

# THE INVESTMENT OUTLOOK FOR THE CANADIAN AND US OIL AND GAS SECTORS

## Evidence from Financial Metrics



Steven Globerman and Joel Emes



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by Steven Globerman and Joel Emes

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## Executive Summary

Canada's oil and gas industry has long been a driver of the country's economic growth. Hence, the outlook for the industry's future profitability is an important determinant of capital investment rates and employment trends for the industry and the country as a whole going forward. The substantial decline in the profitability of Canadian oil and gas companies post-2014 was unsurprisingly accompanied by a collapse of domestic investment in the oil and gas sector. In turn, the decline in profitability was linked to a precipitous decline in the price of crude oil, as well as disrupted shipments of crude oil owing to pipeline capacity constraints.

More recently, there has been a recovery in the price of crude oil produced in both Canada and the United States. However, while economic activity in the upstream segment—that is, the exploration and production segment—of the industry in the United States increased with a modest recovery in crude oil prices in 2017 and 2018, investment in Canada's upstream segment continued to decline. Survey evidence, as well as reports prepared by investment analysts and portfolio managers, suggest that an unfavourable business environment in Canada compared to the environment in the United States is the main factor contributing to a diversion of upstream oil and gas investments from Canada to the United States.

Investors' expectations of the future competitiveness of the Canadian business environment compared to that of the United States should therefore exert a strong influence on corporate investment in Canada's oil and gas sector. In turn, the expectations of investors, as expressed in the financial valuations they place on publicly traded Canadian oil and gas companies relative to their US-based counterparts, provide some insights into the likely long-run investment prospects for the oil and gas industry in Canada compared to the US oil and gas industry.

Financial valuation metrics are frequently employed to identify investors' expectations about the future profitability of companies. Specifically, the market price of a company's publicly traded shares relative to measures of a company's current economic performance such as earnings and revenues is taken to reflect investors' expectations of future profitability. This study reports and evaluates recent financial valuation metrics for portfolios of Canadian and US oil and gas companies along with historical values of those metrics to identify whether relative assessments of investors in companies listed on the main stock exchanges in each country differ in recent years from those in earlier years. For the period from 2019 to 2021, the valuation metrics, on balance, suggest some

improvement in the profitability outlook for Canadian oil and gas companies relative to their US counterparts. However, over the longer period from 2011 to 2020, there was a fairly consistent decline in the relative values of the various financial metrics for Canadian oil and gas companies. Hence, the relative improvement in the profit outlook for Canadian oil and gas companies is quite recent. Indeed, the improvement largely reflects the valuation metrics for 2021.

It is certainly possible that the outlook for a more restrictive regulatory regime surrounding oil and gas exploration and production under the Biden Administration in the United States has, in the view of investors, shifted the relative competitive positions of the industries in Canada and the United States to be more favourable for Canada, on the margin. One must be cautious, however, in drawing strong conclusions from a single year's (2021) divergence from a decade-long pattern of valuation declines for Canadian oil and gas companies relative to their US counterparts. Investors in the North American energy sector will arguably continue to favour US- based investments if the regulatory and tax regimes in Canada are less favourable to investors than those in the United States.

# 1 Introduction

Canada's oil and gas industry has long been a driver of the country's economic growth, particularly for Alberta and, to a lesser extent, Saskatchewan and Newfoundland & Labrador. Hence, the outlook for the industry's future profitability is an important determinant of capital investment rates and employment trends for the industry and the country going forward. In this regard, it is unsurprising that the substantial decline in the profitability of oil and gas companies in Canada after 2014 was accompanied by a collapse of domestic investment in the oil and gas sector (Globerman and Emes, 2019; Jaremko, 2021).<sup>1</sup>

More recently, there has been a recovery in the price of crude oil including the price of Western Canadian Select (WCS), which is the price obtained by many Alberta producers. Specifically, as reported in **table 1**, the WCS price increased from the average for the five-month period, January–May 2020, of US\$20.01 per barrel to the average during January–May 2021 of US\$49.98 per barrel. This represents a 137.9% increase. Table 1 also reports the price of West Texas Intermediate (WTI) crude oil. During January–May 2020, WTI averaged US\$36.82 per barrel. It averaged US\$61.94 per barrel during January–May 2021, an increase of 68.2% from the corresponding period in 2020.<sup>2</sup>

Table 1: Price (US\$) of Western Canada Select and West Texas Intermediate

	January–May 2020	January–May 2021	Percentage change
Western Canadian Select	21.01	49.98	137.9%
West Texas Intermediate	36.82	61.94	68.2%

Source: Government of Alberta, 2021, as of August 5, 2021.

A key finding of Globerman and Emes (2019) is that capital investment in both the Canadian and US oil and gas sector slowed in 2015 and 2016 given a sharp decline in the world price of oil. However, while economic activity in the upstream segment—that is, the exploration and production segment—of the industry in the United States increased with a modest recovery in crude oil prices in 2017 and 2018, investment in Canada's upstream segment continued to decline. Yunis and Aliakbari (2021) report the results of a survey that identifies Canada's onerous and uncertain regulatory environment,

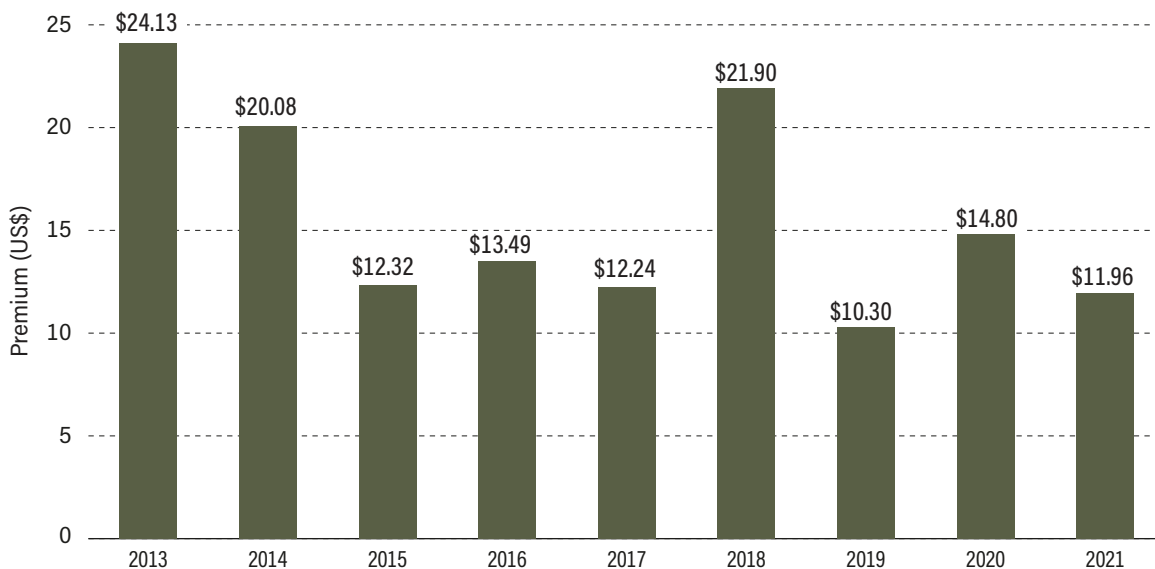
1. Globerman and Emes, 2019 reported capital investment expenditures through 2018.

2. The price per barrel of WCS averaged US\$44.28 over all of 2019. Hence, there was a 53% decline in the price of WCS from 2019 to early 2020.

along with a lack of pipeline capacity, as major factors contributing to a more favourable investment environment in US jurisdictions compared to those in Canada. Globerman and Emes (2019) also report recent warnings from investment analysts and portfolio managers that investment in the oil and gas sector is moving increasingly to the United States and away from Canada. An unfavourable business environment in Canada relative to the United States, encompassing the regulatory and tax environments, is cited as the major factor contributing to the diversion of upstream oil and gas investments from Canada to the United States.

An argument that regulatory and tax factors, broadly defined, have more of an influence on decisions about where to invest in the oil and gas sector than does the price differential between WTI and WCS receives some additional support from the data reported in **figure 1**, which shows the price differential between WTI and WCS for the first five months of each year from 2013 to 2021.<sup>3</sup> A larger price premium for WTI compared to WCS should contribute to a more favourable investment environment in US oil and gas producing regions compared to Canadian regions. In fact, the average price differential in the period from 2017 to 2019 (US\$14.81) was below the average price differential in the 2013–2016 period (\$17.50). Hence, the decline in the perceived competitiveness of Canadian oil and gas producing regions relative to US jurisdictions in recent years is arguably owing to factors beyond the WTI/WCS price differential.

Figure 1: Price premium (US\$)—West Texas Intermediate over Western Canada Select, 2013–2021



Source: Government of Alberta, 2021 (data as of August 5, 2021); authors' calculations.

3. The price differentials are in US dollars. All data on oil prices are those reported by Government of Alberta, 2021.



The expected future competitiveness of the Canadian business environment relative to the business environment in the United States should therefore have a prominent influence on the investment decisions of companies doing business in Canada. The results of a survey by Yunis and Aliakbari (2021) of competitiveness in the energy sector suggest that industry participants believe the business environment in the near term remains unfavourable for Canada's oil and gas sector. A broader perspective on the longer-run outlook for Canada's oil and gas industry might be gleaned from the expectations of investors. Specifically, a variety of financial metrics are employed by financial analysts to assess the earnings outlook for companies. This publication complements surveys of respondents' expectations with the actual financial metrics that are essentially set by investors' behaviour. The specific focus is a comparison of the financial metrics of Canadian oil and gas companies to those of US oil and gas companies to gain some insight into longer-run expectations of the oil and gas sector's environment in Canada relative to the environment in the United States.

The study proceeds as follows. Section 2 offers a discussion of financial valuation metrics that are frequently used as indicators of investors' expectations of the future earnings prospects of companies. In section 3, the specific valuation metrics used in the study are defined and the main data source is evaluated. The valuation metrics over the past decade for portfolios of Canadian and US oil and gas companies are presented and assessed in section 4. Concluding comments are provided in the final section.

## 2 An Overview of Valuation Metrics

Investors buy ownership shares in a company expecting either a stream of dividends over time and/or appreciation in the company's stock price that results in a capital gain. The expectations of investors about the future stream of dividends and capital appreciation ultimately reflect their expectations about the future earnings of the company and should be capitalized into the share price of the company's equity. That is, the price investors are willing to pay for a share of the company's equity should reflect the forecasts of the company's future earnings on the part of the collective of investors. Hence, if investors are more optimistic about the future returns on equity for Company A than for Company B, the value of Company A's equity should be higher than the value of Company B's equity, other things constant.

To be sure, if Company A is currently earning more per share than Company B, the former might enjoy a higher share price than the latter even if the two companies are expected to have similar earnings growth going forward. Hence, valuation metrics typically involve "standardizing" a company's share price by some measure of its current earnings, or its average earnings over a recent period in the past, in order to create a "forward looking" measure of its future earnings outlook. In other cases, a company's share price is measured relative to alternative measures of the company's current performance, such as current or recent sales.

There are numerous valuation metrics that are used by investors and investment advisors to gain insight into the "market's" outlook for individual equities or baskets of equities, such as exchange traded funds (ETFs). The utility of the alternative metrics is obviously conditioned by the market's efficiency in pricing equities or, equivalently, in forecasting the future earnings of specific companies or groups of companies. In this context, efficiency means that investors use all publicly available information when buying or selling equities.<sup>4</sup> Therefore, the more efficient the equity markets, the more reliable the implied forecasts of future corporate earnings given publicly available information and, by extension, the future earnings or equities as implied by valuation metrics.<sup>5</sup>

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4. This definition was identified as "weak-form" market efficiency in a seminal paper by Eugene Fama (1970).

5. This is not to say that valuation metrics that rely on current equity prices necessarily produce accurate forecasts of future earnings of individual companies. The weak efficient market hypothesis holds that equity prices established by market supply and demand conditions use all publicly available information including information that conditions future earnings.

Academics and practitioners continue to debate the efficiency of capital markets.<sup>6</sup> The specifics of the ongoing debate are beyond the scope of this study. Suffice it to say that financial valuation metrics are widely considered to provide useful, if not perfectly accurate, insights into the future earnings prospects of publicly traded equities (Hanano, undated).<sup>7</sup> Similarly, investment analysts and portfolio managers continue to debate the advantages and disadvantages of alternative valuation metrics. Discussion of this debate is also beyond the scope of this study: we simply note that the advice usually given is to consult a variety of valuation metrics (Hanano, undated).

The valuation metrics reported in the next section of this essay are for portfolios of publicly traded Canadian and US oil and natural gas companies. The financial valuation metrics presented are taken from the Oil & Gas subsector of the Energy Sector on the website, *GuruFocus* (2021). In the next section, we discuss this data source and present and assess the valuation metrics reported by the source.

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6. For a recent overview of the theory and evidence surrounding capital market efficiency, see Brown, 2020.

7. Equivalently, expectations of future financial performance are embedded in current financial metrics.

### 3 Data Source and Data

The valuation metrics reported in this section are from the financial website, *GuruFocus* (2021). The website reports that the energy-sector data is for companies that produce or refine oil and gas, provide oilfield services and equipment, and operate pipelines. The sector also includes companies that mine thermal coal and uranium. However, coal and uranium companies ostensibly make up a very small share of the sample of energy companies, since the website reports that, for the Canadian sample, oil and gas producers or refiners account for 95.9% of the company weighting for Canada’s energy sector and 99.7% of the company weighting for the US energy sector.

The financial data reported on the *GuruFocus* website is collected from information reported by Morningstar, a large financial information and advisory company. *GuruFocus* states that it does the necessary calculations to create the reported financial valuation metrics. The *GuruFocus* website does not identify the individual companies that make up the sample for which the valuation metrics are calculated over all the years for which the metrics are reported, although it does provide a current list of companies. Hence, it is certainly possible that the company samples for Canada and the United States differ with respect to the mix of upstream and downstream companies, the size distribution of the companies in each sample, and other differences that might influence the valuation metrics reported for the Canadian and US samples beyond the country in which they are headquartered. As well, it is possible that changes over time in specific valuation metrics reflect changes in the companies included in the overall sample of companies. These disclaimers should be kept in mind when interpreting the results reported below.

The Canadian and US samples consist primarily of oil and gas companies that are listed on Canadian and US stock exchanges. This effectively means that the Canadian and US samples consist of oil and gas companies that are headquartered in Canada and the United States, respectively. In fact, some companies headquartered in one country will have an operating affiliate in the other country. This implies that the valuation metrics reported for the sample of Canadian and US companies do not strictly reflect the operations of the companies solely in their “home countries”. Since *GuruFocus* does not identify the specific companies underlying their valuation metrics in all years, it is not possible to determine the degree to which companies headquartered in Canada and the United States did business in the other country. However, given a reallocation of investment away from Canada and toward the United States in recent years as reported in Globerman and Emes (2018), it is likely that the share of business done in the United States by Canadian oil and gas companies has increased in recent years. Therefore, to

the extent that the business environment in the US oil and gas industry improved in recent years relative to the business environment in Canada, the valuation metrics for the Canadian sample of energy companies might provide a more favourable implicit assessment of Canada as a location for doing business than would be the case if Canadian firms had not increased their share of business done in the United States.

A more general issue is whether investors' evaluations of the productivity and earnings prospects of domestic companies are coincident with the business environments of the home countries in which they are headquartered. In this regard, company-specific factors, particularly the quality of management, are likely to influence the productivity and earnings outlooks of companies and, therefore, the valuation metrics of those companies.<sup>8</sup> It is less clear that management practices are determined by public policies affecting the business environment of specific groups of companies, including oil and gas companies.

In fact, Bloom and van Reenan (2010) report evidence showing that persistent differences in productivity at the firm and national levels reflect variations in management practices, while at the same time, regulations restricting management practices and barriers to competition, including government-imposed barriers, allow bad management to persist. The point here is that government policies likely affect company-specific factors such as management quality which, in turn, influence the earnings outlook of domestic companies and, therefore, influence the valuation metrics of those companies. Hence, it can be argued that financial valuation metrics of Canadian and US publicly listed companies provide useful, if imperfect, insight into how investors' view the business environment in the respective headquarter countries both as it affects external and company-specific determinants of future economic performance.

As noted earlier, there are numerous valuation metrics.<sup>9</sup> While each has its strengths and weaknesses, the main ratios used include:

1. **price to earnings** This shows the relationship between the price per share and the earnings (or net income) per share of a company, where net income is essentially revenue minus cost of sales, operating expenses, and taxes.
2. **price to sales** This shows the relationship between the price per share and the revenue per share of a company.

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8. Bloom, Sandun and van Reenan (2012) provide evidence that indicators of better management and superior company performance are positively and strongly correlated.

9. See Hanano (undated) for a list of valuation metrics, their measurement, and their strengths and weaknesses.

3. *price to book value* This shows the relationship between the price per share and the book value per share of a company where book value is the value of the company's assets on its balance sheet. Balance-sheet assets reflect their original cost minus accumulated depreciation.
  
4. *enterprise value (EV) to earnings before interest, taxes, depreciation, and amortization (EBITDA)* This metric is the ratio of enterprise value to earnings before interest, taxes, depreciation, and amortization. EV is essentially equity value plus debt less cash.

These various metrics all report one or another measure of how the market values corporate equity relative to a measure of current business performance. Higher values of each metric can therefore be interpreted as more optimistic expectations of future economic performance.

## 4 Valuation Metrics for Canadian and US Oil and Gas Companies

In this section, we report recent financial valuation metrics for Canadian and US oil and gas companies and compare recent values to historical values to gain a sense of whether the relative assessments of investors in companies listed on stock exchanges in each country in recent years differ from past years. **Table 2** reports the price-to-earnings ratios for Canadian and US oil and gas companies in 2019 and 2021,<sup>10</sup> as well as the ratio of the Canadian metric relative to the US metric.<sup>11</sup> **Tables 3 to 5** report the price-to-sales, the price-to-book, and the EV to EBITDA valuation ratios for 2019, 2020 and 2021, as well as the Canada-to-US ratios for these metrics.

Table 2: Price-to-earnings ratios, Canadian and US oil and gas sector, 2019–2021

	2019	2020	2021
Canada	12.80	n/a	12.65
United States	14.93	11.60	17.24
Canada/US ratio	0.86	n/a	0.73

Source: GuruFocus, 2021.

Table 3: Price-to-sales ratios, Canadian and US oil and gas sector, 2019–2021

	2019	2020	2021
Canada	0.96	0.95	1.84
United States	1.28	1.11	1.58
Canada/US ratio	0.75	0.86	1.16

Source: GuruFocus, 2021.

10. *GuruFocus* did not report a 2020 P/E value for Canada because of data limitations.

11. All valuation metrics reported in this essay for each year through 2020 are values as of the last business day in December for each year. The 2021 valuation metrics are from July 26th of 2021. We purchased a membership to Guru Focus to allow us to download the data underlying the figures on the Guru Focus website because the web figures did not allow us to identify the year associated with each data point. Unfortunately, the terms of service do not allow us to report the full set of data used to calculate the relevant financial metrics.

Table 4: Price-to-book ratios, Canadian and US oil and gas sector, 2019–2021

	2019	2020	2021
Canada	0.70	0.73	1.13
United States	1.28	1.13	1.46
Canada/US ratio	0.55	0.65	0.77

Source: GuruFocus, 2021.

Table 5: EV-to-EBITDA ratios, Canadian and US oil and gas sector, 2019–2021

	2019	2020	2021
Canada	3.96	-1.27	5.99
United States	7.71	4.55	7.00
Canada/US ratio	0.51	-0.28	0.86

Note: EV-to-EBITDA = enterprise value (EV) of a stock divided by its earnings before interest, taxes, depreciation and amortization (EBITDA).

Source: GuruFocus, 2021.

The data presented in tables 2–5 show similar patterns for the metrics across the time period. Specifically, the ratios generally decline for both countries from 2019 to 2020 and then increase from 2020 to 2021.<sup>12</sup> The pattern for Canadian valuation metrics relative to US valuation metrics is mixed. The price-to-earnings ratio for Canadian oil and gas companies worsened relative to the price-to-earnings ratio for US companies comparing 2019 to 2021. However, the Canadian price-to-sales ratio relative to the US ratio increased when comparing 2019 to 2020 and between 2020 and 2021. The price-to-book ratio for Canadian companies relative to US companies also increased from 2019 to 2020 and between 2020 and 2021. Finally, the EV-to-EBITDA ratio for Canadian companies relative to US companies decreased from 2019 to 2020 and then increased from 2020 to 2021. In short, the valuation metrics, on balance, show some relative improvement for Canadian oil and gas companies compared to their US counterparts from 2019 to 2021.

To provide some additional context, the valuation metrics reported above for 2021 are compared to those metrics averaged over earlier time periods. Specifically, average

12. It is possible for companies to have negative EV-to-EBITDA ratios since, when calculating EV, cash and cash equivalents are subtracted from market capitalization plus debt. If a company's share price declines substantially, so will its market capitalization, and it is possible for cash and cash equivalents to exceed the new lower value of market capitalization plus debt.



values for the four-valuation metrics are reported for 2011–2014 and for 2015–2018,<sup>13</sup> as are the Canada-to-US ratios for those metrics. The 2015–2018 period is of particular interest as a basis of comparison, since it is the period during which investment in Canada’s oil and gas sector suffered a substantial decline (Globerman and Emes, 2019).

**Tables 6 to 9** provide historical valuation metrics to compare to the most recent values for the price-to-earnings, price-to-sales, price-to-book, and EV-to-EBITDA metrics in order to assess the importance of the 2021 valuations to the recent improvement in the expectations of relative profitability for Canadian companies. Specifically, average annual values for the four metrics are reported for various time periods from 2011–2020 and for 2021.

**Table 6: Price-to-earnings ratios, Canadian and US oil and gas sector, 2011–2021**

	2011–2014	2017–2018	2019	2020	2021
Canada	19.73	16.27	12.80	n/a	12.65
United States	17.00	14.28	14.93	11.60	17.24
Canada/US ratio	1.16	1.14	0.86	n/a	0.73

Source: GuruFocus, 2021.

**Table 7: Price-to-sales ratios, Canadian and US oil and gas sector, 2011–2021**

	2011–2014	2015–2018	2019–2020	2021
Canada	2.47	2.07	0.96	1.84
United States	2.15	1.79	1.19	1.58
Canada/US ratio	1.15	1.16	0.80	1.16

Source: GuruFocus, 2021.

**Table 8: Price-to-book ratios, Canadian and US oil and gas sector, 2011–2021**

	2011–2014	2015–2018	2019–2020	2021
Canada	1.33	0.97	0.72	1.13
United States	1.84	1.47	1.21	1.46
Canada/US ratio	0.72	0.66	0.59	0.77

Source: GuruFocus, 2021.

13. 2017 and 2018 only for the P/E ratio in table 6.

Table 9: EV-to-EBITDA ratios, Canadian and US oil and gas sector, 2011-2021

	2011-2014	2015-2018	2019-2020	2021
Canada	5.20	3.96	1.35	5.99
United States	7.92	8.27	6.13	7.00
Canada/US ratio	0.66	0.48	0.22	0.86

EV-to-EBITDA = enterprise value (EV) of a stock divided by its earnings before interest, taxes, depreciation and amortization (EBITDA).

Source: GuruFocus, 2021.

What seems clear from the data is the consistent decline in the valuation metrics for Canadian oil and gas companies relative to US oil and gas companies over the period from 2011 to 2020.<sup>14</sup> Hence, the share prices set in stock-market transactions support both survey evidence and media reports identifying a deteriorating investment environment for the Canadian oil and gas industry compared to the oil and gas industry in the United States over the past decade. However, the evidence is less compelling for the most recent (July 2021) set of valuation metrics. Specifically, only in the case of one of the valuation metrics (price-to-earnings) is the 2021 Canada-to-US ratio lower than the comparable ratio for 2019, thereby suggesting that investors continue to expect a deteriorating investment environment in Canada relative to the United States.<sup>15</sup> However, the other valuation metrics (price-to-sales, price-to-book, and EV to EBITDA) suggest that investors became somewhat more optimistic about earnings prospects for Canadian oil and gas companies relative to their US counterparts in 2021 than they were in the two prior years. In short, the improved profitability outlook for Canadian relative to US oil and gas companies primarily reflects the influence of data for 2021.

It is certainly possible that the outlook for a more restrictive regulatory regime surrounding oil and gas exploration and production, particularly with respect to fracking, under the Biden Administration in the United States has, in the view of investors, shifted the relative competitive positions of the industries in Canada and the United States to be more favourable for Canada, on the margin. One must be cautious, however, in drawing strong conclusions from a single year's (2021) divergence from a decade-long pattern of valuation declines for Canadian oil and gas companies relative to their US counterparts, particularly given the sharper recovery in the price of WCS relative to

14. Price-to-earnings data for Canadian oil and gas companies were unavailable for the years 2015 and 2016. Hence, the average price-to-earnings ratio shown is for 2017 and 2018 only.

15. The reader is reminded that the price-to-earnings ratio for Canada is unavailable for 2020.

WTI in early 2021. In this overall context, it seems prudent to conclude that the deteriorating earnings outlook for Canadian oil and gas companies relative to US companies as expressed by public investors' behaviour has not been convincingly halted, let alone reversed. While improved investor expectations about the prospects of Canada's oil and gas companies should be seen as optimistic for investment growth in Canada's oil and gas sector, capital investment in the Canadian oil and gas industry will likely continue to be sluggish over the foreseeable future, both because of growing opposition to fossil fuels in Canada and the United States, as well as the particular opposition to the mining and production of heavy crude oil in Alberta.

## 5 Concluding Comments

Significant decreases in capital expenditures by Canadian oil and gas companies in the post-2014 period undoubtedly reflect a variety of factors including regulatory restrictions on the expansion of pipeline capacity and relatively low oil prices. Notwithstanding, while WTI oil prices were also relatively depressed in the post-2014 period, investment in the US oil and gas industry was substantially more robust than investment in Canada's oil and gas sector (Globerman and Emes, 2019). Financial valuation metrics for Canadian and US oil and gas companies reinforce the perspective of industry executives and stock-market analysts that investors intending to finance oil and gas exploration and production found US companies increasingly attractive investments compared to Canadian companies over the past decade.

The most recently available financial information underlying the valuation metrics discussed in this essay hint at the possibility that the increasingly strong investor preference for US over Canadian oil and gas companies from 2011 to 2020 may be stabilizing or even reversing, although one can make the case that the mixed results for 2021 do not allow for any strong inference of a “topping out” of investor preference for US oil and gas companies. In any case, policy makers in Canada need to be mindful of the geographical mobility of financial capital and that, beyond the growing movement away from investments in the oil and gas sector facilitated in part by environmental, social, and governance (ESG) and related clean-energy mutual and Exchange Traded Funds, investors in the North American energy sector will continue to favour US-based investments if Canada's regulatory and tax regimes continue to be more punitive than US regimes.

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