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Capital Markets Special Report

The NAIC's Capital Markets Bureau monitors developments in the capital markets globally and analyzes their potential impact on the investment portfolios of US insurance companies. A list of archived Capital Markets Bureau Special Reports is available via the index

The Current Oil Shock: Modest Impact on Insurance Industry Investment Portfolios

Key Points:

- The price of crude oil has slumped more than 50% from its mid-June 2014 peak of $107 per barrel.
- Sluggish economic activity around the world, particularly in Europe and Asia, have weakened oil demand, while supply has continued to grow, driven by U.S. oil production.
- The securities of oil-producing companies are under pressure, and the economies of certain oil-exporting countries have also been hit, quite hard in some cases.
- U.S. insurers' worldwide oil-and-gas-related bond and stock exposure totaled 4.1% of total cash and invested assets as of Dec. 31, 2013.
- As of year-end 2013, the U.S. insurance industry had modest exposure to key oil-exporting countries, totaling 3% of total cash and invested assets. Exposures to problematic countries such as Venezuela and Russia are small.
- The insurance industry has little exposure to other potential areas of risk that could be affected by the oil price shock, such as municipal securities issued in oil-producing regions, or the bonds and stocks of financial institutions with heavy oil exposure.

The Current Oil Shock and the U.S. Insurance Industry

For much of the past four years, the economic effects of the high price of oil and petroleum products were the subject of much discussion, detailed in a Capital Markets Special Report dated April 15, 2011. In the past eight months, however, the tables have turned; the global price of crude oil has been in steady decline since mid-June 2014, and in December, the downtrend steepened, as described in a Dec. 17, 2014, Capital Markets "Hot Spot" article. As oil prices have declined further, the effect on the global economy and world financial markets has become more pervasive, affecting a wide range of assets either directly or indirectly. Still, the industry's exposure to the oil and gas industry itself is modest at $226 billion (4.1% of total cash and invested assets) as of Dec. 31, 2013; the industry also has $169 billion of exposure to oil-exporting countries (3.1% of cash and invested assets—not mutually exclusive from the industry's oil and gas industry exposure). The industry is also indirectly exposed to oil through investments in financial institutions that lend to oil producers, suppliers of goods and services to the oil sector, municipalities whose revenue base is dependent on energy sales, and real estate securities that may have concentrations in oil-rich geographies. No one of these exposures is material by itself, and the industry's aggregate exposure to falling oil prices probably is manageable, albeit more significant.

Oil Prices Plummet

The global price of crude oil has been in a major downtrend since peaking in mid-June 2014 at more than $100. The price of New York-traded West Texas Intermediate (WTI)—the world's most liquid benchmark variety of crude—plunged through $50 per barrel on Jan. 4, for the first

time in more than five years. Brent—another benchmark variety produced in the North Sea—dipped below $55 on the same day. WTI has rebounded to just about $50, about 12% from the 52-week low of $44.78 set on Jan. 13, while Brent trades around $60. By either benchmark, the price of crude oil is down more than 50% from its mid-June 2014 peak, as Chart 1 shows. The stocks and bonds of oil-producing companies are coming under pressure—high-yield exploration and production and oil-service companies, in particular—while the economies of oil-exporting countries such as Russia (where the ruble has declined precipitously to record lows), Nigeria, Iran and Venezuela have also been hit hard. (See Table 1 for insurance industry country exposures.) Ripple effects have begun to spread to the broader financial markets as investors assess the impact of lower energy prices on companies that supply goods, services and capital to the oil industry.

Prices in major commodity groups often move together when there are strong underlying trends in global economic activity. Hence, weak economic conditions in Europe and Asia dampened demand for many commodities in the past eight months, putting pressure on prices. Commodity price trends tend to diverge, however, when there are commodity-specific supply-side factors; with crude oil supply continuing to grow in excess of global demand, the price of oil has fallen sharply.

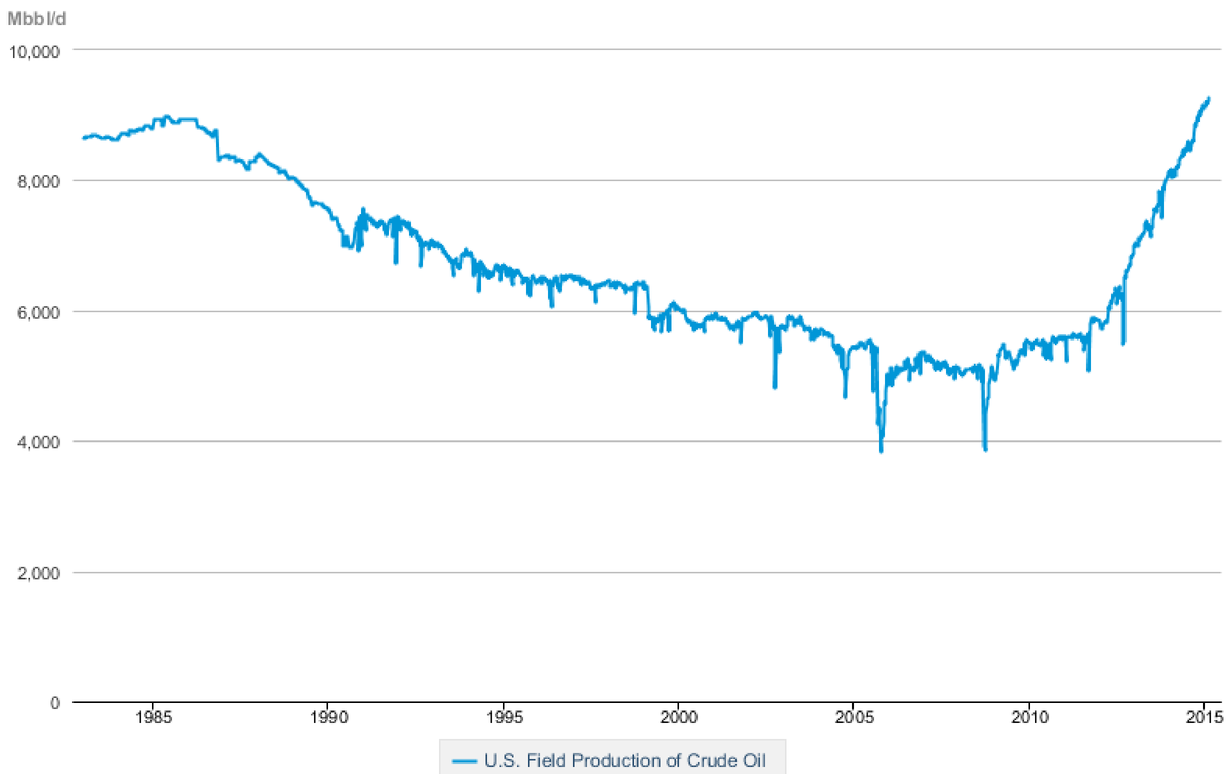
Chart 1: Price of Crude Oil, WTI (white) and Brent (green), $/Oil Barrel, 30 Years through Feb. 2014

Causes of the Oil Collapse

Commodity prices are affected by market fundamentals (supply and demand) and by market sentiment, or expectations, which play out in both the spot and futures markets. Changes in oil market fundamentals often lead to significant price swings, because supply and demand are both relatively inelastic in the short run. Slowing economic activity in Asia and Europe has depressed global oil demand. At the same time, global oil supply has increased, mainly driven by production from shale formations in the U.S. and Canada. U.S. crude output has soared in the past three years (Chart 2), reaching an estimated 9.3 million barrels per day in the week of Feb. 13 —the highest weekly level since the U.S. Energy Information Administration (EIA) began publishing the data in 1983. The surge in U.S. production accounts for most of the growth in world supply, while production from the 12 nations comprising the Organization of the Petroleum Exporting Countries (OPEC) has held relatively steady, and geopolitical risk—often a major cause of supply uncertainty— has largely remained in check in 2014-2015, despite occasional incidents around the globe. Indeed, Iraqi oil production increased by 330,000 barrels per day (b/d) in 2014 despite disruptions by terrorists. Supplies continue to mount; the EIA reported U.S. crude inventories in the week ending Feb. 13 reached a record 425.6 million barrels, up 17.5% year-over-year.

Chart 2: The Rise in U.S. Crude Oil Production

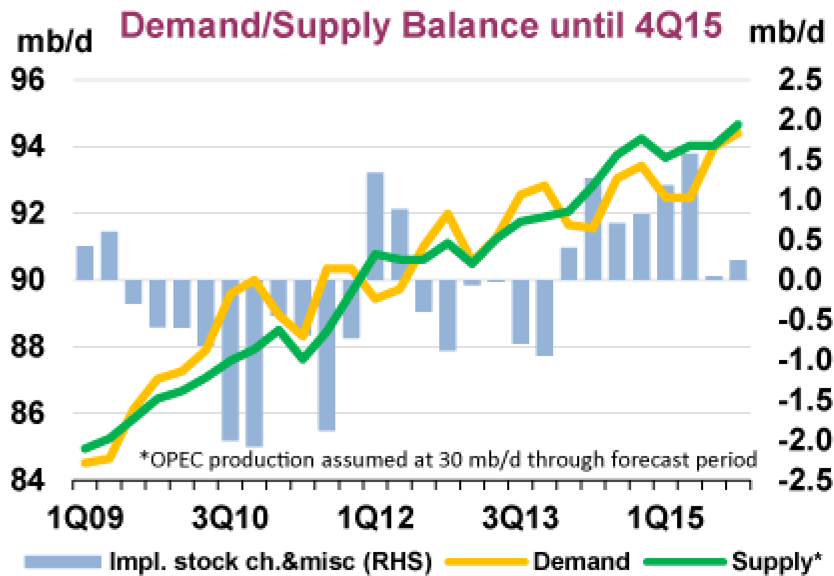
Weekly Supply Estimates



In the long run, oil demand and supply both tend to be more elastic. One would expect demand to increase over the long term because consumers lulled into complacency by low prices will worry less about conservation and fuel efficiency. Moreover, low energy prices are likely to boost overall economic activity. On the supply side, some oil inventory eventually will be liquidated as prices fall, and a sustained low oil price would render high-cost wells uneconomic, meaning some are likely to be shut in, and producers would be slower to develop some new fields. Current spot and futures prices suggest these longer-term expectations are not fully on investors' radar screens, although prices have rebounded slightly, as many oil producers recently cut their 2015 capital budgets, and oil drilling activity has slowed sharply, as illustrated by the 34% retreat in the Baker Hughes oil rig count from its Oct. 10 peak.

Standard & Poor's (S&P) and the International Energy Agency (IEA) both expect the oil market to be oversupplied by up to 2 million b/d in the first half of this year, as Chart 3 shows. Even though supply and demand are expected be more balanced by the end of 2015, S&P expects crude prices to remain relatively low in the intermediate term, with WTI and Brent averaging a respective $50 and $55 per barrel this year and $60 and $65 in 2016. One reason is that the economic malaise in Europe and Japan and slower growth in Asia are likely to continue through 2015. Another is that OPEC, led by Saudi Arabia, is expected to maintain — or even increase — its current rate of production in order to gain market share.

Chart 3: International Energy Agency Forecasts Oil Oversupply in 2015



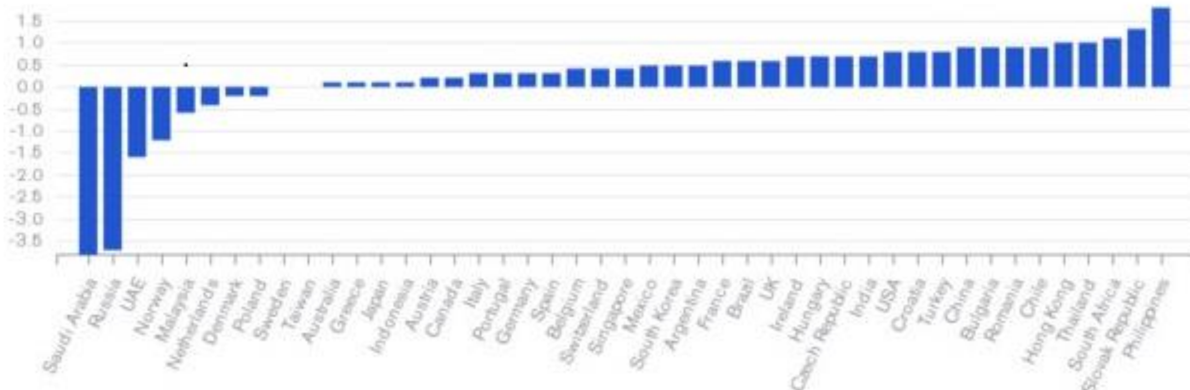
Source: International Energy Agency

Economic Effects

The downdraft in oil prices has sent ripples through the global economy and financial markets. While it seems clear that most of the developed world and a significant portion of the developing world should benefit from lower oil prices, the economic impact could be severe for a handful of oil-dependent countries if oil remains depressed for a sustained period. Chart 4 illustrates the expected effect on gross domestic product (GDP) growth across a variety of oil-exporting and oil-consuming nations, according to Oxford Economics Ltd.

Chart 4: Likely Economic Winners and Losers in a Low Oil Price Environment

Effect on GDP growth in 2015-'16 of oil at $40 a barrel vs. $84



Source: Oxford Economics Ltd. Bloomberg

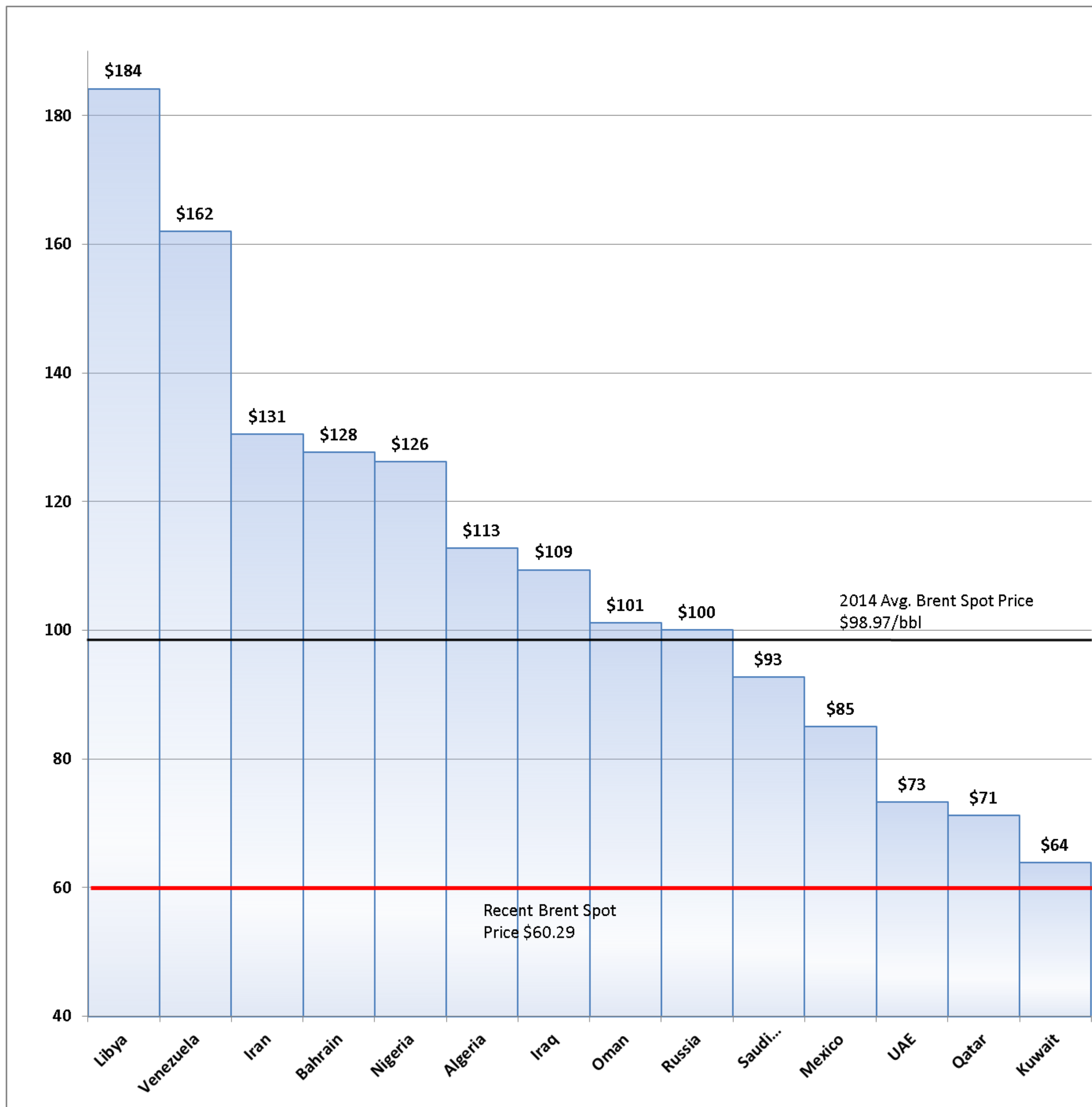
Among the countries hardest hit by the oil plunge are Russia (which also is facing U.S.- and EU-imposed sanctions) and Venezuela, along with Saudi Arabia and Iran. The United Arab Emirates, Norway and Malaysia are also harmed, but to a lesser extent. (See insurance industry country exposures in Table 1.) Some large net oil exporters could fare relatively well; Mexico, for example, has a comparatively diverse economy to which oil contributes only about 6% of GDP, according to the Columbia/SIPA Center on Global Energy Policy. Moreover, Mexico's government hedged more than half of its planned crude exports for 2015.

Table 1: Insurers' Exposure to Key Oil Exporting Countries at Year-End 2013

	Net Crude Oil Exports, 2012 (thousand bbl/d)	Financial	Government	Other	Total Bond	Preferred	Common	Total Stock	Total Exposure
		Exposure by Asset and Issuer Type (BACV in $mil.)							
Saudi Arabia	8675	-	-	-	-	-	-	-	-
Russia	7214	-	856	18	873	-	9	9	882
United Arab Emirates	2532	-	28	1,822	1,850	-	-	-	1,850
Kuwait	2345	-	-	-	-	-	143	143	143
Iraq	2289	-	-	-	-	-	-	-	-
Nigeria	2070	-	10	3	14	-	-	-	14
Qatar	1847	86	687	927	1,700	-	-	-	1,700
Iran	1322	-	-	-	-	-	-	-	-
Angola	1756	-	-	-	-	-	-	-	-
Venezuela	1705	-	1,456	114	1,570	-	0	0	1,570
Norway	1603	800	594	8,985	10,379	-	65	65	10,444
Algeria	1383	-	-	-	-	-	-	-	-
Canada	1650	18,145	24,535	85,494	128,173	107	3,678	3,785	131,958
Kazakhstan	1400	56	-	246	302	-	0	0	302
Mexico	864	200	1,522	10,654	12,375	-	134	134	12,510
Azerbaijan	787	-	-	-	-	-	-	-	-
Libya	736	-	-	-	-	-	-	-	-
Colombia	722	189	740	610	1,539	0	67	67	1,606
Gabon	219	-	48	-	48	-	0	0	48
Ecuador	272	-	0	1	1	-	-	-	1
Malaysia	47	62	44	1,517	1,623	-	15	15	1,639
Brazil	-403	891	1,559	1,607	4,057	10	65	75	4,131
Total		20,429	32,079	111,998	164,506	117	4,176	4,293	168,799

Production costs for these countries vary greatly, and in some cases, the marginal cost of extraction is lower than current prices. However, when one factors in these nations' high levels of government spending on social initiatives, the so-called "fiscal" break-even oil price—the average price at which the budget of an oil-exporting country is balanced in a given year—is well above current prices, as shown in Chart 5. Of particular concern are Venezuela, whose economic problems are quite profound, and Russia, whose economic difficulties are less severe, but worsening.

Chart 5: "Fiscal" Break-Even Oil Prices for OPEC Countries, USD/bbl



Based on International Monetary Fund (IMF) and Deutsche Bank Estimates, Thomson Reuters data.

On Dec. 18, Fitch Ratings downgraded Venezuela's issuer default ratings and country ceiling to CCC from B. Fitch cited the sharp fall in oil revenues, which are expected to have accounted for 92% of current external receipts and 50% of central government revenue in 2014, according to its estimates. Moody's Investors Service (Moody's) lowered the country's sovereign debt rating to Caa1 in December, and cut the rating two more notches to Caa3 on Jan. 13. S&P lowered the sovereign rating to CCC+ in September. Venezuela has limited sources of foreign exchange (FX); its FX reserves were only $22.1 billion as of Dec. 2014. The country has no direct access to capital markets, leaving it with limited financing options—chiefly borrowing from China. In addition, Venezuela is in a severe recession, and the country faces an onerous foreign currency debt payment schedule (which includes the obligations of the state-owned oil company, Petróleos de Venezuela, S.A., or PDVSA) exceeding $10 billion per year through 2017 that

threatens its limited FX reserves. Venezuela's five-year credit default swaps (CDS) have retreated from their widest levels, but still are quoted at nearly 5000 basis points (bps), compared to a 2000bps to 3000 bps range throughout most of 2014. Venezuela's benchmark U.S. dollar-denominated bond maturing in 2027 was bid as low as 34 cents on the dollar in January, for a yield to maturity of nearly 30%. However, the bonds have bounced a bit since then, trading on Feb. 19 at 41.00 (24.6% yield). The modest price recovery is due to some creative scrambling for cash, including the recent issuance of $2.8 billion in debt by CITGO, PDVSA's U.S. refining and marketing subsidiary. Borrowing a familiar tactic of private equity investors (the dividend recap), CITGO sold the debt, which is secured by $750 million of midstream assets and 100% of CITGO's equity, with the intention of paying a large dividend to parent PDVSA. PDVSA also struck a deal with the Dominican Republic, accepting a $1.9 billion to settle $4 billion owed to PDVSA under its Petrocaribe agreement. The steep decline in Venezuelan bond prices suggests that insurers holding the debt may face significant other than temporary impairment (OTTI) adjustments. For example, at the end of 2013, life insurers holding the Venezuela 2027 bond reported book/adjusted carrying values (BACVs) ranging from 71.29 cents to 106.56 cents on the dollar, and a fair value of about 77.

Even prior to the current crisis, the Russian economy had been struggling, with GDP slowing to 1.3% in 2013 compared to 4% in both 2010 and 2011, and 3.4% in 2012, according to the International Monetary Fund (IMF). The Russian economy is expected to contract 4% in 2015, according to Bloomberg's consensus forecast, and Russia's finance minister has projected a GDP drop of 4.7% if oil remains at $60. Moody's downgraded the country's debt by one notch to Baa2 in October. On Dec. 23, S&P, which had already downgraded Russia last April to BBB-, placed the country's ratings on watch for further downgrade. Moody's downgraded Russia's sovereign debt on Jan. 16 to Baa3, the lowest investment grade level. On Jan. 26, S&P then lowered Russia's sovereign rating to BB+, the highest speculative-grade rating category. The yield on Russia's benchmark 2030 Eurobond was nearly 7% as of Feb. 13, and the 5-year CDS has traded between 500 bps and 600 bps since early January, compared to a 200 bps to 300 bps range for much of 2014. Over the past 12 months, the ruble has depreciated more than 40%, as sanctions have reduced foreign investment and further slowed economic growth, spurring inflation and higher interest rates, according to Moody's; the slide in oil prices is causing more pain, as more than half of the government's 2012 revenues came from oil and gas, according to data from the EIA. It is true that the slide in the ruble has acted as a hedge against the decline in oil prices so that oil revenue and profits have declined far less in local currency terms, but the impact on Russia's foreign exchange flows has been real.

Many exploration and production companies are under pressure; at current prices, much of the world's oil production is unprofitable, as Chart 6 shows. On Jan. 16, 2015, S&P acknowledged the shift in oil market expectations and took negative rating action on 23 U.S. E&P companies, including eight downgrades and two negative watch listings.

Chart 6: Break-Even Oil Prices Around the World

The Cheapest Barrel

Saudi Arabia and the Middle East produce oil at the lowest cost

Type/source of oil	Break-even production cost in U.S. dollars per barrel
Expensive offshore/deepwater	$95
Canada oil sands	75
Most offshore	70
Mexico	69
U.S. shale/tight oil	65
Brazil	60
Conventional Africa	55
Norway	49
China	48
Kazakhstan/CIS	46
U.S. excluding shale	42
Russia	40
Other OPEC/Middle East	38
Saudi Arabia	25

Sources: Energy Aspects; trade analysts — The Wall Street Journal

Insurance Industry Exposures: Multiple but Manageable Risks

Oil & Gas Industry

The U.S. insurance industry's worldwide oil-and-gas-related bond and stock exposure totaled $226 billion, or 4.1% of total cash and invested assets as of Dec. 31, 2013. Corporate bonds accounted for 88%, or $199.9 billion, with the remaining $26.1 billion consisting of common and preferred stock. Total energy sector corporate bond and equity holdings—which also include other energy-related industries—totaled $235.7 billion (11.9% of total corporate bond holdings) and energy stocks comprised $71.4 billion (10.7% of total unaffiliated stock holdings).

Compared to the composition of the overall corporate bond market, the insurance industry was market-weighted to slightly overweight in the sector as of Dec. 31, 2013; energy sector corporates made up 12.6% and 8.7%, respectively, of the Bloomberg U.S. and Global Investment Grade Corporate Bond Indices, while energy stocks made up 10.2% of the S&P 500 index. The insurance industry's direct investments in oil and gas properties (as reported in Schedule BA) were quite small as of Dec. 31, 2013, amounting to $314 million.

Only 8%, or $15.9 billion, of the insurance industry's oil and gas corporate bond holdings were designated NAIC 3 through NAIC 6 or unrated. Moreover, as Table 2 shows, the insurance industry has relatively few large specific exposures to comparatively weaker energy credits, which we define as those rated Baa1 / BBB+ (Moody's / S&P) or lower and larger than $1.5 billion in total BACV — the equivalent of NAIC2 designation —and below. In recent months the rating agencies have taken a number of negative rating actions on certain energy-related issuers, so the insurance industry probably experienced some adverse credit migration in this

sector in 2014 and early 2015, but even so, we can identify only three large specific exposures to below-investment-grade issuers based on current Moody's and S&P ratings. The largest of these exposures, at $2.8 billion, is Petróleo Brasileiro S.A., or Petrobras, the multinational oil and gas producer, majority-owned by the federal government of Brazil, that is embroiled in a corruption scandal that has delayed the release of financial statements and raised questions about the values of certain company assets. Moody's cut Petrobras' global foreign currency debt rating to Ba2 from Baa3 on Feb. 24, 2015, citing the ongoing corruption probe and possible liquidity pressures that may arise if the Company is not able to timely deliver its audited financial statements; the ratings remain under review for further downgrade. Another large below-investment-grade exposure, at $2.3 billion, is Transocean, one of the world's largest offshore drilling contractors, whose long-term debt was downgraded by Moody's on Feb. 25 to Ba1 from Baa3 because of "the company's large capital commitments and Moody's expectation for a significant increase in leverage as the company enters what it believes could be a prolonged industry down-cycle," according to Moody's announcement. The remaining large below-investment-grade exposure is DCP Midstream, whose long-term debt rating was cut to BB by S&P and is on watch for downgrade at Moody's, because of the decline in natural gas liquids prices.

Table 2: Insurance Industry Large Low- and Below-Investment-Grade Energy Holdings, BACV as of Dec. 31, 2013 ($ mil.)

Issuer	NAIC Designation as of Dec. 31, 2013	Current Moody's Rating	Current S&P Rating	Total BACV
Kinder Morgan Energy Partners	2	Baa3	BBB-	8,497,857,117
Enterprise Products	2	Baa1	BBB+	5,574,961,833
Noble Energy	2	Baa2	BBB	4,410,796,865
Spectra Energy	2	Baa2	BBB	4,036,959,246
Williams Partners	2	Baa2	BBB	3,900,292,824
Devon Energy	2	Baa1	BBB+	3,885,387,432
Marathon Oil	2	Baa1	BBB	3,706,882,636
Enbridge Inc	2	Baa1	A-(WL -)	3,618,708,742
Energy Transfer Partners	2	Baa3	BBB-	3,394,252,045
Plains All American Pipeline	2	Baa2	BBB+	3,043,268,981
Weatherford International	2	Baa3	BBB- (WL -)	2,935,451,147
Hess Corp	2	Baa2	BBB	2,858,441,930
Canadian Natural Resources	2	Baa1	BBB+	2,850,110,854
Anadarko Petroleum	2	Baa2	BBB	2,817,064,915
Petrobras	2	Ba2 (WL -)	BBB-	2,807,286,899
PEMEX	2	A3	BBB+	2,762,039,621
Valero Energy	2	Baa2	BBB	2,600,111,554
Encana Corp	2	Baa2	BBB	2,582,396,599
Oneok Partners	2	Baa2	BBB	2,437,722,285
Transocean Inc	2	Ba1	BBB- (WL -)	2,336,271,639
Cenovus Energy Inc	2	Baa2	BBB+	2,188,935,143
Talisman Energy	2	Baa3	BBB-	2,139,205,194
DCP Midstream	2	Baa3 (WL -)	BB	2,099,785,063
Magellan Midstream	2	Baa1	BBB+	1,752,616,775
Husky Energy Inc	2	Baa2	BBB+	1,727,956,926
Buckeye Partners	2	Baa3	BBB-	1,686,216,494
Nabors Industries	2	Baa2	BBB	1,621,161,147
EQT Corp	2	Baa3	BBB	1,508,839,157

Source: Moody's Investors Service, Standard & Poor's, Bloomberg Finance L.P., NAIC data; WL indicates credit rating on watch for upgrade (+) or downgrade (-)

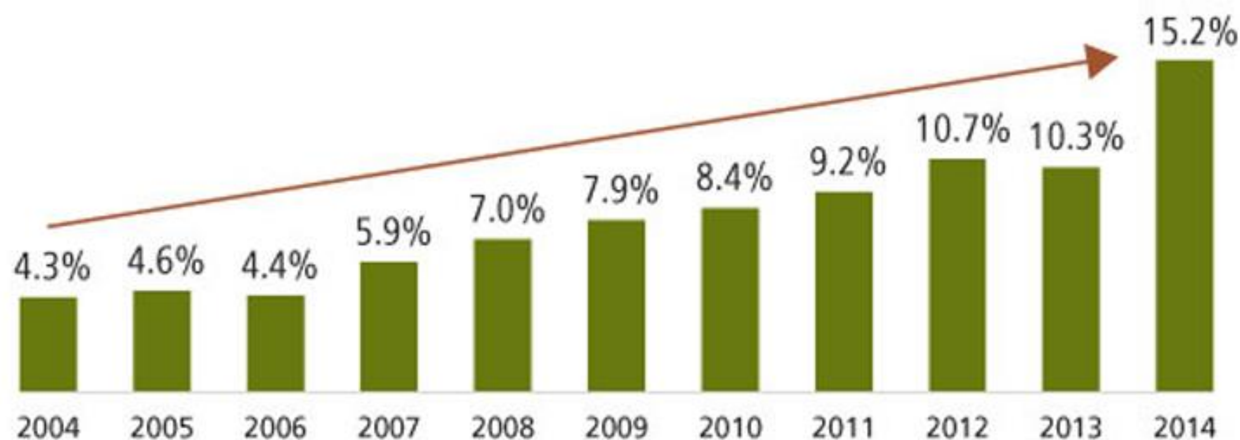
Stocks and High-Yield Credit at the Epicenter

Energy stocks have come under pressure: As of Feb. 19, 2015, the S&P 500 Energy Index, although it has rebounded modestly from its December low, has returned -4% over the past 12 months, despite the S&P index's 17.1% positive 12-month return. Energy sector high-yield corporate bonds have also sold off, with only a small recovery. As of Feb. 19, 2015, the Energy component of the Markit CDX HY CDS Index was quoted near 700 bps after ranging from 250 bps to 300 bps for most of the prior 12 months, while the overall CDX HY index, which had peaked at approximately 400 bps in late December after trading between 300 bps and 350 bps for most of 2014, has recovered to 360 bps. The impact of energy-related high-yield credit spreads on the overall market has gained significance because of the sector's increasing share

of the high-yield market in recent years, reaching 15.2% in 2014, according to Barclays data (Chart 7).

Chart 7: Energy Sector Influence on High Yield Market

On the Rise: Energy Companies' Share of High-Yield Bond Market



As of October 31, 2014
Columns represent the weight of the energy sector in the index. All columns represent year-end values, except 2014.
Source: Barclays

Ripple Effects

In the broader stock market, the ripple effects of cheaper oil have affected earnings estimates for companies dependent on the oil and gas sector. Hence, stocks overall are seeing intermittent selling pressure, with attendant volatility episodes; the Chicago Board Options Exchange (CBOE) Volatility Index (VIX) has remained above last year's average level and has spiked above 20 on several occasions to about the same level as the mid-December peak. Most of the attention outside of oil exploration and production and oilfield services has focused on alternative energy, which is less appealing at lower oil prices, and on industries tied to oil sector capital spending, such as engineering and construction, capital equipment, and steel. Investors are also re-examining the collateralized loan obligation (CLO) and commercial mortgage-backed securities (CMBS) markets to identify securities with potentially problematic concentrations in risky oil-related loans.

Oil Exporting Countries

As of year-end 2013, the U.S. insurance industry had modest combined debt and equity exposure to key oil-exporting countries around the world of $169 billion (shown in Table 1), or 3% of total cash and invested assets. (Note that the country exposures and the energy sector exposure are not mutually exclusive.) Drilling down to specific country exposures, the majority, or 78%, was to Canada, whereas the respective exposures to Russia and Venezuela were only $882 million and $1.6 billion.

Due to fear of "contagion," ripples have spread, causing resource-dependent emerging markets around the world to sell off. Through Feb. 19, stock markets in Colombia, Brazil, Mexico and Chile were down approximately 2% to 22% over the past 12 months on a currency-adjusted basis, and Russia's MICEX Index was down 26%. Emerging market debt has followed suit, as the emerging market CDX Index widened to about 400 bps in early 2015 after trading between 250 bps and 300 bps for most of last year, and has only recovered slightly, to 375 bps.

Municipals

While lower oil prices may modestly benefit most local and regional economies, there could be negative ramifications for some municipal issuers in oil-producing states because of the potential for declining employment and revenues. According to a recent article by analysts at Charles Schwab & Co., oil-producing states should be less affected than local governments, because states can receive revenues from various sources tied to oil and gas production. At least 36 states impose a severance tax on the extraction of non-renewable natural resources—31 specifically tax the extraction of oil and gas—according to the National Conference of State Legislatures (NCSL). Many states tax the volume rather than the dollar value of production, or use a combination, so revenues collected by those states should not be as vulnerable to falling prices as long as production holds steady. The production of crude oil in the U.S. is concentrated in a handful of states, and the reliance on severance taxes as a portion of total state tax revenue is only significant for a few, highlighted in Table 3.

Table 3: Insurance Industry Exposure to U.S. Oil-Producing States Reliant on Severance Taxes at Dec. 31, 2013

State	Moody's G.O. Rating	S&P G.O. Rating	Severance Tax Share of Total State Tax Revenue	Insurance Industry Total BACV ($mil.)
Alaska	Aaa	AAA	78%	267.8
North Dakota	*	*	46%	248.7
Wyoming	*	*	40%	262.5
New Mexico	Aaa	AA+	14%	3,054.9
Montana	Aa1	AA	11%	548.4
Texas	Aaa	AAA	9%	53,168.3

Source: U.S. Census Bureau data, Moody's and Standard & Poor's
**: Wyoming and North Dakota do not have state general obligation bonds outstanding*
Some states, including Montana and North Dakota, distribute severance tax revenue to counties and local governments, whereas others, including Texas and Wyoming, do not. Municipalities that do not share in severance tax revenue may rely on sales tax revenues, which tend to track economic activity and employment, which has boomed in areas where oil shale production has grown, but could reverse. If oil prices remain depressed for a sustained period, it is possible that certain governments in oil-rich areas could be on the hook for increased services associated with fast-growing population. The insurance industry's municipal credit exposure to oil-producing states is minimal, though; only Texas—which derives a modest 9% of state tax revenue from severance taxes—is significant at $53.2 billion.

Financial Institutions

According to a recent report by RBC Capital Markets, large U.S. banks' energy-related lending exposure is modest, averaging 2.4% of loans outstanding among the largest U.S. banks. It, therefore, seems unlikely that the insurance industry has significant exposure to energy-related lending by way of investments in the banking sector. Certain U.S. regional banks based in Texas and other oil-dependent states may have significantly larger exposures to oil—as much as 13% to 19% of total loans—but the insurance industry does not have material exposure to those institutions as of Dec. 31, 2013. The same is true for certain business development companies that have as much as 10% to 15% of their loan books concentrated in energy; the insurance sector's exposure is minimal.

Foreign banks' exposure to oil also varies: According to Fitch Ratings, the six large Canadian banks have between 3.8% and 13.5% of loans concentrated in oil and gas, but the insurance industry's exposure to these institutions is not large, amounting to $10.4 billion (in corporate bonds) as of year-end 2013. Certain European players in oil and gas lending have large concentrations, including BNP Paribas, Commerzbank, Crédit Agricole, DNB, Natixis, The Royal Bank of Scotland, Skandinaviska Enskilda Banken, Société Générale (SocGen), and Standard Chartered. Certain European banks also have significant exposure to Russia, although many sharply curtailed their lending to Russia in 2014, according to Bloomberg and Financial Times reports. Still, three European institutions stand out as having large Russian exposures: SocGen, with €25 billion; UniCredit, with €18 billion; and Raffeisen, with €15 billion. Total insurance industry corporate bond exposure to European banks was $35.4 billion as of Dec. 31, 2013, just 1.8% of total corporate bond BACV, so the subset of European banks with outsized lending exposure to oil—or Russia—is not material.

Conclusion

The decline in oil prices since mid-June 2014 has begun to affect the global economy and financial markets in many ways, but the overall effect on the insurance industry's investment portfolios is likely to be modest, given that the industry's bond and stock exposure to the oil and gas sector accounts for only about 4% of total cash and invested assets, and its exposure to oil-exporting countries (an overlapping measure) totals only about 3%. Indirect exposure through other entities that are in some way tied to oil prices are quite small.

The Capital Markets Bureau will continue monitoring the U.S. insurance industry's oil and gas (and commodities) exposure and report on these investments as deemed appropriate.

Questions and comments are always welcome. Please contact the Capital Markets Bureau at **CapitalMarkets@naic.org**.

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