Confidential

1Q18 U.S. Energy Capital Markets Review

- \$39 billion raised in bond & equity during 1Q18 in 74 industry wide issuances compared with \$43 billion raised in 83 deals in 1Q17.
- \$6.1 billion in equity (industry wide) raised in 24 offerings compared to \$14.9 billion in 40 equity offerings 1Q17.
- Bankers generated ~\$196 million in fees from 1Q18 equity sales.
- Capitalize reported 33 (new) private equity commitments across all sectors during the quarter. 17 reported commitments totaled \$8.3 billion
- \$33 billion of bonds across 50 deals compared with \$27.9 billion in 43 deals in 1Q17.
- Midstream issued \$16.4 billion during the quarter compared to \$10.8 billion in 1Q17. Integrated oil and gas firms issued no bonds in 1Q18.
- There were 6 bankruptcies in 1Q18 involving \$7.5 billion of secured and unsecured debt vs. 21 bankruptcies in 1Q17 involving almost \$12.9 billion of secured and unsecured debt in 1Q17.

PLS Inc., tracks energy finance, activity through our Capitalize platform. This quarterly research has been compiled from both internal and external sources. Such information consists primarily of filings with public securities' regulators, press releases and other information issued to the public that we believe to be reliable, but we cannot and do not guarantee the accuracy, timeliness, or completeness of such information for any particular purpose.

1Q18 U.S. Energy Capital Markets (Equity, IPOs, Bonds, Credit Facilities & Private Equity)

Quarterly Takeaways & Observations

- Debt capital markets continue to perform adequately while public equity markets remain slow
 - Public investors still focused on profitability and no longer supportive of dilutive forms of fundraising in 1Q18
 - 1Q18 was the worst quarter since 2010 for public equity issuances in upstream.
 - —Only 6 IPOs filed in 1Q18 and all were in the oilfield service sector and filed in rapid succession over 30 days.

Facts & Figures

- ---\$39.1 billion aggregate equity and debt raised in 1Q18, up 29% sequentially but down 9% YOY
- -\$6.1 billion in equity in 1Q18, down 30% from 4Q17 and 59% YOY
- -\$33.0 billion in debt offerings in 1Q18, up 52% from 4Q17 and 18% YOY

Bankers & Market Share

- Most active participants Wells Fargo in 54% of all offerings in 1Q18, 25% of all equity offerings
- -Wells Fargo was also active in 59% of all 1Q18 debt offerings
- ---\$56 billion in borrowing, launched or amended in 1Q18 across 77 credit facility agreements, up ~1% from 4Q17 and up 149% YOY
- ---Wells Fargo was most active lender participating in 65% of all 1Q18 credit facilities and had the largest aggregated share w/~ \$3.4 billion



Upstream Markets (Capital Markets)

Quarterly Takeaways & Observations

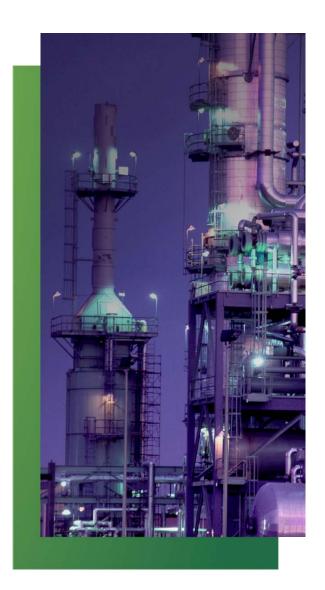




- Capital markets are still soft for upstream issuances.
- \$778.8 million raised in five upstream equity deals during 1Q18 off 59% from 4Q17 and 86% off the \$5.4 billion raised (15 deals) in 1Q17.
- Five upstream issuers included Lilis Energy (\$100 mm); California Resources (\$51.1 mm); Halcon Resources (\$55.2); Ring Energy (\$75 mm); Centennial Resource Development (\$497.5 mm)
- There were no upstream IPOs in 1Q18 compared to four upstream IPOs in 1Q17 that raised \$1.8 billion including two SPACs that raised \$1.25 billion.
- One 1Q18 deal, Centennial Resource Development's \$497.5 million follow-on, was almost two-thirds of all Upstream equity raised in 1Q18.
- \$6.66 billion raised in 10 upstream bond issuances, down 9% from the \$7.3 billion in debt raised in 9 deals in 1Q17.
- \$25.2 billion in upstream credit facilities launched or amended in 1Q18 compared to \$3.2 billion 1Q17
- Private Equity continues to step in where public markets have waned.
- PLS counts 33 private equity commitments across all sectors including 19 in the upstream space.
- See page 25 for more information on private equity markets; page 15 for bonds; page 7 for equity; page 22 for credit facilities.

Midstream and Downstream Markets (Capital Markets)

Quarterly Takeaways & Observations

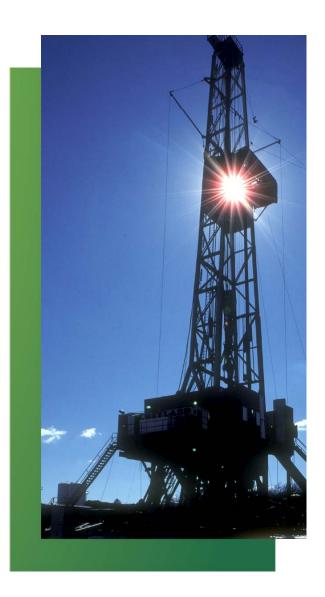




- In 1Q18, the Midstream and Downstream sectors issued \$2.8 billion of equity, down 50% from 4Q17's \$5.6 billion and 43% YOY from 1Q17's \$4.9 billion.
- The two sectors raised \$20.6 billion of debt across 29 deals was 75% higher than \$11.8 billion in debt raised via 18 deals in 1Q17.
- Midstream generated \$16.4 billion in new bonds in 1Q18, while Upstream tapped \$6.7 billion in new bonds.
- Marathon's MLP "MPLX" (\$5.5 billion), Enterprise Product Partners (\$2.7 billion) and Sunoco (\$2.2 billion) were the most prolific issuers of debt.
- Downstream issued \$4.2 billion in debt in 1Q18, up 300% from 1Q17's \$1.1 billion
- Nearly \$25.3 billion in credit facilities were either launched or amended in 1Q18 compared with \$10.7 billion in 1Q17 for these sectors.
- EnCap Flatrock committed \$650 mm to Getka Energy and Lotus Midstream in 1Q18.

Oilfield Services (Capital Markets)

Investors continue to support services with 6 IPO's





- In 1Q18, the Oilfield Service Sector (OFS) raised \$2.5 billion across 12 deals compared with \$2.3 billion raised across 11 deals during 1Q17, for a 7% YOY increase.
- There were six IPOs in 1Q18 raising a combined \$2.0 billion compared with two IPOs in the OFS sector that raised \$858 million in 1Q17.
- There were no IPOs in the midstream or upstream sectors so OFS carried the day.
- The list of OFS IPOs include: Cactus Inc (\$437 million), FTS International (\$351 million), Gates Industrial Corp (\$732 million), Liberty Oilfield Services (\$216 million), Nine Energy Service (\$161 million) & Quintana Energy Services (\$93 million).
- The OFS sector raised \$5.7 billion in debt across 11 deals. This debt raise was ~ 245% higher than the total \$1.66 billion raised in the OFS sector through five deals in 1Q17.
- \$5.4 billion in new loans or loan amended in 1Q18 in OFS vs. \$8.6 billion in 1Q17.

Special Report (Index & Key Slides)

Coverage Universe (By Ticker Symbol) (>400 Firms)

Capitalize

UPSTREAM - AXAS ASENQ APC AR APA AREX AOIL ATLS BRN BROE BXE ANFC BSM COG CRC CPE CNQ CRZO CDEV CHK XEC COP CWEI CIE CRK CXO CNX MCF CLR DRBM DNR DVN FANG DUNR EROC ESTE ECR EC ECA EGN ENRJ EOG EPE EQT ERN EVEP EPM XCO XOG FEECQ FPPP FXEN GST GPRK GDP GTE GPOR HK HWKR HES HUSA ISRL JAG JYHW JONE KAAC KLREU KOS KRP LPI LGCY LBYE LLEX LINE LNCO LRE LEI MPET MHR MRO MTDR MMR MEMP MRD MXC MCEP MPO MILL MUR NFX NOG OAS OSPRU OXY ROYT PHX PE PDCE PED PBR PO PRHR PXD QEP RRC RGFR RDMP REN REXX RICE REI BBLS ROYL RSPP SSN SN SPP SDR PER SSL SM SWN SGY STNLU SWTF SYRG GMXRQ TTEN TRCH TAT TPGE.UN UNT USEG EGY VNR VEAC VQ VYEY VNOM VOC WTI WLL WHZ WRD WPX YUMA ZN

MIDSTREAM - CAFD AMID AM AMGP ARCX APLP ATO BKEP BPMP BWP BPL CPGX CNNX CEOP COH CMLP XTXI XTEX CCLP DAKP DPM DKL DM LPG EPB ENBL EEQ EEP ENB ETE ETP ENLC ENLK EPD EQGP EQM GEL GLOP GMLP HESM HEP KNOP NRGM JPEP KMP KMI KMR LNG MMP MMLP MEP MPLX NAP NGL NKA NMM NVGS NS NSH OILT OKE OKS OMP PBA PTXP PSXP PAA PAGP PVR OEPM STR RGP RMP RRMS SEMG SHLX SXE SOCGP SO SWX SE SEP SMLP SXL TEGP TEP TLP TRGP NGLS TCP TLLP TRP USAC USDP WGP WES WMB WPZ

DOWNSTREAM - ALJ APU BDCO CLMT CPLP COP CAPL CVI UAN CVRR CELP DK DLNG FGP GLP HMLP HFC MPC OCIP PARR PBFX PDH PESC PSX RNF SRLP SGU SPH SUN SYMX TGP TOO TSO VLO VLP VTTI WNR WNRL WLKP WPT

INTEGRATED - BP CVE CVX CEO XOM HSE NFG REPYY RDSA STO SU TOT YPF

SERVICES - BHI BAS BRS CJES CDVIQ CAM CRR HELI CLH CLB DWSN DPDW DO DRC DRQ ESES EDG ENG ESV EMES ENSV EXTN FMSA FTK FMC FTI FET FI FRAC GDI GEOS GPP GIFI HAL HLX HP HERO HIIT HOS ICD IO FRAC KEG LBRT MIC TUSK MTZ MDR MIND MRC NBR NOV NGS NR NE NBLX NAO NADL DNOW NCSM NES ORIG OII OIS PACD PGNPF PKD PTEN PHII PES PDS PUMP RCON RGCO RNET RNGR RDC RES SAEX SLB SDLP SOI SSE SND SND SDPI SPN TESO TTI TDW RIG RIGP SLCA VTG VTNR WFT WTTR INT

Quarterly Special Report —

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energy finance events.

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modules tracking various



1Q18 Energy Equity Review

- 1Q18 equity markets reported \$6.1 billion raised, down 30% from 4Q17 and down 59% YOY.
- Midstream represented 45% of the quarterly total but fell 50% from 4Q17.
- At \$778MM, Upstream posted the worst single quarter since 2010
- Average equity follow on offering was \$253 million during 1Q18.
- Largest corporate equity raise was \$1.05 billion follow-on issued by Oneok Inc (NYSE).
- JP Morgan was the most active equity bookrunner in 1Q18, followed by Morgan Stanley, Citi & Credit Suisse.
 - However, Morgan Stanley led banks with ~\$1.2 billion in value (\$802 MM in Upstream).
 Credit Suisse came in 2nd with \$917 million (\$635 million in Midstream).
- Citi led the IPO market, with 2 of the 6 deals launched last quarter. All six IPOs were in the services sector.
 - The six IPOs include: Cactus Inc, FTS International, Gates Industrial Corp, Liberty Oilfield Services, Nine Energy Services & Quintana Energy Services.

1Q18 Equity

\$4.08 billion in follow-on 1Q18 equity offerings not including IPO and ATM offerings

Midstream led equity raises in 1Q18, with \$2.7 billion from 6 deals.



Upstream \$0.78 billion (19%) QOQ -56% 5 Deals



Midstream \$2.71 billion (66%) QOQ -42% 6 Deals



Downstream \$0.12 billion (3%) QOQ -23% 1 Deal



Integrated No Deals



Services \$0.48 billion (12%) QOQ -47% 6 Deals

Top banks for each sector by allocated deal amount.

J.P.Morgan

\$0.53 billion

68% Market Share

Morgan Stanley

\$0.802 billion 30% Market Share 🗱 UBS

Morgan Stanley

0.04 billion 35% Market Share No Banking Activity



\$0.37 billion 77% Market Share

Note: Does not include at-the-market equity offerings QOQ = Quarter On Quarter Market Share = % of participation in Follow-On offering

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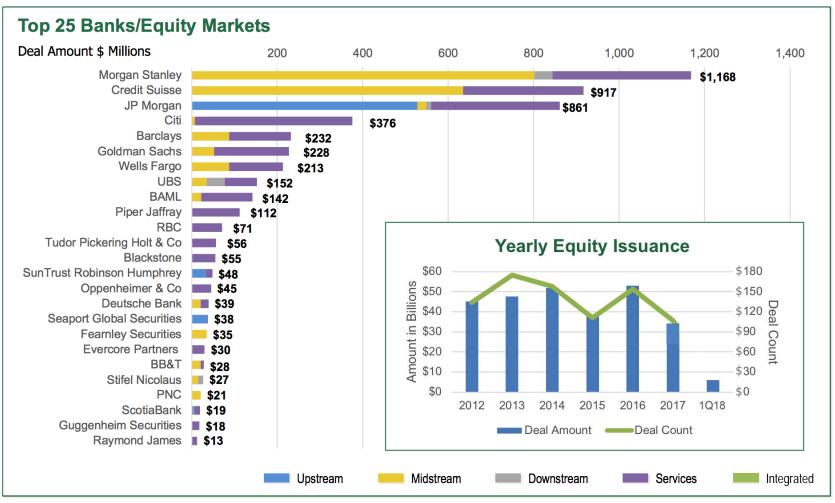
1Q18 Energy Follow-on Equity Issues

There was a 46% decrease in follow-on issuances from 4Q17 to 4Q18

Sector	Company	Sector	Ticker	Deal Amount (\$MM)	Bank Fees (\$MM)	Underwriting Discount	Reoffer Discount	All In Rate	Lead Bookrunner	No. of Banks
01/08/18	Oneok Inc	Midstream	OKE	\$ 1,045	\$ 21.09	2.02%	0.94%	2.93%	Credit Suisse	10
02/05/18	Shell Midstream Partners LP	Midstream	SHLX	\$ 680	\$ 6.00	0.88%	4.99%	5.83%	Morgan Stanley	1
01/15/18	USA Compression Partners LP	Midstream	USAC	\$ 500	\$ 5.95	1.19%	0.00%	0.00%	N/A	1
03/07/18	Centennial Resource Development Inc	Upstream	CDEV	\$ 498	\$ 10.00	2.01%	0.80%	2.79%	JP Morgan	1
01/16/18	SemGroup Corp	Midstream	SEMG	\$ 350	\$ 7.00	2.00%	0.00%	0.00%	N/A	1
01/18/18	Keane Group Inc	Services	FRAC	\$ 243	\$ 10.33	4.25%	1.40%	5.59%	Citi	10
02/26/18	Oil States International Inc	Services	OIS	\$ 156	\$ 3.14	2.01%	0.70%	2.70%	JP Morgan	1
01/17/18	Teekay Offshore Partners LP	Downstream	TOO	\$ 115	\$ 3.62	3.15%	0.00%	0.00%	Morgan Stanley	7
01/30/18	Lilis Energy Inc	Upstream	LLEX	\$ 100	\$ 2.00	2.00%	0.00%	0.00%	N/A	1
01/10/18	GasLog Partners LP	Midstream	GLOP	\$ 100	<mark>\$</mark> 3.15	3.15%	0.00%	0.00%	Morgan Stanley	5
02/23/18	Ring Energy Inc	Upstream	REI	\$ 75	\$ 3.75	5.00%	5.53%	10.26%	SunTrust Robinson Humphrey	, 8
02/08/18	Halcon Resources Corp	Upstream	HK	\$ 55	\$ 2.35	4.25%	7.38%	11.32%	JP Morgan	11
02/07/18	California Resources Corp	Upstream	CRC	\$ 51	\$ 1.05	2.07%	0.00%	0.00%	N/A	1
02/20/18	Ion Geophysical Corp	Services	ю	\$ 50	\$ 2.50	5.00%	0.00%	0.00%	Oppenheimer & Co	2
02/14/18	Navios Maritime Partners LP	Midstream	NMM	\$ 35	\$ 1.40	4.00%	9.95%	13.55%	Fearnley Securities	1
03/16/18	RGC Resources	Services	RGCO	\$ 14	\$ 0.77	5.50%	7.33%	12.43%	BB&T	3
01/05/18	Emerge Energy Services LP	Services	EMES	\$6	\$ 0.13	2.06%	0.00%	0.00%	N/A	1
01/23/18	Recon Technology Ltd	Services	RCON	\$6	\$ 0.42	7.00%	-3.75%	3.51%	Maxim Group	1
	Top 1	8 Total Transa	ctions:	\$ 4,079	\$ 85				Avg # of Banks:	4
	1Q18 Total Follow	-on Equity Iss	suance:	\$ 4,079	\$ 85					

1Q18 Top 25 Equity Market Advisors & Facilitators

JP Morgan participated in 38% of all equity deals in 1Q18 but Morgan Stanley won largest allocation



Note: Follow-on and IPO offerings.

Does not include at-the-market equity offerings.

2015-2018 U.S. Equity Issuance Value by Quarter

Total equity deal value decreased by ~30% from 4Q17 to 1Q18

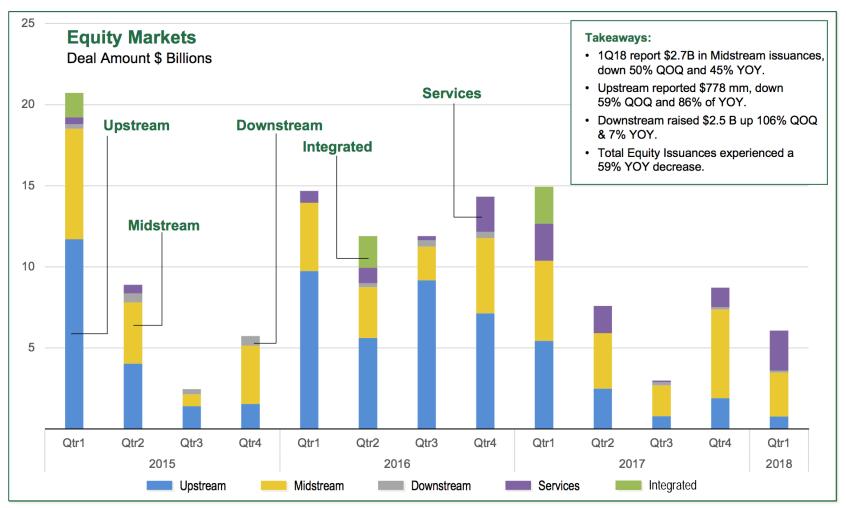
	U	pstream	Mi	dstream	Do	ownstream	Services	Int	egrated	Total
2015										
Qtr1	\$	11.71	\$	6.81	\$	0.27	\$ 0.43	\$	1.50	\$ 20.71
Qtr2	\$	4.04	\$	3.76	\$	0.56	\$ 0.54		-	\$ 8.90
Qtr3	\$	1.42	\$	0.72	\$	0.30	\$ 0.03		-	\$ 2.45
Qtr4	\$	1.55	\$	3.60	\$	0.58	-		-	\$ 5.73
	\$	18.71	\$	14.88	\$	1.70	\$ 0.99	\$	1.50	\$ 37.79
2016										
Qtr1	\$	9.75	\$	4.20	\$	-	\$ 0.74	\$	-	\$ 14.68
Qtr2	\$	5.61	\$	3.14	\$	0.24	\$ 0.94	\$	1.96	\$ 11.89
Qtr3	\$	9.18	\$	2.07	\$	0.39	\$ 0.26		_ :	\$ 11.90
Qtr4	\$	7.13	\$	4.64	\$	0.39	\$ 2.16		-	\$ 14.32
	\$	31.66	\$	14.05	\$	1.02	\$ 4.11	\$	1.96	\$ 52.79
2017										
Qtr1	\$	5.43	\$	4.94		-	\$ 2.30	\$	2.26	\$ 14.93
Qtr2	\$	2.49	\$	3.43		-	\$ 1.67		-	\$ 7.59
Qtr3	\$	0.79	\$	1.90	\$	0.20	\$ 0.09		_	\$ 2.98
Qtr4	\$	1.90	\$	5.47	\$	0.15	\$ 1.20		-	\$ 8.71
	\$	10.61	\$	15.75	\$	0.35	\$ 5.24	\$	2.26	\$ 34.21
2018										
Qtr1	\$	0.78	\$	2.71	\$	0.12	\$ 2.46			\$ 6.07
Grand Total		\$62		\$47		\$3	\$13		\$6	\$131

Equity Markets (Deal Amount \$ Billions)

Note: Follow-on and IPO offerings. Does not include at-the-market equity offerings

U.S. Equity Deals by Quarter 1Q15 to 1Q18

The IPO market has breathed life into the OFS sector while the Upstream sector is in need of support



Note: Follow-on and IPO offerings. Does not include at-the-market equity offerings QOQ= Quarter On Quarter

YOY = Year over Year.

1Q18 Energy IPOs

There were 6 IPOs in 1Q18 increasing value to \$1.99B, up 68% from 4Q17

IPO	Company	Sector	Ticker	Deal Amount (\$MM)	Bank Fees (\$MM)	Net Proceeds (\$MM)	Total Shares Issued (MM)	Public Reoffer Price Per Issue	Underwriting Discount	Lead Bookrunner*	No. of Banks
01/25/18	Gates Industrial	Services	GTES	\$ 732	\$ 36.58	\$694.93	38.50	\$ 19.00	5.00%	Citi (20.00%)	16
02/09/18	Cactus Inc	Services	WHD	\$ 437	\$ 26.22	\$410.78	23.00	\$ 19.00	6.00%	Citi (27.83%)	10
02/05/18	FTS International	Services	FTSI	\$ 351	\$ 20.18	\$330.82	19.50	\$ 18.00	5.75%	Credit Suisse (33.48%)	10
01/16/18	Liberty Oilfield Services	Services	LBRT	\$ 216	\$ 11.90	\$204.52	12.73	\$ 17.00	5.50%	Morgan Stanley (24.50%)	12
01/22/18	Nine Energy Service	Services	NINE	\$ 161	\$ 10.87	\$150.13	7.00	\$ 23.00	6.75%	JP Morgan (27.50%)	11
02/12/18	Quintana Energy Services Inc	Services	QES	\$ 93	\$ 5.56	\$87.04	9.26	\$ 10.00	6.00%	BAML (30.00%)	8
			Totals:	\$ 1,990	\$ 111	\$ 1,878			5.83%		11.17

* Bank allocation percentage shown in parenthesis

Key Takeaways:

- There were only 6 IPOs in the quarter and all six were in OFS.
- Citi led the IPO market handling both Cactus and Gates Industrial
- Lead banks took smaller allocation percentages when syndicating IPO deals in comparison to 4Q17.
- 5.83% average underwriter discount (~1.90% higher than 4Q17 average).
- 6 IPOs saw an average of 11 bookrunners (~57% higher than 4Q17 average).
- 27.22% average allocation to lead bookrunner.

1Q18 Stock Performance

There were winners and losers during the first quarter of 2018





An action-packed refi for Comstock \$1.2 billion debt load Comstock Resurces, Inc. plans to "substantially refinance all of its existingides, Starting and the substantial pressure and the substantial pressure and the substantial pressure and the substantial pressure and the substantial substantia substantia substant

Market Cap \$/Share \$/Share % Change % Change Company Sector Region Ticker Exchange 03/31/18 (\$MM) 01/01/18 QOQ YOY Mammoth Energy Services Multi 1.429.53 TUSK NASDAQ \$ 32.06 \$ 19.63 63.3% 49.0% Services \$ International \$ 27.10 \$ 19.75 **ION Geophysical Corp** Services \$ 375.16 IO NYSE 37.2% 458.8% \$ 4.43 \$ W&T Offshore \$ 3.31 Upstream Gulf Of Mexico 616.17 WTI NYSE 33.8% 59.9% \$ 3.65 \$ 2.75 \$ 785.98 ERIN.Q OTC 32.7% 52.1% Erin Energy Upstream International 9 \$ 33.84 \$ 26.48 Whiting Petroleum Upstream Bakken \$ 3,124.39 WLL WLL 27.8% -10.6% Top \$ 2.74 \$ 2.21 **Denbury Resources** Upstream \$ 1,101.26 DNR NYSE 24.0% 6.2% Multi **Evolution Petroleum** \$ EPM \$ 8.05 \$ 6.85 Upstream Ark-La-Tex 267.03 NYSE 17.5% 0.6% \$ \$ \$ 40.70 34.94 **Delek US Holdings** Downstream Multi 3,415.51 DK NYSE 16.5% 67.7% \$ 37.10 \$ Stone Energy Upstream Gulf Of Mexico \$ 741.95 SGY NYSE 32.16 15.4% 69.9% \$ \$ 46.88 40.68 **RSP** Permian Upstream Permian \$ 7,474.62 RSPP NYSE 15.2% 13.2% **Camber Energy** Upstream MidContinent \$ 3.16 CEI NYSE \$ 0.77 \$ 3.06 -74.8% -94.8% \$ 14.86 PQ NYSE \$ 0.58 \$ 1.89 -69.3% -78.8% PetroQuest Energy Upstream Multi 9 **Gulf Island Fabrication** Services Multi \$ 106.81 GIFI NASDAQ \$ 7.10 \$ 13.43 -47.1% -38.5% \$ 336.92 EPE NYSE \$ -43.2% -71.8% EP Energy Upstream Multi 1.34 \$ 2.36 Bottom \$ 265.55 SN NYSE \$ \$ 5.31 -41.1% -67.2% Sanchez Energy Upstream Multi 3.13 **Eclipse Resources** Upstream Eastern \$ 434.55 ECR NYSE \$ 1.44 2.40 -40.0% -43.3% \$ \$ 381.45 BAS NYSE \$ 14.44 23.47 -38.5% -56.7% **Basic Energy Services** Services Multi \$ \$ 772.32 HK NYSE \$ 4.87 \$ -35.7% Halcón Resources Upstream Permian 7.57 -36.8% **Gastar Exploration** \$ 150.81 GST NYSE \$ 0.68 \$ 1.05 -35.0% -55.6% Upstream MidContinent **Pacific Ethanol** \$ 131.88 PEIX \$ 3.00 \$ -34.1% Midstream Multi NASDAQ 4.55 -56.2% Exxon Mobil Integrated \$ 316,157.05 XOM NYSE \$ 74.61 \$ 83.64 -10.8% -9.1% International Chevron Corp Integrated International \$ 217.845.28 CVX NYSE \$ 114.04 \$ 125.19 -8.9% 5.8% Bellcows \$ \$ Shell Integrated International 214,356.85 RDSA NYSE 25.79 \$ 27.79 -7.2% 5.8% \$ 134.567.65 BP NYSE \$ 479.25 \$ 522.70 -8.3% 5.1% BP plc Integrated International \$ 2.745.91 CHK NYSE \$ -23.7% Chesapeake Energy Upstream Multi 3.02 \$ 3.96 -49.0% \$ **Pioneer Natural Resources** Upstream Multi 29,254.28 PXD NYSE \$ 171.78 \$ 172.85 -0.6% -7.4% 29.4% **Continental Resources** Multi \$. 22,118.98 CLR NYSE 58.95 \$ 52.97 11.3% Upstream \$

Key Takeaways:

- Chesapeake (natural gas weighted) is still struggling to secure market acceptance.
- The market did see a bit of run up post OGIS, however, the flagship analysts conference was lightly attended. (See PLS Capital Markets coverage)



1Q18 Energy Bond Market

- The Bond Market had the second best quarter in the past two years.
- IQ18 bond market reported \$33 billion in deals, up 52% QOQ and 18% YOY.
- Average principal bond was \$660 million in 1Q18, up from the 4Q17 average offering size was \$529 million.
- Wells Fargo and BAML were most active banks, with each bank participating in 64% & 58% of offerings, respectively.
- PLS expects \$54 billion of bonds to mature in the next 12 months, 24% of those coming due in 2Q18.
- Investment Grade Bonds accounted for 34% of issuances during 1Q18.
- MPLX LP was the most prolific bond issuer raising \$5.50B in 1Q18.

1Q18 Bond Market

\$33.0 billion in energy bond issuances in 1Q from 50 deals

Midstream was the most active sector in the Bond market during 1Q18 with 22 deals raising \$16.4 billion.



Upstream \$6.7 billion (20%) QOQ -5% 10 Deals



Midstream \$16.4 billion (50%) QOQ +119% 22 Deals



Downstream \$4.2 billion (13%) QOQ +163% 7 Deals



Integrated No Deals



Services \$5.7 billion (17%) QOQ +19% 11 Deals

Top banks in the Bond Market by sector.



\$0.54 billion

8% Market Share

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\$1.80 billion 11% Market Share



\$0.58 billion 14% Market Share

N/A



\$0.56 billion 10% Market Share

QOQ = Quarter On Quarter Market share = % of participation in Bond issuances.



1Q18 Energy Top Bond Issues

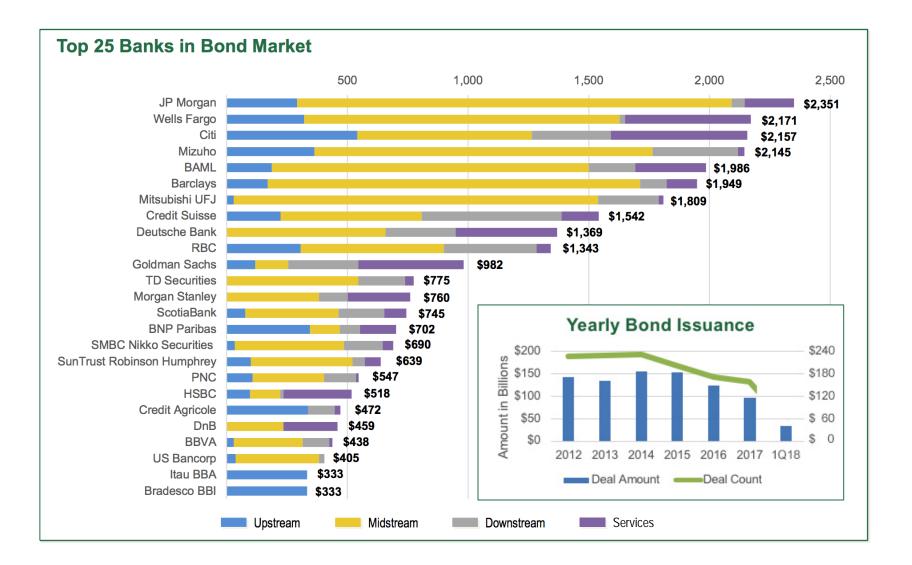
The Top 25 Deals total \$24.3 billion, 74% of the total value during 1Q18

Announce Date	Company	Sector	Ticker	Deal Amount (\$MM)	Bank Fees (\$MM)	Coupon	Maturity	Underwriting Discount	Lead Bookrunner	No. of Banks
01/26/18	Petroleo Brasileiro Petrobras SA	Upstream	PBR	\$ 2,000	\$ 6.00	5.750%	02/01/29	0.30%	Bradesco BBI	6
02/07/18	MPLX LP	Midstream	MPLX	\$ 1,750	\$ 13.13	4.500%	04/15/38	0.75%	BAML	23
02/07/18	MPLX LP	Midstream	MPLX	\$ 1,500	\$ 13.13	4.700%	04/15/48	0.88%	BAML	23
02/26/18	Kinder Morgan Inc	Midstream	KMI	\$ 1,250	\$ 5.63	4.300%	03/01/28	0.45%	Mizuho	10
02/07/18	MPLX LP	Midstream	MPLX	\$ 1,250	\$ 8.13	4.000%	03/15/28	0.65%	BAML	23
02/02/18	Enterprise Products Partners LP	Midstream	EPD	\$ 1,250	\$ 10.94	4.250%	02/15/48	0.88%	JP Morgan	19
01/03/18	EP Energy Corp	Upstream	EPE	\$ 1,100	\$ 8.25	9.375%	05/01/24	0.75%	N/A	1
03/01/18	Occidental Petroleum Corp	Upstream	OXY	\$ 1,000	\$ 7.50	4.200%	03/15/48	0.75%	Barclays	23
01/16/18	ENSCO plc	Services	ESV	\$ 1,000	\$ 14.55	7.75%	02/01/26	1.46%	Deutsche Bank	8
01/09/18	Sunoco LP	Downstream	SUN	\$ 1,000	\$ 20.00	4.875%	01/15/23	2.00%	Credit Suisse	15
01/30/18	Transocean Ltd	Services	RIG	\$ 854	\$ 17.08	0.5%	01/30/23	2.00%	N/A	1
02/28/18	Enbridge Inc	Midstream	ENB	\$ 850	\$ 8.50	6.250%/3M LIBOR + 3641 bps	03/01/78	1.00%	Credit Suisse	6
02/28/18	Williams Partners LP	Midstream	WPZ	\$ 800	\$ 7.00	4.850%	09/01/48	0.88%	Citi	12
02/27/18	Phillips 66	Downstream	PSX	\$ 800	\$ 5.20	3.900%	03/15/28	0.65%	Deutsche Bank	22
01/16/18	Nabors Industries Ltd	Services	NBR	\$ 800	\$ 11.40	5.75%	02/01/25	1.43%	Goldman Sachs	14
01/09/18	Sunoco LP	Downstream	SUN	\$ 800	\$ 16.00	5.500%	02/15/26	2.00%	Credit Suisse	15
02/26/18	Kinder Morgan Inc	Midstream	KMI	\$ 750	\$ 5.63	5.200%	03/01/48	0.75%	Mizuho	10
02/02/18	Enterprise Products Partners LP	Midstream	EPD	\$ 750	\$ 2.63	2.800%	02/15/21	0.35%	JP Morgan	19
01/25/18	Extraction Oil & Gas	Upstream	XOG	\$ 750	\$ 15.00	5.625%	02/01/26	2.00%	Credit Suisse	12
01/17/18	Noble Corp	Services	NE	\$ 750	\$ 12.90	7.875%	02/01/26	1.72%	Citi	11
03/23/18	USA Compression Partners LP	Midstream	USAC	\$ 725	\$ 14.50	6.875%	04/01/26	2.00%	JP Morgan	2
02/23/18	Western Gas Partners LP	Midstream	WES	\$ 700	\$ 6.13	5.300%	03/01/48	0.88%	Mizuho	17
02/02/18	Enterprise Products Partners LP	Midstream	EPD	\$ 700	\$ 7.00	5.375%	02/15/78	1.00%	JP Morgan	19
03/15/18	Williams Companies Inc	Midstream	WMB	\$ 600	\$ 12.00	4.600%	03/15/48	2.00%	Barclays	4
02/21/18	Weatherford International	Services	WFT	\$ 600	\$ 12.00	9.875%	02/28/25	2.00%	Deutsche Bank	11
		Top 25 Issi	uances:	\$ 24,329	\$ 260				Avg # of Banks:	13
	1Q18	Total Bond Iss	uances:	\$ 33,003	\$ 386					

Note: Includes issuances registered with the SEC by foreign companies.

1Q18 Top 25 Bond Market Advisors & Facilitators

Wells Fargo participated in 64% of all bond deals in 1Q18 but JP Morgan won larger allocations



2015-2018 U.S. Energy Bond Deals by Quarter

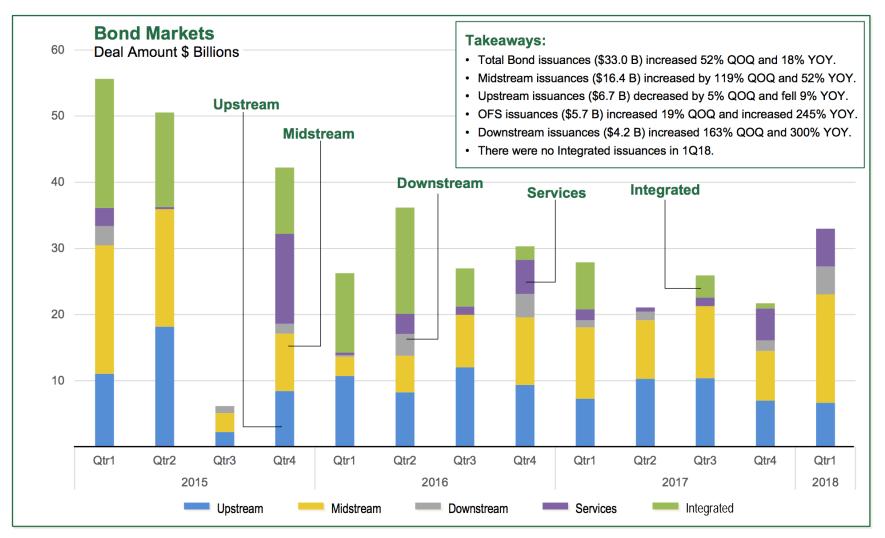
Downstream bond issuances in 1Q18 increased by 163% from 4Q17 and 300% from 1Q17

	U	pstream	м	idstream	Do	wnstream	9	ervices	In	tegrated	G	rand Total
2045	U	psucam	IV.	lusticalli	00	WIIStlealli		el vices		liegraleu	0	
2015												
Qtr1	\$	11.05	\$	19.40	\$	2.93	\$	2.75	\$	19.50	\$	55.62
Qtr2	\$	18.18	\$	17.75		-	\$	0.35	\$	14.25	\$	50.53
Qtr3	\$	2.25	\$	2.85	\$	1.10		-		-	\$	6.20
Qtr4	\$	8.45	\$	8.66	\$	1.50	\$	13.63	\$	10.00	\$	42.24
	\$	39.94	\$	48.65	\$	5.53	\$	16.73	\$	43.75	\$	154.59
2016												
Qtr1	\$	10.70	\$	2.90	\$	0.25	\$	0.40	\$	12.00	\$	26.25
Qtr2	\$	8.24	\$	5.53	\$	3.30	\$	3.05	\$	16.05	\$	36.16
Qtr3	\$	12.02	\$	7.96		_	\$	1.25	\$	5.75	\$	26.98
Qtr4	\$	9.35	\$	10.22	\$	3.55	\$	5.18	\$	2.00	\$	30.30
0.0001030	\$	40.32	\$	26.61	\$	7.10	\$	9.88	\$	35.80	\$	119.70
2017												
Qtr1	\$	7.30	\$	10.78	\$	1.05	\$	1.66	\$	7.10	\$	27.88
Qtr2	\$	10.30	\$	8.85	\$	1.33	\$	0.63		-	\$	21.10
Qtr3	\$	10.40	\$	10.85		-	\$	1.35	\$	3.30	\$	25.90
Qtr4	\$	7.01	\$	7.50	\$	1.60	\$	4.83	\$	0.75	\$	21.69
	\$	35.01	\$	37.98	\$	3.98	\$	8.46	\$	11.15	\$	96.57
2018												
Qtr1	\$	6.66	\$	16.43	\$	4.20	\$	5.72		-	\$	33.00
Grand Total		\$121.93	5	\$129.66		\$20.80		\$40.78		\$90.70		403.87

Bond Markets (Deal Amount \$ Billions)

U.S. Energy Bond Deals by Quarter 1Q15 to 1Q18

Downstream bond issuances in 1Q18 increased by 163% QOQ and 300% YOY

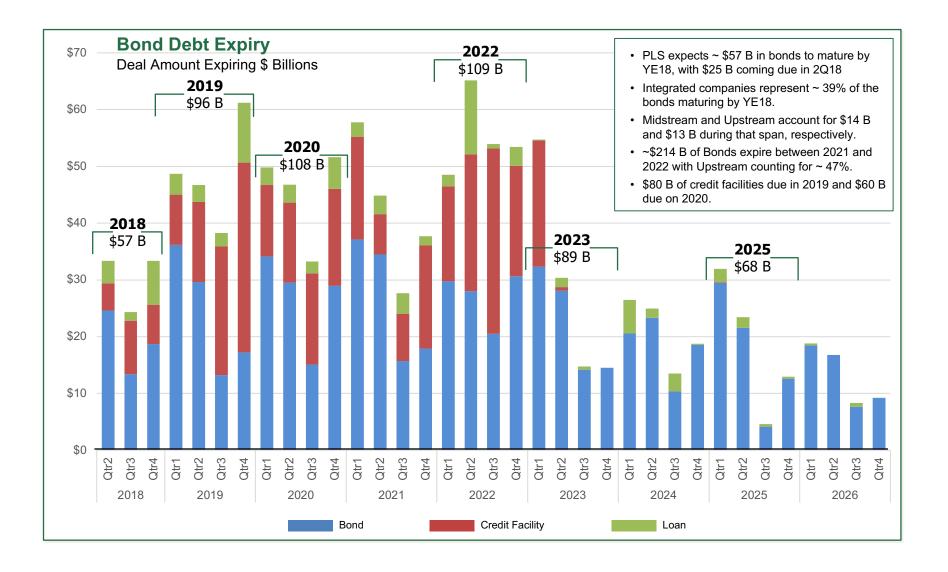


QOQ= Quarter On Quarter

YOY = Year over Year.

Bond Debt Expirations Schedule

Capitalize monitors over 400 companies within our coverage universe



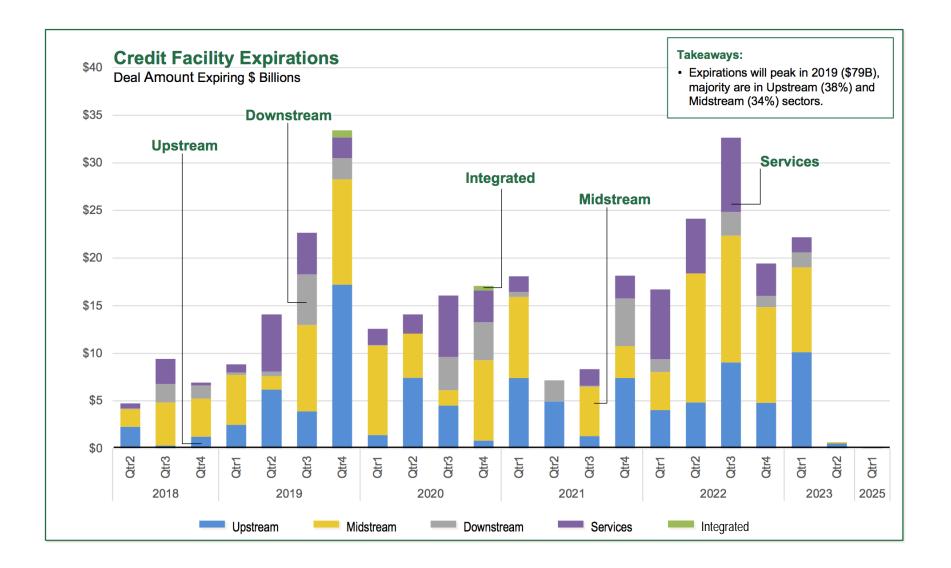


1Q18 Energy Credit Facility Lending Review

- Over \$56 billion in facilities launched or amended in 1Q18 across 77 distinct agreements.
 - ~1% less borrowings than 4Q17, over 149% more than 1Q17.
 - 58 of 75 of credit facilities were "secured first lien agreements".
- \$69 billion of Upstream Facilities are set to expire between 2018 2021.
- The Upstream sector accounted for 45% of facilities launched or amended in 1Q18.
- The Upstream and Midstream sectors were busy renegotiating their credit facilities with YOY increases of 167% and 113%, respectively. The 1Q18 activity was the most observed in the last two years.

U.S. Credit Facility Expirations

Reporting Period: 1Q18 Forward





1Q18 Private Equity Markets

- Capitalize tracked 33 new management teams including 17 which reported \$8.3 billion in commitments.
 - Stonepeak Infrastructure Partners' \$1.1 billion funding of a joint venture with Targa Resources was largest
 - Apollo committed another \$1.0 billion to Double Eagle III since initial commitment of \$380.0 million in 2Q17.
 - Blackstone invest \$1.0 billion to Mime Petroleum after Blue Water's initial \$300.0 million investment in 2Q17.
- Private Equity made:
 - 12 commitments with either disclosed or undisclosed sums to both Upstream and Services companies
 - Six to Midstream/Downstream companies
 - Private equity continues to prefer Permian and Oklahoma plays within the Upstream sector
- Tracked 17 PE transactions in 1Q18 classified as realizations for private equity groups, including IPOs and buyouts.
- Select private equity backed companies with new mandates in 1Q18.



Top Private Equity Commitments to New Teams

1Q18 Snapshot – Top 10 Reported Commitments

Vintage	Company	Sponsor	Sector	Key Areas	Amount (\$MM)
2018	Targa Resources	Stonepeak Infrastructure Partners	Midstream	North America	\$1,100
2018	Northwoods Energy	Apollo Global Management	Upstream	Powder River Basin	\$850
2018	Lotus Midstream	EnCap Flatrock Midstream	Midstream	Permian Basin	\$400
2018	Ridge Runner Resources	Warburg Pincus	Upstream	Delaware Basin	\$300
2018	Getka Energy	EnCap Flatrock Midstream	Midstream	Midcontinent	\$250
2018	PetroLogistics II	Quantum Energy Partners LP; Stonecourt Capital	Other	North America	\$250
2018	Enpro Subsea	Energy Ventures	Services	GOM; UK Continental Shelf; West Africa	\$200
2018	Actian Corporation	HCL Technologies Ltd; Sumeru Equity Partners	Services	Global	\$165
2018	Anvil Energy	Anvil Capital Partners	Upstream	North Dakota; Colorado; New Mexico; Oklahoma; Texas; Louisiana	\$150
2018	Stronghold Energy II	Warburg Pincus	Upstream	Permian Basin; Central Basin	\$150

General Partner	1Q18 Commitments	Notes
Warburg Pincus	3	100% Upstream
Apollo Global Management	2	50% Upstream
Bayou City Energy Management	2	100% Upstream
EnCap Flatrock Midstream	2	100% Midstream
Natural Gas Partners	2	100% Upstream
Other Sponsors with 1 Commitment	22	50% Upstream
Total 1Q18 Commitments	33	36% Upstream

Select printout for some of the select larger private equity commitments. PLS Capitalize database offers significantly more granular data.

- PE continues to step in where public markets have not.
- Capitalize tracked 33 PE deals including 17 deals which disclosed \$8.3 billion in commitments (See page 24).
- There were 16 deals where the private equity sponsor or recipient did not disclose their commitment.
- It's possible that another \$2 billion of commitments were given if we assume the average commitment was \$100 million during the quarter

1Q18 Canadian Capital Market Activity

Observations from PLS Canadian Capital Coverage

Internationals Retreat from Oil Sands, Canadian Companies Filling the Cracks

- Cenovus seeks partner to help finance C\$1.3 billion Narrows Lake project.
- Husky Energy plans to raise up to \$3.0 billion over next two years, all in \$US funds.
- Upstream raises during 1Q18 include Peyto Exploration's \$100 million notes placement and Journey Energy's \$22 million units sale.
- Several small private placements under \$5.0 million characterized most Upstream fundraising in 1Q18.
- Canadian-based E&Ps focusing abroad—Gran Tierra (Colombia) sells \$300 million in notes, Valeura (Turkey) raises \$60 million in equity and Crown Point (Argentina) issues \$12 million rights offering.
- Midstream active in 1Q18—Enbridge issued US\$850 million in convertible debt, Pembina Pipeline sold C\$700 million in notes, Enerflex raised C\$269.5 million and Wolf Midstream pays \$1.6 billion for rest of Access pipeline backed by CPPIB.
- PE group Waterous spending \$90 million to buy out Cona Resources
- Biggest 1Q18 M&A deal was Suncor's purchase of \$920 million worth of Syncrude stakes to own over half the company.



- PLS notes that there were C\$2.22 billion (US\$1.75 billion) in M&A activity across 31 deals in Q1 versus C\$32.61 billion (US\$25.39 billion) across 32 deals in 1Q17. However, \$30.7 billion of last year's deal value was from two transactions—Cenovus' \$17.7 billion asset buy from ConocoPhillips and Canadian Natural Resources' \$13 billion purchase of Shell and Marathon assets.
- Market volatility and high capital costs for Canadian companies dissuades potential foreign acquirers from buying in Canada.
- Canada's lack of infrastructure and consequent bottlenecks in processing continue to compromise capital market interest up North.
- Widening disparity between Canada and the US regulatory policy in wake of US corporate tax cuts and more lax regulations for the industry.

1Q18 International Capital Activity

Observations from PLS International Capital Team

Additional Thoughts Overseas

- Much ballyhooed Saudi Aramco \$100 billion IPO pushed back to 2019 and will probably just trade on local Tadawul exchange to start.
- Privatization brought three Vietnam state-owned energy companies public for \$737 million, is impetus for Sinochem \$2.0 billion IPO and other Chinese and Indian SOEs.



- Energean raised \$460 million through London IPO, other firms announcing IPO plans in 1Q18 including Sapura Energy's \$1.5 billion E&P business and Indian OFS John Energy.
- Large private placements in 1Q18 included Gazprom's \$1.1 billion equity sale and Japaul Oil & Maritime Services' \$350 mm deal.
- Blackstone & Shell working up \$10 billion bid for BHP Billiton's US shale assets after Blackstone & Blue Water's combined commitment is \$1.38 billion in Mime Energy.
- Biggest debt raisers in 1Q18 include Pemex (\$4.0 billion), Petrobras (\$2.0 billion), Gas Natural Fenosa (\$1.05 billion), Chrysaor (\$796 million) and Tullow Oil (\$650 million).





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