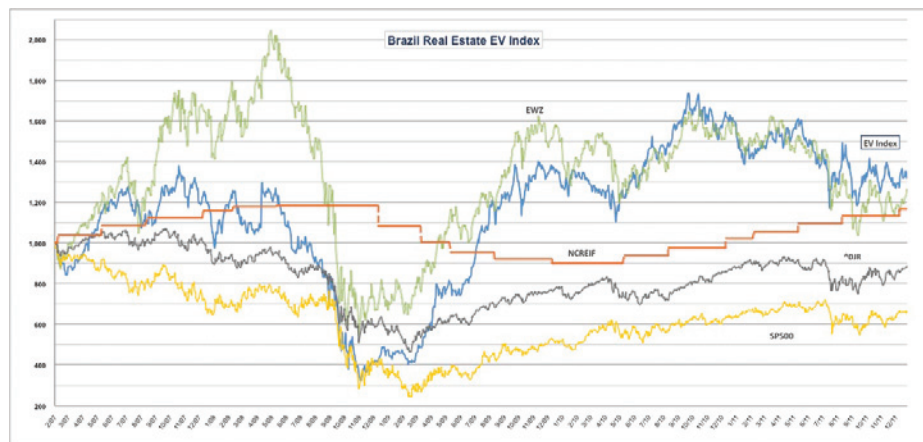
The way the industry currently works is much less scientific and goes something like this: Manager makes case for investment using subjective return projections; Manager talks about historical returns as evidence of future returns; Manager makes case that the manager's expertise is superior to other managers (and the market) and finally, Manager makes case that a significant management fee and incentive is necessary if the investor wants the returns because the execution strategy relies entirely on individuals who subjectively make all decisions regarding risk.

From our perspective, there seems to be something illogical with a strategy that argues, on the one hand, that private real estate investment offers a better risk-adjusted return because it is uncorrelated, but, on the other hand, doesn't mark-to-market so any correlation analysis is by definition impossible. To really make the case, managers would have to benchmark against a comparable index and provide periodic, independent valuations of the portfolio. This leaves us with the unresolved question of how do investors really know to what degree their alternatives investments are in fact uncorrelated?

■ Elusive Alpha

A funny thing happened on the way to calculating beta. What we found was that by isolating the Brazil real estate constituents, beta drops substantially versus the SP500. In fact, it drops substantially for both the MC Index as well as the EV Index. Before we get into the risk analysis, let's take a look at the overall performance of the various indices.

Performance results for the various indices were a little surprising. The EV Index



	Risk Analysis					
	MC Index	EV Index	EWZ	^DJR	SP500	NCREIF
Stdev	2.40%	2.43%	3.03%	3.17%	1.69%	4.01%
Average	1,029	1,159	1,335	620	826	1,052
Median	1,109	1,240	1,397	633	836	1,053
Maximum	1,519	1,737	2,046	1,000	1,072	1,183
Minimum	277	325	548	246	467	901
Variance (SP500)	0.0285%	0.0285%	0.0285%	0.0285%	0.0285%	
Covariance	0.0014%	0.0015%	0.0431%	0.0213%	0.0285%	
Beta (vs SP500)	0.05	0.05	1.51	0.75	1.00	
Risk-free Rate	3.00%	3.00%	3.00%	3.00%	3.00%	
Jensen's Alpha	12.97%	29.95%	1.59%	-33.85%	-11.74%	
Annualized Alpha	2.64%	6.09%	0.32%	-6.89%	-2.39%	
Sharpe Ratio	1.10	2.50	0.11	(2.17)	(1.41)	
Skew	0.27	0.34	0.12	0.34	0.26	(1.23)
Kurtosis	5.94	8.96	8.36	6.42	9.58	0.38

Total Return					
MC Index	EV Index	EWZ	^DJR	SP500	NCREIF
14%	32%	25%	-33%	-12%	16%
Annualized Returns					
MC Index	EV Index	EWZ	^DJR	SP500	NCREIF
2.9%	6.5%	5.1%	-6.7%	-2.4%	3.3%



outperformed all benchmarks by a wide margin. Remember, we only used the same constituents as the MC Index but changed their weightings based on quarterly changes in net debt.

As one would suspect, the EWZ' high beta and strong correlation to commodities, sent the country index parabolic right before tanking 70% into the peak sell-off of the recession. The real estate indices, however, never went parabolic. This suggests that even public equity investors know when a market has peaked, but it also may be a consequence of the composition of the EWZ, capital flows and the relatively higher correlation of the EWZ to other major benchmarks.

The EV Index returned a total of 32% over the 5 year period, besting the EWZ by

700bps. On an annualized basis, the EV Index returned 6.5% versus 5.1% for the EWZ and 2.9% for the market cap weighted MC Index. The NCREIF index, on the other hand, barely outperformed the MC Index and lagged the EV Index by 320 bps on an annualized basis. The EV Index bested the MCREIF by a 2 to 1 margin on a total return basis.

While the total returns were surprising, what really caught our attention were the risk-adjusted returns.

The EV Index, quite simply, has a much lower beta, higher alpha and a commensurately compelling Sharpe Ratio relative to the SP500. In fact, the EV Index' annualized alpha of 6.09% vs. 2.64% for the MC Index and 0.32% for the EWZ, frankly, surprised us.

Risk Metrics

Our analysis found the SP500 to be 50.2% correlated to the EV Index, the ^DJR to be 39.6% correlated and the EWZ to be 73.9% correlated. Conversely, the SP500 was 61.4% correlated to the EWZ and the ^DJR was 46.7% correlated. All of this suggests that Brazil real estate equities provide a relative safe haven which should show up in beta and alpha (and it does!).

We calculated beta using the covariance of the data sets and the variance of the SP500. There's a lot going on in the Risk Analysis data set to the left but the basic conclusion is that the EV Index generated superior uncorrelated returns to the comparison sets.

Notably, both the EV Index and MC Index have similar standard deviations as well as

being substantially lower than the EWZ, ^DJR and NCREIF indices. To be fair, calculating stdev for the NCREIF is pointless since its data set is so small (but we did it just for kicks).

As for the EV Index' superior alpha, we believe the primary reason for this is that integrating changes in a company's net debt more accurately captures what really happens with the company's capital structure during periods where interest rates change quickly (this bears a strong similarity to the private equity world which is severely punished for being too leveraged going into a top).

By drilling down into the risk-adjusted returns, we see that the EV Index generated a 2.50 sharpe ratio versus 1.10 for the MC Index and 0.11 for the EWZ.

■ Using EV to Better Allocate Capital

The practical application of the EV Index is where it gets interesting. If the predicted risk-adjusted returns are quantifiable, it makes the manager's job much easier in evaluating the appropriateness of adding risk and, if so, what kind of risk and when? In particular this strategy lends itself well to private investing via preferred equity in lieu of the typical pari passu terms that are found in the private equity industry. Historically, managers made bets based on property types versus an overall evaluation of the portfolio's relative risk profile. This is changing of course since many private equity deals are now structured as preferred equity where the investor is senior in the capital stack. The days of straight up pari passu deals are likely over for the foreseeable future.

The other possibility would be to layer in privately issued convertible debt into an EV Index-based portfolio. The industry is already seeing the use of convertible debt gain significant traction. Were funds to base their strategy on, say, a 60/40 allocation of EV Index/Private Investment, where initially 100% of the fund would be invested in an EV Index and then would grow into a 40% direct investment allocation, the investors would benefit tremendously from being fully invested throughout the Fund's

entire term as well as maintaining liquidity. Most importantly, the investor would have a built-in ability to benchmark how the risk is managed. One of the key weaknesses of the current alternatives model is the risk associated of actually putting funds to work. Uncommitted capital has a cost and that creates a built-in drag on returns over time.

Finally, hedging a portfolio would become a real possibility. A manager (or the investor himself) could hedge exposure by simply shorting the EV Index basket. Or conversely, structure a long/short portfolio using the EV Index, the EWZ or even the SP500. Lower Fees (Should) Beget Lower Overhead

The issue of fees and lower yields are causing LPs to renegotiate better terms with managers. This trend is firmly in place and it is not going to reverse any time soon. Lower fees represent something of a double-edged sword. While it is always good to pay lower fees, this does impact the manager's ability to compensate the management team and, ultimately, serves as a disincentive to effective risk management. If LPs and managers were to reflect on ways to scale down overhead by streamlining the strategy as well as the parameters of new investments, and relied more on an index comprised of listed equities, the end structure may likely be a much better mousetrap for everyone.

The benefit of more liquidity, in and of itself, seems to warrant at least a serious look at alternative strategies, but the fact that historical performance shows that compelling risk-adjusted excess returns can be attained by isolating listed equities and rebalancing properly makes for a meaningful discussion that we are not quite sure the private equity industry necessarily wants to have yet. Were the EV Index adopted, the implications for how parties are compensated would change dramatically.

Tierra Analytics LLC is currently working on similar index models for Mexico and the Latin America region. Our belief is investors and managers can gain proper allocation to the real estate asset class without sacrificing liquidity and quantifiably predictable risk-adjusted returns.

Claudio Freitas

Claudio Freitas, CFA is based in Rio de Janeiro and is Partner and Managing Director of Axzesa Consultores which currently advises Aquila Capital Concepts in its Latin American and Global equities allocation. As portfolio manager, Claudio oversees quantitative and fundamental analysis for all investments. Previously, Mr. Freitas was Senior Analyst for Zacks Investment Research, Director for Banco Fleming Graphus, Senior Manager at WestLB and relationship manager at Lloyds Bank. Claudio has extensive experience in proprietary trading and structured products with an emphasis on quantitative analysis.

Claudio has an MSc in Quantitative Finance from the University of London and a BS in Engineering from Universidade Federal do Rio de Janeiro. He has been a Member of the CFA Institute since 2001.

James Anderson

James Anderson is Principal of Tierra Capital Partners, a private investor and real estate alternatives advisor. Previously, Jamie was COO of Mexico Home Capital Holdings, LP where he oversaw direct investments in the residential development sector in Mexico. Between 2002 and 2006, Jamie was Vice President with AIG Global Investment Group where he oversaw real estate for the Latin America region. Prior to AIG, Jamie lived in Mexico City held senior positions with Fenix Capital Group (a Deutsche Bank/JER company that focused on distressed debt) and Grupo Protexa. He began his career in the real estate services group at Arthur Andersen's Mexico City office in 1994.

Jamie has a BA in History from Denison University and an MA in International Affairs from Ohio University.

Who Will Win the Currency Wars?

■ ALI Speaks with City Credit Capital

Uncertainty in Europe, elections in the US, and the threat of escalating “currency wars” are all key global issues likely to influence Latin American foreign exchange markets in the near future. In such a volatile climate, expert forex brokers at City Credit Capital tell Alternative Latin Investor they expect some big opportunities for profits in 2012.

For market analysts, the last 12 months were full of risk and uncertainty: A mounting debt crisis in Europe has threatened the very survival of the single-currency bloc, spooking investors worldwide and threatening to undermine the fragile recovery in the US, while everyone frets over soft- and hard-landing scenarios in China. This has translated into significant volatility in forex markets, as currencies respond quickly to evolving world events and historic policy moves.

Emerging markets and their currencies, including many Latin American states, have experienced some of the biggest moves and changes in this unpredictable climate. Surging investment inflows into commodity-rich and fast-growing countries such as Brazil and Peru are having a major impact on currencies in the region and providing an

important test for monetary policy makers striving to find a balance between cooling inflation expectation and remaining competitive.

According to Andrew Braine of City Credit Capital, specialists in online foreign exchange (forex) and Contracts for Difference (CFDs) trading, these trends are giving investors in the region a growing appetite for currency trading. “CCC has seen a large increase in LatAm investors trading FX. They understand that the volatility in these markets can present massive opportunity. The forex market is so liquid and that is essential to any investor, regardless of region. LatAm clients also love the fact they can use currency trading to hedge against their current investments.”

The market situation today remains unstable, providing optimal conditions for

knowledgeable forex traders to make the most of frequent and important investment opportunities. With the help of City Credit Capital, Alternative Latin Investor provides a recap of the key moves of the last year, and looks ahead to the influential trends and events that will shape currency moves in Latin America and globally in 2012.

■ Where Are We?

“Risk averse” and “flight to quality” were common phrases in investment circles in 2011. The threat of a Greek default – and potential exit from the Eurozone – magnified as its domestic economic, political and social climate deteriorated and EU policymakers seemed unable to unite behind a single course of action. Other, more globally significant European economies, including Spain and Italy, were also dragged into the regional mess, while Japan reeled from a devastating tsunami (March 2011).

Even the US government, the ultimate safe haven, came close to a (technical) default as Congress could not reach an agreement on how to tackle an enormous budget deficit and debt pile. While the US dollar appreciated strongly in the second half of the year, the country’s political divisions and structural weaknesses tested investors’ faith in the greenback. At the same time, the Federal Reserve’s policy of holding interest rates at

However, 2011 also brought a few curveballs in terms of monetary policy, as central banks around the world scrambled to alleviate the problems caused by the Eurozone's debt crisis. According to Braine, the most surprising policy move by far last year was the Swiss National Bank's decision to intervene in order to weaken the franc in September. "It was ridiculous. It was the largest move I have ever seen in my career in the FX business. Something close to 10% of its value was wiped out in 10 minutes!"

Though unexpected, the decision by the Swiss National Bank typifies the dilemma faced by monetary policymakers in recent times. Monetary powers in the US, EU and Japan have responded to economic crisis with aggressive monetary easing, pumping liquidity into the financial system and slashing interest rates to record lows.

These policy moves are creating major trading opportunities in forex markets. After its ascent earlier in the year, the Brazilian real has dipped more than 5% against the dollar in March. Meanwhile, as the real dips and investors fear more severe action, some city analysts are forecasting strong gains in the Mexican peso, as the economy feeds off the US recovery and the government shows no sign of mimicking the interventionist policies further south. As Neto says, "For FX investors those market movements can create huge opportunities



“According to market analysts emerging market currencies are overvalued directly affecting its competitiveness. So we see commodities exporter countries, such as Brazil and Colombia, taking actions in response.”

as they can take advantage both on long and short positions.”

■ Looking Ahead: Elections and EU Crisis On The Radar

CCC analysts expect uncertainty, particularly over the future of the Eurozone, to continue to loom over the forex markets in 2012. For Andrew Braine, the focus is still very much on the EU debt crisis: “I think

the dollar will appreciate against the euro over the next few months—as long as the Eurozone crisis drags on.”

Indeed, despite gold’s recent charge, Braine thinks the US dollar is still a favourite among risk-averse forex traders: “While gold has proven to be a very popular flight to safety for investor, the dollar is still seen as a safe haven. I think the dollar will strengthen in 2012 as the US economy starts to improve.”

Armando Neto agrees, also pointing out that any increased political uncertainty in the run up to US presidential elections this year could actually support further US dollar gains. “Although EUR/USD has performed well so far this year, historical data shows us the US dollar tends to perform well in election years. And it’s also important to remember that we will have other elections this year in countries such as France, Russia, Venezuela and Mexico. It usually means that leaders are more focused on



domestic issues rather than global cooperation and investors with more risk aversion will look for safe havens like the US dollar.”

In Latin America, investment flows and currency movements will also depend heavily on events in Europe, which is the source of around half of all foreign investments coming into the region. Although Greece managed to buy some time after approving the austerity measures required to receive bailout, elections in May, in which extremist left and right-wing parties are expected

“Foreign investment in Brazil is at an all-time high and although Brazil’s strategy will be to keep their currency weak – with so much investment into the country (the [2014] Soccer World Cup and [2016] Olympics will only push this further) this will be difficult.”

to perform well, could be another potential flashpoint.

That said, according to Braine, markets have already priced in a Greek default, so it is the impact of this on other EU states,

and particularly Spain due to its close links with Latin America, that has the potential to cause a shock.

LatAm currency markets will also be influenced by growth in Asia, and especially China, which has become one of the most important consumers of commodity exports from the region. Earlier in March, China cut its growth forecast to an eight-year low of 7.5%, sending a shiver through global commodity markets. For countries like Brazil, Chile, Colombia and Peru, signs of falling demand for key resources such as iron ore, copper and gold will weigh on growth and put pressure on the local currency.

Braine, however, plays down fears of a sharp slowdown in the East, arguing that “growth in Asia will be the strongest in the world. Japan on the rebound post-earthquake will help bolster exports and even with the slight stalling of China’s economy, I think we will see growth continue.”

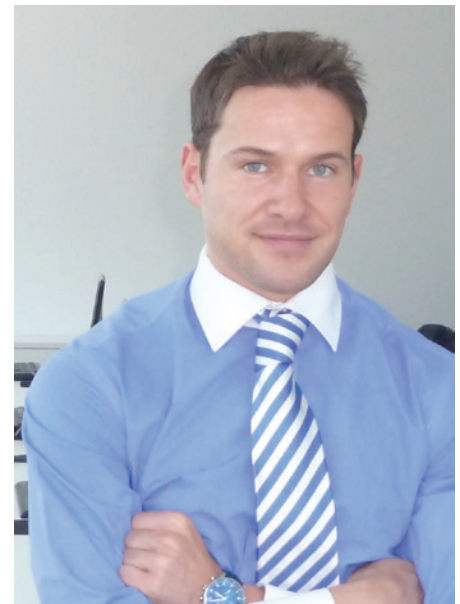
Given this outlook, and expectations for continued upward pressure on the Brazilian real, future currency moves will largely depend on the actions of local monetary authorities. Braine anticipates more measures by the central bank to restore competitiveness. “Foreign investment in Brazil is at an all-time high and although Brazil’s strategy will be to keep their currency weak – with so much investment into the country (the [2014] Soccer World Cup and [2016] Olympics will only push this further) this will be difficult.”

Some are speculating about the possibility that Brazil will impose a so-called “quarantine” on foreign capital, whereby funds coming from abroad would have to remain in the country for a determined period of time. This is a policy option that the government, including President Dilma Rousseff herself, has so far denied vehemently, though continued pressure on the real will keep rumors circulating.

Most important to remember is that this, or another similar type of intervention, could cause significant swings in currency markets through the LatAm region, creating big opportunities for profits among well-positioned forex traders.



Armando Neto - Senior Business Broker for CCC Latin America



Andrew Braine, CCC's Director of Latin America



Playing with Its Heritage

Steps Toward a Critical Juncture in Argentina



This year's Heritage Foundation/Wall Street Journal Annual report of economic freedom confirms what many in the global investment community already suspected or knew: that it is getting increasingly difficult and risky to invest and do business in Argentina. The Index gives Argentina an "economic freedom" score of 48, making it the 158th freest in the world, and 27th out of 29 LatAm countries included. Argentina is one of four LatAm/Caribbean countries (Venezuela, Ecuador and Cuba are the others) that qualify as "Repressed." Surprisingly, Brazil is "Mostly unfree," while Uruguay and Paraguay qualify as "Moderately free." Chile, "Mostly free," ranks 7th in the world.

"Argentina's foundations of economic freedom have weakened in light of extensive government intrusion into free markets," the report states. "Aggravated by corruption and political interference, the lack of judicial independence has severely eroded limits on government. Public spending by all levels of government now exceeds one-third of total domestic output." (The report can be read in its entirety at www.heritage.org/index/country/argentina.)

The Heritage Foundation is by no means the country's only major critic and skeptic. Last year, Moody's downgraded its outlook for the Argentine banking sector and downgraded its rating of several companies in the country's oil and gas sector. It is currently considering downgrading several major individual Argentine banks. And, of course, there have been consistent reports of government interventions and the Fernández Kirchner administration's universally alleged fudging of inflation statistics.

Argentina thus appears to be at a crisis moment in terms of whether it will be able to attract and maintain the investment it needs to grow in certain vital areas, including the renewable energy sector (covered in this issue) and the oil and gas sector, which was recently bolstered by massive discoveries of shale gas and oil.

REPRESSED (49.9-40)

World Rank	Country	Overall Score	Change From Previous
151	Maldives	49.2	+0.9 ▲
152	Sierra Leone	49.1	-0.5 ▼
153	Belarus	49.0	+1.1 ▲
154	Liberia	48.6	+2.1 ▲
155	Togo	48.3	-0.8 ▼
156	Ecuador	48.3	+1.2 ▲
157	Burundi	48.1	-1.5 ▼
158	Argentina	48.0	-3.7 ▼

Data Provided by The Heritage Foundation

Below is a chronological list of events in the last year that have gotten Argentina to this critical juncture.

January 2011: Farming strike against government grain quotas.

February 2011: Fines introduced on private economic consultancies for their reporting of inflation statistics.

February 2011: Number of product categories requiring non-automatic import licenses increased to almost 600 (from 400).

April 2011: President announces intention for new property law regarding the foreign ownership of Argentine land.

September 2011: Primary budget surplus contracts 86% year-over-year to US\$100 million; in deficit after debt repayments.

October 2011: Tax controls introduced by revenue agency that limit retail purchases of hard currency.

October 2011: Presidential decree orders 100% repatriation of profits for oil and mining firms.

February 2012: End of Petrol Plus and Refinery Plus incentives in the hydrocarbons industry.

Data provided by Pionero Partners

Mercatrade

B2B Online Marketplace



For those of our readers who are not familiar with Mercatrade, can you please give us a quick overview?

Mercatrade is the B2B online marketplace that helps companies import and export in South America. We provide wholesalers, manufacturers, distributors and buyers with a one-stop shop on the internet for doing business in this dynamic market. Our portal offers an all-inclusive, comprehensive system for buying and selling goods and services.

How has business been since last year?

Mercatrade.com has been steadily growing. With the economic uncertainty around the world, companies are looking to new emergent markets to achieve further growth. Mercatrade is naturally the perfect partner to help them in their endeavors.

We have also been busy doing a lot of work in redesigning our website to offer an improved online experience to our users. We have also diversified our service offer in order to meet the growing needs for online marketing services in the region. For instance we are offering search engine optimization services in English, Spanish and Portuguese to improve the lead generation and conversion of our clients.

What trends do you see?

As far as online business is concerned, we have seen an increase in demand for over-all internet marketing and specifically for search engine optimization(SEO) in the region. Companies are becoming aware that they need an online presence in order to survive in their respective competitive industries.

They are also starting to spend more on their website and CRM tools to manage the processes between their clients and their employees. Their websites have really become a strategic component of their company.

What regions have increased/decreased trade with Latin America?

We continue to see strong commercial activity from China. We also see an increased business interest from American companies that are starting to be much more aggressive in expanding into Latin America.

What products have increased/decreased quantity traded?

It is difficult for us to answer accurately this question; however we have a good idea of what buyers are searching for. Our analy-

sis reveals that the categories of products most searched on mercatrade.com since the beginning of the year are clothing/apparel, agriculture products, consumer electronics, food/beverage goods and chemicals. Compared to last year, there are fewer searches for automobile/motorcycle products.

Are you seeing more international business or more LatAm-on-LatAm trade?

Both, actually.

South American companies are starting to expand internationally by doing more trade with their neighbors, of course, but also target the North American and European market to export their products. This also applies to services.

At the same time, Asian American and European economies are driven by the need to find new markets to feed their growth and naturally target Latin America to expand their business.

Any surprises over the last year?

We were very impressed with the growth of ecommerce in the region despite the fact that shipping infrastructures and online payments systems are not always available in LatAm countries. There is also a real addiction to social networks in LatAm that is used by marketers to promote brands and corporate image.

Have there been any political developments that have made trade either more efficient or more difficult?

Panama has just signed a Free Trade Agreement with the US, which should increase trade between the two countries; however, the treaty might take a little bit of time before being implemented. I recently had the opportunity to talk to exporters of pineapples and mangoes in Panama and they were really seeing this as an opportunity to grow their business.

What would you suggest for investors looking to invest in trade? What products, manufacturing, regions and commodities?

I would suggest really assessing correctly each market that they want to invest in. There are a lot of market intelligence reports available online and a lot of information available for free (on the World Trade Organization website for instance) that can be of a huge help.

If a company wants to 'test' the LatAm market before investing more aggressively, online marketing is really accessible cost-wise. For instance, mercatrade was able to help a Japanese Laboratory Chemicals company to multiply its sales by 3 in 2011 by working on its online strategy, which helped them find new distributors throughout the region.

For more info visit: www.mercatrade.com
or email : info@mercatrade.com

2nd Annual

Latin America Buy-Side Tech ALGO & HIGH FREQUENCY TRADING SUMMIT

**March 29-30, 2012
Sao Paulo, Brazil**

Promo code: JHC958
\$400 off sell-side/ vendor only

The Benefits of Attending:

- International Perspective: SEC and Its View of HFT
- Assess the Impact of Regulatory and Self-regulatory Rules on Algorithmic and High Frequency Trading in Brazil
- Make The Right Low-Latency Choices to Stay Ahead in Electronic Trading
- Implement Appropriate Risk Management Techniques to Offset the Risks of Operating in a Highly Volatile Environment
- Assess Best Strategies to Utilize Market Data

New at this Event:

- Panel Discussion about Multi-Exchange Ecosystem that includes Direct Edge
- Interactive Discussions on MILA and Algo-Trading in Andean region
- NEW Educational Session: Current Mathematical Models for Trading

Organized by:



TO REGISTER, CALL 800-647-7600 OR 781-939-2500
e-mail: info@worldrg.com • www.buysideevents.com/HFTLatAm

Providing At-Risk Youth

a Way Out of Poverty

In order for a society to prosper socially and economically, it must provide the next generation of leaders with the appropriate educational resources. While Argentina excels beyond its LatAm neighbors in many areas, it falls behind in offering a truly democratic and accessible educational system to its youth.

Throughout Argentina, primary education is required for all, and almost 90% of youth are enrolled in a secondary education institution. However, despite these positive trends, the reality is that the Argentine education system still struggles to truly prepare youth to become productive members of society. The national high school dropout rate is close to 20% and 1 in 3 of the unemployed is a young adult between the ages of 18 and 24 and of immigrant or low-income status. This group not only has the highest unemployment rate in the country but is also the segment that has benefitted the least from the recent financial upswing in Argentina. Unfortunately, those who need education the most are the ones who are suffering the shortcomings of the system.

Faced with this reality, the Reciduca Foundation, based out of Buenos Aires, has cre-

ated an innovative social enterprise that offers an effective solution to the education dilemma facing the country. Reciduca Foundation aims to reduce high school dropout rates and increase educational and employment opportunities by training and placing low-income students in small medium-sized businesses. Those businesses offer them a paid internship and pay Reciduca a placement fee. By doing so, students earn an income, learn professional skills and receive workplace experience while they complete their secondary education. Meanwhile, companies keep costs down by paying intern-level salaries, and Reciduca generates revenue to further its mission.

Educationally innovative social enterprises like Reciduca's, which is supported by NESsT, breathe hope into the Argentine educational system. NESsT, an international social enterprise catalyst, assisted Reciduca



in the design and implementation of their social enterprise and invited the social enterprise to enter its incubation portfolio. As a portfolio member, NESsT provides ongoing financial and capacity support to expand and refine its services, reaching more students and providing more potential job opportunities for qualified youth.

To date, the social enterprise has successfully placed over 200 youth with businesses throughout Buenos Aires. The enterprise income has grown almost 300% in the past year. With tools and investment provided by NESsT, Reciduca is planning to grow its social enterprise both in Buenos Aires as well as in other urban centers in Argentina.

NESsT believes that with appropriate financial and technical support, social enterprises can transform the landscape of a country by finding a solution to a critical social prob-

lem and improving the livelihoods of its citizens. Magdalena Olmos of Reciduca reinforces this: “We believe that if an organization has a clear goal and interest in developing a social enterprise, NESsT will provide the tools and the proper support to successfully make it happen.”

Argentina already has NESsT on the ground doing the day-to-day work to help solve critical social problems. What it needs now is private sector investment. It needs new investors and businesses to support these programs and this type of social enterprise development. It needs funding for the development and scaling of activities like Reciduca’s. By investing and offering tailored technical assistance and patient financial investment, there is sure to be a strong pipeline of social enterprises that generate positive impact and contribute to transforming the Argentine educational system.

About NESsT

NESsT is a catalyst for social enterprises in emerging markets and worldwide. We achieve our mission by providing financial capital, training and mentoring, and access to markets for a high-impact portfolio of social enterprises. We combine the tools and strategies of entrepreneurship and investment with the mission and values of the social sector to enable our portfolio companies to better plan, improve management capacity, grow, and increase their social impact.



State Monopolies

in the Brazilian Mining Market

■ Adler Martins

Foreign investment in mining is legal in Brazil. Let's start from the basics:

The Brazilian Federal Constitution provides for several rules on Mining Law, which include the following:

1. The mineral resources, including the ones found underground, are property of the Union (article 20).
2. The Union has the capacity to issue laws and rules on mineral deposits, mines, other mineral resources and metallurgy (article 22, XII).
3. The ownership of mineral deposits, mines and other mineral resources differs from the ownership of the soil, for the purposes of exploitation and use, and concessionaires are granted the ownership of the output of the mining-extraction activity (article 176).
4. The research and the mining-extraction of mineral resources can only be carried out by means of the issuance of an authorization or concession by the Union. The concession may be granted to Brazilian citizens or by companies chartered under the Brazilian laws and having their headquarters in the country, pursuant to the law, which will establish the specific conditions when these activities take place in the boundary zone (the 150km-wide area next to the Brazilian border line) or on Indian lands (article 176, §1).
5. The authorization for the research (exploration) shall always be granted for a determined period of time; the conces-

sion of mining-extraction is granted for an indeterminate period of time (article 176, §3).

Now, as it was said, to be able to obtain the authorization for exploration and concession to mining exploitation, every company must be chartered under Brazilian law, have its headquarters and management in the country and have as its corporate objective the exploitation and use of mineral resources.

It's worth saying that equal treatment is constitutionally granted to Brazilian capital and foreign capital companies, which means that there should be no distinction in terms of access to exploitation and use of Brazilian underground, except in areas located on the international border zone.

An interesting matter on mineral exploitation in Brazil refers to the activities that are reserved as a Union monopoly. They are, as set by the article 177 of the Brazilian Constitution:

“Article 177. The following are the monopoly of the Union:

1. Prospecting and exploitation of deposits of petroleum and natural gas and of other fluid hydrocarbons.
2. Refining of domestic or foreign petroleum.
3. Import and export of the products and basic by-products resulting from the activities set forth in the preceding items.
4. Ocean transportation of crude petroleum



of domestic origin or of basic petroleum by-products produced in the country, as well as pipeline transportation of crude petroleum, its by-products and natural gas of any origin.

5. Prospecting, mining, enrichment, reprocessing, industrialization and trading of nuclear mineral ores and minerals and their by-products, with the exception of radioisotopes whose production, sale and use may be authorized under a permission, in accordance with letters b and c of item XXII of the head paragraph of article 21 of this Federal Constitution.”

Those provisions, plus the widely spread information of Petrobras’ dominance over petrol exploitation, for example, may cause the impression that there is no space for private action on this field (even though nowadays Petrobras has a mixed public private capital structure). This is not true.

What is important to highlight here is that the regulation retains the monopoly over the *activity*, but not the *execution* of it. This new regulation was introduced to the Brazilian Constitution back in 1995, by the Constitutional Amendment n, 9, which provides the possibility of delegation of the execution of those activities.

The first paragraph of the same article 177 now says:

“Paragraph 1. The Union may contract with state-owned or with private enterprises for the execution of the activities provided for

in items I through IV of this article, with due regard for the conditions set forth by law.”

Subsequently, paragraphs 2 to 4 will determine law provisions to the cases of competence delegation when the situations are suited on incises I to V of article 177.

To make things clearer, a last comment must be made to remember what was already explained when article 176 was brought to discussion: If the activities are to be conducted in the boundary zone, in addition to the fact that the company will have to be constituted under Brazilian law and have its head-office and management on the territory to be able to contract with the Union (independently of the origin of its capital), the law will provide specific conditions for the concession.

Turns out the law specified that any exploitation running within the boundary zone (any place at least 150km far from the Brazilian territorial limits, inwards. The sea has different regulations) must be conducted by companies with at least 51% of Brazilian Capital, or with two-thirds Brazilian employees and with Brazilian directors. Plus, the directive control of the board must be retained by Brazilian citizens.

This is the real monopoly. So, keep out of the boundary zone and you will be OK.

Author Biography

Director, International Law Department
- Minas Gerais

Lawyer, graduated with honors by the Federal University of Minas Gerais (UFMG)- Brazil. Specialized in international law. MBA by FGV University. Attending Post Graduation course in Tax and Financial Planning. Attending Masters Course in International law at Pontifical Catholic University in Minas Gerais. Professor of Post Graduation course in International Law – UNI University - Brazil Speaker in the 7th Commercial Mission to India, organized by the India Brazil Chamber of Commerce. Subject: Foreign Investment in Brazil. (2008). Speaker in the 1st Legal Symposium organized by the French Brazil Chamber of Commerce. Subject: International Sales Contracts. (2008) Founder of UFMG Study Group on International Commercial Contracts. Represented UFMG at the Willem C. Vis Moot on International Commercial Arbitration, held in Vienna 2005.
adl@noronhaadvogados.com.br

In uncertain times, there are still some investments that will pay dividends. IE Consulting can help you understand how current and future developments will impact your reputation and your ability to do business. And we can tell you how your competition will be affected, too. We can also help you raise capital, source and execute deals and safeguard and create value.

To find out more about how we can help your private equity business flourish, contact
Matthew Craig-Greene
E: matthew.craig-greene@ieconsulting.co.uk
T: +44 20 7004 7461

supporting private equity



Benefits of the Colombian Free Trade Agreement for Foreign Investors

■ Felix Villalba



Contrary to what one might initially think, imports and exports are not the biggest benefit of a Free Trade Agreement (FTA) between a developing country and a developed country. The biggest benefit is the push for improvement in the ease of doing business, i.e., efficiency and effectiveness throughout the economic system. We saw this happen as a result of the US-Chile FTA and we will see the same with the US-Colombia FTA.

For this to work, there has to be political will, and the good news is that there seems to be such in Colombia. In addition, the private sector, especially larger companies like Bancolombia, are clearly aware of the real benefit. Last week I had the pleasure of attending a meeting in Barranquilla organized for executives by Bancolombia.

The bank's Managing Director of Research and Strategy, Daniel Ignacio Niño, gave a presentation on precisely this topic. In this presentation he highlighted the pressure that the FTA would pose on politicians who otherwise would resist change. Daniel also presented the main items that would be affected by the FTA that would generate efficiency in the country's productivity:

- Improved economic policies (Colombia now has a Central Bank target of 3% inflation, etc.)
- Stable rules and regulations improving predictability for investors
- Transparency
- Improved efficiency in government operations

Another basic component that the government is keenly aware of is the need to improve the country's infrastructure. Currently the country is graded 85 out of 140 in the competitiveness of its infrastructure, with 1 being best (World Bank rankings). An example that puts the urgency in perspective is that a country like the United States has 65% paved roads while Colombia's roads are only 15% paved. Also compare that to Chile's 20% and Mexico's 35% and one can see that even a 5% improvement means a

substantial advantage. These are major investments that are possible today thanks to Colombia's recently acquired investment grade ranking by Moody's, Fitch and other ratings agencies. These investment grade ratings make government borrowing easier and have made many international investors interested in participating in infrastructure investments.

In just a couple of years and in preparation for the FTA, Colombia has made great strides. Just recently the "Doing Business Rankings" labeled Colombia as the 10th best in improvements to its economy. Mainly, Colombia made it easier to incorporate businesses and improved its payment receipt services by the taxing authority.

It's interesting to look at the successful Chile FTA with the US. Although Chile is a success story, its economy was and is dependent on limited resources that reached a maximum supply point after a decade. For example, Chile's exports are about 50% mining, a limited resource. However, Colombia is starting from a more diversified economy that is not dependent solely on limited natural resources. The country has a potential for even more diversification that coupled with a larger population can yield many productive sectors or industries. This means the possibility that Colombia could surpass the Chilean example.

As a result, long-term focused foreign private equity investors should be lining up to bank on the additional improvements that the FTA will bring to the ease of doing business in Colombia.

Felix Villalba

Felix has over 15 years of experience on both the operating side and the investment side of business transactions. After his MBA, Felix worked for captive financial services companies at Dell and Whirlpool, and later spent over 5 years as CFO with 2 venture backed technology companies. Dell's successful effort to start Dell Financial Services marked Felix's official involvement in the venture industry in 1997. It was after that when he joined an Austin Ventures backed company that later led to his joining Pacesetter Capital Group. At Pacesetter, Private Equity firm, he was Vice President and served as Portfolio Manager for several inherited deals, some of which required intervention strategies. In 2009, Felix formed his own Private Equity management firm, Accordo LLC and raised Accordo Fund 1 and 2 placing investments in residential and hospital-ity developments in Colombia.

Felix is a graduate of the University of Notre Dame with three degrees, a Masters in Business Administration, a B.S. in Civil Engineering, and a B.A. in Economics. He successfully completed the Harvard Business School's Executive Management Development Program.



THE CAIA DESIGNATION:
WE DON'T JUST STAND OUT.
WE RISE ABOVE.

We live in challenging times. Today's economic volatility is enough to test the mettle of even the investment world's best. Firms are running leaner, and businesses and investment professionals alike are looking to stand out from the pack. So how do the best distinguish themselves? Through the CAIA program.

When it comes to alternative investment education, the CAIA program stands alone. As an individual, earning the designation means you've completed the most intensive curriculum in the alternative investment

world—and shown a level of dedication beyond that of the ordinary investment professional. As a company, bringing on CAIA designees demonstrates your commitment to the ideals they live by: follow the industry's best practices, uphold its highest ethical standards, and stay on its cutting edge. CAIA is more than a set of letters, it's a sharp divide between where the industry is and where it's headed. Hard times come and go, but the best come through—stronger and smarter. And when new challenges arise, the best will rise up to meet them.



For success in alternatives, there is no alternative.

FOR MORE INFORMATION, PLEASE GO TO [HTTP://INFO.CAIA.ORG](http://info.caia.org)

ONLY
NETJETS®

THE PASSAGE OF TIME IS INEVITABLE.

WHAT YOU DO WITH YOUR TIME IS NOT.

Make time for what matters. The clock keeps ticking. But how you fill each minute is up to you. With NetJets®, a flight is always just a phone call away. Guaranteed. No lines. No delays. No hassles. You can cut your total travel time by as much as 50% and create more time for you to get things done. It's no wonder that NetJets is the private aviation company more people talk about and choose. With NetJets' exacting safety standards, the world's largest private jet fleet, and the unmatched resources of Berkshire Hathaway, why would you choose anyone else?

SHARE | LEASE | CARD | CHARTER | MANAGEMENT

NETJETS.COM | 877.JET.9161

A Berkshire Hathaway company.



All fractional aircraft offered by NetJets® in the United States are managed and operated by NetJets Aviation, Inc. Executive Jet® Management, Inc. provides management services for customers with aircraft that are not fractionally owned, and provides charter air transportation services using select aircraft from its managed fleet. Marquis Jet® Partners, Inc. sells the Marquis Jet Card®. Marquis Jet Card flights are operated by NetJets Aviation under its 14 CFR Part 135 Air Carrier Certificate. Each of these companies is a wholly owned subsidiary of NetJets Inc. © 2012 NetJets Inc. All rights reserved. NetJets, Executive Jet, Marquis Jet, and Marquis Jet Card are registered service marks.