Group Presentation Writeup:

Refineries and Fractionators

Bus 419 Advanced Derivatives

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Industry Overview

Overview

The petroleum industry is divided into three sectors: upstream, midstream and downstream operations. The companies we looked at were more focused towards the midstream and downstream activities. Midstream operations store, market and transport the commodities, while downstream operations are related to oil and petroleum plants, distribution of products and retail outlets.

Petroleum refining is the process where a petroleum refinery takes a raw material, in this case, crude oil and refines it into petrol and other products. The main purpose of refining is to turn the crude oil into standardized products and removes contaminants, such that they meet end user requirements and environmental regulations. All refineries perform three basic steps in the processing of petroleum. Separation is the where the raw material is separated into their purified components. For example, crude oil is separated into other mixtures such as gasoline, natural gas and other hydrocarbons by fractional distillation. Another step is fluid cracking where the feedstock is heated (thermal cracking) or a catalyst is added (catalytic cracking) in order to separate the feedstock into other products. The last step in the refining of petroleum is the treatment step, it involves blending, fine-tuning and improving products to meet specific requirements.

Refineries

Most large refineries in the United States are located in Louisiana and Texas and are heavily concentrated near the coast. The top refineries in Canada are located in Ontario, New Brunswick and Quebec. Refining capacities are changing for the integrated major oil producers, and in order to combat this, they are divesting towards downstream businesses as a separate entity. The result is that refinery ownership is moving away towards integrated majors and a selling off of refining assets. The integrated model of combining exploration and production with refining and marketing is underperforming and is a major driver towards non-integrated companies. In order to remain viable, the refining businesses will need to be able to generate sufficient cash to provide an adequate return to their owners. A measure of profitability in the refining industry is the refining margin. Refining margin is the difference between the total value of the petroleum products produced less the cost of the raw materials and other costs. Major costs in the refining industry is fixed operating costs: labour, maintenance, taxes and overhead costs, variable operating cost feed-dependent costs for power, water, chemicals, additives, catalyst and refinery fuels, transportation costs, freight, duties and insurance.

Natural Gas Processing

Natural gas processing is a procedure to clean raw natural gas by separating impurities, hydocarbons and fluids into pipeline quality natural gas. Raw natural gas comes primarily from any one of three types of wells: crude oil wells, gas wells, and condensate wells. Processing of the raw natural gas yields important byproducts such as, natural gas condensate, natural gas liquids (propane and butane), ethane and sulfur. The recovered NGL stream is sometimes processed through a fractionation train consisting of three distillation towers: deethanizer, depropanizer and debutanizer. Running the NGL through the distillation towers will yield ethane, propane and butane.

Regulation

The Environmental Protection Agency has started to propose regulation of greenhouse gases under existing Clean Air Act programs such as the Vehicle Emission Standards, Prevention of Significant Deterioration and the New Source Performance Standards. Under these regulations, permits will be required for projects that emit threshold levels of CO_2, Due to the changing regulations, significantly more permits will be required for refinery modifications or refinery operation. In order to comply with new regulations, the EPA is currently working on an approach for refinery GHG measures, this approach is to better manage and control source specific emission limits and obtain benchmarks. In any case, a greater focus on energy reduction projects will likely be required.

Another program is the Reformulated Fuel Standard (RSF2); created under the Energy Policy Act of 2005, this program establishes the first renewable fuel mandate which was to have at least 7.5 billion gallons by 2012. The implication of this mandate is that the growth in biofuels may exceed the growth in transportation fuels, this puts an increased pressure on refineries. In order to capture this increased growth in biofuels, there will be significant expansion in the refining facilities in order to manufacture, store, transport and blend the biofuels. The impact of increasing biofuel volumes will result in changes to the mix of fuel blending components, refinery configurations and new technologies.

Future regulations such as Waxman-Markey Legislation will affect the market environment by increasing regulatory costs and because of excess capacity that is abroad. Costs of production have been increasing due to recently enacted environmental and regulatory requirements. In addition to rising competition from foreign competitors; flat or declining demand for transportation fuels in the United States market will significantly impact profits. An estimated 7.6 to 8.8 million barrels per day (mb/d) of new refining capacity is expected to come online by 2015; 80% of which will be built outside of the OECD. With rising taxes and biofuel mandates, the profit margin of refining will decrease, which could lead to permanent closure of refineries.

Risk Analysis

Firms in the petroleum refining industry are exposed to many risks both globally and domestically. Firms in all three divisions face operational risks specific to the industry and systematic risks. These risks include operational risks, environmental risks and considerations, economic and political risk, commodity risk, financial risk, regulatory limitations and limitations on capacity. Key issues related to safety, environment, profitability, fuel quality, feedstock and energy requirements are all challenges that firms in the petroleum refining industry has to face. Environmental impacts are a major challenge to refineries as pollution is a large concern. Refinery emissions contain several ozone precursors and the associated impacts of refinery emissions are most significant near and downwind of a facility.

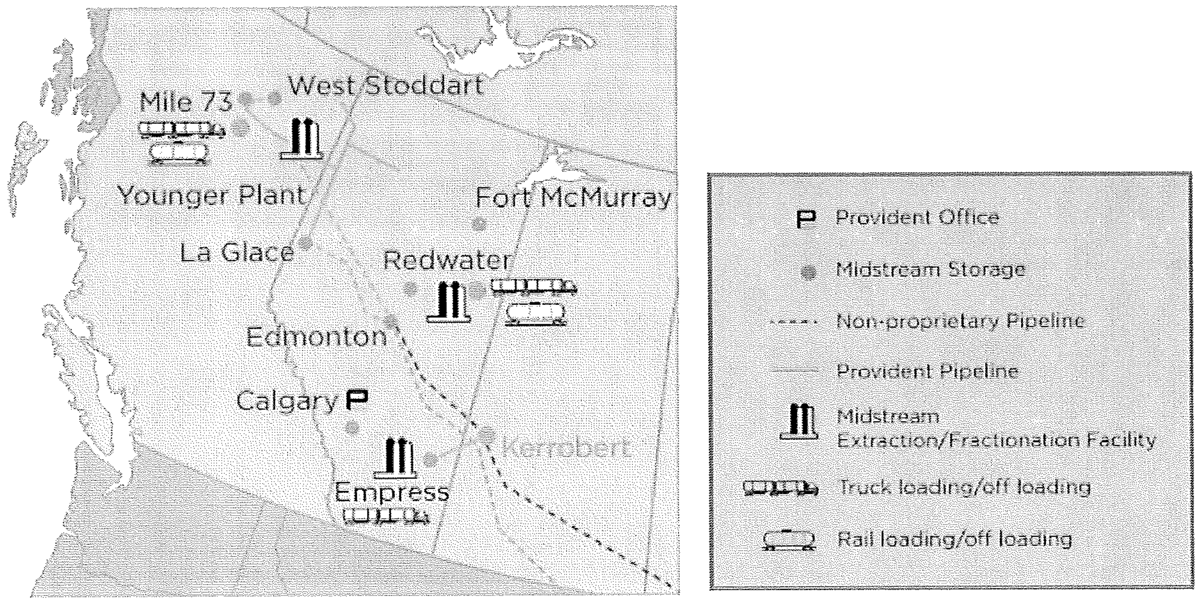
Firms in the petroleum refining industry use sensitivity analysis, simulation analysis, VaR and probability estimation to measure risk. In order to manage risk, firms will use OTC forward contracts, exchange traded energy futures, foreign exchange futures, and options in order to hedge against risk. The use of derivative contracts to hedge against losses, will vary depending on the firm's risk management philosophy. Those that do engage in the use of derivatives will usually use costless collars, crack spread contracts and options, interest rate and foreign exchange swaps.

Provident Energy LTD

Provident is a Calgary based corporation that owns and operates NGL midstream services. Provident is focused on natural gas liquid midstream processing and marketing in western and central Canada and the United States. The energy products they sell include: ethane, butane, propane and condensate. Non energy products they provide are storage, processing, terminalling and transportation. The Midstream business unit extracts, processes,stores, transports and markets natural gas liquids (NGLs) for Provident and offers these services to third party customers.

Provident has three operations: Empress East, Redwater West and Commercial Services. Their midstream extraction and fractionation facilities are located in Alberta and Northern British Columbia and they also have pipelines going from Canada to the United States. Empress East and Redwater West are also supported by Provident's integrated marketing arm which maintains marketing offices in Calgary, Alberta, Sarnia, Ontario, and Houston, Texas and operates under the brand name Kinetic. Rather than selling NGL produced by the Empress East and Redwater West facilities at the plant gate, the marketing and logistics group utilizes Provident's transportation, storage and logistics assets to access markets across North America.

Provident is pursuing several growth opportunities that will enhance its position as a premier condensate supply, storage and services provider. In addition to the expansion of their existing base facilities, these include related rail and storage opportunities such as rail loading of other products and bitumen blends.



Empress East

The Empress East facility is located near major export pipelines transporting natural gas from the Western Canadian Sedimentary Basin to Eastern Canada and the United States market. The margin in the business is determined primarily by the frac spread, which is the ratio between crude oil prices and natural gas prices. Frac Spread is simply the value received on the sale of propane, butane and condensate less the cost of the natural gas used to extract the natural gas liquids. The Demand for propane is seasonal and results in inventory that generally builds over the second and third quarters of the year and is sold in the fourth quarter and the first quarter of the following year. Traditionally a higher frac spread ratio and higher crude oil prices will result in stronger Empress East margins. Differentials between propane-plus and crude oil prices, as well as location price differentials will also impact the frac spread. Natural gas extraction premiums and costs relating to transportation, fractionation, storage and marketing are not included within the frac spread.

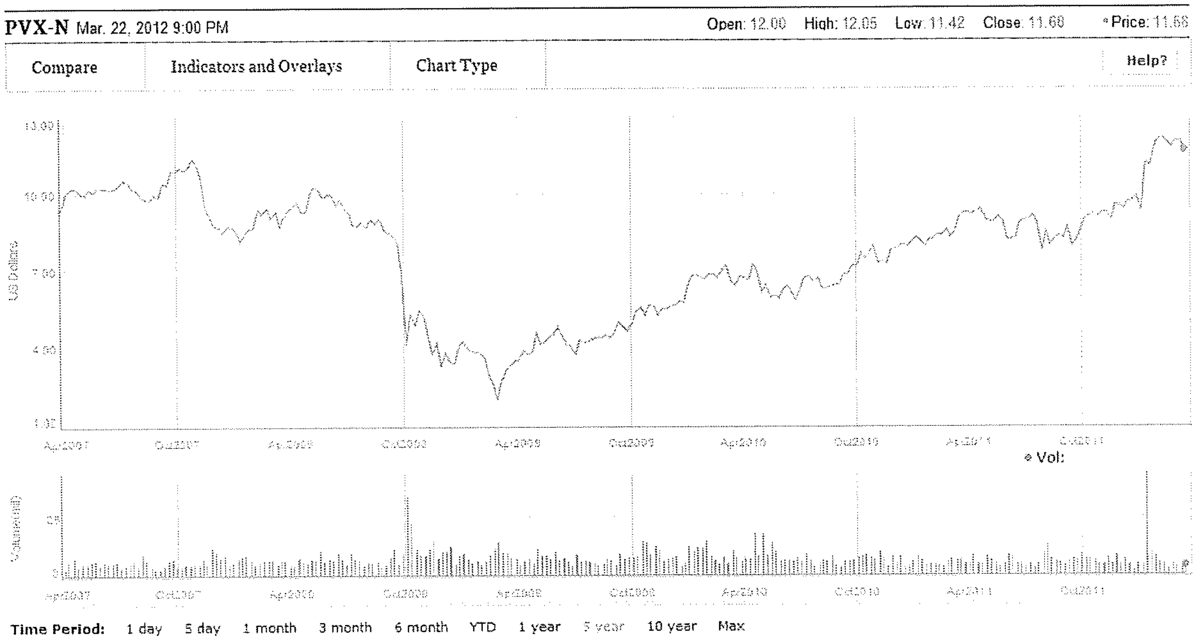
Redwater West

The Redwater West facility captures supply form northeast British Columbia and northwest Alberta to generate revenues through extraction, gathering, transportation, storage and fractionation of NGL into finished products. The facility purchases NGL mix from various natural gas producers and fractionates it into finished products at the Redwater fractionation facility near Edmonton, Alberta. Also includes natural gas supply volumes extracted at the Younger NGL extraction plant located at Taylor in northeastern British Columbia. The Redwater fractionator has several significant competitive advantages including the ability to process sour NGL and is one of only two fractionation facilities in the Fort Saskatchewan area capable of processing ethane-plus. The feedstock for Redwater West is primarily NGL mix rather than natural gas, therefore frac spreads have a smaller impact on operating margin than in Empress East.

Commercial Services

Provident utilizes its assets to generate income from fee for service contracts to provide fractionation, storage, NGL terminalling, loading and offloading services. Income from pipeline tariffs from Provident's ownership of NGL pipelines is also included in this business unit. These assets provide service to upstream, midstream and downstream customers across Canada and the United States. Provident has long term processing contracts with third parties of up to 20,000 bpd of NGL mix delivered to Redwater. Provident owns three pipelines which are connected to the northern end of the LGS; these lines opeate on a fee for service basis.

Stock Details



Provident's ticket symbol is PVE-T on the TSX and PVX-N on the NYSE. The most recent closing price was $11.46 USD down from $11.68 the previous day. Their high and low from the past 52 weeks was $12.19 and $6.9. With 271.7 million shares outstanding, Provident has a market cap of $3.2 billion. Provident has a price to earnings of 31.59 and an earnings per share of 0.37, and also pays an annual dividend of $0.54. Due to Pembina's successful acquisition of Provident, Provident shareholders will receive 0.425 shares of Pembina for each share of Provident held. Prior to the Pembina acquisition of Provident, shares of Provident were eligible for the DRIP plan which allowed for reinvestment of dividends into shares of Provident stock. This plan has been suspended until the completion of the transaction between Pembina and Provident.

Financial Statements

	As at December 31, 2011	As at December 31, 2010	As at January 1, 2010
Assets			
Current assets			
Cash and cash equivalents	$ -	$ 4,400	$ 7,187
Accounts receivable	**230,457**	206,631	216,786
Petroleum product inventory (note 7)	**147,378**	106,653	58,779
Prepaid expenses and other current assets	**4,559**	2,539	4,803
Financial derivative instruments (note 16)	**4,571**	487	5,314
Assets held for sale (note 23)	-	-	186,411
	386,965	320,710	479,280
Non-current assets			
Investments	-	-	18,733
Exploration and evaluation assets (note 23)	-	-	24,739
Property, plant and equipment (note 8)	**984,217**	833,790	1,422,156
Intangible assets (note 9)	**107,118**	118,845	132,478
Goodwill (note 10)	**107,430**	100,409	100,409
Deferred income taxes (note 15)	**2,962**	72,699	-
	$ **1,588,692**	$ 1,446,453	$ 2,177,795
Liabilities			
Current liabilities			
Accounts payable and accrued liabilities	$ **276,480**	$ 227,944	$ 221,417
Cash dividends payable	**8,353**	12,646	13,468
Current portion of long-term debt (note 11)	**9,199**	148,981	-
Financial derivative instruments (note 16)	**56,901**	37,849	86,441
Liabilities held for sale (note 23)	-	-	2,792
	350,933	427,420	324,118
Non-current liabilities			
Long-term debt - bank facilities and other (note 11)	**184,936**	72,882	264,776
Long-term debt - convertible debentures (note 11)	**315,786**	251,891	240,486
Decommissioning liabilities (note 12)	**85,055**	57,232	127,800
Long-term financial derivative instruments (notes 11 and 16)	**52,373**	29,187	103,403
Other long-term liabilities (notes 12 and 14)	**20,551**	19,634	12,496
Deferred income taxes (note 15)	-	-	37,765
Commitments (note 21)			
	1,009,634	858,246	1,110,844
Shareholders' equity			
Equity attributable to owners of the parent			
Share capital (note 13)	**2,911,024**	-	-
Unitholders' contributions (note 13)	-	2,866,268	2,834,177
Other equity	**(8,370)**	684	684
Accumulated deficit	**(2,328,241)**	(2,278,745)	(1,767,910)
	574,413	588,207	1,066,951
Non-controlling interest (note 6)	**4,645**	-	-
	579,058	588,207	1,066,951
	$ **1,588,692**	$ 1,446,453	$ 2,177,795

Balance Sheet

Analysis of Provident's balance sheet shows that the company has derivatives in both assets and liabilities section of the balance sheet. Derivative instruments designated as liabilities have a value of $109 million which is significantly higher than the derivative instruments designated as assets.

	Year ended December 31, 2011	2010
Product sales and service revenue (note 18)	$ 1,955,878	$ 1,746,557
Realized loss on buyout of financial derivative instruments (note 16)	-	(199,059)
Unrealized gain offsetting buyout of financial derivative instruments (note 16)	-	177,723
Loss on financial derivative instruments (note 16)	(69,756)	(103,464)
	1,886,122	1,621,757
Expenses		
Cost of goods sold (note 7)	1,517,070	1,396,635
Production, operating and maintenance	37,432	18,504
Transportation	20,001	18,442
Depreciation and amortization	43,630	44,475
General and administrative (note 14)	51,059	36,671
Strategic review and restructuring (note 22)	-	13,782
Financing charges	41,282	32,251
Loss on revaluation of conversion feature of convertible debentures and redemption liability (note 16)	17,469	433
Other income and foreign exchange (note 20)	(7,524)	(3,826)
	1,720,419	1,557,367
Income from continuing operations before taxes	165,703	64,390
Current tax expense (recovery) (note 15)	654	(6,956)
Deferred tax expense (recovery) (note 15)	67,832	(40,871)
	68,486	(47,827)
Net income and comprehensive income from continuing operations	97,217	112,217
Net income (loss) and comprehensive income (loss) from discontinued operations (note 23)	-	(122,723)
Net income (loss) and comprehensive income (loss)	$ 97,217	$ (10,506)
Net income (loss) and comprehensive income (loss) attributable to:		
Owners of the parent	$ 96,791	$ (10,506)
Non-controlling interest	426	-
	$ 97,217	$ (10,506)

Income Statements

Provident's income statement displays a number of items that can be attributed to or related to their risk management strategy. Looking at the 2010 figures, Provident has engaged in a large buyout of financial derivative instruments, to the amount of $199 million. Although there was no buyout in 2011, there was still a loss on financial derivative instruments, to a value of $69 million.

	Year ended December 31, 2011	2010
Cash provided by (used in) operating activities		
Net income for the year from continuing operations	$ 97,217	$ 112,217
Add (deduct) non-cash items:		
Depreciation and amortization	43,630	44,475
Non-cash financing charges and other	8,603	7,956
Loss on purchase of convertible debentures (note 11)	3,342	-
Non-cash share based compensation expense	12,469	1,280
Unrealized gain offsetting buyout of financial derivative instruments (note 16)	-	(177,723)
Unrealized loss on financial derivative instruments (note 16)	3,235	52,599
Loss on revaluation of conversion feature of convertible debentures and redemption liability (note 16)	17,469	433
Unrealized foreign exchange gain and other (note 20)	(414)	(3,786)
Loss (gain) on sale of assets (note 20)	1	(3,300)
Deferred tax expense (recovery)	67,832	(40,871)
Continuing operations	253,384	(6,720)
Discontinued operations	-	(2,436)
	253,384	(9,156)
Site restoration expenditures related to discontinued operations	-	(2,041)
Change in non-cash operating working capital	(33,145)	(28,472)
	220,239	(39,669)
Cash used for financing activities		
Issuance of convertible debentures, net of issue costs (note 11)	164,950	164,654
Repayment of debentures (note 11)	(249,784)	-
Increase (decrease) in long-term debt	109,893	(192,380)
Declared dividends to shareholders	(146,287)	(191,639)
Issue of shares, net of issue costs (note 13)	37,101	32,091
Change in non-cash financing working capital	(4,293)	(822)
	(88,420)	(188,096)
Cash (used for) provided by investing activities		
Capital expenditures	(134,115)	(70,218)
Acquisition (note 6)	(7,852)	-
Proceeds on sale of assets	3	3,300
Proceeds on sale of discontinued operations (note 23)	-	106,779
Change in non-cash investing working capital	5,745	14,407
Investing activities from discontinued operations	-	170,710
	(136,219)	224,978
Decrease in cash and cash equivalents	(4,400)	(2,787)
Cash and cash equivalents, beginning of year	4,400	7,187
Cash and cash equivalents, end of year	$ -	$ 4,400
Supplemental disclosure of cash flow information		
Cash interest paid including debenture interest	$ 35,307	$ 25,448
Cash taxes received	$ (1,465)	$ (2,576)

Cash Flow Statements

This is the cash flow statement for year ended 2011 and 2010. It again shows the cash flows related to derivative usage and related activities, as well as gains or losses on foreign exchange.

(bpd)	2011	2010	% Change
	Year ended December 31,		
Redwater West NGL sales volumes	**58,969**	63,006	(6)
Empress East NGL sales volumes	**45,790**	43,069	6
Provident Midstream NGL sales volumes	**104,759**	106,075	(1)

($ 000s)	2011	2010	% Change
	Year ended December 31,		
Redwater West margin	$ **213,256**	$ 160,208	33
Empress East margin	**109,439**	88,965	23
Commercial Services margin	**58,680**	63,803	(8)
Gross operating margin	**381,375**	312,976	22
Realized loss on financial derivative instruments	**(66,521)**	(50,865)	31
Cash general and administrative expenses	**(38,590)**	(35,391)	9
Other income and realized foreign exchange	**7,110**	40	17,675
Adjusted EBITDA attibutable to non-controlling interest	**(946)**	-	-
Adjusted EBITDA excluding buyout of financial derivative instruments and strategic review and restructuring costs	**282,428**	226,760	25
Realized loss on buyout of financial derivative instruments	-	(199,059)	(100)
Strategic review and restructuring costs	-	(13,782)	(100)
Adjusted EBITDA	$ **282,428**	$ 13,919	1,929

Midstream Business Performance

This figure shows the business performance of Provident's three business divisions. Their loss on financial derivative instruments for 2011 is 31% higher than the previous year and the amount is larger than the margin from their Commercial Services division.

Risk Management Philosophy

Provident uses an enterprise risk management program that identifies and manages risks that could negatively impact the business. Their enterprise risk management plan uses a hedging program that protects a portion of the company's cash flow and supports continued shareholder distributions, capital programs and bank financing. The ERM program includes risk identification, assessment, response, control ,monitoring and communication of derivative instruments. Provident uses put and call options, costless collars, participating swaps and fixed price products. The purchase of put option contracts effectively create a floor price for the commodity, while allowing for full participation if prices increase. The purchase of call options allow for a commodity to be purchased at a fixed price at the option of the contract holder. Costless collars are contracts that provide a floor and a ceiling price and allowing participation within a set range. Participating swaps are contracts that provide a floor and also provide a ceiling for a certain percentage of the volume of the contract. Fixed price swaps are contracts that specify a fixed price at which a certain volume of product will be bought or sold at in the future. Provident's commodity price risk management program utilizes derivative instruments to provide for protection against lower commodity prices and product margins, as well as fluctuating interest and foreign exchange rates.

Provident uses a fair value measurement of assets and liabilities recognized on their balance sheet, and are categorized into levels within a fair value hierarchy based on the nature of the valuation inputs. Provident's financial derivative instruments have been classified as level 2 instruments which have inputs other than quoted prices that are observable for the asset or liability.

Risk Factors

The number one risk factor that Provident views as having the most impact on the business is the frac spread and commodity price risk. Provident is exposed to possible price declines between the time Provident purchases NGL feedstock and sells NGL products, and also at risk to narrowing frac spreads. There is also a differential between NGL product prices and crude oil prices which can change prices received and margins realized for midstream products that are separate from frac spread ratio changes. The amount of profits of the midstream business will depend on the frac spread. Variability in the frac spread determines the cash flow generated by the midstream business.

The second risk factor that Provident views as having a significant impact on their business is the facilities throughput and product demand. The volumes of natural gas processed through Provident's natural gas liquids midstream infrastructure and logistics business and of NGLs and other products transported in the pipelines depend on production of natural gas in the areas serviced by the business and pipelines. Without reserve additions, production will decline over time as reserves are depleted and production costs may rise. Commodity prices may not remain at a level which encourages producers to explore for and develop additional reserves or produce existing marginal reserves. Lower production volumes will also increase the competition for natural gas supply at gas processing plants which could result in higher shrinkage premiums being paid to natural gas producers.

The third most significant risk factor is operating and capital costs related to Provident's NGL midstream infrastructure and logistics business. Operating and capital costs may vary considerably from current and forecast values and rates and represent significant components of the cost of providing service. Although operating costs are to be recaptured through the tariffs charged on natural gas volumes processed and oil and NGLs transported, respectively, to the extent such charges escalate, producers may seek lower cost alternatives or stop production of their natural gas.

The fourth risk factor that Provident lists is their reliance on principal customers and operators. Provident will rely on several significant customers to purchase product from the Midstream Business. If for any reason these parties were unable to perform their obligations under the various agreements with Provident, the revenue and dividends of Provident, and the operations of the Midstream Business could be negatively impacted.

The fifth risk factor that affect Provident's profitability is due to operational matters and hazards. Provident's operations will be subject to common hazards of the natural gas processing and pipeline transportation business. The operation of Provident's natural gas liquids midstream infrastructure and logistics business could be disrupted by natural disasters or other events beyond the control of Provident. The operation of Provident's natural gas liquids midstream infrastructure and logistics business will involve many risks, many of which are beyond the control of Provident.

Financial Derivative Sensitivity Analysis

As at December 31, 2011 ($ 000s)		+ Change	- Change
Frac spread related			
Crude oil	(WTI +/- $5.00 per bbl)	$ (7,255)	$ 7,333
Natural gas	(AECO +/- $1.00 per gj)	20,349	(20,346)
NGLs (includes propane, butane)	(Belvieu +/- US $0.10 per gal)	(10,033)	10,033
Foreign exchange ($U.S. vs $Cdn)	(FX rate +/- $ 0.05)	(14,217)	14,217
Management of exposure embedded in physical contracts			
Crude oil	(WTI +/- $5.00 per bbl)	(5,647)	5,647
NGLs (includes propane, butane and condensate)	(Belvieu +/- US $0.10 per gal)	4,908	(4,908)
Corporate			
Interest rate	(Rate +/- 50 basis points)	1,599	(1,599)
Electricity	(AESO +/- $5.00 per MW/h)	218	(218)
Conversion feature of convertible debentures	(Provident share price +/- $0.50 per share)	$ (7,077)	$ 6,487

The following tables show the impact on (loss) gain on financial derivative instruments if the underlying risk variables of the financial derivative instruments changed by a specified amount, with other variables held constant. The sensitivity analysis provides an overview of the general impact of potential changes in factors may have on Provident's business. One problem is that Provident does not explain the process they used to obtain these results.

Market Risk

Market risk is the risk that the fair value of a financial derivative instrument will fluctuate because of changes in market prices. The types of market risk that Provident will face are price risks, currency risks and interest rate risks.

Market Risk Management Program

In order to reduce the risk that they face, Provident will utilize financial derivative instruments to provide protection against commodity price volatility and protect a base level of operating cash flows. The reasoning behind this is that the use of derivative instruments will protect the relationship between the purchase cost of natural gas and the sales price of propane, butane and condensate and to protect the relationship between NGLs and crude oil in physical sales contracts. Derivative instruments are also used in order to reduce foreign exchange risk to due the exposure of fluctuating exchange rates and the conversion of U.S. Dollars into Canadian Dollars.

Year	Product	Volume (Buy)/Sell	Terms	Effective Period
2012	Crude Oil	1,224 Bpd	US $97.40 per bbl (3)(6)	April 1 - December 31
		1,216 Bpd	US $92.75 per bbl (3)(6)	January 1 - December 31
		978 Bpd	Cdn $101.82 per bbl (3)(6)	July 1 - December 31
	Natural Gas	(30,311) Gjpd	Cdn $3.26 per gj (2)(6)	January 1 - December 31
	Propane	2,083 Bpd	US $1.4685 per gallon (4)(6)	January 1 - February 29
	Normal Butane	2,445 Bpd	US $1.7434 per gallon (5)(6)	January 1 - December 31
	Foreign Exchange		Sell US $2,633,333 per month @ 1.016 (7)	January 1 - June 30
			Sell US $5,785,714 per month @ 0.996 (7)	January 1 - July 31
			Sell US $5,144,444 per month @ 0.996 (7)	January 1 - September 30
			Sell US $2,666,667 per month @ 1.042 (7)	April 1 - December 31
			Sell US $2,875,000 per month @ 1.050 (7)	January 1 - December 31
2013	Crude Oil	1,700 Bpd	US $96.65 per bbl (3)(6)	January 1 - March 31
	Foreign Exchange		Sell US $5,000,000 per month @ 1.050 (7)	January 1 - March 31
	Interest Rate	$ 50,000,000 Notional (Cdn$)	Pay Average Fixed rate of 1.124% (8)	July 1 2013 - September 30, 2014

Commodity Price Risk Program

Provident's commodity price risk management program utilizes commodity hedges to protect against adverse price movements. Their intention is to routinely hedge approximately 50% of its natural gas and NGL volumes on a rolling 12 month basis. Subject to market conditions, Provident may add additional hedges up to 24 months.

FRAC Spread Volumes & Prices Hedged

Forward Market Strip

	Q1 2012	Q2 2012	Q3 2012	Q4 2012	Q1 2013
WTI Crude Oil (usd$/bbl)	$103.27	$107.99	$108.16	$107.78	$106.91
Mont Belvieu TET Propane (usd$/gal)	$1.25	$1.23	$1.25	$1.28	$1.29
Mont Belvieu NON TET Normal Butane (usd$/gal)	$1.91	$1.89	$1.90	$1.92	$1.91
NGL Basket %	62%	59%	60%	61%	61%
AECO Natural Gas (cad$/gj)	$2.39	$1.97	$2.12	$2.55	$2.97

FRAC Spread Hedged Volumes

	Q1 2012		Q2 2012		Q3 2012		Q4 2012		Q1 2013	
	WAP	Volume	WAP	Volume	WAP	Volume	WAP	Volume	WAP	Volume
Crude Oil Participating Options (usd$/bpd)	$92.84	1,083	$92.20	1,783	$92.33	3,167	$91.53	3,750	$91.94	2,000
Propane (usd$/bpd)	$1.55	7,857	$1.23	1,715	$1.25	1,631	$1.29	1,625	$1.30	1,625
Butane (usd$/bpd)	$1.78	3,250	$1.71	2,475	$1.73	1,305	$1.77	3,415	$1.92	630
Condensate / Crude Oil (usd$/bpd)	$96.65	5,114	$94.38	2,988	$97.09	2,140	$97.49	3,709	$98.06	1,954
Natural Gas Participating Options (cad$/gjpd)	$7.19	6,190	$6.41	7,380	$6.46	10,961	$7.14	10,486	$7.58	9,540
Natural Gas (cad$/gjpd)	$3.51	77,667	$3.27	36,500	$3.21	42,000	$3.56	41,033	$3.95	25,700

FRAC Spread Percentage of Volumes Hedged by Product Type

	Q1 2012	Q2 2012	Q3 2012	Q4 2012	Q1 2013
NGL's					
Product Fixed for Floating Swaps	58%	43%	32%	36%	17%
Crude Oil					
Crude Oil Participating Options	11%	18%	34%	25%	13%
Total NGL % Hedged	69%	61%	66%	61%	30%

Natural Gas					
Fixed for Floating Swaps	78%	45%	50%	53%	26%
Natural Gas Participating Options	10%	9%	13%	14%	10%
Total Natural Gas % Hedged	88%	54%	63%	67%	36%

Commodity	Description	Volume (Buy) / Sell		Effective Period
2012				
Crude Oil	US $97.57 per bbl (3) (10)	1,507	Bpd	January 1 - December 31
	US $95.43 per bbl (3) (11)	5,548	Bpd	January 1 - March 31
	US $92.67 per bbl (3) (12)	2,889	Bpd	January 1 - December 31
	US $94.57 per bbl (3) (10)	1,484	Bpd	January 1 - December 31
	Cdn $101.82 per bbl (3) (10)	978	Bpd	July 1 - December 31
	Participating Swap Cdn $85.19 per bbl (Average Participation 27% above the floor price)	1,445	Bpd	February 1 - December 31
	Participating Swap US $72.22 per bbl (Average Participation 51% above the floor price)	1,352	Bpd	March 1 - December 31
Natural Gas	Cdn $3.42 per gj (2) (10)	(49,382)	Gjpd	January 1 - December 31
	Participating Swap Cdn $8.55 per gj (Average Participation 28% below the ceiling price)	(9,578)	Gjpd	February 1 - December 31
Propane	US $1.49 per gallon (4) (10)	2,430	Bpd	January 1 - December 31
	US $1.0094 per gallon (4) (11)	(3,297)	Bpd	January 1 - March 31
	US $1.3375 per gallon (5) (11)	(989)	Bpd	January 1 - March 31
Normal Butane	US $1.7352 per gallon (6) (11)	(2,654)	Bpd	January 1 - March 31
	US $1.7484 per gallon (6) (10)	2,923	Bpd	January 1 - December 31
ISO Butane	US $1.7807 per gallon (7) (11)	(1,454)	Bpd	January 1 - March 31
	US $1.98 per gallon (7) (10)	250	Bpd	October 1 - December 31
Condensate	US $2.233 per gallon (8) (12)	(2,889)	Bpd	January 1 - December 31
F/X	Sell US $24,641,529 per month @ 0.9862 (13)			January 1 - March 31
	Sell US $2,633,333 per month @ 1.016 (13)			January 1 - June 30
	Sell US $5,785,714 per month @ 0.996 (13)			January 1 - July 31
	Sell US $5,144,444 per month @ 0.996 (13)			January 1 - September 30
	Sell US $2,875,000 per month @ 1.050 (13)			January 1 - December 31
	Sell US $2,016,783 per month @ 1.0119 (13)			March 1 - March 31
	Sell US $1,041,721 per month @ 0.9413 (13)			April 1 - October 31
	Sell US $2,666,667 per month @ 1.042 (13)			April 1 - December 31
	Sell US $681,260 per month @ 0.9850 (13)			May 1 - October 31
	Sell US $1,437,986 per month @ 0.9659 (13)			July 1 - December 31
	Sell US $6,974,227 per month @ 0.9891 (13)			October 1 - December 31
	Sell US $1,420,538 per month @ 0.9995 (13)			November 1 - December 31

2013				
Crude Oil	US $96.65 per bbl (3) (10)	1,700	Bpd	January 1 - March 31
	US $107.65 per bbl (3) (10)	250	Bpd	January 1 - March 31
	US $100.70 per bbl (3) (12)	1,667	Bpd	January 1 - March 31
	Participating Swap Cdn $84.90 per bbl (Average Participation 25% above the floor price)	1,250	Bpd	January 1 - March 31
	Participating Swap US $85.62 per bbl (Average Participation 30% above the floor price)	758	Bpd	January 1 - March 31
Natural Gas	Cdn $4.05 per gj (2) (10)	(23,200)	Gjpd	January 1 - March 31
	Participating Swap Cdn $8.87 per gj (Average Participation 22% below the ceiling price)	(9,524)	Gjpd	January 1 - March 31
Propane	US $1.30 per gallon (4) (10)	1,625	Bpd	January 1 - March 31
Normal Butane	US $1.885 per gallon (6) (10)	380	Bpd	January 1 - March 31
ISO Butane	US $1.965 per gallon (7) (10)	250	Bpd	January 1 - March 31
Condensate	US $2.245 per gallon (8) (12)	(1,667)	Bpd	January 1 - March 31
F/X	Sell US $1,651,990 per month @ 0.9829 (13)			January 1 - January 31
	Sell US $6,737,250 per month @ 0.9927 (13)			January 1 - March 31
	Sell US $5,000,000 per month @ 1.050 (13)			January 1 - March 31
Corporate				
Electricity	Cdn $65.98 per MW/h (9)	(10)	MW/h	January 1 2012 - December 31 2012
Interest Rate	Pay Average Fixed rate of 1.877% (14)	$ 180,000,000	Notional (Cdn$)	October 1 2011 - June 30 2013
	Pay Average Fixed rate of 1.124% (14)	$ 50,000,000	Notional (Cdn$)	July 1 2013 - September 30 2014

VALERO ENEGY CORPORATION

Valero Energy Corporation is a Fortune 500 company based in San Antonia, Texas and, through its subsidiaries, is the world's largest independent petroleum refiner and marketer. Valero supplies fuel and products with 16 refineries and 10 ethanol plants stretching from the U.S. West and Gulf coasts to Canada, United Kingdom and the Caribbean. It was incorporated in 1981 as Valero Refining & Marketing Company, and in 1997, it changed its name to Valero Energy Corporation. Its growth strategy is increasing "shareholder value growth through innovative, efficient upgrading of low cost feedstocks into high value, high quality products" combined with a "growth through acquisitions" strategy. Since 1997, it has grown from 1,000 to 22,000 employees, 1 to 16 refineries, and crude oil refining capacity per day of 200 million barrels to 3 million barrels per day.

The stock price has fallen dramatically from its five year peak on July 12th at $77.25, to the current stock price of around $27. It currently has an annual dividend of 60 cents and a yield of 2.3%.

Executives:

Bill Klesse is the Chairman of the Board, CEO and President. He began his 40-year career in refining as a chemical engineer with a BSci in Chemical Engineering. Klesse also holds a MBA in Finance and has been the CEO since 2006 and the Chairman of the Board since 2007.

Mike Cisowski is the Executive Vice President and Chief Financial Officer. He is responsible for the Treasury, Finance, Accounting, Internal Audit, Trading Controls and Insurance departments. He holds a BBA and MBA in Finance.

Jay Browning is the Senior Vice President of Corporate Law and Secretary. He is responsible for Corporate Governance, Finance, Securities and Exchange Commission, and Information Systems Support. He also holds a BBA and MBA in Finance.

Donna Titzman is the Vice President and Treasurer. She is responsible for the company's banking, cash management, customer credit and investment management areas. Titzman holds a BBA in Accounting and also has a Certified Public Accountant designation.

Segments:

Valero has three operational segments: refining, ethanol and retail.

Its refining segment consists of refining operations, wholesale marketing, product supply and distribution, and transportation operations. Valero has 16 petroleum refineries located in the U.S., Canada, the U.K. and Aruba. These refineries produce conventional gasolines, distillates, jet fuel, asphalt, petrochemicals, lubricants, and low and ultra-low sulfur diesel fuel. Gasolines and blendstocks consist of 46% of their overall yield, distillates are 34%, petrochemicals are 3%, and other products are 17%. Most of the refineries have access to marine transportation facilities and interconnect with common-carrier pipeline systems, allowing Valero to sell their products in the U.S., Canada, the U.K. and other countries. Valero sells a significant portion of their gasoline and distillate production through bulk sales channels in the U.S. and international markets, with no customer accounting for more than ten percent of total operating revenues.

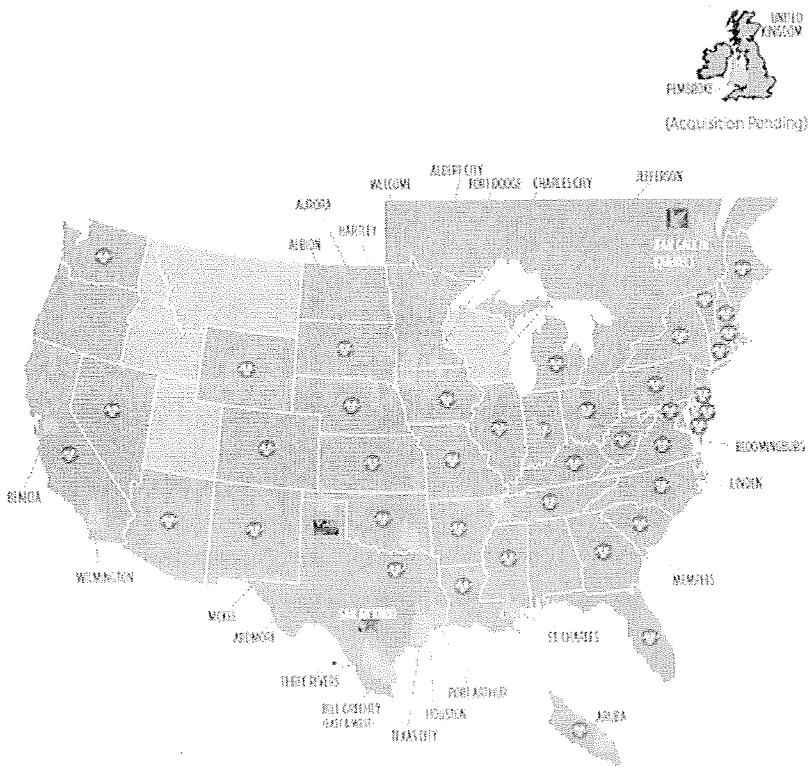
Approximately 63% percent of Valero's current crude oil feedstock requirements are purchased through term contracts while the remaining requirements are purchased on the spot market. The term contracts consist of a producer's official stated price and not a negotiated price specific to Valero.

The ethanol segment includes sales of internally produced ethanol and distiller grains. The ethanol operations are geographically located in the central plains region of the U.S. The ethanol plants are dry mill facilities that process corn to produce ethanol and distiller grains. Valero sources their corn supply from local farmers and commercial elevators and receives corn by rail and truck. On their website they have a corn bid for local farmers and cooperative dealers to use to facilitate corn supply transactions.

Thirdly, Valero has a retail segment. These are company-operated convenience stores, Canadian dealers/jobbers, truckstop facilities, card lock facilities, and home heating oil operations. It is segregated into Retail-US and Retail-Canada. Valero sells refined products through a network of 6,800 retail and wholesale branded outlets in the U.S., Canada, the U.K., Aruba and Ireland under various brand names such as Valero, Diamond Shamrock, Shamrock, Ultramar, Beacon and Texaco.

Valero is also expanding into renewable fuels with its Valero Renewables subsidiary. It has a joint venture agreement with Darling Green Energy LLC to construct and operate a biomass-based diesel plant with a feed capacity of 10,000 barrels per day that will process animal fats, used cooking oils, and other vegetable oils into renewable green diesel. This project has a total cost of approximately $368 million.

VALERO MAP OF OPERATIONS



Here is a map of their operations from their 2010 Annual Report. The yellow refinery logos represent the location of its crude oil refineries. The green refinery logos represent its ethanol refinery locations. The teal states and Quebec are where Valero has a retail presence through its convenience stores and gas stations.

Competitors:

USA				
	1.	ConocoPhillips (USA)	13	2,226,200
	2.	ExxonMobil Corp. (USA)	7	2,043,000
	3.	Valero Energy Corp. (USA)	12	1,999,660
	4.	BP PLC (UK)	6	1,476,575
	5.	Marathon Oil Corp. (USA)	7	1,188,000
	6.	Royal Dutch Shell PLC (NL/UK)	8	971,250**
	7.	Chevron Corp. (USA)	5	941,000
	8.	PDVSA (Venezuela)	4	849,400***
	9.	Sunoco Inc. (USA)	4	825,000
	10.	Flint Hills Resources (USA)	3	816,525

Valero was 3rd for 2010 crude oil refining capacity in the U.S with their 12 refineries. This does not include their three refineries in Canada, Aruba, and the UK, in addition to their purchase of another refinery in 2011.

Financial Statements:

	Year Ended December 31,		
	2011	2010	2009
Refining:			
Gasolines and blendstocks	$ 49,019	$ 33,491	$ 27,322
Distillates	43,713	26,402	20,526
Petrochemicals	4,253	3,161	2,177
Lubes and asphalts	1,948	1,315	1,126
Other product revenues	10,205	5,485	4,365
Total refining operating revenues	109,138	69,854	55,516
Retail:			
Fuel sales (gasoline and diesel)	9,730	7,498	6,148
Merchandise sales and other	1,635	1,581	1,505
Home heating oil	334	260	232
Total retail operating revenues	11,699	9,339	7,885
Ethanol:			
Ethanol	4,436	2,647	1,032
Distillers grains	714	393	166
Total ethanol operating revenues	5,150	3,040	1,198
Consolidated operating revenues	$ 125,987	$ 82,233	$ 64,599

Here is a chart of Valero's segment revenues for the past three years. All three segments have had considerable growth in revenues since 2009 with refining revenues increasing by 97%, retail revenues increasing 48%, and ethanol revenues also increasing 48%. Crude oil refining has consistently been Valero's major revenue segment with 86% of revenues generated in 2011. Retail and ethanol consist of the remaining 14% of the revenues with 10% and 4% respectively.

VALERO ENERGY CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(Millions of Dollars, Except Par Value)

	December 31, 2011	December 31, 2010
ASSETS		
Current assets:		
Cash and temporary cash investments	$ 1,024	$ 3,334
Receivables, net	8,706	4,583
Inventories	5,623	4,947
Income taxes receivable	212	343
Deferred income taxes	283	190
Prepaid expenses and other	124	121
Total current assets	15,972	13,518
Property, plant and equipment, at cost	32,253	28,921
Accumulated depreciation	(7,076)	(6,252)
Property, plant and equipment, net	25,177	22,669
Intangible assets, net	227	224
Deferred charges and other assets, net	1,407	1,210
Total assets	$ 42,783	$ 37,621
LIABILITIES AND EQUITY		
Current liabilities:		
Current portion of debt and capital lease obligations	$ 1,009	$ 822
Accounts payable	9,472	6,441
Accrued expenses	595	590
Taxes other than income taxes	1,264	671
Income taxes payable	119	3
Deferred income taxes	249	257
Total current liabilities	12,708	8,784
Debt and capital lease obligations, less current portion	6,732	7,515
Deferred income taxes	5,017	4,530
Other long-term liabilities	1,881	1,767
Commitments and contingencies		
Equity:		
Valero Energy Corporation stockholders' equity:		
Common stock, $0.01 par value; 1,200,000,000 shares authorized; 673,501,593 and 673,501,593 shares issued	7	7
Additional paid-in capital	7,486	7,704
Treasury stock, at cost; 116,689,450 and 105,113,545 common shares	(6,475)	(6,462)
Retained earnings	15,309	13,388
Accumulated other comprehensive income	96	388
Total Valero Energy Corporation stockholders' equity	16,423	15,025
Noncontrolling interest	22	—
Total equity	16,445	15,025
Total liabilities and equity	$ 42,783	$ 37,621

Valero's balance sheet does not have a line for derivative securities, and instead chooses to include these into receivables, prepaid and accrued expenses, and inventories.

VALERO ENERGY CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME
(Millions of Dollars, Except per Share Amounts)

	Year Ended December 31, 2011	2010	2009
Operating revenues (a)	$ 125,987	$ 82,233	$ 64,599
Costs and expenses:			
Cost of sales	115,719	74,458	58,686
Operating expenses:			
Refining	3,406	2,944	2,880
Retail	678	654	626
Ethanol	399	363	169
General and administrative expenses	571	531	572
Depreciation and amortization expense	1,534	1,405	1,361
Asset impairment loss	—	2	222
Total costs and expenses	122,307	80,357	64,516
Operating income	3,680	1,876	83
Other income, net	43	106	17
Interest and debt expense, net of capitalized interest	(401)	(484)	(416)
Income (loss) from continuing operations before income tax expense (benefit)	3,322	1,498	(316)
Income tax expense (benefit)	1,226	575	(43)
Income (loss) from continuing operations	2,096	923	(273)
Loss from discontinued operations, net of income taxes	(7)	(599)	(1,709)
Net income (loss)	2,089	324	(1,982)
Less: Net loss attributable to noncontrolling interests	(1)	—	—
Net income (loss) attributable to Valero Energy Corporation stockholders	$ 2,090	$ 324	$ (1,982)
Net income (loss) attributable to Valero Energy Corporation stockholders:			
Continuing operations	$ 2,097	$ 923	$ (273)
Discontinued operations	(7)	(599)	(1,709)
Total	$ 2,090	$ 324	$ (1,982)
Earnings per common share:			
Continuing operations	$ 3.70	$ 1.63	$ (0.50)
Discontinued operations	(0.01)	(1.06)	(3.17)
Total	$ 3.69	$ 0.57	$ (3.67)
Weighted-average common shares outstanding (in millions)	563	563	541
Earnings per common share – assuming dilution:			
Continuing operations	$ 3.69	$ 1.62	$ (0.50)
Discontinued operations	(0.01)	(1.05)	(3.17)
Total	$ 3.68	$ 0.57	$ (3.67)
Weighted-average common shares outstanding – assuming dilution (in millions)	569	568	541
Dividends per common share	$ 0.30	$ 0.20	$ 0.60
Supplemental information:			
(a) Includes excise taxes on sales by our U.S. retail system	$ 892	$ 891	$ 873

In the income statement, there isn't any mention of derivatives as well. Operating income and net income has dramatically increased since 2009, in part due to a shutdown of a refinery in 2009.

VALERO ENERGY CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Millions of Dollars)

	Year Ended December 31, 2011	2010	2009
Cash flows from operating activities:			
Net income (loss)	$ 2,089	$ 324	$ (1,982)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization expense	1,534	1,473	1,527
Asset impairment loss	—	2	607
Loss on shutdown and sales of refinery assets, net	12	888	1,868
Gain on sale of investment in Cameron Highway Oil Pipeline Company	—	(55)	—
Stock-based compensation expense	58	54	66
Deferred income tax expense (benefit)	461	347	(343)
Changes in current assets and current liabilities	81	68	255
Changes in deferred charges and credits and other operating activities, net	(197)	(56)	(175)
Net cash provided by operating activities	4,038	3,045	1,823
Cash flows from investing activities:			
Capital expenditures	(2,355)	(1,730)	(2,306)
Deferred turnaround and catalyst costs	(629)	(535)	(415)
Acquisition of Pembroke Refinery, net of cash acquired	(1,691)	—	—
Acquisition of Meraux Refinery	(547)	—	—
Acquisitions of ethanol plants	—	(260)	(577)
Minor acquisitions	(37)	—	(29)
Proceeds from the sale of the Paulsboro Refinery	—	547	—
Proceeds from the sale of the Delaware City Refinery assets and associated terminal and pipeline assets	—	220	—
Proceeds from the sale of investment in Cameron Highway Oil Pipeline Company	—	330	—
Other investing activities, net	(39)	23	35
Net cash used in investing activities	(5,298)	(1,405)	(3,292)
Cash flows from financing activities:			
Non-bank debt:			
Borrowings	—	1,544	998
Repayments	(774)	(517)	(285)
Bank credit agreements:			
Borrowings	—	—	39
Repayments	(4)	—	(39)
Accounts receivable sales facility:			
Proceeds from the sale of receivables	150	1,225	950
Repayments	—	(1,325)	(850)
Proceeds from the sale of common stock, net of issuance costs	—	—	799
Proceeds from the exercise of stock options	49	20	11
Purchase of common stock for treasury	(349)	(13)	(4)
Common stock dividends	(169)	(114)	(324)
Contributions from noncontrolling interests	22	—	—
Other financing activities, net	9	(4)	(6)
Net cash provided by (used in) financing activities	(1,066)	816	1,289
Effect of foreign exchange rate changes on cash	16	53	65
Net increase (decrease) in cash and temporary cash investments	(2,310)	2,509	(115)
Cash and temporary cash investments at beginning of year	3,334	825	940
Cash and temporary cash investments at end of year	$ 1,024	$ 3,334	$ 825

Valero has invested their net cash from operating activities into capital expenditures and acquisitions of additional refineries.

VALERO ENERGY CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Millions of Dollars)

	Year Ended December 31,		
	2011	2010	2009
Net income (loss)	$ 2,089	$ 324	$ (1,982)
Other comprehensive income (loss):			
Foreign currency translation adjustment, net of income tax expense of $ - , $ - , and $ -	(122)	158	375
Pension and other postretirement benefits:			
Net gain (loss) arising during the year, net of income tax (expense) benefit of $101, $5, and $(132)	(188)	(14)	219
Net (gain) loss reclassified into income, net of income tax expense (benefit) of $2, $3, and $(2)	(1)	(4)	(1)
Net gain (loss) on pension and other postretirement benefits	(189)	(18)	218
Derivative instruments designated and qualifying as cash flow hedges:			
Net gain (loss) arising during the year, net of income tax (expense) benefit of $(11), $1, and $(44)	21	(1)	81
Net (gain) loss reclassified into income, net of income tax expense (benefit) of $1, $62, and $72	(2)	(116)	(133)
Net gain (loss) on cash flow hedges	19	(117)	(52)
Other comprehensive income (loss)	(292)	23	541
Comprehensive income (loss)	1,797	347	(1,441)
Less: Comprehensive loss attributable to noncontrolling interests	(1)	—	—
Comprehensive income (loss) attributable to Valero Energy Corporation stockholders	$ 1,798	$ 347	$ (1,441)

In Valero's Statement of Comprehensive Income, derivative instruments that are designated as cash flow hedges are shown. However, the net gain on cash flow hedges of $19 million is quite insignificant relative to its comprehensive income of $1.8 billion.

Risk Management:

Valero's Board of Directors considers oversight of Valero's risk management efforts to be a responsibility of the full board. The Board had a Finance Committee in 2010 which reviewed and monitored the investment policies and performance of their Thrift Plan and pension plans, and insurance and risk management policies and programs.

The most important risk factor is the volatility of refining margins, along with global economic activity. This is primarily affected by the relationship, or margin, between refined product prices and the prices for crude oil and other feedstocks. It is also affected by regional and global supply and demand for crude oil and refined products, the U.S. and global economies, U.S. relationships with foreign governments, and governmental regulation. A significant portion of Valero's profitability is derived from the ability to purchase and process crude oil feedstocks that historically have been cheaper than benchmark crude oils, such as Louisiana Light Sweet (LLS) and Brent crude oils. Historically, refining margins have been volatile, and Valero believes they will continue to be volatile in the future.

The second risk factor is uncertainty and illiquidity in credit and capital markets. This could impair their ability to obtain credit and financing on acceptable terms, and can adversely affect the financial strength of their business partners. Standard and Poor has rated Valero with BBB and a stable outlook, along with the other two major rating agencies Moody's and Fitch. However, they could downgrade their rating and this would lead to increased borrowing costs.

The third risk factor is compliance with, and changes in, environmental laws. Valero has emissions into the air and could release contaminants into the soil, surface water or groundwater. The level of expenditures required for environmental matters could increase in the future due to more stringent and new environmental laws and regulations.

The fourth risk factor is a disruption in Valero's ability to obtain crude oil. They have suppliers originating in the Middle East, Africa, Asia, North America and South America. There are political, geographic and economic risks in these regions that could affect Valero. There is also the possibility for unavailability of alternative sources of crude oil or volumes at unfavourable prices.

The fifth risk factor is Valero's reliance on third-party transportation of crude oil and refined products. This is subject to interruptions in supply and increased costs due to weather events, accidents, governmental regulation or third-party actions.

Commodity Price Risk:

Valero is exposed to market risks related to the price of crude oil, refined products (primarily gasoline and distillate), grain (primarily corn), and natural gas used in their refining operations. To reduce the impact of price volatility on their results of operations and cash flows, we enter into commodity derivative instruments, including swaps, futures, and options to hedge: inventories and firm commitments to purchase inventories generally for amounts by which the current year LIFO inventory levels differ from the previous year-end LIFO inventory levels, and forecasted feedstock and refined product purchases, refined product sales, natural gas purchases, and corn purchases to lock in the price of those forecasted transactions at existing market prices that they deem favorable.

Valero uses future markets for liquidity, swaps for price exposure, and certain commodity derivative instruments for trading purposes to take advantage of existing market conditions related to future results of operations and cash flows. These positions are monitored and managed on a daily basis by a risk control group to ensure compliance with the risk management policy that has been approved by the board of directors.

	Derivative Instruments Held For	
	Non-Trading Purposes	Trading Purposes
December 31, 2011		
Gain (loss) in fair value resulting from:		
10% increase in underlying commodity prices	$ (156)	$ 1
10% decrease in underlying commodity prices	156	2
December 31, 2010		
Gain (loss) in fair value resulting from:		
10% increase in underlying commodity prices	(199)	—
10% decrease in underlying commodity prices	189	(1)

This sensitivity analysis shows that a 10% decrease in underlying commodity prices would lead to a $156 million gain in fair value.

For risk management, Valero uses fair value hedges, cash flow hedges, economic hedges, and trading derivatives.

Fair value hedges are used to hedge price volatility in certain refining inventories and firm commitments to purchase inventories. The level of activity is based on the level of Valero's operating inventories and represents the amount by which the inventories differ from their previous year-end LIFO inventory levels.

Derivatives in Fair Value Hedging Relationships	Location of Gain (Loss) Recognized in Income on Derivatives	Year Ended December 31, 2011	2010	2009
Commodity contracts:				
Gain (loss) recognized in income on derivatives	Cost of sales	$ (6)	$ 45	$ (75)
Gain (loss) recognized in income on hedged item	Cost of sales	(23)	(40)	69
Gain (loss) recognized in income on derivatives (ineffective portion)	Cost of sales	(29)	5	(6)

Derivative Instrument	Notional Contract Volumes by Year of Maturity 2012
Crude oil and refined products:	
Futures – long	15,398
Futures – short	35,708
Physical contracts – long	20,310

Cash flow hedges are used to hedge price volatility in certain forecasted feedstock, refined product purchases, refined product sales and natural gas purchases. Their objective is to lock in prices that Valero deems favourable.

Derivatives in Cash Flow Hedging Relationships	Location of Gain (Loss) Recognized in Income on Derivatives	Year Ended December 31, 2011	2010	2009
Commodity contracts:				
Gain (loss) recognized in OCI on derivatives (effective portion)		$ 32	$ (2)	$ 125
Gain (loss) reclassified from accumulated OCI into income (effective portion)	Cost of sales	3	178	337
	Loss from discontinued operations, net of income taxes	—	—	(132)
Gain (loss) recognized in income on derivatives (ineffective portion)	Cost of sales	5	—	3

Derivative Instrument	Notional Contract Volumes by Year of Maturity 2012
Crude oil and refined products:	
Swaps – long	5,961
Swaps – short	5,961
Futures – long	38,201
Futures – short	36,637
Physical contracts – short	1,564

Economic hedges are used to manage price volatility in certain refinery feedstock, refined product, and corn inventories; forecasted refinery feedstock, refined product, and corn purchases, and refined product sales; and fixed-price corn purchase contracts. These are not designated as hedging instruments for account purposes due to difficulty of establishing the required documentation for hedge deferral accounting. The objectives are consistent with the objectives for fair value and cash flow hedges.

Derivatives Designated as Economic Hedges and Other Derivative Instruments	Location of Gain Recognized in Income on Derivatives	Year Ended December 31, 2011	2010	2009
Commodity contracts	Cost of sales	$ (349)	$ (210)	$ 55
Foreign currency contracts	Cost of sales	18	(24)	(22)
Other contract	Cost of sales	29	—	—
		(302)	(234)	33
Alon earn-out agreement	Other income, net	—	—	20
Alon earn-out hedge commodity contracts	Other income, net	—	—	(62)
		—	—	(42)
Total		$ (302)	$ (234)	$ (9)

Derivative Instrument	Notional Contract Volumes by Year of Maturity 2012	2013
Crude oil and refined products:		
Swaps – long	67,862	—
Swaps – short	67,040	—
Futures – long	70,211	—
Futures – short	65,339	—
Options – long	10	—
Corn:		
Futures – long	18,530	—
Futures – short	49,565	780
Physical contracts – long	20,377	833

Trading derivatives are used to take advantage of existing market conditions related to future results of operations and cash flows. The cost of sales impact of these derivatives was only $23 million in 2011.

Derivative Instrument	Notional Contract Volumes by Year of Maturity 2012	2013
Crude oil and refined products:		
Swaps – long	15,128	2,000
Swaps – short	14,968	2,000
Futures – long	50,126	825
Futures – short	50,133	825
Options – long	300	—
Options – short	600	—
Natural gas:		
Futures – long	400	—
Futures – short	400	—
Options – long	2,000	—
Corn:		
Swaps – long	1,050	—
Swaps – short	3,355	—
Futures – long	2,510	—
Futures – short	2,310	—

Trading Derivatives	Location of Gain (Loss) Recognized in Income on Derivatives	Year Ended December 31, 2011	2010	2009
Commodity contracts	Cost of sales	$ 23	$ 8	$ 126

Interest Rate Risk:

Valero manages their exposure to changing interest rates through the use of a combination of fixed-rate and floating-rate debt. In addition, Valero occasionally uses interest rate swap agreements to manage their fixed to floating interest rate position by converting certain fixed-rate debt to floating-rate debt. There were no outstanding interest rate derivatives as of December 31, 2011 and 2010.

Foreign Currency Risk:

Valero is exposed to exchange rate fluctuations on transactions entered into by their Canadian and European operations that are denominated in currencies other than the local (functional) currencies of those operations. To manage their exposure to these exchange rate fluctuations, Valero uses foreign currency exchange and purchase contracts. These contracts are not designated as hedging instruments for accounting purposes, and therefore they are classified as economic hedges. As of December 31, 2011, Valero had commitments to purchase $751 million U.S. dollars. The market risk was minimal on the contracts and only resulted in a $3 million loss.

Compliance Program Risk:

Valero is exposed to volatility in the price of financial instruments associated with various governmental and regulatory compliance programs that they must purchase in the open market to comply with these programs. As of December 31, 2011, Valero had purchased futures contracts – long for 68,000 metric tons of EU emission allowances that were entered into as economic hedges. This is due to their Pembroke Refinery in the U.K. being subject to a maximum amount of carbon dioxide that it can emit each year under the EU Emissions Trading Scheme.

Lastly, here are the fair value measurements of Valero's derivatives. Total asset and liability derivatives are around $2 billion, which is quite insignificant compared to their 2011 operation revenue of $126 billion.

	Fair Value Measurements Using				
	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Netting Adjustments	Total as of December 31, 2011
Assets:					
Commodity derivative contracts	$ 2,038	$ 78	$ —	$ (1,940)	$ 176
Physical purchase contracts	—	(2)	—	—	(2)
Investments of certain benefit plans	84	—	11	—	95
Other investments	—	—	—	—	—
Liabilities:					
Commodity derivative contracts	1,864	101	—	(1,940)	25
Obligations of certain benefit plans	34	—	—	—	34

	Balance Sheet Location	December 31, 2011 Asset Derivatives	December 31, 2011 Liability Derivatives
Derivatives designated as hedging instruments			
Commodity contracts:			
Futures	Receivables, net	$ 264	$ 240
Swaps	Accrued expenses	36	46
Total		$ 300	$ 286
Derivatives not designated as hedging instruments			
Commodity contracts:			
Futures	Receivables, net	$ 1,636	$ 1,624
Swaps	Prepaid expenses and other	4	2
Swaps	Accrued expenses	38	51
Options	Receivables, net	2	—
Options	Accrued expenses	—	2
Physical purchase contracts	Inventories	—	2
Total		$ 1,680	$ 1,681
Total derivatives		$ 1,980	$ 1,967

Inter Pipeline Fund

Business overview

Created in 1997, Inter Pipeline Fund is a major petroleum transportation, storage and natural gas liquids extraction business based in Calgary, Alberta, Canada. Inter Pipeline is a publicly traded limited partnership that owns and operates a diversified combination of energy infrastructure assets in western Canada, the United Kingdom, Denmark, Germany and Ireland. This asset portfolio generates long-term and predictable cash flows, thereby providing unitholders with a growing and stable source of monthly cash distributions.

Inter Pipeline operates approximately 6,100 kilometres of petroleum pipelines and 4.8 million barrels of storage in western Canada. These systems transport approximately 950,000 barrels per day of oil sands bitumen and conventional crude oil, representing approximately 15% of total western Canadian conventional volumes and approximately 35% of oil sands volumes.

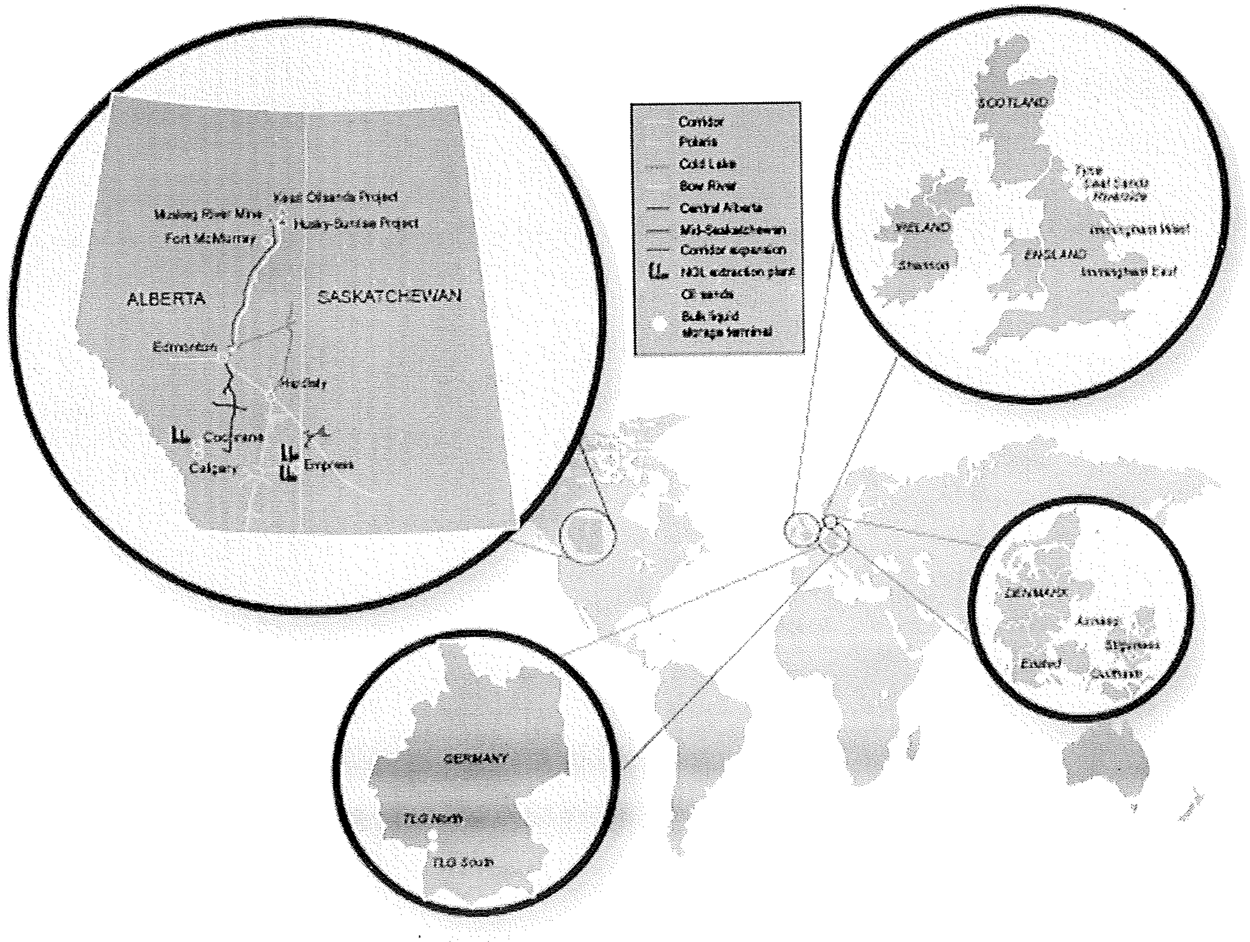
In addition, Inter Pipeline is one of North America's largest natural gas liquids extraction businesses with ownership in three major extraction facilities located in southern Alberta. These facilities have the capacity to process 6.2 bcf/d of natural gas, and capacity to produce approximately 200,000 b/d of natural gas liquids. Inter Pipeline's NGL business currently processes approximately 40% of the natural gas exported from the province of Alberta.

Inter Pipeline's bulk liquid storage business segment is the fourth largest independent storage business in Europe. The bulk liquid storage segment operates through two wholly owned entities. Simon Storage Limited (Simon) holds Inter Pipeline's storage operations in the United Kingdom, Ireland and Germany. Inter Pipeline's other European entity, Inter Terminals, holds bulk liquid storage assets in Denmark.

Simon Storage is a recognized leader in the bulk liquid storage sector. Simon handles, blends and stores over 250 different products primarily comprised of petroleum, petrochemical and alternative fuels. Simon owns and operates eight bulk liquid storage terminals located on the coasts of the United Kingdom, Germany and Ireland with a combined liquid storage capacity of approximately eight million barrels. Other complementary services include facilities management and engineering services to several of the world's largest integrated energy companies.

Inter Terminals operates four large terminals that are strategically located along the Danish Straits, which is the third most active petroleum transit channel in the world. The four terminals have a combined storage capacity of approximately 10.7 million barrels in 51 tanks. A variety of petroleum products are handled at the four terminals.

Inter Pipeline's Class A units trade on the Toronto Stock Exchange under the symbol IPL.UN.



Stock Details

The closing price on March 14th was \$11.68 CAD. Their high and low from the past 52 weeks was \$19.73 and \$14.35. With265.93 million shares outstanding, IPL has a market cap of \$5,187.38 M.

Financial Statement

Balance Sheet

Consolidated Balance Sheets

(thousands of Canadian dollars)	As at December 31 2011	As at December 31 2010 (restated - note 24)	As at January 1 2010 (restated - note 24)
ASSETS			
Current Assets			
Cash and cash equivalents (note 20)	$ 50,021	$ 22,507	$ 18,208
Accounts receivable	109,145	129,501	122,122
Derivative financial instruments (note 16)	5,167	8,916	3,738
Prepaid expenses and other deposits	10,917	13,118	17,927
Total Current Assets	175,250	174,042	161,995
Non-Current Assets			
Derivative financial instruments (note 16)	9,772	10,067	9,239
Employee benefits (note 10)	-	4,488	-
Property, plant and equipment (note 5)	4,081,038	4,011,754	3,774,830
Goodwill and intangible assets (note 6)	502,009	515,291	535,550
Total Assets	$ 4,768,067	$ 4,715,642	$ 4,481,614
LIABILITIES AND PARTNERS' EQUITY			
Current Liabilities			
Cash distributions payable (note 7)	$ 23,114	$ 20,644	$ 19,098
Accounts payable and accrued liabilities (note 13)	162,499	156,959	136,191
Current income taxes payable (note 11)	49,753	764	123
Derivative financial instruments (note 16)	25,746	25,144	16,655
Deferred revenue	4,583	6,339	3,621
Current portion of long-term debt (note 8)	90,989	386,584	123,600
Commercial paper (note 8)	1,464,369	1,576,062	1,583,327
Total Current Liabilities	1,821,053	2,172,496	1,882,615
Non-Current Liabilities			
Long-term debt (note 8)	1,102,288	832,967	903,988
Long-term payable	9,772	9,096	9,212
Derivative financial instruments (note 16)	11,035	4,169	4,081
Provisions (note 9)	37,018	34,725	34,852
Employee benefits (note 10)	6,989	6,500	13,459
Long-term deferred revenue and other liabilities	17,652	13,172	8,730
Deferred income taxes (note 11)	342,474	314,468	314,594
Total Liabilities	3,348,281	3,387,593	3,171,531
Commitments (notes 5 and 14)			
Partners' Equity			
Partners' equity (note 12)	1,452,066	1,360,735	1,319,117
Total reserves (note 12)	(32,280)	(32,686)	(9,034)
Total Partners' Equity	1,419,786	1,328,049	1,310,083
Total Liabilities and Partners' Equity	$ 4,768,067	$ 4,715,642	$ 4,481,614

Analysis of IPL's balance sheet shows that the company has derivatives in both assets and liabilities section of the balance sheet. Derivative instruments designated as liabilities have a value of $36781 thousand which is significantly higher than the derivative instruments designated as assets.

Income Statement

Consolidated Statements of Net Income

(thousands of Canadian dollars)	Twelve Months Ended December 31 2011	2010 *(restated - note 24)*
REVENUES		
Operating revenue	$ 1,151,567	$ 997,063
EXPENSES		
Shrinkage gas	278,114	317,065
Operating (note 19)	285,272	252,541
Depreciation and amortization	99,716	87,553
Financing charges (note 18)	80,216	40,298
General and administrative (note 19)	54,824	45,460
Unrealized change in fair value of derivative financial instruments (note 16)	14,539	3,568
Management fee to General Partner (note 13)	10,641	7,836
Loss on disposal of assets	23	723
	823,345	755,044
INCOME BEFORE INCOME TAXES	328,222	242,019
Provision for income taxes (note 11)		
Current	51,590	1,440
Deferred	28,700	4,626
	80,290	6,066
NET INCOME	$ 247,932	$ 235,953
Net income per Partnership unit (note 12)		
Basic and diluted	$ 0.95	$ 0.92

Consolidated Statements of Comprehensive Income

(thousands of Canadian dollars)	Twelve Months Ended December 31 2011	2010 *(restated - note 24)*
NET INCOME	$ 247,932	$ 235,953
OTHER COMPREHENSIVE INCOME (LOSS) (note 12)		
Unrealized gain (loss) on translating financial statements of foreign operations	4,472	(28,395)
Actuarial (loss) gain on defined pension benefit obligation (note 10)	(6,167)	5,390
Transfer of losses on derivatives previously designated as cash flow hedges to net income (note 16)	809	808
Income tax relating to components of other comprehensive income (note 11)	1,292	(1,455)
	406	(23,652)
COMPREHENSIVE INCOME	$ 248,338	$ 212,301

The income statement shows that the unrealized change in fair value of financial derivative in 2011 becomes higher than it was in 2010. Also, the changes in interest rate benefit the company with 4million gains on oversea transactions.

Cash Flow Statement

Consolidated Statements of Cash Flows

(thousands of Canadian dollars)	Twelve Months Ended December 31 2011	2010 (restated - note 24)
OPERATING ACTIVITIES		
Net income	$ 247,932	$ 235,953
Items not involving cash:		
Depreciation and amortization	99,716	87,553
Loss on disposal of assets	23	723
Non-cash expense (recovery)	1,826	(1,802)
Unrealized change in fair value of derivative financial instruments	14,539	3,568
Deferred income tax expense	28,700	4,626
Proceeds from long-term deferred revenue and lease inducements	1,480	5,796
Pension plan payment	-	(4,052)
Funds from operations	394,216	332,365
Net change in non-cash operating working capital (note 20)	66,288	17,200
Cash provided by operating activities	460,504	349,565
INVESTING ACTIVITIES		
Expenditures on property, plant and equipment	(152,003)	(335,618)
Proceeds on sale of assets	474	390
Net change in non-cash investing working capital (note 20)	7,710	3,721
Cash used in investing activities	(143,819)	(331,507)
FINANCING ACTIVITIES		
Cash distributions (note 7)	(156,601)	(194,487)
(Decrease) increase in debt	(129,169)	180,689
Transaction costs on debt	(6,078)	(849)
Issuance of Partnership units, net of issue costs	-	152
Net change in non-cash financing working capital (note 20)	2,470	1,546
Cash used in financing activities	(289,378)	(12,949)
Effect of foreign currency translation on foreign currency denominated cash	207	(810)
Increase in cash and cash equivalents	27,514	4,299
Cash and cash equivalents, beginning of year	22,507	18,208
Cash and cash equivalents, end of year	$ 50,021	$ 22,507

Cash taxes paid	$ 2,643	$ 756
Cash interest paid	$ 70,337	$ 54,719

This is the cash flow statement for year ended 2011 and 2010. It again shows the cash flows related to derivative usage and related activities, as well as gains or losses on foreign exchange.

Performance Overview

	Three Months Ended December 31		Years Ended December 31		
(millions, except per unit and % amounts)	2011	2010 *(restated)*	2011	2010 *(restated)*	2009[7]
Revenues					
Oil sands transportation	$ 71.3	$ 36.8	$ 284.8	$ 144.5	$ 130.6
NGL extraction	129.1	149.1	584.6	594.3	529.1
Conventional oil pipelines	46.3	40.7	177.8	157.4	148.9
Bulk liquid storage	26.5	25.9	104.4	100.9	116.0
	$ 273.2	$ 252.5	$ 1,151.6	$ 997.1	$ 924.6
Funds from operations[1][2][3][4]					
Oil sands transportation	$ 39.5	$ 17.9	$ 165.7	$ 73.8	$ 73.9
NGL extraction	44.1	46.8	202.5	176.9	133.1
Conventional oil pipelines	33.5	26.8	133.2	113.0	110.8
Bulk liquid storage	9.4	8.4	37.2	39.8	51.3
Corporate costs	(36.4)	(19.1)	(144.4)	(71.1)	(65.0)
	$ 90.1	$ 80.8	$ 394.2	$ 332.4	$ 304.1
Per unit[1]	$ 0.35	$ 0.31	$ 1.52	$ 1.29	$ 1.28
Net income	$ 45.8	$ 60.1	$ 247.9	$ 236.0	$ 157.7
Per unit – basic and diluted	$ 0.17	$ 0.23	$ 0.95	$ 0.92	$ 0.66
Cash distributions[5]	$ 65.1	$ 59.3	$ 251.7	$ 232.6	$ 202.4
Per unit[5]	$ 0.2475	$ 0.2300	$ 0.9675	$ 0.9050	$ 0.8450
Units outstanding (basic)					
Weighted average	262.7	257.8	259.9	256.9	238.1
End of period	264.2	258.0	264.2	258.0	254.6
Capital expenditures					
Growth[1]	$ 34.2	$ 221.0	$ 132.6	$ 322.9	$ 573.4
Sustaining[1]	7.2	5.7	19.4	16.7	18.0
	$ 41.4	$ 226.7	$ 152.0	$ 339.6	$ 591.4
Payout ratio before sustaining capital[1]	72.3%	73.5%	63.9%	70.0%	66.6%
Payout ratio after sustaining capital[1]	78.5%	79.1%	67.2%	73.7%	70.8%

	As at December 31		
(millions, except per unit and % amounts)	2011	2010 *(restated)*	2009[7]
Total assets	$ 4,768.1	$ 4,715.6	$ 4,472.7
Total debt[6]	$ 2,672.1	$ 2,801.2	$ 2,619.7
Total partners' equity	$ 1,419.8	$ 1,328.0	$ 1,320.1
Enterprise value[1]	$ 7,593.3	$ 6,651.2	$ 5,372.4
Total debt to total capitalization[1]	65.3%	67.8%	66.5%
Total recourse debt to capitalization[1]	38.9%	41.0%	35.7%

This statement shows that IPL has total revenue of 273.2 million in the fourth quarter of

201. The NGL extraction department account for the biggest part of the total revenue among its all four operating business.

Risk Management Philosophy

Inter Pipeline utilizes derivative financial instruments to manage liquidity and market risk exposure to changes in commodity prices, foreign currencies and interest rates. Risk management policies are intended to minimize the volatility of Inter Pipeline's exposure to commodity price, foreign exchange and interest rate risk to assist with stabilizing FFO*. Inter Pipeline endeavours to accomplish this primarily through the use of derivative financial instruments. Inter Pipeline's policy prohibits the use of derivative financial instruments for speculative purposes. All hedging policies are authorized and approved by the board of directors through Inter Pipeline's risk management policy.

Inter Pipeline enters into the following types of derivative financial instruments: commodity price swap agreements, foreign currency exchange contracts, power price hedges and heat rate and interest rate swap agreements. The mark-to-market or fair value of these financial instruments is recorded as an asset or liability and any change in the fair value recognized as an unrealized change in fair value of these derivative financial instruments in the calculation of net income. When the financial instrument matures, any realized gain or loss is recorded in net income.

Risk Factors

The most important risk factors are the demand risk and supply risk. Inter Pipeline's business depends, in part, on the level of demand for petroleum in the geographic areas in which deliveries are made by the pipelines and the ability and willingness of shippers having access or rights to utilize the pipelines to supply such demand. Future throughput on the pipelines and replacement of petroleum reserves in the pipelines' service areas is dependent upon the success of producers operating in those areas in exploiting their existing reserve bases and exploring for and developing additional reserves. Reserve bases necessary to maintain long term supply cannot be assured, and petroleum price declines, without corresponding reductions in costs of production, may reduce or eliminate the profitability of production and therefore the supply of petroleum for the pipelines

The company also considers competition and contract as another risk factor. While Inter Pipeline attempts to renew contracts on the same or similar terms and conditions, there can be no assurance that such contracts will continue to be renewed or, if renewed, will be renewed upon favourable terms to Inter Pipeline Inter Pipeline's supply contracts with producers in the areas serviced by the conventional oil pipelines business are based on market-based toll structures negotiated from time to time with individual producers. The pipelines are subject to competition for volumes transported by trucking or by other pipelines near the areas serviced by the pipelines.

Operational risk could also affect the company. The pipelines are connected to various third party mainline systems such as the Enbridge system, Express pipeline, the Trans Mountain pipeline, and the Plains Milk River system, as well as refineries in the Edmonton area. Operational disruptions or apportionment on third party systems or refineries may prevent the full utilization of the pipelines.

The fifth risk factor raises because of multi-jurisdictional regulation. The pipelines are subject to intra-provincial and multi-jurisdictional regulation, including regulation by the Energy Resources Conservation Board in Alberta, and the Ministry of Energy and Resources in Saskatchewan

The availability of natural gas and composition affect the production and the quality of the product. The volumes of natural gas processed by the NGL extraction business depend on the throughput of the Foothills and TransCanada Alberta systems from which the NGL extraction facilities source their natural gas supply. The production of NGL from the NGL extraction facilities is largely dependent on the quantity and composition of the NGL within the natural gas streams that supply the NGL extraction business.

The rival in the refinery industry could also bring risk to IPL's business. The NGL extraction facilities are subject to natural gas markets and, as such, are subject to competition for gas supply from all natural gas markets served by the TransCanada Alberta System or the Foothills System The NGL extraction facilities are subject to competition from other extraction plants that are in the general vicinity of the NGL extraction facilities or that may be constructed upstream of or in parallel to the NGL extraction facilities.

Execution and reputational risk are also important to be realized. Inter Pipeline's ability to successfully execute the development of its growth projects may be influenced by capital constraints, third party opposition, changes in customer support over time, delays in or changes to government and regulatory approvals, cost escalations, construction delays, shortages and in-service delays. Reputational risk is the potential for negative impacts that could result from the deterioration of Inter Pipeline's reputation with key stakeholders. The potential for harming Inter Pipeline's reputation exists in every business decision and all risks can have an impact on reputation.

Credit risk

Inter Pipeline's credit risk exposure relates primarily to customers and financial counterparties holding

cash and derivative financial instruments, with a maximum exposure equal to the carrying amount of these instruments. Credit risk is managed through credit approval and monitoring procedures. The credit worthiness assessment takes into account available qualitative and quantitative information about the counterparty including, but not limited to, financial status and external credit ratings. Depending on the outcome of each assessment, guarantees or some other credit enhancement may be requested as34 security. Inter Pipeline attempts to mitigate its exposure by entering into contracts with customers that may permit netting or entitle Inter Pipeline to lien or take product in kind and/or allow for termination of the contract on the occurrence of certain events of default. Each business segment monitors outstanding accounts receivable on an ongoing basis.

Concentrations of credit risk associated with accounts receivable relate to a limited number of principal customers in the oil sands transportation and NGL extraction business segments, the majority of which are affiliated with investment grade corporations in the energy and chemical industry sectors. At December 31, 2011, accounts receivable associated with these two business segments were $78.5 million or 72% of total accounts receivable outstanding. Inter Pipeline believes the credit risk associated with the remainder of accounts receivable is minimized due to diversity across business units and customers.

With respect to credit risk arising from cash and cash equivalents, deposits and derivative financial instruments, Inter Pipeline believes the risk of non-performance of counterparties is minimal as cash, deposits and derivative financial instruments outstanding are predominantly held with major financial institutions or investment grade corporations. Inter Pipeline actively monitors the risk of non-performance of its customers and financial counterparties.

At December 31, 2011, accounts receivable outstanding meeting the definition of past due and impairedis immaterial.

Frac- spread risk management

Inter Pipeline is exposed to frac-spread risk which is the difference between the weighted average propane-plus price at Mont Belvieu, Texas and the monthly index price of AECO natural gas purchased for shrinkage calculated in USD/USG. Derivative financial instruments are utilized to manage frac-spread risk. Inter Pipeline transacts with third party counterparties to sell a notional portion of its NGL products and purchase related notional quantities of natural gas at fixed prices. NGL price swap agreements are transacted in US currency, therefore Inter Pipeline also enters into foreign exchange contracts to sell US dollars to convert notional US dollar amounts in the NGL swaps.

(millions)	Fair value of derivative financial instruments	Change in net income based on 10% increase in prices/rates[1]	Change in net income based on 10% decrease in prices/rates[1]
NGL[2]	$ (13.7)	$ (16.3)	$ 16.3
AECO natural gas	(15.6)	3.0	(3.0)
Foreign exchange	(7.2)	(15.5)	15.5
Frac-spread risk management	$ (36.5)		

Power price risk management

Inter Pipeline uses derivative financial instruments to manage power price risk in its NGL extraction and conventional oil pipelines business segments. Inter Pipeline enters into financial heat rate swap and power price swap contracts to manage power price risk exposure in these businesses. As at December 31, 2011, there are no heat rate or electricity price swap agreements outstanding.

Foreign Exchange Risk Management

Inter Pipeline uses derivative financial instruments to manage power price risk in its NGL extraction and conventional oil pipelines business segments. Inter Pipeline enters into financial heat rate swap and power price swap contracts to manage power price risk exposure in these businesses.

Interest Rate Risk Management

Based on the variable rate obligations outstanding at December 31, 2011, a 1% change in interest rates at this date could affect interest expense on credit facilities by approximately $14.7 million, assuming all other variables remain constant. The entire $14.7 million relates to the $1.55 billion Corridor credit facility and is recoverable through the terms of the Corridor FSA, therefore there would be no after-tax income impact

Here are the fair value measurements of IPL's derivatives.

	Three Months Ended December 31		Years Ended December 31	
(millions)	2011	2010	2011	2010
Realized (loss) gain on derivative financial instruments				
Revenues				
NGL swaps	$ (10.4)	$ (2.2)	$ (35.5)	$ 0.3
Foreign exchange swaps (frac-spread hedges)	-	1.0	4.7	1.7
	(10.4)	(1.2)	(30.8)	2.0
Shrinkage gas expense				
Natural gas swaps	(4.7)	(6.6)	(13.8)	(19.3)
Operating expenses				
Electricity price swaps	0.3	-	1.2	0.1
Heat rate swaps	1.3	0.4	5.0	1.7
	1.6	0.4	6.2	1.8
Financing charges				
Interest rate swaps	**0.7**	**0.7**	**2.8**	**3.7**
Total realized loss on derivative financial instruments	**(12.8)**	**(6.7)**	**(35.6)**	**(11.8)**
Unrealized (loss) gain on derivative financial instruments				
NGL swaps	(5.1)	(17.1)	3.1	(7.5)
Natural gas swaps	(8.7)	6.4	(4.7)	(4.9)
Foreign exchange swaps (frac-spread hedges)	5.2	4.3	(11.7)	5.4
Electricity price swaps	(0.3)	0.3	(0.3)	0.3
Heat rate swaps	(1.4)	0.3	(2.0)	2.0
Interest rate swaps	0.5	0.6	1.9	1.9
Transitional transfers [1]	(0.2)	(0.2)	(0.8)	(0.8)
Total unrealized loss on derivative financial instruments	(10.0)	(5.4)	(14.5)	(3.6)
Total loss on derivative financial instruments	$ (22.8)	$ (12.1)	$ (50.1)	$ (15.4)

(1) Transfer of gains and losses on derivatives previously designated as cash flow hedges from accumulated other comprehensive income.