FRASER INSTITUTE ANNUAL

Survey of Mining Companies 2011/2012

Fred McMahon and Miguel Cervantes

This publication has been made possible thanks to the support of the Prospectors and Developers Association of Canada (PDAC) and the Fraser Institute.

About The Fraser Institute

The Fraser Institute's vision is a free and prosperous world where individuals benefit from greater choice, competitive markets, and personal responsibility. Our mission is to measure, study, and communicate the impact of competitive markets and government interventions on the welfare of individuals.

Founded in 1974, we are an independent research and educational organization with locations throughout North America, and international partners in over 80 countries. Our work is financed by tax-deductible contributions from thousands of individuals, organizations, and foundations. In order to protect its independence, the Institute does not accept grants from government or contracts for research.

Media

For media inquiries, please contact our Communications Department
telephone: 604.714.4582; e-mail: communications@fraserinstitute.org

Disclaimer

The coordinators of this survey have worked independently and opinions expressed by them are, therefore, their own, and do not necessarily reflect the opinions of the supporters, trustees, or other staff of the Fraser Institute. This publication in no way implies that the Fraser Institute, its trustees, or staff are in favor of, or oppose the passage of, any bill; or that they support or oppose any particular political party or candidate.

Copyright

Date of issue

February 2012

Editing, design, and production

Kristin McCahon

Cover

Design by Bill Ray. Cover image copyright © gwhitton, Bigstock

For additional copies of this survey, or for copies of previous years' surveys, please call:
The Fraser Institute,
4th Floor, 1770 Burrard Street,
Vancouver, BC, Canada V6J 3G7
Phone: (604) 688-0221, ext. 580; call toll-free: 1-800-665-3558, ext. 580; or e-mail sales@fraserinstitute.org

Survey information

The Fraser Institute Annual Survey of Mining Companies was sent to approximately 5,000 exploration, development, and other mining-related companies around the world. Several mining publications and associations also helped publicize the survey. (Please see the acknowledgements.) The survey, conducted from October 4 to December 23, 2011, represents responses from 802 of those companies. The companies participating in the survey reported exploration spending of US$6.3 billion in 2011 and US$4.5 billion in 2010.

Acknowledgements

We would like to thank the hundreds of members of the mining community who have responded to the survey this year and in previous years. You do a service to your industry by providing such valuable information.

We would also like to thank the Prospectors and Developers Association of Canada (PDAC), whose generous support makes this survey possible. We also owe a debt of gratitude to a number of mining associations and publications that generously helped inform their readers and members of the opportunity to participate in the survey. These include: the Association for Mineral Exploration BC, MineAfrica Inc., the Australasian Institute of Mining & Metallurgy, the Colorado Mining Association, the CRU, the NWT & Nunavut Chamber of Mines, the Vancouver Mining Exploration Group, *International Mining*, *Mining Weekly*, and the Canadian embassies and high commissions that helped us with valuable industry contacts. We would like to thank Viktor Koo for his contribution in helping us find contacts in Eastern Europe.

We would also like to thank then Executive Director Michael Walker and Laura Jones for conceptualizing this project a decade ago.

Executive summary—2011/2012 mining survey

Background

Since 1997, the Fraser Institute has conducted an annual survey of metal mining and exploration companies to assess how mineral endowments and public policy factors such as taxation and regulation affect exploration investment. Survey results represent the opinions of executives and exploration managers in mining and mining consulting companies operating around the world. The survey now includes data on 93 jurisdictions around the world, on every continent except Antarctica, including sub-national jurisdictions in Canada, Australia, the United States, and Argentina. This year, Missouri, Dominican Republic, Egypt, Guyana, Laos, Mauritania, Morocco, Poland, Suriname, and the following sub-national jurisdictions from Argentina: Catamarca, Chubut, Jujuy, Mendoza, Rio Negro, Salta, San Juan, and Santa Cruz were added to the survey. South Dakota and Wisconsin were dropped.

Focus on the news

Miners appear to be more pessimistic about future commodity prices, at least in comparison to the heady optimism about mining prices in the recent past. Miners are expecting level or reduced prices for almost all the commodities we examine: silver, copper, diamonds, coal, zinc, nickel, potash, and platinum. The exception is gold.

Diamonds, in particular, may not be the investor's best friend. Miners were especially pessimistic about diamond prices. Prices for gold and silver, on the other hand, were expected to fare better than other minerals.

We asked miners whether they thought that the prices of these commodities over the next two years would increase by over 50 percent, between 20 percent and 50 percent, under 10 percent (in other words, at just above or below the rate of inflation), or decline. Although there appears to be less optimism, the decline should not be overstated. Averaging across the minerals, only 14.4 percent of miners expect prices to decline, while 49 percent expect prices to increase by 10 percent or less over the next two years (roughly, as noted, the rate of inflation). A third of miners expect increases in the order of 20 to 50 percent, while 4 percent expect increases over 50 percent. (See "Investment patterns" for details.)

The level of optimism or pessimism varies widely across minerals.

80 percent of respondents thought diamond prices would increase by 10 percent or less, or decline over the next two years

75 percent of respondents thought nickel prices would increase by 10 percent or less, or decline over the next two years

73 percent of respondents thought zinc prices would increase by 10 percent or less, or decline over the next two years

71 percent of respondents thought coal prices would increase by 10 percent or less, or decline over the next two years

Projections on copper and platinum were more optimistic; about 40 percent of respondents believe their prices would either increase by over 50 or between 20 and 50 percent

63 percent of respondents thought copper prices would increase by 10 percent or less, or decline over the next two years

60 percent of respondents thought potash prices would increase by 10 percent or less, or decline over the next two years

59 percent of respondents thought platinum prices would increase by 10 percent or less, or decline over the next two years

Projections on gold and silver prices were positive.

52 percent of respondents thought silver prices would increase by 10 percent or less, or decline over the next two years, but this of course means that nearly half believed silver prices would either increase by over 50 or between 20 and 50 percent

Only 38 percent thought gold prices would either increase by 10 percent or less, or decline over the next two years; 53 percent thought they would increase by 20 to 50 percent, while 9 percent expected increases of more than 50 percent.

Reduced optimism is also reflected in investment intentions. Last year, 82 percent of respondents expected to increase their exploration budgets in 2011. This year, 68 percent expected to increase their exploration budgets in 2012.

Corruption

This year we added a new question on corruption, and there are a few surprises (see figure 20).

The strongest growing economies in Latin America (Chile) and Africa (Botswana) are perceived to have the lowest level of corruption among developing nations. Even more interestingly, they are perceived to have less corruption than four Canadian provinces (Quebec, Manitoba, British Columbia, and Alberta), and two US states (Montana and Washington).

Spain and Poland had the highest levels of corruption among high-income nations, immediately followed by Nunavut and the Northwest Territories, although as noted elsewhere, these territories have improved in this survey. Of more concern is the fact that a large number of miners would not invest in these jurisdictions due to worries about corruption: around 16 percent for Spain, Poland, and the Northwest Territories, and 8 percent in the case of Nunavut.

The 10 jurisdictions considered by respondents to be the most corrupt are India, the Philippines, Indonesia, the Democratic Republic of Congo (DRC), Venezuela, Papua New Guinea, Guatemala, Honduras, Madagascar, and Zimbabwe. The least corrupt in their estimation are Sweden, Norway, Finland, Missouri, Minnesota, Michigan, Idaho, Arizona, Saskatchewan, and South Australia.

The rankings

The Policy Potential Index (PPI) is a composite index, measuring the overall policy attractiveness of the 93 jurisdictions in the survey. The PPI is normalized to a maximum score of 100. A jurisdiction that ranks first under the "Encourages Investment" response in every policy area would have a score of 100; one that scored last in every category would have a score of 0 (see table 1 and figure 1).

The top

Since no nation scored first in all categories, the highest score is 95.0 (New Brunswick). Along with New Brunswick, the top 10 scorers on the PPI are Finland, Alberta, Wyoming, Quebec, Saskatchewan, Sweden, Nevada, Ireland, and the Yukon. All were in the top 10 last year except for New Brunswick, Ireland, and the Yukon. The Yukon is the first Canadian territory to make the top 10. Chile, Manitoba, and Utah fell out of the top 10. Chile, which has fallen to 18th place, had been the only jurisdiction outside North America that had been consistently in the top 10 over the life of the survey. It has been replaced by Sweden and Finland, which have now been in the top 10 for the last three years.

The bottom

The bottom 10 scorers are Honduras, Guatemala, Bolivia, Venezuela, India, Philippines, Kyrgyzstan, Ecuador, Indonesia, and Vietnam. Unfortunately, all are developing nations which most need the new jobs and increased prosperity that mining can produce. All were in or close to being in the bottom 10 last year, except for Kyrgyzstan, which fell from the 39th spot the year before, and Vietnam, which fell from 55th.

Highlighting Canada: New Brunswick and territories up; Manitoba down

New Brunswick has achieved a remarkable jump up in the PPI, from 23rd spot last year to number one this year. All of Canada's territories—Yukon, Nunavut, and the Northwest Territories—moved up significantly in the rankings with the Yukon being the first territory to reach the top 10 in the survey.

Manitoba, on the other hand, seems to be on a steady decline, going from 9th spot last year to 20th this year. Until this year, Manitoba was consistently in the top 10 and just five years ago was number one.

Highlighting Latin America

Latin America's average score continues to decrease, this year dropping from 34.3 to 29.6. This is a far cry from the 2005/06 survey, where the average score for that continent was 51.2. Venezuela, Guatemala, Honduras, and Bolivia pull the average down. There were also disappointments in Latin America for its top scorer, Chile, now at 18th, down from 8th last year, and its most improved jurisdiction, Colombia. In 2006/2007, Colombia scored 24.6 but climbed to 51.2 in last year's survey. This year it scored 38.0, suggesting continued uncertainty in the mining community about policy and policy stability in Colombia.

Survey background

Since 1997, the Fraser Institute has conducted an annual survey of metal mining and exploration companies to assess how mineral endowments and public policy factors such as taxation and regulation affect exploration investment. Survey results represent the opinions of executives and exploration managers in mining and mining consulting companies operating around the world. The survey now covers 93 jurisdictions around the world, on every continent except Antarctica, including sub-national jurisdictions in Canada, Australia, Argentina, and the United States.

The idea to survey mining companies about how government policies and mineral potential affect new exploration investment came from a Fraser Institute conference on mining held in Vancouver, Canada, in the fall of 1996. The comments and feedback from the conference showed that the mining industry was dissatisfied with government policies that deterred exploration investment within the mineral-rich province of British Columbia. Since many regions around the world have attractive geology and competitive policies, and given the increasing opportunities to pursue business ventures globally, many conference participants expressed the view that it was easier to explore in jurisdictions with attractive policies than to fight for better policies elsewhere. The Fraser Institute launched the survey to examine which jurisdictions provide the most favorable business climates for the industry, and in which areas certain jurisdictions need to improve.

The effects of increasingly onerous, seemingly capricious regulations, uncertainty about land use, higher levels of taxation, and other policies that interfere with market conditions are rarely felt immediately, as they are more likely to deter companies looking for new projects than they are to shut down existing operations. We felt that the lack of accountability that stems from 1) the lag time between when policy changes are implemented and when economic activity is impeded and job losses occur and 2) industry's reluctance to be publicly critical of politicians and civil servants, needed to be addressed.

In order to address this problem and assess how various public policy factors influence companies' decisions to invest in different regions, the Fraser Institute began conducting an anonymous survey of senior and junior companies in 1997. The first survey included all Canadian provinces and territories.

The second survey, conducted in 1998, added 17 US states, Mexico, and for comparison with North American jurisdictions, Chile. The third survey, conducted in 1999, was further expanded to include Argentina, Australia, Peru, and Nunavut. The survey now includes 93 jurisdictions, from all continents except Antarctica. This year, the Dominican Republic, Egypt, Guyana, Laos, Mauritania, Missouri, Morocco, Poland, Suriname and the Argentine provinces (Catamarca, Chubut, Jujuy, Mendoza, Rio Negro, Salta, San Juan, and Santa Cruz) were added to the survey.

We add countries to the list based on the interests expressed by survey respondents, and have noticed that these interests are becoming increasingly global. In recognition of the fact that jurisdictions are no longer competing only with the policy climates of their immediate neighbors, but with jurisdictions around the world, we think it is important to continue publishing and publicizing the results of the survey annually, and to make the results available and accessible to an increasingly global audience.

Summary indexes

Policy potential index: A "report card" to governments on the attractiveness of their mining policies

While geologic and economic evaluations are always requirements for exploration, in today's globally competitive economy where mining companies may be examining properties located on different continents, a region's policy climate has taken on increased importance in attracting and winning investment. The Policy Potential Index serves as a report card to governments on how attractive their policies are from the point of view of an exploration manager.

The Policy Potential Index is a composite index that measures the effects on exploration of government policies including uncertainty concerning the administration, interpretation, and enforcement of existing regulations; environmental regulations; regulatory duplication and inconsistencies; taxation; uncertainty concerning native land claims and protected areas; infrastructure; socioeconomic agreements; political stability; labor issues; geological database; and security. This year, we added a question on corruption.

The Policy Potential Index (PPI) is based on ranks and calculated so that the maximum scores would be 100, as described below. Each jurisdiction is ranked in each policy area based on the percentage of respondents who judge that the policy factor in question "encourages investment." The jurisdiction that receives the highest percentage of "encourages investment" in any policy area is ranked first in that policy area; the jurisdiction that receives the lowest percentage of this response is ranked last. The ranking of each jurisdiction across all policy areas is averaged and normalized to 100. A jurisdiction that ranks first in every category would have a score of 100; one that scored last in every category would have a score of 0. (Since the issue of uncertainty is also picked up in specific policy areas, the question on overall uncertainty is not included in the PPI.)

The rankings

The top

Since no nation scored first in all categories, the highest score is 95.0 (New Brunswick). Along with New Brunswick, the top 10 scorers on the PPI are Finland, Alberta, Wyoming, Quebec, Saskatchewan, Sweden, Nevada, Ireland, and the Yukon. All were in the top 10 last year except for New Brunswick, Ireland, and the Yukon, the first time a Canadian territory has made the top 10. Chile, Manitoba and Utah fell out of the top 10. Chile, which has fallen to 18th place, had been the only jurisdiction outside North America that had been consistently in the top 10 over the life of the survey. It has been replaced by Sweden and Finland, which have now been in the top 10 for the last three years.

The bottom

The bottom 10 scorers are Honduras, Guatemala, Bolivia, Venezuela, India, the Philippines, Kyrgyzstan, Ecuador, Indonesia, and Vietnam. Unfortunately, all are developing nations which most need the new jobs and increased prosperity mining that can produce. All were in or close to the bottom 10 last year, except for Kyrgyzstan, which fell from the 39th spot the year before, and Vietnam, which fell from 55th.

Figure 1: Policy Potential Index