

‘Globalisation and the Industrial Minerals Industry’

**Vasili Nicoletopoulos
Premier Chemicals LLC and Natural Resources GP**

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I. Definitions. Pros and Cons. Recent Developments

We all speak about globalisation [‘G’] but, as is often the case, everybody has different perceptions when discussing this topic. Definitions can range between two extremes, already setting the stage for a heated debate on the advantages and disadvantages [20], [25].

On the one hand , there are those that think of G as ‘the possibility to have free movement of people, goods, capital & services throughout the globe’ , or in more colloquial terms , as ‘the movement of billions of dollars around the global financial system’ .

Others see G as ‘the homogenisation of all rules, including political and social norms, environmental standards and safety rules’ , often implying that it affects [negatively] people ‘at the bottom of the pile’.

The proponents of G [from A.Greenspan to, I dare guess, the majority of attendants of the ‘10th Industrial Minerals Congress & Exhibition’] see it as the driving force behind growth in the world economy in recent years, as well as – to get closer to our field – the cause of the [associated] commodities boom that is still going on.

Opponents , ranging from liberals such as J.Stiglitz to radicals including N.Chomsky and E.Hobsbawm to the [remaining] Marxists , claim that G amounts to Americanisation ie dominance of one country , to rising inequalities, and to destruction of the environment.

For most persons that are thinking objectively, we believe the key questions should be the following: Does G foster economic growth? Does it benefit the consumer, the worker and the environment? Does it benefit developing nations? Does it promote human rights? Does it promote growth of democratic governments? Does it improve the quality of life?

Without necessarily agreeing on the questions themselves, globalists and antiglobalists would answer them roughly as follows.

Globalists would claim that G accelerates economic growth, increasing standards of living, albeit w/ winners and losers; that it benefits the consumer – by increasing income and offering a greater variety of lower-priced products and services; that it increases employment, wages and helps improve working conditions [e.g. workers' rights]; that it helps clean up and protect the environment by creating national wealth for environmental improvements; that it helps developing nations: acceleration of economic growth and lifting of millions out of poverty; that it helps protection of human rights: economic and political freedom closely linked; that it fosters the growth of democratic governments, which have almost doubled worldwide in the last decade.

In two sentences, this positive view can be summarised as follows: G and technology result in a quality of life unimaginable a hundred years ago. Life expectancy, literacy, human health, leisure and living standards improved dramatically worldwide.

Antiglobalists' arguments are that it subjects people to financial crises and poverty in the name of corporate greed; that it has resulted in record corporate profit rates while worldwide income gap widens; that it results in jobs being shipped overseas to low-wage factories with poor working conditions and abuses of workers' rights; that it exploits local environments in the quest for corporate profit and contributes to worldwide global warming; that it subjects developing nations to severe trade and financial lending practices, keeps nations trapped in debt and poverty; supports a world trade in human bondage and slavery estimated in the millions; that it threatens sovereignty of the nation-state undermining national laws and regulations with power of world trade and finance bodies. Also G threatens public health, the local economies and the social fabric of agricultural based societies.

G is not a new phenomenon. It started with the ancient and evolutionary phenomenon of internationalisation of commerce in goods. Then came transport and communications technologies, followed by freer movement of capital, labor and services. In modern times, the US and the UK can be seen as the driving forces, with the collapse of communism giving a new impetus, even though some say that communist ideology also preached globalisation, albeit of a different kind. Finally, an excellent period of economic growth followed, especially from 2002 to 2007.

Seven new factors eased G in the 21st century [20].

First, there are institutions, like the EU that now has 27 members plus four candidate countries. As a consequence, most national policies, with the exception of taxation, are now homogenised as they are all originating in Brussels. These range from environmental, social and health & safety, to antimonopoly rules, to antidumping, to R&D to financing.

Second, the information revolution by itself fosters globalisation: the internet, e-mails, search engines, data bases, electronic press, mobile phones, and tools such as Google Earth are providing a fast common language to people, businesses and institutions everywhere on the planet.

Third, the developments in the energy field are also bringing people closer and setting common rules : the ex-Comecon countries are also now paying international market rates, prices are at a high point due to strong demand in the far East, and lastly there is a link between energy and the environment.

Fourth, environmental globalization in the form of greenhouse emissions [the global warming phenomenon] is linking energy with the environment in a manner that everybody immediately understands.

Fifth, there are new finance tools and mechanisms that facilitate worldwide financial communications and transfers of funds: the euro; links among stock exchanges [themselves globalised & on-line]; new financial schemes such as options/ real options / derivatives; sophisticated mathematical models; modern computer software and hardware.

Sixth, there is an increasing role of the so-called BRIC ie Brazil, Russia, India and China. These countries help shape the new international scene , not only as suppliers but also as consumers , causing nothing less than a shift in the global economy's centre of gravity. For an excellent discussion on the topic, and how it relates to mineral resources, see [12] and [13].

Lastly, as a response to G, but also a force that contributes and feeds back to the phenomenon, are international organizations , be it lobbying groups or environmental NGOs . Both sets of institutions are becoming more and more powerful in a world that is coming to grips with all the new realities discussed above.

Suddenly , however, ‘a funny thing happened on the way not to the Forum but to 2008’. Starting in the last months of ’07 , we are witnessing a departure from the more-or-less linear, and to some benign, evolution of the six years 2002-2007. There is partial return to so-called protectionism, and not only in the ‘usual-suspect’ countries; there are reports of reform fatigue in the new [and some old] EU member states; markets are in turmoil, looking for decoupling , which to some strikes of deglobalisation and there are signs of ‘a new type of stagflation’; and , to get closer to home, in the Davos ’08 Symposium the main theme was ‘the struggle for basic commodities including food, energy and water’. William White, the chief economist of the Bank of International Settlements, was very recently [Financial Times, March 13, 08] quoted as saying that ‘[the difficulties facing policy makers] seem as great today, if not greater, than at any other time in the post-war period’. For other examples and further analysis , see [1] , [9], [11] and [23].

Furthermore, new powers are emerging, including energy-rich anti-globalist regimes. In a serious manner, ‘Americanisation’ gives way to Multipolarism . Many of the world-class companies of the future will come from the ‘new economies’ rather than the ‘new economy’. The role of BRIC is enriched, from suppliers/consumers to worldwide investors: there is already strong foreign direct investment from China in Africa, with Chinese companies searching for raw materials. The costs of food and energy and many minerals are rising fast , with the biggest long-term driver is growing wealth in China and

India. There are associated environmental [sustainability] problems , worldwide and a rapid increase in transport costs. On this subject , see, for example, [3], [4], [5], [8] and [10].

In addition, in the domain of finance there is an increasing role of **sovereign wealth** funds, with yesterday's 'bad guys' coming to the rescue of solid establishments such as UBS, Morgan Stanley etc ; at the same time, at the other end of the scale, we see **individuals** such as Soros and Buffet acting as institutions!. The well-publicised subprime crisis that lead to a credit squeeze, the falling \$ vs the euro , and skyrocketing energy and food prices, albeit in \$ terms, are also making the global financial system now so complicated that nobody really knows how deep its' problems run. The reader is referred to [10], [16], [23] and [24].

II. Globalisation in Minerals

The driving forces for G from the supplier's viewpoint were [14] access to mineral resources , access to markets, synergies & economies of scale in production . In addition, until a few years ago, there was partial abandonment of state ownership and a decline in transport costs.

Now, partly due to the recent factors just listed, we might be seeing the beginning of a new era of resource wars.

When analysing these phenomena, it is interesting to note that often the trends in the oil and gas industry are followed by the metal ores and metals industry and then by industrial minerals.

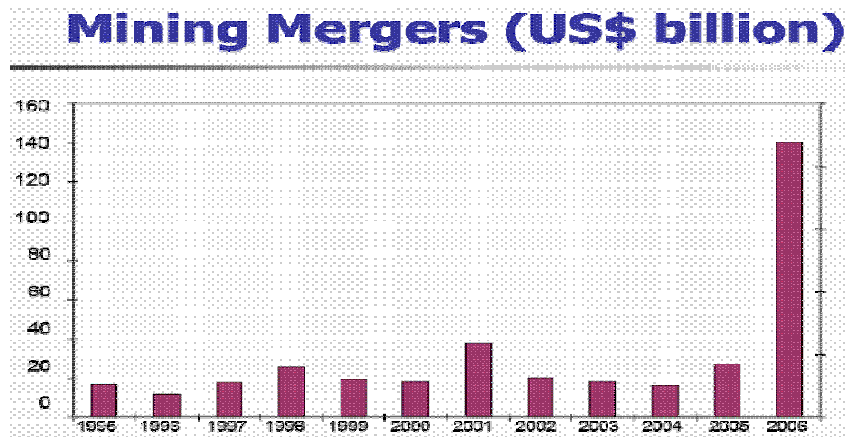
BRIC activity is affecting all mining [and shipping!] worldwide . China is booming, polluting and increasing in costs. It is rich in industrial minerals , but for a number of reasons is going from dumping to rationing in a few years . India is following suit but in a rather different manner. Russia and Brazil are major forces in many industrial minerals as well as energy. Chinese and Russian mining giants invest abroad, in places like Latin America , Australia , Africa , China and now North America.

A multitude of EU directives and regulations come into play, notably Natura , REACH , Emissions Trading Systems, the IPPC Directive/BAT and the Waste Directive . Trade institutions , mainly Euromines, Eurometaux, IMA and The World Mining Council respond to many of these challenges with information, lobbying and networking. On this subject, see also Section 4 below.

Mergers and acquisitions are a key element of globalisation . The following Graph 1 [22] presents the evolution of mining mergers from 1995 to 2006, the record year of that period.

Graph 1 : Mining Mergers 1995 - 2006

Source: [22]

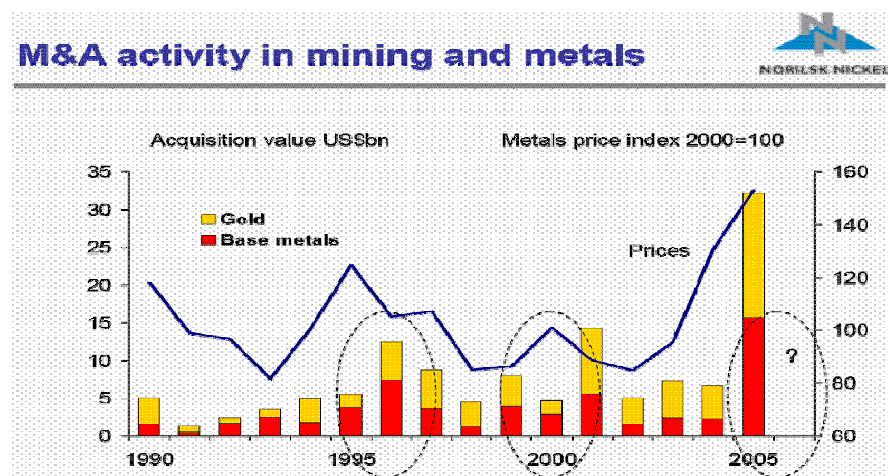


Graph 2 [14] is showing the M&A activity in mining and metals [gold and base metals] from 1990 to 2005, correlated with the price evolution of these commodities. During the period '99-'01 bad market conditions and low prices prevailed, causing a low morale in the industry. As a result, M&A activity in that period was mostly defensive, ie aiming at cost-cutting, consolidation and rationalisation. Of course, achieving economies of scale was also a driving force, as usual in M&A. The dilemma 'exploration vs. M&A' was solved in favor of the latter. All in all, the mining industry was following similar moves in the oil industry.

In contrast, '05-'06 was a period of bull market, hence there were marked differences in M&A drivers. Due to an expansion mood, acquiring companies were seeking growth and opportunity, rather than cost-cutting and restoration of profitability. Mining enterprises had excess cash and bought, rather than returned to shareholders. There was strong demand from China, India. Commodity diversification and resource availability [low exploration, difficult permitting – both politically and environmentally] became important.

Graph 2 : M&A activity in mining/metals [gold, base metals] 1990-2005

Source: [14]

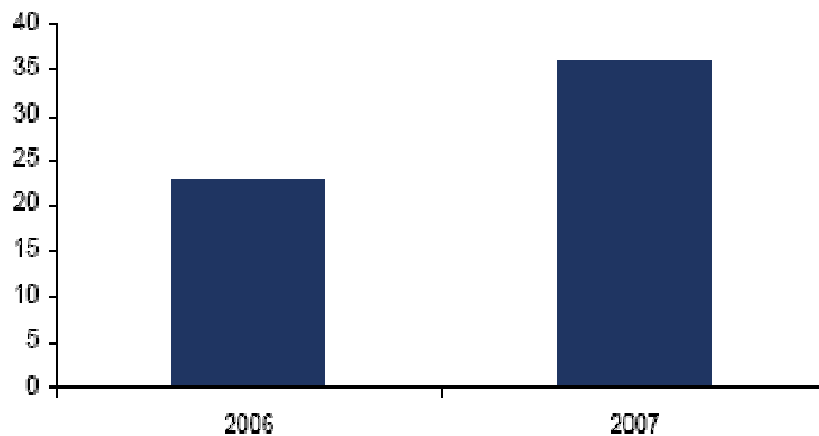


III. Globalisation in Industrial Minerals

Industrial minerals have a lot of similarities with metal ores, but they are different in that deposits more dispersed, sophisticated processing often necessary, there is a wide range of applications and as result a rather complex marketing and market development is required, pricing is not set by a stock market, shipping is many times an important aspect due to handling peculiarities and also to the fact that freight is often a sizable component of the cost-and-freight cost. One of the consequences of the above is that metal ore companies, when deciding to diversify into industrial minerals, find that a long-term commitment is absolutely necessary, on which subject see an interesting discussion in [2].

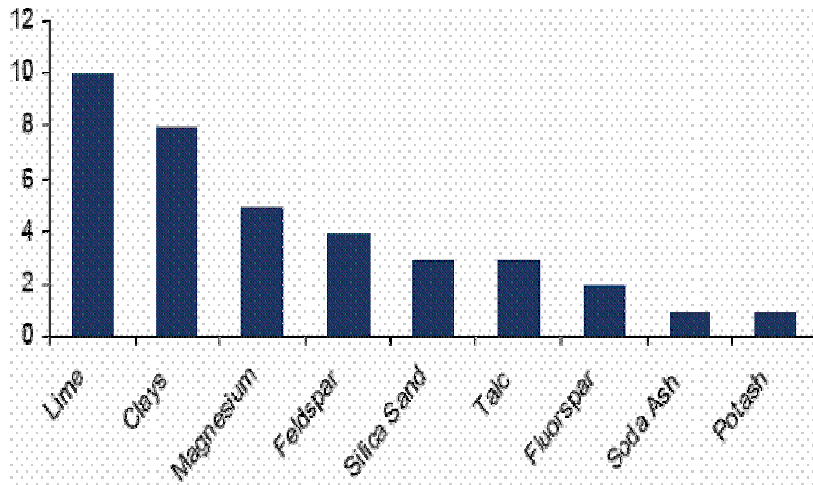
In the following graphs 3 and 4 [7], we present recent examples of M&A activity in Industrial Minerals, including from the involvement of private equity capital in our field. In Graph 3 it is seen that the number of transactions in 2007 were 57% higher compared with 2006.

Graph 3: M&A in Industrial Minerals, number of deals
Source: [7]



Graph 4 below shows an analysis of the industrial minerals deals in 2006 and 2007, indicating that lime and clays were the most active mineral targets, followed by 'magnesium', feldspar, silica sand, talc and fluorspar.

Graph 4 : M&A in Industrial Minerals, by Mineral '06-'07
Source:[7]



The following Tables 1, 2 and 3 , show M&A in Industrial Minerals in the last three years .

Table 1 : Major M&A in Industrial Minerals 2008
Sources: [7],[15], [21]

<i>TARGET</i>	<i>TARGET COUNTRY</i>	<i>MINERAL</i>	<i>ACQUIRER</i>
Verkneamskoe	Russia	Potash	OAO Silvinit
Olympia Resources	Australia	Zircon	Bid by Territory R.
Paradox Basin	US	Potash	Ringbolt Ventures
RTZ [+its' Ind. Minerals]	Australia, UK	Talc, ...	Chinalco,Alcoa,BHP
Ma'aden Phosphate	Saudi Arabia	Phosphate	Chinese, Korean
RTM Borax	Denver	Borate	'for sale'
Keliber Li	Finland	Lithium Carbonate	Nordic Mining
Slovmag	Slovakia	Magnesite	Magnezit
General Chemical	US	Soda Ash	TCL
US Silica Co.	US	Silica Sand	General Chemical Ind. Products
Keliber Oy	Finland	Lithium Carbonate	Nordic Mining

Table 2 : Major M&A in Industrial Minerals 2007*Sources: [7],[15], [21]*

TARGET	TARGET COUNTRY	MINERAL	ACQUIRER
Searles Valley Minerals Inc.	US	Borate, Soda Ash, Na ₂ S ₀₄ , Salt	Nirma
Van Mannekus	Germany	MgO	50% Grecian Magn
Birch Mountain Resources	Canada	Limestone/Aggregates	Tricap Partners
Oglebay Norton Company	US	Lime , industrial sands	Carmeuse
Ceture Kimtas	Turkey	Lime	Carmeuse
Advanced Industrial Mins	Sierra Leone	Coal	Hidalgo
US Silica Co.	US	Industrial Sands	Harbinger Capital Partners
Hill & Griffith Co.	US	Bentomite,Carbon	S&B
Zemex Industrial Mins Inc.	US, Canada	Attapulgit, Mica	General Chemical Industrial Products

Table 3 : Major M&A in Industrial Minerals 2006*Sources: [7],[15], [21]*

TARGET	TARGET COUNTRY	MINERAL	ACQUIRER
Trisil Minerals Inc.	US	Riprap, Crushed Rock, Guard Rock	Global Industrial Services
Unifrax Corp	US	Ceramic Fiber	AEA
Buffalo Fluorspar	South Africa	Fluorspar	Sallies
Zemex SMPI	U	Talc	Wold Talc
Minelco	UK	Vermiculite	Hoben Int'l
Royal DSM NV	The Netherlands	Iodine	SQM
Izocam stake	Istanbul	Mineral /Glass/ Stone Wool, Fibre Glass	St. Gobain
Engelhard Corporation	Newark	Kaolin	BASF

In addition to the above, venture capital and private equity recently became very involved in industrial minerals M & A . Key examples [21] include the Carlyle Group that bought PQ in the US, Hg Capital that acquired the Omya talc division ‘Mondo Minerals’ , GP Investments that entered Magnesita SA of Brazil, the Resource Capital Fund that acquired QMAG of Australia as well as NYCO Minerals , Rhone Capital of the USA with Almatris GmbH and LWB Refractories, Palladium Equity Partners that bought Prince Minerals and recently the Gilsonite Co in Utah and, inversely, 3 i of the UK that sold UCM [UK/USA].

IV. Policy Recommendations for Industrial Minerals Companies.

Whether they like what is going or not , modern industrial minerals companies cannot ignore the realities of globalisation, nor of the developments of the last months. Hence, appropriate strategies should be explored [20].

Based on the above analysis and our long experience in the field, we believe that, **in the commercial field**, industrial minerals companies should be always alert regarding market as well as administrative issues. They will profit from participating in tentative alliances, initially to test the waters, possibly get involved in distribution channels [and in shipping?], and perform joint R&D projects eg in EU Framework projects.

Mostly, these companies should be prepared for major M&A s and deeper alliances; their customers [eg refractories] and their customers’ customers [eg steel] are doing it ! It goes without saying that companies should beware and take careful notice of competition policy, especially the two key issues of ‘market definition’ and of the ‘producer vs consumer surplus’.

In the so-called ‘softer areas’, there is a clear advantage in being socially and environmentally aware and proactive and in dramatically improving how an industrial minerals company communicates, especially on environmental matters. Engaging communities, environmental groups and local interests early in new projects is to the benefit of everybody concerned , in order to combat the common [unfavourable] perception that ‘mining benefits are national, while costs are local’.

Furthermore, as past president of Euromines, the European Association of Minerals, my strong opinion is that the value of industrial minerals companies’ active participation in international institutions and associations cannot be overemphasised, for three reasons . First-hand early-warning information on forthcoming directives and regulations, inputting the industry’s opinion on same, and exchanging opinions and best-practices with companies in similar situations and like characteristics. This was already discussed as well in Section 1 above. A different example of the pioneering role of Euromines in the development of ties of the Western European mining industry with its counterparts and

governments of five countries in the then-crumbling Soviet block can be seen in [17] and [18].

Lastly, in the internal field ie **within - and at the interface of - the borders of the company** itself, we would recommend using financial institutions & consultants as antennae , employing cosmopolitan and multilingual staff, making full use of IT, while at the same time continuously improving management, corporate governance and financial reporting .

In summary, at times like these, an industrial minerals enterprise should **set a clear strategy and business plan , but always be prepared to scrap it if a great new opportunity arises. Lastly , we should all be prepared for a market downturn, as good times do not last forever**, and we are already seeing strong signs of a slowdown in the US and the EU economies, admittedly without a significant impact on our sector - at least up to the moment of writing this paper.

V. A Concluding Comment

Ours is a mature industry, highly competitive and cyclical. Worldwide assets are depleting, for technical as well as administrative reasons. Demand for mineral products may be still good, but projects will be harder to do .The risk-reward structure is changing – to the worse. There is polarisation towards, on the one hand large diversified companies, and on the other, smaller companies to pioneer new regions and fill niches of the market . Our recommendation is to make that strategic choice early enough -it is very difficult and increasingly risky to do both !

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