

FINAL REPORT

Saskatchewan in the Spotlight: Acquisition of Potash Corporation of Saskatchewan Inc.— Risks and Opportunities

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Executive Summary

The Government of Saskatchewan asked The Conference Board of Canada to assess the risks and opportunities associated with a possible takeover of Potash Corporation of Saskatchewan (PCS).

Context

BHP Billiton's (BHPB) unsolicited bid for PCS provides the Government of Saskatchewan with a unique opportunity to think strategically about incoming foreign investment and how to optimize the benefits from that investment.

The acquisition of PCS would mark a possible change in Saskatchewan's positioning because new owners may have new ways of conducting business.

Method

We use a framework—developed in earlier research by The Conference Board of Canada—to assess corporate takeover effects (CTEs) associated with different types of suitors for PCS.

We categorize possible suitors in three ways; industry, consumer, and financier.

We believe that if PCS is acquired, it will most likely be acquired by an industry suitor such as BHPB. A second, less probable outcome is an acquisition by a consumer-led group such as the Chinese state-owned enterprise, Sinochem. Financiers—in the form of sovereign wealth funds, private equity, or pension plans—are unlikely to take the lead, although they may play a supporting role in other bids.

We gauge possible CTEs associated with these bidders.

Results of Our Analysis

In the case of BHBP, with the exception of significant government revenue impacts, we found few negative takeover effects. (See the main report, pp. 55–58, for a detailed summary of takeover effects.) The ownership would change from a widely held North American company to a widely held global company. The senior management would change from American dominated to Australian/South African/British dominated. BHPB's CEO has made a public commitment to locate BHPB's global potash headquarters in Saskatoon and repatriate head office jobs, currently based in Chicago, to Saskatoon.

BHPB is committed to building on PCS's existing plans for expansion of the potash industry in Saskatchewan. The company has already invested approximately \$1 billion in its Jansen Lake project (which will eventually produce 8-million tonnes of potash annually). By assuming PCS's current operations and capital plans, and proceeding with

Jansen Lake, BHPB would be a key part of the growth of the potash industry in Saskatchewan.

Jansen Lake Impact

The Jansen Lake development has both positive impacts in terms of employment, and significant adverse fiscal implications for the Province.

The existing tax and royalty regime would have the desired effect of encouraging BHPB to continue developing Jansen Lake. Since Jansen Lake becomes more attractive to BHPB under an acquisition scenario, the probability of its actual development improves. (It is currently undergoing environmental review). Jansen Lake will cost about \$12 billion and is expected to create up to 2,000 direct and indirect jobs when it is fully developed. BHPB estimates that 1,300 construction jobs will be created during the investment phase. The timing of the investment will determine when those jobs are realized.

However, we calculate that the negative fiscal impact to the Province would be about \$200 million per year over a 10-year period, for a total of \$2 billion—equivalent to approximately two per cent of the Province's annual revenues.

The reason is that through the acquisition, BHPB would be able to avail itself of favourable tax preferences. Acquiring an existing operation would allow BHPB to write off the capital cost of Jansen Lake against current income generated by PCS properties under the existing tax and royalty regime. In addition, the acquisition would allow the company to organize its affairs in such a way as to minimize corporate taxes paid to the Province. Even if BHPB were to follow the same marketing strategy as PCS's current management—which includes using Canpotex, the jointly-owned marketing and logistics arm of the Saskatchewan producers—Saskatchewan's tax yield from the potash industry would be temporarily lowered, due to the nature of the current tax and royalty regime.

Therefore, there is a fiscal hit for the Province of \$200 million per year under the existing tax and royalty regime, with the offsetting positive effect of creating investment and jobs for Saskatchewan.

Because Jansen Lake is a long-term investment, with full production not expected until 2026 at the earliest, most of the job creation will occur beyond 2020—the end point for this study. Thus, if Jansen Lake were delayed, the net result would be a small reduction in royalties and about 300 fewer direct and indirect jobs in Saskatchewan in 2020.

The development of Jansen Lake, along with expansions of other existing mines in the province, would allow Saskatchewan to increase its market share to 34 per cent of global production by 2020, compared with just over 31 per cent in 2008.

	2009	2010	2011	2012	2013	2014	2015	2020
Price (\$CAN/K2O tonne)	825.6	531.7	574.3	591.0	601.2	611.2	611.2	734.3
No Sale of PCS to BHPB and Delayed Development of Jansen Lake								
Production (millions of KCl tonnes)	7.0	11.8	16.6	18.2	19.9	21.4	22.2	25.6
Direct and indirect employment (thousands)	8.2	8.2	8.2	8.4	8.8	9.5	9.8	11.5
No Sale of PCS to BHPB and Development of Jansen Lake								
Production (millions of KCl tonnes)	7.0	11.8	16.6	18.2	19.9	21.4	22.2	26.7
Direct and indirect employment (thousands)	8.2	8.2	8.2	8.4	8.8	9.5	9.8	11.8
10-year average potash industry royalty revenue (mils of \$)	988							
10-year total potash industry royalty revenue (mils of \$)	9,883							
Sale of PCS to BHPB and Development of Jansen Lake								
Production (millions of KCl tonnes)	7.0	11.8	16.6	18.2	19.9	21.4	22.2	26.7
Direct and indirect employment (thousands)	8.2	8.2	8.2	8.4	8.8	9.5	9.8	11.8
10-year average potash industry royalty revenue (mils of \$)	786							
10-year total potash industry royalty revenue (mils of \$)	7,857							

High-Production Scenario

A larger concern, given the nature of Saskatchewan's tax and royalty regime, is the fiscal impact of operational strategies that have the effect of significantly lowering the world potash price. If an acquirer chooses to ignore market disciplines and compete for market share through higher volumes and lower prices—unlikely in the case of BHPB but likely in the case of Sinochem—the adverse fiscal impact on the Province could be very significant.

We ran a "high-production" scenario to assess that impact. This scenario sees the price of potash fall considerably as Saskatchewan producers lead other world producers into competition for market share. The net effect is a \$5.7 billion reduction in taxes and royalties over a 10-year period. This is comparable to a situation in which BHPB acquires PCS and proceeds with the development of Jansen Lake using the base case production and pricing assumptions. The high-production scenario is a serious risk to the Province.

We consider it unlikely that BHPB would pursue such a strategy because it would not be the best way to maximize the return on their investment. We think it more likely that BHPB would show market discipline that would allow it to justify the acquisition premium it will pay for PCS.

The Province, however, should be concerned about a bid from a state-owned enterprise (SOE) like Sinochem, especially given that it is a SOE from a major importer country (China). SOEs such as Sinochem simply do not face the same commercial constraints as do commercial enterprises like BHPB. Therefore, we believe that Sinochem is more likely not to demonstrate market discipline to support the potash price. Sinochem has a strong incentive to lead the world marketplace toward price competition, which would hurt all Saskatchewan producers and, indeed, global producers of potash. China was one of the few countries not to cut potash production in 2009 in response to falling demand and prices.

Policy Levers

The Government of Saskatchewan has a variety of policy levers at its disposal to maintain control of its potash resource. It is in a very strong position because it controls over half the world's reserves of potash.

The Province will want to provide its input to Industry Canada on foreign offers for PCS to ensure that the successful acquirer agrees to a binding undertaking that the global potash headquarters will be located in Saskatchewan, and that related jobs are situated in the province.

Specifically, to safeguard the PCS head office location, and to stimulate the transfer of head office jobs to Saskatchewan, the Province may want to consider asking the Government of Canada to attach, as conditions of approval of the PHPB acquisition, two associated undertakings: that the global headquarters for the company's Potash Customer Sector Group be located in Saskatchewan, and that the chief executive officer and other senior executives for the Potash Customer Sector Group be required to live in the province.

Most of the benefits to the Province from any acquisition will be realized through sensible resource policy, which includes licensure, taxation, and royalties. If the policy is applied correctly, Saskatchewan will benefit from ongoing investment and employment while gaining a strong revenue return from high potash market prices.

In particular, the Province may want to consider making the impact of capital expenditures on potash royalties project-specific, rather than company-specific.

A balanced approach to policy and conditions, designed to mitigate risk and take advantage of the opportunities presented by an acquisition of PCS, would prudently safeguard a major corporate headquarters, provincial revenues, and good jobs. At the same time, it would ensure that Saskatchewan's turn in the spotlight encourages the sustained investment in the province that is vital to Saskatchewan's long-term economic prosperity.

About This Report

The Government of Saskatchewan has asked The Conference Board of Canada to assess the risks and opportunities associated with a possible takeover of Potash Corporation of Saskatchewan (PCS). The purpose of this report is to provide an objective and balanced assessment of risks and opportunities. We have been asked to suggest ways to enhance opportunities and minimize risks, keeping in mind that the Government of Saskatchewan is dedicated to building on the province's positive reputation as a good place to do business.

Given that the bid process is still ongoing, our mandate is to consider a range of possible acquirers. Our report is designed to inform the Government of Saskatchewan as it formulates its approach to a possible acquisition; it is not directly part of any formal review of the acquisition that may take place at the federal or provincial levels.

1. Introduction

Corporate transformations via corporate mergers and acquisitions (M&As) are an inevitable result of companies' ongoing search for competitive advantage. As we have noted elsewhere, Canadian companies have been enthusiastic participants in this search for competitive advantage, as Canadian acquisitions of foreign firms have exceeded foreign acquisitions of Canadian firms over the long term.¹

Foreign acquirers have taken a particular interest in the Canadian resource sector in recent years, as seen in the high-profile acquisitions of Canadian-headquartered companies such as Alcan, Falconbridge, and Inco. These resource company acquisitions strike a particular chord with Canadians—we intrinsically understand that our resources are important to our long-term prosperity. Consequently when foreign acquirers purchase Canadian resource companies, there is widespread concern that Canadians are losing control of their resources.

The global credit crisis of 2008–09 inevitably led to a pause in M&A activity. As global credit markets continue to work through an unsteady recovery, it has become far more difficult to put together the financing for major M&A deals, which has resulted in a lacklustre M&A marketplace. This has allowed Canadians to take a vacation from the national debate around the so-called "hollowing out" of corporate Canada or, conversely, the central role that M&A can play in building global competitiveness.

The trend is now changing as the global mining industry enters another wave of M&As. According to a recent report by PricewaterhouseCoopers (PWC), no fewer than 1,324 mining deals worth in total US\$104 billion have been announced so far in 2010. PWC suggests that deals for the whole of 2010 could outpace the 2007 peak of 1,732 deals that

¹ Grant and Bloom, Hollowing Out, Vol. 1. p. 38.

were valued at US\$159 billion. Interestingly, companies headquartered in Canada and the United States lead the way globally in this latest wave of mining M&As, accounting for 49 per cent of acquirers compared with 21 per cent from Asia-Pacific countries.²

Why is mining leading the way in the revival of the M&A market? First, well-managed mining companies performed extremely well in the commodity boom leading up to the global financial crisis at the end of 2008. Many of these companies are now flush with cash and see the current market as an ideal time to make acquisitions that either diversify risk and/or consolidate operations. Their strong balance sheets allow them to finance deals, even in this distressed financial environment. Second, some companies' evaluations of long-term commodity markets are more bullish than that of the stock market in general. The key structural change in the commodity markets—namely the emergence of China, India, and Brazil as major sources of commodity demand—is becoming increasingly significant in world markets. Resource companies are using the global downturn as an opportunity to acquire assets before the next uptick in commodity prices pushes the cost of corporate takeovers much higher.

This is the context for BHP Billiton Limited's (BHPB) unsolicited offer to acquire Potash Corporation of Saskatchewan Inc. (PCS) in August 2010. As in the last M&A cycle, a diversified global mining giant is interested in adding a Canadian-headquartered, specialized player to its portfolio of commodities. And as with the acquisitions of Alcan, Falconbridge, and Inco, concerns are being expressed about possible "hollowing out" and other negative takeover effects that may follow an acquisition. However, there are also grounds to consider the implications for long-term competitiveness.

² PricewaterhouseCoopers, *M&A* in the Mining Sector.

2. Approach

BHPB's unsolicited bid for PCS provides the Government of Saskatchewan with a unique opportunity to think strategically about incoming foreign investment and how to optimize the benefits from that investment. To do so requires a framework for understanding the range of what we call corporate takeover effects (CTEs) that may result from an acquisition. We develop the elements of this framework, based on our previous research on M&As.

We apply this evaluative framework to the specific issue of PCS, and also argue that the approach to PCS will provide an important test as to how the Province deals with other acquisitions in the future, which we see as inevitable. Applying this framework to the case of PCS involves understanding the global potash marketplace, changes in the organization of that marketplace and Saskatchewan's positioning. Therefore, we provide an analysis of these factors.

An acquisition marks a possible change in Saskatchewan's positioning because new owners may have new ways of conducting business. That will depend on the nature and strategy of an acquirer and its relationship with Saskatchewan. We can analyze how those strategies are likely to play out based on an acquirer's clearly stated intentions, an acquirer's track record of behaviour after an acquisition, and the fundamental motivations for the acquisition.

Our analysis, therefore, develops a range of possible outcomes based on the nature of the acquirer. We then detail the corporate takeover effects (CTEs). These effects can be negative and therefore present risks to the Province. Alternatively, they can be positive, which presents opportunities. Given that the Government of Saskatchewan has a wide range of policy levers at its disposal, it is possible for the Province to pull these levers to minimize risks and maximize opportunities. We understand that the Province needs to be mindful of the broader implications of its policy actions and therefore consider spillover effects that may be associated with different courses of action.

Our approach is one of risk management, which involves:

- 1. understanding the range of possible outcomes;
- 2. assigning probabilities to the possible outcomes;
- 3. understanding when outcomes are likely to occur;
- 4. developing a strategy that rolls out the right policies at the right time; and
- 5. understanding the risks associated with policy responses and mitigating these risks.

Method

This risk management approach necessitated a range of methodologies:

- We have completed a thorough literature review relating to the theory and practice of M&As. We have reviewed literature pertaining to the specific case of the PCS acquisition, including corporate literature, media accounts of the proposed transaction, and industry literature. The Government of Saskatchewan has been helpful in adding to our understanding of their current approaches to resources (including royalties, taxation, and incoming direct investment).
- We supplement the review of literature with quantitative research. We present data pertaining to the global supply and demand for potash and how the Saskatchewan potash resource relates to that marketplace. We analyze the current industry "footprint" in the Province and develop a statistical "baseline" that reflects our current understanding of the industry in the event of an unsuccessful acquisition (i.e., PCS continues to operate in its current form). We then develop scenarios based on our understanding of changes in company strategy and operations after an acquisition. This involves model simulations of both the industry and the revenue that it generates for the Province.
- This quantitative work is supplemented with confidential interviews with parties
 directly affected by acquisition and industry experts who understand Saskatchewan
 resource industries in general and the potash industry in particular. We conducted 11
 interviews in total, including representatives from PCS, BHPB, Mosaic Co., Agrium Inc.
 and Canpotex.

These methods come together in the aforementioned CTE framework. This allows us to focus on the specific elements of an acquisition that may present risks and opportunities. It permits us to identify appropriate policy responses while minimizing negative spillover effects to the reputation of the Province of Saskatchewan among investors.

The Framework: Corporate Takeover Effects

In 2008, the Competition Policy Review Panel ("the Wilson Panel") reviewed Canada's incoming foreign direct investment policies and competition policies.³ To engage in the M&A debate, The Conference Board of Canada produced a comprehensive study in two volumes. Volume One, "Hollowing Out"—Myth and Reality: Corporate Takeovers in an Age of Transformation, developed a framework for understanding what happens during corporate takeovers and how these effects are related to the concerns of the broader community.

Our intention at the time was to develop a systematic and analytical way of understanding what goes on during the takeover process and how this is related to specific concerns in the

³ Competition Policy Review Panel, Compete to Win.

community. We then tested this framework through 30 case studies that considered a diverse range of takeovers, including foreign takeovers of Canadian targets, Canadian takeovers of Canadian targets, and Canadian takeovers of foreign targets, which we published in a second volume. We believe that this approach allows us to take a step back from the often emotional debate that occurs when a major acquisition of a Canadian company is announced, so that public discourse and decision-making can be informed by a factual analysis.

We appreciate that major takeovers of Canadian companies potentially affect many people, which is why the citizenry looks to its political leadership to engage in the takeover process. Yet our research suggests that much of the public discussion is affected by misunderstandings of the takeover process and how changes in corporate policy and practice impact the broader community. Moreover, public concerns tend to be greater when foreign-headquartered companies take over Canadian-headquartered companies, even though Canadian corporate acquisitions of other Canadian companies produce many of the same effects.

Table 1: Categories of Corporate Takeover Effects (In Order of Post-Acquisition Changes)
Category What Happens Key Questions

Owners	Shareholder structure changes, new owners.	Who are the new owners?
		Are they more likely or less likely to make decisions in the interest of Saskatchewan?
Governance	New board of directors is appointed.	Who is on the new board of directors?
		Will they direct management in such a way as to favour Saskatchewan?
Management	Senior- level management changes and some middle-level managers may choose to leave.	Who is the senior management? Where are they located?
		Are they likely to favour Saskatchewan in their decisions, and will Saskatchewan reap the benefits from spillover management activities?
Operations	Acquirer deploys strategy to either extract untapped value from company and/or integrate it with other operations.	How are the operations changing after the acquisition, and might these changes affect the impact on Saskatchewan?
Capital	Acquirer deploys policy on capital investments.	What commitments are the new owners making in terms of investing capital in Saskatchewan?
People	Acquirer deploys policy on employment, which depends on operational choices	Are the new owners likely to create new jobs or shed jobs in Saskatchewan?
Community	Acquirer deploys its approach to Corporate Social Responsibility (CSR). Its operational changes affect its tax contribution.	How will its strategy impact its contribution to Saskatchewan through taxes and royalties?
	onanges another to tax contribution.	What will the impact be on corporate donations and community support?

Source: The Conference Board of Canada.

In our framework, we are interested in the range of impacts, starting with the company and moving to the broader community. We start with the company because changes in company strategies initiate a series of other changes that eventually affect the broader community. The extent and depth of these effects depend entirely on changes in corporate strategy and practices. The above table details the sequence and categories.

A fundamental strategic issue for the broader community arises when company strategies are at odds with the public interests (negative corporate takeover effects or risks). But corporate strategies can also further the public interest because society benefits when companies make investments, employ people, implement productivity-enhancing practices (positive corporate takeover effects or opportunities) and put into practice enlightened practices toward the community. Optimizing the benefits to society is a key public policy challenge.

3. The Global Potash Industry

What Is Potash?

Potash is the common name for various potassium compounds. The most common form is potassium chloride (KCl), which is also known as muriate of potash. Since fertilizer is the primary use for potash, industry statistics are also commonly reported on a potash fertilizer or potassium oxide basis (K_2O). In modern times, most of the world's potash is supplied by the underground mining of sedimentary rock layers that are remnants of ancient dried up seas. In essence, it is part of the salt left over from the disappearance of those seas.

Although that is a technical description of potash, for our purposes, we also have to understand how the nature of the good relates to the demand for the good, which in turn is directly related to the inherent market risks of the product. Potash is, in effect, a capital improvement to land. It clearly improves crop yields. But the demand for potash is directly driven by the demand for crops, which can be cyclical and can depend on whether the crops are consumed directly or are used as feed for livestock (as we explain in detail below).

Moreover, as a capital improvement, it has some demand characteristics that are similar to investment goods, in the sense that some farmers may decide to reduce capacity in down markets (leave fields fallow) or to skip making an application of potash so as to effectively lower yields. However, when food prices rise, there is incentive to increase crop yields by adding potash to the soil.

One final characteristic is important to note. Unlike other mining products, it is relatively costly to store potash because it cannot be left out in the open air. This means that inventories typically constitute only around 1 per cent of supply. For these reasons, Potash is very much a just-in-time good with a short cycle between production and usage.

Global Potash Supply

According to the U.S. 2010 Geological Survey, which collects and analyzes information on the mineral industries of more than 170 nations, total global potash reserves were estimated to be more than 14 billion tonnes in 2009. Canada accounts for 52 per cent of global potash reserves, with most of it located in the Sedimentary Basin in the Province of Saskatchewan. (See Table 2.) At current rates of production, the established reserves in Saskatchewan will last for several hundred years.

⁴ Jasinski, *Potash* (2010).

⁵ For the purposes of this report, potash volumes are reported in KCl equivalent units unless otherwise noted. The K_2O content of a KCl tonne averages 60 per cent.

Table 2: Canada Has the World's Largest Potash Reserves global potash reserves, millions of tonnes of KCI equivalent					
Canada	7,291	52.0			
Russia	2,983	21.3			
Belarus	1,243	8.9			
Germany	1,176	8.4			
Brazil	497	3.5			
China	331	2.4			
U.S.	149	1.1			
Other	343	2.4			
World	14,013	100.0			
Sources: U.S. Geological Su	ırvey; The Conference Board of Ca	inada.			

Not surprisingly, given its large reserves, Canada is also the world's top potash producer. (See Table 3.) Only 12 countries produce potash; and Canada, Russia, Belarus, and Germany account for more than 75 per cent of global supply. The industry has long been characterized as having excess capacity; thus there have been few mine developments over the last 30 years, but higher prices in recent years have spurred some capacity-expanding developments.

potash production by country, thousands of KCl tonnes				
	2007 ⁶	2008 ⁷	2009 ^{e7}	
Canada	18,393	17,399	10,771	
Belarus	8,235	8,235	6,379	
Russia	10,936	11,152	5,965	
China	3,314	4,557	4,557	
Germany	5,965	5,435	3,811	
Israel	3,645	3,811	3,314	
Jordan	1,806	2,022	1,823	

The new capacity that has been added in recent years has come from expansions of existing facilities (or brownfield development), primarily in Canada and Russia. There has not been a new (or greenfield) potash development for many years because the required initial investments are high and development time is lengthy. Thus, the cost per tonne of potential mine capacity for developing a new mine is generally considerably higher than the costs associated with expanding an existing one. However, there are greenfield projects proposed

⁶ Jasinski, *Potash* (2009).

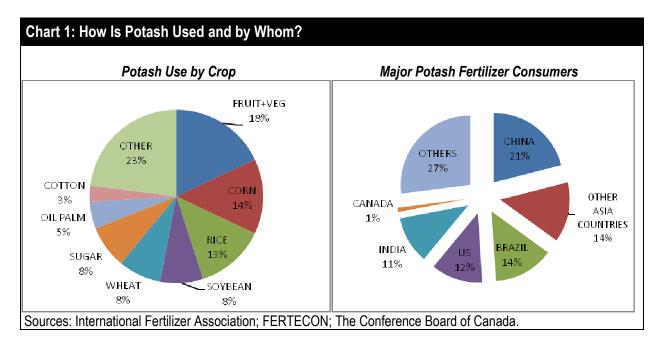
⁷ Jasinski, *Potash* (2010). Note: 2009 numbers are an estimate.

in Russia, Argentina, and Congo.⁸ There are several other potential greenfield projects at some stage of planning and development, including BHPB's proposed Jansen Lake mine in Saskatchewan. If completed, Jansen Lake would be the first new potash mine to open in the province in decades.

Higher prices and rising production in recent years have been driving the renewed interest in greenfield development. For example, between 1999 and 2008, global production rose by an average of 2.8 per cent per year. Demand for—and production of—potash collapsed in 2009 due to the combined effects of a spike in potash prices and a correction in prices for many agricultural products. Nonetheless, the demand for fertilizer is now starting to recover, and this demand will gather pace in the future.

Global Potash Demand

More than 95 per cent of the world's potash is used as an agricultural fertilizer. It is heavily applied to crops, such as fruits and vegetables, corn, and rice. (See Chart 1.) The leading potash-consuming countries—such as China, the U.S., Brazil, and India—have large agricultural sectors and typically lack potash resources of their own. In recent years, Malaysia and Indonesia have also emerged as significant potash consumers.



A number of factors are driving increases in demand for fertilizers in general and potash in particular. These include:

⁸ Bain, Outlook for International Prices of Fertilizers.

⁹ International Fertilizer Association, *Potash Production and Trade Statistics*.

1) Higher incomes in developing economies

Economic growth in developing countries will continue to result in rising incomes; and as more people move up from subsistence diets, their food consumption habits will change. This will mean more calories per day from staple grains, and it will also mean increased demand for protein-rich diets, significantly increasing meat consumption. Meat consumption in China, for example, tripled in the last 20 years as per capita income grew, and it is expected to climb even higher. Thus, expanding the production and quality of animal feed grains (such as corn) becomes an important factor in sustaining and expanding the supply of meat.

2) Growing global population

The world's population continues to grow. The United Nation's medium variant forecast projects that the world's population will rise from nearly seven billion today to more than nine billion by 2050. Thus, even if per capita demand were unchanged in the coming years, world food consumption would continue to rise.

3) Declining amount of arable land

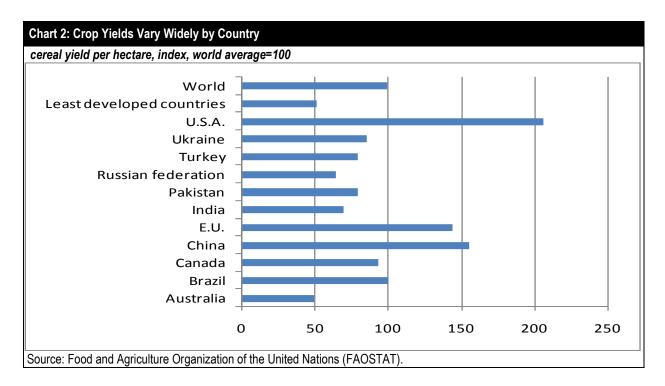
As cities and suburbs around the globe continue to sprawl, the inventory of arable land available for agriculture purposes is gradually shrinking. Consequently, the remaining farmland needs to be more productive and deliver higher-quality yields. Along with methods such as irrigation, planting techniques, and better seeds, fertilizer application is one way to achieve this.

4) Low yields in developing countries

Crop yields vary considerably by country, and yields are often much lower in developing countries than they are in developed countries. For example, the average cereals yield for the least developed countries is half the global average and one-quarter of the U.S. average. (See Chart 2.) Accordingly, there is considerable room to increase yields through a variety of methods, including increased fertilization.

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¹⁰ The United Nations, World Population Prospects.



5) Increasing demand for biofuels

The production of crop-based biofuels, including ethanol and biodiesel, has increased the use of fertilizers. For example, about one-quarter of the U.S. corn crop is now used to produce ethanol.¹¹ The most common crops used to manufacture biofuels include corn, sugar, and oil palms—and all three are major users of potash.

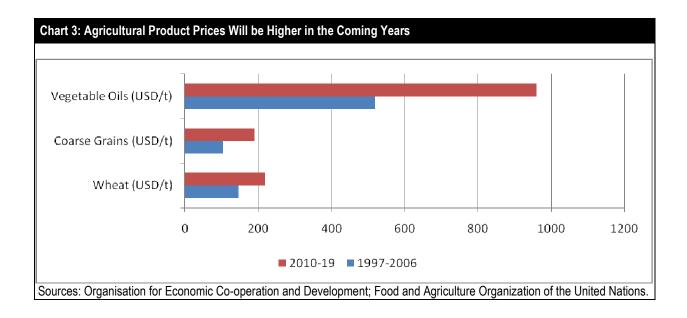
6) Higher prices for agricultural products

All the previous factors will contribute to a tighter supply/demand balance for crops in the coming years. As a result, prices for grains and oilseeds will remain well above historical levels. The United Nations Food and Agriculture Organization, together with the Organisation for Economic Co-operation and Development, published its annual *Agricultural Outlook* in June 2010. The outlook predicts that world prices for wheat and coarse grains will increase on average 15 to 40 per cent in real terms over the next 10 years (2010 to 2019). Real prices for vegetable oils will also jump by more than 40 per cent. (See Chart 3.) Livestock prices are expected to rise as well, but to a lesser extent. Higher agriculture commodity prices will provide an incentive for farmers to maximize yields, and will also increase their ability to pay for fertilizers.

¹¹ United States Department of Agriculture, Corn: Market Outlook.

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¹² Food and Agriculture Organization of the United Nations, *Agriculture Outlook 2010-2019*.



Global Potash Trade

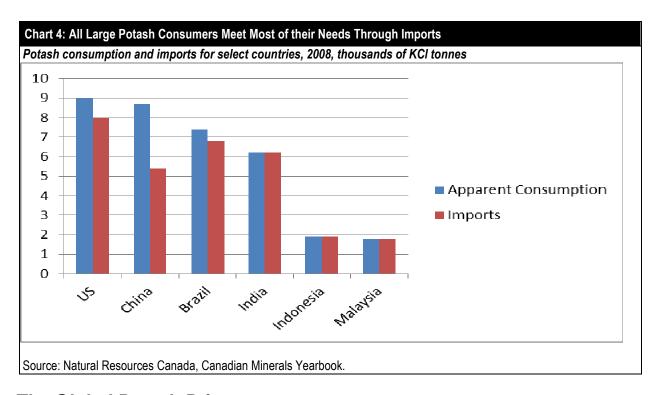
With many potash consumers worldwide, but few potash producers, the global potash trade is very significant. In recent years, on average, almost 80 per cent of global potash production is traded internationally. (See Table 4.) The six leading potash-producing countries (Canada, Russia, Belarus, Germany, Israel, and Jordan) jointly account for over 97 per cent of the global potash trade. Canada exports more than 95 per cent of its potash output. Approximately 45 per cent of the potash production is exported to the U.S., with the remainder being shipped to markets in the Pacific Rim and Latin America.

	Total World Potash Production	Total World Potash Export	Total Trade / Total Production (%)
2000	42,709	33,786	79.1
2001	42,731	33,478	78.3
2002	43,840	34,972	79.8
2003	46,342	38,481	83
2004	51,646	42,273	81.9
2005	54,344	41,921	77.1
2006	48,794	38,449	78.8
2007	55,350	45,019	81.3
2008	53,721	41,136	76.6

¹³ Stone, Canadian Minerals Yearbook.

¹⁴ Saskatchewan Ministry of Energy and Resources, *Potash*.

Asia is the world's largest potash-consuming region, with the two largest consumer markets in the region being China and India. The United States is also a top potash consumer whose demand far exceeds its own domestic production. Brazil is another country with a growing appetite for potash that is driven by economic growth in its agriculture and biofuel industries. Malaysia and Indonesia have ramped up their potash consumption as well in recent years due to the growth of their biofuel industries. (See Chart 4.)



The Global Potash Price

In an environment historically characterized by long-term contracts, available excess capacity, and a limited number of sellers, potash prices were low and stayed within a limited range of between \$125 and \$200 per K_2O tonne (price at the Saskatchewan mine gate) for a period of nearly 20 years, starting in the mid-1980s. However, gradual improvements in demand, accompanied by almost no supply increases, resulted in a tightening of the supply/demand balance for potash. That led to an improvement in potash prices in the mid-part of the past decade, which culminated in a potash price spike in late 2008 and early 2009. The end result is that the mine gate price in Saskatchewan averaged \$825 per K_2O tonne in 2009.

After reaching that peak, prices fell considerably in response to a collapse in demand in 2009. However, potash prices remain very elevated compared to their historic norms, with the mine gate price in Saskatchewan expected to average \$532 per K_2O tonne in 2010. Prices have already begun to recover from their recent lows and are expected to rise further in the coming years thanks to strong demand growth.

4. The Potash Industry in Saskatchewan

Provincial Potash Production

Canada is the world's largest potash producer, with the Province of Saskatchewan being the dominant source of domestic production. Potash Corp. of Saskatchewan (PCS) has one mine situated in New Brunswick, but the vast majority of Canadian production originates in Saskatchewan. At present, three companies—PCS, Mosaic Co., and Agrium—operate a total of 10 mines in the province, with total operational capacity of about 21 million tonnes, or a little less than one-third of the global total. Most of the production in Saskatchewan comes from PCS and Mosaic, which are also, respectively, the first- and second-largest potash producers in the world in terms of capacity.

Potash production in the Province has been ongoing since 1962, and the industry currently has plans to invest billions of dollars to expand several of the existing mines through at least 2020. All three of the companies operating in the province have announced expansion plans. If all the projects are completed on time, operational capacity at the existing mines in the province will rise to more than 30 million tonnes by 2020.

BHPB has also spent several hundred million dollars in the province in recent years acquiring mineral rights and conducting testing, with the end goal of developing several potential new mines in Saskatchewan. The project that is most advanced is the Jansen Lake project. Although it would be built in stages, when completed it would eventually become the world's largest potash mine, with nameplate capacity of up to 8 million tonnes—equivalent to about 12 per cent of current global capacity. It would also be the first new potash mine in nearly 40 years for the province. Potential increases in production from this project are still years away, and for the purposes of production forecasts discussed later in this report, initial production at Jansen Lake is not expected to begin until around 2017.

Sales of Saskatchewan Potash

With less than five per cent of Canadian potash production sold domestically, export markets are the key sources of demand for Saskatchewan potash. Sales to the U.S. market and sales of products from PCS's mine in New Brunswick are managed by the companies themselves. Other export sales are managed through Canpotex Limited, which is an export marketing company owned jointly by Agrium, Mosaic, and PCS.

Canpotex takes ownership of the potash at the mine gate, manages its transportation by rail to West Coast ports, oversees its loading onto seaborne vessels, and arranges delivery in customer markets. It is also markets the potash produced by its shareholders in overseas countries. Canpotex sells Saskatchewan potash in about 30 countries, with the proceeds of

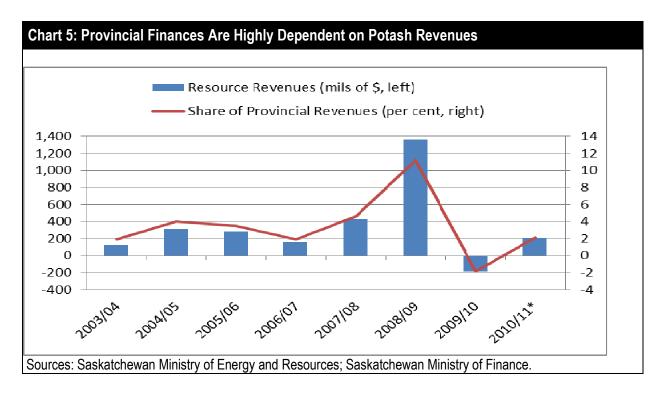
¹⁵ Capacity estimates are based on global capacity data from Fertecon and company reports.

the sales being distributed to its shareholders based on their share of the total production sold through Canpotex.

The Potash Industry's Contribution to Saskatchewan's Economy

The potash industry provides considerable economic benefits to the Province of Saskatchewan. The largest financial benefit comes from the royalties and taxes that the industry pays to the Province. Potash resource revenues in Saskatchewan are collected using a three-tiered system. First off, a base tax is calculated based on the volume of potash that is sold. Secondly, a profit tax is charged depending on the revenues generated from selling the potash. Lastly, potash mined on Crown lands must also pay a separate royalty fee that totals about 2 to 3 per cent of the value of the potash.

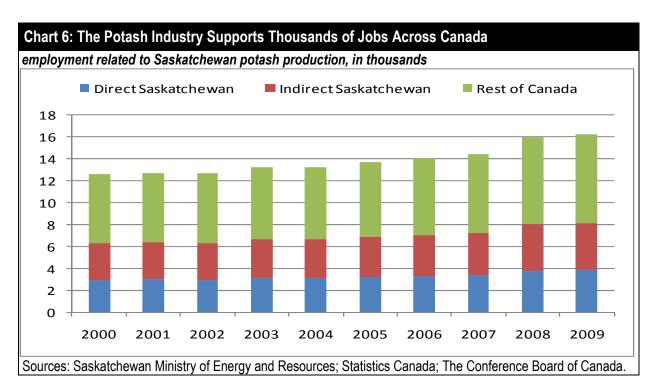
The amount of resource revenues generated from the potash companies varies dramatically, as it is highly dependent on market prices. Taxes and royalties collected annually by the Province have varied between \$120 million and \$1.3 billion over the past decade. Tax and royalty collections actually were negative in fiscal year 2009–10 as the decline in potash prices actually resulted in some of the revenues collected in the previous fiscal year being returned. (See Chart 5.)



To put this into perspective, potash resource revenues averaged 4 per cent of provincial revenues between 2003 and 2009. In addition, the Province also collects corporate income taxes and gross surcharges from the potash companies, which makes the provincial budget even more dependent on potash. As such, the fiscal health of the province is highly dependent on the health of the province's potash industry.

To manage the possible variability in revenues from potash royalties, Saskatchewan created a Growth and Financial Security Fund within its fiscal accounts. The purpose of the fund is two-fold: 1) It provides financial security to the Government of Saskatchewan from year-to-year; and 2) it is a source of funding for the promotion and enhancement of economic development in Saskatchewan. The Fund is a form of insurance policy for the Province. While there is no specific reference to potash taxes or to the specific contribution of royalties to the fund, inasmuch as these taxes and royalties contribute to variability in provincial revenue, the Fund can help mitigate that variability.

The potash industry is not only an important contributor to government revenue, but also provides numerous job opportunities. For example, the industry directly employed 3,916 people in 2009. Using the job multiplier of 2.1 calculated by Statistics Canada, 16 the total estimated number of industry jobs created—both directly and indirectly—was 8,224. (See Chart 6.) The spinoff jobs generated are mostly in the wholesale trade and transportation and warehousing sectors. Saskatchewan's potash sector also generates about 8,000 additional jobs in the rest of Canada.



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 $^{^{16}}$ Statistic Canada special tabulations – Interprovincial Input-Output model.

5. Potash Corporation of Saskatchewan (PCS) and the Saskatchewan Potash Industry

The history of potash mining in Saskatchewan has seen an ongoing search for the best corporate structure to maximize the opportunities presented by the potash resource. Although the potential of the resource has been known for 50 years, it was always understood that its development would require huge capital outlays and the application of advanced mining techniques and marketing practices. The key was to find the right corporate structure to raise significant capital, run the mines efficiently and avoid excess supply.

In the 1950s and 1960s, the Saskatchewan (and indeed global) industry was organized around many small competing companies. At least 11 separate potash companies once operated in Saskatchewan. This corporate structure limited scale economies in production as well as the ability of producers to maximize profits from the resource, as they would compete with one another to bid down prices. The industry would often be faced with periods of oversupply and falling prices until marginal producers dropped out of business to restore balance. As potash is an input into food production, the market for the potash resource tended to mimic the performance of food markets, which were also characterized by many small producers that were "price takers."

Given that Saskatchewan controlled the lion's share of the world's potash, it did not make sense to continue to develop a market structure that led to lower prices and oversupply. Hence in the late 1960s, the Government of Saskatchewan introduced a variety of measures to limit production, including production quotas, marketing controls, and a floor price. Canpotex began operating in 1972 as the private export marketing arm for the potash industry. In 1987, the Government of Saskatchewan passed legislation giving its cabinet control over the supply of potash and the creation of new mines.

In parallel to these supply and pricing management strategies, the industry continued to consolidate into fewer producers. This consolidation was given impetus through the 1975 creation of the Potash Corporation of Saskatchewan (PCS), a Crown corporation. PCS proceeded to acquire several existing mines and develop greenfield projects on its own. By 1980, it was by far the industry's largest player, having acquired its Cory, Rocanville, Alwinsal, and Allan mines, as well as a production agreement at Esterhazy. However, as late as 1990 there were still 7 companies mining potash in Saskatchewan. Consolidation has continued and today there are three major producer companies—PCS, Mosaic Co., and Agrium Inc.

The early 1980s recession was especially challenging for the Saskatchewan potash industry. Demand in its primary market, the United States, collapsed due to the recession and U.S. government efforts to reduce planted acreage. That resulted in a drop in sales by about a

¹⁷ SaskBusiness. "One Hundred Years of Mining in Saskatchewan." May 1, 2005.

third within two years—from just over \$1 billion to around \$635 million. Sales did not exceed \$1 billion again until 1994.¹⁸

During that time, PCS continued to struggle with oversupply. As a Crown corporation, the company may have been politically constrained from cutting back volumes sufficiently to raise prices.¹⁹ In fact, it was only when U.S. authorities pursued anti-dumping remedies in 1987 that the Province took measures to cut back volumes and stabilize prices.²⁰

At that time, the Government of Saskatchewan had begun to consider the idea of privatizing PCS, a notion that was then very much in vogue. Many governments around the world had problems with political management of commercial enterprises. The view was that private management would improve the efficiency of the companies while deepening the pool of capital upon which firms could draw for capital expenditures (which is especially critical in mining). The Government of Saskatchewan wanted to realize these benefits of private management while still maintaining an oligopolistic marketing structure (via Canpotex and through industry consolidation). It proceeded to organize its royalty and taxing regime in a way to maximize its share of rents from the industry, given that market structure.

That arrangement has worked well for both PCS and the Province of Saskatchewan. The Province took until 1993 to fully divest itself of its shares in PCS. Since that time, the entity has grown significantly in terms of overall revenues, capital expenditures, employment, and exports. The volume of provincial potash production similarly grew, going from less than 6 million tonnes (K2O) in 1993 to over 10 million tonnes at the peak in 2008. Over the same period, the value of sales grew from around \$800 million to \$7.3 billion. Much of these increases were due to PCS leadership.

Today, PCS is the world's largest potash company, with about a quarter of global capacity (including its offshore investments). The company points to key strategic advantages. PCS has more mines and brownfield capacity than other producers, especially those that depend on greenfield developments. It is a low-cost producer globally. It has a well-developed logistical capacity to deliver potash to customers worldwide, both on its own and through Canpotex.

How Does PCS Measure Up to the Framework?

Given that our interest is in exploring possible changes in corporate strategies and practices that may follow an acquisition, we first need to demonstrate how PCS relates to our evaluation framework. That analysis will provide us with a benchmark for measuring corporate takeover effects (CTEs) that may follow an acquisition.

PCS summarizes its strategic approach as "potash first." Although the company produces all the macro-nutrients (potash, nitrates, and phosphates), potash is the most important in

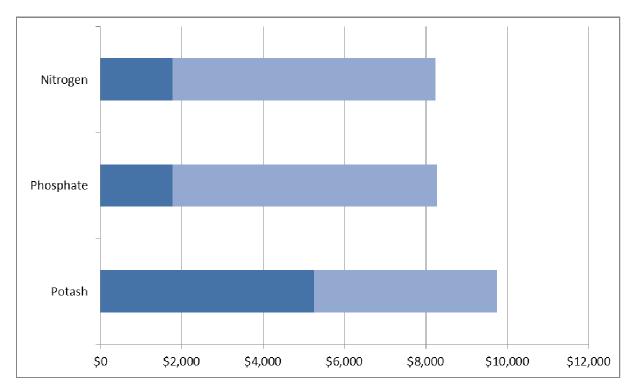
¹⁸ Government of Saskatchewan, Ministry of Energy and Resources data.

¹⁹ See: Fulton and Karp. "Estimating the Objectives of a Public Firm in a Natural Resource Industry."

²⁰ See: Wilkinson, "The Saskatchewan Potash Industry and the 1987 U.S. Antidumping Action."

terms of contribution to the company's revenue and gross margins over the cycle. (See Chart 7.) However, it is important to note that PCS is *not exclusively* a potash company—it is a fertilizer company. The potash component accounted for 37 per cent of sales during the 2005–09 period, compared with 32 per cent for nitrogen and 31 per cent for phosphate. These latter businesses are based primarily in the United States. (See below where we discuss PCS operations.)

Chart 7: Total Sales and Gross Margins (US\$ 000s, 2005–09)



Note: dark blue is gross margin portion of total sales

Source: PCS.

There has been much discussion of PCS's (and also Mosaic's) role as a so-called "swing producer" in the marketplace. The role of a swing producer is to adjust volumes to changing demand conditions so as to minimize price volatility, particularly on the downside. This role is of little consequence when global supply and demand are in rough alignment, but should play a more important role when global demand drops, as it has quite significantly during recent recessions. PCS was faced with oversupply conditions in the early 1980s (for reasons indicated earlier), the early 1990s (due to the collapse of Soviet Union), and most recently in 2008–09 due to the global recession. In this latter case, PCS (in concert with Mosaic Co. and Agrium Inc.) significantly reduced volumes to stabilize prices. In 2009, PCS took its utilization level well below 50 per cent in order to shore up prices.

It is something of an exaggeration to say that PCS is a swing producer that acts differently from companies in other major producing nations. In fact, in the current market (and the foreseeable market going forward) all the major global potash players adjust their supply in response to rising and falling demand conditions. Consider, for instance, the most recent drop in global demand in the 2008–09 period. Companies in the major producing countries—Canada, Russia, and Belarus—all cut back on volumes in the face of a declining marketplace. The only country that continued to increase production was China. (See Table 5.) Less than 10 years ago, the Russian producers started to push up against capacity and realized it was in their interest to behave like oligopolists. By all accounts, that is what they are now doing. The tendency for concentration in the Russia/Belarus supply structure makes this behaviour just as likely going forward.

Table 5:
Who's the "Swing Producer"?
Volumes, Change in Volumes and Per Cent Change (Thousands of KCI Tonnes)

			Vol. Decline or	
	2007	2009	Increase	% -/+
Canada	18,393	10,771	-7,622	-41%
Russia	10,936	5,965	-4,971	-45%
Belarus	8,235	6,379	-1,856	-23%
Combined Russia/Belarus	19,171	12,344	-6,827	-36%
Germany	5,965	3,811	-2,154	-36%
Israel	3,645	3,314	-331	-9%
Jordan	1,806	1,823	17	1%
China	3,314	4,557	1,243	38%
Total	71,465	48,964	-22,501	

Sources: U.S. Geological Survey; The Conference Board of Canada.

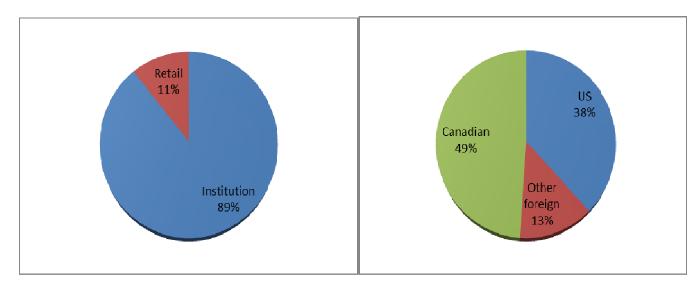
That strategy ultimately determines how PCS relates to our previously described evaluation framework. We will now run through each element of the framework to establish benchmarks for PCS, prior to analyzing how these elements might change in the event of a successful acquisition.

Shareholders

A common concern is that the acquisition of a Canadian company introduces new shareholders who may have different motivations than the old shareholders. The unstated assumption is that Canadian or Saskatchewan shareholders' interests are more aligned to national or provincial interests than that of foreign shareholders. It is virtually impossible to test that assertion directly, especially in situations where a company is widely held with no dominant shareholder. But we can look at shareholder structure to determine how it might change in the event of an acquisition and speculate on whether such a change is likely to manifest itself in changes in the way the company behaves.

PCS is a widely held company that is owned mostly by foreign-based institutional investors. According to the company, 51 per cent of the shares are owned by foreign nationals and institutions, including 38 per cent in the United States. Fully 89 per cent of the shares are held by institutions such as mutual fund companies, compared with only 11 per cent held by retail investors (see Chart 8 and Table 6).

Chart 8: PCS Shareholder Structure (September 2010)



Source: PCS

Table 6: PCS Shareholder Structure by Holder (June 2010)

Holder	Shares	%	Value
Capital World Investors	20,972,600	7.07	\$1,808,677,024
Royal Bank of Canada	10,378,723	3.5	\$895,061,071
Primecap Management Company	9,660,308	3.26	\$833,104,961
Jarislowsky, Fraser Ltd.	8,818,148	2.97	\$760,477,083
FMR LLC	8,078,268	2.72	\$696,669,832
Harris Financial Corp	7,161,542	2.41	\$617,611,382
Blackrock Inc.	5,810,577	1.96	\$501,104,160
Thornberg Investment Management Inc.	4,660,364	1.57	\$401,909,791
Wentworth, Hauser and Violich	4,554,634	1.54	\$392,791,636
Toronto-Dominion Bank	3,799,774	1.28	\$327,692,509

Source: Yahoo Finance.

Governance

Given the diverse holdings of a widely traded public company, shareholders depend on a smaller group to represent their interests and to provide shareholder direction to senior management. As with the shareholders themselves, the nature of the board of directors is often scrutinized during and after an acquisition for clues as to the direction the board may provide senior management. Currently, eight out of twelve board members are Canadians, including two individuals from Saskatchewan.

Once again, in widely held public corporations, it can be very difficult to ascertain the motivations of the board. Board members are often appointed at the recommendation of management. Institutional shareholders may choose to be passive or activist. And it is difficult to ascertain whether Canadian board members are more inclined than foreign members to consider Saskatchewan's or Canada's interests.

Table 7
PCS Board Structure by Nationality (September 2010)

Board Members From	#
Canada	8
Of which: Saskatchewan (2)	
United States	3
Other	1

Source: PCS

Management

Our previous research on M&As suggests that senior management is key to setting the direction for the corporation. Although the Board approves management strategy, senior managers formulate this strategy and execute it on a day-to-day basis.

There is much concern about where headquarters are located, where the senior executives are located, and their nationality. This is an acknowledgement that headquarters are the decision-making centres of companies and are particularly important for the providers of professional services to headquarters, such as legal, accounting and audit, strategy and management, and other professional services.

Table 8
PCS Senior Executives

Name	Served Since	Position Held
William J. Doyle	1987	President and Chief Executive Officer
Wayne R. Brownlee	1988	Executive Vice-President, Treasurer and Chief Financial Officer
James F. Dietz	1997	Executive Vice-President and Chief Operating Officer
Barbara Jane Irwin	2000	Senior Vice-President, Administration
Robert A. Jaspar	1997	Senior Vice-President, Information Technology
Joseph A. Podwika	1997	Senior Vice-President, General Counsel and Secretary
G. David Delaney	1997	President, PCS Sales
Garth W. Moore	1982	President, PCS Potash
Thomas J. Regan, Jr.	1995	President, PCS Phosphate and PCS Nitrogen
Stephen F. Dowdle	1999	Senior Vice-President, Fertilizer Sales, PCS Sales
Daphne J. Arnason	1988	Vice-President, Internal Audit
Karen G. Chasez	2000	Vice-President, Procurement
John R. Hunt	1997	Vice-President, Safety Health and Environment
Denis A. Sirois Source: PCS	1978	Vice-President and Corporate Controller

PCS is a company with two major headquarters: a head office in Saskatoon; and a subordinate headquarters office in Chicago. The Chicago office plays a role in marketing and operating the majority of the company's assets, most of which are based in the United States. This second headquarters reflects the importance of the U.S. market to PCS's sales, operations, finance, and strategy. According to the company, each of these offices employs about 200 people. Of the 15 senior executives listed on the firm's website, nine are American nationals and six are Canadians. The President and Chief Executive Officer, William Doyle, an American, spends much of his time at the Chicago office.

Once again, there is no clear cut evidence to suggest that foreign nationals that run companies based in Canada are systematically biased against Canada. But the issue of the nationality of senior management tends to be a political issue during the acquisition process.

Operations

PCS operations are structured in three business segments that align to its three commodities—nitrogen, phosphate, and potash. This is a standard form of organization for mining companies because commodities are also aligned to customer groups. As indicated, potash is considered the most important of these three for strategic and financial reasons.

The company's potash properties are located primarily within Saskatchewan (with one mine in Sussex, New Brunswick) while its nitrogen and phosphate operations are located primarily in the United States and Trinidad. (See Exhibit 1.) Over a five-year period, revenues from Canadian operations provided slightly less than 40 per cent of total corporate revenues. Operations in the United States provide the bulk of the rest. Thus, from an operational point of view, the company is substantially a U.S.-based company.

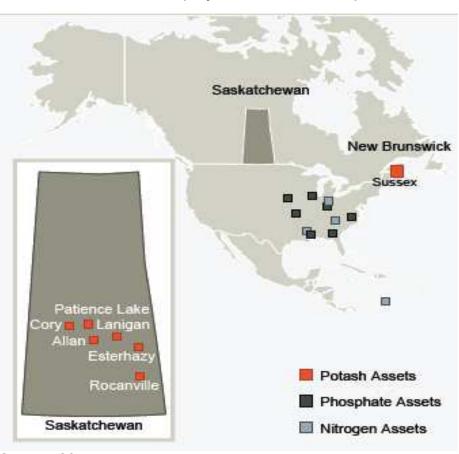


Exhibit 1
PCS: A North American Company With Saskatchewan Operations

Source: PCS.

PCS is the largest fertilizer company in the world with 21 million metric tons of primary product capacity. Globally, by sector of production, PCS ranks first in potash, third in phosphates, and third in nitrogen. Over time, the company has made a number of strategic acquisitions to bolster its potash mining capacity and its marketing reach (see Table 9).

Given the nature of the Saskatchewan potash resource and the sophistication of PCS as a company, PCS can be considered a cost-competitive producer. However, the industry cost curve is relatively flat across the world, especially for the major producers in Canada, Russia, and Belarus. In light of the size of the Saskatchewan potash resource and the high cost of developing greenfield sites, PCS's operational strategy is to make incremental changes to capacity and then to run that capacity at levels that stabilize prices over the cycle.

Table 9

Key Acquisitions by PCS 1990-2010

1990

Allan mine, through the acquisition of all of the outstanding shares of Saskterra Fertilizers Ltd.

1993

New Brunswick potash mine and port facilities.

Patience Lake solution mine in Saskatchewan.

1995

PCS Phosphate Company, Inc. (formerly Texasgulf Inc.).

White Springs Agricultural Chemicals, Inc., phosphate fertilizer and feed producers.

1997

Arcadian Corporation, a producer of nitrogen fertilizer, industrial, and feed products.

1998

PCS Cassidy Lake, a potash mill facility located at Clover Hill, New Brunswick.

2000

PCS Purified Phosphates (formerly a joint venture with Albright & Wilson Americas Inc.), a phosphoric acid joint venture.

2003

Twenty-six per cent of the shares of Arab Potash Company (APC) from Jordan Investment Corporation, an arm of the Jordanian government.

2001-02

Twenty per cent of the shares of Sociedad Química y Minera de Chile S.A. ("SQM"), a Chilean specialty fertilizer, iodine, and lithium company. Subsequently sold a portion.

2005-06

Nine per cent of the shares of Israel Chemicals Ltd. ("ICL"). Increased ownership interest to 11 per cent. One million additional shares in APC, and in April 2006, acquired 220,100 additional shares in APC, increasing ownership interest to 28 per cent.

About 10 per cent of the shares of Sinofert Holdings Limited ("Sinofert"), a vertically-integrated fertilizer company and a subsidiary of Sinochem Corporation (a Chinese company) In February 2006, exercised an option to acquire an additional 10 per cent of the shares of Sinofert, increasing ownership interest to 20 per cent.

2008

385.9 million additional shares of Sinofert, increasing ownership interest to 22 per cent.

2010

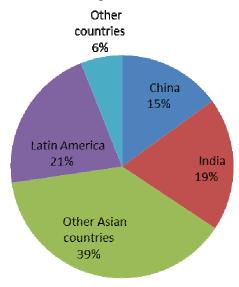
32.4 million additional shares in ICL, increasing ownership interest to approximately 14 per cent.

Source: PCS 10K Filing.

It uses its jointly owned subsidiary, Canpotex, to coordinate sales with Mosaic Co. and Agrium Inc. into export markets outside of North America and counts on market discipline among the three producers in determining volumes for North America. However, it is important to note that, from a governance point of view, it is the members that own Canpotex and provide it with direction on its marketing volumes.

For historical reasons, Saskatchewan-based companies have shared this marketing function. But the decision-making around volumes is very much a decision of the individual companies, whose past behaviour indicates that they rationally behave like oligopolists. At times, this has meant that, along with many other major producers worldwide, they have sought (with some success) to stabilize prices by changing production levels.

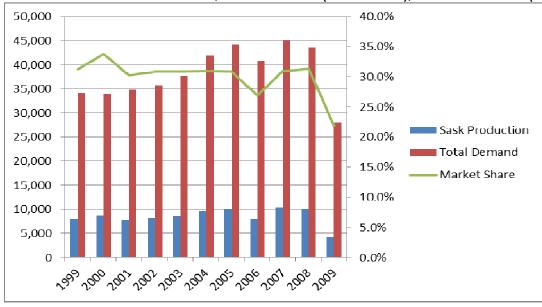
Chart 9
Distribution of Canpotex Sales, Average 2006–09



Average Annual Sales of \$1.3 Billion

Source: PCS.





Sources: Saskatchewan Bureau of Statistics; International Fertilizer Institute.

That strategic approach to operations has implications for the amount of potash produced from its Saskatchewan and New Brunswick mines, the capital investment that goes into those mines, and the employment that is generated by them. So while the longer-term trend is toward higher levels of production, exports, employment, and capital, these levels will be subject to short-term adjustments that can at times be quite severe.

Capital

PCS's producer strategy explains how it develops its mines in Saskatchewan and the capacity utilization of those mines. The company has by far the greatest mineral rights to potash in the province. It only adds to capacity when base capacity is operating at a high level. It can then adjust capacity across its mines as market conditions dictate.

According to the company's most recent 10K filing with the Securities and Exchange Commission, the net book value of its assets is about US\$6.5 billion, the majority of which are dedicated to its potash assets. Similarly, the company has plans for significant expansions in its potash capacity. In 2005, it began implementing a long-term capital plan. It notes that in 2009, it spent about \$1.7 billion on new projects, most of which were geared toward brownfield developments. (See tables 10 and 11.) By 2015, the company expects to have doubled its 2005 operational capacity to around 18 million tonnes. The company notes that its construction projects will create over \$3 billion in economic activity during the construction phase.

Table 10 PCS Fixed Capital, US\$ Millions, 2005–09

	2005	2006	2007	2008	2009
Current assets	1,110.8	1,310.2	1,811.3	2,267.2	2,271.7
Property, plant, and equipment	3,262.8	3,525.8	3,887.4	4,812.2	6,413.3
Additions to property, plant, and equipment	382.7	508.6	607.2	1,198.3	1,763.8

Source: PCS.

Between 2005 and 2009, projects at the Rocanville, Allan, Lanigan, and Patience Lake operations in Saskatchewan were completed at a cost of around \$1 billion. Four additional projects are now under development, including a de-bottleneck/expansion at Cory, an expansion at Allan, and a mine and mill expansion at Rocanville. The company is also expanding its mine and mill in New Brunswick. In total, these brownfield projects will cost \$6.5 billion. Construction is expected to be completed in 2010 for Cory I, 2011 for New Brunswick, 2012 for Allan and Cory II, and 2013 for Rocanville. Once completed, projects like these typically take an additional two years to ramp up. These projects clearly show that PCS's position in Saskatchewan potash allows it to grow new production fairly rapidly, especially when compared with greenfield developments around the world.

Table 11 PCS Fixed Capital, US\$ Millions, 2005–09

Facility	Standard Capacity* Expansions/ Debottlenecking (Millions of Metric Tonnes)	Investments (Billions C\$)
Construction Projects Completed	,	
Rocanville	0.75	\$0.13
Allan	0.40	\$0.21
Lanigan	1.50	\$0.41
Patience Lake	0.36	\$0.11
Projects in Progress		
Cory I	1.20	\$0.90
New Brunswick	1.20	\$1.66
Allan	1.00	\$0.55
Cory II	1.00	\$0.54
Rocanville	2.70	\$2.80

^{*} Includes, as applicable, bringing back previously idled capacity and expanding to capacity, and does not necessarily reflect current operational capability.

Source: PCS.

PCS's weighted cost of capital in 2009 was 10.1 per cent. Given the allocation of capital across the lines of business, we estimate that the capital costs in Saskatchewan are around \$200 million per annum.

People

As a company, PCS employs 5,136 people.²¹ PCS employs just over 1,600 people at the five mines that it operates in Saskatchewan, an increase of about 400 employees since 2005. (See Table 12.) Given the company's expansion plans, it may be employing as many as 2,500–3,000 people at the operational level by 2015.

Given its operational strategy, the number of employees can be subject to variability during times of weaker potash demand, when PCS withdraws supply from the marketplace. For example, in December 2008, PCS announced 940 miners would be laid off at three of its mines for two months in order to reduce production by 2 million tonnes, or 20 per cent. Its marketing partners in Canpotex also laid off workers. Agrium Inc. announced 380 layoffs at its Vanscoy mine, while Mosaic Co. proceeded to lay off 1,000 workers at two Saskatchewan locations in January 2009 in order to reduce production by up to 1 million tonnes by the end of May 2009. Given the short-term nature of these reductions, they do not appear in the company headcounts for the year.

Wages and benefits of employees across the company were \$522 million in 2009. (See Table 13.) If we pro-rate this across the company based on employment, an estimated \$170 million of these wages and benefits were paid within Saskatchewan.

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²¹ PCS.10K filing.

Table 12 PCS Employment at Saskatchewan Mines, 2005–09

	2005	2006	2007	2008	2009
Allan					
Employment					
Number of employees	293	312	336	347	349
Average tenure (years)	17.7	16.7	16.8	15.8	16.3
Lanigan					
Employment					
Number of employees	375	403	441	519	509
Average tenure (years)	19	18	12.9	11.9	12.8
Cory					
Employment					
Number of employees	207	209	233	271	344
Average tenure (years)	13.1	13.7	12.1	10.7	9.3
Patience Lake					
Employment					
Number of employees	68	67	70	75	80
Average tenure (years)	21.3	20.1	17.9	17.5	16.9
Rocanville					
Employment					
Number of employees	340	343	354	406	395
Average tenure (years)	17.4	15.2	14.8	13.5	13.2
otal Employment	1283	1334	1434	1618	1677

Source: PCS.

Table 13 PCS Payroll: Employee Wages and Benefits (\$ millions)

	2005	2006	2007	2008	2009
Total salaries	299.0	315.0	384.1	438.8	373.4
Benefits	124.8	115.0	135.6	134.2	148.7
Total payroll	423.8	430.0	519.7	573.0	522.1

Source: PCS.

Taxes and Royalties

Given the importance to Saskatchewan of the resource royalties and other taxes derived from PCS, we discuss these separately from other community impacts.

Saskatchewan has a complicated system for extracting resource rents from the industry in the form of royalties and various taxes. The system includes royalties for potash extracted

from Crown land, a resource surcharge, property taxes, a mining profits tax, and corporate income tax. As we indicated earlier, about 4 per cent of Saskatchewan's revenue is derived from potash royalties, but this is a highly variable source of revenue. For example, tax and royalty revenues fell from \$1.4 billion in fiscal year 2008–09 to –\$184 million in fiscal year 2009–10.

PCS reports that it paid about \$2 billion in royalties and taxes (federal and provincial) in the 2005–09 period. (See Table 14). The largest source of revenue from potash for the Province comes in the form of the potash profit tax (corporate income taxes are split with the federal level). Interestingly, those payments exceeded the entire wage bill of the company by about US\$300 million.

Table 14 PCS Taxes and Royalties (US\$ Millions)

	2005	2006	2007	2008	2009
Income taxes	170.5	51.8	154.1	516.2	31
All other taxes	36.4	34.7	45.7	103	47
Potash profits tax, surtax, and base payment	134.3	62.4	131.1	539.6	25.3
Royalties	8.3	5.9	8.8	18.8	9.2
Canada total	349.5	154.8	339.7	1,177.6	112.5

Source: PCS Website DataTool.

Community

PCS, through its corporate policies and practices with respect to sponsorships, giving, and volunteering, has a significant impact on Saskatchewan communities.

As with most well-run, resource-based companies, PCS has a policy for managing its relationships with the communities in which it does business. The company identified "build strong relationships with and improve the socioeconomic well-being of our communities" as one of its five key performance drivers. By making this a "key performance driver," the company systematically tracks and manages its community engagement, setting annual performance targets.

The company sets specific targets for community giving, community perceptions, and local spending. For community giving, the target is to donate one per cent of after-tax earnings (on a five-year rolling average) in communities and other philanthropic programs. The company supports an annual perception survey in the communities in which it operates and seeks to achieve an average score of 4 out of 5 in a top-line survey of community leaders on their perception of the firm. Finally, the firm sets a target for local spending of 60 per cent (excluding purchases for major expansions, energy, transportation, and raw materials). Chart 12 show the company's donations performance in recent years.

\$8.00 3.5 \$7.00 3 \$6.00 2.5 \$5.00 2 ■\$US M (Left) \$4.00 1.5 •% Earnings (Right)* \$3.00 1 \$2.00 0.5 \$1.00 \$0.00 0 2005 2006 2007 2008 2009

Chart 12 PCS Donations, 2005–09 (US\$ Millions)

Source: PCS. * Five-year rolling average.

Summary

Using the evaluation framework set out in section 2, the portrait that emerges of PCS is a company that has a wide range of stakeholders that would ultimately be affected by an acquisition of the company. These stakeholders are not restricted to Saskatchewan, even though potash is clearly a major focus of the corporation and those operations are overwhelming based in Saskatchewan.

The company is actually majority-owned by foreign nationals, and Saskatchewan shareholders have gone from being the whole owners in 1988 to constituting a relatively small fraction of total ownership in 2010. The Board of Directors is mostly Canadian, yet the majority of the senior management of the company is American, and headquarters functions are situated in the U.S. as well as in Saskatchewan.

Although we have focused on the company's Saskatchewan operations, those operations constitute little more a third of the company, by revenue—although it is the third that generates the most profits for the shareholders and is of greatest consequence to the Province of Saskatchewan. The remainder of the company is primarily based in the United States.

These fundamental characteristics of the company are directly related to the risks and opportunities that an acquisition would present to the Province of Saskatchewan. We now turn to our evaluation of those risks and opportunities.

6. Implications of an Acquisition of PCS: Risks and Opportunities

Any acquisition of PCS, regardless of the suitor, would be by far the largest single acquisition globally in 2010. It would be at least \$10 billion larger than Novartis' purchase of the remaining shares of Alcon from Nestle, which is the largest deal so far this year. For international capital markets that have been in the doldrums since the credit crisis of 2008, such a large deal represents a key benchmark in the recovery process.

The size of the proposed transaction has put the international spotlight squarely on Saskatchewan. The global business media in Beijing, Bombay, Moscow, London, New York, and even Toronto are focused on Saskatchewan. Given that focus, the risks, and opportunities associated with the deal are greatly amplified. The world is watching Saskatchewan to see how it will respond.

Our terms of reference are to consider the risks and opportunities associated with a variety of acquisition scenarios. The senior management of PCS is in the process of fulfilling their fiduciary responsibilities to shareholders to ensure that an offer for their shares fully reflects the inherent value of the company. That involves the company actively encouraging other bidders to come forward to challenge BHPB's unsolicited offer—simply because a single offer has less chance of increasing in value than does a competitive bid.

This state of play presents a challenge to our analysis. *At this writing*, there are no competing bids to the BHPB tender offer. There is, however, considerable speculation in the media that there may be competing bids in the near future. As we have argued, most of the post-acquisition takeover effects depend on the nature of the acquirer and its strategy. Assessing potential effects requires a marshalling of evidence, judgment, and some informed speculation in our analysis.

Our assessment of risk and opportunities, presented below, is based on a combination of theory, analysis of previous practice by possible suitors, and the stated policies of the suitors. We deal with uncertainty by defining a range of outcomes based on scenarios, and by applying our considered judgment. Yet, we have extensive information about only one suitor—BHPB. This allows us to be more specific and analytical when it comes to the BHPB bid, as opposed to other bids that, *at this writing*, are hypothetical.

A Typology of Suitors

The resource sector broadly defined has already demonstrated a long-term trend toward consolidation, and the emergence of China, India, and Brazil as fast-growing economies is a fundamental game changer for the resource sector. We are in the midst of a process that is lifting about half the world's population from low-income to middle-income status, with increasing demand from those economies for resources of all types. Saskatchewan- and

other Canadian-based companies will therefore continue to be subject to acquisitions in the resource sector—even as many of those companies seek out acquisitions of their own in other countries, as well as domestically.

As incomes rise, one of the first changes in the development process is that people eat more and higher-quality food. That has been the case for millennia and is no different now that China, India, and Brazil are growing and developing quickly. This fact is the fundamental driver behind trends in the global potash market and related corporate behaviour in the market directed at expanding production and acquiring brownfield operations.

This development process fundamentally changes the demand for a wide range of resources, which in turn transforms the economies of scale of resources across the spectrum. The economies of scale strongly favour large globally integrated producers. With the exception of Brazil, the emerging countries are relatively labour rich yet resource poor. Canada is labour poor and resource rich. So Canadian resource companies are inevitably going to be targets for acquisition, as they were in the 2007–08 period. It is important to understand these fundamentals since they will affect the Canadian resource sector over the long term.

To assist in our understanding of possible suitors, we have developed a simple typology. (See Table 15.) There are three types of players that are likely to come to the table, either on their own account or in collaboration with other suitors:

- 1. *Industry players*—These are large, diversified mining companies that understand the global business environment and have the market capitalization required to secure the financial resources needed to undertake a major acquisition. They will want to acquire PCS to expand their portfolio of resources, leverage their existing resources (e.g., market resources), or realize synergies with existing operations.
- 2. Consumer players—These are customer-facing companies that are interested in backward integration through the supply chain. Their motivation may be that backward integration allows them to better service customer needs. In addition, they may be driven to focus on customer needs because of their relationship as state-owned enterprises to the governments of the countries in which they are based.
- 3. Financiers—Financiers differ, based on their investment mandate. Private equity players seek to realize efficiencies by taking companies private and providing management with clearer instruction on maximizing shareholder value. Pension plans are interested in long-dated assets that allow them to match the cash produced by assets with their long-dated liabilities to pension plan members. Sovereign wealth funds are interested in diversifying their assets away from the source of their funds, which typically result from running continual trade surpluses with the rest of the world. If the nature of those trade surpluses are commodity-based (e.g., Abu Dhabi), then they will look to diversify into non-resource assets. If the source is manufacturing based (e.g., China), they will look to diversify into resource assets.

Table 15
Typology of Suitors

Туре	Motivations	Takeover Effects	Examples
Industry players	Diversification of portfolio; market power; economies of scale	Depend on whether target relates to existing business and post-acquisition strategy	<u>Large Diversified</u> : BHPB; Rio Tinto; Vale; Xstrata
	Scale and scope economies	Usually involves integration; synergies allow for lower costs	Small focused: PCS; Goldcorp; Agrium
Consumer players	Offset market power of large diversified or specialized producers Secure long-term supplies	Defensive strategy; May wish to lock firm into long-term supply contracts (off take agreements). Takeover effects related to forward supply chain	Sinochem
Financiers	Untap inherent value; secure greater financing; provide focused direction to senior management	Depends on how well run target is; poorly-run companies will have costs cut; well-run companies will be provided more capital: takeover effects range from modest to significant	Private equity: Carlyle Group; Bain Capital; Kohlberg Kravis Roberts; Blackstone Group
	"Sterilize" and recycle foreign exchange reserves; diversity sources of national income; hedge	Usually take passive positions because of political concerns; limited takeover effects	Sovereign Wealth Funds: Abu Dhabi Investment Authority; Temasek Holdings (Singapore)
	Align long-term liabilities to cash producing assets at reasonable cost of capital; Diversify holdings to hedge risk	Usually fairly passive investors; align objectives of firms to plan objectives; Limited takeover effects	Pension plans: Canada Pension Plan Investment Board; Government of Norway Pension Plan

Source: The Conference Board of Canada.

BHPB clearly falls into the industry category. In that sense, its bid is very much in keeping with other large mining acquisitions of recent years. The largest deals typically involve large global diversified companies acquiring focused companies. Some companies, like Xstrata and Broken Hills Properties (BHP), have made the transition from focused players to global diversified companies on their own initiative by merging with other players.

These deals happen because successful diversified firms have strong cash positions and relatively low cost of capital. For example, BHPB is calculating the economics of this deal at

around a 6 per cent cost of capital (the rate at which they can access capital) versus PCS's current weighted cost of capital of around 10 per cent. This makes it easier for BHPB to fund the transaction on its own or through the capital markets on a scale necessary to consummate a deal. The scale of the PCS deal for BHPB would be similar to that of Rio Tinto's acquisition of Alcan Aluminum.

Table 16
Recent Large Acquisitions of Canadian-Headquartered Mining Companies

Deal	Year	Description
Xstrata Plc. acquires Falconbridge	2006	Xstrata acquired Falconbridge for \$19.2 billion; converts Falconbridge into Nickel business unit
Rio Tinto acquires Alcan Aluminum	2007	Rio Tinto acquires Alcan for US\$38.1 billion after Alcan rejects offer from U.Sbased Alcoa Aluminum.
Companhia Vale do Rio Doce (CVRD, now Vale) acquires Inco Ltd.	2007	CVRD acquires Inco for \$19.8 billion in order to expand its Brazil-based nickel business

Source: The Conference Board of Canada.

The acquisition process itself inevitably involves a takeover premium. The premium is offered to ensure that the target company's shareholders readily agree to sell their shares and do not seek to hold out in hopes of obtaining further gains through a rising stock price in the marketplace following the announcement of a takeover bid. In our previous work on M&As, we found that the takeover premium for foreign acquisitions of Canadian companies was an average of 28.8 per cent above the pre-acquisition share price. ²² Given that premium, it is usually necessary for the acquirer to justify the acquisition to its own shareholders either by pointing to significant synergies (i.e., lower operating and capital costs) or through some other strategic justification.

Table 17
Average Premium Paid by Acquiring Company
(per cent; sample = 540)

Foreign acquires Canadian (n=115)	28.8
Canadian acquires foreign (n=29)	26.6
Canadian acquires Canadian (n=142)	24.7

Sources: The Conference Board of Canada; Financial Post Crosbie: Mergers & Acquisitions in Canada.

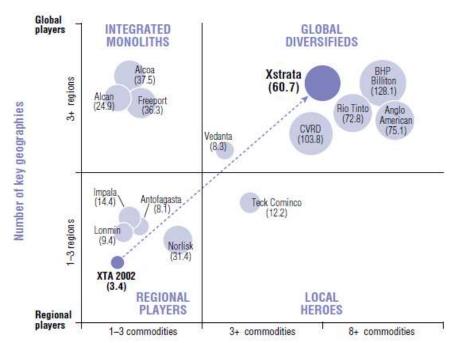
²² Grant and Bloom, *Hollowing Out*, Vol. 1.

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Industry Acquirers' Considerations

When industry players acquire a company, it is fairly easy to ascertain their motivations and strategies. For most large acquisitions, the acquirer is a public company bound by public reporting requirements and its governance structure. And while the acquiring company may very well be transparent about its strategic intentions, it may not always be successful in execution. Conference Board of Canada research on Canadian acquisitions found that acquirers significantly underperformed in the immediate aftermath of an acquisition.

Exhibit 2
Xstrata's Movement From Regional Player to Global Diversified Company
(Market Capitalization, 2006)



Source: Xstrata Plc.

An acquisition of PCS will likely only be possible if the acquirer is a major global diversified company and if it has the financial means of undertaking an investment of this scale—in particular, with respect to corporate debt.²³ On that basis, a potash play does not appear to make strategic sense for Xstrata or Anglo American. Vale has a commitment to potash, but is on record as committing its resources to Brazilian properties. Rio Tinto has a major issue with debt overhang from its \$40 billion acquisition of Canada's Alcan at the top of the market. That makes BHPB the only likely suitor from the industry.

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²³ See: Macquarie Equities Research. North American Fertilizers: BHP May Increase its Bid to US\$160.

Consumer-Based Acquirers' Considerations

Moving through our typology, the motivations of consumer-based acquirers, such as state-owned enterprises, to pay a premium to take over a foreign company become less clear. For instance, there has been much media speculation about a Chinese bid organized around the Chinese state-owned enterprise Sinochem Group. China, of course, is the world's largest consumer of fertilizer and has a growing appetite for potash. It has had difficult negotiations in the past with BHPB over iron ore pricing. The Chinese could justify a takeover premium as a sort of insurance premium to prevent BHPB from exercising similar market power in potash. This would be less of a strategy than a counter-strategy. Yet given the state-owned nature of Sinochem, it becomes unclear whether this would be a corporate counter-strategy or state counter-strategy. As we mentioned earlier, China was the only country that increased production of potash during the latest market decline.

Sinochem is reported to be considering including sovereign wealth funds as part of its bid consortium—most notably, the Singaporean sovereign wealth fund Temasek Holdings. The motive for this should be seen as political, because there is no financial reason for the Chinese to include other parties to help fund an acquisition. As the historian Niall Ferguson points out in a recent article, "Currently, China's strategy is to diversify out of paper claims and into commodity assets; even if that means paying a premium, it still makes more sense than holding the bulk of \$2.5 trillion of international reserves in various forms of the U.S. dollar."²⁴ That may explain why recent press reports suggest that China's own sovereign wealth fund, China Investment Corporation, may be part of the funding consortium.

It seems fairly certain that even if Sinochem puts together a financing consortium the underlying motivation would be to secure access to a key commodity. Food security is an overriding concern in China, arguably even more important than access to industrial materials.

Financier-Acquirers' Considerations

The involvement of financiers, including sovereign wealth funds, private equity, or pension funds, would complicate matters further. There is little likelihood that financiers would be able to or want to take over PCS on their own account. They would likely end up competing with an industry producer, such as BHPB, to drive up the acquisition price of PCS and would have little capacity to recoup their investment through operational strategies. As Leo de Bever, the CEO of the Alberta Investment Management Corporation, put it, "It's very hard for pension funds to get involved in any kind of motive other than economic return.... From an economic standpoint, getting into a bidding war with BHP is probably not the best way to deploy our capital." Sovereign wealth funds may have the financial wherewithal, but are unlikely to place a bid on their own account. Yet they may very well play a part in a bid

²⁴ Niall Ferguson, "Lessons and Legacies of the Financial Crisis."

²⁵ Canadian Broadcasting Corporation. "Chinese Seek Help in PotashCorp Bid."

by a Chinese state-owned enterprise that invites them in so as to make the deal more politically palatable.

Likely Outcomes

In order to focus our assessment of takeover effects, we consider in detail the two takeover scenarios that we consider most likely in the event that a takeover proposal is successful:

- 1. A successful bid by an industry-based acquirer—in this case, BHPB (currently the likeliest outcome *should* an acquisition go forward).
- 2. A successful bid by a consumer-based acquirer—in this case, Sinochem (still a possibility given that Sinochem has sufficient motivation and the financial wherewithal). Yet we assign a lower probability to this outcome because of the political challenges associated with a foreign state-owned enterprise owning a major Canadian resource company.

We now turn to the risks and opportunities presented by both these outcomes.

Risks and Opportunities Associated With a Successful Industry-Based Bid by BHPB

Returning to our framework, we are interested in analyzing possible corporate takeover effects associated with a successful bid by BHPB. To do so, we analyze BHPB using the same framework as we have for PCS.

BHPB is very clear about its overall strategy and how the PCS acquisition fits in. It wants to expand its current portfolio of nine commodities by adding "tier one" assets that are long-life, low-cost, diversified by geography and commodity, and that can be easily expanded to fill export demand. Although the individual returns from the commodities in its portfolio fluctuate, if the markets for the commodities tend to move in different directions, the overall fluctuation in earnings will be moderated. The PCS acquisition fits into this strategy because it introduces the company to a new commodity that fits its criteria and builds on its existing operations and multibillion-dollar investment in Canada.

The company has considered adding potash to its portfolio since 2005. The most developed project is Jansen Lake in Saskatchewan, which it intends to eventually build into an 8 million-tonne capacity mine. The PCS acquisition would allow it to get into the potash business immediately and would improve the economics of the Jansen Lake project through local economies of scale as well as access to efficient logistics. It has a record of preferring to sell its products through market pricing, hoping to trade based on cost advantage.

Shareholders

BHPB is a public company headquartered in Melbourne, Australia. The company actually comprises two companies: the BHP Billiton Limited Group and the BHP Billiton Plc Group. They are the two dual-listed companies that emerged from the merger of BHP and Billiton in 2001. The two groups maintain separate corporate identities yet operate as a unified company. (BHPB Plc is based in London, United Kingdom.) BHPB has a current market capitalization of around US\$200 billion compared to the \$40 billion at which it presently values PCS. In other words, the acquisition would expand the company by about 20 per cent and in a direction where it does not currently carry out business.

Like PCS, BHPB is widely held by institutions. Interestingly, the shareholder structure has some overlap with PCS's existing shareholders. The reason is that a relatively high percentage of the shares are owned in North America by the same institutions that own PCS. The North American float is about 37 per cent for the dual-listed companies, and about half of those shareholders also own PCS shares. That means about 18.5 per cent of the total shareholding for BHPB also owns PCS shares. (See Table 18.)

Table 18: BHPB Shareholder Structure

By type	
Retail and Unidentified	61%
Institutions	39%
Insiders	>1%
By location	
North America	37%
U.K.	29%
Australia	12%
Rest of World	7%
Jointly owned with PCS	18.5%

Source: BHPB.

The effect of an acquisition of PCS would be to shift the shareholding structure somewhat away from North America toward the rest of the world, specifically the United Kingdom and Australia. Canadian equity would definitely go down because the joint shareholdings favour U.S. institutions.²⁶ The reason is that Canadian mutual funds would no longer hold PCS as part of their exposure to Canadian equities.

²⁶ Of the top 20 joint institutional holders of PCS and BHPB, not one is Canadian.

Governance

BHPB has a 12-member board comprised of nationals from a variety of countries, including Australia, the United Kingdom, South Africa, and the United States. At this point, there are no Canadians on the board of BHPB, although BHPB has offered to put one Canadian on its board should its offer be accepted. The impact of adding a single Canadian to the board is unclear.

Management

BHPB has a Group Management Committee structure that consists of seven senior executives, none of whom are Canadian. It organizes its business units in Customer Sector Groups (CSGs). There are currently nine CSGs—including petroleum, aluminum, base metals, diamonds and specialty products, stainless steel, iron ore, manganese, metallurgical coal, and energy coal. Once again, none of these groups is headed by a Canadian, although the diamond and specialty products group does have operations in Canada. The functional head of marketing and sales is a Canadian, Mike Henry.

BHPB has a minerals exploration office in Vancouver (it owns 80 per cent of the EKATI diamond property in the Northwest Territories) and an office in Saskatoon to manage the development of its Jansen Lake greenfield potash project. According to its plan, the Saskatoon office would be converted into the headquarters for a new potash CSG and the executive head of that group would reside in Saskatoon.

In addition, BHPB foresees an expansion of its Vancouver presence. It would continue to maintain an office in Chicago, but this would be converted into a marketing office for the U.S. market. The company suggests that the Canadian offices would see some growth, including the movement of some headquarters jobs from Chicago to Saskatoon, while the Chicago office may shrink somewhat.

Operations

The major difference in strategy between BHPB and PCS is that BHPB is on record as saying that it would not market its potash through Canpotex. Canpotex essentially plays two functions: it is a co-ordinating mechanism for marketing and sales for export outside of North America, and it manages the logistics for shipping potash to these markets.

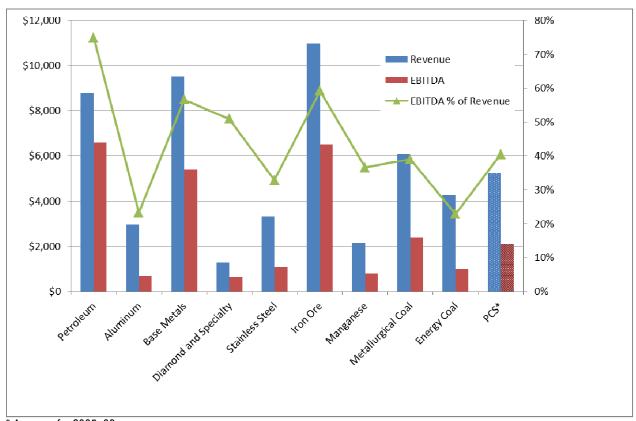
Clearly BHPB is not interested long-term in the marketing coordination function of Canpotex. As its offer for PCS is not conditional on due diligence, it has indicated that it might continue to use Canpotex for its logistical expertise and capacity once it has an opportunity to evaluate the organization.

Operations is one of the most important aspects of the BHPB bid and may have the greatest CTEs. BHPB has no existing potash production. As such, there is no likelihood of rationalizing production based on existing capacity, which is where negative CTEs often arise.

Rather, the implication is that BHPB will no longer feel constrained to act as the so-called swing producer. Some have speculated that this means that BHPB will run the mines "flat out." That suggests that mining output and employment will be higher over time than might be the case with PCS. But given Saskatchewan's history with chronic oversupply, there is an understandable concern that such a strategy would lead to excess supply and falling prices. Leaving aside those concerns for the time being, there is nothing in the BHPB bid to suggest that operations would be curtailed.

A close look at BHPB financial statements reveals that the company is not in the habit of losing money. It has adopted different pricing strategies for each commodity dependent on its market position. For instance, for diamonds from the EKATI project, it adopts a floating price model that blends the spot price with term sales. As it is a secondary producer of diamonds (De Beers being the market leader), it is able to differentiate its pricing without fundamentally changing the market. In iron ore, it is one of three major producers and therefore deploys a somewhat different strategy because it understands that it is a market maker.

Chart 13
BHPB's and PCS Revenue and Earnings Before Interest, Taxes, Depreciation and Amortization, 2010
(US\$ Millions and Percentage of EBITA)



* Average for 2005–09 Sources: BHPB; PCS.

There is some speculation that the potash market is sufficiently different from BHPB's other commodities that its marketing strategies might not work as well in potash. But BHPB strategies for its existing portfolio of nine commodities are sufficiently differentiated to suggest that a potash CSG would be mandated to develop a unique strategy to maximize returns over the commodity cycle.

The percentage of earnings before interest, taxes, depreciation, and amortization (EBITDA) over revenue for PCS is slightly below that for BHPB as a group. Its revenue would place it as a medium-sized Customer Sector Group of average profitability. Yet there is a possibility that the company may pursue a short-term strategy to push out competitors by lowering prices. We therefore spend some time considering that possibility in detail. (See below.)

Capital

In 2010, BHPB spent almost US\$10 billion in capital expenditures across its nine Customer Sector Groups. The company has a clear track record of investing in additional capacity based on its long term assessment of market fundamentals.

BHPB is on record as saying that it will continue with PCS's current brownfield expansions and will continue to develop its own Jansen Lake property, with or without an acquisition. It points to the fact that it has spent around \$1 billion developing the project in the last four years. It also has properties at Young, Boulder, and Melville that are at various stages of development. There is nothing to suggest that capital expenditures will decline after the acquisition; and given local economies of scale, the economics of BHPB existing projects are likely to improve.

People

BHPB currently employs 124 people (including its own employees and contractors) in Saskatchewan. It maintains an office in Saskatoon. It also employs around 60 people at its Vancouver mineral development office. This reflects its current footprint in Canada, which is limited to its development of potash properties in Saskatchewan and its EKATI diamond mine in the Northwest Territories.

It is clear that BHPB has no plans to reduce head counts in Saskatchewan or Canada. Indeed, BHPB's Global CEO, Marius Kloppers, stated to the Conference Board that BHPB would make Saskatoon its global headquarters for potash. There would, in fact, likely be some expansion in head counts if it reorganizes management from Chicago toward the Saskatoon headquarters for its Potash Customer Sector Group.

The acquisition would likely have little or no negative impact on current BHPB employees in Saskatchewan. The Vancouver office, as well, may see a slight increase in head count. Current employment in Saskatchewan will be about the same as with PCS in the medium term but in the long term will be larger than PCS for the simple reason that the Jansen Lake project will add to the total head count of the CSG. The reason is that BHPB project office

for Jansen Lake is not a headquarters function so there would be few if any duplications of jobs to be eliminated.

To the extent there is any negative employment effects, it is more likely to be felt at Canpotex. Canpotex now employs 65 people at its headquarters in Saskatoon. If BHPB pulls out of Canpotex, or out of the marketing activity of Canpotex, that level of employment would likely go down. However, the other members of Canpotex have indicated that they will continue to use the organization, which should mitigate the job losses.

Community

In 2009, PCS contributed about \$7 million to various community causes. The dollars directly given to community causes by PCS tend to have a targeted impact on community institutions and initiatives, including social, cultural, educational, sporting, and health programs. Therefore, any substantial decline in corporate giving and support for community causes could have a significant negative impact on Saskatoon and the communities in which PCS's mines are located.

Given BHPB's community engagement policy, the risk of loss appears minimal, and there are prospects for some gain. BHPB has a community-engagement policy that is similar to that of PCS, albeit somewhat more generous proportionately. It gears its community giving to 1 per cent of *pre*-tax profits over a rolling three-year horizon. In 2010, it contributed around US\$200 million to what it calls "community investments." Based on its 2010 numbers, BHPB gave about 1.5 per cent of its after-tax earnings to the communities in which it operates.²⁷ At its EKATI diamond mine in the Northwest Territories, it has given around \$3.6 million to the local community since 2002.

BHPB has said that it intends to bring PSC spending commitments on community programs in line with PHPB's global commitment levels. This would represent an increase in contributions: currently, PCS targets 1 per cent of *after*-tax earnings to community investment over a rolling five-year horizon. For our purposes, there is little or no reason to believe that the engagement in the community and support for community causes would decline if BHPB were successful in its bid; in fact, there may be some increase.

Taxes and Royalties

In our framework, the community is affected through two mechanisms: tax and royalty yields and corporate-giving policies. The former is far larger in terms of total dollars committed to the community. In 2009, PCS paid over \$112 million in taxes and royalties. This does not include the income and consumption taxes paid by its employees, which could easily bring the total to upwards of \$150 million.

The tax and royalty yield is complicated because the structures of taxes and royalties are based on assumptions around the operating strategies of the industry players. Given the

 $^{^{\}rm 27}$ BHP Billiton Annual Report, 2010; company presentations.

importance of this issue and the uncertainties associated with the strategies and the overall marketplace, we undertook a scenario analysis to try to understand the nature of this potential risk.

Post-Acquisition Scenarios

The global potash market has many of the characteristics of a traditional oligopoly market. For example, there are few players in the industry, with the Canadian, Russian, and Belarus producers accounting for the vast majority of global trade. There are also high barriers to entry, with few large deposits of potash globally and high costs and long development times to develop new mines. Finally, most of the large producer companies in the industry are price setters, rather than price takers. Although potash producers do negotiate their selling prices with their customers, they have considerable bargaining power given the limited number of players operating in the industry.

A distinctive feature of an oligopoly market is the interdependence of a few large firms, each of which has the ability to influence broad market conditions. Therefore competing firms must take into account the actions of the other market participants. In some situations, this can lead to various forms of collusion, such as passively allowing a market leader to set prices, which the smaller producers then adopt; or more active measures, such as seeking to increase prices by limiting production. At the other extreme, oligopolistic markets can be extremely competitive, with firms seeking to maximize market share through aggressive price discounting. This situation is more common in markets with undifferentiated products and high levels of fixed costs, both of which characterize the global potash industry.

The potash market has experienced both of these market conditions. There have been periods of extreme price competition in the past. In particular, the mid-1980s saw a period of weak demand and very low prices. In more recent years, the concentration of market power amongst a few firms, a reduction in the amount of excess capacity in the industry, and a high level of market discipline among leading producers to manage production in response to market demand and thus maximize prices contributed to potash prices reaching a record high in late 2008 and early 2009. Most of the variations in prices since 1980 were not due to errors by producers in putting excess capacity on the market; rather they were caused by unforeseen drops in demand. That was the case with the collapse of Soviet demand in the late 1980s and early 1990s, and once again in the aftermath of the global credit crisis.

For our purposes, the key question is how an acquisition of PSC would affect supply conditions in the industry. That depends critically on the motivations of the acquirer. Given what we have already noted about the market structure, an acquisition of PCS would not fundamentally change the market structure. The fact is the supplier structure is already becoming increasingly concentrated, both in North America and in the Former Soviet Union (FSU).

Belarusian Potash Corp (which exports production from Belarus and Russia's Uralkali), Silvinit, and Canpotex account for about 70 per cent of global exports, excluding the U.S. (where Canpotex does not operate). Nearly all of the remainder of global exports are provided by K + S Group, which primarily serves the European market, and Israel Chemicals Limited and Arab Potash Company (both of which are partially owned by PCS). Thus, if PCS's Saskatchewan production was removed from Canpotex, the number of players in the industry would rise by only one—from six to seven.

And this number could very well be reduced back to six if a rumoured merger between Uralkali and Silvinit were to occur—a majority of shares in both companies are held by the same group of investors. In June 2010, Russian oligarch Suleyman Kerimov acquired a 25 per cent stake in Uralkali. Press reports also indicated that concurrent with this transaction, Mr. Kerimov acquired a 20–25 per cent stake in the Russian producer Silvinit (on 16 August 2010). There is speculation that this may ultimately lead to a Silvinit–Uralkali merger. These developments give further impetus to the idea that the global potash market is likely to become more concentrated.

What could BHPB's strategy be in this case? And how might that play out in terms of production? BHPB is clearly a profit-making company with a profit-maximizing strategy that depends on its profits to attract capital. It has a well-established management system for allocating capital across its commodities, which it calls a "toll-gate system." That requires that its investments meet minimum hurdle rates of return. Accordingly, it will govern its behaviour by its need to make a return on capital.

To get some idea of what this means for the company's production strategy, Citibank ran some numbers on the sensitivity of the return on invested capital for BHPB.

Table 19
Estimated Return on Capital Under Price and Volume Scenarios

Price \$/K₂O Tonne 6 12 -4.80% -4.80% -4.70% -4.70% \$165 \$330 -1.80% 0.00% -1.40% -0.80% 0.80% 1.80% \$495 0.00% 3.10% 4.70% \$660 1.00% 1.90% 3.10% \$825 2.00% 3.10% 4.50% 6.40% \$990 3.00% 4.30% 5.90% 8.10%

Millions of K₂O Tonnes of Production by BHPB

Source: Citibank.

Original table converted to K2O tonnes.

The strategic problem for BHPB is clear. In an oligopolistic market structure, it is both a price taker and a price setter. So while ideally it might like to operate at the highest volume

at the highest price, by running volumes higher, it affects the price (i.e., prices move down as volume moves up). So BHPB is constantly trying to find the sweet spot that optimizes its return on capital. That will likely see the company operating at less than capacity and only bringing on new capacity when it is sure that the deployment of capital will make a reasonable return.

Given the flatness of the industry cost curve, we believe that the idea of running at a loss to push out competitors would be a failed strategy. ²⁸ Instead, BHPB is likely to favour a longer-term strategy, rather than a short-term strategy of running competitors out of business. In our view, it is really about dictating terms about where *new* capacity will be located over the long term. Given the nature of Saskatchewan's deposits, the political risks and economies of scale, the long-term bet is that the Saskatchewan players will be able to develop new capacity cheaper than will competitors. That, in turn, will have the effect of driving new capacity toward Saskatchewan and away from competitors over the long term. BHPB has made it clear that this is a long-term strategic play. It has no interest in operating in high-cost, politically unstable regions.

During a conference call with the investment community timed to coincide with its offer, BHPB's CEO Marius Kloppers was asked a question about price assumptions.²⁹

Ouestioner:

I am just wondering whether you could tell us what potash price assumption you are using and also what debt-cost assumption you are using for that analysis. And then secondly, if you look at how you have marketed iron ore and solid iron ore, you have run flat out. I think you would be the low-cost producer in that. I mean are you going to have the same strategy on potash even if the industry is now running at 75 per cent to 80 per cent utilization rate? Would you be looking to increase that?

Marius Kloppers:

Unfortunately, I am not at liberty to disclose our long-run prices. ...We typically use market prices for visible total periods and thereafter conceding to a long-run price that we don't commonly disclose. And the same for our debt costs.

....with respect to your second question, again I have referred to some arrangements with Canpotex which we are not privy to. But I need to refer to our basic long-term plans which always—in all of our products, wherever possible—does involve running at low-cost assets that naturally should be the assets that dispatch first into the market on a full-capacity utilization basis. And wherever possible, we do transform markets into pricing mechanisms where we get today's price every day.

Although this exchange is not very informative on the specific price scenario that BHPB uses to justify its investment it reveals something about the company's strategy. It clearly does not try to manage small fluctuations in demand, as it thinks it can compete as a low-

²⁸ CRU compiles and publishes production cost information for all of the major global producers in the potash sector. ²⁹ Thomson Streetevents. "BHP Announces All-Cash Offer for PotashCorp Conference Call."

cost producer. But over the long term, it is not going to put new capacity in place that will undermine its long-term prices. Other coverage of the deal has suggested that PCS has told the SEC that its assumption for potash prices is \$800/tonne by 2015, versus the market consensus of \$400/tonne. It is unlikely that the BHPB price model would fall outside of this range.³⁰ This should be kept in mind as we explore scenarios.

Scenario One: Base Case

The base case forecast considers what would occur if a potential acquisition of PCS fails, or if an acquirer were to behave in a manner similar to that of the existing management at PCS. The key assumption in this scenario is that the market discipline that potash producers have displayed in recent years will continue in a post-acquisition environment. Thus, major producers hold back some of their potential production to prevent prices from falling and reducing the return on their capital.

Many of the potential acquisition scenarios could lead to this circumstance. Any profit maximizing investor, be they a pension fund or a buyer within the mining sector (including BHPB), may well choose to follow this market strategy. In regards to Canpotex, even if the buyer chose to leave Canpotex, it is assumed that the buyer would behave very much as it would if it remained a full partner in Canpotex. Thus, the price and production effects of the buyer leaving Canpotex are assumed to be minimal.

In this scenario, price appreciation for potash is expected to be muted in the near- to medium-term. Although global demand for potash is expected to surpass its 2007 peak by 2012 and reach a record high of 67 million tonnes in 2015, global potential supply is also expected to experience strong growth over this period. Operational capacity at existing mines in Saskatchewan alone is expected to rise by more than 7 million tonnes between 2009 and 2015, with many of these expansion projects already under way. The large increases in potential supply will offset much of the demand growth, keeping global excess supply at a level that limits price increases. Thus, prices at the mine gate in Saskatchewan will be only 15 per cent higher in 2015 than they are today.

After 2015, healthy demand growth is expected to continue, with global demand rising by about 3 per cent per year. This is on par with the growth experienced over the period 1999 to 2008, which preceded the market's collapse in 2009. However, growth in global supply is more uncertain between 2016 and 2020. For example, announced expansions at existing mines in Saskatchewan amount to only about 4 million tonnes of operational capacity over this period. As well, there is the question of how quickly BHPB's Jansen Lake will be developed. The end result is that demand growth is expected to outstrip expansions in potential production and the resulting decline in unused capacity will drive prices higher.

³⁰ Adhikari, Supratim. "Breakfast Deals: BHP's Potash Boost." *Business Spectator*.

We will now assess the production, employment, and royalty effects in Saskatchewan of this global demand and price scenario, using different assumptions regarding the potential acquisition of PCS and the timing of the Jansen Lake development.

No Sale of PCS to BHPB and Delayed Development of Jansen Lake

An acquisition affects the tax and royalties associated with BHPB's Jansen Lake project, and therefore it is important to assess how this project might affect the outlook under different scenarios. In this case, it is assumed the PCS is not acquired by BHPB, and if PCS were acquired by a different buyer that they would operate in a manner similar to PCS's existing management.

BHPB has already undertaken significant work developing Jansen Lake in Saskatchewan including sample drilling and an environmental assessment. As a result, BHPB has reportedly invested about \$1 billion in Saskatchewan in the past five years. At present, BHPB plans to begin construction on Jansen Lake in the summer of 2011 with initial production beginning in 2015. The project would proceed in stages based on market conditions, but in the initial environmental assessments the company states that full production would be expected in 2026.

However, since the timing of the project depends on a variety of factors including the cost of and access to capital for BHPB, market prices for potash and possible construction delays, it is possible that this timeline would be delayed. If that were the case, the production and employment increases that would result from Jansen Lake would be delayed beyond 2020, which is the end of the forecast horizon.

It is expected that this delay would result in operational capacity in Saskatchewan being about 1.8 million tonnes lower in 2020 than it might otherwise be. However, if demand and pricing are unchanged as a result of this situation, a critical assumption regarding the effects is where that potential capacity would be otherwise produced.

If it were all produced by other mines in Saskatchewan, the effects of the delay on royalties and employment in the potash sector would be minimal. If it were all produced elsewhere, then direct and indirect employment in the sector would be reduced by about 500 positions, or 4 per cent. As well, royalty collections would be somewhat smaller, but the effects would be limited to a reduction in the Crown royalties paid, since no profit taxes would be paid on the Jansen Lake mine until the costs of its development were written off, and that could take up to ten years.

What is most likely is that some of this production would come from Saskatchewan and some would come from elsewhere. Based on the expected market shares of exporting countries, it is likely that about 40 per cent of the lost production from the Jansen Lake mine would be met through increased production from other mines in Saskatchewan. Thus, the net result would be a small reduction in royalties and about 300 fewer direct and indirect positions in 2020 as a result of Jansen Lake being delayed.

No Sale of PCS to BHPB and Development of Jansen Lake

In this scenario, construction on Jansen Lake is assumed to begin in 2012, and the project's production is expected to come online in 2017. The reason for the delay from BHPB's publicly stated objectives is the assumption that there will be unexpected delays that slow the development of the project. As a result, only the first phase of the project is expected to be developed before 2020, resulting in about 1.8 million tonnes of operational capacity being added in Saskatchewan.

For Saskatchewan this scenario means strong gains in production and employment over the next 10 years. Potash production in the province is expected to surpass its 2007 peak by 2012, eventually reaching nearly 27 million tonnes. This will drive combined direct and indirect employment in the sector to 11,800 jobs, a 43 per cent increase from the 2009 level of employment. As previously stated, this would be an increase of about 300 direct and indirect jobs in the province, versus a situation where the development of Jansen Lake is delayed.

When Jansen Lake is added to announced expansions by PCS, Mosaic, and Agrium, the end result is that Saskatchewan's share of global capacity will increase over the next 10 years. This will allow producers based in the province to take advantage of rising global demand. As a result, Saskatchewan is expected to account for more than 34 per cent of global production by 2020 compared with 31.1 per cent in 2008. This verifies our hypothesis that this is a long-term play incorporating a bet that Saskatchewan will be a cheaper and safer place to develop new capacity than elsewhere.

When the rise in production is combined with steady gains in prices, the end result is healthy gains in tax and royalty revenues for Saskatchewan over the forecast period. Royalties are lower in the near term due to the large capital expenditures the industry is undertaking and how they are accounted for in the current regime; but over the period 2010 to 2020, they are expected to sum to \$9.8 billion for the potash industry in Saskatchewan. As well, corporate income tax collections would also make strong gains over this period. This scenario produces the highest royalty collections for the Province.

It is also important to note that the development of Jansen Lake will have a significant impact for Saskatchewan beyond the direct and indirect jobs created from potash mining. For example, BHPB estimates that 1,300 construction jobs will be created during the investment phase.³¹ Additional investment away from the mine site may be also required in the form of infrastructure improvements, such as rail capacity. At present the expected investment required to fully develop Jansen Lake is \$12 billion. When fully developed, Jansen Lake will have the potential to create nearly 2,000 direct and indirect jobs in Saskatchewan.

³¹ BHP Billiton, Jansen Project Proposal, 2-1.

Sale of PCS to BHPB and Development of Jansen Lake

In this circumstance, the production and employment implications are assumed to be the same as if PCS were not sold to BHPB, but BHPB continued with the development of Jansen Lake. Thus, the only change is who owns PCS's current operations. The reason why this is important is because of how the current tax and royalty regime treats capital expenditures. The tax and royalty regime was not designed with a major acquisition in mind—it was designed to encourage existing producers to develop brownfields.

If BHPB proceeds with the development of Jansen Lake and acquires PCS, BHPB will be able to defer royalty payments from the PCS mines using the capital expenditures undertaken to develop the Jansen Lake mine. This reduces royalty revenues by an average of about \$200 million per year (or \$2 billion total) between 2010 and 2020, although the effects would not begin until 2012.

On the corporate tax side, BHPB would be able to deduct its debt servicing costs for the PCS acquisition against the taxable income of PCS operations, resulting in lower federal and provincial tax corporate tax. The actual extent of this revenue loss depends on a myriad of factors, and therefore we merely acknowledge the issue and do not include specific estimates of these in our scenario.

As such, the risk in this environment is not related to corporate strategy, but to the structure of the existing tax and royalty system. The tax advantages provided to BHPB in this scenario would provide an added incentive for BHPB to develop Jansen Lake by making the after-tax return on their investment higher regardless of market conditions. However, under the current system, in the event of an existing producer being acquired, government revenue would decline significantly if the acquiring firm were to develop a greenfield operation.

As such, the Province may wish to consider making the effects of capital expenditures on royalties project specific, rather than company specific. Table 20 highlights the assumptions and results for the different scenarios under the base case assumptions.

As noted in the previous scenario, the development of Jansen Lake will have a significant impact for Saskatchewan beyond the direct and indirect jobs created from potash mining. For example, BHPB estimates that 1,300 construction jobs will be created during the investment phase.³² Additional investment away from the mine site may be also required in the form of infrastructure improvements, such as rail capacity. At present, the expected investment required to fully develop Jansen Lake is \$12 billion. When fully developed, Jansen Lake will have the potential to create nearly 2,000 direct and indirect jobs in Saskatchewan.

³² BHP Billiton, Jansen Project Proposal, 2-1.

	2009	2010	2011	2012	2013	2014	2015	2020
Price (\$CAN/K2O tonne)	825.6	531.7	574.3	591.0	601.2	611.2	611.2	734.3
No Sale of PCS to BHPB and Delayed Development of Jansen Lake								
Production (millions of KCl tonnes)	7.0	11.8	16.6	18.2	19.9	21.4	22.2	25.6
Direct and indirect employment (thousands)	8.2	8.2	8.2	8.4	8.8	9.5	9.8	11.5
No Sale of PCS to BHPB and Development of Jansen Lake								
Production (millions of KCl tonnes)	7.0	11.8	16.6	18.2	19.9	21.4	22.2	26.7
Direct and indirect employment (thousands)	8.2	8.2	8.2	8.4	8.8	9.5	9.8	11.8
10-year average potash industry royalty revenue (mils of \$)	988							
10-year total potash industry royalty revenue (mils of \$)	9,883							
Sale of PCS to BHPB and Development of Jansen Lake								
Production (millions of KCl tonnes)	7.0	11.8	16.6	18.2	19.9	21.4	22.2	26.7
Direct and indirect employment (thousands)	8.2	8.2	8.2	8.4	8.8	9.5	9.8	11.8
10-year average potash industry royalty revenue (mils of \$)	786							
10-year total potash industry royalty revenue (mils of \$)	7,857							

Scenario 2: Full Production Scenario

We have already established that the idea of BHPB pursing a flat-out production strategy is, in our view, unlikely because it would likely result in falling pricings and a negative return on employed capital. So who would have an incentive to run the mines full out? Clearly the only possible suitor that would have that incentive is a consuming country like China. To be sure, for the Chinese such a strategy would be a money loser, but they may see this as a cheaper way of subsidizing fertilizer for their farmers than other mechanisms. History shows that countries that rapidly industrialize often end up subsidizing farmers. This has the effect of both providing income to farmers and lowering food prices for city dwellers. It is impossible to know today what the Chinese intentions are, but lower prices would definitely seem to favour them more than industry players.

By taking control of a major player in potash, the Chinese could fundamentally change the dynamics of the industry by breaking down market discipline. The "full production" scenario considers what might occur in an environment where market discipline breaks down and instead of choosing to maximize profits, producers instead choose to maximize market share.

The key assumption in this scenario is that once a major producer like PCS breaks ranks with the other producers and maximizes production, all other market participants will follow suit. They are expected to respond in this manner since any other response would require PCS's competitors to cede market share to the new owners of PCS in an effort to support prices, which they are unlikely to do. As well, maximizing production would reduce the average production cost per tonne, allowing producers to maximize profits in a lower price environment. This scenario has been confirmed through our interviews with various industry experts.

Two critical assumptions are necessary to assess the effects of a full production scenario. The first is the amount of global operational production capacity that will exist over the next ten years. For this scenario, The Conference Board of Canada estimates that current global operational potash capacity is about 66 million tonnes. By 2015, that figure is expected to rise above 83 million tonnes, but growth will slow markedly thereafter. The slowdown in capacity expansion is even more marked than what occurs in the base case, as lower prices are expected to lead to the deferral of some planned expansions both in Saskatchewan and abroad. Thus, by 2020 global operational capacity will rise to only 88 million tonnes.

A major question is how sensitive are potash prices to increases in production? This is usually expressed in terms of what economists call "elasticity", which is the relationship between a percentage change in price and a percentage change in demand. In the existing economic literature there have been some attempts to assess the price elasticity of potash demand—the impact of a change in the price on demand for potash—but there is no consensus on what that elasticity is. What seems apparent is that the price elasticity for potash varies considerably by region and by agricultural product.³³ These studies also demonstrate that selling prices for agricultural products are an important determinant of fertilizer demand and can either offset or magnify the effects of changing potash prices on demand.

The demand shock due to the 2008–09 recession can also provide some guidance regarding the price elasticity of demand for potash. Average potash prices in 2008 were nearly three times what they were in 2007, but over the course of 2008 and 2009 global demand for potash fell by about 45 per cent. This would imply a price elasticity of 0.15, meaning that a 10 per cent change in prices results in a 1.5 per cent change in demand.

However, this number likely does not fully represent potash consumers' true sensitivity to prices. One factor that is obscuring the analysis over this period is the fact that many agricultural products (including rice, soybeans, corn, and wheat) also experienced a large price spike in late 2007 and early 2008, and despite a correction in the second half of 2008, prices have remained above their historic norms since then. Higher prices for agricultural product prices would have cushioned famers from the negative effects of higher potash prices in 2008. As well, many developing countries—including China and India, two of the largest consumers of potash—subsidize fertilizer in various ways. Thus, farmers in these countries did not experience all of the price increase, and this again would reduce the impact of higher potash prices on demand.

One other factor is how farmers view potash. The application of potash to soil is essentially a capital improvement that provides higher yields. If potash prices are too high relative to crop prices, farmers can defer the use of fertilizers at the cost of lower yields, which may

³³ Examples of papers that consider the price elasticity of potash include: Roberts and Heady, "Fertilizer Demand Functions."

Quddus, Siddiqi, Riaz, "The Demand for Nitrogen, Phosphorus and Potash Fertilizer."

dampen potash prices over time. This ability to defer the application of potash for one or even several planting seasons would argue that demand should be more elastic (or price sensitive) than what was observed in 2008/2009.

With these considerations in mind, The Conference Board of Canada assumes that the price elasticity of potash is 0.4 for the purposes of the full production scenario. In other words, in the "full production" scenario, for every 1 per cent increase in production over the base case, prices are assumed to be 2.5 per cent lower than they would otherwise be. Although this assumption is above the potash price elasticity of 0.15 that was observed in the 2008–09 recessionary period, it is well below the level of elasticity found in some empirical studies.

Using these price and maximum potential production assumptions, it is now possible to estimate what the effects of a "full production" scenario. For the purposes of the scenario, it is assumed that the acquirer would eventually leave Canpotex, but that there would be a transition period before this would take place. Thus, global and Saskatchewan production does not start to ramp up until 2012 and it is 2013 before the maximum level of production is reached. This results in global production being 22 per cent higher than what occurs in the base case by 2015, which drives prices 60 per cent below what they would otherwise be.

Prices are expected to reach their ebb in 2015 in this scenario. At \$217 per K_2O tonne, prices at the mine gate in Saskatchewan would reach their lowest point since 2004. Although this is higher than where prices stood during periods of previous price wars, it is important to note that market conditions have changed over the past decade and will continue to evolve in the coming years. For example, underlying demand growth for potash is expected to be strong, and agriculture prices are expected to remain elevated. Both of these factors would help to mitigate the effect on prices of increased production.

Post-2015, potash prices are expected to begin rising again under this scenario. Producers are expected to delay many expansion projects in response to lower prices, slowing the growth in potential production. At the same time, demand will want to continue to expand, and since there is limited additional capacity coming online, supply constraints would drive prices higher. For Saskatchewan, Mosaic's longer-term expansions at Belle Plaine and Esterhazy are expected to be delayed under this scenario. However, BHPB is still assumed to proceed with the development of Jansen Lake. Although this is a new mine and therefore considerably more expensive to develop than the expansion of an existing mine, BHPB appears to be determined to establish a significant market presence in potash.

Prices are expected to steadily rise between 2015 and 2020, with mine gate prices reaching $$488 \text{ per } K_2O$ tonne. Although a significant improvement over 2015, this is still 31 per cent below the level it is expected to reach in the base case. This is because global production is 12 per cent higher than it would otherwise be.

For Saskatchewan, production will stand at 31.8 million tonnes in 2020, 19 per cent above the base case. This means that Saskatchewan's share of the global potash market will rise to

36 per cent by the end of the forecast horizon. Combined direct and indirect employment for the industry will surpass 14,000 in the province by 2020, an increase of more than 2,000 jobs from the base case. However, construction employment would be negatively affected by the deferral of some investment activity in the sector.

Despite the increase in production, royalties in this scenario will be considerably lower than in the base case. Over the 10-year forecast period, total revenues collected will be \$2.1 billion versus \$7.8 billion in the BHPB acquisition of PCS and the development of the Jansen Lake base case scenario, a difference of \$5.7 billion. This is indicative of the high degree of reliance on the level of prices in the current royalties system. Table 21 highlights the key assumptions and results for this scenario.

Table 21: Assumptions and Results for the "Full Production" Scenario									
	2009	2010	2011	2012	2013	2014	2015	2020	
Price (\$CAN/K2O tonne)	825.6	531.7	574.3	356.7	245.0	225.7	217.5	488.2	
Production (millions of KCl tonnes)	7.0	11.8	16.6	20.5	24.4	26.8	28.0	31.8	
Direct and Indirect Employment (thousands)	8.2	8.2	8.2	9.5	10.8	11.8	12.3	14.0	
10-year average potash industry royalty revenue (mils of \$)		213							
10-year total potash industry royalty revenue (mils of \$)		2,130							
Sources: The Conference Board of Canada; The Saskatchewan Ministry of Energy and Resources.									

It is possible that the price effects of increased global production are assumed to be too high in the full production scenario. With that in mind, a couple of different price scenarios were considered using the production figures from the "high production" scenario. If prices are \$100 per K_2O tonne higher beginning in 2012 than initially assumed, the sum of the royalty payments over the period 2010 to 2020 is \$4 billion. If prices are \$200 per K_2O tonne higher beginning in 2012 than initially assumed, royalty revenues would be \$6.3 billion. Thus, even if the reduction in prices that results from increased production is much more modest than is assumed, the price effects on royalty revenues will overwhelm any benefits that come from increased production.

This full production scenario would not seem to make much sense for BHPB. They would go through a prolonged period of negative return on their investment with no sign of prices increasing to a level that would justify those losses. Investors would be very reluctant to allocate further capital to BHPB for a potash business that makes a negative return on capital.

As well, it should be noted that these royalty figures assume that BHPB acquires PCS and proceeds with the development of Jansen Lake. If another acquirer were to takeover PCS and follow the full production path, the reduction in royalties would be smaller because of the way capital expenditures are treated in the current royalty regime.

7. Summary of Risks and Opportunities of Acquisition

Due to the nature of PCS and the conditions under which it operates (unlike some other mining takeovers) the risk associated with acquisition is not related to the potential for PCS to be "hollowed out" through negative corporate takeover effects (CTEs). Our assessment of the impact of an acquisition of PCS on shareholders, governance, senior management, capital, employees, corporate donations, and community support is that the impact would be marginal. In the case of an acquisition, there are some prospects of positive impact on employment, both in production and head office jobs. (See Exhibit 3.)

Both analyzed acquirers lack any current capacity in potash production and would look to Saskatchewan operations as the epicentre of potash production. As well, they both would have the wherewithal to continue to invest in the industry. As a result, the main risk emerging from acquisition relates to how the new acquirer will run the business, how their operational strategy for production and pricing would affect the potash market, and what that could mean for the Province's tax and royalty regime. (See Exhibit 4 and Chart 14.)

The impact of the consumer interest-led Sinochem alternative is highly speculative at this point. Yet we believe it has more incentive to move toward the high production scenario than does BHPB. Although that strategy would involve a higher level of employment, there is considerable potential tax loss for the Province that would arise from a fall in potash prices globally through significant increases in supply and follow-the-leader pricing.

As a state-owned enterprise acting on behalf of consumers of potash, we assume that Sinochem has strong incentives for lower prices and that it will not be guided by the same market discipline and profit motive as commercial players. Obviously, the more Sinochem were to behave like a commercial owner, the less the risk would be for the province, and the better off the province would be. But the state-owned and consumer-led orientation of Sinochem makes this, in our view, a riskier scenario for the Province.

Given everything we know about the BHPB bid, the prices in the high-production scenario do not appear to be a realistic option. Although the company will not say what its price assumptions are, to make this an economic use of capital involves long-term prices over \$400/tonne. Therefore the base case scenario is likely much closer to what BHPB will work toward, in our view.

The opportunities for both acquirers are the same in terms of operations, employment and capital, but because BHPB needs to produce an economic return, the way BHPB would put capacity in place and run the operation is much more aligned to the Province's interests.

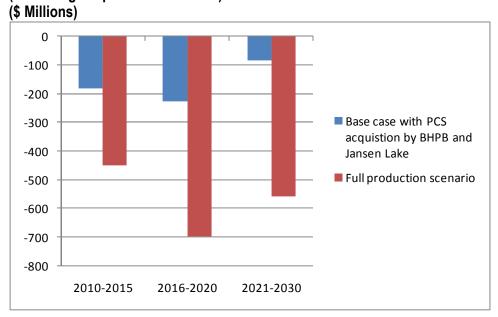
Exhibit 3
Risks Associated with an Acquisition

RISKS						
	Industry Led: BH	PB		Consumer	Led: Sinoche	m
	Likelihood	Timing	Severity of Risk	Likelihood	Timing	Severity of Risk
Ownership changes reduce Canadian influence	High	0-3 months	modest	High	0-3 months	Medium-High as SOE may not run on commercial basis
Governance: Canadian influence on Board is reduced	High	0-3 months	modest	High	0-3 months	Medium-High as SOE may not run on commercial basis
Canadian influence on management changes	Low	0-3 months	modest	Low	0-3 months	Modest
Operations are reduced in province	Low	1-50 years	modest	Low	1-50 years	Modest
Capital investment is reduced in province	Low	1-20 years	Negligible	Low	1-20 years	Negligible
People: Employment is reduced in province	Low	1-20 years	Negligible	Low	1-20 years	Negligible
Community I: tax and royalty yield is reduced	Medium due to offsets from capital expenditures	Averages \$200 million from 2013 to 2022; corporate tax is reduced	High	High	Averages about \$550 million between 2012 and 2030	Severe
Community I I: Community investments fall	negligible	1-20 years	Modest	Unknown		Modest

Exhibit 4
Opportunities Associated with an Acquisition

OPPORTUNITIES								
	Industry Led: BHF	РВ		Consumer I	Led: Sinochei	n		
	Likelihood	Timing	Impact	Likelihood	Timing	Impact		
Ownership changes increase Canadian influence	Low	0-3 months	modest	Low	0-3 months	Modest		
Governance: Canadian influence on Board is increased	Low; although Canadian may serve on board of larger enterprise	0-3 months	modest	negligible	0-3 months	Modest		
Canadian influence on management changes	Medium if Canadian business unit managers replace current Americans	0-3 months	medium	Low	0-3 months	Modest		
Operations are expanded	High	1-50 years	Positive for employment	Positive	1-50 years	Positive		
Capital investment is increased in Province	High	1-20 years	In long term	Positive	1-20 years	Positive		
People: Employment is increased in province	High	1-20 years	Positive	Positive	1-20 years	Positive		
Community I: tax and royalty yield is increased	High	After Jansen Lake project revenues increase	High in long term	Low	1-20 years	Negative		
Community I: Community investments increase	Medium	Somewhat higher than PCS	Modest	Unknown	Unknown	Unknown		

Chart 14
Average Annual Tax and Royalty Impacts Under Different Scenarios Versus the Base Case (Excluding Corporate Income Tax)



Source: The Conference Board of Canada; Government of Saskatchewan.

8. Policy Responses to Mitigate Risks and Enhance Opportunities

The Province of Saskatchewan faces three kinds of risk with respect to its potash resource:

- 1. Market risk
- 2. Acquisition risk
- 3. Policy risk

The first two risks manifest themselves primarily in the yield that the Province realizes from its potash resource (including employment, taxes and royalties). The policy risk involves all those risks associated with changes in policy that are directed at maximizing the Province's yield and that may have impacts in terms of investment, both within the industry and in the Province in general. We discuss each of these risks.

Market Risk

The main market risk that the Province faces is sudden changes in the demand for potash. As we have discussed, this has occurred previously in the early 1990s and in 2008–09. The latest downturn saw a very significant drop in provincial taxes and royalties. It is very difficult for the Province to completely mitigate this risk, which goes along with the nature of the potash resource and the industry.

The best way for the Province to manage demand risk would be to set aside sufficient revenues from potash in the boom times to smooth out the inevitable downturns in the industry.

A secondary market risk relates to the supply side of the industry. One part of this risk relates to the total capacity of the industry and how the capacity is utilized. In the past, it was felt that Canpotex was the best mechanism for managing this risk. But our analysis suggests that the movement toward greater concentration in the industry will lead to the market largely managing this risk through the decisions made by the major producers globally. The role of Canpotex as a marketing, price-setting arm of the member companies is already modest. It is arguably becoming increasingly redundant as the worldwide market moves to fewer and fewer players that all have an incentive to maximize the return on their assets through some form of price setting in the face of changing demand conditions.

The view that Canpotex manages supply-side risk overstates the importance of its role. The members of Canpotex (especially PCS and Mosaic) are its owners, and together they form the governance of Canpotex. Certainly, they discuss marketing strategies with Canpotex management, but the decision on production strategies lie with the member companies. And Canpotex only accounts for about 16 per cent of the world's potash volumes, since a large share of the production by PCS and Mosaic reaches the market place directly from the

companies. As we have seen, other major producers around the world also cut production in response to worsening price conditions. Their combined cuts in production greatly exceeded the declines in Canpotex's volumes. The market behaves like an oligopoly, meaning that supply-side risk is increasingly managed through the marketplace.

In this environment, there is little need for the Province to manage market risk through government policy.

Acquisition Risk

The acquisition risk to the Province relates to changes in business policy that expose the Province to supply-side risk in the market. We have suggested that the acquisition risk associated with BHPB is minimal because the company is likely to behave like other market oligopolists and must behave according to the constraints of the capital markets. That still creates a risk to provincial finances because its tax and royalty regime was built around the existing players.

The fact that BHPB has a greenfield play—Jansen— in the province poses a challenge which would emerge in the event of its acquisition of PCS. But that is a result of existing policy, which is designed to encourage investments out of current cash flow.

To the extent that the Province is concerned about the consequences, it could consider making changes to its tax and royalty regime. In doing so, it will want to be mindful of the policy risk implications of doing so. (See below.)

The acquisition risk associated with a Chinese consortium bid, however, is more serious. As we discuss, a Chinese bid mingles state strategy with commercial strategy. Under this scenario, the Province cannot count on market discipline to manage its supply-side risk. Potash is critical to China's food needs and therefore there may be a tendency for the state to "subsidize" food through cheap inputs like potash.

As we have shown, a producer that is unhinged from market discipline could potentially wreak havoc on Saskatchewan's finances. One way for the Province to respond would be to greatly curtail the development of the potash resource through its licensing, taxation, and royalty arrangements. Another option would be to revisit this policy framework to make it more sensitive to production rather than prices. But such steps may involve serious policy risks.

Policy Risk

Policy risk relates to the negative consequences of implementing new policy regimes. Licensure, tax, and royalty policies all impose costs on the industry. If these costs are seen to be punitive, arbitrary, or non-transparent, capital will not flow into the industry. Moreover, a punitive regime in one area may tarnish the province's overall reputation in capital markets, resulting in negative spillover effects in other sectors.

The circumstances of the proposed acquisition of PCS make it an extremely high-profile case throughout Canada and around the world. In that charged environment, the cost to the Province of making "bad" policy is amplified because so many more people in the global capital markets and associated media are paying attention. It is therefore extremely important for the Province to take a calm, rational and careful approach to the acquisition. Its response needs to be proportionate to the risk involved.

Our analysis indicates that an acquisition by BHPB would appear to be of minimal risk to the Province, even if BHPB did not wish to continue PCS's relationship with Canpotex in the long term. Unlike some other major M&A transactions in Canada, there are minimal risks to jobs and professional services associated with synergies that come from joining two companies already operating in the same area of business. Essentially the bid would turn a company that largely operates in the U.S., owned by Canadians and Americans, and run mostly by Americans, into a company that operates globally but with a global potash product mandate run out of Saskatoon and that is owned globally and run mostly by Australians, Englishmen, and South Africans. Indications are that BHPB's global potash operation (its Potash Customer Sector Group) would be headquartered in Saskatchewan and employ many Canadian managers and professionals.

The Province can and should make its concerns known to Industry Canada, recognizing that acquisition policy is run at the federal level.

One concern often expressed is about the location of the corporate headquarters. The location of the head office and the chief executive officer and other senior executives for PCS (or a future Potash Customer Sector Group within the BHPB organization) is seen as a key to maintaining and growing headquarters functions and jobs in Saskatchewan. Currently, BHPB has made general undertakings with respect to the number of headquarters jobs and the location of the senior executives. ³⁴ The investment review process often involves working with the acquirer to make general undertakings more specific.

To safeguard the PCS head office location, and stimulate the transfer of head office jobs to Saskatchewan, the Province could consider asking the Government of Canada to attach, as conditions of approval of the acquisition, two associated undertakings: that the global headquarters for the company's Potash Customer Sector Group be located in Saskatchewan, and that the chief executive officer and other senior executives for the Potash Customer Sector Group be required to live in the province. This would also keep BHPB in step with the Government of Saskatchewan's existing legislation under the *Potash Corporation of Saskatchewan Reorganization Repeal Act*.

³⁴ BHP Billiton. "BHP Billiton Announces All Cash Offer to Acquire PotashCorp." *Press Release.* Vancouver: Author. August 18, 2010; further confirmed by Conference Board interviews with BHPB CEO and staff, September 16 and 22, 2010.

Such conditions would be similar to the conditions that were placed by the Government of Australia on the BHP/Billiton merger that created BHBP. They would also be consistent with BHPB's current practice in regard to its existing nine Customer Sector Groups.

Based on the evidence, the only "hollowing out" that is likely to occur is with Canpotex. That is because Canpotex replicates BHPB's existing marketing operations. Although BHPB may continue to want to use Canpotex's assets and logistical capacity, its marketing functions are becoming less important than they may have been in the past, largely due to the consequences of the global emergence of large producers.

Given that Canpotex is a privately held company, it does not seem wise for the Province either to legislate its survival or otherwise intervene in the marketing of potash to the global marketplace.

The latter move would be a step back toward government control, which the province wisely stepped away from in the late 1980s.

The recent history of federally approved foreign acquisitions in mining suggests that a BHPB bid is unlikely to be rejected at the federal level. In our earlier analysis of Xstrata's acquisition of Falconbridge and of Vale's acquisition of Inco, the negative takeover effects were greater than those that are likely to be realized through a commercial acquisition of PCS. The reason is that the potash resources that PCS develops are much more concentrated in the Province of Saskatchewan (and Canada), whereas the other Canadian targets had more global assets that were easily subsumed into the global structure of the acquiring organization.

Taking Advantage of the Opportunity

In our view, the Province should consider focusing its policy efforts in one area: resource policy. It could use its ample licensure, taxation, and royalty powers to continue to capture long-term market share away from its main competitors, namely Russia and Belarus.

Russia and Belarus have the largest reserves in the world after Canada, and new mines have been considered in other locations, such as Argentina and Ethiopia. So how does Canada compare with these jurisdictions?

One way of measuring the investment attractiveness of Canada is to look at the *Global Competitiveness Report 2010-2011* completed by the World Economic Forum. In the most recent update of this report, Canada ranks number 10 amongst the 139 regions covered in the report.³⁵ By comparison, Russia is ranked 63rd, Argentina 87th, and Ethiopia 119th, while Belarus is not even ranked. In short, by every measure used in the survey (which includes criteria such as institutions, measures of workforce quality, infrastructure, and

³⁵Schwab, "The Global Competitiveness Report 2010-2011."

technological sophistication), Canada is a safer and generally more preferable environment in which to invest.

In addition, the physical characteristics of the potash deposits in Saskatchewan make them highly desirable. The deposits are high quality and lie in accessible flat beds of earth, which make them easier to mine. As well, although the mines are located nearly 2,000 kilometres inland, the province has good rail and road links with the United States, and rail links to deep sea ports on the West Coast. As potash production increases in the province, it will be important to expand the transportation infrastructure necessary to move that production to market, but logistics have not yet been a limiting factor for the sector.

It would, however, be unwise to completely dismiss the Russian or Belarusian competition. According to our interviews, Saskatchewan's current taxation and royalty regime already captures the premium associated with the difference in political risk. So the Province has to be mindful not to overplay its hand. Belarus and Russia, after all, do control over 30 per cent of the world's reserves and are closer to the main areas of growth in China and India.

If Saskatchewan continues to take a prudent approach to its resource policies that influence investment decisions, it will be successful at taking advantage of its fortunate reserve position in a world that requires more and more potash over the long term.

However, even with a strong resource position, reputational or political risk could be increased through policies that are seen as unfriendly to foreign investment. If Saskatchewan is unable to attract the same amount of capital, the resource will not be developed to the same extent. In that event, Saskatchewan's potash market share would decline.

Formal provincial opposition to the acquisition of PCS by a private resource company would be seen as undermining the rights of shareholders to sell their PCS shares to the highest bidder. It would depress the PCS share price and create a "halo" effect around the existing senior management and headquarter structure at PCS.

It may very well depress the activities of junior exploration and development companies in all classes of mining because juniors count on a free and liquid market in acquisitions to reward them for risk-taking. It is hard to see how this could be in the best interest of the province.

International investors seek policy regimes that are based in law, non-arbitrary, transparent, and fairly applied. Our interviews clearly show that the province has a good reputation for negotiating fair tax and royalty systems across the range of its resource categories. It is already seen as a high tax jurisdiction in potash. In the most likely scenario, we estimate that about 6 per cent of provincial revenues will flow from potash operations over the course of this decade. The Province neither wants to lose those potential revenues, nor harm its reputation as an investment destination through arbitrary action.

By continuing to focus its attention on sensible resource policy, the Province is in very strong position to benefit from the great growth opportunity created by rising global demand for potash.

Such an approach would easily distinguish the province from other jurisdictions with less firm commitments to transparency and fairness. That positioning can only benefit the province in the long run and will inevitably lead to it capturing a larger share of total capital expenditure and market share for potash. As one interviewee put it, "It's Saskatchewan's turn."

A balanced approach to policy and conditions, designed to mitigate risk and take advantage of the opportunities presented by an acquisition of PCS, would prudently safeguard a major corporate headquarters, provincial revenues, and good jobs. At the same time, it would ensure that Saskatchewan's turn in the spotlight encourages the sustained investment in the province that is vital to Saskatchewan's long-term economic prosperity.

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