

SPECIAL EDITION | 2016

# COMMODITIES

L'AGEFI

## Through booms and busts



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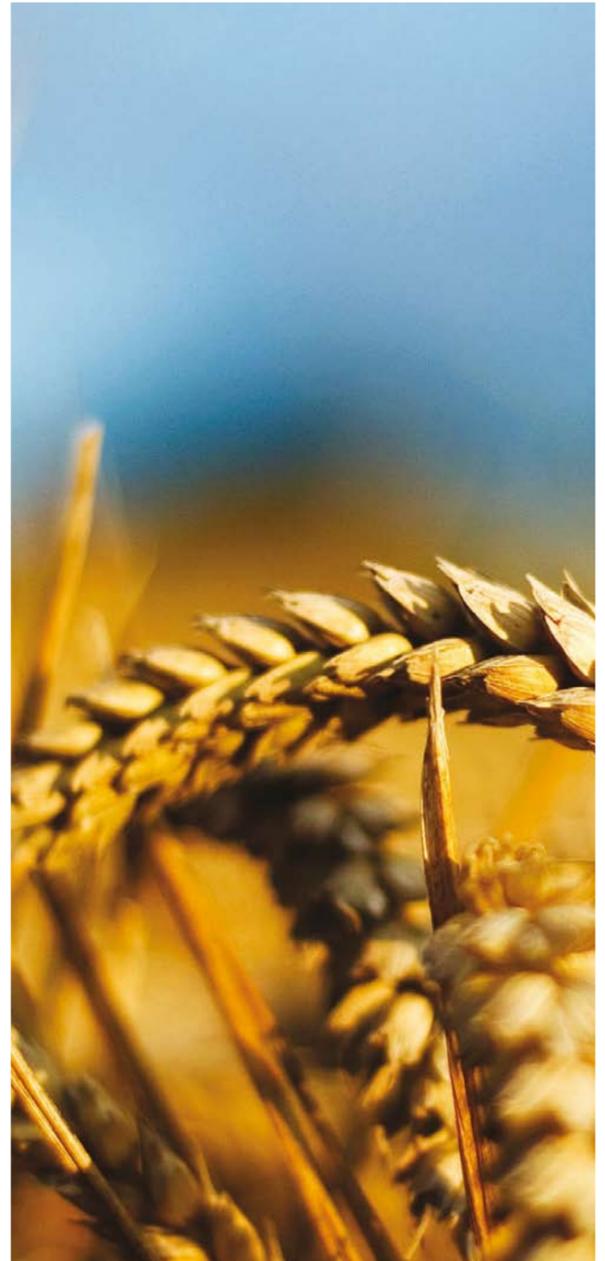


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## EDITORIAL

## Through booms and busts

Things change fast. Two years ago, when we published the first edition of this magazine, it was all about rising oil prices, the need to unlock vast reserves of shale oil and gas, mining companies exploring farther and deeper, and fears that shortage of acreage would drive agricultural prices up. Brent hovered around \$109 a barrel.

We've come a long way since then. By the time our second edition came out in April 2015, Brent had dropped to \$56 a barrel; now it struggles to stay above \$30. Metal prices are under severe pressure, with that of the worst performer, nickel, having fallen by nearly 80 percent over the last two years. Last but not least, agricultural prices are in their fifth year of decline.

Overcapacity rather than flagging demand is at the root of the slump in prices. Overall demand for commodities keeps growing (albeit more slowly) and WTO figures confirm a slight rise in 2015 international trade volumes. China's oil imports were 8.8 percent higher in 2015 than in the previous year, for example. Nevertheless, dollar value for commodities and industrial trade is down.

Despite a much projected boost in importing countries due to the drop in oil prices, and regardless of low interest rates, recent OECD data point to

slower growth in all major economies. The latest figures also point to a sharp fall in Chinese trade. In parallel, the regulatory landscape has shifted dramatically. Rules designed to prevent a new crisis have come or are coming into force. These are aimed not only at financial institutions but also at companies active in commodity trading on both the physical and derivatives markets. The Dodd-Frank Act in the US, the Commodity Trading Act in Singapore, MiFID, EMIR and MAD/R in the European Union, and the FMIA (FinfraG) in Switzerland, share objectives. Unfortunately, differences in approach and implementation have generated a labyrinthine set of requirements that will only weigh the industry down.

On the environmental front, the 2015 United Nations Climate Change Conference held in Paris in December will drive a change of agenda, after 187 countries agreed to limit greenhouse gas emissions. One of them, China – currently the biggest emitter of such gases – has indicated its willingness to take a lead in reining in carbon emissions from 2030.

Advances in technology are also reshaping the landscape. Lower CO<sub>2</sub> emissions and sustained hydrocarbon use need no longer be mutually ex-

clusive, as net-zero emissions strategies such as carbon capture and utilisation (CCU) potentially open up a "third way". On the other hand, solar, wind, geothermal and biomass-derived forms of energy offer a broader choice and may, in the long run, afford countries greater energy security.

Throughout it all, commodity markets have continued to function efficiently. They have survived price movements, changing political agendas and constant innovation, riding booms and busts and keeping up with a constantly evolving global situation. The Swiss commodity hub is prepared to support growth in the renewable energy market by providing a wide range of services related to the trade in power, as well as fuel and agricultural supply chains. With the Swiss Research Institute on Commodities (SRIC), it is building a platform for exchange between academics, professionals and the Swiss authorities, in order to better meet future challenges and to deliver solutions based on scientific research. ■



Nicolette de Joncaire  
Editor in chief

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# Commodity trading: at the forefront of what is happening in the world

David Fransen discusses the positive role that commodity trading can play around the world.



DAVID FRANSEN  
Managing Director, Vitol SA  
President of the STSA

As I write many commodity markets are at multiyear lows – as ever they are a key indicator of broader economic sentiment and activity in markets around the world. The anticipated slowdown in China's economic growth and rebalancing of its economy away from industry and towards services has made its impact felt worldwide. From their highs a couple of years ago, copper is down 42%, iron ore 35% and oil 72%. And yet throughout these price movements, commodity markets have continued to function in an orderly and efficient manner, enabling commodity products to be shipped around the world and producers and consumers to hedge their future exposure to movements in the price, should they choose to do so.

We should not forget that this is only possible due to the presence of financial participants and speculators in the market. Without them, entire sectors of the economy, from farmers to airlines, would be exposed to the gyrations in the price of

commodities – with neither knowing if they'll be able to cover their costs. In such a situation, where businesses struggle to prudently manage risk, there is more, not less, likelihood of business failures.

Transparent and efficient markets benefit both the producers and users of commodities, but they are at risk from inappropriate regulations. These, even if they are intended to improve the market's function, can too easily be used to stifle efficiencies, increase risk and protect vested interests, increasing costs and limiting economic development; thereby harming those it is most intended they protect.

The risks of absolute price exposure are, at present, being markedly felt by some producing countries, particularly those where commodities are a key part of the economy. In such instances, ensuring commodity products reach the optimal market, efficiently and safely, is even more important and here commodity traders can and do add real value – particularly when operating within a competitive and open market. Over 15 per cent of GDP in large parts of South America and Africa is commodity dependant, and across Africa commodities account for over 90 per cent of export revenues. At a time of low prices maximising revenues in countries dependent on commodity revenues is critical.

Another feature of many commodity exporting countries is their limited infrastructure. The World Bank estimates that, in Africa, the total investment in infrastructure required to support growth is some USD 93 billion per annum. The majority of this must be government led, however, the commodity trading sector can play an important role in enabling the development

OUR FOOTPRINT AND OUR RESPONSIBILITIES ARE GLOBAL. AS A COMMUNITY OUR INTERESTS ARE LARGELY ALIGNED WITH THE COUNTRIES IN WHICH WE OPERATE.

of trade related infrastructure, thereby facilitating economic growth and increasing incomes. For example, the UN's Food and Agricultural Organisation estimates that in sub-Saharan Africa 150kg of food is lost per capita each year at the harvesting and processing level. More anecdotally, we have seen how fishermen in San Pedro, Cote d'Ivoire have benefited from Japanese traders building refrigerated storage, enabling them to sell their catch beyond the local market.

With regard to energy commodities, it is not only export infrastructure which is required and in which traders are investing, but also consumption related infrastructure. According to World Bank estimates, on average lack of power is reducing GDP growth by two per cent a year in Africa, and worldwide over one billion people do not have access to electricity. 2.9 billion still use solid fuel such as wood, charcoal and dung for cooking and heating; fuels which are time consuming to collect and associated with increased respiratory problems, limiting the ability of women to engage in more economically productive activities. Commodity traders, with their international networks and familiarity with complex markets are well placed to building distribution networks for a range of energy products, as well as engaging in the development of power solutions, either from locally produced gas or imported fuels.

Our footprint and, with it our responsibilities, are global. As a community our interests are largely aligned with the countries in which we operate, but we have to do better at communicating the positive and important role we play around the world, to stakeholders worldwide. If we do, there is no reason why we should not be an industry of which Switzerland can be proud. ■

## Endurance in the face of change

In spite of shifting conditions and new challenges, commodity trading remains resilient, adaptive and innovative.



MARTIN FASSER  
President, Zug Commodity Association

Booms or busts, the world keeps turning, and so do international trade and the commodity industry. As markets move, prices shift and the global economy changes shape, our sector shows remarkable resilience. Despite the present upheavals – from free-falling oil prices to volatile currencies or turmoil in producing countries – the commodity industry continues to make a positive contribution to the growth of the Swiss economy. Even at the height of the financial crisis of 2008, the commodity trading sector accounted for 3.9 percent of Swiss GDP – on par with pharmaceuticals and tourism – and created over CHF 7 billion in value added to the Swiss economy. That our industry managed to achieve this in times of recession attests to just how resilient, adaptive and innovative it can be, and the pages of this magazine will take you through an overview of these three aspects of the Swiss commodity industry. Resilience, a somewhat overused term of late,

means the ability to go on, even to thrive, in times of adversity, crisis and change. One of the critical success factors for resilience is the ability to adapt in order to carry on. This, our sector displays at its finest. Its core activity – indeed its very nature – remains unabated. Commodities keep flowing, from where they are abundant to where they are in demand, and the related risks – so pervasive in challenging times – are managed with competence. Commodity traders keep playing the essential role of transforming commodities in space via their logistics networks, in time through their storage facilities, and in form through their processing units. So no matter how much the context may have changed – with China's economy normalising, price bubbles bursting or the Iran sanctions being lifted –, commodity trading is still around, and is here to stay.

Our sector continues to have a role in responding to the evolving demand of consumers and the supply patterns of producers, and to this end, it has travelled well-trodden paths and found new routes. Companies have invested in logistics and transformation assets such as ports, terminals and processing plants, they have expanded their analytic, quantitative and risk management capacities, and are adapting to the ever-more knowledge and data-driven economy of our globalised age.

Energy is a case in point for the need and ability of our sector to adapt. The future of our energy supply, globally and locally, hinges on integrating more renewable energies and distributing energy in a more flexible and indeed "smarter" way. In this era of transition, new technology and new energy products will help ensure that

COMMODITY TRADERS KEEP PLAYING THE ESSENTIAL ROLE OF TRANSFORMING COMMODITIES IN SPACE, IN TIME AND IN FORM.

traders continue to widen the value proposition in energy.

The example of the energy transition shows that change requires one to be innovative – coming up with new ways of doing things, or indeed doing entirely new things. Our industry displays a wide range of both. In trade finance, alternative ways of financing commodity flows are gaining ground along with new currencies such as the renminbi. The digitalisation of trade finance helps make transactions secure and traceable. Commodity traders use ever more sophisticated ways of generating and analysing a wealth of data to plan, organise, monitor and execute transactions, using the resulting insights to their advantage, be this in sourcing, shipping or hedging. Last but not least, the members of our association have taken the lead in implementing the UN Guiding Principles on Human Rights and Business – the Ruggie Principles – for the commodity trading sector, and in doing so, have stepped ahead of the curve in taking responsibility as global corporate citizens. All of this has not gone unnoticed in political circles and with the authorities: the innovative forces of the commodity trading sector are explicitly recognised, and deemed worthy of support, in the Canton of Geneva's Economic Strategy 2030.

We can therefore be confident, as we move forward into a new era after the China boom, that our sector will be able to master the challenges, changes and opportunities that lie ahead. By its adaptive, innovative and therefore resilient nature, to which the pages that follow attest so richly, commodity trading is still here, and it is here to stay. ■

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# ROBERTO BOCCA & GILLIAN DAVIDSON | WEF

## The challenge of China's rebalancing model

Compounded with the slow-down in China (and more generally in emerging markets) flagging growth is now also affecting Europe, bringing this year's global economic prospects to their lowest level in the last few years. Despite a much projected boost in importing countries from the drop in oil prices and regardless of low interest rates, recent OECD data point to slower growth in all major economies. Concern has risen on the sharp fall in China's recently published international trade figures and most commodity markets are at historical lows. After the boom years triggered by the emergence of China as a world player, the next steps are still unclear. The commodity market needs adapting and so does commodity trading in Switzerland and elsewhere. Roberto Bocca and Gillian Davidson of the World Economic Forum reflect on the current developments and on what to expect in the future.

### Is China's drive for infrastructure building gone?

From a commodity point of view China's domestic production has gone down and therefore imports have increased compared to 2014. To accelerate growth the Chinese government is changing its model, transforming the supply and demand dynamics. An additional element in the changing infrastructure dynamics is China's anti-corruption campaign, which has resulted in delays to many projects as authorities and businesses adjust to the new normal. Another priority is China's new climate agenda. China has expressed the willingness to take a lead on global climate change with stemming rise in carbon emissions beyond 2030. This pledge is modifying the future of the Chinese economy. However, the shift towards a consumer-driven economic model and the rise of a large middle-class, supported by the scrap of the one-child policy, will increase infrastructure investment and also bring about re-emerging infrastructure products. The Chinese dynamics are little understood. There has been a lot of talk about China's soft and hard landing – we would rather consider it a bumpy landing.

### Will the oil market remain oversupplied in spite of a rather healthy rise in demand?

Production from OPEC – led by Saudi Arabia – has increased throughout last year, helping to maintain the glut. Outside OPEC countries, production has been far more resilient than expected with US oil rigs operating way below what was previously believed to be their breakeven. The oil industry is technologically savvy. It grew fat on complexity and complacency but has now entered a phase of cleansing. The inefficiencies of the boom cycle will fade away, as will the margins. That being said, the margin of cost of production will not be a variable cost anymore. On the other hand massive investment cuts, estimated around \$400 billion, will threaten long term output. Low investment will turn around the supply/demand balance and, in the long run, demand and supply will converge again. The time of the oil price increase is unclear, as it is uncertain if there will be a gradual increase or if the reduced investment will create a spike at some stage in the coming years or months. Yet, the impact of the energy transition and diversification will also alter oil demand in a way which is largely unpredictable and depends also on the steps being taken to protect from oil substitution with net-zero emissions strategies such as Carbon capture and utilisation (CCU). In this respect, the pledge to fight global warming by ten of the largest oil companies in October of last year is emblematic.

### Will demand diversifying strategies also apply to coal?

They will, but transition won't be immediate. The demand for coal as an accessible and low cost energy source, particularly from emerging countries such as India, could likely remain high for the next two decades. However, technology innovations, investor activities and a shift to conservation, efficiency and renewables will bring disruption.

### Will the energy transition also affect metal producers? How are they reacting?

Thinking ahead, technology is going to disrupt and create different demand for different commodities, including metals. Metal players are increasingly recognising the importance of being part of the climate agenda as their industry too is being affected but also they have a role to play in the creation of value chain solutions. Our first multi-stakeholder conversation with the mining and metals community took place during a climate focused session at Davos this year, prior to which several companies signed our CEO Climate Action Statement.



**ROBERTO BOCCA. HEAD OF ENERGY INDUSTRIES  
MEMBER OF THE EXECUTIVE COMMITTEE**

**1993-1995** Unifarma, Finconsumo, Telecom Italia.  
**1995-2009** Group Leader, BP International: Downstream and Alternative Energy in different businesses in India, South Africa, China, Vietnam, Indonesia and across Europe and Northern Africa including France, Poland, UK.  
**Since 2009** Head of Energy Industries, World Economic Forum.



**GILLIAN DAVIDSON. HEAD OF MINING  
AND METALS INDUSTRY**

**2004-2008** Head of Social and Economic Sciences, Rescan Environmental (part of the ERM group of companies).  
**2008-2014** Director, Social Responsibility, Teck Resources: Canada's largest diversified miner with operations in Canada, USA, Chile and Peru and exploration globally.  
**Since 2014** Head of Mining and Metals Industries, World Economic Forum.

### How will emerging geopolitical factors impact markets?

Whereas tensions in Iraq, Syria or Libya are already priced, there is still uncertainty regarding the effect of the strain between China and neighbouring countries. Another unanswered pending concern is that of failing states such as Venezuela, Nigeria or Azerbaijan. Geopolitical conflicts and interconnections among countries and regions are causing investments to be increasingly vulnerable and risky, and thereby constitute an overall fear of investing. It is each country's responsibility to reinforce trust among the government and energy market players.

### How will the energy transition affect market flows?

The outcome of COP21 was much better than we expected. There is a broad consensus of countries and companies to address the roots of environmental distress. The energy transition is setting new economic criteria and a new competitive landscape. It is important to note that countries today have much more diversified energy supplies to choose from. Solar, wind, geothermal, biomass and shale have opened a broad array of new options. This new energy mix also enhances supply security. Nor should one underestimate the positive impact of digitalisation on energy efficiency, in smoothing electricity peaks or in assisting end-users to manage their consumption. As we discussed early, it remains difficult at this stage to quantify the impact of technology disruption and long-term market flows remain largely unpredictable.

### Is this also the case for metals?

Indeed, the energy transition and technological disruption will alter the demand for certain products. The need for more energy efficient transportation and vehicle light-weighting for example will modify the flows for steel, aluminium, nickel and carbon based materials. Progress in distributed renewable energy sources and grid scale energy storage will shift demand in metals such as lithium and zinc, and the need for alternative fuelled transport and vehicle electrification will affect the demand for copper. Tomorrow's demand will be different from today's, in volumes and diversity of demand. The market players need to look at the transformations emerging in downstream value chains and get involved in better understanding the question: «am I in the right commodity?»

### Will there be another China?

We do not believe so. India is growing at a strong 6 to 8 percent per annum but it won't be a game changer. The largest growth potential is in Africa but looking forward, we see a more consistent and balanced growth over a larger number of regions. China has enabled stability looking at overall GDP in the world and is still driving, but there is more symmetry in global growth. ■

# Broadening research on commodity trading

The SRIC will provide a platform for exchange between the academic world and trading professionals.



YVES FLÜCKIGER  
Rector, University of Geneva

Inaugurated in September 2015, the Swiss Research Institute on Commodities (SRIC) reflects the ambition of the University of Geneva (UNIGE) to be, in parallel with its traditional activities, a platform for exchange between academics and the city around it, to better meet the challenges that stakeholders face and deliver solutions based on scientific research.

With this vision in mind, we created the "Master's Degree in International Trading, Commodity Finance and Shipping" in 2008. This course, which is unique in the Swiss and international academic landscape, reflects the importance of the trading sector to Geneva and Switzerland. It is unique not only in its content, but also because it combines a demanding university course with employment in a company active in the sector in Geneva. Our students thus have the opportunity to address all the issues relating to international trading: economic, social, financial, ethical and professional

matters with, on top of everything, a guaranteed job in a company. This is the case for nearly 200 students who have followed the programme up until now. Participants are selected on the basis of academic criteria in combination with obtaining an internship within a company.

This dual training course, unrivalled at the university level, has proven its effectiveness for over eight years now. It draws on cutting-edge research to enhance the quality of the training it provides. The SRIC has stepped in to fill a gap. Trading is not a university discipline as such, and it has therefore been necessary to unite the disparate facilities of various departments within UNIGE and other Swiss universities – researchers working in international commerce, earth sciences, international law, finance, ethics or management. This is also the reason why one of the first missions of the SRIC is to map professors and research groups working in Switzerland in areas of interest relating to international trading. The SRIC seeks to encourage research by fostering contacts between its various partners.

The SRIC has a management board of which I am the chairman and which comprises representatives of the federal and cantonal authorities, the professional world and non-governmental organisations. Alongside the management board, the scientific board examines research proposals submitted to the Institute. This is a crucial aspect: the «raison d'être» of a University Institute such as the SRIC being anchored on scientific quality and the independence of its research.

To initiate its activities, the SRIC will identify a number of themes suggested by the Institute's

THE RESEARCH INSTITUTE INTENDS TO SERVE AS A PLATFORM FOR THE DISSEMINATION OF SCIENTIFIC KNOWLEDGE IN THE TRADING SECTOR.

various stakeholders. They will then make submissions to a network of professors concerned with trading at Swiss universities, with the intention of identifying potential Ph.D. students for these subjects. These will then have the opportunity to collaborate with players in the professional world in Geneva and have access via the Institute to unique sources of information. For their part, the professionals may offer to fund research projects on matters of interest to them. In this case, the SRIC will tender to the Swiss universities and its scientific board will confirm the selected projects.

In the longer term, the SRIC also intends to serve as a platform for the dissemination of scientific knowledge in the trading sector. Thus, once completed, the work of the Ph.D. students and research done on commission will be made available not only to the stakeholders concerned but also to the public at large, in a summarised format. Research will gradually be fed into a knowledge and expertise bank. This activity will simultaneously strengthen the appeal of UNIGE's Master's in Trading. Each year, the scientific committee will select a few of the best thesis works, which will be published on the Institute's website, giving visibility to the most accomplished students.

The development of international trading in Geneva and Switzerland is the fruit of a long history. It is part of our country's economic success over the course of the last few centuries. Through the creation of the SRIC, the UNIGE and its partners aim to contribute to a better knowledge in this field for the benefit of society. ■

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## TRADING ENERGY IN THE SWISS COMMODITY HUB

## At the forefront of major global changes

The energy trading business is easily misunderstood. It is perceived to be far too big, complex and risky and hence in need of special regulation. When in reality its driving forces are really quite simple.



**JEREMY BAINES**  
VP Sales & Trading, Oil Products  
Neste (Suisse) S.A.

I am often asked why Neste has a commercial office in Geneva. And usually there is surprise that my first reason is: not for tax purposes. After all, there are places in the world with lower or no tax, so this was never going to be a convincing reason. What is important for energy companies is access to a truly professional talent pool, proximity to market participants and customers and lastly to a stable and competitive regulatory environment.

Geneva has for years been able to attract talent from across the globe thereby building up the deep knowledge required to succeed. For trading and commerce requires a combination of many skills. From financing and banking, through chartering and shipping, insurance and inspections, operations and accounting to sales and marketing, and supply and trading. Thou-

sands of individuals in hundreds of companies are needed to form this hub. The skills that these people bring and the value they generate flow into the Swiss economy as people join and leave the industry. So not only is it beneficial to the energy industry, but the skills are also taken up in other parts of the economy. Geneva with its excellent transport links and centrally located in Europe, brings European capitals to within but a couple of hour's flight. Therefore it is no surprise that many energy and supporting industries have established themselves in Geneva, reinforcing the hub appeal. Being able to continue to attract international talent is therefore essential to maintaining and growing this industry.

One of the big challenges in recent years facing the energy sector has been the growing regulatory environment. The main reason this has been challenging is that legislation has not been harmonised across different jurisdictions, creating the need for complex reporting and monitoring systems. Most of this new legislation in the different jurisdictions are in fact seeking the same aim of transparency, but the lack of harmonisation creates the need to report similar information in many different ways, which unfortunately does not add value. To be able to keep investing, the industry needs a stable and transparent roadmap for the future.

Unfortunately the energy trading business is easily misunderstood. It is perceived to be far too big, complex and risky and hence in need of special regulation. Like many industries, it has developed its own technical vocabulary, which can confuse the outside observer, when in reality its driving forces are really quite simple. Two major aspects of the trading business are the much derided terms of speculation and arbitrage. Speculation though is no more than the business of creating value from expecta-

**ENERGY COMPANIES PLAY AN IMPORTANT ROLE IN THE GLOBAL ECONOMY AND CAN CONTRIBUTE GREATLY TO SWITZERLAND. THEY SHOULD MAKE EVERY EFFORT TO GROW THE TRUST OF THE WIDER PUBLIC.**

tions. It is therefore no different from a farmer's decision making process for what crop to plant for the next year. The farmer is speculating that one crop will be worth more than another. The difference and the challenge for the energy business is the scale. Due to the size of the transactions the value involved becomes very large, and so despite razor thin margins the profits or losses can be substantial. But in this case, it is creating a market where these different expectations can be exchanged and monetised. Arbitrage is the other major area of misunderstanding. When arbitrage is really moving product from a market where it has a low value to one where it has a higher value. But this is no different from a builder looking for the best value material among different suppliers, or a cheese manufacturer looking for the best export market. The energy companies do the same by moving product from surplus areas to deficit areas. Here too the scale and complexity are very large, which translates into the need for having this concentration of skills. As for every movement of said product, dozens of specialist interactions and contributions are required.

I believe that energy companies play an important role in the global economy and can contribute greatly to Switzerland. But they should make every effort to explain their activities, to maintain and grow the trust of the wider public. Over the next few decades the energy sector needs to transform itself for a low carbon environment as recent discussions in the COP and the global trend is moving to a decarbonised world. The opportunities for Geneva and its commodity hub to be at the forefront of this change are huge. Spearheading this development and being able to deliver the needed services and solutions are the key for Geneva's continued success. ■

## Metals trading in Switzerland

The Swiss trading hub must fight hard to retain a compelling business logic in an increasingly competitive global environment.



**THOMAS PATRICK**  
Chief Financial Officer, DUFERCO S.A.

The global market place and the commodities segment have been dampened by weak demand and price attrition. The combined blows of a slowdown in growth in China and stagnating economic activity in Europe with (in the case of steel in particular) regionalisation of trade flows driven by protectionist trade barriers has made metals trading an extremely difficult business to manage. Trading margins are thin and with low absolute prices depressing profitability so 2016 is appearing to be yet another tough year with the only bright spot that it might be finally reaching the price bottom.

Facing the above perfect storm, today's metal traders are only viable if they provide mine-to-customer services in the form of logistics management, storage and consignment facilities and also finance trade flows while applying risk mitigation practices that protect against price mo-

vements and balance sheet exposures. Long gone are the days of speculative pure trading activities across regions arbitraging price ignorance. Survival nowadays (at least in the metals space and more particularly steel trading) is based on being a global service provider that can apply sophisticated trade finance and risk mitigation tools and has strong links to suppliers and customers alike.

Since the end of the super cycle (marked dramatically by the global financial market collapse in 2008) the number of traders has declined for many of the challenges set out above. The concentration has been accelerated by the "flight to quality" by the financial institutions and the fundamental need to be a structural component of the supply chain in the current trading environment. This ironically has the unwelcome consequence of causing the big to get bigger and the small to wither and fade away. Competition (like volatility) is a healthy component of any commercial environment, in our case competition has been reduced by the contraction and regionalisation of markets and by the reluctance of the financial market to support small to medium size traders.

How does the above translate into strategic action by metal trading houses to sustain business? Size matters as does global reach, meaning the big focus on getting bigger through regional investment that in our opinion is best managed by centralised oversight. Source and supply matter but not at the expense of balance sheet exposure to fixed assets which is best managed by financing suppliers through structured programs. Integration with suppliers is a common theme with traders - often through joint sha-

**IT IS ESSENTIAL THAT SWITZERLAND REMAINS AN OPEN AND PROGRESSIVE BUSINESS ENVIRONMENT SO THAT CULTURAL DIVERSITY IS NOT UNREASONABLY CONSTRAINED.**

reholding arrangements or direct shareholding of suppliers by the trading houses. IT systems tailored to trading needs allowing efficient and professional controls over the business process requiring substantial investments of both money and management time are key components to ensure longevity. The above are complex in terms of management and heavy in terms of financial capacity that few small trading houses can assemble.

Global trading companies are multi-cultural organisations and when centred in Switzerland, they are reliant on having a diverse pool of foreign national personnel with the requisite skill sets to manage and develop business. This becomes more pronounced depending on the depth of integration required in relation to JVs and up or downstream shareholding arrangements.

It is essential that Switzerland remains an open and progressive business environment supported by both Federal and Cantonal authorities so that cultural diversity is not unreasonably constrained. We are global companies requiring global staffing solutions. It is equally important that the activities of the commodity sector in Switzerland are understood and appreciated by the governing authorities and all interested parties. Switzerland has all the essential services necessary to manage a diverse and sophisticated trading organisation and occupies a central European location to conveniently headquarter large trading houses. But Switzerland is competing with other strategic locales including Singapore and Dubai and must fight hard to retain a compelling business logic in an increasingly competitive global environment. ■

The Swiss commodity hub must adapt to new challenges as traditional agricultural commodity players remodel themselves to continue to feed the fast-growing world population.

## Reshaping global dynamics in the world of agricultural commodities



**PEDRO NONAY**  
Regional Head of Oilseeds for Europe and Black Sea, Louis Dreyfus Commodities

**A**gricultural commodity trading has greatly expanded with the development of international trade over the last 70 years. It has always been and continues to be a truly global business where events in South America impact markets in China or Indonesia and vice-versa. Backed by global supply chains and logistics, together with networks of suppliers and customers, the sector is creating value by solving imbalances in food availability and demand. In enabling the flow of goods from one region to another, agricultural commodity players ensure that each piece of food finds the right consumer at the right time and place, linking farmers to end users across the globe. This commercial orchestration has many equivalents in other industries, with modern day examples including social media networks such as Facebook and online retailers (e.g. Amazon, eBay, etc.), to name a few.

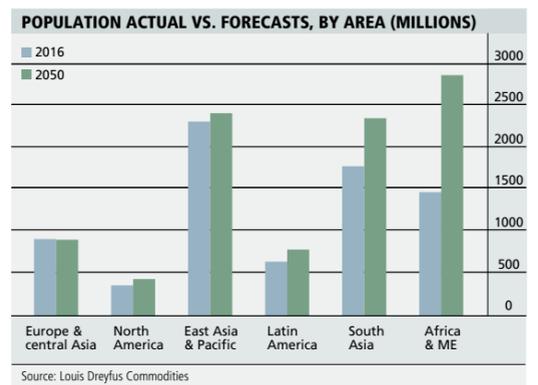
LOUIS DREYFUS Commodities has been finding new trading solutions and routes for the last 165 years. From 2006 to 2012, commodity markets enjoyed a strong period of growth, sometimes referred to as the "commodity super cycle". During this period, companies competed for the best investments and experienced rapid geographical expansion on the back of rising prices. Many newcomers emerged in this fruitful period, notably in Asia. However, from 2012 onwards the commodities landscape began to change drastically, with the industry witnessing bankruptcies, rapid consolidations as well as the rationalisation of business operations. Over the last few decades, Switzerland has offered an ideal environment for building an agri-

cultural hub. In addition to its convenient time zone, strong financial institutions and fiscal advantages, it has also offered skilled teams, synergies with shipping entities and energy trading houses, as well as many other reliable service providers which are crucial to the business, including insurance groups, supervision companies, and so on.

Agriculture is sometimes seen as being a slow moving industry. Nevertheless, the sector is nowadays facing the unprecedented challenge of feeding a growing world population which will reach 9 billion people by 2050, under ever more volatile environmental conditions and finite arable land resources.

FOOD merchants must adapt to the 21<sup>st</sup> century, namely to the Internet and telecommunications revolution which has made information readily available across the world at a low cost. Twenty years ago, if a coffee plantation had a poor harvest in Colombia, only a few well-connected market players would have been aware and have had a competitive edge. This is no longer true. Small players can now compete on a global scale with large commodity groups, combining their agility with relatively cheap financing, which is no longer the barrier to entry that it used to be. Technological developments have had a great impact at the origin. Nowadays, many farmers follow trading exchanges in real-time on their mobile devices, whereas they would barely have been able to participate in the past. Weather in the field is tracked instantaneously using satellite images, and drones are able to estimate crop yields by flying over hundreds of hectares at a time. Downstream, food companies are dealing with increasingly demanding and informed consumers who require higher quality, traceable and environmentally friendly products. Ultimately, commodity players will need to manage a more unstable and unpredictable environment, marked by complex geopolitics and price volatility. Covering risks has become a question of survival.

**A FAVOURABLE COMMODITIES ENVIRONMENT IS NOT UNIQUE TO SWITZERLAND THOUGH. ASIA, AND PARTICULARLY CHINA, HAS EMERGED AS A NEW GIANT IN THE COMMODITIES INDUSTRY.**



In order to adapt to new conditions, companies will need to invest in their workforce to attract, retain and develop top talent. A deeper partnership with schools is needed beyond the existing basic programs with Universities.

A FAVOURABLE commodities environment is not unique to Switzerland though. Asia, and particularly China, has emerged as a new giant in the commodities industry, with markets open around the clock through the use of new technologies. This has reduced the importance of time zones and enabled more countries and cities to substitute the current commodities hubs. Switzerland is in effect losing importance in the financial sphere as other locations become more flexible and creative. The strength of the Swiss franc is not helping the country's competitiveness compared to other locations. The presence of Asian companies in the Swiss agricultural hub is an additional asset for them.

These are just some of the complex dynamics that come into play. By making a sustained effort to innovate and modernise the supply chain, there is no doubt that solutions will be found so that commodity trading houses can successfully overcome the challenge of doubling global food production in a sustainable way over the next 50 years. ■

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# The Swiss commodities trade finance hub

The realities of trade finance today: managing through turbulent times.



**ALASTAIR HOULDING**  
Member of the Management Committee  
Head of Trade & Commodity Finance  
ING Belgium, Brussels, Geneva branch

Having entered the Commodities Finance industry in 1999 (a year that began with oil at \$11 a barrel) I little then anticipated that we were standing at the foot of a mountain range that would peak at over \$130 a barrel in 2008, as a precursor (via a vertiginous drop in 2009 and a rapid recovery) to a plateau in excess of \$100 for a number of years. If the trading industry grumbled at the backwardated market and relative lack of volatility in 2011-14, the banking community got rather used to it and to the turnover it could generate based on these high prices.

17 years later, 2016 has reminded us that markets are (of course) cyclical leaving the CTF industry again in the valley of low prices at a time when the industry additionally faces new challenges. Internationally, regulation has increased driving higher capital and liquidity charges. Significant and increasing effort is dedicated to compliance tasks. Typically more hands on deck are required, not least as transactions have become more complex than simple voyage finance. In 2016 then, this new equation in the Swiss environ-

ment will be more acute and the industry will need to demonstrate its capacity and skills to manage within that altered landscape.

Locally, banks must also adjust to new compliance standards as Switzerland has enacted further anti-money laundering legislation which places a duty on banks to take a view on their client's tax paying position when dealing with clients incorporated in foreign jurisdictions. The trading community business is to some extent "portable" and there appears to be a trend to establishment of trading company incorporation and operations in the UAE which may over time represent a challenge to the Swiss trading node. The industry also faces a changed credit environment. For a decade or so the oil industry has had to closely follow refiner credit risk, which now (with some exceptions in Russia and Africa) is enjoying its day in the sun – while we worried less about commodity producer credit – be it in the mining or E&P sector. The steel sector and related raw materials is challenged by the impact of a tsunami of Chinese steel impacting prices and profits. Overall the cycle of petrodollar liquidity has diminished with an impact on emerging market balance of payments and reserves, particularly amongst the producing countries.

The inevitable recovery (it's a truism that the seeds of the next boom are planted in every trough) seems quite far off at present, with China being as much a part of the problem for the commodity sector as it was a solution in 2009. The global uncertainty might be amplified by the impact these macro-economic developments can have on bank shares which could lead certain banks, as already noticed in the market, deciding to review their exposure to the industry.

So far so gloomy and it is clear that 2016 will present challenges for the CTF sector – at a time

**THE TRADING COMMUNITY BUSINESS IS TO SOME EXTENT "PORTABLE". THIS MAY OVER TIME REPRESENT A CHALLENGE TO THE SWISS TRADING NODE.**

when the general direction of international regulations tends to increase the requirements on the business, whether on capital needed or in terms of additional reporting or liquidity requirements. Nevertheless, commodity finance remains fundamental to the origination, transmission and delivery of primary commodities and while these goods may seem temporarily out of fashion because of supply / demand dislocation, they are emphatically not out of demand. The cash conversion cycle remains short and engagement with trading firms provides financial institutions with an ability to diversify their country risk in an informed partnership with clients for goods in critical demand. The Swiss

**THE SWISS ENVIRONMENT, CONTINUES TO PROVIDE AN EXCEPTIONAL CONCENTRATION OF EXPERTISE IN THE COMMODITY TRADING SECTOR.**

environment, meanwhile, continues to provide an exceptional concentration of expertise in the commodity trading and financing sector and in contrast to the producing sector, traders may even improve their margins in volatile times.

Overall we believe the sector is durable "through the cycle" and we see time and again that a consistent approach to long term client relationships leads to value-added opportunities. The current market we are going through will push banks and their clients to adapt to and to demonstrate that the Swiss hub will remain one of the most competitive and vibrant CTF locations worldwide. ■

## COMMODITIES FINANCING

# Challenges and opportunities in trade finance

There has been a radical change in the lending landscape of the commodity trading sphere. Historical actors have dramatically reduced their ambitions while new entrants are becoming more and more active.



**RABIH BLEIK**  
Head of Client Relationships,  
Wholesale Banking, Switzerland  
National Bank of Abu Dhabi PJSC

Today's commodity trade financing environment is marred by challenges that affect financiers and their clients, the traders. However, this environment also represents opportunities for those with the right setup and strategy.

Commodity trade financing in general has been witnessing a radical transformation for the past 5 years as a result of the stricter capital rules imposed by regulators since 2008 (Basel II and Basel III, in addition to national regulators from the US to Europe to Asia). The transformation accelerated in 2014 with the combined effects of price volatility in commodity prices, large fines paid by several large banks historically active in the commodities space, and shrinking liquidity in energy-dependent areas such as the Middle

East or Africa. Lending criteria have tightened and both lenders and borrowers have had to adapt to a new situation where credit is less available, more restrictive and, in general, more expensive.

This has led to a radical change in the lending landscape of the commodity trading sphere: historical actors have dramatically reduced their ambitions, notably the French banks, and while new entrants are becoming more and more active such as select Asian (Japan, Chinese) or Middle Eastern banks, high entry barriers do exist that make it difficult for banks to fully embrace that industry and, most importantly for their customers, to commit to it on the long term.

Indeed, one should not forget that commodity financing is not a standardised product but remains a tailor-made approach to lending with structures generally varying with clients, markets, and types of transactions. The techniques of transactional financing practiced by Geneva-based banks is a prime example. Moreover, while default probabilities are generally very low, the financial impact of a default can be high and not commensurate with the amount of capital that a company is willing (or can) post alongside its bank.

Hence a bank that wishes to enter and succeed in that space has to build up internal knowledge and comfort with such an approach to lending, which can prove difficult especially if factored with the tighter capital and compliance related regulations that affect the industry at large. We see some banks having capitalised on the knowledge base built up by other banks, through acquisition of teams for example, with success. Others, however, are struggling and their

**GENEVA, LONDON OR SINGAPORE REMAIN GLOBAL BUSINESS HUBS AS THEY ARE RESERVOIRS OF TALENT POOLS THAT ARE HARD TO FIND ELSEWHERE.**

strategy is still not clear despite several years of activity in that industry.

As a result, commodity traders find it more complicated to obtain credit in the same way that had facilitated their business in the previous decades. Companies with low capital and high risk profiles are having hard time to raise the necessary liquidity for their transactions, while companies with higher capital and financing capacities have relatively easier access to the banking market albeit at higher prices. Further distinctions can be made by type of industry (energy, agricultural goods, metals, etc.) but the trend is generally the same for everyone.

Needless to say that this poses challenges for traders, especially small to medium size players, to maintain their market positioning and business stamina, especially in an era of volatile commodity prices that represents good business opportunities for traders but higher risk for lenders. However, those who are able to understand the shifting nature of the banking landscape and the banks' "flight to quality", are in a better position to profit from the generally lesser pool of liquidity available for that industry. Working capital and balance sheet management, quality and flexibility of transactions, as well as investment in talent and technology, will be defining elements for traders to maintain their competitive advantage and, generally, render themselves "more bankable" in the eyes of their lenders.

This is where the element of talent also comes into force, and where cities like Geneva, London or Singapore, remain global business hubs for commodity traders and financiers in general, as they are reservoirs of talent pools that are hard to find elsewhere. ■

## STÉPHANE GRABER | STSA

## In search of harmonised international regulation

Today, Switzerland faces some challenges that could affect the commodity trading industry. As a major trading hub, Switzerland is increasingly pressured by competitors such as London, the Netherlands, Singapore, Hong Kong or Dubai. Rising operational costs such as staff salaries and other overheads are exacerbated by the strength of the Swiss franc. New and pending regulation such as Switzerland's Financial Market Infrastructure Act (FMIA), the third series of Corporate Tax Reforms, and an increasing number of popular initiatives that could weaken the industry raise some concerns. Is Switzerland's role in global business and the country's image as a stable, predictable, open place to do business under threat? Stéphane Graber, Secretary General of the Swiss Trading and Shipping Association (STSA), sheds some light on current issues and the steps that his association is taking to address them.

#### What are the most critical challenges to the Swiss commodity trading hub?

The commodities trading industry recognises the need for regulation in line with other countries, and the necessity for a level playing field, as well as clear rules for all market participants, and adequate transparency and enforcement. There seems however to be some confusion between financial and commodity markets, and a «one-size-fits-all» approach would be detrimental and create tensions. The sector fears both misguided and over-regulation which would be particularly damaging for small and medium-sized enterprises. In order to be effective, it is necessary that regulation be internationally harmonised and consistent for a commodity trading sector that is looking primarily for stability and predictability. Barriers to mobility of human capital are another main threat. The sector is intensive in human resources and expertise. The ability of the industry to access the best available global skills, and not just at executive level, is critical for Switzerland to retain its position as one of the world's most important hubs.

#### What is the impact of the increasing level of new and pending regulation?

Generally speaking, the continuing trend towards more regulation and more transparency – a result of the 2008 financial crisis – adds complexity, uncertainty and insecurity to companies operating in Switzerland. Smaller companies experience difficulties to cope with this increasing burden compounded with a trickier access to finance – caused by a decrease in local bank support – and rising supply disruptions. We observe the beginning of a market consolidation and the disappearance of mid-sized firms and related jobs.

#### What are the keys to overcoming such challenges?

The focus must be on well designed answers to the current regulatory and transparency challenges, with the objective of keeping Switzerland as a central and competitive hub. Special attention should be given to applying a smart mix of binding regulation and voluntary standards. Commodity trading is a global business; its regulation requires international coordination and a level playing field in order to avoid the chance of legal and regulatory arbitrage. Swiss expertise in commodity trading should be used whenever possible to foster private-public dialogue and cooperation on regulation, development and environmental issues as well as to promote good practices. In this respect, the industry needs to have a voice in the regulatory debate.

#### How does the industry contribute to progressing issues?

There are three principal areas in which the commodity trading industry contributes: transparency, human rights, and engagement with the general public.

#### Can you be more specific on transparency?

The STSA supports initiatives that improve transparency within the commodity trading industry. A good example of this is the Extractive Industries Transparency Initiative (EITI), which has the potential to bring transparen-



**STÉPHANE GRABER. SECRETARY GENERAL OF THE SWISS TRADING AND SHIPPING ASSOCIATION (STSA).**

**2005** Doctoral degree in business management.  
**2005-2012** Delegate at the Economic Development Office in charge of worldwide Direct Investment Promotion with a special focus on China, helping companies to relocating to Geneva.  
**2012-2015** President of the Swiss-Chinese Chamber of Commerce, Geneva Chapter.  
**Since 2012** Secretary General of STSA.

cy of industry payments to governments and mitigate risks in the commodity value-chain. STSA members are already fulfilling EITI disclosure obligations in participating countries such as Iraq. Furthermore, the STSA initiated a closed meeting, organised alongside the EITI side-event in Bern in October 2015. This included the launch of a multi-stakeholder EITI and commodity trading working group, by the STSA and major Swiss commodity trading houses. The association considers this the perfect platform for addressing issues such as confidentiality clauses that are imposed to buyers by government and State-Owned Enterprises (SOEs) or National Oil Companies (NOCs), or the necessity to standardise EITI reporting between countries in order to allow the adjustment of information systems. The currently missing participation of governments, SOEs and NOCs in this working group is a necessity for moving forward.

#### Human rights are at the centre of lively debates in Switzerland. What is the position of STSA?

The STSA is an active member of the Ruggie multi-stakeholder advisory group that supports the development of guidance for Human Rights and Business in commodity trading. Among other things, the association has been entrusted with the Institute for Human Rights and Business with the mapping survey of the commodity trading sector. This will serve as the basis for elaborating the Ruggie guideline. The survey data will be analysed by the University of Geneva and will be made available to local authorities to improve their understanding of the industry. The STSA is also working at developing a Code of Conduct to advocate positive contributions in the Swiss commodities industry which will also explain how its members are fulfilling their roles as responsible corporate citizens. This Code should encapsulate best practices, and is intended as a source of inspiration for members who will be expected to comply by virtue of their STSA membership.

#### The public at large does not seem to fully grasp what commodity traders actually do. Are you addressing this?

Promoting a better understanding of commodity trading in the general public and improving its social integration is one of our main objectives. To this end, the STSA spearheaded the launch of the Swiss Research Institute in Commodities (SRIC) as a multi-stakeholder platform to gather knowledge and expertise about commodity trading. It is intended to promote the development of scientific research on the industry. The STSA also attends public exhibitions, where it presents its economic role, as it did at the Journée de Genève last November.

#### How did STSA view the Young Socialists' initiative (otherwise known as JUSO) to ban financial speculation on agricultural derivatives?

The STSA took the economic lead of the campaign against this initiative, in close collaboration with the Parti libéral-radical (PLR) who lead the political front. This campaign brought the STSA closer to the general public than ever before in order to address several misconceptions about commodity trading. It has also addressed the clear lack of understanding of commodity markets and the role of the different actors involved. It appears crucial to pursue these communication efforts in the future.

#### What are the next steps?

Our sector has greatly evolved over recent years and is plainly more transparent and engaged with the general public in Switzerland. The dialogue between all stakeholders of the commodity value-chain should be further encouraged. We need to pursue our efforts in the search for innovative and creative answers to back the necessary evolution of regulation and transparency requirements, locally and internationally. The STSA and its members are committed to working towards building a more sustainable commodity value-chain in order to contribute to a long-term competitive commodity trading hub in Switzerland and to our nation's good standing. ■

# World rules and interplay with Switzerland



FRANÇOISE DESHUSSES  
Consultant Commodity Market Risk  
& Compliance

**A**s a reaction to the major financial upheaval of 2008, governments introduced new regulations to prevent the return of another crisis. These regulations not only apply to financial institutions but also to companies active in commodity trading, both on the physical and the derivatives markets. Each commodity hub – mainly the US, the EU, Singapore and Switzerland – has developed a set of rules to regulate trading. However inconsistency between regulatory sets may create potential arbitrage between countries.

The set of regulations being put in place is structured at two main levels. The general framework is given by a text of law – Dodd-Frank Act in the US, Commodity Trading Act in Singapore or FMIA (better known as FinfraG) in Switzerland – or of a directive in the European Union (MiFID, EMIR or MAD/R). The second level is the regulation's implementation set out by a regulator: CFTC in the US, ESMA in Europe, and FCA in the UK. In Switzerland, both the Government and the FINMA issued an Ordinance. This second level provides more details to institutions on how to understand and apply the text of law. Often a consultation period allows the industry to comment before the final text is published. However, in the EU, another level of complexity is added because the application of the directive needs to be compatible with each country's legal framework.

The purpose of these regulations is to minimise systematic counterpart risk, increase transparency and prevent market abuse and fraud. The Dodd-Frank Act governs the reporting of OTC deals, swaps regulations, position limits and disruptive market practices to mention the most important. In Europe, EMIR implemented in 2014 a reporting obligation for cleared and non-cleared transactions, MAD/R which enters in force in July 2016 prevents and sanctions market abuse and enforces transparency. Each commodity exchange has its specific rules and most have position limits in place. In addition, MiFID, the umbrella framework for European rules, defines derivatives, the companies targeted by the rules and the instruments in scope. It imposes a harmonised approach to the calculation and application of position limits for commodity derivatives (ESMA RTS 21). The methodology describes which positions can be netted or considered as a hedge. The application of MiFID has recently been delayed to January 2018. FinfraG mirrors in one text of law most subjects above. It is applicable since last January with some authorised exemptions for better alignment pending application of international regulations.

These regulations categorise companies by type of activity and by size in order to define which obligations they fall under. However, each region has a different approach to classifying companies. The US considers the type of activity such as producer, trader, dealer to categorise an institution. The EU performs tests to determine whether the derivative activity is ancillary to classify the company as non-financial (NFC) and also evaluates its size for NFC and NFC+ labels. In Switzerland, FinfraG inspired by both the US and EU uses both activity type and size criteria to assess between FC+, FC-, NFC+ and NFC. For each category there is a clear set of obligations. For example, under EMIR, the category indicates at which frequency a company must perform risk mitigation. Under FinfraG, the obligation to clear OTC deals applies to all OTC transactions unless executed between two "minus" companies (FC- or NFC-). This framework imposes regular reviews of companies, especially small ones who need to prove that they remain under a given threshold to retain the "minus" label and therefore have fewer obligations to comply with than if they were labelled as "plus".

The intermingled international framework creates an intricate matrix (not to say a maze) of rules that a company must comply with depending on where it resides and on which exchanges it operates. One example is that some jurisdictions require single reporting of a trade whereas others demand double reporting (with large numbers of unmatched trades by centralised repositories). The complexity of implementation required at each level (exchanges, legal systems and regulators) not only adds responsibilities, administrative burden and costs to most actors in the commodity business but potentially opens the way to legal arbitrages. To the detriment of the spirit of each regulation. ■

# Regulatory big data for OTC derivatives

By imposing an obligation to report, regulators are aiming to shed light on the previously intransparent area of OTC-derivatives trading. But data alone is not enough to monitor financial risks.



THOMAS ZEEB  
Division CEO SIX Securities Services

**L**et us travel forward to the year 2025: A central bank (CeBa) receives news that a major bank is having trouble meeting its payment obligations. CeBa can access its risk system and then, at the touch of a button, check the volume of the bank's payment obligations to its largest counterparties. In addition to providing an overview of the bank's collateralised and uncollateralised obligations by currency, the system provides a separate view of the Tier 1 capital ratios of all the banks affected. The regulators carry out "worst-case" calculations to directly establish whether the bank requires any support measures.

At present, such a scenario only exists on paper. However, regulators across the world are working hard to develop such a risk system.

OTC derivatives conceal a large proportion of the financial risks in the markets. To monitor systemic risk when it comes to derivatives, so-called transaction registers have been set up. Across the globe there are already 20 of these official transaction registers, which record data related to derivative transactions.

In some countries, institutions that resemble transaction registers are permitted; here more straightforward admission criteria apply.

The idea of collecting data on derivative transactions can trace its origins to the Pittsburgh Conference of G20 leaders in 2009. Three years later, the US implemented the Dodd-Frank Act, and in doing so became the first country to introduce an obligation to report OTC-derivatives transactions. Since then, such transactions have been sent by US swap dealers subject to the reporting obligation to so-called "swap data repositories". At the start of 2014, the EU introduced the European Market Infrastructure Regulation (EMIR), which imposed an obligation on counterparties in derivative transactions to report these to trade repositories. There is now some form of reporting obligation in most G20 countries. Switzerland introduced such an obligation as part of its Financial Market Infrastructure Act (Article 104, FinfraG), which entered into force on 1<sup>st</sup> January 2016. In contrast to EMIR and in a similar manner to the Dodd-Frank Act, the FMIA stipulates a one-sided reporting obligation for Switzerland, i.e. only one of the two counterparties is required to report a derivatives transaction. This eliminates any overlaps in reporting and removes the need for the various transaction registers to reconcile the transactions reported to them.

Based on the transitional provisions concerning

the obligation to report transactions to repositories, it can be assumed that the first Swiss companies will start reporting their derivatives transactions to the Trade Repository from SIX or a foreign transaction repository recognized by FINMA in the second half of 2016. The reporting obligation is likely to enter into force for all parties subject to reporting obligations and all derivatives by the end of 2018.

The reporting obligation will not only impact financial counterparties such as banks, but all companies that carry out derivative transactions – even those outside of the financial sector. This will result in over 5,000 companies connecting to transaction repositories in the EU alone, with these companies reporting over 330 million transactions each week. Thanks to the one-sided reporting obligation, the corresponding volume in the US is estimated to be slightly less at around 250 million per week.

If we assume that each transaction report averages seven kilobytes in size, the combined annual data volume across both the EU and US amounts to 200 terabytes. This corresponds to around 350 million standard A4 pages, which if stacked one on top of the other, would reach 30 kilometers into the sky, and the introduction of the Swiss reporting obligation is likely to add another two to three kilometers to this stack each year.

Nevertheless, a huge volume of data on its own is not enough to identify systemic risks on a global level. In addition to having a complete set of data, the data must also be of a high quality and comparable. Thus far, however, the poor quality and comparability of information has presented regulators with a problem that is almost impossible to solve. Many of the reports are not only incorrect, but have been entered numerous times. This, for example, has resulted in the nominal volumes published in the trade repositories as per the November 2015 Report of Financial Stability Board being three and a half times higher than the figures that appear in the statistics issued by the Bank for International Settlements (BIS). This is one of the reasons why various international committees are working to define standards that can be used to identify the parties involved, the transactions and the products, and which will in future help to ensure that data is recorded in a uniform manner. However, continuous regulation induced adaptations after a trade repository's initial implementation tend to be cumbersome and very expensive for service providers. Switzerland's financial community will need to bear this in mind going forward.

Furthermore, to maintain a global overview of the risks for certain underlying instruments and counterparties, regulators require full, cross-border access to the necessary information. Though, only a few countries – one of them being Switzerland – allow foreign regulators direct access to data, and trade repositories themselves do not provide regulators with a standardised way of accessing data. This is why the Financial Stability Board recently carried out a study to establish a system for globally aggregating data. In addition to facing a number of technical hurdles, such a global aggregation system also has to tackle the obstacle of the different national legislation in place. At present, the EU is trying to ensure that at least its six ESMA transaction registers are able to provide an aggregated overview of EU data.

One thing for certain is that regulatory big data in the area of derivatives is yet to provide any relevant information as regards systemic risks. As such, it appears that it will be a long time before this information can be used to better evaluate risk. ■

SWITZERLAND INTRODUCED THE OBLIGATION TO REPORT OTC-DERIVATIVES TRANSACTIONS IN JANUARY 2016.

The Financial Market Infrastructure Act (FMIA) came into force on 1<sup>st</sup> January 2016. The associated Swiss Federal Council's Ordinance FMIO and the FINMA's Ordinance came into force as of the same date.

## New Swiss rules on OTC derivatives



GEORGES RACINE  
Partner, LALIVE

The Swiss Federal Act on Financial Market Infrastructures and Market Conduct in Securities and Derivatives Trading, otherwise known as the Financial Market Infrastructure Act (FMIA also known as FinfraG), came into force on 1<sup>st</sup> January 2016. The associated Swiss Federal Council's Ordinance on Financial Market Infrastructures and Market Conduct in Securities and Derivatives Trading, otherwise known as the Financial Market Infrastructure Ordinance (FMIO), and the Swiss Financial Market Supervisory Authority (FINMA)'s Ordinance on Financial Market Infrastructures and Market Conduct in Securities and Derivatives Trading (FMIO-FINMA), also came into force as of the same date as the FMIA. The rules contained in these new instruments considerably alter the legal landscape relating to over-the-counter (OTC) commodity derivatives.

THE OBJECT of the FMIA is to regulate the organisation and operation of financial market infrastructures, and the conduct of financial market participants in securities and derivatives trading, including shareholding disclosures, public takeover offers, insider trading and market manipulation. Financial market infrastructures

**THE FMIA IS INSPIRED FROM THE US DODD-FRANK ACT OF JULY 2010 AND FROM THE EUROPEAN REGULATION KNOWN AS EMIR.**

include stock exchanges, multilateral trading facilities, central counterparties, central securities depositories, trade repositories and payment systems. The FMIA is inspired from the US Dodd-Frank Wall Street Reform and Consumer Protection Act Title VII (Dodd-Frank), which was signed into law on 21 July 2010, and Regulation No. 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC Derivatives, Central Counterparties and Trade Repositories, otherwise known as the European Market Infrastructure Regulation (EMIR), which came into force on 16 August 2012.

In view of their extraterritorial reach, both the Dodd-Frank and the EMIR have an impact on Switzerland. The FMIA is part of a larger legislative package including the draft Swiss Federal Financial Services Act and draft Swiss Federal Financial Institutions Act. It was submitted to public consultation from 13 December 2013 to 31 March 2014 and adopted by the Swiss Parliament on 19 June 2015.

The subordinate FMIO specifically governs the authorisation conditions and duties for financial market infrastructures, the duties of financial market participants in derivatives trading, the disclosure of shareholdings, public takeover offers and the exceptions that apply with regard

to the ban on insider trading and market manipulation. It was submitted to public consultation from 20 August to 2 October 2015 and adopted on 25 November 2015.

The FMIO-FINMA contains the implementing provisions on reporting requirements for securities trading, on clearing for derivatives, as well as on disclosure and takeovers. It was also submitted to public consultation from 20 August to 2 October 2015 and published on 9 December 2015.

It is broadly accepted that establishing regulation equivalent to the EMIR was of vital importance to the Swiss OTC commodity derivative market participants. Indeed, up to 95% of OTC derivatives transactions in Switzerland are concluded with a foreign counterparty, of which 78% are made with the European Union (EU), 10% with the United States and a mere 2% with Swiss counterparties. Prior to the entry into force of the new rules, Swiss regulation did not meet the recent and more demanding standards developed by international bodies, in particular the Committee on Payment and Settlement Systems (CPSS) and the Technical Committee of the International Organisation of Securities Commissions (IOSCO) of the Bank for International Settlements (BIS), for important financial market infrastructure institutions such as central counterparties and central securities depositories.

The FMIA will help fill the gap. It will also contribute to Switzerland meeting the recommendations of the Financial Stability Board (FSB). Switzerland's underlying aim is to ensure the proper functioning and transparency of securities and derivatives markets, the stability of the financial system, the protection of financial market participants and equal treatment of investors, while at the same time safeguarding Swiss competitiveness. The FMIA is also a response to the so-called "third-country rules" contained in the EMIR.

THE FMIA introduces clearing, reporting and risk mitigation obligations. It also contemplates the introduction of an obligation to trade standardised OTC derivatives over recognised platforms, where a counterparty is subject to the clearing obligation. However, transitional rules provide that such trading obligation will only be implemented if it becomes necessary as a consequence of international developments, in particular with respect to final requirements under the EU's Markets in Financial Instruments Directive II (MiFID II) and Markets in Financial Instruments Regulation (MiFIR), neither of which are yet in force. Subject to very limited exceptions (e.g. multilateral development banks and social security institutions, which are only subject to the reporting duty), the FMIA will apply to any counterparty to an OTC derivatives transaction that has a registered office in Switzerland.

The clearing obligation will entail counterparties having to clear certain OTC derivatives transactions by a central counterparty authorised or recognised by the FINMA. The types of derivatives transactions that will be subject to the clearing obligation will also be determined by the FINMA.

The reporting obligation will require that all counterparties (including central counterparties) report details of any OTC derivatives

**IT IS BROADLY ACCEPTED THAT ESTABLISHING REGULATION EQUIVALENT TO THE EMIR WAS OF VITAL IMPORTANCE TO THE SWISS OTC COMMODITY DERIVATIVES MARKET PARTICIPANTS.**

transactions to trade repositories that are either authorised or recognised by the FINMA. Such reporting obligation will apply at the time the transaction is executed, any time it is modified and upon its termination.

THE RISK mitigation obligation will apply where a derivatives transaction is not cleared by a central counterparty authorised or recognised by the FINMA (e.g. where one or both counterparties benefit from an exemption).

Similar to the EMIR, the FMIA distinguishes between financial counterparties (FCs) and non-financial counterparties (NFCs) in determining the availability of exemptions to obligations. FCs include banks, securities dealers, (re-)insurance companies, parent companies of a finan-

**SIMILAR TO EMIR, THE FMIA DISTINGUISHES BETWEEN FINANCIAL COUNTERPARTS AND NON-FINANCIAL COUNTERPARTS IN DETERMINING EXEMPTIONS.**

cial or insurance group or financial or insurance conglomerate, fund management companies, collective investment schemes, asset managers of collective investment schemes, occupational pension schemes and investment foundations. The FMIA categorises any entity that is not an FC as an NFC. The latter include commodity trading houses, amongst others.

In contrast to the EMIR, the FMIA establishes a subcategory of FCs: small FCs. An FC is deemed to be small if the rolling average for its gross position in all outstanding OTC derivatives transactions calculated over 30 days is below CHF 8 billion at financial or insurance group level. The FMIA also establishes a subcategory of NFCs: small NFCs. A small NFC is an NFC whose OTC derivatives transactions for each relevant category of derivatives have a rolling 30-day average gross position that is below minimum thresholds set by the Swiss Federal Council. The latter thresholds vary depending on the categories of derivatives (e.g. 3.3 billion for commodity derivatives). An NFC's OTC derivatives transactions for purpose of hedging risks are not factored in the above calculation if such transactions are directly associated with the NFC's business activity, liquidity management or asset management of the NFC or its group.

Certain exemptions from the clearing obligation are available for small NFCs and certain intra-group derivatives transactions. Various exemptions from the risk mitigation obligation are also available to small FCs and small NFCs as well as for intra-group derivatives transactions.

THE FULL impact of the FMIA will ultimately depend on the types of derivatives to which the clearing obligation will apply, as determined by the FINMA, and the exemptions made available. Given the remaining legal uncertainty, especially for smaller and mid-sized companies, swift clarification by the Swiss authorities will be welcome. Regardless of the final outcome, market participants ought to start (if they have not already done so) reviewing internal procedures and documentation with a view to complying with the upcoming changes. ■

# Regulatory changes in commodity trading



VICTORIA ATTWOOD SCOTT  
Global Head of Compliance  
Mercuria Energy Group

It cannot be denied that the regulatory environment for commodity trading companies is changing and some of these changes will likely and have already resulted in market structural changes and new processes. So what do these changes and the new regulations mean for commodity traders?

The Swiss Financial Market Infrastructure Act came into force on 1<sup>st</sup> January 2016 and aligns the regulation of financial markets with international requirements and market developments. The regulation will introduce new requirements in relation to trade reporting, risk mitigation and central clearing of derivative business for Swiss companies. Commodity traders are active users of the financial markets to hedge their various exposures and as such financial market regulations impact traders however this is just one piece of the regulatory puzzle. A commodity trader's primary business is the purchase, sale, storage, transportation and transformation of commodity products and as such the regulations that apply to traders include environmental, health and safety and other laws in each of the jurisdictions in which they operate. Traders must constantly stay on top of the complex web of changing regulations across the many different aspects of their businesses.

Regulating commodity markets can be complicated given the close and in some cases overlap-

ping relationship between the underlying physical commodity and the financial markets. We have seen the introduction of new legislations including REMIT and Swiss REMIT which seek to regulate certain markets holistically taking into consideration both financial and physical activities. It is important to remember that the drivers of price formation in the commodity markets are market fundamentals including supply, demand and logistics, each of the commodity markets themselves are fundamentally different and therefore a "one size fits all" approach to commodity markets regulation can be problematic.

Some of the new financial regulations will result in new obligations for trading companies towards the Swiss and other financial regulators. For Swiss trading companies it is impossible to only think about and implement Switzerland's regulations and in fact many of the obligations that arise from the Swiss regulations are obligations that Swiss trading companies have already implemented and are already complying with in other jurisdictions across the globe. By way of examples transaction reporting systems have and continue to be developed within the trading community and the range of authorisations required by traders has already increased in some markets. With international business activities taking place within many different types of regulatory environments around the globe, traders are used to working with new and evolving regulations.

When contemplating and implementing changes commodity trading companies need to think much more broadly than just changes in the financial regulatory space. Not all evolvments of processes, procedures and business practi-

TRANSPARENCY OF SUPPLY CHAIN, HUMAN RIGHTS AND CSR ARE SUBJECTS WHICH ARE ACTIVELY DISCUSSED ON TRADING FLOORS AND IN MANAGEMENT MEETINGS.

ces come in the form of formal regulations. In some cases regulations that are not on the face of it applicable to commodity traders, effectively become so as they are passed through to traders indirectly through financiers and business partners.

The commodity trading industry spends an increasing amount of time working with many stakeholders on how we can make positive changes to the industries in which we are active. Transparency of supply chain, human rights and CSR are all subjects which are actively discussed around the trading floors and in management meetings. Many commodity traders have dedicated teams focusing on developing their business in a way that can contribute to positive developments in each of these areas.

One thing that is for sure is that the various evolutions of regulation, policy and calls for transparency are impacting and driving change within the commodity trading industry on many fronts. The industry is becoming more transparent, dedicates time to working proactively with regulators, NGOs and governments and is developing "investment bank style" control functions and policies, these developments can only be a good thing for all concerned. Regulations and CSR are core to our industry and as such are integral to the activities and strategy of any major trading house.

With all of the global and local changes and developments and the continuation of internal and external pressures applied to commodity traders it is inevitable that there will be lots to keep us all busy in the coming months and years. As a result maybe a career in Compliance will be one of the more attractive options for the next generation! ■

## UN Guiding Principles: a sectoral approach

The Ruggie Principles apply to all industry sectors. Could commodity traders emulate the sector approach taken by the Thun Group of Banks?



BRUNO BISCHOFF  
Deputy Head Sustainability Affairs  
Credit Suisse AG

In June 2011, the UN Human Rights Council endorsed the Guiding Principles on Business and Human Rights (UNGP). The UNGP establish a global point of reference on the respective roles of businesses and governments to ensure that companies respect human rights in their own operations and through their business relationships. They were developed by the UN Special Representative on Business and Human Rights, Prof. John Ruggie, in a six year research and multi-stakeholder consultation process. The UNGP are based on the "Protect, Respect and Remedy" framework, i.e.:

- The State duty to protect human rights against abuse by third parties, incl. business, through appropriate policies, legislation and regulations,
  - The corporate responsibility to respect human rights,
  - And the need for access to remedy for victims, through judicial and non-judicial means.
- The corporate responsibility to respect human rights requires companies to have in place:
- A statement of their policy commitment to respect human rights,
  - A human rights due diligence process to:

- Assess actual and potential human rights impacts,
- Integrate the findings and take action to prevent or mitigate potential impacts;
- Track and communicate their performance.
- Processes to provide or enable remedy to those harmed for impacts caused or contributed to by the company.

**The Thun Group process.** The UNGP do not contain any industry-specific provisions. Any company is expected to develop its own understanding of what they mean for the business activities in its respective industry, its supply and value chains, and for its relationships with its own employees, contract workers, customers, and with the communities living around their operations. In order to develop a shared interpretation of the UNGP in the banking sector, UBS and Credit Suisse co-initiated the informal "Thun Group of Banks". In a collaborative process stretching from 2011 to 2013, with workshops (at Lake Thun, hence the name) and conference calls, a group of major international banks developed a discussion paper for the implementation of the UNGP, focusing on the overarching policy commitment and a description of how to conduct human rights due diligence in retail and private banking, corporate and investment banking, and in asset management, respectively. The process was supported by representatives of the University of Zurich Competence Center for Human Rights, who helped set the broader context of the UNGP, challenged banks' perspectives and provided input from non-business points of view. A draft of the discussion paper was shared with a small group of renowned experts on business and human rights, who provided valuable feedback on general direction, scope and contents of the paper.

**Experiences and challenges of applying UNGP in business.** The Thun Group's business-

THE THUN GROUP DEVELOPED A DISCUSSION PAPER FOR THE IMPLEMENTATION OF THE UNGP. FOCUS WAS ON POLICY COMMITMENT AND HUMAN RIGHTS DUE DILIGENCE.

driven approach allowed banks to openly share their understanding of the UNGP, explore how various types of business might have an impact on human rights, and analyse how to link this to existing policies and processes. This exchange equipped the participants to raise awareness for this subject matter among senior management and to conduct training in their respective institutions. Ongoing challenges in the implementation of the discussion paper are to balance the need for information (quality and quantity) in due diligence with time constraints, understanding the bank's level of influence, and the change of perspective, i.e. to focus on the impacts on the right holders and not (just) on the risk to the bank.

**Value of UNGP implementation for commodity sector.** The UNGP are increasingly referenced in policy instruments by international organisations and national legislators, such as the OECD MNE Guidelines, the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals, and the National Action Plans on Business and Human Rights (under development in more than 40 countries, incl. Switzerland). They are shaping the regulatory environment for every sector. Commodities companies may benefit from pursuing a business-driven collective process to reflect on the application of the UNGP to their business, and to engage in the policy discussions affecting the industry. At the company level, the application of the UNGP can lead to informed and improved risk management, some protection against reputational harm if negative impacts nevertheless occur, access to business opportunities with governments, financiers and customers who increasingly expect their business partners to identify and manage human rights risk, and improved relationships with workers, communities and other stakeholders, resulting in greater trust and a stronger social license to operate. ■

# Responsible gold sourcing

Pioneering and leading responsible sourcing standards for the precious metals industry.



**OLIVIER DEMIERRE**  
Senior Vice President, Corporate Social Responsibility, MKS PAMP Group

Precious metal supply chains inputs consist of either doré from mines, investment bars from the financial markets or scrap from collectors and the industry. These materials are then transformed into a wide range of products spanning from the electronics to the jewellery industries.

The MKS PAMP Group decided a number of years ago to design and implement processes that ensure responsible sourcing practices in its precious metals supply chain. Simultaneously, the group led key industry and international bodies in drafting various responsible sourcing standards. The table below shows the key challenges involved in responsible sourcing along with the measures taken to mitigate them.

Those risks are widely spread over the precious metals supply chains. Monitoring and mitigating them is thus critical in order to be able to source responsibly. The due diligence processes to be conducted can be summarized by the following key steps:

- Due diligence on a risk based approach (taking into account the country and the counterpart risks). Such due diligence includes collecting and assessing information, with an onsite visit if necessary, before entering into a business relationship.
- A unanimous approval process of the supply chain by three bodies (relationship manager, compliance department as well as the executive management committee).
- The daily review of transactions to identify possible anomalies.
- An immediate suspension of the relationship in the case of serious doubt on the compliance with due diligence requirements and, if applicable, reporting to the Financial Intelligence Unit. Our due diligence processes are regularly audited by independent auditors. The results of such audits are transmitted to the corresponding regulatory body (such as FINMA or the London Bullion Market Association) and published on our website.

**DUE DILIGENCE PROCESSES ARE AUDITED INDEPENDENTLY. THE RESULTS ARE PASSED ON TO THE APPROPRIATE REGULATORY BODY: FINMA OR THE LONDON BULLION MARKET ASSOCIATION.**

The responsible sourcing standards in the precious metals industry are fairly new and need to establish their credibility within the downstream markets. Therefore, it is imperative that the relevant standard-setting bodies implement the following:

- Set criteria for qualified auditors, accredit each of them and provide proper training on the standards.
- Critically assess the audit reports and take independent decisions on their findings.
- Thoroughly investigate credible suspicions and confirmed non-compliance occurrences.
- Implement decisive sanctions in the case of non-compliance.

We are also a firm proponent of extending the responsible sourcing standards, that currently only cover gold, to other precious metals, namely silver, platinum and palladium. Furthermore, it is imperative that environmental and social criteria to also be included as an integral part of the responsible sourcing standards. As a group and since inception, we have extended our responsible sourcing due diligence processes to cover all precious metals as well as environmental and social practices.

In addition, we also propose “Beyond Precious™” products in all precious metals that not only comply with extended due diligence requirements but can also provide for positive impact at source. Such products bear the Beyond Precious logo. Considering that responsible sourcing is an integral pillar of the precious metals industry, we continue to lead by example and spare no effort towards a global, fully comprehensive and accountable responsible sourcing model. ■

SOURCING RISKS AND DUE DILIGENCE MEASURES						
Risks	Framework	AML/CFT Law	LBMA RGB*	RJC COP**	SA 8000***	MKS PAMP Policies
Money Laundering, Counter-Terrorism Financing		✓	✓			✓
Conflict Financing			✓			✓
Human Rights Abuses			✓			✓
Health and Safety			✓		✓	✓
Business Practices				✓	✓	✓
Environmental and Social Practices						✓
Other Reputational Risks						✓

✓ Mandatory Measures  
 ✗ Voluntary Measures  
 □ External Audit

\* London Bullion Market Association – Responsible Gold Guidance  
 \*\* Responsible Jewellery Council – Code of Practices  
 \*\*\* Social Accountability International - Socially acceptable practices in the workplace

Source: MKS Pamp Group ©2016



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For more information, please contact: Ziliane Mariotti, ziliane.mariotti@kessler.ch or Maurits Quarles van Ufford, maurits.quarles-van-ufford@marsh.com.

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# Why acting responsibly is good business

Commodity traders need to do a better job at explaining themselves. Some firms are taking the first steps.



ANDREW GOWERS  
Head of Corporate Affairs, Trafigura

To counter their unfortunate reputation trading firms should do more to demonstrate they are responsible and transparent. Asked for a view on the characteristics of commodities trading firms, most passably well-informed citizens would probably not name corporate responsibility as the first thing that comes to mind. On the contrary: the trading sector suffers from an unfortunate reputation, most obviously typified by the label of “Switzerland’s most toxic industry” stuck on it by a Swiss NGO a few years ago and still not entirely shaken off. Some of this is undoubtedly unfair, born of general lack of awareness about what commodity trading firms actually do or the service they provide to the world economy. Some arises from controversies and notoriety of the past and some from a generalised suspicion of private companies operating in what is perceived as a lightly-regulated jurisdiction.

But part of the blame can also be laid at the door of commodity trading firms themselves, for the industry has in the past done a spectacularly poor job of explaining itself in public, indicating that it has a care for the world around it, or assessing and reporting on its impact on society.

It is important, even for private companies, to recognise that the global scale and scope of the trading sector bring with them heightened scrutiny and a need to explain, just as it did for extractive companies when public concern over their environmental and social policies grew loud 20 years or more ago.

In recent times several groups have stepped up public disclosures concerning their finances and their business activities. The next step is in the area of social and environmental impacts. The firm I work for, Trafigura has published its first standalone Responsibility Report late 2015.

Commissioning independent authorities to review the business and producing educational reports explaining the role of commodities trading to a wide audience is another area to expand. So is seeking to engage with governments and civil society concerning the most frequently expressed concerns about the industry – for example in the areas of revenue transparency and of supply chain due diligence.

The reasons for undertaking these activities are clear and firmly rooted in business logic. We believe that we have to earn and maintain a licence to operate in the many countries in which we are active. Trafigura has experience from its own brief history as to what can happen when an incident puts this licence at risk. So we are committed to demonstrating that we have safe

IT IS IMPORTANT TO RECOGNISE THAT THE GLOBAL SCALE AND SCOPE OF THE TRADING SECTOR BRING WITH THEM HEIGHTENED SCRUTINY AND A NEED TO EXPLAIN.

and responsible processes in place to manage the large volumes of potentially dangerous or polluting materials that we move around the world and the infrastructure assets that we own.

A second reason is that the industry depends on a unique network of partnerships to maintain and grow our business – including governments, resource-producing and processing companies, banks and capital market investors. Our partners rightly require that we operate to the highest standards. The third reason – and a factor that should encourage commodity traders to continue further along this path – is that there is a competitive advantage to be gained from this agenda. Our business partners, for example, have warmly welcomed our membership of the Extractive Industries Transparency Initiative and the steps we have taken under its auspices to disclose payments for purchases of crude from national oil companies in EITI implementing countries. Our banks draw comfort from the lengths we go to in explaining our procedures for managing risks. The NGO community is also welcoming and encouraging the new dialogue with the industry. From the point of view of senior management and Boards, positive reactions are an important validation. There is no contradiction between acting responsibly and transparently and continuing to run a healthy and profitable business.

Far from the two goals being contradictory, they are mutually reinforcing. Defining ourselves, acting and being seen as acting responsibly has the potential to reassure our clients, improves access to financing, generates pride among employees and increases companies’ appeal to potential recruits. What better argument to follow this course? ■



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# JACQUES DE WATTEVILLE | FDF

## The interplay of Swiss and international regulations

In recent years, Switzerland has confirmed its commitment to internationally-recognised standards. With the Corporate Tax Reform Act III, with the Financial Markets Infrastructure Act (FMIA also known as FinfraG), with the disclosure of payments to governments and governmental agencies for the extractive industry and with other initiatives, Switzerland is aligning with regulation in the US and in the European Union. An interview with Jacques de Watteville, State Secretary in the Federal Department of Finance and chief negotiator with the EU.

**The commodity trading sector represents a significant part of the Swiss economy. How important is this sector in your view?**

According to estimates, the contribution of the commodity trading sector to GDP was approximately 3.9% in 2014. Hence, this sector continues to play an important role for the Swiss economy. The Swiss commodity cluster is very diverse and not only consists of commodity trading companies, but also comprises banks that specialise in the financing of commodity trading, companies that provide inspection services, shipping companies, insurance companies and consultants.

**Switzerland is aligning with US and EU regulations impacting the sector such as rules on derivatives markets. How important is it for Switzerland to be in line with international regulations?**

For Swiss companies, it is important to have a level playing field at the international level. Global standards define the framework that allows for such a level playing field and consistent rules across jurisdictions. The implementation of internationally agreed key standards is thus in the interests of Switzerland and its economy. We should continue to participate actively in the further elaboration of such standards. This fosters confidence, stability and legal certainty. Furthermore, it increases the credibility of Switzerland in international fora and enhances our ability to defend the interests of Switzerland in an efficient way.

**How important is it for Switzerland to avoid being too strict in order to avoid damage to the sector?**

The aim of the Swiss government is twofold, i.e. to preserve and improve the framework conditions and to reduce risks, including reputation risks. Therefore, it makes sense for Switzerland to implement internationally agreed key standards. However, at the same time, we have to ensure that our companies do not suffer from disadvantageous conditions. Consequently, the implementation has to be done in an internationally coordinated way. I believe that, with these efforts, Switzerland is well positioned as a competitive and reputable location for commodity companies.

**Do you feel that the third series of corporate tax reforms (Corporate Tax Reform Act III) is well balanced and will encourage commodity trading houses to be established in Switzerland?**

Yes, I am rather optimistic. First, the reform aims to strengthen Switzerland as a business location and increases legal and planning certainty for all companies. Second, as part of the reform package, the Confederation intends to create fiscal policy leeway for profit tax reductions in the cantons if necessary to preserve their tax competitiveness.

**Do you feel that Switzerland can fight on equal terms with other commodity hubs such as London or Singapore and will remain competitive?**

We know that some other locations offer more favourable tax rates. However, even though tax considerations are important, they are not the only decisive factor for location. What matters is a business-friendly environment overall. This includes the quality of the infrastructure, a flexible job market, the availability of a highly qualified workforce and the quality of life, for example. Taking all relevant factors into account, Switzerland remains a very attractive place for doing business, including for commodity companies. But since other locations are also making substantial efforts, we need to be mindful to preserve and to strengthen our competitiveness.



**JACQUES DE WATTEVILLE. STATE SECRETARY IN THE FEDERAL DEPARTMENT OF FINANCE AND CHIEF NEGOTIATOR WITH THE EU.**

**1951** Born in Lausanne.  
**1982** Entry into the diplomatic service of the Federal Department of Foreign Affairs (FDFA).  
**2007-2012** Ambassador, Head of Swiss Mission to the European Union in Brussels  
**2012-2013** Swiss Ambassador to the People's Republic of China, the Democratic People's Republic of Korea and Mongolia.  
**2013** State Secretary in the Federal Department of Finance (FDF).  
**2015** Chief negotiator in negotiations with the EU.

**Swiss NGOs are particularly critical of the commodity trading sector. Is this justified?**

In Switzerland, everyone has the right to express their views, irrespective of whether these views are justified or not. Some of the criticism from Swiss NGOs has to do with the fact that commodity traders were quite secretive about their business until some years ago. However, this has changed in recent years. The industry has started to engage in constructive dialogue with the public. In our political system, we are used to constructive dialogue with all stakeholders.

**Are you not concerned about the impact on trading houses and the risk that they may leave for other hubs?**

The activities of some Swiss NGOs seem to be unsettling the commodity trading sector. But I do not think that critical NGOs are a reason for companies to leave as long as the industry recognises that Switzerland is pursuing a coherent and balanced policy.

**Switzerland encourages dialogue with multiple stakeholders. Do you view this approach as strength? Why?**

This dialogue is an important pillar of the recommendations made in the background report on commodities published by the Swiss government in 2013. We are pleased to see that the dialogue particularly between the industry and NGOs has improved since then. Through this dialogue, mutual understanding among stakeholder has increased. Only if all stakeholders work together are real improvements possible. For example, NGOs and companies are preparing guidance for the implementation of the UN Guiding Principles on Business and Human Rights in the commodity trading industry.

**There is a strong push to encourage companies' responsible behaviour along the value**

**chain. Can and should Switzerland be a leader in this area?**

First, let me stress that responsible behaviour concerns not only commodity companies, but all companies. Second, I think that we should indeed be among the leading countries in this area. In my view, this is already the case today. However, it is important to recognise that unilateral action going much further in this area would not be effective. What is more reasonable and effective is a multilateral approach.

**If so, should it promote voluntary rules/codes of conduct?**

Voluntary rules are important instruments for supporting companies in their efforts to behave in a responsible manner. Therefore, Switzerland is actively involved in the development and implementation of several such initiatives. Examples include the UN Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Enterprises and the Voluntary Principles on Security and Human Rights.

**Are there areas where Switzerland should impose binding legislation?**

I am aware of the widely held view that there are no binding rules for the commodity sector. But actually this is not correct. Just to cite some examples, commodity firms are subject to the provisions on corruption and money laundering in the Swiss Criminal Code as well as to the provisions of the Anti-Money Laundering Act if trades are executed for the account of a third party, and they are subject to certain aspects of financial market regulation. In addition, the Swiss government is preparing a specific proposal for legislation on payments made by commodity companies to governments within the scope of the revision of the law on companies limited by shares. Again, we are following an internationally coordinated approach, as the EU, the US, Canada and Norway are introducing similar rules or have already done so. In many cases, however, the most efficient approach is to work with companies to develop guidelines that achieve specific improvements in responsible behaviour.

**How do you view the role of Swiss authorities in supporting this process?**

The role of Swiss authorities is to act as a coordinator and facilitator, and to bring together all relevant stakeholders at the national and international level. ■



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## THE PARIS AGREEMENT AND SUSTAINABLE ENERGY

## An energy system based on value not volume

We need to move beyond the engineering culture that brought us to today, where energy is a series of commodities. We need markets that are designed explicitly to value and pay for flexibility.



SCOTT FOSTER  
Director, Sustainable Energy Division  
United Nations Economic Commission  
for Europe (UNECE)

Last December 187 countries agreed to limit greenhouse gas emissions to help mitigate climate change. In addition, last September the United Nations adopted the 2030 Agenda for Sustainable Development that included 17 specific goals. While only one sustainable development goal, number 7, addressed energy specifically, in fact attainment of all of the goals depend on having access to energy. Our concern is that we are getting the energy equation wrong, and it is essential for us get it right if we are going to meet our goals.

We depend on energy for everything in our daily lives. It fuels transport, it powers computers, and it charges our mobile phones. For many countries, sustainable energy is about mitigating climate change and shifting from fossil fuel use

to renewables. For others, sustainable energy is about getting access to the energy needed for sustainable development. Many people and many countries depend on fossil fuels for their livelihoods and their development, climate change often is not their priority.

Our challenge is to address both perspectives in an integrated way. Energy is at the heart of the matter. We can meet our environmental, social and economic development goals, but only if we rethink energy. We need to move beyond the engineering culture that brought us to today, where energy is a series of commodities, to a new culture of energy services that focuses on providing value and not volume.

Let me use electricity as an example to explain. The concept of energy services connects the various links in the electricity value chain. At the customer level, customers do not “use” electricity but rather they use lighting, heating, or cooling. They use the services that energy provides for all aspects of daily life. And yet at the end of the month they pay a utility bill for the kilowatt hours consumed. What customers “buy” is not what the utilities are selling. It is in the interest of utilities to sell more kilowatt hours because that is how they make money in a cost-plus system. From a societal point of view, this approach is not consistent with sustainable development. We need to transform utilities to become energy service providers and allow competition from new players. By making this shift we unleash innovative investments by energy service providers who have the technical expertise, can do the financing, and have a stable pool of trustworthy contractors to deliver energy efficiency – insulation and better windows, efficient space condition-

IT IS IN THE INTEREST OF UTILITIES TO SELL MORE KILOWATT HOURS. FROM A SOCIETAL POINT OF VIEW, THIS APPROACH IS NOT CONSISTENT WITH SUSTAINABLE DEVELOPMENT.

ing and lighting systems, and smart appliances that can manage energy. This approach can only work if suppliers can get their revenues based on the quality of life they deliver. They would then make profits by managing their costs to deliver these services.

If we explore the link between the networks and the energy service providers, quality of service can be measured in many ways. Besides keeping lights on, how long does it take customer service to answer a phone? How long does it take to get a crew out to repair a power line? Here I propose that companies be rewarded or penalised for the quality of service that they offer.

Power plants and customers can provide a range of services to the networks. Production of electricity from wind and photovoltaic generation is highly variable. With that variance and the minute-by-minute changes in electricity demand, it is clear there is a growing need for flexibility to ensure system reliability and resilience. We need power plants and consumers who can stop and start quickly, thereby providing the flexibility that a robust, integrated system requires. We need markets that are designed explicitly to value and pay for the provision of flexibility services.

Sustainable energy is achievable, but policy and regulations must catch up. Thinking of energy as a series of services rather than as a commodity is an important place to start. We must regulate energy as a service to improve the performance of the energy system and support sustainable development and achievement climate goals. The result will be innovation unchained – improving efficiencies, reducing costs, and better environmental performance. ■

## Thinking renewables along the value chain

To understand renewables-related investment one needs to differentiate between technology manufacturing and investment related to power production.



PR. ULF MOSLENER  
Head of Research, FS-UNEP

Investors interested in renewables often focus on the question “Which technology should I invest in?”; the most common alternatives being wind and solar. While this is obviously important, it is only part of the full picture of the current structural change in electricity markets. A look at investments related to renewable energy is revealing: by far the largest section of a total investment of about US\$270bn is financing the application of technologies, in other words the installation of smaller solar systems or utility-scale solar or wind farms. Much less (about US\$ 30bn) is going to the production of technology including R&D, venture capital, private equity or new stocks. Another US\$69bn is invested in M&A or buyout transactions, which is unfortunately often ignored in the renewables debate as they don’t directly lead to additional power generation capacity – although they play an important role by providing liquidity and exit options for initial investors. However, it is key to realise the differences between these three parts of what we might loosely call the “value chain”

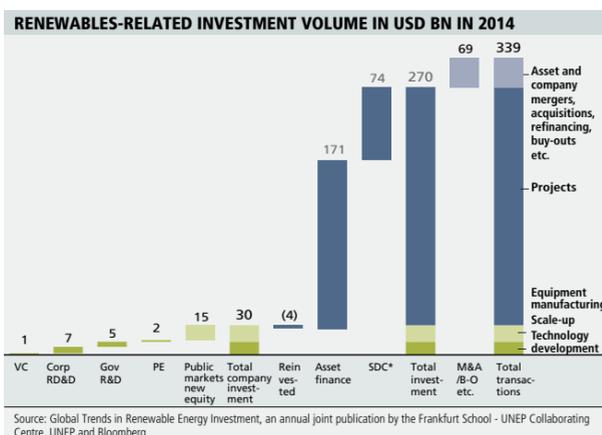
of renewables-based power. A simple example: rapidly falling prices for solar modules over the last years have sent many solar firms into financial distress – many were forced out of the market. This is neither pleasant for them, nor for those who invested in the companies. However, for those who buy and use the modules to produce and sell electricity, the story looks different: their costs are falling and their business model is increasingly attractive. That is why, for example, prices for renewables technology stocks on the one hand and investment volumes in renewables based power plants on the other are not moving in sync. In fact the structural change may even move faster because of this, with investment surging at times when technology companies are suffering from low prices and strong competition from Asia.

But the value chain does not end there. Power systems around the globe experience a substantial structural change when the shares of renewables rise to levels above around 30%. A main driver is the fact that based on wind and sun, power can only be produced at times of sunny

INVESTORS SHOULD KEEP IN MIND THAT INVESTING IN RENEWABLES ISN'T ONLY A QUESTION OF TECHNOLOGICAL CHOICE BUT ALSO A QUESTION OF WHERE IN THE VALUE CHAIN.

or windy weather. So production is exogenously determined and volatile. What is even more striking is that the marginal costs to produce power this way are practically zero. This means, even under the assumption that there is no government driven feed-in law, as long as the wholesale power price is larger than zero, it is always attractive to produce and sell power, when wind or sun are there. That is different from coal and gas based power generation. A gas-fired power plant is not likely to produce at times when the electricity price does not even cover the costs of the gas. This has obvious consequences for the power market. While price volatility increases, the price itself might be very low on sunny, windy days. Because of the high volatility, other new technologies come into sight. Options to react are more flexible (e.g. gas-fired) power plants, better and larger grids to level out wind-availability, measures to make the demand more flexible, and – most prominently – electricity storage technologies such as pump storage or batteries. Batteries are receiving particular interest as their costs have more than halved over the last five years.

This is interesting in the face of regular intraday volatility of more than 50% for peak-power at the European Energy Exchange. However, the same thought as above applies to the difference between producing the batteries and using them in times of low battery prices. Battery producers might not be happy about the low prices and in the long run one should also not forget that in a world with cheap and efficient electricity storage technologies we should not expect large price volatility to persist. That – after all – is what makes storage attractive in the first place. Investors should keep in mind that renewable energy investment isn’t only a question of which technology to invest in, but also at which point in the value chain. ■



# Sustainable development? The only option

We will have to switch from a world we perceived as limitless to a world that we will feel is too small.



JEAN-CLAUDE KELLER  
Engineer EPF and Physicist

During the 19th and 20th centuries our economic development was based on the exploitation of Earth's fossil energies and minerals without any serious questioning of their finite nature. We have disposed of our waste into the environment with little thoughts over our capacity to absorb such waste. We have been blinded by the apparent endlessness of our planet's resources which we thought we could use as we saw fit, thanks to cheap oil. Without this oil, which has made all transport (by air, sea and land) possible, we would have been unable to develop our current economic system of production/consumption: a system unsuitable to the large flows of people, materials and products that we have today. Our vision was of a world without limits. But in the late sixties, the first photograph of Earth as a whole – as a finite body – was published by

NASA. Shortly after, in 1972, the Club de Rome published the Meadows report: «The Limits to Growth». These events marked the beginning of an awareness of the finite nature of Earth. Until then, our planet had seemed too large for us to perceive its limits!

Unfortunately, this awareness has not yet led us to consider a different form of development. Today, we continue to massively exploit mineral resources and fossil fuels, as if it had no environmental consequences. But our level of CO<sub>2</sub> emissions is such that it has begun to upset the thermal balance of the planet at a speed that it has not experienced over the past million years. Among the most serious impacts – with environmental, economic and social consequences –, we can list the speed at which water levels rise and ocean acidity increases. We will have to switch from a world we perceived as limitless to a world that we feel is too small!

Although there is still doubt in some people's minds, we must acknowledge facts and face reality. Human activities have impacts on our environment and science has been able to clearly establish such responsibility. For example, it has been confirmed, based on the ratio of carbon 13 and carbon 12, that the increase in CO<sub>2</sub> in the atmosphere is due to the burning of fossil fuels. Theory also predicts that the greenhouse effect should be more noticeable in polar areas and this is precisely what we observe. Indeed, some parts of Greenland are strongly affected, including the tips of the Zachariae and Jakobshavn glaciers; Antarctica is not spared as several stu-

BASED ON THE RATIO OF CARBON 13 AND CARBON 12, WE KNOW THAT THE INCREASE IN CO<sub>2</sub> IN THE ATMOSPHERE IS DUE TO THE BURNING OF FOSSIL FUELS.

dies confirm the accelerated melting of the entire western ice-shelves. Another example concerns ocean acidification: we see that surface waters warm up and the level of acidity increases. But as it gets warmer, the ocean water should release the CO<sub>2</sub> it previously absorbed and thus its level of acidity should decrease. This does not happen for the simple reason that the CO<sub>2</sub> concentration in the atmosphere continues to rise, increasing its absorption, and therefore its acidity. In short, human activities cause climate disorders along with significant environmental risks, so they could get out of hand and induce considerable expenses.

Action is needed to reduce these risks and we know what to do: we need to decarbonise our economy! To achieve this, sustainable development is essential because it meets the needs of the present without compromising the ability of future generations to meet theirs. Practically, this transition implies an increasing use of renewable energy, a substantial increase of the energy efficiency of all appliances and engines, as well as the implementation of effective recycling for waste and for products that have become obsolete. It also asks for a more restrained and more local consumption from all parties involved, and should meet the needs of the many rather than cater to the excesses of the few. Let us not forget that the creation of wealth leads to the destruction of part of the natural resources of the planet. And to make sure that the next generation will not be penalised, all the new techniques inherited from the previous generation must compensate for the destroyed natural capital. ■

## CLIMATE GOALS AND CHEAP OIL

# Time for an energy policy reboot

Post-COP feelgood factor masks global energy policy muddle. Carbon pricing, subsidy removal and R&D should replace arbitrary renewables and de-carbonisation targets.



DAVID FYFE  
Head of Market Research and Analysis,  
Gunvor Group

Climate campaigners leaving COP21 talks in Paris heralded the end of the hydrocarbon age. Oil analysts foresee months of sub-\$50 oil ahead, boosting both oil demand and the economy. Despite appearances, lower CO<sub>2</sub> emissions needn't automatically contradict sustained hydrocarbon use. But opposing sides in the energy debate seem to prefer megaphone diplomacy, rather than collaboration on better policy formulation – to limit anthropogenic CO<sub>2</sub> emissions, while enhancing developing country access to cheap and affordable energy. Collaboration requires compromise from hitherto entrenched positions. Were hard-line environmentalists to look beyond speculative temperature models, then unattainable deadlines for “de-carbonising” might lose some of their lustre. The hydrocarbon industry too must raise its head from the sand in the global warming debate. Now that governments in the US, China and India are walking the environmental walk, things cannot just continue as before. If both sides dare to consider the wider picture, a reboot towards less costly and more effective energy policy might result.

The obvious question for “de-carbonisers” is: “what replaces hydrocarbons?” Today's solar and wind technologies cannot fill the gap themselves. These technologies remain relatively inefficient and intermittent compared with more concentrated energy forms like hydrocarbons and nuclear. Indeed, capping CO<sub>2</sub> emissions becomes almost impossible if a widespread nuclear moratorium persists. Diversifying from established energy forms is prudent policy. So too allowing the market to price-in the true costs of using energy (hydrocarbons, nuclear and renewables alike). But simply writing-off hydrocarbons and nuclear altogether – 85% of today's global energy – is folly. Even the IEA's “New Policies Scenario” (including COP21 pledges) suggests they may still provide 80% of global demand by 2040.

One solution is to nudge governments away from picking technologies. The success rate of bureaucrats in picking industrial winners is patchy (at best). Europe's fiscal shift to diesel and the competitive straight-jacket imposed on German industry since the nuclear freeze are recent examples. Corn ethanol in the US is another instance where politics trumped economics, leaving only corn producers better off.

Subsidies, for end-users or producers, also distort economic signals at times of market imbalance. The world spent nearly \$500 billion in fossil fuel subsidies in 2014, plus \$135 billion for renewables. That works out at \$6 for every barrel oil equivalent (boe) of hydrocarbon consumed and \$12 per boe for renewables. Governments must find better ways to enhance social welfare than supporting inefficient technologies and encouraging wasteful energy consumption.

In contrast, there is a crucial need to broaden and deepen government support for technology research & development (R&D), across the spectrum, from enhanced oil recovery, to carbon capture and storage (CCS) and advanced renewables technologies, alongside the promotion of more energy efficient turbines, buildings and vehicles.

CARBON PRICING COULD DO MORE TO REDUCE CO<sub>2</sub> EMISSIONS THAN THE ARTIFICIAL STIMULUS OF RENEWABLES.

Enhanced R&D spend would be a better use of taxpayers' money than the current patchwork of grants, tax breaks, mandatory market shares and subsidized funding.

Broader adoption of market-sensitive carbon pricing, via taxes or emissions trading, would be a further step towards rationale energy use. Long opposed by the oil, gas and coal sectors, there is now growing acceptance that this would at least provide investment clarity, compared to the current muddle of moratoriums, grants and arbitrary renewables targets. Let fuels compete on a level, market-oriented, playing field. The existing European emission trading scheme is flawed, but has been unfairly damned, presumably because market-based systems can at times allow hydrocarbon consumption to rise as well as fall.

Crucially however, carbon pricing opens the door to a hitherto stifled technology, but one which, alongside energy efficiency, could do more to reduce CO<sub>2</sub> emissions than the artificial stimulus of renewables: CCS. Wider adoption of CCS, together with a carbon tax, would acknowledge the key role hydrocarbons will play for the foreseeable future, while meaningfully reducing emissions. Some climate campaigners remain lukewarm to market-driven policies, precisely because they mitigate the need to ban the hydrocarbon “enemy” altogether. Such blinkered thinking risks missing CO<sub>2</sub> targets altogether, and ignores the affordable energy and wealth creation arguments that favour continued, albeit enlightened, use of hydrocarbons.

We should aspire to a future where economically robust renewables combine with rising energy efficiency, advanced nuclear technology, hybrid vehicles, CCS and flue gas desulphurisation. But this vision requires a change in mindset across the entire breadth of the climate debate. The prize is a more sustainable, affordable global energy system – for the environment, for energy producers and consumers, and for broader economic well-being. ■

# Segregation in the Swiss electricity market

While everybody talks about equality, the Swiss policy maker introduced a segregated two-class system for electricity consumers and producers.



DR. MARTIN P. EVERTS  
Chief Economist, Axpo Holding AG

The Federal Constitution of Switzerland postulates the equality of all persons before the law, independent of someone's origin, race, gender, age, language, or way of life. In what seems to be a contradiction against this fundamental principle of equality, Article 4 of the Electricity Supply Ordinance states that most end consumers of electricity with a consumption smaller than 100 MWh have to pay retail tariffs based on production costs. Larger customers with a consumption of more than 100 MWh however, can buy their electricity at wholesale market prices. Article 4 of the current Electricity Supply Ordinance does not only create inequalities for the Swiss electricity consumers, but it also creates a two-class system for producers. Electricity producers who deliver their electricity to small end consumers are allowed to base their retail tariffs

on production costs, while electricity producers who sell their electricity to larger customers face wholesale market prices. Thus, producers are segregated based on how strongly they are vertically integrated or, in other words, based on whether they have distribution channels to directly reach small end consumers.

Looking at current figures, these inequalities become even more striking: According to the Federal Electricity Commission, the current average retail electricity tariffs for of a medium sized household vary between 60 CHF/MWh in the canton of Glarus and 90 CHF/MWh in the canton of Geneva. In contrast to this, on the wholesale market the same product is priced at around 40 CHF/MWh at the European Energy Exchange.

As a result, small consumers currently pay up to 200% of the price on the wholesale market and subsidise their vertically integrated electricity producers with 20 to 50 CHF/MWh. Because of these subsidies, the usually smaller, vertically integrated producers are still able to make a profit, while large electricity producers which are competing for large customers on the wholesale market are currently struggling with the extremely low wholesale market prices.

On the basis of Article 4 of the Electricity Supply Ordinance, the Swiss policy makers enforce a structural change in the electricity market. Vertically integrated, usually smaller producers are able to sell the electricity of their production assets above production costs to the extent that they sell their electricity directly to small end consumers and therefore profit from the quasi-subsidies provided by the small end consumers. Larger producers who sell their electricity main-

**SMALL CONSUMERS CURRENTLY PAY UP TO 200% OF THE PRICE ON THE WHOLESALE MARKET AND SUBSIDISE THEIR VERTICALLY INTEGRATED ELECTRICITY PRODUCERS WITH 20 TO 50 CHF/MWH.**

ly on the wholesale market currently face market prices well below the production costs. As a reference, the center for Energy Policy and Economics of the Swiss Federal Institute of Technology estimates the average production costs of Swiss hydro power stations to be approximately 60 CHF/MWh. Thus, the segregation of the electricity producers into a two-class system leads to the current situation in which smaller, vertically integrated producers can buy electricity production assets (i.e. power plants) at price levels which large producers could never afford.

Whenever the policy makers were talking about remodeling of the Swiss energy sector, they most probably had something different in mind. Article 1 of the Electricity Supply Ordinance states that the policy makers shall set the conditions to maintain and strengthen the international competitiveness of the Swiss electricity sector – a principle which seems to be put into question by the observed inequality. Instead of letting market forces increase the competitiveness of all electricity producers, the Swiss policy makers protect and favor smaller, vertically integrated producers with monopoly-like rules.

The inequalities consumers and producers face are due to a failed market liberalisation in Switzerland. A partially liberalised market as we are observing now is the worst option for the Swiss energy sector and was never intended to be a permanent one. Currently, the respective time-limits for creating a fully liberalized Swiss electricity market are being disregarded. As the proverb states, policy makers should be “in for a penny, in for a pound” and quickly aim for a full liberalization of the Swiss electricity market. ■

## BIOMASS FOR BIOFUEL

# Challenges and opportunities in the development of a new market

There are opportunities to make current agricultural practices more sustainable and more resilient to future requirements for biomass feedstock standards.



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During the past decade, investment in biofuel programs has grown and expansion of biomass feedstocks for biofuel production has expanded, mainly due to regional and national energy policy mandates. Biofuels have also been increasingly viewed as a means to secure the future of rural communities that traditionally depend on cultivation of food crops. Therefore, support of the agriculture-based economy is another important policy driver of biofuel development by governments, and biofuels production provides an additional market for biomass feedstocks thereby increasing farmers' revenue, especially for agricultural residues and wastes. In addition, it provides the socio-economic benefit of additional rural jobs and increases broader economic opportunity through multiplier effects associated with retaining more money in the rural economy. While offering promising

environmental and social benefits, using certain types of biomass – in particular, food crops – for fuel also raises a number of environmental and social concerns.

Biofuel can be produced from a wide range of biomass feedstock, examples of which include starch crops (e.g. corn), oil seeds (e.g. soy), wood chips and straws. Each type may entail environmental or socio-economic risks. Dedicating food crops to biofuel production can impact food market prices. Conversion of land to crop production, less frequent crop rotations, and over application of fertilisers for crop yield improvement can deteriorate soil quality, pollute water, and release the carbon stored in the soil to atmosphere. Meanwhile, the food-versus-fuel debate has drawn more attention to non-food biomass resources, as well as to sustainability criteria when a type of biomass is considered for biofuel production. To ensure sustainable production and use of biomass for biofuel, the effect of feedstock choice and the scale of feedstock production or residue use on biodiversity, soil, hydrology and landscape should be taken into account.

In spite of these facts, due to the current regulatory landscape and available technology, food crops are currently used to meet part of the global biofuel demand. For example, in the United States, the Renewable Fuel Standard (RFS) Program mandates a significant portion of biofuel production from food crops versus crop residues or wastes. Collecting agricultural residues for biofuel production generates an added value for these (often low value) materials and does not interfere with the food market. However, as studies show, if soil carbon loss due to residue utili-

**TO ENSURE SUSTAINABLE USE OF BIOMASS FOR BIOFUEL, WE SHOULD TAKE INTO ACCOUNT THE EFFECT OF FEEDSTOCK CHOICE AND THE SCALE OF PRODUCTION ON BIODIVERSITY, SOIL, HYDROLOGY AND LANDSCAPE.**

sation is not compensated, the produced biofuels may not comply with the RFS. Efforts are being undertaken to overcome the technical challenges of cellulosic biofuel but until there is a significant increase in their availability on larger scales, the bulk of US renewable volume obligations (RVO) must be fulfilled with food crops.

All said, biomass demand continues to increase in response to growing demand for regulatory-compliant sources of energy. In addition to providing sustainable energy, it is also critical to integrate the benefits of an improved and sustainable agricultural system into biomass selection criteria as technology and policies evolve in the future.

If designed strategically, there are opportunities to make current agricultural practices more sustainable and more resilient to future requirements for biomass feedstock standards. For example, coupling annual and perennial agriculture or short rotation multipurpose forests may enhance soil carbon stock, biodiversity, and landscape when the land is harvested for biomass production for biofuel. Using biofuel co-products, such as biochar, has also been shown to improve soil quality and biomass production while at the same time reducing water pollution. This, in turn, will open significant opportunities for sustainably produced biomass to endure in the market in larger scales, which can also ensure farmers a positive return to new and sustainable farming practices. A more resilient agriculture that can adjust to requirements for new sources of biomass can preserve, and perhaps even improve the market share of those agricultural products and promote a sustainable and healthy rural economy. ■

# Africa's energy transition and COP21



FRANCIS PERRIN  
Editor in Chief of the OAG Africa Newsletter

**T**he concept of energy transition for the African continent is certainly not a new one and it has been discussed for decades within various international fora but the meaning of this term has evolved.

In the past, one of the key issues was the transition from traditional energies (wood, charcoal, and biomass) to commercial energies (petroleum, natural gas, liquefied petroleum gas) in order to reduce deforestation and desertification and to improve the living conditions of the population, especially women and children. More recently, especially since the COP21 in Paris in December 2015, the energy transition refers to the rise of modern renewable energies such as solar and wind power as well as certain forms of biomass exploitation.

These two concepts are not mutually exclusive in fact. The growth of energy consumption in Africa will be very significant due to the expected increase in population, urbanisation and economic development. There were 1.1 billion Africans in 2013 and that number could rise to 2.4 billion in 2050 and 4.2 billion in 2100. However, for 2014, commercial energy consumption in Africa was estimated at 420 million tons of oil equivalent (420 Mtoe) only on a world total of 12,928 Mtoe by the BP Statistical Review of

World Energy, a share of 3.2%. The continent will therefore need a diverse energy mix to meet its growing demand.

In theory, Africa should benefit from several provisions of the Paris agreement reached at the COP21. This agreement emphasises that the specific needs and concerns of developing countries must be taken into account, that responsibilities are common but differentiated and that it is urgent for developed countries to provide support to developing countries in the form of financial resources, technology and capacity building. The objective of funding of at least \$100 billion a year for developing countries was reaffirmed and many funds (the Green Climate Fund, the Global Environment Facility, the Least Developed Countries Fund, the Special Climate Change Fund and the Adaptation Fund) exist or are set up to help developing countries.

The COP21 also intends to promote universal access to energy, particularly in Africa, through renewable energy. Like other developing countries, African countries have no obligation to reduce greenhouse gas (GHG) emissions. To limit the average temperature increase to below 2° C compared to pre-industrial times, the capping of greenhouse gas emissions should take place as soon as possible at the worldwide level but this cap will take longer for developing countries.

Advantages of gas, solar and biomass derived energy in Africa are great. Of the 54 states of the African continent, there are about fifteen countries producing oil and/or natural gas and several others will become producers in the coming years. After the COP21, many observers

**THE COP21 ALSO INTENDS TO PROMOTE UNIVERSAL ACCESS TO ENERGY THROUGH RENEWABLES, PARTICULARLY IN AFRICA.**

and NGOs felt that the end of fossil fuels was in sight but this opinion is not very realistic. The COP21 promotes renewable energy and energy efficiency of course but natural gas is the cleanest fossil fuel and it should play an important role in the energy transition. Africa often has more an oil than a gas profile but the region has several major gas producers, including Algeria, Angola, Egypt and Nigeria, and Mozambique, Tanzania and Senegal will join them. Tanzania and Mozambique will become producers of liquefied natural gas and the second country will be in the next decade one of the largest LNG exporters in the world.

Gas resources and reserves of Africa will be an asset for the post-COP21 era as well as its considerable potential for renewable energy, especially solar and biomass. On this last point, the key issue will be funding and it remains to be seen how the promises and commitments in this area will be fulfilled. In addition to funding, three other issues are essential for Africa to move significantly toward this energy transition: the attractiveness of the region for foreign investors, appropriate state energy policies and the strengthening of regional cooperation, which remains very insufficient.

Beyond the national policies of African countries, the Paris agreement at the end of the COP21, whose direct intrinsic importance has often been exaggerated, could create or develop a momentum for renewable energy development within civil societies, the private sector and local authorities. If this trend materialised, it would undoubtedly be one of the main merits of the Paris agreement. ■

# The value proposition of commodity traders in renewable energies

Commodity traders can support the renewable energy market growth providing a wide range of services on the power trade or on fuel supply sides.



PABLO FERNANDEZ  
Head of Environmental Markets  
Mercuria Energy Group

**T**he year 2015 was a historic one, it was the tipping point towards renewable. For the first time in modern history the investments on renewable energy was greater than the investments in fossil fuel energy. In addition, positive news on renewables and climate change are related to its future prospects. After the COP21 in Paris, the governments from all around the world indicated that they will all, in a way or another, support renewable energy and carbon pricing as ways to tackle the climate change.

The four main technologies that compose the renewable energy landscape are: solar, wind, hydro and biomass. While the first three sources are considered as "fuel free" technologies, converting natural energy into electricity, the last one converts bioproducts (biogas, agricultural waste, woodchips or wood pellets) into thermal energy and/or electricity.

The first group presents opportunity for commodity traders mainly on the power side, allowing trade and services around the electri-

city produced. In the biomass energy, there are two trading angles: power trading, similarly to other technologies, and opportunities on the fuel supply chain and logistics.

As renewable technologies are more and more competitive, fewer subsidies or other kinds of government support are needed for their development. The sector is maturing and its products are becoming "commoditised". As a result, a faster growth is expected in the short future.

In general, commodity traders are not pioneers of new markets, but catalysts of growing markets. With regulations and risk management tools in place, traders bring liquidity, dynamism and innovation to support the market growth. Traders tend not to be fixed asset holders but service providers who catalyse the deployment of fixed asset projects and/or help the optimisation of the return from such assets.

To accelerate the growth of renewable energy in some consolidated markets such as the European or American markets, some of the services and value proposition from a commodity trader are:

#### For Power trade:

- **Access to Market** – especially in Europe there are numerous small scale (10 MW) solar and wind projects, Traders act as entities who provide access to spot and future power market;
- **Flexible Pricing contracts** – Subsequently, Floating vs. fixed price contracts can be negotiated giving cash flow visibility to asset holders and/or customers;
- **Weather risk management** – with generation mix being more related to weather, sunny or windy days might lead spot energy prices close to zero while storms or other natural disasters may lead to energy generation close to zero. Weather risk is a growing concern for all electricity players, specially the intermittent ones;

**TRADERS WILL PROSPER BY OFFERING A WIDE RANGE OF INNOVATIVE SERVICES AND MANAGING A COMPLEX SET OF INCREASINGLY DISTRIBUTED AND INTERMITTENT ASSETS.**

#### For Biomass fuel trade:

- **Storage/Logistics** – intercontinental flows, seasonal production and consumption patterns require intensive logistic and storage capacity for a smooth operation of biomass assets and markets;
  - **Inventory Finance** – biomass used for heating is produced mainly during summer and consumed during winter. Inventories need to be financed to bridge the average 6 months' gap. Commodity traders with strong balance sheet are great partners for such transactions;
  - **Marketing Services** – International flow requires international presence. International traders can use their vast footprint to open new markets for biomass flows.
  - **Credit Sleeve** – Given a strong balance sheet, traders can enhance the credit quality from a supplier or a final buyer and support the Project Finance from upstream and downstream projects. Commodity traders have a wide range of activities along the commodity value chain that goes way beyond the traditional buy/sell transactions. Structured transactions increase and widen the value proposition along the renewable energy sector. It will vary from marketing to traditional trading services or from logistic to financial services.
- The successful trader of the future is one that learns how to capture and position himself into growing markets. Renewable energy is growing and will grow even faster. A trader who manages to offer a wide range of innovative services (marketing, logistic and financing services) and who manages a complex set of assets that are increasingly distributed and intermittent will prosper. Moreover, this doesn't require the traders to forge a new business model, but to be open to embracing the challenge of catalysing the fast evolving market of renewable energy. ■

# ISABELLE CHEVALLEY | MEMBER OF PARLIAMENT

## Making a success of the energy transition

Following the nuclear reactor accident at Fukushima in 2011, the Swiss government devised a national energy strategy to be implemented by 2050. This strategy is based on three pillars: more energy-efficient buildings, machinery and transport, increased use of renewables, especially hydropower, and phasing out nuclear power. Any supply shortfalls will be covered by electricity from fossil fuels and by imports. The aim of this new strategy is a 3 percent reduction in energy consumption per capita by 2020 and a 13 percent reduction on 2000 levels by 2035. Measures include decommissioning Switzerland's five nuclear power plants by the end of their operating life, upgrading the electricity grids, a rise in the CO<sub>2</sub> levy, and the extension of the energy-efficient buildings programme. How does a country implement such a transition and how does it integrate market forces? We have turned to Isabelle Chevalley, MP for the Parti vert/libéral and president of Suisse Eole.

### What does Switzerland need to make its planned transition a success?

It is all about the rules of the game. Switzerland needs to improve legal certainty, predictability and flexibility in order to guarantee a clear legal framework that ensures that efforts and investments are persistent. For example, it has implemented a feed-in tariff at cost for promoting electricity production from renewable energy sources where the government covers the difference between the production cost and the market price. In other words, it guarantees producers of renewable electricity a price that corresponds to their production costs. The tariffs are defined on the basis of reference power plants for each technology and output category and are applicable for 20 years. Such tariffs must be maintained for existing installations. In Switzerland, anyone who wishes to produce electricity should be able to do so. The current waiting list for solar projects is huge. Listed initiatives would ensure a production equivalent to that of the nuclear reactor at Mühleberg.

### Isn't it unfair to subsidise renewables?

As long as fossil fuels and nuclear energy are subsidised, renewable energy should be subsidised too<sup>1</sup>. The EU reports €10 billion of subsidies for coal, €7 billion for nuclear power and €10 billion for wind power. It says that it will cease all subsidies by 2018 and the Swiss Council of States (who represents the cantons) has decided to stop renewables subsidies six years after the law came into force. This is too short. The renewables market is not quite ready.

### Can renewables be profitable?

It is purely a question of willingness and pricing. BKW's first wind power site at Mt-Crosin was entirely financed privately with energy sold under the label "wind power". The operation breaks even. Customers should be able to choose which power they wish to use and at which price: the commune of Leysin for example has chosen to be green and accepted to pay accordingly. It is also a question of marketing. When electricity in Geneva was deemed too expensive by the Federal Electricity Commission (ElCom), rather than lower their prices, the SIG (Services Industriels de Genève) chose to offer a basic "Blue" tariff for hydroelectric, a more expensive "Green" tariff for renewables and a cheaper "Grey" tariff for gas. As a result, 90% of households are on the Blue or Green tariffs. People couldn't be bothered to make the required changes for the cheaper Grey tariff. On these grounds, SIG has announced that 100% of its electricity will be from renewable sources by 2017. Companies committed to energy saving should be encouraged (and they are by way of renewable tax exemptions). There is room to charge households more – up to 20%. Such charges could easily be balanced off by increasing efficiency, for the most part by savings made through the use of less wasteful household equipment. Equipment spending 20 watts in standby mode should be systematically replaced by newer units with a single watt standby mode. There is a clear need for a legal framework to support such a conversion.



ISABELLE CHEVALLEY, MP FOR THE PARTI VERT/LIBÉRAL AND PRESIDENT OF SUISSE EOLE

**2000** PhD in chemistry.  
**2010** Founded the Green liberal party of the Canton de Vaud, a center-right political party for a responsible environmental policy.  
**2012-2016** President of Suisse Eole, Association for the promotion of wind energy in Switzerland.  
**2011-2016** Member of the Swiss National Parliament.

### The public is not necessarily aware of the efforts needed. Would better education improve the current status?

Unquestionably. Education and better information is the key to the success of the transition. SIG offers its customers Acti-véco, a tool that allows them to measure their electricity consumption in order to monitor their savings. Similar tools and a broader education can lead to significant improvements.

### Would appropriate carbon pricing make a true difference?

If CO<sub>2</sub> was correctly priced, there would be no need to subsidise anything and renewables would become profitable. Stopping fossil fuel and nuclear subsidies in 2018 will automatically raise the price of CO<sub>2</sub>. In the case of Switzerland – and of most developed countries – it would also be beneficial to apply a different policy in carbon compensation. In the current system, 1kg of CO<sub>2</sub> in Switzerland is balanced by 1kg of CO<sub>2</sub> abroad. But the cost of a kilo of CO<sub>2</sub> in Switzerland is much higher than in developing countries. The compensation should be value-based and not volume-based, taking into account production costs and power purchasing parity. Using such ratios would mean that 10 million tons of CO<sub>2</sub> in Switzerland could replace a higher CO<sub>2</sub> production – say 12 million tons – elsewhere.

### Will the need for oil disappear?

Certainly not. Power should be produced primarily from solar, wind, biomass and geothermic sources as well as hydro sources with the complement being gas generated. Oil will remain indispensable to produce the enormous amount of products from the petrochemical industry such as plastics and synthetic fibres. Such products can also be produced from liquefied coal.

### Switzerland imports large amounts of electricity. How would it do without these imports which are generally of fossil fuels or of nuclear origin?

The shortage of electricity in Switzerland is a myth. The reality is that Switzerland "launders" fossil fuel and nuclear energy of foreign origin to resell it as "clean" hydroelectric power. Geographically, Switzerland is a node and is in a position to buy cheap electricity at night (from German coal units or French nuclear plants for instance), in order to resell it during peak time to Italy as hydroelectricity.

This transformation has generated vast profits for the Swiss electricity distributors although they have lost some of their market because of German solar power<sup>2</sup>. If you look at the export-import balance, you will see that Switzerland is a net exporter of electricity. It is also revealing to analyse the CO<sub>2</sub> emissions from Swiss production (21 grams CO<sub>2</sub> /kWh) and Swiss consumption (91.1 grams CO<sub>2</sub> /kWh) published by the Swiss Federal Office of Energy (SFOE). These figures clearly indicate that Swiss citizens consume dirty electricity which does not correspond to the country's production.

### Switzerland has decided to phase out nuclear power but radioactivity travels far. Are you not concerned with the significant number of nuclear power reactors under construction in China?

The Mühleberg plant, with its cracks in the reactor shell, and the Beznau Nuclear Power Plant, which houses the oldest commercial reactor in the world, are a much bigger worry. So is the aging European nuclear pool in general. The biggest concern is the lack of desire for transparency in the European nuclear industry. It has a culture of secrecy and lies.

### In summary, what are the keys to energy transition?

Pricing and information. ■

Interview Nicolette de Joncaire

(1) In 2013, the International Energy Agency (IEA) estimated that consumer subsidies for fossil fuels amounted to US\$548 billion, while subsidies for renewable energy amounted to US\$121 billion, on a worldwide basis.

(2) German solar power peaks are balanced by units producing electricity from coal and other fossil fuels.

## Smart Health Solution

Enhance your employees' social benefits and get more for less!

### STSA Smart Health Solution is:

- All-inclusive health insurance
- Customised to meet the needs of commodity trading company employees and their families
- A tailor-made, flexible healthcare solution
- Modern benefits and VIP services
- Free transfer to Allianz Worldwide care in case of departure from Switzerland
- Generous coverage and emergency care abroad, 24 hours a day, 365 days a year

### Benefits for employers:

- Additional social benefits at no cost
- Simplification of administration
- No subsidy obligation



# Innovation in commodities

Business model innovation will challenge the traditional economics of the commodities supply chain. A core topic for the industry in the decade to come.



ADRIAN MOGUEL Y ANZA  
Founder and CEO of Libero Commodities

To different degrees, every business model in the industry is being challenged. The answer to these challenges is innovation. Since the turn of the millennium, the structural changes within our industry have accelerated to the fastest pace in its history. In varying degrees, these changes have quietly affected hard and soft commodities alike and all the participants across the supply chain. Some of these structural changes are quite momentous. The industry went from hedging in open-outcry pits to placing orders on electronic platforms, where the order flow is anonymous and systematic, and short-term macroeconomic drivers are as relevant as the fundamentals of the underlying. Consumer behaviour has changed from price-sensitive demand towards environmental and socially-conscious consumers, which, step-by-step, are demanding ever-higher levels of sourcing transparency and accountability. And our sector is in transition, from being an industry where closely guarded supply and demand information gave actors a clear edge, to

a “new normal” where actors are over-supplied with the real time availability, dissemination, and modelling of quantitative and qualitative data.

IN AGRICULTURAL commodities in particular, important changes have swept the landscape as well. The emergence of new futures markets around the globe, increasingly liquid and cash-convergent, represent a structural change to the post-war landscape that was in place for most of the second half of the 20th century, a shift that is empowering a new breed of origin and destination participants. The emergence of container-bound supply chains is allowing new and smaller participants to increasingly compete on a level playing field with legacy and infrastructure-heavy incumbents. Furthermore, the global convergence of agriculture with energy added a layer of welcomed demand optionality, but also a new layer of intrinsic volatility, particularly to the grains and oilseeds markets.

The overall context of these structural changes was not one of historical price averages, but one of a 10 year commodity supercycle and a global liquidity crisis in the middle of it. In hindsight, the supercycle not only delayed the impact that some of these structural changes may have had, but it also increased the complexity of how these structural changes will have to be dealt with in a post-supercycle period of below-average industry margins, and above-average industry regulation.

TRUE BUSINESS model innovation, which challenges the traditional economics of the commodities supply chain, will be a core topic for the industry in the decade to come. As legacy and established participants are better at optimising existing processes than at disruptive and game-changing innovation, the optimisation of operating expenses will take centre stage in the

THE EMERGENCE OF NEW FUTURES MARKETS AND OF CONTAINER-BOUND SUPPLY IS ALLOWING NEW AND SMALLER PARTICIPANTS TO INCREASINGLY COMPETE.

short term. However, this might not be enough this time around. Real business model innovation will only be achieved when organisations question the right of each of their business units to exist in the current market structure.

If innovation is driven either by optimisation of existing processes or by disruptive initiatives that affect the economics and composition of the supply chain, what will innovation look like in our industry?

OPTIMISATION will be driven by technology – mostly in mobility and big data. It will encompass all areas: from process-driven activities such as documentary processing and clearing through electronic platforms, to real-time auditing, to the enhancement of decision-making practices like advanced analytical capacity for the calculation of net trading margins adjusted for risk, operational load and equity utilisation on a pre-trade basis. Disruptive impulses, on the other hand, are most likely to occur in the main production regions, where global consumer demand for social responsibility will empower regional participants, supported by global information access, new infrastructure availability and, in some cases, new regional futures markets that better reflect the regional spot and forward price dynamics.

As in any industry, strategic vision and creative capacity will not be sufficient for meaningful innovation. Considering that, in commodities, the barrier is not one of entry but one of scalability, the main challenge for innovation within our industry will be the working capital structure that will allow the incubation cycle of each initiative to mature in an industry where razor-thin margins are the rule. Open collaboration between the big and the small, global and local and old and new will be the hallmark of innovation in the foreseeable future. ■

## THE DISTRIBUTED ENERGY REVOLUTION

# A disruptive change in energy markets

Societies and economies world-wide are undergoing massive changes in the energy sector. This is not about ethical principles but about hard economic facts.



DR TORSTEN AMELUNG  
Senior Vice President Trading & Customers, Statkraft

Since 2008 in the aftermath of the financial crisis a number of countries have been experiencing changes to their power sectors that are likely to disrupt the current business models in the utility industry. Since then the prices for solar photovoltaic (PV) systems, storage batteries and onshore-wind generation units have come down by more than 50 percent, while investment in conventional power generation technology has been increasing. This has triggered a number of new business models ranging from households producing electricity on their rooftops to storage batteries saving extension in distribution grids. Initially the underlying economic model was associated with the German Energiewende (“Energy transition”). Since then, 67 countries have implemented subsidy systems for solar and wind generation.

Today it is no longer Europe that leads as investment levels in China and the USA are much higher. Governments have experienced that with such an energy transition one can hit two birds with one stone: increase the share of renewable production and save emissions, while on the other hand benefit from local positive employment effects that come with the increased installation of distributed energies. As the subsidised solar and wind plants produce at near-zero marginal costs the increasing number of installations turn investment towards merchant power stations into high-risk undertakings. In Europe, regulators try to prevent the closure of conventional power stations by establishing capacity markets thus paying the generators for the capacity rather than the power produced. The underlying logic is that back-up power is needed during hours of less wind or no solar radiation. Yet, with further declining prices of batteries and solar installations, grid parity has been reached on the household level in a number of countries and regions. Given the continued decline in prices for batteries and solar systems, there seems to be a clear trend towards increasing grid parity around the world.

This is likely to change the way the power sector is organised. Today, in most countries large conventional power stations are connected to high-voltage transmission systems and produce electricity to match the demand of these systems. In the future, a lot of the generation will be decentralised and located near demand centres. Both renewable generation and power demand will be adjusted according to regional demand by making use of increasingly sophisticated IT

GIVEN CONTINUED DECLINE IN PRICES FOR BATTERIES AND SOLAR SYSTEMS, THERE SEEMS TO BE A CLEAR TREND TOWARDS INCREASING GRID PARITY AROUND THE WORLD.

solutions. In tomorrow’s world, large conventional power stations will increasingly provide for capacity services and generate power for larger industrial agglomerations.

In the future, households and even smaller industrial and commercial customers are likely to use their potential in demand side management. Smart and yet affordable IT solutions provided by companies such as Nest and tado° will give the consumers and producers additional power, some of them becoming “prosumers”. They will also have the choice of managing their production and consumption on their own or leaving it to a service provider. In some regions, grid connection to the transmission system might turn out to not be economically viable. This holds especially true for countries in which the high-voltage grid is still growing.

Of course this shift from centralised to decentralised power systems will impact the markets for energy commodities. On the one hand, conventional power stations’ demand for oil, gas and coal for power generation might grow less on a global level. In some countries, this decrease is a certainty. On the other hand, power consumers will become increasingly conscious of their demand patterns. This will impact the demand for energy saving technologies, the demand for heating and cooling and therefore the use of oil and gas in the respective markets. Unlike some of the demand fluctuations caused by business cycles, this is no longer a disruption but a long-term trend that is here to stay. Yet, demand for commodities that are necessary for the production of photovoltaic cells and storage batteries is likely to increase dramatically. ■

# Big Data in the commodity supply chain

Innovation has enabled the supply chain to become the critical business discipline.



RICHARD QUIGLEY, CEO  
DANIEL DIXEY, Data Scientist  
DataGenic

Effective Supply Change Management (SCM) has blended research and industrial engineering to enable companies to improve efficiency. Efficiency in this context is not just minimising costs, meeting demand and capacity utilisation, it is the overall benefit it gives to the business. The encompassing benefit is that it provides the guarantee and level of security to the customer that they can be reliable, responsive to demand and deliver with minimal cost, whilst still improving the bottom line. Is this possible within the confines of your current systems and has there been an over-reliance on legacy systems to power your infrastructure? Before continuing it's important to acknowledge the great technological achievements of SCM: it began with approaches of how scientific techniques could be applied to improve human labour; followed by scientific rigour in the form of Operation Research, and most recently the advent of the Enterprise Resource Planning (ERP) systems. It's now time for the next major revolution – Big Data!

IBM estimates that 90 percent of the data in the world today has been generated in the last two years. To put this in context, in 2003 Mark Liberman, a linguist at the University of Pennsylvania calculated that the total amount of all human speech ever to be spoken at 42 zettabytes. In 2015 alone 8-9 zettabytes were created and forecasts project that by 2020 around 40 zettabytes will be produced per year. The concept of Big Data has been driven by technology and price where the use of technology has never been as prevalent in our personal and business lives as it is today. Using our devices we can tweet, call, instant message, text and photograph almost effortlessly, this is generating an enormous exhaust of data that can be collated and analysed. This is what is referred to as Big Data: characterised by larger volumes, greater variety and complexity, being produced at immense velocity. In summary, Big Data looks to collect and manage large quantities of heterogeneous data to serve large scale web applications and powerful analytic platforms.

THE POINTS below identify possible key areas that a business could improve upon with the application of Big Data.

- Reliability – the ability to quickly identify weak points, ensure that deliveries are to the right place and at the right time with the best utilisation of resources.
- Responsiveness – it's the intelligence to anticipate demand, optimise lead times and ensure scheduling is accurate.
- Costs – minimising costs by having productive workforce and machinery that complement one another in addition to the ability to learn from

**BIG DATA IS COMPLEX AND OFTEN CONFUSING BUT WHEN USED CORRECTLY AND INTRODUCED EFFECTIVELY, AN ORGANISATION CAN REAP THE BENEFITS.**

their mistakes/defects.

- Asset Management – the capabilities to have good cash to cash cycle through good practices in an ERP system
- Customer Focus – Understanding the client/customers at whatever stage of the Supply Chain.

BIG DATA can be applied to all of these areas to drive innovation, reduce costs and help maintain or gain competitive advantage. Organisations will need to recalibrate their business models to ensure survival at the basic level and to seek an advantage. The future competitive advantage and productivity enhancements will involve "intelligent" technologies that can process, manage, analyse and provide "actionable insights". The time for real-time "intelligent" supply chain practices has already begun – Big Data will divide companies. Ocado, a market leader in online grocery delivery, began their journey seriously in 2013 where they sought to employ approximately 150 technology specialists and engineers to help build its "game-changing" infrastructure. Internally they have revolutionised the end-to-end cycle of taking orders, preparation of the produce to delivery all within a tight deadline with optimal efficiency. This has all been possible with the use of Big Data and intelligence driven from data, to enable themselves to evolve from a small British start-up to a Global company. Big Data is complex and often confusing but when used correctly and introduced effectively, an organisation can reap the benefits. Big Data IS the next frontier to drive innovation, competition and ultimately profits. The revolution is only beginning. Make sure you are a part of it. ■

## AGRICULTURAL TRADE DATA

# The new frontier in market transparency

The next push in agriculture information is already taking place. Real-time communication tools, professional networks, geographical information systems and big data are catalysing a new wave of innovation.



SIAVOSH ARASTEH  
Co-Founder and Director of AgFlow

In the summer of 1972, a major crop failure in Russia triggered vast grain purchases by the Soviets to avert widespread hunger. The Soviets bought the US grain surplus with utmost discretion. Once the purchases became known and the sellers had covered their position, a major market disruption sent grain prices soaring all over the world and ultimately hurt American consumers. The "Great Grain Robbery" prompted the US government to request greater transparency from grain exporters. The US intelligence community launched new technology programs to monitor crops worldwide.

Such a dramatic episode is unthinkable in today's markets but it contains insights on a mindset that is still relevant more than 40 years later. Historically, agricultural trading has been a business-to-business relationship involving private companies operating with maximum

discretion, far away from public eyes. Secondly, and more importantly, the story reflects a long-standing aversion to over-the-counter market transparency that still prevails today despite wide-ranging changes in the global marketplace. Indeed, the context in which agricultural merchants operate today is different at all levels: the world has been through several communication revolutions, from telex to fax, later email and now instant communication tools.

Agricultural markets have globalised and supply chains have become more efficient. Agriculture trading has moved out of the "sweet spot" in terms of trading attractiveness: margins have eroded as a result of competition. In the past decades, the main agricultural commodity exchanges have developed increasing liquidity; new exchanges have been successfully launched and with commodities becoming an asset-class; participation in what is now a transparent market has diversified. The increased liquidity in futures enables the industry to today offset their market risk. Meanwhile, companies involved in the global supply chain have sought new capital structures by going public, triggering rising public awareness and scrutiny of the sector. Traceability and sustainability have become major elements of the environment. Regulators are eyeing the industry. This new level-playing field is forcing the entire industry to rethink their models.

The next push in agriculture information is already taking place within the agricultural underlyings themselves. Real-time communication tools, professional networks, geographical information systems and big data analysis are catalysing a new wave of innovation that bring information efficiencies to decision-makers: rapid and relevant access to homogenised information bundled from public and private sources,

**TRANSPARENCY IS KEY TO AN EFFECTIVE PRICE DISCOVERY IN THE AGRICULTURAL SUPPLY CHAIN. PRICE DISCOVERY MECHANISMS LEAD TO A MORE EFFICIENT ALLOCATION OF RESOURCES.**

the ability to scale analysis and uncover patterns on large amounts of data, and finally information systems enabling an efficient exchange of over-the-counter information between market participants active in specific regions and agricultural product lines.

Transparency is key to an effective price discovery in the agricultural supply chain. Price discovery mechanisms lead to a more efficient allocation of resources: farmer planting decisions among different crop choices, research focus in plant breeding for the benefit of both producers and consumers and a suitable government policy formulation. Crucially, transparency enhances market liquidity, which allows operators throughout the supply chain to lay-off price risk in volatile markets. Price volatility normally comes from supply shocks, i.e. low crop production due to drought or other natural events and less so from the demand side of the equation. Transparency enhances an efficient supply chain, which provides world consumers products at price competitive levels.

The agricultural trade was the first industry to globalise in Ancient Times. In the 19th century, the development agricultural commodity exchanges crystallised innovations in communication technology, transportation, financing and warehousing; paving the way for the expansion of international trade and modernisation of the market. There are thus no reasons why the agriculture trade cannot once more be at the forefront of innovation and change. Embracing transparency will improve the environment in which the merchants operate in relation to their counterparts, their ability to measure and mitigate risk, and overall facilitate a better understanding between the private sector, governments and other stakeholders. ■

# Vessel tracking unlocks innovative supply chain analysis

With AIS and other maritime data, commodity traders have more intelligence at their fingertips than ever before.

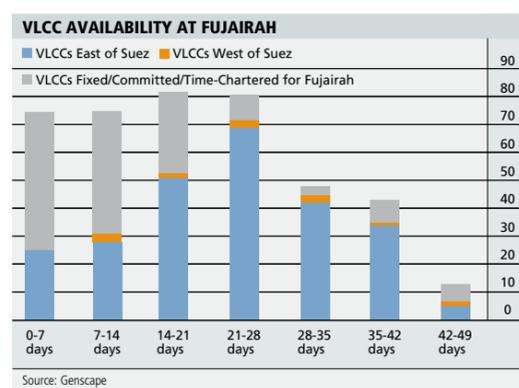


**ROBERT SNYDER**  
Maritime Data Scientist, Genscape

The advent of big data analytics has revolutionised most industries, and global shipping is no exception. Remote sensing technologies have enabled companies to collect fundamental data on the production and transfer of commodities at every step of the supply chain. For shipping in particular, the combination of terrestrial and satellite-based sensing technologies (including visual, radiofrequency, radar, and more) and big data techniques has enriched the intelligence available to commodity traders and provided transparency to the market. Perhaps the most important sensing technology is AIS, or Automatic Identification System, which facilitates the collection of data on seaborne vessels via radio. Starting in 2002, the International Maritime Organization (IMO) required all vessels over 300 gross tonnage to be equipped with an AIS transceiver. The purpose was primarily for collision avoidance: speed, position, destination, and other fundamental voyage data is communicated between nearby vessels continuously in real-time. Since this communication is done through VHF

radio signals, AIS data can be picked up by low-orbiting satellites or land-based receivers tuned to these signals, enabling Vessel Traffic Services, coast guards, fleet owners, and other organisations to monitor groups of vessels in real-time.

Large AIS receiver networks (such as [www.vesseltracker.com](http://www.vesseltracker.com)) receive over 250 million data points from over 2500 land-based receivers located in major ports, along coastlines, and throughout inland waterways. In order to make this data useful, it needs to be cleaned, aggregated, and combined with other sources of data. Cleaning AIS data requires a comprehensive knowledge of AIS radio signal and noise characteristics, particularly in areas of high ship density. In order to match data points to actual vessels, AIS data must be combined with an extensive database of vessel and port characteristics. Once compiled historically, this enriched data unlocks the versatility that AIS provides to commodity trading and tracking. How much cargo is waterborne, where and when cargos will arrive, where ships are



**AIS DATA CAN DO MORE THAN PROVIDE REAL-TIME UPDATES ON CARGO. IT PROVIDES THE FOUNDATION FOR SOPHISTICATED ANALYTICS AND CREATES NEW RESEARCH OPPORTUNITIES.**

likely to berth, the availability of empty vessels, and triggers for congestion can all be predicted and modelled. Machine learning techniques applied to the entire history of AIS data can predict where a vessel is going and how much cargo it is carrying at all times – whether the AIS data is available, unclear, or missing. The results produce flow models that are more complete and more accurate than those derived from AIS data alone – and hence more useful for commodity traders. AIS data can do more than provide real-time updates on cargo. It provides the foundation for more sophisticated analytics and creates new research opportunities. For example, AIS data can give you an idea of tanker supply in the Middle East Gulf by locating all oil tankers which are empty and heading to the Gulf. But AIS can also be used to identify the speed of the entire VLCC fleet and, using a historical database, analyse how that speed changes under different physical and market conditions. A Genscape analysis shows that the average VLCC fleet speed when laden inversely correlates with bunker prices and the average VLCC fleet speed when ballast directly correlates with shipping rates. Thanks to AIS data, a connection between VLCC fleet speed, effective size of the VLCC fleet, VLCC supply, and market conditions affecting VLCC tankers could be statistically demonstrated.

Vessel data is one piece in the puzzle of tracking and predicting commodity flows. When AIS data is combined with big data techniques and other remotely sensed data from all elements of the supply chain (including processing facilities, storage tanks, pipelines, and more), vessel tracking becomes a powerful tool for shipping operations, maritime surveillance, and global supply chain tracking in commodity markets. ■

# Can blockchain revolutionise trade finance?

Trade finance is an obvious area where blockchain technology can fundamentally alter the rules of the game.



**ANDREAS LENZHOFFER**  
Partner with PwC Strategy&, based in Zurich

Let's look at the trade finance process today: as an exporter, once you receive the bill of lading, you add the invoice and the related certificates and put them all in an envelope and bring it to your local bank. They check it, approve it and send it to the recipient. The recipient checks all the documents again and triggers the receipt. When the recipient's bank receives the bill of lading, it triggers the payments to the supplier and goods are released.

All these process steps are based on antiquated tools, consume a tremendous amount of time and are all prone to problems and forgeries.

The technology which is likely to change this is called "blockchain". Originally the formal name of the tracking database underlying the digital currency bitcoin, the term is now used broadly to refer to any distributed electronic ledger that uses software algorithms to record transactions with reliability and anonymity. At its heart, blockchain is a self-sustaining peer-to-peer database technology for managing and recording transactions without the involvement of central banks or clearing houses. Because blockchain verification is based on algorithms and consensus among

multiple computers, the system is presumed immune to tampering, fraud or political control. Because every core transaction is processed just once, in a shared electronic ledger, blockchain reduces the redundancy and delays that exist in today's banking system.

Blockchain as a technology is still in its infancy, but some first applications in trade finance are emerging. Standard Chartered Bank, DBS Bank and Infocomm Development Authority (IDA) have developed a proof of concept (PoC) for a blockchain-based invoice trading platform. The platform allows banks to convert invoices into digital assets on a distributed ledger. Since the participants are given a cryptographic identity, confidentiality is preserved, while the information on the status of invoices seeking financing is accessible to all users. The initiative is envisioned as an open ecosystem in which neutral third parties can participate and verify the authenticity of the trade documents being financed. "We believe we can substantially reduce the risk of duplicating invoice financing using the distributed ledger, and soon we will start looking at other trade

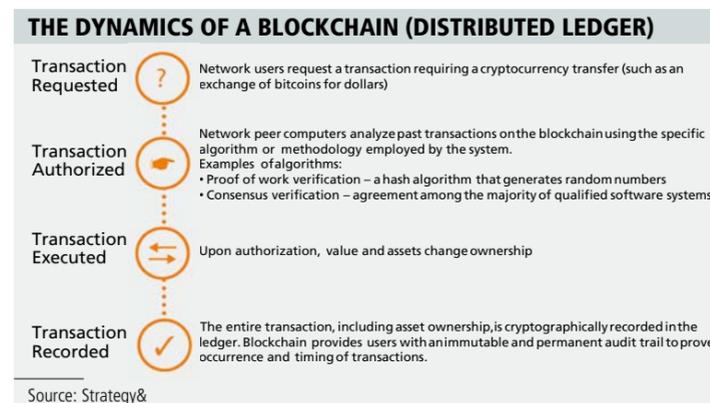
**STANDARD CHARTERED, DBS BANK AND IDA HAVE DEVELOPED A PROOF OF CONCEPT. BARCLAYS IS PARTNERING WITH WAVE TO BRING BLOCKCHAIN TO TRADE FINANCE.**

instruments like the bill of lading," says Gautam Jain, Standard Chartered's global head of digitalisation. "In time, we believe that the assembly of all the various documentation and processing stages involved in a trade transaction can happen on a distribution ledger."

In another initiative, Barclays is partnering with Wave to bring blockchain to trade finance. Wave will focus on integrating blockchain technology in one part of the supply chain process, where it will take the place of traditional bills of lading (documents issued by carriers that include details about a shipment, its type and quantity of goods and its destination) and give title of the property to a certain party.

Looking ahead, 2015 was marked by blockchain hype, but 2016 will be the year of blockchain applications. In "A strategist's guide to blockchain"<sup>1</sup>, Strategy& outlines four steps to a blockchain-enabled strategy: (1) Find specific opportunities: Start by compiling a list of potential pilot projects for which a distributed ledger could make a difference. (2) Explore feasibility and readiness: For each of the starting points you've chosen, develop explicit hypotheses describing how distributed ledger technologies can make a difference. (3) Put your prototypes to work: As you move into implementation, you will adjust your parameters to make the prototypes work. (4) Scale your efforts appropriately.

With any luck, your prototype experiments will result in some immediate, tangible improvements that justify your interest in blockchain. They may also expand your awareness of its potential and of what it will cost to implement real change. ■



1. *A Strategist's Guide to Blockchain*, by John Plansky, Tim O'Donnell, and Kimberly Richards, January 11, 2016 / Spring 2016 / Issue 82, <http://www.strategy-business.com/article/A-Strategists-Guide-to-Blockchain?gko=0d586>

# The future of Deep Strategy Analytics in commodities trading



FRANÇOIS GILARDONI, PH.D.  
Member of the Board, e-GTSA SA  
Contributing Author:  
TIESE MANIGO GILARDONI

Commodity prices have fallen to deep multi-year lows. Uncertainties in the political and economic landscapes, heterogeneous tax, regulatory obligations and ownership laws across different jurisdictions, cross-border movement of data and privacy concerns are pressuring the industry to adapt in order to thrive. The number and diversity of the parties involved in the commodity trading value chain – sometimes technophobic and often operating in silos – hamper the wider adoption of innovations regardless of their nature, incremental or disruptive. The onset and rise of the digital revolution and artificial intelligence (AI) – the next frontier for innovation, effectiveness and performance – hold much promise for corporations. As a result, the banking industry has started pouring time and resources into devising new solutions for corporate demands. Fully integrated and predictive digital frameworks will bring a substantial competitive-edge to all industry players at every stage of the value chain. Deep Strategy Analytics (DSA) is at the confluence of the digitalisation of trading operations, big data and AI. DSA will revolutionise human decision-making, minimise risks, and unearth valuable insights that would otherwise remain hidden, especially when supplemented by management input based on context-specific knowledge. It will

integrally facilitate the improvement and optimisation of business rules for automated handling of any transaction and other record-based activities. To date, there is no instrument that allows for fully integrated DSA all along the commodity trading value chain. DSA will no doubt disrupt the industry and become a remarkable asset for leading companies to outperform their peers. DSA is still embryonic and amalgamates diverse technologies, techniques and methodologies. Its building blocks – big data, deep learning, the Internet of Things (IoT), blockchain and smart contracts – are set to transmute the commodity trading industry. Big data are datasets whose size is beyond the ability of classic database software tools to capture, store, manage, and analyse. Data alone are worthless. The aggregation and fast processing of consolidated operational, transactional and financial data by self-adaptive predictive models – via deep learning algorithms – will bring a resilient competitive edge to those controlling the entire data flow. Deep learning moves beyond classic computing to create systems that can autonomously learn to perceive and model the “world” on their own. Soon, intelligent agents will deliver dynamic and contextual actions and interfaces. Timely access to data is key and IoT enables it. IoT is ubiquitous sensing and it is changing the world. IoT refers to connected static or mobile objects that have embedded sensors and the ability to send and exchange data over wireless networks. Communications and process technology advancements continue to enable more data collection than ever before from an ever increasing number of sensors monitoring almost anything, anywhere, anytime. The fast analysis and exploitation of IoT data

DEEP LEARNING MOVES BEYOND CLASSIC COMPUTING TO CREATE SYSTEMS THAT CAN AUTONOMOUSLY LEARN TO PERCEIVE AND MODEL THE WORLD ON THEIR OWN.

with deep learning algorithms will provide the commodities industry with instant information and real-world knowledge. In addition to pure analytics, DSA can alleviate the growing pressure from consumers and regulatory authorities in different jurisdictions for improved reporting, transparency, and dissemination of data. Blockchain technology is possibly part of the solution. A blockchain – sometimes referred to as a “distributed ledger” – is an electronic, distributed record of all digital transactions of a given asset, real or virtual, within a given public or private network. Of particular interest is its ability to trail, at any given time, every single action, transaction and attributes; such as origination, proof and transfer of ownership, provenance, quality, grading and location of goods. It can bring trust, consistency and transparency to the movement of physical commodities in a supply chain. All digital traces are also visible to any involved parties throughout the lifecycle of the trade. Some major players are now exploring how to use blockchain and enable smart contracts. A smart contract is a computerised transaction protocol that executes the terms of a contract either from human-to-machine or from machine-to-machine. Certainly, DSA requires a high degree of interoperability in commodity trading workflows to perform at its best. The need to capture, aggregate, concentrate and exploit every piece of information, knowledge and data along the value chain is strong. The future of DSA is to develop a unique and intelligible framework that will empower those with instant access to large amounts of data and information from different feeds, providing true competitive and economic insights. ■

# Agricultural innovation turns Canada into the world's leading pulses exporter

Over the last 30 years Canada turned into the world leading exporter of pulses. A new global supply chain was born. From Saskatchewan to the Middle East.



ALEXANDRE KRIEGER  
Head of Trade Finance at BCV

Lentils, beans, chickpeas, and other pulses are a tasty mainstay of many diets – especially in the Indian subcontinent and the Middle East. But two-thirds of these protein-packed legumes are actually grown thousands of miles away, in Canada's heartland. Or more specifically in the province of Saskatchewan, where the local government decided to promote agriculture as a way to diversify the region's economy. A study carried out by the University of Saskatchewan's Crop Development Centre found that pulses could play an important role in crop rotation. That, combined with the many other advantages of pulse crops, helped launch a new industry in Canada – now the world's leading exporter of pulses. Pulse crops are ideally suited for the prairies stretching from the Great Lakes to the Rocky Mountains, as they help these regions with the

dual challenge of protecting the soil and preserving water in industrial farming processes. Their nitrogen-fixing properties reduce the need for costly fertilisers; pulses also improve soil management through more effective crop rotation. Canadian farmers began growing pulses in the 1970s, not only to improve yields but also to meet growing demand for a low-cost, high-protein alternative for humans as well as for animal feed. And today they fit in perfectly with another crucial trend: the switch to sustainable, low-carbon farming methods. Pulse crops have one of the smallest environmental footprints in agriculture: producing a kilo of lentils generates 30 times less CO<sub>2</sub> than a kilo of beef.

But for pulse farming to provide a real boost to the local economy there needs to be a smooth-running supply chain between producers in Canada – where pulses grow under optimal conditions – and consumers in the Middle East and Indian subcontinent, where these staples are in high demand. And in fact, the entire production chain experienced M&A-driven consolidation as it grew. As an example, in 2007, Agtech Income Fund acquired Saskcan Pulse Trading and renamed the combined company Alliance Grain Traders. Then in 2009, Alliance Grain Traders acquired Turkey-based Arbel Group, creating a global leader in the processing, trade, and export of pulses and staple foods. Alliance Grain Traders changed its name to AGT Food and Ingredients in 2014, completing its transformation into a food-industry behemoth. The man at the helm of this empire is the Canadian-born Turk, Murad Al-Katib; his company's operations span from its headquarters in Regina, Saskatchewan, to its main processing center in Mersin, Turkey, its trading desk in Geneva, Switzerland, and its distributors in India.

IN 2009, ALLIANCE GRAIN TRADERS ACQUIRED TURKEY-BASED ARBEL GROUP, CREATING A GLOBAL LEADER IN THE PROCESSING TRADE AND EXPORT OF PULSES AND STAPLE FOODS.

Thanks to its fully integrated supply chain, AGT Food and Ingredients enjoys several advantages over its more-fragmented competitors. The company adds value every step of the way. It serves as a market place for goods not traded on an official exchange, and gives farmers a reliable buyer, since it needs a steady supply for its processing plants. It can also run more efficiently and leverage economies of scale to negotiate lower shipping costs. This close coordination makes it easier to comply with ever stricter food traceability regulations and certification requirements. All that results in better tracking and transparency along the entire value chain – a big plus for banks in their trade finance activities.

Today AGT Food and Ingredients has a 28% share of the pulses market. It generated USD 1.6 billion in revenue in 2014 and has 2,500 employees around the world. Its product lineup has expanded beyond the traditional lentils, beans, and chickpeas to include durum wheat, pasta, other packaged foods, and even pet food. What's more, AGT's production facilities are state-of-the-art: its plant in Regina is fully automated, with cleaning, sizing, splitting, sorting, and packaging machines that operate 24/7 under the watchful eye of some 40 staff. Innovation is another growth driver for the company. Based near Saskatchewan's crop research cluster, it can leverage the latest advancements in farming technology.

The fact that two-thirds of pulses consumed around the world come from Canada is no accident. As the local authorities are always eager to recall, it is the result of a shared vision for a leading global exporter, combined with the united efforts of farmers, researchers, traders, distributors, and policy-makers. ■

## ALEXANDER R. MALAKET | ICC

## Will the renminbi become dominant?

According to data published by SWIFT in December 2015, the Chinese renminbi (RMB) experiences a «stellar ascension» as an international trade currency. Nevertheless, the US dollar remains dominant, with a 51.9% share of the value of international currency usage and the euro holds the second place, with a 30.5% share with the British pound in third position, with a 5.4% share, followed by Asian currencies such as the Japanese yen and the Chinese renminbi (RMB). SWIFT data shows that the RMB currently ranks fifth internationally and that its usage continues to grow significantly. The People's Bank of China (PBOC) demonstrates a strong commitment to promoting the internationalisation of the Chinese renminbi and the Chinese government has implemented a range of supportive policy measures. Beijing is clearly seeking to globalise the renminbi, through currency swaps and trade-financing facilities, and the offshore renminbi can now be cleared all over the world. Geographic and regional factors also play a role and amplified usage of the Chinese currency in Asia-Pacific through countries such as Japan has also been noted. Will the renminbi reach a dominant place in international trade and trade finance anytime soon? We have asked Alexander Malaket, President of OPUS Advisory Services International in Canada and Deputy Head of the Executive Committee of the International Chamber of Commerce (ICC) Banking Commission.

#### How fast is the renminbi share of international trade growing?

Progress has been striking since China began to open up its economy and Hong Kong started serving as an international hub for the offshore renminbi (CNH) market. Since then, Singapore, Taiwan, and London among others have also developed their own offshore renminbi markets and the trend is quickening. The results are evident in the SWIFT trade statistics. With the increasing flexibility and a growing number of clearing centres, we see an increased acceptance of the Chinese currency across more markets. China wants to grow its market share and is progressively exercising more influence to do so by actively promoting RMB payments for its trade. What started as commercial gestures – e.g. discounts on RMB settled trades to local counterparts – is slowly becoming a requirement and State-Owned Enterprises (SOE), highly active in trade, are instrumental in applying government policy. The convergence between onshore and offshore rates, carefully managed by Beijing, demonstrates the success of this policy. The evolution of China from a sell-side to a buy-side player will further enable the rise of the RMB market share. China is the second largest world economy. It accounts for 15% of global GDP and 50% of growth. The implications in terms of trade impact can only be expected to be significant.

#### For a long time, the contention was that the RMB was trading at a discount.

##### Is it true in light of the recent devaluation?

The situation, both commercially and politically, has changed materially since China faced strong criticism from various directions, for the (export-enabling) rate at which the RMB was trading. In hindsight, the carefully managed state of the currency and its role in global markets seems to have been effective. Recent dynamics in the capital markets in China, coupled with relative decline in GDP growth – which remains high relative to most markets – coupled with persistent questions about data quality and reliability plus concerns about high rates of default in the loan portfolios across the banking sector combine to support a lower rate for the RMB.

#### How detrimental is the loss of trust in Chinese GDP figures?

There are endless discussions – in China and elsewhere – about GDP metrics. The fact remains that, whether Chinese GDP grows at 5 percent rather than seven percent, there is still a significant delta with the rest of the world. China is still competitive on exports in spite of wage increases, which were inevitable in the bigger picture, and a natural part of economic evolution. Even if labour arbitrage is now more attractive in other markets, there are other factors to consider relative to China and the growing adoption and importance of the RMB. One such factor is the notable and accelerating growth of the middle-class and the increasing levels of disposable income available to underpin economic growth. China becomes a case study for numerous international institutions following its success in pulling about 400 million citizens above the poverty line, and even with that,



**ALEXANDER R. MALAKET, CIPF, PRESIDENT, OPUS ADVISORY SERVICES INTERNATIONAL AND DEPUTY HEAD OF THE EXECUTIVE COMMITTEE, ICC BANKING COMMISSION**

**2000** President OPUS Advisory Services International Inc.

**2013** Member of the Board of Directors of the Forum for International Trade Training (FITT).

**2013** Member of the Executive Committee of the Board of Directors World Trade Centre Winnipeg.

**Dec. 2013** Deputy Head of the Executive Committee of the International Chamber of Commerce, Banking Commission.

**Feb. 2014** Publishes Financing Trade and International Supply Chains: Commerce Across Borders.

**Jan. 2016** Co-Chair, Trade Finance Faculty, ICC Academy.

there is much potential for growth, including increasing activity at the higher value-added ends of the spectrum of economic activity and global value chains. The evolution of the service sector in China will be one dimension worth watching carefully.

#### Is the inclusion of the RMB in the IMF's Special Drawing Rights basket significant?

It is a significant and important step forward, a milestone; because it gives the RMB an additional element of credibility, and integrates the currency further into the global currency markets, system of trade and of economic activity and policy.

#### What would be the key drivers to the RMB's further rise?

Credibility of the metrics is important as mentioned earlier. So are the legal framework and its regulatory impact. It is undeniable too, that the rise of the RMB will be driven by geopolitical factors. One cannot decouple politics from trade and currencies. The position of China in world economics and the pressure born from its rise as a key political player in Africa, Latin America and South East Asia will be a major factor, the importance of which will increase over the coming years. There was a time when the euro was considered as a serious potential competitor to the U.S. dollar but the political dissensions in the European Union and the recent sovereign crises in the region have combined to dilute its impact and its appeal as a global currency. Fundamental issues about the future of the EU and of the euro will need to be resolved, and in the interim, businesses and jurisdictions looking for an alternative – particularly those with material commercial or political ties to China, will gravitate – or be firmly nudged – to the RMB. The euro ranks second in share of the value of international currency usage but its share has decreased from 37 percent in 2007 to 33 percent in 2012 and again to 30.5 percent in 2014.

#### Could the RMB eventually compete with the dollar?

I cannot see it happen any time soon. Its share will grow but there are still some fundamental changes to be achieved to envisage a RMB competing on anything close to equal footing with the dollar. The level of trust in the currency, in the metrics and in the political stability is not yet sufficient. And there is a built-in bias in favour of the dollar and the euro, in spite of continuing debates about Grexit and Brexit. Many years, perhaps even a decade will pass before one can envisage a world where the RMB and the US Dollar share equal standing as currencies of global commerce. The process will be impacted by defensive measures that will inevitably and understandably originate from the United States, and might also arise out of the EU and other areas, even as numerous jurisdictions appear to embrace the rise of the RMB by establishing RMB centres around the world. A small indication can be seen by the way authorities in the US reacted some years ago when the increasing use of the euro in grey and black market and illicit activity raised concern as a leading indicator of what could come. All this said however, a significant shift in market share could still happen in our lifetime.

#### Is the role of Chinese banks in trade finance progressing strongly?

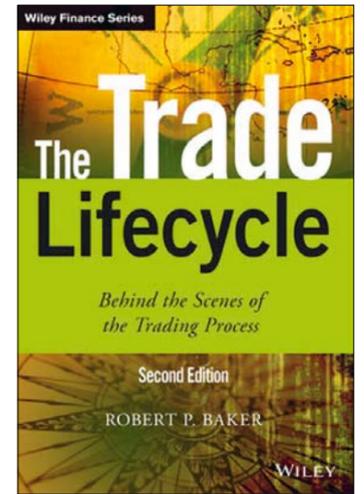
There is clearly an increasing interest from Chinese banks in trade finance. Not only from Tier 1 banks but also from Tier 2 institutions. When China entered the WTO, Chinese expertise in letters of credit was dubious. Since then, the banks' skill set has evolved significantly and so has their appetite. The 2015 edition of the ICC Annual Survey shows that the volume of L/Cs issued in CNY has more than doubled between 2011 and 2014. With over 82.51 percent of MT700, the dollar remains the main currency for L/C issuance but the RMB is now the second most used currency at 10.17%. Chinese banks increasingly support both producers and traders. China's activities in Africa are well known, as is the scale and appetite of Chinese buyers for commodities and strategically important products. A single exporter in Latin America was reported to be shipping \$1.5 billion in commodities per month on the basis of documentary letters of credit. China is moving upward along global value chains; SOEs play a very significant role in achieving both commercial and political objectives, including the internationalisation of the RMB. Chinese progress towards the buy-side creates an additional degree of leverage in both the commercial and the political arena. ■

# Commodities review of books

«The Trade Lifecycle: Behind the Scenes of the Trading Process», Robert P. Baker  
2<sup>nd</sup> ed., Wiley, 2015, 416 pages.

Based on the author's experiences, «The Trade Lifecycle» catalogues and details the various types of trades, including the inherent cashflows and risk exposures of each. Trade processing and settlement combined with control of risk has been thrust into the limelight with the recent near collapse of the global financial market. This comprehensive book provides thorough, practical guidance toward processing the trade, and the risks (including human ones) and rewards it entails. Robert P. Baker (UK) works as a consultant in the development of financial software and in training. He has been involved in credit derivatives for ten years and also has experience of project management across a wide range of asset classes and financial instruments. In four parts and about forty very precise, specific sections, The Trade Lifecycle dissects a trade into its components, tracks it from preconception to maturity – in chapters meaningfully titled «Anatomy of a trade», «Consequences of trading», «What happens overnight», «Too much knowledge in on person» or «Example of a bad project» – and shows how it affects each business function of a financial institution. It helps the reader to become more familiar with the full extent of legal, operational, liquidity, credit, and market risks to which the business is exposed.

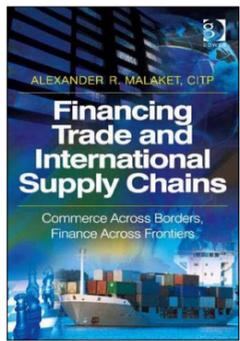
Alongside theoretical aspects (presented very factually), the book introduces case studies of real projects, covering topics like commodity counterpart risk, equity settlement, bond management, and global derivatives initiatives. Now in its second edition, it includes major new coverage of traded products, credit valuation adjustment, regulation, and the role of information technology (IT) – in both risk and potential developments. Providing a deep insight into the fundamentals of trade processing and the direct monitoring of trades throughout their lifetime, as well as into emerging subject areas, The Trade Lifecycle offers a gripping behind-the-scenes introduction and overview to researchers, traders, analysts or accountants at work.



## Financing Trade and International Supply Chains

Alexander R. MALAKET

ASHGATE PUBLISHING (ROUTLEDGE), 2014 (312 PAGES)

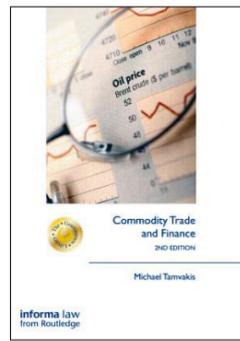


A member of the International Chamber of Commerce, Alexander Malaket makes perfectly clear the twists and turns of trade financing. In 13 detailed sections, he gives a general review of this complex subject, from basic efficiency, to future prospects, switching his focus from financial institutions, practical needs, to suitable opportunities, or strategy in trade programming. Above all, he highlights the major strategic importance of trade and supply chain finance in terms of both international competitiveness and «wealth of nations».

## Commodity Trade and Finance

Michael TAMVAKIS

(2ND ED.), INFORMA LAW/ROUTLEDGE, 2015 (508 PAGES)



This fully revised edition of an acclaimed reference book adds oil refining, electricity and the price risk management of energy to its comprehensive, academic overview of the economics of commodities, whether natural gas, steel or grains. From scratch, it explains all the concrete stages of commodities trading by scrutinizing the assembly patterns of several products, breaking down costs, exploring effective trade flows, and market mechanisms, as well as related derivatives. Michael Tamvakis is Professor of Commodity Economics and Finance at Cass Business School.

## Trade-based Money Laundering

John A. CASSARA

JOHN WILEY, 2015 (256 PAGES)



John A. Cassara is a former expert for the federal government in counter-terror finance and money laundering, and his analysis of the problem is as insightful as unsettling: in a tense international state of affairs, turning dirty money into decent assets by means of trade is both detrimental to public finances and increasingly likely to fund terrorism. Putting his readers on guard as well as warning them on reasonable grounds about questionable occurrences of TBML-operations, he prescribes the enhancement of relevant detection systems in order to protect trading – and traders.

Texts and images: Courtesy Payot

# Commodity events

EVENT	ORGANISER	DATE	VENUE	WEBSITE
Trading Forum	STSA, UNIGE, SRIC	March 15, 2016	Fédération des Entreprises Romandes (FER), Geneva	<a href="http://internationaltrading.unige.ch/index.php/trading-forum">http://internationaltrading.unige.ch/index.php/trading-forum</a>
Swiss Mining Institute	Bally Capital	March 22, 2016	Hotel Mandarin Oriental, Geneva	<a href="http://swissmininginstitute.ch/conferences/conference_geneva.php">http://swissmininginstitute.ch/conferences/conference_geneva.php</a>
Swiss Commodities Exchange (SCX)	GE Group	March 22, 2016	Hotel President Wilson, Geneva	<a href="http://www.swisscommex.com/">http://www.swisscommex.com/</a>
Global Energy	GE Group	March 23-24, 2016	Hotel President Wilson, Geneva	<a href="http://www.globalenergygeneva.com/">http://www.globalenergygeneva.com/</a>
Cereals Europe	Agresource Company and Fryer's Reports	April 7-8, 2016	Hotel President Wilson, Geneva	<a href="http://cerealseurope.com/">http://cerealseurope.com/</a>
FT Commodities Global Summit	Financial Times	April 11-13, 2016	Hotel Beau-Rivage, Lausanne	<a href="https://live.ft.com/Events/2016/FT-Commodities-Global-Summit-2016">https://live.ft.com/Events/2016/FT-Commodities-Global-Summit-2016</a>
WISTA Conference & Cocktail	WISTA (Women's International Shipping and Trading Association)	April 14, 2016	Société de Lecture, Geneva	<a href="http://wista-swiss.com">http://wista-swiss.com</a>
ICDA Blockchain Conference	International Commodities and Derivatives Association	April 19-20, 2016	Banking Hall, Cornhill in the City of London	<a href="http://www.incoda.org/">http://www.incoda.org/</a>
European Gold Forum	Denver Gold Group	April 19-20, 2016	Park Hyatt, Zurich	<a href="http://www.europeangoldforum.org/egf16/">http://www.europeangoldforum.org/egf16/</a>
Energy conference with Fatih Birol, International Energy Agency	Chamber of Commerce and Industry Switzerland – Turkey	April 26, 2016	Geneva, Venue TBD	
6th New Energy Investor Summit	Energie Zukunft Schweiz	May 9-10, 2016	Swiss Re Centre for Global Dialogue, Zurich	<a href="http://www.investorsummit.ch/2016_en/index.php">http://www.investorsummit.ch/2016_en/index.php</a>
13th Annual Global Commodities Finance	Euromoney	June 8-9, 2016	Hotel InterContinental, Geneva	<a href="http://www.euromoneyseminars.com/global-commodities-finance/details.html">http://www.euromoneyseminars.com/global-commodities-finance/details.html</a>
WISTA Conference	WISTA	June 17, 2016	Zug, Venue TBD	<a href="http://wista-swiss.com">http://wista-swiss.com</a>
Marine Money Geneva Forum	Marine Money International	June 29, 2016	Hotel President Wilson, Geneva	<a href="https://www.marinemoney.com/forums/geneva16/index">https://www.marinemoney.com/forums/geneva16/index</a>
Global Commodities Forum	CNUCED/UNCTAD	July 15-16, 2016	Nairobi, Kenya	<a href="http://unctad.org/en/pages/MeetingDetails.aspx?meetingid=1047">http://unctad.org/en/pages/MeetingDetails.aspx?meetingid=1047</a>
Swiss Energy and Climate Summit	Swiss Energy and Climate Summit (SwissECS)	September 13-14, 2016	Allegro/Kursaal, Berne	<a href="http://www.swissecs.ch/de/home/energy-and-climate-summit">http://www.swissecs.ch/de/home/energy-and-climate-summit</a>
Annual CTA Conference	CTA	October 6, 2016	Geneva, Venue TBD	<a href="http://ctageneva.com/">http://ctageneva.com/</a>
Global Grain	Global Grain Events	October 8, 2016	Geneva, Venue TBD	<a href="http://www.globalgrainevents.com/">http://www.globalgrainevents.com/</a>
2016 Precious Metals Summit Zurich	Precious Metals Summit Conferences	November 2-3, 2016	Park Hyatt, Zurich	<a href="http://www.precioussummit.com/event/2016-summit-zurich/">http://www.precioussummit.com/event/2016-summit-zurich/</a>
Buergenstock	International Commodities and Derivatives Association	November 2016	Geneva, Venue TBD	<a href="http://www.sfoa-events.org/">http://www.sfoa-events.org/</a>

# Commodity Trading Fundamentals

Four (very dense) half days for a quick yet comprehensive overview of the commodity supply chain.



NICOLETTE DE JONCAIRE  
Journalist L'Agefi

Getting familiar with the fundamentals of commodity trading over four half days is a bit of a challenge. So is teaching the subject matter. Meant for people in back office, financial and other support functions (as well as anyone wishing to gain a cursory understanding of trading, including ignorant members of the press), the Commodity Trading Fundamentals course organised by STSA aims at providing a quick yet comprehensive overview of the commodity supply chain.

Needless to say, the course is dense. Laid over eleven sections, it leaves little space for breaks or distraction. Beyond the trading work flow per se – which covers trading contracts, trading operations, shipping and chartering, laytime and demurrage, as well as trade finance – there are useful chapters on documentation (including model documents), legal principles, risk and insurance, and counterpart relations. The introduction covers the basics of why we trade, who trades and how we trade, together with a historical and geographical perspective of how the sector developed. There is also a handy glossary of the terms used in trading companies to help laymen through the maze of professional jargon. All in all, there is sufficient material there to cover months rather than days of study.

The use of case studies drawn from real life examples complement the more theoretical teachings and a sprinkle of anecdotes – including how things can go horribly wrong – keeps the audience on its toes. To retain attention (and make the whole thing palatable), our teacher, Richards Watts, ran a quiz at the end of each section: a nice and obvious way to ensure that basic concepts are assimilated before moving on. In addition, Q&A sessions offer the opportunity to spell out obscure points and dig further if necessary.

Bearing in mind that the course is not intended for those who wish to acquire in-depth knowledge of the topic, nor is it for those who have never heard the words “commodity trading” before, information is presented at an adequate level and with appropriate depth. Instructions are easy to follow, concepts are made clear, and all questions are answered to satisfaction. There are also flowcharts and graphics to help summarise the more complex processes.

The first key lesson to be learnt is that commodity trading is about people. Technical knowledge is indispensable but when all hell breaks loose, it's all about knowing the right person in the right place and having built trust. A friendly phone call to a port captain in the Horn of Africa can untangle the messiest of situations. The second key lesson is that commodity trading and operations is not a nine-to-five job on week days. When your cargo gets stuck somewhere in the South China Sea or in the Strait of Hormuz on a Saturday night, you will catch some sleep later.

The course content is made available in a hefty binder (not the easiest item to carry around) and is, unfortunately, not obtainable in electronic format. This is a shame but understandable from STSA's view point.

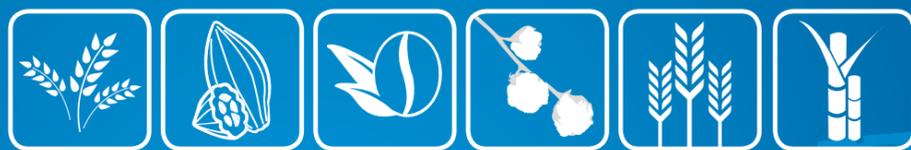
Unsurprisingly, the bi-yearly sessions are fully booked and STSA struggles to offer more as courses are handled by professionals with extensive industry experience. Richard Watts' day job is to run his own service company, HR Maritime.

Commodity Trading Fundamentals is internationally renowned. Given how short the course is, one would expect it to be attended exclusively by locals. This is not the case. People travel from the UK, the US and other parts of the world to be there. One of my class mates, CEO of a Mongolian trading house, had come all the way from Ulaanbaatar. It is pointless to add (but we shall do it anyway) that such a course represents an opportunity for networking and the participants can make friends as they hang around in Geneva. Surely, this must be good for the reputation of the Swiss commodity trading hub. ■



**Filhet-Allard Maritime**  
MARINE INSURANCE BROKERS  
BORDEAUX - GENEVA

## COMMODITIES INSURANCE SPECIALIST



Grains

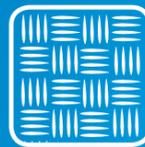
Cocoa

Coffee

Cotton

Rice

Sugar



Steel



Ores



Oil



Gas



Fertilizers

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- Credit Risks
- Contract Frustration
- Claims recoveries & defence

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