UNDERSTANDING NATURAL RUBBER PRICE VOLATILITY

Prepared for The European Tyre and Rubber Manufacturers’ Association (ETRMA)

June 2011
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EXECUTIVE SUMMARY

Throughout the last decade commodities and raw materials showed a strong increase of both prices and volatility. But it needed the financial crisis from 2007 onwards to raise awareness about the massive uncertainties that result from these price movements. The steep fall of commodity prices upon the wider economic crisis and focus at the time on the survival first of the global financial system, only temporarily deflected attention away from commodities. In the meantime, commodities have been more and more perceived as part of the broader scope of a financial sector that needs to be brought under better control.

The debate on how to tackle price increases and volatility facing commodities was initially launched in June 2008 by the G-8 Finance Ministers, but was then rapidly taken over by the G-20 both at Finance Ministers and Heads of State levels. The latter committed to “work to address excessive commodity price volatility” but the primary focus at the time was on fossil fuels. That, in turn, laid the ground for a vast body of work on enhanced regulation and supervision by a mix of existing institutions and aggregations of new ones, such as the IOSCO TC Task Force, the G-20 Study Group on Commodity Markets and the Financial Stability Board. As their work progresses currently, it is clear that the intention is to bring other commodities into the analysis. Hence this analysis concerning pricing in the natural rubber sector (“Study”) focuses in part on how to best make use of which institutional channels (G-20, IOSCO, FSB, WTO and, of course, the EU) in order to press for effective solution of the challenges facing the natural rubber market specifically.

This Study also aims to shed light on the commodity analyses that are developing on the several institutional tracks while drawing out and bearing in mind any specific characteristics of the natural rubber market. While price and volatility trends follow those of certain other commodities, important natural rubber market specificities are identified by the Study as well as the importance of effectively addressing these specificities.

Special attention is devoted to three distinct issues. First, to better understand how far the identified price and volatility trends of recent years correspond to actual structural changes in supply and demand (noting in particular the post-crisis commodity-intensive global economic growth cycle), as opposed to causation by speculative forces or specific manipulative activities in the market. In this regard, it appears that natural rubber prices have risen beyond what might be justified by the fundamentals for this sector.

Second, the Study examines various elements of price discovery, in this context looking especially at transparency issues and the operation and relative importance of the principal derivatives exchanges covering natural rubber. In this context special attention is devoted to the phenomenon of market liquidity and potential for manipulation
(whatever the level of liquidity). While recognising expert conclusions about non-
destabilising effects of financialisation (or “speculation”) concerning commodities
generally, the existing futures markets for natural rubber appear to exhibit special
features that may, in fact, contribute to destabilising effects in the case of natural rubber.

Third, the Study has looked at the wider issues of the physical market transparency and
the major changes underway in the several rubber sector organisations established in part
to provide reliable data as regards their segment(s) of the market. Accuracy and
transparency is a real challenge for this sector in the first instance and is potentially
complicated further by allegations of manipulation of data and other elements of the
market. Further, while the responsible organisations were set up at different times, with
different mandates and for different constituencies, they nonetheless share the aim of
maintaining a stable natural rubber market and, in a general sense, a fair price. However,
the current developments across these organisations appear very threatening to the long-
time order.

The Recommendations of this Study focus on the natural rubber market issues which, in
the view of the authors, are most timely and important for ETRMA. The
recommendations cover different types of actions and timeframes and are relevant to both
EU and international levels, but they fit logically into a whole and all should be assessed
carefully for follow-up by ETRMA. The Recommendation concern:

- Reliability of Physical Market Data / Dealing with IRSG - Timeframe: Urgent
- Reliability of Price Discovery in Singapore / Evolution of the Respective
  Financial Exchanges - Timeframe: Urgent
- Transparency on Natural Rubber Derivatives Trading - Timeframe: Urgent
- Multilateral Trade Policy Action - Timeframe: Medium- to long-term
- Use of EU Competition and Trade Instruments - Timeframe: Urgent to medium-
term
- Creation of Horizontal ETRMA Task Force – Timeframe: Urgent

* * *

30 June 2011
1 INSTITUTIONAL CONTEXT

1.1 International Context (Non-Commodity Specific)

1.1.1 G-8 to G-20

While there has been a clear increase in price volatility of commodities since the beginning of the last decade, it was in the run up and during the financial crisis in 2007 and 2008 that high and volatile commodity prices became a major international policy issue. The subsequent rapid fall of commodity prices with the onslaught of the global economic crisis and sharp drop-off in demand from mid-2008 into 2009 as well as the strong international focus on immediate responses to save the stability of the financial system temporarily only reduced the attention given to commodity developments. At the same time, the developments concerning commodities were more often than not considered as part of the broader issue of financial market speculation, mainly but not exclusively, in connection with the impact of oil prices on the global economy.

It is noteworthy that in June 2008 the G-8 Finance Ministers meeting in Osaka mentioned the functioning of commodity futures as a matter of concern. In September 2009, the G-20 in Pittsburgh addressed price volatility both from the angle of energy security, because of the central role of oil, and in the context of the functioning of commodity futures markets. They called for special attention to be devoted to qualitative improvement concerning over-the-counter (OTC) commodity transactions. The Financial Stability Board (FSB)\(^1\) was tasked with the responsibility to oversee work on the functioning of the financial markets in general and regulation of derivatives markets in particular. Food security was also mentioned as an important component with the aim of enhancing agricultural productivity. These policy lines were confirmed and fine-tuned both at the September 2009 G-20 Finance Ministers meeting in London and on the occasion of the G-20 Summit in November 2010, in Seoul.

The work undertaken so far under the G-20 auspices has followed different tracks. The first one is Study Group on Commodity Markets set up by the G-20 Finance Ministers but who hasn’t really delivered an operational result of its own. The second one is represented by the FSB’s Group on OTC derivatives and the Task Force on Commodities Futures Markets under the Technical Committee of the International Organization of Securities Commission’s (IOSCO). The third track focuses on Price Volatility in Food and Agricultural Markets, involves all the relevant International Bodies and is being coordinated by FAO and OECD. The fourth line concerns specific work done on the

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\(^1\) The FSB, located in Basel, Switzerland and hosted by the Bank for International Settlements, was founded in its original form in 1999 by the G7 Finance Ministers and Central Bank Governors. It coordinates at the international level the work of national financial authorities and international standard setting bodies and promotes implementation of effective regulatory, supervisory and other financial sector policies.
functioning of the energy markets with the principal institutional stakeholders, in part in conjunction with the IOSCO Task Force. Some of its work is particularly relevant for purposes of this Study on pricing of natural rubber specifically.

The initial findings by the IOSCO Task Force in March 2009, at that time still strongly influenced by the developments in the oil trade, concluded that strong financialisation in the form of major investment inflows into commodities has occurred but there is a lack of evidence of “systematic influence” from speculative activity on price volatility. Nevertheless, the report called for determined action on transparency through the compilation of detailed data on the underlying markets, aggregate futures market data by regulators in general and concerning OTC commodities derivatives in particular.

In this context the Task Force reported in November 2010 that it was consulting with participants and stakeholders in OTC financial oil derivative markets in view of the potential creation of a trade repository for other commodities. This latter work was principally carried out by the Commodities Steering Committee (COSC). The aim of the repositories is to establish a transparent interface on financial information both to regulators and to market participants on OTC transactions, for which cooperation with clearing houses and exchanges would become a pre-requisite.

The Task Force is presently working on an update of best practices as defined in the Tokyo Communiqué of 1997. Considering the importance of futures contracts as a function of price discovery of the underlying product, the Task Force intends to put forward a set of parameters for review by the G-20 Finance Ministers in October 2011. While still strongly influenced by the oil market considerations, the Task Force clearly intends that this standard be valid also for other commodities of concern and that, more generally, its work on commodities derivatives markets should become a permanent task.

With respect to this Study concerning natural rubber, it therefore becomes essential, first, to closely monitor the deliberations of the Task Force as well of the work of the G-20 Study Group on Commodity Markets as they are supposed to prepare the feed-in to the FSB and ultimately the G-20 itself. Second, it is crucial to be fully aware of any special or distinguishing characteristics of the natural rubber market – as identified in this Study – and to highlight them. This point on specificity cannot be emphasised enough because it may ultimately determine if and how NR can or indeed should be included among the commodity sectors to be covered by new regulatory disciplines. Depending on the specificities and the resulting policy preferences, the tyre industry may want to take appropriate measures to ensure that the G-20 governments take them into account.

Also to be considered in the international context are the efforts undertaken under the Food Security pillar of the Seoul Multi-year Action Plan on Development. This work constitutes a natural further step, by all the competent International Organisations, with the aim of protecting the most vulnerable economies from the excesses of the overall increase of price volatility. The chosen approach goes beyond food, however, and
therefore is potentially relevant to other stakeholders involved in agricultural commodity trading. The analysis currently under way takes into account the impact of agricultural trade in all its different facets in terms of products for consumers and producers in both developed and developing countries. As its central plank, the approach intends to distinguish between policy options construed to reduce price volatility and those designed to mitigate its consequences.

Contrary to many previous studies that take an *a priori* view in defence of the weaker countries at the cost of politically-induced market distortions, the present Action Plan policy aims at perfecting the functioning of the market by trying to reduce distortions. In other words, the work under way looks on the whole compatible with the other current efforts aiming to reduce excessive volatility by systematically improving market information and by backing the ongoing efforts on neighbouring policy fronts. This approach makes all the more sense as agricultural commodity prices, very broadly speaking, tend to correlate with oil prices. Financial investments in these commodities are undoubtedly playing a significant role in this process.

### 1.1.2 European Union

As so often happens, the EU tends to respond to new market situations with a conceptual approach. This happened in the midst of the financial crisis when the Commission launched the so-called “The Raw Materials Initiative” in 2008. In the meantime, the chosen direction has been integrated into the framework of the EU’s 2020 Strategy, by covering the respective challenges in the broadest possible manner. In the latest Commission pronouncement in this arena, its Communication of 2 February 2011\(^2\), the Commission has undertaken an update of recent developments and, interestingly and for the first time under cover of this Communication, addresses commodities as well as the original subject of concern – access to essential raw materials. It highlights that the challenges of commodities prices and raw materials are closely intertwined and commonly touch on EU policies relating to financial markets, development, trade, industry and external relations.

With its three main tracks of:

- ensuring a level playing field for the access to commodities and raw materials in third countries,
- fostering sustainable supply of raw materials from European sources, and
- boosting resource efficiency,

the Commission initiative is highly relevant to issues covered by this Study.

The Communication sets out one point that is particularly relevant in this respect:

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“Each commodity market functions differently depending on the nature of the commodity, the needs of traders and historical developments. There is no single model for the organisation of commodity markets and hence of how prices evolve. Some commodity trading exhibits a high degree of standardisation, while on other markets the way in which trades are done may change according to the particular needs of individual market participants ... Just as the underlying commodities can be traded in different ways, derivatives can be traded on a bilateral basis, generally called over the counter or OTC, or using organized exchanges. Additionally, the role of financial institutions as well as the importance of derivatives is very different from one market to another.”

As will be seen herein, although certain features of the natural rubber market track developments in other commodity markets, in other ways the natural rubber market appears to display quite distinctive features, both historical and current, in its functioning.

The Communication mentions progress in areas such as Energy markets and CAP-related policies as well as food security and supply, mainly to developing countries. But the thrust of the work relevant to the functioning of commodity markets relates to the financial markets, notably concerning new regulation of OTC derivatives trading. The adoption of an Alternative Investment Fund Management Directive, reviews of the Market Abuse Directive and Packaged Retail Investment Products and, most importantly, the revision of the Markets in Financial Instruments Directive, are also in process. It also looks ahead to further analysis of the interaction between physical and financial commodities markets (akin to analyses being undertaken by the international bodies mentioned in §1.1.1) and on means to improve transparency and accessibility of information on the physical commodity markets – the latter action being particularly relevant to the natural rubber market.

While it would be interesting to assess the impact of all these developments, we limit ourselves here to two main comments. The first one is that almost all of the EU regulatory initiatives concern the updating of primarily the EU internal regulatory framework for the financial markets area at large. However, what would potentially be most relevant for the purposes of the natural rubber market is the functioning of the key financial markets/exchanges abroad, mainly in Asia. Beyond some bilateral work by individual Member States, the most effective way to influence regulation in this area at international level is the IOSCO Task Force and to a point the G-20 Study Group on Commodities Markets, which, in turn, aims at decision-making at the G20 level. It is clear that the current Presidency of the G20, now firmly backed by EU Commission President Barroso, is pressing for just such an internationalisation of financial market regulations as are now being rolled out in Brussels.

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3 Id., p. 3.
4 France holds the G20 Presidency for 2011.
The second comment concerns the improvement of security, legal and commercial, as regards ensuring reliable access to commodities in the face of both new producer country measures to protect domestic raw material interest and new typologies of privileged supplies. These increasingly crucial issues, which feature so prominently in the Raw Material Initiative, deserve to move up quickly towards the top of EU’s trade policy agenda and specifically aiming to ensure fair access to commodities such as natural rubber.

1.2 Natural Rubber Institutions

1.2.1 International Rubber Study Group

The International Rubber Study Group ("IRSG") was founded in 1944, after the termination of the International Rubber Regulation Agreement. The creation of the IRSG in 1944 was both perfectly logical and at the same time innovative in the commodities universe. The setting up of such an organization at that time was quite a novelty to the extent that, in light of the experience during WW2, the supply of natural rubber was considered of the highest importance for the West in general and the US in particular. The chosen format of an intergovernmental body very much reflected the logic of the time.

This Study does not address the successive International Rubber Agreements (1979, 1987, 1995), established under the auspices of UNCTAD, which terminated as an institution in October 1999. However, it is worth noting that a primary feature of these Agreements was that they provided for management of a buffer stock (a normal buffer stock of 400,000 tonnes and a contingency buffer stock of 150,000 tonnes) as a price stabilisation instrument; no provision for export quotas or production controls. The buffer stock would be purchased and sold when natural rubber quotations were outside upper and lower price bands in relation to a set reference price. The successive Agreements did not alter this basic scheme but brought modifications relating to the periodicity of reviews and the size of revision of the price levels triggering market interventions.

Also with relevance to this Study, other key objectives of the Agreements were:

− To attain a balanced growth between the supply of and demand for natural rubber;
− To achieve stable conditions in natural rubber trade through avoiding excessive price fluctuations and stabilising prices without distorting long-term market trends;
− To ensure adequate supplies of natural rubber at fair and reasonable prices and, also, improve their reliability and continuity for importing members;

The Agreements were each managed by the International Natural Rubber Organisation, based in Kuala Lumpur, Malaysia. The stated cause of termination of the last, 1995 Agreement was the members’ disagreement as to the reference price set and the withdrawal from the agreement of Malaysia, Thailand and Sri Lanka. See report by the UNCTAD Secretariat available at: http://www.unctad.org/infocomm/anglais/rubber/Doc/UNCTAD_IntlNatRubberAgrs.pdf.

The International Rubber Regulation Agreement was a 1934 agreement among France, India, the Netherlands, Thailand and the United Kingdom. Its aim was to control the production and prices of natural rubber. As demand for natural rubber declined sharply after World War II, the Agreement prevented the creation of new plantations for production of natural rubber as well as restricted the production of existing plantations, measures which were not supported by major consumer countries including the United States.
For many years IRSG performed its role as a provider and guarantor of reliable data. By the ‘70ies, however, UNCTAD had emerged with the mandate to secure better protection of the “exploited” commodity producing developing countries. The setting up of the Common Fund and the negotiation of the several sectoral agreements, notably including provisions for use of buffer stocks, was supposed to limit the exposure of the producing countries in what continued to be a buyer’s market.

The profound changes of the strategic landscape after the fall of the Wall and the economic emancipation of many of the still developing commodity producing countries affected quite naturally the relation between producers and consumers of raw materials. The liquidation of the Rubber Agreement in the aftermath of the economic crisis in South-East Asia (1998-1999) was just one manifestation of the much more differentiated economic development and re-positioning of relations at global level.

Within the current constellation of natural rubber institutions, the IRSG is unique in that it brings together both the world’s rubber producing and consuming stakeholders.

The stated objectives of the IRSG are:

- To provide a forum where matters affecting the supply of and demand for natural and synthetic rubber can be discussed, e.g. trade in raw materials, manufacturing of rubber products, marketing, shipping and distribution; and
- To collect and disseminate comprehensive statistical data on the production, consumption and trade in rubber and rubber products.

In relation to the latter point, the IRSG indicates that it is the authoritative source of statistical data on rubber: it prepares current estimates, forecasts short- and long-term trends and regularly undertakes statistical, economic and techno-economic studies on specific aspects of the industry.

Membership to the IRSG is open to governments. Current members include Belgium, the Republic of Cameroon, Côte d’Ivoire, the EU, France, Germany, India, Italy, Japan, Malaysia, Nigeria, Russian Federation, Singapore, Spain, Sri Lanka, Thailand and the United States of America. In addition, any private organisation involved in the rubber

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8 Supra, footnote 7.
10 Note that Belgium, France, Germany, Italy and Spain are members of the IRSG in their own right, alongside the EU. As noted in Chapter 3, the United States, Thailand and Malaysia have each provided notice that they will drop out of the IRSG in the course of 2012, which may indeed signal the political demise of the IRSG; the IRSG webpage (http://www.rubberstudy.com/aboutus.aspx) does not reflect these membership developments.
industry can participate in the IRSG, through membership to the group’s Panel of Associates. Many of the world’s major natural rubber producer organisations, synthetic rubber producers, traders, tyre and other rubber products’ manufacturers, and rubber industry consultants are currently members of the Panel of Associates.\textsuperscript{11}

The IRSG has been affected by internal frictions and the departure of key members. The departure of the UK after 64 years caused the re-location of the IRSG headquarters from London to Singapore in 2008. However, the forthcoming exit of the United States, Thailand and Malaysia (see footnote 10) has created doubts as to the continuing viability of the IRSG after many years of internal frictions. Further below, this Study assesses the potential creation of a new, successor body that might credibly take up IRSG’s existing objectives and potentially more.

1.2.2 Association of Natural Rubber Producer Countries

The Association of Natural Rubber Producer Countries ("ANRPC") is an inter-governmental organisation, founded in 1970. It represents solely the interests of natural rubber producers, providing a forum for analysing policies and devising strategies to safeguard these interests.

Its stated objectives include:

- To bring about sustainable growth in the production, processing, marketing and consumption of natural rubber;
- To promote natural rubber as an environmentally friendly industrial raw material;
- To improve the well-being of natural rubber farmers, by ensuring a remunerative and stable price for natural rubber;
- To serve as an up-to-date information resource center for the natural rubber industry, by publishing statistics and conducting studies on natural rubber.\textsuperscript{12}

With regard to the latter point, the ANRPC provides periodic updates on future trends on the supply of and demand for natural rubber, on the basis of the input it receives from officials and experts that it has designated in each of its member countries.\textsuperscript{13}

Membership to the ANRPC is only open to governments of natural rubber producing countries. Members of the ANRPC include Cambodia, China, India, Indonesia, Malaysia, Papua New Guinea, Philippines, Singapore, Sri Lanka, Thailand and Vietnam. In 2009, these countries accounted for approximately 94% of the global natural rubber production.\textsuperscript{14} The private sector’s involvement in the ANRPC’s functions is limited to

\textsuperscript{11} See \url{http://www.rubberstudy.com/membership.aspx}, which also provides a list of the current industry members.
\textsuperscript{12} \textit{Supra}, footnote 14.
\textsuperscript{13} See \url{http://www.anrpc.org/html/faq.aspx}.
\textsuperscript{14} See \url{http://www.anrpc.org/html/about.aspx?ID=3&PID=4}. 

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participation in the Annual Rubber Conference organised by the ANRPC. In addition, the private sector has access to most of the ANRPC’s information resources, *inter alia* updated production data and industry news.15

The ANRPC is headquartered in Kuala Lumpur, Malaysia.

**1.2.3 International Rubber Consortium**

The International Rubber Consortium Ltd. ("IRCo") is a company created in 2002 pursuant to a Memorandum of Understanding signed among the governments of Indonesia, Malaysia and Thailand, *i.e.* the three most important natural rubber producers. The IRCo was established to provide support to the International Tripartite Rubber Council (ITRC)16, by means of carrying out Strategic Market Operation (SMO).

The IRCo’s stated objectives are:

- To achieve a long-term price trend that is stabilized, sustainable and remunerative to the natural rubber farmers; and
- To maintain a supply-demand balance in order to ensure adequate supply of natural rubber in the market at fair prices.17

The country Members of the IRCo are Indonesia, Malaysia, Thailand and Vietnam, which collectively account for more than 75% of global production of natural rubber. Other countries that have been invited to become members include India, Papua New Guinea, Singapore and Sri Lanka.18

The IRCo is headquartered in Bangkok, Thailand.

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15 *Supra*, footnote 13.
16 The ITRC is a body formed pursuant to the Bali Declaration of 2001, signed between the governments of Indonesia, Malaysia and Thailand. In this declaration, the three governments pledged to co-operate in order to ensure fair and remunerative income for their natural rubber producers. The ITRC’s objective is to coordinate and supervise the implementation of the supply measures for natural rubber, *i.e.* the Supply Management Scheme (SMS) and the Agreed Export Tonnage Scheme (AETS). See [http://www.irco.biz/profile.php](http://www.irco.biz/profile.php).
1.3 The Key Financial Exchanges for Natural Rubber

1.3.1 SICOM/SGX

The Singapore Commodity Exchange (“SICOM”), previously known as the Rubber Association of Singapore Commodity Exchange, was established in 1992. The tyre producers and certain other rubber stakeholders have long been closely involved, with the encouragement of Singapore, in developing the activities of this market. Beyond its rubber futures contracts, SICOM during its existence offered only one other agricultural commodity (coffee) and one metal commodities’ futures contract (gold).

In 2008, SICOM was acquired by the Singapore Exchange (“SGX”). At that time, SGX constituted a “rubber committee” to advise it on the development of the rubber futures market; the committee comprised the same tyre producer and other members as were formerly shareholders and clearing members of SICOM. As of 16 May 2011, SGX moved the SICOM rubber futures onto its own derivatives platform. The transfer to the SGX platform was intended primarily to improve liquidity, by facilitating increased participation of international traders in these rubber contracts.

The SGX as such was created in 1999, following the merger of the Stock Exchange of Singapore and the Singapore International Monetary Exchange. It currently is Asia’s second largest listed exchange and, in 2010, was ranked as the 28th largest derivatives exchange by volume globally. The SGX overall offers securities (e.g. bonds, business trusts, equities, etc.), derivatives (e.g. interest rate futures and options on futures, equity index futures and options on futures, etc.) and various commodities products including rubber as indicated above.

The SGX offers various membership options; foreign incorporated companies may also benefit from membership. SGX is regulated by the Monetary Authority of Singapore.

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19 Rubber futures have been traded in Singapore since the 1920s. The transactions were initially cleared by the Singapore International Chamber of Commerce Rubber Association. This institution was succeeded by the Rubber Association of Singapore, which was later on privatised and became the Rubber Association of Singapore Commodity Exchange. The Rubber Association of Singapore Commodity Exchange has since been renamed into the Singapore Commodity Exchange, in order to reflect the institution’s intention to expand its activities to other commodities too, besides rubber. For more information, see Chwee Huat Tan, “Financial Markets and Institutions in Singapore”, 2005 Singapore University Press, p. 274-277.

20 See http://howtotradecommodities.co.uk/singaporecommodityexchange.html.

21 See http://www.sicom.net/. It appears that, prior to that, the SICOM’s coffee futures also migrated to the SXG’s trading platform (see http://www.morningstar.co.uk/uk/markets/newsfeeditem.aspx?id=138501958289084).


24 As will be seen later, this feature of SGX (and TOCOM) stands in contrast to the situation of the Shanghai Futures Exchange which remains closed to foreign membership. See...
1.3.2 The Tokyo Commodity Exchange

The Tokyo Commodity Exchange ("TOCOM") was formed in 1984, through the merger of the Tokyo Gold Exchange, the Tokyo Rubber Exchange and the Tokyo Textile Exchange. It constitutes Japan’s largest derivatives platform and was ranked, in 2010, as the 34th largest derivatives exchange by volume globally. TOCOM is regulated by the Ministry of Economy, Trade and Industry.

The TOCOM offers three types of regular (i.e. broker, trade and affiliate) and one type of special (i.e. associate) membership. Foreign entities may benefit from either the affiliate or associate membership.

Beyond a number of metals (gold, silver, platinum, etc.) and energy (gas oil crude oil, kerosene, gasoline) commodities, TOCOM offers futures contracts on both RSS3 and RSS4 (no TSR) rubber futures. Rubber is one of the oldest contracts on TOCOM, first offered in 1952. The rubber futures normally attract the third or fourth highest volume out of all TOCOM commodity futures products. TOCOM literature indicates that “market participants for rubber futures on TOCOM not only include tire manufacturers and Southeast Asia rubber producers but trading houses, investment funds, commodity index funds and speculators as well.”

In June 2010, SICOM and TOCOM announced the signing of a Heads of Terms agreement designed to develop cross-listing collaboration and enhance liquidity of both commodity markets. As noted later in this Study, the rubber contracts on both exchanges have been experiencing major declines in volume, while trading on the Shanghai Future Exchange has growth dramatically.

1.3.3 The Shanghai Futures Exchange

The Shanghai Futures Exchange ("SHFE") was formed in 1999, after the Shanghai Metal Exchange, the Shanghai Foodstuffs Commodity Exchange and the Shanghai Commodity Exchange merged. It constitutes China’s largest commodities market and was ranked, in 2010, as the 11th largest derivatives exchange by volume globally. The SHFE is a non-
profit organization, regulated by the China Securities Regulatory Commission ("CSRC").

The SHFE distinguishes between brokerage and proprietary members. Membership is restricted to legal enterprises registered in the People’s Republic of China ("PRC") or PRC citizens. Foreign-owned companies’ subsidiaries in the PRC can only trade on the SHFE as customers of the SHFE’s brokerage members, though this may be changing in future.

The SHFE offers futures contracts on:
- Copper cathode;
- Aluminium;
- Zinc;
- Lead;
- Gold;
- Steel rebar;
- Steel wire rod;
- Fuel oil;
- Natural rubber.

Amongst these commodities, SHFE’s natural rubber futures contract (RSS3 for imported rubber; SCR5 on domestic) has been the most heavily traded in China in notional value terms since 2006.

1.3.4 General comments on the evolution of these trading platforms

SICOM/SGX, TOCOM and SHFE represent a key pillar of the institutional trading framework for natural rubber-related transactions. While in the past natural rubber and derived products were traded on the principal commodity exchanges internationally, more recently both natural rubber physical and futures trading have become concentrated in Asia. This being said, trade in natural rubber is far from showing a homogenous pattern across the several market places. There remain huge differences in the trading cultures depending on the inherited national specificities of the producers as well as the industrial logic of the main consumers. Beyond the classical dichotomy of physical supply and demand, as in the case of other commodities, transactions in natural rubber

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30 For a list of current members, see [http://www.shfe.com.cn/Ehome/doclist_member_1.html](http://www.shfe.com.cn/Ehome/doclist_member_1.html).
are more and more characterised by the growing role played by derivatives, namely futures. In the case of natural rubber, however, this is happening without the involvement of the natural players, thus leaving the market primarily to non-commercial interests. It remains unclear, though, whether natural rubber has been directly caught up in the rush of investment into more complex and advanced instruments such as commodity index funds.37

While the bulk of the natural rubber requirements of the tyre industry are covered by long-term contracts concluded directly with trusted suppliers and without hedging in the futures market, the primary price reference for these contracts is the SGX futures price. The recent developments at SGX and other main trading platforms are therefore important to assess with respect to their price discovery value. It goes without saying that the various exchanges offer contracts with different specifications both with respect to the underlying and the futures.

While rubber trading at both SGX and TOCOM has been progressively losing volume, SHFE has been growing dramatically, in terms of volume, turnover and the number of brokerage houses. This truly impressive trend applies to rubber as well as various metals and oil futures, and has to do largely with the rapid growth in demand stemming from China itself (domestic and foreign-invested production operations in the case of tyres). At least the sentiment of the trade is directly or indirectly related to the domestic production. On the other hand and as elaborated later below, there is real concern over the lack of soundness of a non-negligible part of the Chinese actors on the SHFE. The exchange also remains closed to non-Chinese traders, though this clearly has not been a problem for liquidity as such. For the moment, the Chinese exchanges also are affected by the non-convertible RMB currency. As and when these factors change, SHFE could become the defining factor in this field.

Against this backdrop, the rubber futures contracts on the new SGX platform look vulnerable. Notwithstanding Singapore’s standing over a very long period as the world’s centre of rubber trading, the rubber contracts on SICOM/SGX have been progressively losing volume. The absence of key players and the relatively late conversion to a more sophisticated trading platform appear to be serious problems. The recent changes with into SGX have been complemented by a transfer of competencies for the supervision of natural rubber futures from IE Singapore, its traditional regulator, to the Monetary Authority Singapore. There is no doubt that much will depend on the ability of Singapore to defend its position against the perceived and already mentioned growing pressure from the G-20 concerning OTC derivatives trading and clearing.

In conclusion, there are real concerns for the future of the SGX rubber contracts and hence SGX’s ability to keep up its long-held and crucial price-reference function. In this

37 Indications from this Study (see §3.2.5) would point to a conclusion that the large index funds have generally not included rubber, but further examination would be appropriate.
respect SGX will have to come to terms with the exponentially growing SHFE. There is no doubt that the future of the SGX contracts may depend in good part on the interest manifested by the rubber community in Singapore itself to maintain the status of SGX.

2 QUANTITATIVE ANALYSIS

2.1 Introduction

Recent years have seen unprecedented volatility in commodity prices: prices peaked in 2007, collapsed in 2008/09 and then recovered strongly. This can clearly be seen in IMF’s index of all primary commodities (Diagram 2.1).

Breaking the series down, we can broadly identify three time periods: very low prices (2000 to 2003); a recovery of prices (2004 to 2007); and, a further rise in prices, but with greater volatility (2008 to present). The fall in prices in 2008/09 was due to a fall in demand associated with the recession in the developed markets. However, even during this period, commodity prices did not revert to their 2000 to 2003 lows, but rather fell to 2005 levels.

Diagram 2.1: IMF primary commodity price index

There are a number of factors that account for the rise in prices and increased volatility:
Increased demand from the emerging markets (and in 2008/09, a fall in demand in the developed markets), and for some agricultural crops increased demand from biofuels;

Limited production response as demand increased, in part due to the effect of the low prices between 2000 to 2003 which resulted in little investment in primary commodities;

Adverse weather conditions which reduced short term production potential for agricultural commodities;

The depreciation of the US dollar, which has increased production costs in countries whose currencies have appreciated against the dollar, and reduced the impact of higher dollar commodity prices on importing countries in local currency terms; and

Increased speculative activity in commodity markets. Speculating in commodities is exclusively a bet on their future price appreciation. They are an investment “of last resort” by those who believe that a series of bearish financial events will coincide: inflation will more than erode the interest on bonds; falling equity prices will more than offset the flow of dividends; and falling property prices will more than offset any rental income. Yet, they also believe that commodity prices will remain untouched by such factors, or, in a less gloomy environment, they believe that the rise in commodity prices will be sufficiently rapid that the capital gains will offset the absence of an income stream.

In this chapter we consider: first, general trends in commodity pricing; second, the fundamental factors affecting the rubber market; and third, the behaviour of prices on the futures exchanges where rubber is traded.

2.1.1 Rubber and commodity prices

As can be seen from Diagram 2.2, natural rubber prices closely followed the IMF’s index of all primary commodities until mid-2009, but subsequently rose much more strongly than the index.

Comparing rubber prices with the main groupings of the primary commodity index shows that, since mid-2009, rubber prices have risen with the metals grouping and at a much greater rate than that of the food and energy grouping. These latter two groupings are increasingly linked due to the influence of biofuels (Diagram 2.3). The reasons why rubber prices should have moved with metals are not entirely clear but include: (i) a similar fundamentals picture with rising demand (particularly from China), constrained short term supply and the long period of time required to establish new production facilities; and (ii) the increased influence of the Shanghai futures exchange. Both these issues are discussed from a rubber perspective in the following sections.
Diagram 2.2: IMF primary commodity price index and rubber

Source: IMF, International Financial Statistics

Diagram 2.3: IMF commodity indices and rubber

Source: IMF, International Financial Statistics
Comparing the volatility of prices (as measured by the coefficient of variation) across the range of commodities covered by the IMF reveals that, in general, volatility has been greater since 2007 (Table 2.1), compared to the previous two years. This is true for all but three of the commodities considered below.

The coefficient of variation for rubber rose to 30% in the 2007-2010 period. This is one of the highest levels of volatility for the agricultural commodities (only sugar has a higher volatility), but below that of a number of metals and energy products (Diagram 2.4).

### Table 2.1: Selected commodities price volatility, 2005-2006 versus 2007-2010

<table>
<thead>
<tr>
<th>Grouping</th>
<th>Commodity</th>
<th>2005-2006</th>
<th>2007-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food commodities</td>
<td>Barley</td>
<td>16%</td>
<td>23%</td>
</tr>
<tr>
<td></td>
<td>Maize: U.S.</td>
<td>17%</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>Palm Oil: Malaysia</td>
<td>7%</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>Rice: Thailand</td>
<td>8%</td>
<td>22%</td>
</tr>
<tr>
<td></td>
<td>Soybeans: U.S.</td>
<td>7%</td>
<td>19%</td>
</tr>
<tr>
<td></td>
<td>Wheat U.S. Gulf</td>
<td>13%</td>
<td>26%</td>
</tr>
<tr>
<td></td>
<td>Sugar: Caribbean</td>
<td>26%</td>
<td>37%</td>
</tr>
<tr>
<td>Beverages</td>
<td>Cocoa Beans</td>
<td>5%</td>
<td>19%</td>
</tr>
<tr>
<td></td>
<td>Coffee: Other Milds</td>
<td>9%</td>
<td>21%</td>
</tr>
<tr>
<td></td>
<td>Tea</td>
<td>10%</td>
<td>19%</td>
</tr>
<tr>
<td>Agricultural raw materials</td>
<td>Cotton: Liverpool</td>
<td>4%</td>
<td>31%</td>
</tr>
<tr>
<td></td>
<td>Rubber: Malaysia</td>
<td>23%</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td>Wool: Australia:64:Fine</td>
<td>7%</td>
<td>18%</td>
</tr>
<tr>
<td></td>
<td>Urea: Ukraine</td>
<td>9%</td>
<td>41%</td>
</tr>
<tr>
<td>Metals</td>
<td>Aluminium</td>
<td>17%</td>
<td>22%</td>
</tr>
<tr>
<td></td>
<td>Gold</td>
<td>17%</td>
<td>22%</td>
</tr>
<tr>
<td></td>
<td>Iron Ore: Brazil</td>
<td>9%</td>
<td>52%</td>
</tr>
<tr>
<td></td>
<td>Lead</td>
<td>20%</td>
<td>29%</td>
</tr>
<tr>
<td></td>
<td>Nickel</td>
<td>37%</td>
<td>43%</td>
</tr>
<tr>
<td></td>
<td>Silver</td>
<td>25%</td>
<td>24%</td>
</tr>
<tr>
<td></td>
<td>Zinc</td>
<td>47%</td>
<td>33%</td>
</tr>
<tr>
<td></td>
<td>Tin</td>
<td>14%</td>
<td>24%</td>
</tr>
<tr>
<td></td>
<td>Copper</td>
<td>34%</td>
<td>23%</td>
</tr>
<tr>
<td>Energy</td>
<td>Coal: Australia</td>
<td>9%</td>
<td>33%</td>
</tr>
<tr>
<td></td>
<td>Gasoline</td>
<td>18%</td>
<td>26%</td>
</tr>
<tr>
<td></td>
<td>Natural Gas: United States</td>
<td>30%</td>
<td>39%</td>
</tr>
<tr>
<td></td>
<td>Petroleum: West Texas Intermediate</td>
<td>12%</td>
<td>28%</td>
</tr>
</tbody>
</table>

Source: LMC based on IMF
2.1.2 Natural and synthetic rubber pricing

The other comparison to make is the price of rubber against competing synthetic rubbers. SBR is the most common substitute and as relative prices change, so a degree of substitution occurs, particularly in less demanding applications. Hence, during the late 1990s, with very low natural rubber prices, end users increased the use of natural rubber. From 2006, natural rubber prices have mostly been higher than SBR prices so the opposite has been true. However, the extent of switching has been limited for largely technical reasons; the rubbers have different chemical properties. The strong rise in natural rubber prices has widened the differential between SBR and natural rubber significantly (Diagram 2.5).
Diagram 2.5: Natural and synthetic rubber prices

That there is limited substitutability between the two products can be seen in the behaviour of their relative prices over time. The greater the ability of consumers to switch between two competing materials, the closer their prices should remain over time — with the prices of perfect substitutes theoretically remaining equal. Diagram 2.6 depicts the history of the relative price between TSR 20 and SBR.

The first point evident from the diagram is that the prices of natural and synthetic rubber show considerable divergence, with significant price differentials often existing for prolonged periods. This suggests that the substitutability between the two products is limited, and that any substitution is slow to take place.

The second point that can be drawn from the diagram is that the relative price of natural and synthetic rubber hovers around parity over time. There are several possible reasons for this. If the costs of production were determined by the same factors, the prices of two goods might well follow each other. However, the costs of producing synthetic rubber are determined primarily by monomer prices (which are based on crude oil), while those of natural rubber are determined primarily by labour costs. Alternatively, if the supply of two products was determined by the same factors, we may expect prices to move together. Once again, this does not apply to the case of natural and synthetic rubber. A more likely explanation for the observed relationship between natural and synthetic rubber is...
rubber prices is that there is a degree of substitutability between the two products, however loose it may be.

Diagram 2.6: The relative price of natural and synthetic rubber

A third point that one might draw from the above price diagram is that there is no clear trend towards a greater or lesser correlation between the prices of the two products over time. This suggests that the substitutability of natural and synthetic rubber has neither increased nor decreased over the last twenty years.

2.2 Fundamental factors

To understand changes in prices, it is important to have an understanding of the underlying market fundamentals.

High prices stimulate both a supply and demand response, but given the nature of production, there are often time-lags in the response. There are three main effects of price on production. First, there is a short term impact: a rise in prices leads to increased tapping and production. Second, higher prices lead to new plantings, which in the longer term lead to higher production. The level of new plantings varies considerably between countries, but is a function of government policy, availability of land and seedlings and the profitability of rubber versus alternative crops. Third, high prices have an impact upon replanting decisions. Typically the economic lifetime of a tree is between 25 and 30
years. However, at high prices the economic lifetime changes as lower yields can be offset by a higher price per tonne. During periods of high prices, there is a tendency to delay replanting.

In terms of demand, high prices can be expected to lead to a degree of substitution away from natural rubber, where technically possible, in the short run and in the longer term lead to the adoption of raw material-saving technologies.

### 2.2.1 Supply

LMC estimates that natural rubber production rose to 10 million tonnes in 2010. Production is dominated by three countries, Thailand, Malaysia and Indonesia, who account for two thirds of total production. Below this upper tier, a second tier of three countries – India, Vietnam and China – account for 23% of production (Diagram 2.7). Concentration is even greater for exports as production in China and India is largely for domestic markets. Production in the three largest countries is dominated by smallholders.

![Diagram 2.7: Global natural rubber production by country, 1990-2010](source: LMC)

Typically, there is a seven year lag between planting and production. Therefore, production trends now need to be seen in the context of planting decisions seven years ago. Observing a graph of annual prices reveals that prices between 1997 and 2003 were below $1,000 per tonne (Diagram 2.8) and over this period there were very few new
plantings across the world: smallholders reduced their plantings and governments discouraged rubber planting and replanting. This is best illustrated from Thai planting and Malaysian replanting data. In Thailand, between 1997 and 2003, new plantings averaged just 6,500 hectares per annum. Plantings then rose as prices recovered (Diagram 2.8). In the case of Malaysia, where there were no new plantings, the annual level of replantings fell from 20,000 per annum to just 2,000 in 1999. As prices recovered, so the level of replantings increased (Diagram 2.9).

Diagram 2.8: Annual rubber prices and Thai rubber plantings, 1995 - 2005

Source: Office of Rubber Replanting Aid Fund, Thailand
While data on plantings and replantings are poor for many of the other producing countries, LMC estimates that over the period of low prices, the global level of new plantings fell to under 50,000 hectares per annum, the bulk of which were accounted for by Vietnam, where government owned estates were increasing their planted area.

The knock-on effect of this lack of plantings was that during the period under review (2007-2010), there were very few new plantings available to draw on as demand rose.

In addition, as discussed above, high prices would be expected to have led to increased tapping in the short term. That this did not occur to the extent that would have been expected is in part due to the effect of heavy and unseasonal rains in much of south-east Asia which reduced the number of days when producers were able to tap. This is best illustrated by examining data on rainfall patterns in Southern Thailand. The data show exceptional levels of rainfall in November 2008 and 2010 and March 2011 (Diagram 2.10).
Diagram 2.10: Southern Thailand, East coast monthly rainfall

In order to test the impact of rainfall on natural rubber exports from Thailand monthly series of natural rubber exports and rainfall were captured with series running from January 2003 to the end of 2010. The export data was deseasonalized so that the point in time at which any deviation from normal rainfall patterns could be more readily identified. A separate rainfall series of monthly variation from long-run monthly average, for a given month, was also generated. The hypothesis to be tested was whether exports would be influenced in the short run by rainfall patterns that differed from seasonal norms.

The model selected was one that compared the previous three month seasonally adjusted moving average of exports (a proxy for the prevailing level of exports) with deviation of rainfall in current and lagged months. This model made use of no other variables and, therefore, any variation in its output is entirely attributable to variation from normal seasonal rainfall patterns.

The result of this analysis was that there are significant current and lagged effects from rainfall variation. This influenced natural rubber exports in two ways. First, the current and previous month’s rainfall led to a negative correlation with exports and, second, a longer lag in rainfall variation, from two and three months prior to the export measure, had a positive correlation with exports. For example, during a period of higher-than-average rainfall, tapping will be reduced (and so, therefore, exports) and this would
depress exports for the current month and following month after the high rainfall. Conversely, in the second and third months following such heavy rainfall, producers would likely attempt to make up shortfalls in output by increasing tapping and this would have a positive impact on exports.

Diagram 2.11 illustrates how the model performs relative to the export variation measure described above. Note that the most extreme variations in exports, in 2004 and 2008, are not fully explained by the model since the coefficients are averaged across the entire series and, of course, other factors not included in this analysis will have played a role.

**Diagram 2.11: Deviation from three month average exports**

![Diagram showing deviation from three month average exports]

Source: LMC

### 2.2.2 Demand

The demand for natural rubber is dominated by the tyre industry, which accounts for some 70% of total demand. Between 2002, when the US economy emerged from recession, and 2006, natural rubber demand grew at over 5% per annum. This strong demand growth was largely due to new demand from the emerging markets, in particular China. Annual demand reached over 10 million tonnes in 2010 (Diagram 2.12).
An indication of the strength of Chinese demand can be seen from Chinese natural rubber imports. Chinese official imports of natural rubber (including compound rubber) rose by 1 million tonnes between 2005 and 2009, reaching 2.66 million tonnes in 2010 (Diagram 2.13). In addition to officially reported imports an adjustment needs to be made for imports from Vietnam as these are under-reported in the Chinese import data (the volume of rubber reported as imported to China from Vietnam is considerably less than the volume of exports from Vietnam reported to be destined for China).
Diagram 2.13: Chinese natural rubber imports

Not all of Chinese natural rubber demand should be seen as Chinese domestic demand. A proportion of Chinese demand for natural rubber is destined for finished goods exports. Export demand does not add to global demand for natural rubber, but merely replaces demand in one region with exports from China. In the case of the Chinese tyre industry, the largest user of natural rubber, up to 50% of production is for export, with the remainder of production for the domestic market (Diagram 2.14)
Diagram 2.14: Chinese tyre production (light vehicle and truck tyres)

Source: LMC

2.2.3 The supply-demand balance

The two factors: (i) the lack of new plantings in the period between 1997 and 2003, and (ii) the strength of demand, owing to new demand from emerging markets, meant that supply has been under pressure and stocks would be expected to have fallen.

There is little official data on stock levels in producing or consuming countries. The Thai Research Institute and Malaysian Rubber Board publish data for Thailand and Malaysia, respectively, but these data are not considered to be complete. The data suggest that over the 2005 to 2010, stocks fell by 60,000 tonnes (Diagram 2.15).
Our estimates, which are based on the difference between estimated production and consumption, suggest that since 2002 there has been a drawdown in stocks of close to 800,000 tonnes, while over the period 2005 – 2010, the stock drawdown was 440,000 tonnes (Diagram 2.16). In comparison, over the latter period, IRSG data point to a drawdown in stocks of 500,000 tonnes.

The underlying fundamentals picture has provided support to prices, although it is not clear that the extent of the rise in price is justified by the drawdown in stocks alone. What can be said though is that the rise in prices does not appear to have led to a strong rise in stocks throughout the world, confirming the tightness of supply.


Diagram 2.16: supply-demand balance

2.3 Behaviour of prices on futures markets

Rubber is traded at TOCOM (Japan), Shanghai Futures Exchange (SHFE) and SICOM (Singapore). The TOCOM contract is the oldest and was established in 1984 (taking over the Tokyo Rubber Exchange (1952)). SICOM is largely a physical exchange and was established in 1994. All of the contracts trade 5 tonne lots. SICOM (which was taken over by SGX in 2011) operates two rubber contracts, a RSS3 and TSR20 contract, while the other exchanges run RSS3 contracts. A summary of the main features of the contracts is presented in Table 2.2.

The key futures market variables to analyse are price, volumes and open interest. Definitions of volumes and open interest are provided in the box below.
### Table 2.2: Main contract specifications

<table>
<thead>
<tr>
<th></th>
<th>TOCOM</th>
<th>SHFE</th>
<th>SICOM</th>
<th>SICOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
<td>Japan</td>
<td>China</td>
<td>Singapore</td>
<td>Singapore</td>
</tr>
<tr>
<td>Standard</td>
<td>RSS3</td>
<td>RSS3</td>
<td>RSS3</td>
<td>TSR20</td>
</tr>
<tr>
<td>Trading unit</td>
<td>5 tonnes</td>
<td>5 tonnes</td>
<td>5 tonnes</td>
<td>5 tonnes</td>
</tr>
<tr>
<td>Quotation Unit</td>
<td>Yen/kg</td>
<td>Yuan/tonne</td>
<td>US cent/kg</td>
<td>US cent/kg</td>
</tr>
<tr>
<td>Tick size</td>
<td>Yen 0.1 per kg</td>
<td>5 Yuan per tonne</td>
<td>0.1 US cent per kg</td>
<td>0.1 US cent per kg</td>
</tr>
<tr>
<td>Contract months</td>
<td>6 consecutive months</td>
<td>Jan, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov</td>
<td>12 consecutive months</td>
<td>12 consecutive months</td>
</tr>
<tr>
<td>Trading hours</td>
<td>9.00am to 3.30pm, 5.00pm to 7.00pm</td>
<td>9.00am to 11.30am, 1.30pm to 3.00 pm</td>
<td>7.55am to 6.00pm, negotiated large trade: 7.00am to 6.30pm</td>
<td>7.55am to 6.00pm, negotiated large trade: 7.00am to 6.30pm</td>
</tr>
<tr>
<td>Daily price limit</td>
<td>Set daily</td>
<td>4% above/below previous settlement</td>
<td>10% above/below previous settlement</td>
<td>10% above/below previous settlement</td>
</tr>
<tr>
<td>Delivery grades</td>
<td>RSS3 or 4 Domestic (1st grade, SCR5, GB8081-8089-87), Imported RSS3</td>
<td>Warehouse delivery, FOB port of loading</td>
<td>Warehouse delivery, FOB port of loading</td>
<td></td>
</tr>
<tr>
<td>Delivery</td>
<td>Specified warehouses in Japan</td>
<td>SHFE approved warehouses</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: SICOM, SHFE, TOCOM

### Futures market definitions

Volume is the total amount of trading activity or contracts that have changed hands in a given commodity market for a single trading day. The greater the amount of trading during a market session the higher will be the trading volume.

Open interest is the total number of outstanding contracts that are held by market participants at the end of each day. Where volume measures the pressure or intensity behind a price trend, open interest measures the flow of money into the futures market. For each seller of a futures contract there must be a buyer of that contract. Thus a seller and a buyer combine to create only one contract. Therefore, to determine the total open interest for any given market one only needs to know the totals from one side.

The relationship between price, volume and open interest is summarised in the table below:

<table>
<thead>
<tr>
<th>Price</th>
<th>Volume</th>
<th>Open Interest</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rising</td>
<td>Rising</td>
<td>Rising</td>
<td>Market is strong</td>
</tr>
<tr>
<td>Rising</td>
<td>Falling</td>
<td>Falling</td>
<td>Market is weakening</td>
</tr>
<tr>
<td>Falling</td>
<td>Rising</td>
<td>Rising</td>
<td>Market is weak</td>
</tr>
<tr>
<td>Falling</td>
<td>Falling</td>
<td>Falling</td>
<td>Market is strengthening</td>
</tr>
</tbody>
</table>

Source: www.futures.tradingcharts.com
2.3.1 RSS3 contracts

Historically TOCOM has been considered as the main exchange for price determination. However, in the period under review (2007-2010), the annual volumes traded at SHFE have increased dramatically, while the volumes traded at TOCOM and SICOM have declined (Table 2.3). The volume traded at the SHFE in 2010 was equivalent to some 1.5 billion tonnes rubber, over 150 times the physical volume of rubber traded annual.

Table 2.3: Annual traded volumes (lots)

<table>
<thead>
<tr>
<th></th>
<th>TOCOM RSS3</th>
<th>SHFE RSS3</th>
<th>SICOM RSS3</th>
<th>TSR20</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>7,156,225</td>
<td>19,006,316</td>
<td>216,915</td>
<td>269,100</td>
</tr>
<tr>
<td>2006</td>
<td>9,661,388</td>
<td>52,094,122</td>
<td>174,088</td>
<td>278,468</td>
</tr>
<tr>
<td>2007</td>
<td>7,062,252</td>
<td>84,383,454</td>
<td>177,036</td>
<td>247,448</td>
</tr>
<tr>
<td>2008</td>
<td>5,914,747</td>
<td>92,931,858</td>
<td>142,024</td>
<td>294,843</td>
</tr>
<tr>
<td>2009</td>
<td>3,320,088</td>
<td>178,071,918</td>
<td>75,428</td>
<td>195,986</td>
</tr>
<tr>
<td>2010</td>
<td>3,130,073</td>
<td>334,829,824</td>
<td>35,712</td>
<td>191,219</td>
</tr>
<tr>
<td>Growth 2007-2010</td>
<td>-56%</td>
<td>297%</td>
<td>-80%</td>
<td>-23%</td>
</tr>
</tbody>
</table>

Source: SHFE, TOCOM, SGX

One explanation for the fall in physical trade and liquidity in Singapore, in particular, is that the rise in prices has meant that smaller traders are buying and hedging smaller volumes due to cash flow constraints than was the case when prices were lower.

Comparing end-of-year open interest (that is the number of trades that have not been closed at the end of the trading day) with monthly average volumes gives an impression of how long positions are being held for. China has, by far and away, the lowest level of open interest at under 1% of average monthly volumes and this has fallen over the last three years. The low percentage points to a high proportion of speculative day trading. As would be expected, in Singapore the level of open interest is high relative to the monthly volumes traded as the market is being used for physical hedging (Table 2.4).

Table 2.4: End of year open interest (OI) and OI as percentage of monthly volume

<table>
<thead>
<tr>
<th></th>
<th>TOCOM OI % monthly volume</th>
<th>SHFE OI % monthly volume</th>
<th>SICOM OI % monthly volume</th>
<th>SICOM OI % monthly volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSS3</td>
<td>81683</td>
<td>56970</td>
<td>31,840</td>
<td>42,980</td>
</tr>
<tr>
<td>2005</td>
<td>14%</td>
<td>3.6%</td>
<td>176%</td>
<td>192%</td>
</tr>
<tr>
<td>RSS3</td>
<td>52821</td>
<td>86002</td>
<td>18,940</td>
<td>260%</td>
</tr>
<tr>
<td>2006</td>
<td>7%</td>
<td>2.0%</td>
<td>35,735</td>
<td>280%</td>
</tr>
<tr>
<td>RSS3</td>
<td>38147</td>
<td>91288</td>
<td>34,500</td>
<td>234%</td>
</tr>
<tr>
<td>2007</td>
<td>6%</td>
<td>1.3%</td>
<td>30,735</td>
<td>163%</td>
</tr>
<tr>
<td>RSS3</td>
<td>34574</td>
<td>172888</td>
<td>4,961</td>
<td>149%</td>
</tr>
<tr>
<td>2008</td>
<td>7%</td>
<td>2.2%</td>
<td>79%</td>
<td>305%</td>
</tr>
<tr>
<td>RSS3</td>
<td>38154</td>
<td>231056</td>
<td>2.981</td>
<td>305%</td>
</tr>
<tr>
<td>2009</td>
<td>14%</td>
<td>1.6%</td>
<td>100%</td>
<td>82%</td>
</tr>
<tr>
<td>RSS3</td>
<td>36537</td>
<td>214550</td>
<td>11,924</td>
<td>75%</td>
</tr>
</tbody>
</table>

Source: SICOM, TOCOM, SHFE, LMC
The growth in SHFE volumes suggests that market leadership has switched from TOCOM to SHFE.

Daily prices for the three exchanges were obtained from 2008 onwards and converted into US dollars at the daily exchange rate, in order to assess the level of correlation between prices at the exchanges.

As Diagram 2.17 reveals there is a high level of correlation between prices at the three exchanges. This is true of both the most traded month (TOCOM 6th position, SHFE 4th position and SICOM 5th position) and a comparison of the same price position across the markets. Over the 2008 – March 2011 period, the correlation in prices between TOCOM and SHFE was 99%, SICOM and TOCOM 99% and TOCOM and SHFE 98%.

**Diagram 2.17: Price comparison, 2008 – March 2011**

Furthermore, comparing the TOCOM and SHFE markets shows that the SHFE 4th position has traded at a premium of close to $400 per tonne over the TOCOM 6th position for the last three years, although the premium fell in 2010. There is a similar premium between SHFE and SICOM, while prices at TOCOM and SICOM are much more closely aligned (Diagram 2.18). Over this limited period, on an annual basis, there is no evidence in a change systematic change in the level of premium, again confirming the strong level of correlation between the markets. There is, though, variation month by month leading to SICOM trading at a premium to SHFE for one month in 2011.
One of the reasons that SHFE trades at a premium to TOCOM and SICOM is that all of the contract delivery warehouses are in China and for imported rubber to be delivered against the contract, import duty has to be paid. Import duties fell in 2010, partly explaining the fall in the premium.

**Diagram 2.18: Market price premiums**

That there is a high correlation between prices and that the premiums between markets vary consistently over time points towards a high degree of inter-connectedness between the markets. This is further emphasised by considering the spreads between the individual markets which move in a consistent fashion over the three year period.

This does not give any insight into the direction of the relationship between the exchanges. The TOCOM market opens an hour before SHFE each day and closes after SHFE in the evening, so if the TOCOM market leads SHFE we would expect that price changes between closing and opening in TOCOM to be related in SHFE opening prices. This was tested using daily data for the most traded positions over a three year period. The resulting correlation was weak when the relationship was tested in local currency terms (r=0.39), and weaker still when an adjustment was made for a change in the daily exchange rate (r=0.29). This would suggest that the opening price in TOCOM does not have a large influence on the opening price at SHFE. The relationship could not be tested in the other direction as there was no period during which SHFE was open and TOCOM
closed. However, that there is a strong correlation between prices on the exchanges suggests that either the SHFE market is influencing the TOCOM market, or that external factors influence both exchanges, for instance the publishing of data which may influence trading decisions (GDP growth rates, etc.)

Examining the relationship between change in price and change in open interest reveals, as expected, only a weak relationship between the variables. That the relationship is positive highlights the strength of the market over the period under investigation. Diagram 2.19 shows the relationship at SHFE which is similar for the other markets.

**Diagram 2.19: SHFE, Relationship between Change in Price and open Interest**

![Diagram 2.19](image)

**Source:** SHFE

### 2.3.2 RSS3 versus TSR20

While the majority of futures contracts are for RSS3, the volume of RSS physically traded is declining as end users demand greater quantities of TSR. This is most clearly seen in Thai natural rubber export statistics, Thailand is the largest exporter of RSS\(^{38}\), but its RSS exports have fallen from 80% of total exports in 1990 to just 25% of exports in 2010 (Diagram 2.20).

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\(^{38}\) India is the other major producer of RSS, but most production is used for the domestic market.
Diagram 2.20: Thailand rubber exports by type

Both RSS3 and TSR20 are traded on the SICOM exchange. Comparing prices between the RSS3 and TSR20 allows us to investigate any changes in the relationship between the two series. Diagram 2.21 shows the RSS3 premium between the two SICOM contracts and between the TOCOM RSS3 contract and the SICOM TSR20 contract. The diagram reveals that the two series moved in parallel to 2010. In 2010, the RSS3 premium rose dramatically in Singapore as the SICOM RSS3 price rose, but the premium remained unchanged when using the TOCOM RSS3 price. In 2011, the RSS3 premium rose dramatically again, in both markets, but again the Singapore differential rose to higher levels.
The rise in the Singapore premium is associated with the fall in the volumes of RSS3 traded at SICOM. The reduced liquidity of the contract makes it more vulnerable to price volatility and presents greater risk to hedgers. With high prices, the liquidity of the SICOM RSS3 contract has fallen from a monthly average of 14,600 lots in 2006-2007 to an average of just 1,200 lots during the first four months of 2011 (Diagram 2.22).
While liquidity has also fallen in TOCOM, there is no evidence of increased concentration of trading positions. Since May 2009, TOCOM has published data on the concentration of traders (these data are not published for SICOM and SHFE). These data show that the level of concentration is high (particularly for long positions), but concentration varies over time and does not trend in any particular direction. There was found to be little correlation between a change in concentration and a change in price (Diagram 2.23).
Diagram 2.23: TOCOM, concentration of trading position, 5 largest traders

Source: TOCOM

2.4 Is rubber unique?

The evidence of the rubber futures market points to the increased importance of the SHFE market, with greater volumes being traded and greater speculative day trading, the close correlation of prices between markets, and reduced volumes and liquidity in the TOCOM and SICOM markets.

Rubber is not the only commodity traded on the TOCOM and SHFE exchanges and we are able to compare the performance of rubber with other commodities in order to determine if the performance of rubber is unique.

2.4.1 Shanghai futures exchange

SHFE also trades copper, zinc, fuel oil and since 2007 contracts have been launched for gold, lead and steel. In comparing rubber with other commodities, the analysis has been limited to the older contracts which have all been traded since 2007.

Comparing annual traded volumes reveals that the growth in volumes since 2007 has been similar for rubber to copper and aluminium. The growth in the zinc contact has been greater, although the contract was new in 2007 so relatively few volumes were traded.
Trends in open interest are similar to rubber, with open interest a low proportion of total monthly volumes. However, rubber does have the lowest open interest (Diagram 2.25).

**Diagram 2.24: SHFE, Growth in trade volumes, 2007 - 2010**

Note: Zinc volumes increased by 1330%, albeit from a low volume in 2007

Source: SHFE
In terms of price volatility, after rubber, copper and zinc are found to have the greatest volatility. Copper prices are found to be closely correlated with natural rubber (Table 2.5)

<table>
<thead>
<tr>
<th></th>
<th>Copper</th>
<th>Aluminium</th>
<th>Zinc</th>
<th>Rubber</th>
<th>Fuel Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient of variation</td>
<td>0.25</td>
<td>0.15</td>
<td>0.21</td>
<td>0.32</td>
<td>0.17</td>
</tr>
<tr>
<td>Correlation with rubber</td>
<td>0.90</td>
<td>0.64</td>
<td>0.77</td>
<td></td>
<td>0.82</td>
</tr>
</tbody>
</table>

The contract that does not behave in the same way is fuel oil: there has been no growth in the volume of contracts traded.

A similar picture to fuel oil emerges for the agricultural commodities that are traded on the Dalian Commodity Exchange. With the exception of soybean meal, the growth in volumes has been relatively low and in 2010 traded volumes fell (Diagram 2.26).
Diagram 2.26: Dalian commodity exchange, volumes traded

In the case of the vegetable oils, the Chinese government actively intervenes in the market by releasing soybean stocks to reduce price pressure. This knowledge could then discourage investors from investing in the market. The same could be true of fuel oil, where the government has sought to reduce energy cost inflation, suggesting that there is a distinction between commodities that are considered basic needs and others; with greater speculative behaviour seen in the other category.

2.4.2 TOCOM

At TOCOM, a number of metal and energy contracts are also traded. Although new contracts have been added since 2007, the evidence of all the contracts fully traded over the 2007 – 2010 period is that volumes have declined, as is the case with natural rubber (Diagram 2.27).
Key Quantitative Findings

- Recent years have seen unprecedented volatility in commodity prices. Prices peaked in 2007, collapsed in 2008/09, as a result of recession, and then recovered strongly.
- Rubber prices closely follow the trend in primary commodity prices to 2009 and then follow the general trend in metal prices.
- The rise in rubber prices is supported by market fundamentals, although it is unclear if the extent of the price rise can be justified by fundamentals alone. Production has been constrained by the lack of new plantings over the 1997-2003 period and, in the short run, by heavy rains in both 2008 and 2010. Global demand has been enhanced by new emerging market demand. Consequently, global natural rubber stocks have fallen. In the view of LMC, stocks fell by over 400,000 tonnes over the period 2005-2010. However, both the quantity and quality of publicly available data on stock levels are weak.
- The volumes traded at SHFE have risen dramatically in recent years. In 2010, close to 335 million lots were traded, equivalent to some 1.5 billion tonnes of rubber and over 150 times the physical volume of rubber traded annually. Overall, the majority of lots are traded within the day and hence open interest is very low.
The volumes traded at TOCOM and SICOM have declined since 2007. The decline in SICOM traded volumes in particular, means that there are greater possibilities for market manipulation.

The increase in SHFE volumes suggest that market leadership has switched from TOCOM to SHFE.

In terms of price leadership, there is a strong degree of price correlation between SHFE, TOCOM and SICOM suggesting that the markets are inter-related. Analysis of the difference between TOCOM and SHFE opening times showed that SHFE opening prices were little influenced by the TOCOM opening price. This suggests that TOCOM does not lead SHFE. That there is a strong correlation between prices on the exchanges suggests that either the SHFE market is influencing the TOCOM market, or that there is an external factor at work that is influencing both exchanges.

The rising volume of trade for rubber at SHFE is not unique, metals have experienced similar trends. Whether this is due to perceived similar fundamentals or rather the limited number of futures contracts at SHFE on which speculative action can focus, would need to be examined separately.

### 3 QUALITATIVE ANALYSIS

With the exception of supplemental research and analysis for §3.2.5 (“The (Exchange) Alternatives for Natural Rubber Price Discovery”) and §3.4 (“Potential EU Remedies to Distortion of the Natural Rubber Market”), this section of qualitative analysis is based primarily on interviews with key stakeholders in and around the natural rubber market. Interviews were held with the major tyre producers’ purchasing representatives, also with former and current high-level officials of SICOM/SGX, the SGX regulator (Monetary Authority of Singapore), two of the largest natural rubber trading companies as well as a noted economist and academic familiar with the so-called “rubber community” in Singapore. These interviews were conducted in large part in Singapore where most of these stakeholders reside and operate and where the tyre companies in particular base most of their global purchasing operations for natural rubber. While there was some divergence of views on certain issues of detail, these interviews found a major convergence of position on what appear to be very fundamental issues for the sector and the future operating environment for the rubber community in Singapore.

#### 3.1 Overview of Tyre Producers’ Purchasing of Natural Rubber

**3.1.1 Purchasing Arrangements**

Tyre producers are purchasing for their tyre production requirements principally Technically Specified Rubber (TSR) grade 20 (TSR20) and Ribbed Smoked Sheet (RSS) grade 3 (RSS3). Much of this purchasing is carried out by tyre company representatives based in Singapore – the principal trading centre for natural rubber for decades, and
covering the global requirements of the respective tyre producers. Indeed, there is a close rubber “community” in Singapore, with the tyre company representatives, natural rubber traders large and small, the IRSG and other rubber experts all there and often interacting.

The tyre companies are purchasing both TSR20 and RSS3 in varying proportion depending on the company’s specific quality requirements and formulations. All purchase a large majority of TSR20 - it is an agreed standard specification that can be used widely in tyre production and sourced widely from the various producing countries, albeit only from specifically approved processors in these countries. RSS3, which is used more widely for tyre production in Japan, is considered to have higher specifications and there is normally a price spread between RSS3 and TSR20 contracts (typical US$150/T RSS premium, though it rose to US$800/T at one point in 2010). However, it is clear from the statistics that RSS, which is produced mainly in Thailand, has an ever-decreasing share of the total natural rubber market – see also §2.3.2.

As indicated, the use of TSR versus RSS may have some impact on sourcing. Certainly for TSR20, however, it appears that the country sourcing for the tyre producers is quite diverse. Asia is the principal source region, with Thailand there being a principal source country (also the world’s largest natural rubber producer), along with Indonesia and Malaysia. To the extent that some Western tyre producers have production operations in China, the Chinese operations’ requirements may be sourced all or in part from the natural rubber production there in China (Chinese market demand – domestic and foreign operations - exceeds domestic natural rubber production so China also imports natural rubber significantly, mainly from the major Asian producer countries). There are also smaller levels of sourcing in Africa and South America.

The tyre producers are purchasing the majority of their natural rubber requirements via long-term contracts, typically 6 and 12 month contracts, negotiated directly with the natural rubber processors. The contract price normally comprises two components, the material price and a fixed “premium” (transformation fee specific to the seller’s circumstances, negotiated). The natural rubber price is established most typically with reference to the SICOM (now SGX) futures price, based on the average closing price

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39 SICOM/SGX offers both RSS3 and TSR20 futures contracts with the TSR contracts having significantly more volume, while TOCOM only offers RSS contracts; apparently TOCOM offered a TSR contract at one point but it was later withdrawn.

40 The great majority of natural rubber “production” is by smallholder farmers, typically owning less than 5 hectares of land (on which other tree crops may be grown as well). Smallholder production principally characterises the production in Thailand, the largest of the natural rubber producing countries. After tapping the rubber trees, it is the farmer’s decision to sell the latex in cup lump form, immediately, to middlemen dealers or processors/factories, or to sell, after some days’ delay for drying, the latex in sheet form. In either form, the product can potentially be stored for long periods of time. The tyre producers’ contracts are with the processors/factories who have bought the materials from the producers or middlemen and have processed it to specifications that have been agreed by the respective tyre producer. For quality and safety purposes, the tyre producers will purchase only from “approved” factories.
over the last month before delivery. This pricing structure appears to be quite standard and applied across the board, with the main element of variation and competition being the negotiated premium.

While the principal price reference is the SGX rubber futures price, the tyre producers watch closely also the TOCOM and SHFE prices, as well as price quotes from the Malaysia Rubber Board. To the extent that the latter’s prices are favourable, sourcing from Malaysia may be based on those MRB prices.  

No contracts were examined for this Study but it was indicated that the contracts are typically general and short-form, allowing for substantial flexibility according to the specific circumstances (e.g., impact of weather conditions) that develop during the contract period. For the tyre majors at least, the transaction is based in good part on trust with the known, technically approved factory. There can be many changes accepted over the course of the contract, including in the volume to be delivered finally, but no default. The major tyre producers pay reliably (apparently unlike a number of the domestic Chinese tyre producers) and, as practically guaranteed buyers, their contracts have a value to the producers beyond just payment for delivery (e.g., for the smaller producers to secure local loans). There can be a very large number of such contracts concluded by a single tyre producer over the course of a year, numbering well into the thousands of individual contracts, and with the total value of these contracts in the billions of dollars (US).

These tyre producers do not totally commit themselves in long-term contracts. Some percentage of requirements, varying amongst the different tyre producers, is held open for purchases on the spot market when the price is right – or instead when the tyre company does not want to purchase from the processors at a given price or when the processors are not wanting to sell. The spot purchases are neither regular in volume or time, having the simple objective of buying more when prices are judged good and as broader purchasing circumstances allow. These spot purchases generally made through established rubber traders – there are several large and well-known traders and a large number of smaller traders – again mostly based and trading in Singapore. These traders will know which factories have been approved by each tyre producer and so can assure delivery of approved quality product, sometimes at a better price than established in the long-term contract. Keeping a reserve of requirements open for spot purchasing throughout the year thus provides the tyre producers some flexibility and price management option.

Furthermore, the tyre producers tend to secure their requirements on a “just in time” basis, meaning that they do not build and manage stocks of natural rubber to help cushion

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41 See also §3.2.2.2 concerning the price quote system of the MRB and recent price trending there higher than the SGX price.

42 One interviewee noted that SGX’s “OTC with clearing” contract was started because the Chinese are known to be “defaulters and gamblers.” In particular, many Chinese tyre companies defaulted on their contracts with the global recession in 2009.
their position. This tendency appears to differ significantly from that of major corporate consumers of other major agricultural commodities. Perhaps as a result, there is a perception that the tyre producers are large captive consumers, always having no choice but to continuously buy to ensure that their tyre factories globally can keep production going. The tyre factories may hold no more than a week’s stock to work with, so ongoing buying and logistics to keep the natural rubber continuously flowing to these tyre factories are essential. Supply assurance is their primary criterion of action in the market, not price. It appears that the absence of any significant inventories on the consumer side may represent one factor in price volatility and potentially make them more prone to price rises.43

3.1.2 Risk Management Via Futures Trading

Our survey of the tyre producers has indicated that very little or no hedging is used by them via futures contracts – historically or presently, and no change is foreseen. This holds true even over recent periods of high price volatility. This non-use of futures hedging by the principal consumers (about 70% of global production - see §2.2.2) of this commodity may be another important factor of difference between the natural rubber market and other commodity markets and will be addressed later in this Study.44 To be highlighted here, however, is that this very notable characteristic of the natural rubber market (i.e., absence of largest consumers from hedging activity) was fully confirmed by other, very knowledgeable stakeholders in this market, notably by former and current officials of the principal futures exchange for natural rubber price reference purposes, SGX.

The reasons provided as to why the tyre producers generally have never actively hedged in the futures market (the same market that provides the primary price reference point for

43 An eminent commodities economist has recently reviewed the relevant literature and confirms a historic negative correlation between price volatility and inventories. As regards the period since 2002/2003 when “new capital” began to flow into commodities and later in 2007/2008 when “billions of dollars were poured into commodity indexes, ETFs, commodity structured securities and so forth”, the result is the same – “scarcity is probably the most important concept in commodity financial economics.” A warning is given, at least regarding industrial metals like copper but which might eventually also concern rubber, that man-made scarcity in the physical markets resulting from strategic stocks accumulated in a non-visible manner by a single country, or even by a financial entity wishing to issue physically-backed ETFs, will be the systemic risk to fear in commodity markets. Professor Dr. H Geman, Price Volatility in storable commodity markets: speculation or scarcity?, Swiss Derivatives Review, Issue 46, Summer 2011, p. 16. See also recent studies by Gorton et al confirming the Theory of Storage (low inventories equal greater price volatility) in a study using inventory and futures prices concerning 31 commodities. http://www.knowledgeatwharton.com.cn/index.cfm?fa=viewArticle&articleID=1789&languageid=1

44 Note that a principal objective of EU internal regulatory and international initiatives concerning commodities markets is to maintain and protect the possibility for physical market players to hedge their price risks via futures, which stands in great contrast to the tyre producers’ long-standing culture not to hedge.
their long-term contracts covering the great majority of global natural rubber purchasing requirements) are as follows:

- Most of the tyre producers have generally been able to recover their increased raw material costs, amongst others, in their tyre sales price to end consumers (at least the Western and premium tyre producers; lower-end tyre producers may not have this same facility) – this factor was commonly cited and appears to substantially alleviate what might otherwise be considerable pressure applied across the industry to manage price risk though hedging.

- When most of the major tyre producers are buying the majority of their requirements on the same basis (via long-term contracts negotiated directly with the processors and with pricing structured in much the same way), then they are acting largely on the same commercial basis and rest essentially in the same position competitively – if natural rubber SGX futures prices go up, these tyre producers are affected substantially in the same way, whereas if one producer hedges and does it badly, there could be a huge negative impact financially for that individual company and incur a major competitive disadvantage. Put another way, one goal is to “not put oneself into a worse position than the others” and hedging might just do this.

- Also to highlight, however, there is a serious element of mistrust in the futures market(s), given the very low level of trading volume especially at SGX and hence susceptibility to speculative or manipulative activities there, and certainly also concerning the special (speculative) nature of trading at SHFE. In this trading context, hedging itself might be considered speculative, not the rational risk management function as normally portrayed in the literature.

- More generally, the necessity for on-going buying for (just in time) tyre production requirements means that there is not much room for risk management. One company noted that when tyre production is going strong and the price is high such as at the peak in a volatile period, the company can’t simply wait until the price drops to a more reasonable level. At best the company might seek out a more favourable spot price, if any, for smaller volumes not covered by the company’s long-term arrangements.

### 3.2 Considerations on External Factors of Natural Rubber Price Formation

Apart from the supply/demand market fundamentals that bear on natural rubber pricing as examined in §2, there appear to be certain other special factors that may also be influencing the pricing of natural rubber beyond what may be justified by those fundamentals.\(^{45}\) Several estimates have indicated that such other factors may represent a

\(^{45}\) We should highlight that several of the tyre producers have questioned the general premise that supply constraints have supported the major price increases of recent years (post-2008 crisis). Several confirmed that the “low supply” theory simply does not make sense in their experience and they have
potential 30% premium. However, the actual extent of influence of these other factors or 
a weighting among them is not possible presently to quantify - further detailed 
investigation would be required. However, for purposes of this Study, it is important to 
identify these factors and provide at least some brief subjective appreciation deriving 
from our survey of key stakeholders.

As regards certain of these factors where corrective actions may already be available or 
are in the making at EU level, we also identify potential EU instruments of remedy (§3.4). 
These concern measures that could be asserted by the EU against any actual manipulation 
or other market-distorting action in the natural rubber market, whether by public or 
private actors or whether concerning the physical market or on one or more of the 
relevant commodity futures exchanges.

Also, and totally distinct from potential specific market manipulation by certain players, 
we highlight in this section strong concerns that the current principal price reference for 
the tyre producers’ natural rubber purchase contracts, i.e., the SGX natural rubber futures 
prices, are derived from futures contracts with a fairly precarious future – this is a key 
issue with overarching effects, which must be assessed for the future. Equally, the 
evolution of IRSG, particularly the fulfilment of its crucial role to provide credible 
natural rubber market data for producers and consumers alike, must be carefully 
considered in light of the latest indications of its possible demise as an organisation.

3.2.1 Information on the Physical Market

The tyre producers have constant regard to a large range of data published by many 
sources concerning the physical market and pricing.

On fundamentals, data on natural rubber production (supply) is of particular concern. All 
available producer data is regarded closely, that is ANRPC’s monthly data and IRCo’s 
regular price and weekly market news, both of whose pronouncements on production can 
quickly impact sentiment and pricing at the principal Asian exchanges with rubber 
futures trading. To be blunt and as regards these effectively exclusive producer-country 
sources for the essential production data, the data is not considered reliable.

On the one hand, there is a clear consensus from all parties interviewed that production 
data for this commodity is very difficult to get right in the first instance (given the 
primarily smallholder nature of production, millions of hectares of cultivation, in diverse 
areas, subject to many short- and longer-term factors all of which cumulatively 
distinguish natural rubber production from that of many other commodities). On the 
not encountered any actual shortages of supply in this period. In effect, and apart from some very 
short-term effects, the general 3-4% production growth over this period has kept supply/demand in 
general balance and has not justified the large price increases that have occurred. Again apart from 
short-term shocks, there is also a view that this general balance will likely be maintained for the next 
10 years, at which time other disruptive factors may kick in.
other hand, there remains a strong belief that, beyond the complexity, the production figures can be and are purposefully manipulated to some extent. In particular, both the Thai and Indonesian production data are considered suspect given that they are provided at government level and are very susceptible\textsuperscript{46} to potential manipulation to suit Government political/economic motivations. Smallholder producers such as the majority of producers in southern Thailand are quickly impacted by price declines and the government, perhaps not unnaturally, will seek to avoid resulting political unrest from this region especially.

In contrast, for many years IRSG has provided market data and its data has been considered, generally, more objective and credible. However, we note that IRSG’s production data is not independently compiled and thus is necessarily based, at least in the first instance, on the data provided by the several producer countries. Even though the IRSG might add some degree of correction factor\textsuperscript{47} to the producer country’s data in light of its own, broader reflections, the IRSG data nonetheless appears tainted by its source. (It is evident also that the review process and any correction factor applied to the producer countries’ data creates political frictions within the organisation.)

Finally, there are certain respected private (consultant) sources of natural rubber market data and projections, which a number of the tyre producers subscribe to and which are considered an expert source.

Overall, the natural rubber market appears to be constantly in flux given the many possible short-term and longer impacts on supply (producer perceptions of price trends, immediate producer economic needs, weather and other natural events, specific political unrest, general politics/elections, etc.) and demand (slower or faster economic recovery generally in the major consumer countries, specific economic trends in global automobile industry, EU CAP policy, introduction of trade remedy measures, etc.) which require the tyre producers to be constantly vigilant on all these factors that can affect pricing/volatility.

3.2.2 Potential Market Manipulation

3.2.2.1 Considerations on Potential Manipulation of Natural Rubber Pricing

One key area of concern is potential manipulation of production data as such. As indicated above, there is widespread acknowledgement that securing accurate production

\textsuperscript{46} Accurate production data appears difficult to secure in any event merely by the primarily smallholder nature of the production, long supply chains to processors and interplay between available planting, actual tapping from day to day or week to week and direct effects of factors like weather. That said, there is a very common sentiment that the government statistics out of ANRPC could be improved upon.

\textsuperscript{47} The authors initially understood from their interviews that IRSG may adapt the producer countries’ data in light of its own expert assessment. However, a subsequent review of ANRPC and IRSG figures over the years since 2006 has not indicated any differences. This issue could be examined further.
data is very difficult in any event in light of the natural rubber production structure and supply chain even before processing. However, there appears to be equal belief that the production data provided by the several major producer countries can be and probably on occasion is distorted to suit the political and economic needs of these countries. Allegations to this specific effect preceded this Study, notably concerning apparent manipulation of ANRPC production data to support prices (e.g., underestimation of production over a period of months). Also, exaggeration of certain factors (bad weather events) that would undercut supply and boost prices was also mentioned. Conversely, it has been noted that these Governments will delay publication of news that would tend to undercut prices.

That said, there is also widespread belief that it would be exceedingly difficult to prove the fact of any deliberate manipulation of data or reporting, further that there is probably little or nothing that could be done if any proof did emerge, mainly because the main actors in this regard are Governments.48

A second, quite distinct area of concern about manipulation relates to unilateral producer government interventions to support natural rubber prices, notably the fact that these Governments are quite ready in times of price declines (e.g., upon the recent Japanese tsunami and related events causing a significant drop in demand from this market) to indicate publicly that they will take action to support the natural rubber prices – just these public pronouncements without any actual market intervention measures (such as export restrictions) have apparently been sufficient to impact the market. Within the relevant producer organisations (ANRPC and IRCo), these types of unilateral interventions are said not to be questioned by the other members. The problem on the consumer side is that the producer governments are quick to react to counter any price decrease, whereas they don’t intervene or do so slowly when prices are rising. Price stabilisation and “fair price” objectives of the organisation seem lost (see, e.g., §1.2.3 re IRCo).

Yet another concern expressed by several parties relates to so-called “whisper prices”, for example the result of a producer government “whispering” to its customs offices to slow down administration of export transactions. The consequent slow-down of national exports is reported and the apparent new supply constraint can push prices higher. The whispers, wherever they are occurring, will of course never be proven.

3.2.2.2 Considerations on Potential Manipulation on Exchanges

We have been informed, but without details, that the Rubber Committee of SICOM/SGX has on at least one occasion submitted a complaint concerning potential manipulation of the futures market. This concerned pricing of RSS3 and occurred after the RSS3 price moved significantly higher than usual against the TSR20 price (see also §3.1.1 and

48 But see §3.4.2 re potential new EU trade policy instruments which might reach certain unfair or market-restrictive Government measures.
Diagram 2.19/explanation at §2.3.2). The complaint (copy not seen) alleged that related companies were buying/selling in a manner to drive the RSS3 premium up.

We understand that the Exchange has investigated the complaint and reported that it could not find any purposeful or fixed pattern of manipulation. No action was taken beyond a warning to traders concerning the serious consequences of such behaviour. Apparently the RSS3 price is slowly moving back to its normal spread.

There are also other concerns about potential SGX price manipulation, though without sufficient evidence currently to justify a complaint. The situation has been mentioned by more than one party, however, so it bears mention. This apparently concerns one or more parties making sufficiently large transactions at the end of the day with a view to bumping up the closing price as such. This could potentially be significant over time because the tyre producers’ long-term contracts establish the contract price on the basis of the average of daily closing prices in the month before delivery. While this same tactic would be much more difficult in a large and liquid market, the SGX does not fit this description. With so few lots traded on a daily basis, it would not be difficult for even a single trader to time a sufficiently large trade to have this effect.

Outside of Singapore, concerns have also been expressed about the procedure for price quotes of the Malaysia Rubber Board (MRB). The MRB has a price quote system, whereby each day it polls a set number of rubber producers and traders, and then will publicly issue a price said to be the average of those quoted prices. The lack of transparency of the process clearly raises the potential for manipulation and there are at least allegations of “price-fixing” via this process. Looking at general trends, it was noted by one party that, last year, the MRB price was lower than the SICOM price most of the time, whereas for no apparent reason this year the MBR price has moved higher than the SICOM/SGX price. One tyre producer noted that while is difficult to defend to management the SGX price in the knowledge that the market is not liquid/subject to manipulation, it is even more difficult to defend prices coming from the MRB.

Finally as regards price manipulation at the exchange level, as elaborated below in §3.2.5 there are independent studies that confirm at least a history of serious organised manipulation on the Shanghai futures exchange (SHFE), including concerning rubber futures contracts specifically (2004). The Chinese regulator has taken steps to curb fairly rampant speculative activities at SHFE including important measures at end-2010, but it remains unclear whether the reported organised manipulative activities at SHFE have fully ceased. One interviewee for this Study in Singapore noted that, indeed, Chinese traders may even “fire up” TOCOM rubber trading at the start of the day (TOCOM opens an hour before SHFE) with a view to pushing SHFE prices up even higher when it opens.
3.2.3 The China Demand Issue

Assessment of the China demand and other factors is complex. While demand has been steadily growing such that China is now the world’s largest natural rubber consumer country (see Diagram 2.11), there is also sentiment that a China focus is misleading, at least with respect to demand analysis. This has to do with the fact that tyre production accounts for some 70% of demand for natural rubber and that the biggest segment of that demand is the replacement market for trucks and other large vehicles. As the Chinese market for replacement tyres could rest substantially below that of the US and European markets for some years, the real demand focus should rest rather on these latter markets. It should also be recalled in this context that a significant percentage of tyres made in China are made by foreign-invested tyre companies, and a good percentage of total Chinese tyre production is for export, thus just replacing production in the export markets. So yes, China is growing rapidly and large quantities of natural rubber are going into production in China, but not really for the Chinese market as such, at least not for a number of years to come.

On the other hand, there is clearly also the more generalised view that China along with other rapidly growing emerging economies is creating demand pressures which, along with certain supply constraints and faster-than-expected recovery of the Western car industries (and consequent demand for tyre production), is supporting much of the latest natural rubber price increase. This perception appears widespread.

A totally distinct consideration relates to China overseas activities. One element of this is historical and relates to the Chinese cultural background of key rubber processors/traders in countries like Thailand, such that there is a very close-knit community within which business happens quickly and not transparently. The second element noted by several parties is the aggressive acquisition of processing companies in Thailand and elsewhere by Chinese rubber companies. The effects of at least this latter development may deserve closer scrutiny given parallel concerns of various developed economies about Chinese efforts to secure privileged access to essential raw materials elsewhere.

3.2.4 Other Possible Factors Influencing Natural Rubber Prices

Certain tyre producers have cited yet other factors as probable contributors to the recent price increases.

One factor relates to apparent development of over-capacity (cited 20-40%) in the processing industry, consequent competition for the raw material and related price hikes to consumers – the tyre producers buying from these processors. The ease of establishing new processing plants (low cost investment, technology not difficult, easy to place

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49 The Indian market is also substantial but is largely self-contained in terms of both production and consumption.
anywhere) has led to the excess capacity and effectively “raw material wars” including offering higher prices to attract and secure sufficient volumes of latex from the farmers (or middlemen) to keep the processing plant operating, meaning that their natural rubber prices to buyers get inflated to assure some profit for the processor. The over-capacity is said to have started in Indonesia and spread to Thailand but is also developing in other regions including in Africa.

Another factor cited is hidden inventories in the early supply chain. This segment of the supply chain for natural rubber is long, from small farmer, to local buyer shops/dealers, often middlemen dealers and even “superdealers”, and finally the processing factories themselves. As rubber in latex or cup lump form is easily storable and even for longer-term, there is no difficulty in anybody along this chain holding back product to push for higher prices – and “everyone does it.” Even the small farmers have phones and can check daily prices and decide to hold (“hut inventory”) for days/weeks or sell immediately to the local processor if the price is good. It is believed that farmers up to the processors may together hold huge inventories at any one time, but it is also impossible to verify or quantify such reserves.

3.2.5 The (Exchange) Alternatives for Natural Rubber Price Discovery

As a matter of introduction of this section, it may be useful to recall the price discovery function of derivatives markets. As summarised for purposes of G-20 discussion:

“Speculation in commodity derivatives markets performs a valuable economic function. Firstly, speculation in these markets allows for the transfer of price risk from those least willing to bear it (commodity producers and consumers, or “end users”) to those with the greatest appetite and capacity to do so (generally “speculators”). Depending upon where prices are at any given moment, commercial hedgers seeking to buy and those seeking to sell are rarely motivated to do so at the same time. Without the liquidity provided by speculators, end users would be unable to use derivatives markets to effectively hedge their commercial exposures.

Secondly, derivatives markets transmit valuable information about supply and demand conditions. Traders or firms with information about these fundamentals can buy or sell if this information implies that the current price is too low or too high. This informed trading forces prices towards their correct (or, “true”) level. Producers, consumers and inventory holders of the commodity can, in turn, use the information imbedded in derivatives prices to make better resource allocation decisions.”

Perhaps key to the validity of the above explanation is that first, there is reliable information available about the fundamentals of supply and demand, and second, that the
traders involved are indeed “informed” or, put another way, the trading process proceeds in a reasonably sophisticated way (as by expert commodity trading advisers, hedge funds and large traders) in light of quality fundamentals data. In the first regard, the G-20 is likely to be told that, “it is no secret that data quality is a significant problem in commodity markets.” – and hence meaningful improvements are needed. In the second regard, there might be significant variations between the relevant exchanges – the informed and sophisticated investor may not, in fact, be a dominant factor in each instance, thus giving more or less weight to truly speculative trading.\textsuperscript{50} Moreover, there is also a fundamental question whether the price discovery function of a derivatives market can ever operate properly if the market in question does not attract an essential level of liquidity.

The several considerations above concerning the theory and practice of price discovery in commodity futures markets are assessed below in relation to the current primary exchanges for natural rubber futures.

First, drawing from the quantitative analysis in §2, it appears that financialisation, at least in terms of substantial investment inflows and consequently high levels of trading in its rubber futures contracts, is not a characteristic of SICOM/SGX. Since 2005, trading volume has decreased substantially concerning the TSR20 contract (-23%) and even more so for the RSS3 contract (-80%), such that the lots being traded currently are quite small by comparison to trade on the TOCOM and especially SHFE exchanges. As commented by a number of stakeholders, the low level of trade at SICOM/SGX presents a strong opportunity for manipulation of this market, simply by the fact that the trading actions of a single trader and even of smaller traders can have that much more of an effect within that market (as opposed to a lesser opportunity where liquidity is high with significant involvement of large traders). As noted earlier in this section, few rubber producers and, according to this Study, none of the principal consumers of natural rubber – the tyre producers – have hedging activity of any consequence on the SICOM/SGX exchange (or on any futures exchange).

That said, there has also been a significant decline in trading volume for the single rubber futures contract offered at TOCOM (RSS3), at -56% since 2005. TOCOM efforts to introduce a TSR20 contract did not attract sufficient volume and the contract was withdrawn. It is not clear whether the objectives of a June 2010 Heads of Terms agreement between SICOM/SGX and TOCOM, i.e., to cross-list each others’ key contracts including rubber and to offer cross-membership, have been approved by the respective regulators or implemented. As regards the trading nature of TOCOM, it has

\textsuperscript{50} Apart from trading by non-commercial traders (i.e., traders not having a commercial interest in or exposure to the underlying physical commodity) being termed speculative, it has also been noted that the position of commercial traders (having an interest in the underlying physical commodity) who do not hedge in the futures market despite having an exposure to the commodity could also be considered as speculative. As noted herein, most tyre producers do not hedge in the rubber futures market to any significant extent.
been noted that TOCOM is now largely (70%) physical traders, with the remainder “speculators”. One interviewee noted that the non-commercial rubber trading volume started dropping at TOCOM once Japanese investors could trade overseas in other products and for which greater transparency is available – “why trade in rubber?”

In great contrast to SGX and TOCOM, it is clear that there have been recent significant inflows of investment, or in this instance speculative funds, into SHFE. The explosion of trading at SHFE is documented in numbers in §2.3, but these volume numbers do not really indicate who the traders are or how to characterise them.

The figures on open interest in SHFE – indicating quite low open interest by comparison to figures elsewhere – would tend to confirm the general commentary on the highly speculative, “day-trading” nature of SHFE. Moreover, these traders are Chinese only, as non-Chinese entities cannot yet become members of SHFE. Interviewees for this Study in Singapore have commented that SHFE indeed has “nothing to do” with natural rubber pricing – “it’s a casino”, with “99% day traders”. The rubber prices there can be significantly higher than at both SGX and TOCOM.

Indeed, there is independent commentary that SHFE presents an exceptional situation of a futures exchange having “too much” liquidity, and this having detrimental effects. This has recently been the case as the super liquidity and trading volumes have lead to “irregular” trading activity (in the words of SHFE), thus requiring regulatory action to redress the situation.51

“Irregular” trading at SHFE is not just recent. A 2008 study52 highlights the “major problems” of the Chinese futures market:

- Tendency of excessive speculation
- Immature and underdeveloped information disclosure
- Market manipulation by those who take advantage of inside information
- Among market participants, a disproportion of speculators over hedgers and arbitragers
- Too few and not diversified futures contracts.

The referenced study cites even earlier (1997) research indicating that the main risks in the Chinese futures market stems from manipulation and improper regulation by the exchange.


52 Dr. Xuyi Wang, Understanding the Risk of Futures Exchange: Evidence from SHFE, Asian Social Science, Volume 4, No. 10, October 2008 (paper sponsored by Thyssenkrupp AG, Germany and CDHK Tongji University).
A more recent, 2010 study confirms the historical existence of market manipulation in the Chinese commodity futures markets, notably during the 1990s but including a cornering incident in 2004 at the SHFE concerning natural rubber. The author indicates that the textbook definitions of “hedgers”, “speculators”, “rational individuals” and “price discovery” are “far from adequate to represent China’s [futures] markets.” While the Chinese securities regulator (China Securities Regulatory Commission) has clearly tightened its control of these markets to curb speculation, the author appears to indicate that cornering and other manipulative activities have been widespread and well organized53, which may also mean that they remain in operation to some extent today.

In its latest attempt to curb speculative trading, the SHFE announced in November 2010 the imposition of position limits and significant margin increases on all of its commodity contracts.54 This was highlighted by one commentator as an effort to slow the “legion of small-time Chinese speculators prepared to play the market on an intra-day basis”. Margins on copper, aluminium, wire rod and certain other metals and energy products were increased to 10%, zinc and steel rebar to 12%. The highest margin was imposed on rubber, 13%. The irony was noted of SHFE trying to curtail liquidity when other rubber futures exchanges are eagerly courting new volume, but this peculiarity is attributable solely to SHFE’s exceptionally speculative nature.55

A great distance from SHFE but with a similar perspective on the need for greater exchange governance, we note that the latest EU political discussion continues to link “speculation” on commodity markets with price volatility not justified by fundamentals. The contention is based in part on the fact that trading volume in the related derivatives far exceeds the actual physical volumes delivered each year. President Sarkozy, for example, has “pointed to contracts dwarfing the physical markets that they related to, with the value of trades in oil-market instruments 35 times greater than the global volume of oil, and trade in wheat derivatives worth 46 times annual wheat production in the US.”56 For purposes of comparison and for greater appreciation concerning rubber trading at SHFE, we note that on one day in 2010 the natural rubber trading volume at SHFE exceeded total annual global deliveries – on the same day the level of open interest was very low. Further, as indicated in §2.3.1, the volume traded at the SHFE in total 2010 was equivalent to some 1.5 billion tonnes rubber, over 150 times the physical volume of rubber traded in that one year.

Further, and apart from the issues of speculation or trading volume as such on the three Asian exchanges in question, it appears that natural rubber is not necessarily a

54 SHFE to raise trade margins, limits Nov. 30, The China Post, November 27, 2010.
55 See Home, fn 47.
commodity for inclusion in the major commodity index funds traded elsewhere and which have been noted as significant conveyors of financialisation to commodities generally. This should be examined in more detail later but a brief survey of major commodity index funds has shown that rubber is rarely included in these, which could indicate that much of the international financialisation that has occurred with many other commodities has not, in fact, gone into rubber.\textsuperscript{57} NYSE LIFFE Commodities, which operates in Europe and the US and is the world’s largest derivatives exchange, offers futures and options on a number of agricultural commodities but does not cover rubber.\textsuperscript{58}

In brief, and notably from a tyre producer perspective, current price discovery for natural rubber via the existing futures exchanges is not working well. Nor is the price quote system in Malaysia defensible. Prices are estimated at some 30\% higher than justified by the fundamentals and the rubber market does not currently have a structure like other commodities to better manage the situation (many market players globally, open exchanges with professional investors and large liquidity, physical inventories to manage price shocks, etc.). Further, while over a period of time the tyre companies have largely been able to pass on cost increases to final consumers, the great price volatility of recent years has been very damaging because cost increases cannot be passed on quickly.

If, indeed, the new platform for the rubber futures contracts at SGX does not succeed, there is no real alternative at hand. Some new mechanism, or combination of mechanisms, which can serve to create essential market transparency, effective price discovery and avoid the worst of recent volatility, would be needed to secure a fair price, for consumers as well as producers.

3.2.6 Dealing with Data and Other Imperfections – Role of IRSG (Past and Future?)

As indicated at §3.2.1, IRSG has played an important role over decades in issuing data relating to production, consumption and trade in rubber and rubber products. This scope

\textsuperscript{57} We researched 6 major commodity index funds (Dow Jones AIG Commodity Index, Deutsche Bank Liquid Commodity Index, Goldman Sachs Commodity Index, Rogers International Commodity Index, CRB Commodity Index, Thompson Reuters Continuous Commodity Index). Most such funds invest in futures of 10 or more commodities and aim for commodities that are highly liquid. They tend to distinguish themselves by the specific commodities they hold and the weight each commodity represents within the index. Our review found that only one of these major index funds included rubber and at that, comprising only 1\% of that particular fund’s holdings. This review should probably be extended and elaborated to establish more certainty about investment inflows into rubber.

\textsuperscript{58} In Europe, NYSE LIFFE runs futures and options markets in Amsterdam, Brussels, Lisbon, London and Paris, where every day approximately two trillion euros worth of derivatives business is traded. It highlights that its commodity contracts offer an effective and efficient tool for hedging the price risk and volatility inherent in the underlying markets, providing price transparency as well as providing the benchmark for physical transactions. See http://www.euronext.com/landing/liffeLanding-12601-EN.html. Of course, even in the absence of rubber from the major commodity index funds, indirect market effects could not be totally ruled out.
of data issued has reflected the dual producer and consumer interests and membership of
the organisation. The fact that the organisation is, indeed, the sole international forum
where both rubber producer and consumer interests can be voiced together has given
IRSG a crucial importance beyond its basic data responsibilities. That broader
importance, however, has been declining as internal issues and resulting political frictions
have been taking greater and greater prominence. The cumulative problems now appear
to be reaching a perhaps definitive breaking point for the organisation.

Three key issues have been highlighted for purposes of this Study. First and perhaps
foremost is the perceived mis-functioning of IRSG’s primary task, quality data
generation. Quite simply, most of the interviewees for this Study faulted the quality of
the IRSG data. The problem is not recent – the quality issues are said to substantially
pre-date the IRSG move from London to Singapore in 2008. New leadership upon that
case was hoped to help resolve the issue, but this did not evolve.

To be complete in this regard, it should be noted that no other organisation is said to have
better rubber data. Also, the real problem area – the production data (based on ANRPC
data) -- is acknowledged to be problematic in any event in terms of securing accuracy\(^{59}\),
and potential technology fixes (e.g., satellite imaging) are being assessed for other
commodities, are expensive. Moreover, the central criticism of the data, i.e., that the
production data is not accurate generally and indeed is at times manipulated by the
producer countries in question, cannot be substantiated beyond anecdotal evidence.

Nonetheless, the criticism from the consumer side concerning the IRSG data quality has
been very vocal. The fact that this criticism focuses on the quality of the production data
secured from the key IRSG producer country members, is clearly central to the
substantial mis-trust said to have developed among the members.

Based on the Study interviews, it appears that a second problem issue for IRSG could be
structural in nature. This relates in good part to the described asymmetric government
roles within the organisation. Whereas on the “producer” side the producer country
government members are the principal if not sole interlocutors, on the “consumer” side
the tyre industry is described as having the dominant role in bilateral discussions, sitting
directly with the member government representatives on all key occasions. This scenario
may raise a question why an inter-governmental organisation is needed anymore,
including in the minds of the producer countries. This structural anomaly could only
exacerbate any political tensions felt on the producer side arising from the first problem
(above) that their underlying data is the main target of criticism within the organisation.

The third, and probably most decisive factor impacting the future of IRSG, is quite
objective – membership. As already mentioned, the latest official membership news

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\(^{59}\) One interviewee indicated that a comparative study some years ago involving a similar agricultural
commodity found that there were similar problems with accuracy.
from IRSG (31 May 2011) is that Malaysia is pulling out of IRSG in June 2012, this more or less coinciding with the earlier announced departures of the US and Thailand. The considered assessment is that these departures of key members on both sides could well threaten the survival of IRSG. ETRMA has separately noted that the coming departures beyond the absence of the now largest consumer country, China, and of the third largest producer, Indonesia, puts the continued existence of IRSG into question. At the same time, the producer organisation ANRPC becomes more powerful as it continues to draw in new members and already includes China, so its members now cover well over 90% of global natural rubber production.

As one tyre producer succinctly put it, “we (consumers) cannot go to war with ANRPC”, meaning that whatever happens with IRSG as such or as regards any new body, some means must be found to keep the producer countries within a credible forum for both sides to commonly address and resolve the real challenges that will be facing this sector over the next decade. It may well be determined that only a newly designed body could satisfy this need.

3.3 Continuing Relevance of the G-20 Initiatives

The main conclusion of the IOSC Technical Committee Task Force review of research into the causes of observed commodity price volatility is that there is no conclusive evidence of systematic influence from speculative activities. In particular, there have occurred large inflows of speculative (non-commercial) investment funds, yes, but there is no clear evidence of destabilising effects. However, for the reasons set out in this Study and notwithstanding similar high price increases and volatility, it is not clear that the natural rubber market has had the same financialisation experience as many other commodities. Indeed, this Study has identified a number of important distinguishing features, or “specificities”, in the natural rubber market.

In particular, the current price reference market for the tyre producers is presently a very non-liquid market and, according to the statistics, appears to be increasingly losing volume. This trend might potentially be reversed but, as noted above, this is very much a “wait and see” situation with considerable prevailing pessimism. For the time being therefore, and likely into the near-future at least, this market is susceptible to manipulative activities.

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60 These conclusions are drawn notably from extensive research of the IMF, which has found that, “Despite recent financial innovation in commodity markets, such as indexing, which has allowed investors to benefit from rising commodity prices without having to maintain physical inventory holdings, there is little discernible evidence that the build-up of related financial positions [in commodity markets] has systematically driven either prices for individual commodities or price formation more broadly.” IMF World Economic Outlook, 2008, p 87. The IMF did note, however, that financial market speculation accompanied by systematic inventory hoarding could have systematic effects on commodity prices, but that then current knowledge about commodity inventories was poor. This Study indicates that currently knowledge specifically about natural rubber stocks is certainly poor.
All the volume growth, indeed spectacular liquidity, in rubber futures trading is occurring rather in China/SHFE, but as explained SHFE appears not to fit the conditions necessary for effective price discovery, at least not yet. For a number of reasons, the trading there might indeed be characterised as having a real potential for destabilising effects.

Consequently, this Study would indicate that continuing concern about destabilising effects appears justified, at least concerning natural rubber specifically, and it is important that the G-20 could be made aware of this apparent exception to the economic conclusions applying for commodities generally.

That said, there are a number of other conclusions deriving from the work of various international bodies and intended for the G-20 deliberations later this year, that do appear very relevant and useful concerning the natural rubber market. Amongst the relevant findings/recommendations of these bodies:

- **Manipulation of market price is a clear threat to the integrity of the marketplace and to the key price discovery and risk management role that futures markets play in the larger economy.** Because manipulative schemes are often complex and may involve conduct that takes place on commodity futures, OTC derivatives and physical commodity markets located in one or more jurisdictions, the Task Force is calling for futures market regulators to review their existing powers to ensure that they have the necessary legal framework that is able to provide an effective enforcement deterrent. (March 2009 Task Force Final Report)

- **The quality of the price which the futures market discovers reflects the extent of the market’s understanding of the available underlying data, and the quality of that data.** If data is inadequate or of poor quality it makes it difficult for futures market regulators to determine accurately whether or not certain activity or price movements are unusual. Accordingly, information about the underlying commodity is key for the satisfactory functioning of the futures market and reliable price discovery. (June 2010 Report to G-20)

- **…[I]nformation about the underlying commodity [fundamentals] is key – indeed critical – for the satisfactory functioning of financial markets and reliable price discovery … better physical [ ] data (production, inventories, transport capacities, etc) will allow for increased understanding of the linkages between the physical and financial markets (November 2010 Report to G-20)**

- **…[D]etermine whether the cash commodity reference price on which pricing of the futures or swaps is based is reliable.** (November 2010 Report to G-20)

### 3.4 Potential EU Remedies for Distortion of Natural Rubber Market

Any market manipulation occurring in the context of one or another futures exchange would clearly be the responsibility primarily of the relevant national regulator, e.g., the
Monetary Authority of Singapore concerning activities impacting trading of the rubber futures contracts now on SGX. Beyond such actions of the exchange regulators, however, there is the potential also for EU action, in various realms. This part of the Study examines potential EU competition and trade law remedies which might be asserted to address certain distortions in the natural rubber market, whether concerning prices or supply. To a considerable extent, though not exclusively, such EU remedies would need to focus on market distorting activities occurring outside the jurisdiction proper of the EU – which creates certain challenges in whether or how the potential remedies might be applied.

3.4.1 Potential EU Competition law remedies

The market analysis of the present Study indicates that there may be physical market or exchange manipulative activities causing disorderly price rises and volatility in the natural rubber market. As indicated by certain interested parties and confirmed by our Study, no “smoking gun” has been identified to date in terms of pinpointing specific actors or proof of activities of concern. Nonetheless, the worries about manipulative actions in the market remain very real and make it important to consider potential remedies for as and when the “smoking gun” is revealed. The analysis below touches only on the general elements of potential remedy and application – detailed analysis would be needed concerning any specific instances coming to light. That said, the EU Commission clearly foresees the potential use of competition policy instruments to ensure that supplies of raw materials including rubber are not distorted by anti-competitive agreements or unilateral actions by companies involved.61

Stakeholders which might be the subject of competition law review could include:

- Private parties/traders in the physical supply chain or who are trading on one or more of the relevant commodity exchanges;
- The IRCo; or
- Governments of the natural rubber producing countries.

The applicable EU law provision would be Article 101 of the Treaty on the Functioning of the EU (“TFEU”), which prohibits all agreements between undertakings, decisions by associations of undertakings and concerted practices, appreciably restricting or distorting effective competition within the internal market.

--- Remedies against potential anti-competitive conduct of private parties/traders

To articulate a credible EU competition law complaint, the industry would need to identify 1) strong and concordant indicia that the private parties in question have engaged

in collusive behaviour (e.g., collusion via transactions in the physical market or manipulation in the futures markets) the object or effect of which is to artificially distort (increase) natural rubber prices to EU tyre producers/consumers, and 2) jurisdiction.

Any decision of the EU Commission to pursue action against such conduct would eventually depend on both jurisdictional and enforcement factors:

- For the EU Commission to assert jurisdiction over the case, the industry would have to provide evidence that the conduct of the parties in question has directly or indirectly affected prices of rubber imported into the EU/EEA.

- To be effective in terms of enforcement, the case would need to be directed against parties with company/assets located in the EU/EEA market. This issue might have been less relevant when rubber futures contracts were still traded on European exchanges, but that trading has now stopped leaving trading activities only in Asia. Purely in theory, parties fitting into this profile might include international banks or investment funds and major commodity trading companies (allegations expressed to date have not concerned such players).

-- Remedies against potential IRCo conduct

As already mentioned in Chapter 1 of the Study, the IRCo is a limited liability company created through a Memorandum of Understanding signed amongst the governments of Indonesia, Malaysia and Thailand. The IRCo has been established to provide support to the International Tripartite Rubber Council (“ITRC”), an international organisation set up by the three abovementioned countries. It is a private entity in the sense of entities covered by section 1.1 above, but its interaction with governmental players makes IRCo a special case for analysis.

The success of any action taken by the EU Commission against IRCo would crucially depend on whether its business conduct is required (and not merely encouraged62) by measures of public authority, i.e., by the governments that have created it. Were it to be shown that the founding governments did not merely encourage the IRCo to coordinate prices and output but, effectively, compelled it to do so, the latter would be free from any liability under the EU competition rules.63 In effect, IRCo could escape coverage by demonstrating that the governments forced it to act anti-competitively, leaving it with no margin for autonomous behaviour whatsoever.64 However, if IRCo remains, even to a

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63 This is the so-called “state compulsion” doctrine. See Joined Cases C-359/95 P and C-379/95 P Commission of the European Communities and French Republic v Ladbroke Racing Ltd., [1997], ECR I-6265.

limited extent, capable of autonomous conduct, liability under EU competition rules could be found.

In light of the above, any actionable case against IRCo would require a detailed review and understanding of IRCo’s activities, precise mandate and the extent to which it acts subject to the will of the governments involved; and notably also, for jurisdiction purposes, any links or assets within the EU/EEA.

-- Remedies vis-à-vis the anti-competitive conduct of governments directly

Article 101 TFEU applies to undertakings. The term “undertaking” has been interpreted broadly to include any entity engaged in an economic activity – regardless of its legal status and the way in which it is financed. Organis of States may be deemed to be undertakings under EU competition law in instances in which they carry out economic activities, i.e. activities consisting in offering goods or services on a given market. In contrast, they will not be considered as undertakings when they engage in activities connected with the exercise of the powers of public authority as provided under law.

Consequently, any attempt to apply Article 101 TFEU to allegedly anti-competitive conduct emanating from the governments of the natural rubber producing countries will depend on whether such conduct relates to the exercise of the powers of public authority. This could prove a highly challenging task in the circumstances. Moreover, we should point out that any decision by the EU Commission to investigate or not a foreign government’s allegedly anti-competitive conduct – even if it could be deemed purely economic in nature – would largely depend on political considerations. We might anticipate that bilateral relations would probably need to be quite dire before the EU would even seriously consider reviewing a potential case against a foreign government. This could be the case especially when other, specifically designed external trade instruments could alternatively be asserted by the EU in an effort to remedy distorting measures by government actors.

3.4.2 Potential EU Trade Remedies

As indicated above, EU competition law may not reach sufficiently far to re-dress certain types of market-distorting actions, notably when these actions are brought about by governmental bodies. In these cases, EU trade law remedies might prove more effective, in that they could exercise more considerable political and actual trade penalty pressure

66 Case C-180/98 to 184/98 Pavel Pavlov and Others v Stichting Pensioenfonds Medische Specialisten, [2000], ECR I-6451.
on the governments involved. Unfortunately, the EU Commission’s 2 February 2011 Communication on commodities and raw materials leaves much to speculation in these regards. While inferring that the EU would take a strong line concerning all manner of export restrictions, for example, the EU Commission indicates only most generally the potential trade policy instruments or initiatives available.\(^{68}\) It would be worthwhile to have a detailed analysis of the EU’s current and future arsenal with regard to instances/problems foreseen for specific raw materials, such as natural rubber.

However, there is already one concrete, albeit still in proposal stage, instrument that bears watching, especially concerning natural rubber:

-- The new draft GSP Regulation

The new draft EU Regulation applying a scheme of generalised tariff preferences\(^{69}\) (“the draft GSP Regulation”) indicatively includes Indonesia, Malaysia and Thailand under the list of countries that are eligible to benefit from its preferential arrangements (Annex I). Specifically, Indonesia and Thailand are indicatively included under the list of countries which can benefit from the general GSP arrangement (Annex II). Both aforementioned lists are to be definitively established, in accordance with the relevant procedures provided for in the draft GSP Regulation, a year before the new Regulation’s application.

The draft GSP Regulation provides that the preferential arrangements in respect of all or certain only products originating in a beneficiary country can be temporarily withdrawn under specific circumstances. Among these, it includes the occurrence of serious and systematic unfair trading practices (\textit{inter alia}, affecting the supply or pricing of raw materials), which have an adverse impact on the EU industry and have not been addressed by the beneficiary country.\(^{70}\)

Consequently, if the tyre industry were to generate and present evidence that the major rubber producing countries of Thailand, Indonesia or Malaysia (or indeed any of the newer producing countries including China) have indeed been engaged in serious and systematic unfair trading practices with regard to the supply or pricing of natural rubber, the EU Commission could investigate with a view to potentially withdrawing preferential tariff arrangements granted to the country(ies) in question under the GSP. Even preliminary official investigatory action by the EU Commission would likely exert considerable political pressure on the government(s) in question and could potentially secure a resolution to the unfair practice.

\(^68\) Op cit, fn 1; \textit{See} § 4.2.

\(^69\) Available at \url{http://trade.ec.europa.eu/doclib/docs/2011/may/tradoc_147893.pdf}.

\(^70\) \textit{See} Article 19 (1) (d). However, Article 19 (2) of the draft GSP Regulation specifies that for those unfair trading practices which are prohibited or actionable under the WTO Agreements, the temporary withdrawal from the GSP scheme is to be based on a previous relevant determination by the competent WTO body. In addition, it is stated that the preferential arrangements shall not be withdrawn in respect of products that are subject to EU anti-dumping or countervailing measures.
We understand that the Commission is currently expressly assessing how EU industries could procedurally and substantively present their concerns to the Commission regarding alleged unfair trading conduct in a GSP beneficiary country. This process should be closely monitored and with specific natural rubber views expressed as appropriate.

-- EU FTA Provisions

As indicated above, the Commission’s 2 February 2011 Communication is not very specific concerning EU trade instruments that might be asserted to protect fair access to crucial raw materials. The above-discussed GSP “instrument” is not mentioned, though it does generally reference, for purposes of example, the EU’s Free Trade Agreement (FTA) with South Korea (entry into effect 1 July 2011). To be clarified, this reference might be in respect of the Chapter 11 provisions on competition law, which establish in Article 11.1 the principle that:

“The Parties recognise the importance of free and undistorted competition in their trade relations. The Parties undertake to apply their respective competition laws so as to prevent the benefits of the trade liberalisation process in goods, services and establishment from being removed or eliminated by anti-competitive business conduct or anti-competitive transactions.”

We note that these provisions importantly go further and address in Article 11.4 public enterprises and enterprises entrusted with special rights or exclusive rights, to the effect that:

“(a) neither Party shall adopt or maintain any measure contrary to the principles contained in Article 11.1; and
(b) the Parties shall ensure that such enterprises are subject to the [respective national] competition laws set out in Article 11.2.”

Consequently, and to the extent that similar provisions would be set out in potential EU FTAs as are planned to be negotiated with the rubber producing country members of ASEAN (Singapore, Thailand, Indonesia and Malaysia), the relevant competition laws prohibiting anti-competitive concerted action or unilateral action by a dominant undertaking, including by a government-entrusted body, might give rise in these countries at least to EU political leverage to pressure the government in question to take effective enforcement action against market distorting anti-competitive acts. The FTA’s dispute settlement provisions (Chapter 14) would equally be available in these regards.

With regard specifically to Malaysia, we note that the ETRMA has already called on the EU to pursue FTA negotiations with Malaysia and, in this regard, to:

-- include a Chapter on raw materials and to pay close attention to the natural rubber trade when negotiating it, and
-- note that Malaysia is a country member of IRCo, which might present threats to the European tyre industry by reason of IRCo’s stated readiness to “shore up
natural rubber prices by regulating supply and implementing export control if necessary.\textsuperscript{71}

4 RECOMMENDATIONS

Introduction

The Recommendations of this Study address issues that, in the view of the authors, are extremely timely and important for ETRMA. The Recommendations cover different types of substantive action to be taken at both EU and international levels and over varying timeframes, but they fit logically into a whole and should all be assessed carefully for follow-up by ETRMA.

There is a widespread perception, notably in Europe but also to a point shared by the United States, that disorderly market movements are overwhelmingly caused by “greedy speculators”. This perception is partly historical but is also quite apparent and widespread currently. The current sentiment has undoubtedly been fostered in large part by the financial sector origins of the 2008-2009 economic crisis, which crisis has not yet gone away. The fall-out of this perception in terms of regulatory approach is principally aiming at corrections in the financial markets, but there is also a strong focus on commodities as such and notably on agri-commodities. These concerns have even been reflected, albeit without expressly mentioning speculation, in the EU Commission’s current proposals on measures to reduce price volatility in commodity markets generally.\textsuperscript{72} We are likely to hear more about “speculators” in the lead-up to both Council decision-taking on the several EU financial market regulatory initiatives and certainly looking ahead to the November G-20 deliberations on commodities.

However, as one economist has recently commented in another context, “At the same time, the anti-speculator rhetoric does not quite fit the facts [of the crisis]… This is not to say that the financial community is immune from conflicts of interest or reckless risk-taking, but only that these are not at the core of the current crisis episode.”\textsuperscript{73} These comments also seem to be appropriate to key findings of this Study, meaning in essence that, to be effective, the recommendations of this Study need to look beyond the types of financial market measures currently being considered at G-20 level. The G-20 proposed actions, if finally agreed and implemented internationally and especially in Asia, may be helpful to some degree to protect natural rubber pricing from abusive behaviour on the

\textsuperscript{71} ETRMA, 3 December 2010.  
\textsuperscript{72} See § 1.1.2.  
\textsuperscript{73} Nicolas Veron, Markets, Politics, and the Euro, June 2011
relevant financial exchanges. But it appears that considerably more may be needed to protect the specific tyre industry interests identified by this Study.

This Study has additionally identified more fundamental issues for the natural rubber market and specifically tyre producer interests, arising from important and fairly recent developments in the natural rubber operating environment. Our recommendations thus also include actions to address effectively these specific natural rubber issues. These are considered highly important to the sector’s future, especially in terms of transparency concerning the fundamentals of the physical market and of ensuring continuing and effective price discovery for the sector.

That said, there remains one particular element of the regulatory initiatives at both EU and G-20 levels that could potentially negatively impact tyre industry interests and should be watched closely. This concerns the proposals to target potentially distorting practices in the financial markets by broadening the regulation of commodities trading to include over-the-counter transactions that are not currently subject to surveillance. The proposals could have various positive effects in principle but, after discussion with several experts, it also remains unclear to what extent the OTC initiatives might touch some of the purchasing arrangements of the tyre producers. If there could be such an impact, it will be important to closely analyze that potentiality and to develop an appropriate advocacy position.

Our specific comments and recommendations in the key areas of concern are as follows.

4.1 **Reliability of Physical Market Data / Dealing with IRSG**

Improvement in the transparency and reliability of data on the natural rubber physical market (supply, demand, inventories, etc.) is of crucial importance for the tyre producers as the principal consumers of this commodity. In this regard it is important to appreciate the linkage between transparency and proper functioning of the physical transactions as well as the quality of price discovery via the corresponding derivatives. Further, improved transparency on the market fundamentals should help the financial regulators to fulfil their supervisory responsibility to prevent market abuse. Consequently, all means to secure improvements on the physical market data need to be pursued by ETRMA. For several reasons, dealing with IRSG is an essential first step in this process.

The IRSG is exceptional for its longevity as an intergovernmental body in the commodities universe. Its rather straightforward data and multi-stakeholder forum objectives may have contributed to this. As explained in this Study, however, the interplay of governments, producers and consumers has apparently exhausted the body to the point at which it is now losing both its largest consuming country (United States) and the first and second producer countries (Thailand and Malaysia). This Study revealed widespread pessimism, at multiple levels of stakeholder, concerning the functioning and output of IRSG. And now, with the latest announcement of withdrawal by Malaysia, the
fate of the organisation itself as a functioning body could be seriously threatened. We recall that the third International Rubber Agreement failed in 1999 when both Thailand and Malaysia pulled out.

It is striking that while in the field of natural rubber the existing multi-stakeholder international body responsible for generation of reliable market data may be failing, there are concurrently active discussions on the setting up of new multilateral schemes for the same purpose of collecting, analyzing and disseminating information concerning other commodities. Interestingly, these initiatives for the benefit of other commodities are taking JODI as a model -- the Joint Oil Data Initiative that was launched in 2000 precisely in order to perform functions similar to those of IRSG but also additional tasks. The pursuit of enhanced physical market data transparency and reliability is undoubtedly a line that will be confirmed by the G-20 in November.

Consequently, it is both urgent and essential for the tyre industry to assess whether to seek to save IRSG in its current configuration (albeit minus three key members) – or to examine means by which to establish a viable and credible successor body. Any successor body would clearly need to be designed to fulfil, preferably improve upon, the crucial objectives that were assigned to IRSG in the first place, while also taking into account the changes that have taken place both in the global market and in international governance.

A reflection on a future body performing the fundamental functions described above should take account of the following four considerations:

- The changes in the international economic environment, as far as commodities generally are concerned, will be increasingly affected by the rising consumption of the large emerging economies. The pattern of oil consumption and new or adapted forms of aggregation among producers will, with all likeliness, affect other commodities and raw materials, including rubber. The trend may very well require reassessment or re-configuration of existing supply arrangements between large consumers (even at country level) and individual producers.

- The established international economic institutions will undergo major changes while bodies like the G-20 will definitely play an influential role in the future overall governance. New rules will have to be put in place in order to guarantee the reliability of the system. The weight and influence of governments will in turn influence the behaviour of large corporations thereby increasing the frictions between multinationals and corporations more closely associated with the State.

- The inherited institutional governance of IRSG will have to be recalibrated in order to find a new balance between the different roles of governments on the consumers’ side as opposed to those on the producers’ side, but also in order to allow for better direct representation of the strategic needs of industry. Considering the frictions that have
developed within IRSG over the longer-term, it is far from obvious that the organisation can survive in its present format.

- Accuracy and reliability of statistics should remain the overriding mission of both producers and consumers even if there are other reasons for the present growing polarization between the two sides. It is entirely possible that other players, such as specialized private companies and/or price reporting agencies, could increase the quality of and secure greater credibility for the needed data. It is against this backdrop that the future of IRSG should be assessed.

We thus strongly recommend the creation of a multi-stakeholder task force, initially comprising tyre industry representatives, rubber traders, sympathetic government representatives and experts, having a mandate to urgently assess and draw conclusions on the future of IRSG. The mandate should include a serious and in-depth assessment whether a credible successor organization might be established (consistent with transparency and other criteria being applied for other commodities), its goals/functions and what specific constitution, political and objective, should be enshrined in order to ensure a sustainable future for such a new body. Timeframe: Urgent

4.2 Reliability of Price Discovery in Singapore / Evolution of the Respective Financial Exchanges

It is clear from the literature that the price discovery value of futures markets depends in central part on the market in question being sufficiently liquid. The common working assumption as regards commodity futures markets is that the key stakeholders in the respective commodity product, notably the producers and/or the major consumers (notably corporate consumers, in our case the tyre producers that together consume over 70% of global natural rubber production for their tyre production operations), are active in that market. Broader success in terms of achieving efficient price discovery requires sufficient trading volume, open interest and depth of participation in terms of number of trading participants.

Transitioning of the SICOM RSS3 and TSR20 rubber contracts to the new SGX trading platform occurred only very recently (16 May), clearly with a view to and a strong institutional interest in attracting greater volume/liquidity for these contracts. At this time, we can only wait and see concerning the development of trading on the new SGX platform. What this Study revealed, however, was a fairly general pessimism about the future of these rubber contracts on SGX. This was in good part attributed to the expectation that the current market configuration would not substantially change, especially that the principal consumers/tyre producers will not become active in hedging

74 Other essential features are noted herein, including availability of reliable information on the underlying fundamentals of the physical market.

75 See, e.g., NCDEX ushers in Indian price discovery of commodities, Swiss Derivatives Review, Issue 46, Summer 2011, p. 38.
on SGX – or on other international exchanges. If this expectation holds true, either the market will remain non-liquid and very susceptible to manipulative activities, or the only real potential for new volume growth on SGX will have to come from the so-called “speculators”/non-commercial traders. The latter evolution may be interesting for the exchange but it remains unclear if this would be promising for effective natural rubber price discovery.

Practically speaking, neither TOCOM nor, for all the indicated reasons, even the highly liquid SHFE market, present attractive price discovery alternatives to SGX – at least for the time being. SHFE might potentially change with major developments such as RMB convertibility and the opening of the financial services market in China, but there is no expectation that such developments will occur quickly.

For the time being, therefore, and despite the very limited transactions and hence vulnerability to manipulation, SGX remains the main price reference for the bulk of international physical trading. This is unsatisfactory for the sector but also raises the specter that, should the new SGX platform for the natural rubber futures contracts not prove sufficiently attractive over the next months, even the current unsatisfactory price discovery mechanism could fail and leave the industry with no credible alternatives. In conjunction with other looming events like potential dissolution of IRSG, the current “rubber community” in Singapore could face substantial disruption.

We therefore strongly recommend that the tyre industry carefully evaluate whether there may be an interest of the industry to support a strengthening of trading in the SGX rubber contracts. This initiative overall might involve actions eventually by various interested parties76 but might also include making more systematic use of the futures exchange by the tyre companies themselves. We emphasize that this latter possibility would clearly require very careful further study and legal review, it being well understood that the issue touches on extremely sensitive corporate financial management and also competition issues for each tyre company. In any event, any action in this regard would need to be an entirely individual decision of each company having regard to its particular financial and risk management strategy and objective circumstances. That said, initial and informal indications given in Singapore were that if the tyre companies as major consumers were to participate even only to a small percentage of their annual natural rubber purchases, this could potentially serve both their own financial management purposes (consistent, in principle, with risk management practice of major consumers of other commodities) as well as strengthen the integrity and price discovery purposes of these SGX futures contracts. Timeframe: Urgent

76 For example, the Exchange for its part might review contract specifications to make them more attractive to a larger range of traders (commercial and non-commercial) as possible, or might take extraordinary precautions to prevent manipulation whatever the level of trading.
4.3 Transparency on Natural Rubber Derivatives Trading

As indicated at the outset, great attention is being devoted by the IOSCO Task Force and the G-20 Study Group on Commodity Markets on the improvement of transparency in the trade of commodities and their derivatives. In particular, the ISDA Commodities Steering Committee (COSC) is encouraged to help create data repositories for commodities, starting with financial oil transactions. This endeavor is part of the wider effort of monitoring any type of structured transaction and of having all OTC operations use a clearing house. Importantly, the Task Force has also recognized the need to broaden the initial oil market focus with a view to covering other commodities, including agricultural commodities, that have a significant bearing on economic activity. Based on this Study, the authors believe that the natural rubber market displays characteristics that could make it an important candidate for similar specific repository attention.

It is therefore strongly recommended that the on-going work of IOSCO/COSC as well as the G-20 Study Group on Commodities Markets be closely monitored by the natural rubber sector in order to determine, in the near-term, the importance and potential for establishing a similar centralised database on natural rubber financial trading. Given the specific market developments in recent years, notably with regard to the significance of natural rubber OTC trading (notably for Chinese tyre production requirements) and the trending of rubber futures trading at SHFE, the difficulty of bringing China into an agreement on such repository measures will likely be a difficult but worthwhile pursuit. It is clear, in any event, that the changing natural rubber trade patterns will continue to impact the traditional relations between producers and consumers.

The strongly politically motivated aim of bringing today’s OTC trading into a regulated context also represents a huge challenge to the natural rubber sector. Such an undertaking presupposes the setting up of both quantitative and qualitative criteria that have to be fulfilled in order to measure whether such steps represent a worthwhile (regulatory) addition and make sense from an economic point of view. This will require not only a detailed analysis of different feasible steps and their delimitations. More fundamentally, it entails a trade-off between the advantages of more transparency concerning the broader natural rubber trade and constraints that may impact directly the tyre producers’ procurement operations. It seems tactically indispensable that the tyre producers stay in close touch with other key commodity stakeholders throughout the next steps leading to

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77 For reference purposes, the financial oil repository is intended to record, as a starting point, all oil financial derivative trade types in a centralised database and to provide a trade report structure in line with applicable regulatory requirements. The scope of the repository would include external facing (i.e. transactions with third parties) financial OTC derivative trades, including any exotic or structured transactions and all OTC transactions which are given up to a clearing house. Cooperation with clearing houses and exchanges will be a pre-requisite. The repository will provide a structure for market participants to report transaction information both to regulators and to market participants, with flexibility for regulatory data requests and changes in content and functionality. (Task Force Report for the Financial Stability Board, March 2011)
decision-making at G-20 level. We understand that there are initiatives underway trying to make sure that industry is being sufficiently consulted and involved in the process.

It is up to the tyre industry to set up the strongest possible constituency of like-minded actors. While one can expect resistance from the emerging markets and specifically from the natural rubber producers, it would remain important that adequate channels of communication are maintained between consumers and the producers.

Because of the rather complex and different configuration of IOSCO Task Force, the G-20 Study Group on Commodity Markets and the FSB, these recommended actions aimed at furthering natural rubber-specific undertakings (assessment of natural rubber trade repository and impact of OTC coverage) should be carried out via the EU Commission and/or via key Member States represented in the respective international institution or body. **Timeframe: Urgent**

### 4.4 Multilateral Trade Policy Action

One of the single most important changes in the global environment of trade in commodities (and raw materials) is the steep increase in demand by the emerging economies in general and by China in particular. This trend is rapidly modifying the position of producers in particular in the case of natural rubber. These latter countries find themselves at the intersection of their role of providers of more and more precious raw materials and competing interests among the principal consumer countries.

While trade policy attention remains primarily devoted to ensuring market access and the security of supply mainly of agricultural goods to developing countries, it is definitely timely to support the launch of a structured reflection on the establishment of effective trade provisions (multilateral or, if that proves impossible due to conflicting interests within the G-20, EU bilateral provisions – see also below) against unjustified trade distorting export restrictions involving commodities. Although Art. XI WTO addresses export prohibitions/restrictions in general terms, it has seldom been used in the past and is manifestly poorly suited to constitute the basis for securing greater discipline in the face of the recent massive changes in trading patterns at global level. China, directly and indirectly, is likely to be of key interest in this regard, but it is very conceivable that other producer countries might be challenged if a new trade discipline can be established.

It is worth recalling that on the occasion of last month's OECD Ministerial Conference, the issue of export restrictions of commodities was addressed by the Ministers in a G-20 format. We also understand that there is going to be a follow-up to that discussion. There seem to be basically two different approaches - that could even complement each other – with a view to the launch of a structured process leading eventually to new and more specific trade rules to address distorting export restrictions.
The first step would be to utilize the G-20 momentum and configuration in order to define an overall objective. This would imply a precise definition of the issues by analyzing the nature, the impact and the consequences of the identified restrictive practices. Even such a first phase deserves, however, a tactful prior consultation phase with those countries who claim to be the victims of certain practices and those countries who should be brought into a better policed trade arena.

WTO would, secondly, provide the natural follow-on action, for it is the appropriate institution overseeing world trade and its legal framework. This is likely, however, to prove particularly sensitive because raw materials are not a topic covered by the DDA and the latter is, as now widely acknowledged, in a dire state. The upside of this precarious situation is that sooner or later, with or without an early harvest under the DDA, the Contracting Parties will have to reassess the situation and define the priorities for the future – at least if the WTO is to remain the principal pillar of the international trading system. But even the mere broaching of such an issue for purposes of a new agenda could become a major affair for those countries who might lose out in the wake of new disciplines, at least in the absence of matching compensations.

From an operational point of view, it is important to define precisely which types of restrictive practices should be covered by any new trade discipline. Identifying potential allies in industry inside but also outside the EU will probably be crucial in setting up a sufficiently credible constituency. At the same time, the EU Institutions (Commission) as well as key Member States should be made aware of the importance and urgency of the question, the aim being to incite them to fully use the available channels to influence the various international organizations and bodies where the issue is being, or should be, pursued. Timeframe: Medium- to long-term

4.5 Use of EU Competition and Trade Instruments

The Study has not revealed any ‘smoking gun’ re manipulation of production data or of pricing on relevant financial exchanges. However, in the latter case the opportunity is presented and real suspicions of manipulation remain. Consequently, it will be important for ETRMA to seek EU support of current and coming international efforts to expand the regulation of financial exchanges internationally in a manner to both enhance trading transparency and reduce the risks of price manipulation. We believe that the Commission would be sympathetic to this request. The specificities of the natural rubber market as highlighted in this Study might be particularly interesting for the Commission.

Additionally, it is important to identify with greater precision not only the EU trade and competition law provisions that could be applied by the EU as and when any specific instances of physical or financial market manipulation may be revealed through further detailed investigation, but also the real potential for use of these instruments in circumstances relevant to the natural rubber market specifically. Of particular concern is if and when government or government-related entities might be involved in the activities
in question. As indicated herein, one closer-term opportunity that ETRMA could pursue would be to ensure that appropriate provisions are incorporated into the EU-Singapore FTA currently being negotiated, with a view to establishing close cooperation relating to best practices for regulation of financial exchanges and enforcement activities relating to avoidance of market distortions or manipulation. **Timeframe: Urgent to medium-term**

### 4.6 Horizontal ETRMA Task Force

The above Recommendations represent a snapshot, as of today, of possible answers to the main challenges identified by the Study for the natural rubber sector and tyre manufacturing industry in the months and years to come. The Recommendations, as described, vary in terms of how they could be followed-up. The same is true with respect to the time horizons for the suggested actions. We hence additionally propose the setting up of a special Task Force within ETRMA with the aim of evaluating the relevance of the several individual recommendations and of overseeing their specific implementation and coordination over time. The Task Force could easily take different configurations depending on the specific issue in question. As an example, a specific sub-body could be set up in order to help advance the reflections about the future of IRSG and which could include participants from other stakeholders. **Timeframe: Urgent**

Finally, and also with a view to facilitating implementation of the Recommendations, we believe it would be worthwhile to assess potential governmental or other sources of funding of projects having objectives that coincide with the ETRMA interests identified in this Study. As with several of the key Recommendations above, an urgent assessment of such potential funding is suggested.

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The authors look forward to detailed discussion with ETRMA concerning their analyses and Recommendations, with a view to helping establish priorities for follow-up actions and methodologies aimed at safeguarding the industry’s price discovery and related natural rubber market interests.

Brussels, 30 June 2011

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