

# Royal Dutch Shell Plc

**Buy → | Target 2750.00 p**

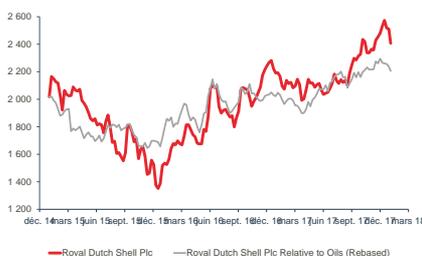
Price (01/02/2018) : 2406.50 p | Upside : 14 %

Est.chg	2018e	2019e
EPS	0.0%	0.5%

## Q4 results in line but disappointment at cash flow

Publication date 02/02/2018 08:52

Writing date 02/02/2018 08:51



Source : ODDO BHF Securities, Firinfo

### Capital

RDSA LN   RDSa.L	
Market Cap (USDm)	213 820
Enterprise value (USDm)	349 025
Extrema 12 months	1 993 - 2 574
Free Float (%)	97.7

Performance (%)	1m	3m	12m
Absolute	-3.0	2.0	12.6
Perf. rel. Country Index	-4.0	2.8	3.9
Perf. rel. Oils	-3.9	3.6	9.5

P&L	12/17	12/18e	12/19e
Sales (USDm)	305 179	332 120	348 568
EBITDA (USDm)	44 170	49 847	54 433
Current EBIT (USDm)	17 947	25 730	28 290
Attr. net profit (USDm)	12 977	17 194	18 979
Adjusted EPS (USD)	2.01	2.07	2.34
Dividend (USD)	1.88	1.88	1.88
P/E (x)	14.0	16.5	14.7
P/B (x)	1.1	1.5	1.5
Dividend Yield (%)	6.7	5.5	5.5
FCF yield (%)	10.3	9.3	9.6
EV/Sales (x)	0.98	1.05	1.00
EV/EBITDA (x)	6.8	7.0	6.4
EV/Current EBIT (x)	16.6	13.6	12.3
Gearing (%)	33	28	27
Net Debt/EBITDA(x)	1.5	1.1	1.0

Next Events	
26/02/2018	Conference/Presentation
21/03/2018	Conference/Presentation
26/04/2018	Q1 Results
22/05/2018	AGM

### Q4 2017 results 1.4% higher than forecast

Adjusted attributable net profit in Q4 totalled \$ 4.3bn, +4.9% q-o-q/+140% y-o-y, i.e. +2.6%/+1.4% ahead of our expectations and those of the consensus. However, adjusted cash flow came in at \$ 8.4bn, shy of the forecasts of \$ 10bn, impacted by one-off taxes related to disposals.

### Excellent performance in upstream and integrated gas

Upstream, earnings came to \$ 1.65bn, up 193% q-o-q, i.e. 49% higher than forecast, despite a 7% drop in production y-o-y with the impact of disposals (Canada, North Sea and Gabon), but up 1% y-o-y organic. This result is buoyed by a rise in Brent prices and a drop in amortisation charges. The group is gaining momentum and issued FIDs for the first FPSO for Libra in Brazil (180kboe/d; Shell: 20%), Tyra in Denmark (60 kboe/d; Shell: 36.8%) and Penguins in the North Sea (45 kboe/d; 50%). It has also just acquired (two days ago) nine exploration blocks in Mexico, which is a very promising basin. This will improve the reserve renewal rate currently at 27% (127% organic). In integrated gas, profit came in at \$ 1.63bn, 7.6% higher than forecast. It was buoyed by the rise in the price of oil and LNG along with lower taxation and amortisation. For Q1 2018, the group forecasts a positive impact of +210kb/d in integrated gas, offset by a contraction of -230kb/d upstream related to disposals and maintenance with volatility in Nigeria and the Netherlands where downtime might continue in a field due to recent earthquakes.

### Downstream: typical contraction in Q4 accentuated by the drop in margins

Earnings came in at \$ 1.396bn (-47.7% q-o-q/+4.3% y-o-y). This is 34% shy of forecasts, attributable to a contraction in margins. But this is typical of Q4 which is traditionally lower than the other quarters, particularly for oil products.

### Confirmed discipline but disappointment at CFFO

The group confirmed its discipline in terms of opex which came to \$ 37.5bn this year, much better than the guidance of \$ 40bn. The figure should stabilise at this level. Capex came to \$ 24bn (in line with our forecasts). The group reiterated its guidance of \$ 25bn-30bn (our forecast: \$ 25bn in 2018), but estimates that unit development costs will continue to drop by over 20% in 2018 after a contraction of 45% in 2014-2017, which puts the group in a stronger position to kick off new FIDs. Cash generation was disappointing in Q4. It came in at \$ 8.4bn while the group normally posts \$ 10bn. This difference is due to one-off taxes on disposals and we still forecast CFFO of \$ 41bn in 2018. This should more than cover capex and the full-cash dividend based on a Brent price of \$ 58/b, giving breakeven of \$ 53/b in 2018 which will decrease subsequently. Management wants to reduce its gearing to 20% vs 24.8% at present. This level should be reached towards end-2018 with the finalisation of \$ 6bn in asset disposals. The group can then kick off its buyback programme of \$ 25bn (towards end-2018 or early 2019 at the earliest in our view) which will be the next catalyst.

### Buy recommendation and target price of 2,750p confirmed

The group is making progress despite the blip in CFFO in Q4. The valuation is in line for 2018, but attractive for 2019 with P/E of 16.5x/14.7x in 2018/2019 vs 16.9/15.2x for the sector. The next catalyst will be the start of the asset disposal programme, probably at end-2018. We confirm our Buy recommendation but now favour Eni which offers potential for a re-rating in the shorter term.

**Ahmed Ben Salem (Analyst)**

+33 (0)1 44 94 56 05

ahmed.ben-salem@oddo-bhf.com

#### Conflict of interests:

ODDO BHF CORPORATES & MARKETS, a division of ODDO BHF SCA, limited sharepartnership - Bank authorised by ACPR. ODDO BHF and/or one of its subsidiaries could be in a conflict of interest situation with one or several of the groups mentioned in this publication. Please refer to the conflict of interests section at the end of this document. This is a non-contractual document, it is strictly for the private use of the recipient, and the information it contains is based on sources we believe to be reliable, but whose accuracy and completeness cannot be guaranteed. The opinions given in the document reflect our appraisal at the time of publication and may therefore be revised at a later date.



## Breakdown of results by division

(\$ m)	Q4 16	Q3 17	Q4 17A	QoQ%	YoY%	Q4 17E	Cons.
Integrated Gas	907	1 282	1 636	+27.6%	+80.4%	1 526	1 520
Upstream	54	562	1 650	+193.6%	+2956%	1 105	1 102
Downstream	1 339	2 668	1 396	-47.7%	+4.3%	2 015	2 115
o/w Oil Products	823	2 018	884	-56.2%	+7.4%	1 425	1 556
o/w Chemicals	516	650	512	-21.2%	-0.8%	590	559
<b>Net operating profit from segments</b>	<b>2 300</b>	<b>4 512</b>	<b>4 682</b>	<b>+3.8%</b>	<b>+103.6%</b>	<b>4 646</b>	<b>4 717</b>
Corporate and Minority interest	(505)	(433)	(379)	n/m	n/m	(450)	(478)
<b>Net Adjusted Attributable Profit</b>	<b>1 795</b>	<b>4 103</b>	<b>4 303</b>	<b>+4.9%</b>	<b>+139.7%</b>	<b>4 196</b>	<b>4 242</b>
Production (kboe/d)	3 905	3 657	3 756	+2.7%	-3.8%	3 715	
Brent (\$/bbl)	49.3	52.1	61.3	+17.6%	+24.2%	61.3	
Western Canada Select (\$/bbl)	35.3	38.2	38.7	+1.3%	+9.5%	38.7	
Henry Hub (\$/MBtu)	2.94	2.99	2.87	-4.0%	-2.4%	2.93	

Sources: Company data, Oddo BHF Securities

RDSa.L | RDSA LN  
Oil Companies | UK

	Buy					Price 2406.50GBP			
	Upside	14.27%			TP 2750.00 p				
<b>PER SHARE DATA (USD)</b>	<b>12/12</b>	<b>12/13</b>	<b>12/14</b>	<b>12/15</b>	<b>12/16</b>	<b>12/17</b>	<b>12/18e</b>	<b>12/19e</b>	
Adjusted EPS	4.01	3.10	3.57	1.67	1.03	2.01	2.07	2.34	
<b>Reported EPS</b>	<b>4.25</b>	<b>2.60</b>	<b>2.38</b>	<b>0.61</b>	<b>0.58</b>	<b>1.64</b>	<b>2.07</b>	<b>2.34</b>	
Growth in EPS(%)	1.1%	-22.8%	15.4%	-53.2%	-38.4%	94.8%	3.2%	12.8%	
Net dividend per share	1.72	1.80	1.88	1.88	1.88	1.88	1.88	1.88	
FCF to equity per share	3.15	0.24	3.69	1.39	0.07	2.89	3.18	3.30	
Book value per share	30.11	28.62	27.27	25.81	23.57	24.63	23.61	23.60	
Number of shares market cap	6 241.47	6 593.82	6 347.71	6 311.61	8 174.39	7 891.67	8 298.99	8 372.64	
Number of diluted shares	6 386.98	6 412.58	6 389.31	6 394.83	7 854.32	8 170.66	8 298.99	7 994.99	
<b>VALUATION</b>	<b>12/12</b>	<b>12/13</b>	<b>12/14</b>	<b>12/15</b>	<b>12/16</b>	<b>12/17</b>	<b>12/18e</b>	<b>12/19e</b>	
12m highest price	37.15	36.37	41.70	33.47	28.53	33.52	35.79		
12m lowest price	30.37	31.49	31.13	22.08	19.71	25.40	33.58		
(*) Reference price	34.54	33.30	37.40	28.53	25.28	28.17	34.26	34.26	
Capitalization	215 590	219 579	237 405	180 096	206 634	222 308	284 307	286 830	
Restated Net debt	19 204	34 866	23 933	26 627	73 346	65 353	54 942	51 825	
Minorities (fair value)	1 644	1 282	1 124	1 370	1 961	3 868	4 155	3 751	
Financial fixed assets (fair value)	4 867	4 715	4 115	3 416	5 952	7 222	7 222	7 222	
Provisions	6 700	11 564	16 695	12 937	14 585	13 841	13 841	13 841	
<b>Enterprise Value</b>	<b>238 271</b>	<b>262 576</b>	<b>275 042</b>	<b>217 614</b>	<b>290 575</b>	<b>298 149</b>	<b>350 022</b>	<b>349 025</b>	
P/E (x)	8.6	10.8	10.5	17.0	24.5	14.0	16.5	14.7	
P/CF (x)	5.1	5.6	6.1	7.4	7.4	5.7	6.9	6.2	
Net Yield (%)	5.0%	5.4%	5.0%	6.6%	7.4%	6.7%	5.5%	5.5%	
FCF yield (%)	9.1%	0.7%	9.9%	4.9%	0.3%	10.3%	9.3%	9.6%	
P/B incl. GW (x)	1.15	1.16	1.37	1.11	1.07	1.14	1.45	1.45	
P/B excl. GW (x)	1.17	1.18	1.40	1.13	1.20	1.28	1.63	1.63	
EV/Sales (x)	0.51	0.58	0.65	0.72	1.24	0.98	1.05	1.00	
EV/EBITDA (x)	4.1	5.3	5.6	8.7	9.6	6.8	7.0	6.4	
<b>EV/EBIT (x)</b>	<b>5.5</b>	<b>9.4</b>	<b>11.3</b>	<b>57.8</b>	<b>55.2</b>	<b>16.6</b>	<b>13.6</b>	<b>12.3</b>	
(*) historical average price									
<b>PROFIT AND LOSS (USDm)</b>	<b>12/12</b>	<b>12/13</b>	<b>12/14</b>	<b>12/15</b>	<b>12/16</b>	<b>12/17</b>	<b>12/18e</b>	<b>12/19e</b>	
Sales	467 153	451 235	421 105	303 487	233 591	305 179	332 120	348 568	
EBITDA	57 713	49 468	48 781	25 033	30 257	44 170	49 847	54 433	
Depreciations	-14 615.0	-21 509.0	-24 499.0	-21 268.0	-24 993.0	-26 223.0	-24 117.0	-26 142.5	
<b>Current EBIT</b>	<b>43 098</b>	<b>27 959</b>	<b>24 282</b>	<b>3 765</b>	<b>5 264</b>	<b>17 947</b>	<b>25 730</b>	<b>28 290</b>	
Published EBIT	43 098	27 959	24 282	3 765	5 264	17 947	25 730	28 290	
Net financial income	-1 757.0	-1 642.0	-1 804.0	-884.8	-3 203.0	-4 042.0	-2 105.2	-1 868.4	
Corporate Tax	-23 449.0	-17 066.0	-13 686.0	-2 447.3	-829.0	-4 695.0	-11 330.9	-12 514.4	
Net income of equity-accounted companies	8 948	7 275	6 116	3 238	3 545	4 225	4 702	4 864	
Profit/loss of discontinued activities (after tax)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Minority interests	-248.0	-155.0	144	171	-202.0	-458.0	198	208	
Attributable net profit	26 592	16 371	15 052	3 842	4 575	12 977	17 194	18 979	
<b>Adjusted attributable net profit</b>	<b>25 139</b>	<b>19 492</b>	<b>22 562</b>	<b>10 676</b>	<b>8 227</b>	<b>16 660</b>	<b>17 194</b>	<b>18 979</b>	
<b>BALANCE SHEET (USDm)</b>	<b>12/12</b>	<b>12/13</b>	<b>12/14</b>	<b>12/15</b>	<b>12/16</b>	<b>12/17</b>	<b>12/18e</b>	<b>12/19e</b>	
Goodwill	3 181	3 181	3 181	3 181	20 865	21 078	21 078	21 078	
Other intangible assets	1 289	1 213	3 895	3 102	3 102	3 102	3 102	3 102	
Tangible fixed assets	172 293	191 897	192 472	182 838	236 098	226 380	217 263	209 120	
WCR	23 345	23 535	13 587	8 836	14 022	18 429	18 429	18 859	
Financial assets	68 828	57 878	53 688	57 678	64 641	61 133	61 133	61 133	
Ordinary shareholders equity	188 494	180 047	172 144	162 876	186 646	194 356	195 948	191 660	
Minority interests	1 433	1 101	820	1 245	1 865	3 456	3 158	2 850	
Shareholders equity	189 927	181 148	172 964	164 121	188 511	197 812	199 106	194 510	
Non-current provisions	59 805	57 625	66 344	60 359	76 871	66 957	66 957	66 957	
<b>Net debt</b>	<b>19 204</b>	<b>34 866</b>	<b>23 933</b>	<b>26 627</b>	<b>73 346</b>	<b>65 353</b>	<b>54 942</b>	<b>51 825</b>	
<b>CASH FLOW STATEMENT (USDm)</b>	<b>12/12</b>	<b>12/13</b>	<b>12/14</b>	<b>12/15</b>	<b>12/16</b>	<b>12/17</b>	<b>12/18e</b>	<b>12/19e</b>	
<b>EBITDA</b>	<b>57 713.0</b>	<b>49 468.0</b>	<b>48 781.0</b>	<b>25 033.0</b>	<b>30 257.0</b>	<b>44 170.0</b>	<b>49 847.4</b>	<b>54 432.9</b>	
Change in WCR	3 391.0	2 988.0	6 125.0	5 521.0	-6 289.0	-3 158.0	0.1	-429.7	
Interests & taxes	-25 206.0	-18 708.0	-15 490.0	-3 332.1	-4 032.0	-8 737.0	-13 436.0	-14 382.8	
Others	10 242.0	6 692.0	5 628.0	2 588.2	679.0	3 375.0	4 701.8	4 863.9	
Operating Cash flow	46 140.0	40 440.0	45 044.0	29 810.0	20 615.0	35 650.0	41 113.4	44 484.4	
CAPEX	-26 230.0	-38 933.0	-21 981.0	-21 411.0	-20 044.0	-12 037.0	-15 000.0	-18 000.0	
<b>Free cash-flow</b>	<b>19 910.0</b>	<b>1 507.0</b>	<b>23 063.0</b>	<b>8 399.0</b>	<b>571.0</b>	<b>23 613.0</b>	<b>26 113.4</b>	<b>26 484.4</b>	
Acquisitions / disposals	-2 330.0	-1 000.0	2 737.0	-620.0	-11 186.0	1 582.0	0.0	0.0	
Dividends	-7 682.0	-7 450.0	-9 560.0	-9 487.0	-9 857.0	-11 283.0	-15 702.1	-15 367.2	
Net capital increase	-1 526.0	-5 565.0	-3 096.0	-448.0	-160.0	-717.0	0.0	-8 000.0	
Others	-1 221.0	3 867.0	-820.0	12 677.0	7 743.0	-14 439.0	0.0	0.0	
Change in net debt	7 275.0	-14 249.0	11 554.0	-4 746.0	-23 696.0	13 011.0	10 411.3	3 117.1	
<b>GROWTH MARGINS PRODUCTIVITY</b>	<b>12/12</b>	<b>12/13</b>	<b>12/14</b>	<b>12/15</b>	<b>12/16</b>	<b>12/17</b>	<b>12/18e</b>	<b>12/19e</b>	
Sales growth	-0.6%	-3.4%	-6.7%	-27.9%	-23.0%	30.6%	8.8%	5.0%	
<b>Lfl sales growth</b>	<b>-0.6%</b>	<b>-3.4%</b>	<b>-6.7%</b>	<b>-27.9%</b>	<b>-23.0%</b>	<b>30.6%</b>	<b>8.8%</b>	<b>5.0%</b>	
Current EBIT growth	-10.8%	-35.1%	-13.2%	-84.5%	39.8%	ns	43.4%	9.9%	
Growth in EPS(%)	1.1%	-22.8%	15.4%	-53.2%	-38.4%	94.8%	3.2%	12.8%	
Net margin	5.4%	4.3%	5.4%	3.5%	3.5%	5.5%	5.2%	5.4%	
<b>EBITDA margin</b>	<b>12.4%</b>	<b>11.0%</b>	<b>11.6%</b>	<b>8.2%</b>	<b>13.0%</b>	<b>14.5%</b>	<b>15.0%</b>	<b>15.6%</b>	
<b>Current EBIT margin</b>	<b>9.2%</b>	<b>6.2%</b>	<b>5.8%</b>	<b>1.2%</b>	<b>2.3%</b>	<b>5.9%</b>	<b>7.7%</b>	<b>8.1%</b>	
CAPEX / Sales	-7.0%	-8.9%	-7.6%	-8.6%	-9.5%	-6.8%	-6.9%	-6.6%	
WCR / Sales	5.0%	5.2%	3.2%	2.9%	6.0%	6.0%	5.5%	5.4%	
Tax Rate	56.7%	64.8%	60.9%	85.0%	40.2%	33.8%	48.0%	47.4%	
Normative tax rate	-56.7%	-64.8%	-60.9%	-85.0%	-40.2%	-33.8%	-48.0%	-47.4%	
Asset Turnover	2.4	2.1	1.9	1.5	1.0	1.1	1.3	1.4	
<b>ROCE post-tax (normative tax rate)</b>	<b>35.2%</b>	<b>22.0%</b>	<b>18.0%</b>	<b>3.4%</b>	<b>3.1%</b>	<b>8.8%</b>	<b>14.4%</b>	<b>16.3%</b>	
ROCE post-tax hors GW (normative tax rate)	35.8%	22.3%	18.3%	3.4%	3.3%	9.6%	15.6%	17.7%	
ROE	14.0%	10.6%	12.8%	6.4%	4.7%	8.7%	8.8%	9.8%	
<b>DEBT RATIOS</b>	<b>12/12</b>	<b>12/13</b>	<b>12/14</b>	<b>12/15</b>	<b>12/16</b>	<b>12/17</b>	<b>12/18e</b>	<b>12/19e</b>	
Gearing	10%	19%	14%	16%	39%	33%	28%	27%	
Net Debt / Market Cap	0.09	0.16	0.10	0.15	0.35	0.29	0.19	0.18	
<b>Net debt / EBITDA</b>	<b>0.33</b>	<b>0.70</b>	<b>0.49</b>	<b>1.06</b>	<b>2.42</b>	<b>1.48</b>	<b>1.10</b>	<b>0.95</b>	
EBITDA / net financial charges	32.8	30.1	27.0	28.3	9.4	10.9	23.7	29.1	

Source: ODDO BHF Securities, Fininfo



- **Valuation method**

Our target prices are established on a 12-month timeframe and we use three valuation methods to determine them. First, the discounting of available cash flows using the discounting parameters set by the Group and indicated on Oddo BHF' website. Second, the sum-of-the-parts method based on the most pertinent financial aggregate depending on the sector of activity. Third, we also use the peer comparison method which facilitates an evaluation of the company relative to similar businesses, either because they operate in identical sectors (and are therefore in competition with one another) or because they benefit from comparable financial dynamics. A mixture of these valuation methods may be used in specific instances to more accurately reflect the specific characteristics of each company covered, thereby fine-tuning its evaluation.

- **Sensitivity of the result of the analysis/ risk classification:**

The opinions expressed in the financial analysis are opinions as per a particular date, i.e. the date indicated in the financial analysis. The recommendation (cf. explanation of the recommendation systematic) can change owing to unforeseeable events which may, for instance, have repercussions on both the company and on the whole industry.

- **Our stock market recommendations**

Our stock market recommendations reflect the RELATIVE performance expected for each stock on a 12-month timeframe.  
Buy: performance expected to exceed that of the benchmark index, sectoral (large caps) or other (small and mid caps).  
Neutral: performance expected to be comparable to that of the benchmark index, sectoral (large caps) or other (small and mid caps).  
Reduce: performance expected to fall short of that of the benchmark index, sectoral (large caps) or other (small and mid caps).

- **The prices of the financial instruments used and mentioned in this document are the closing prices.**

- **All publications by Oddo BHF concerning the companies covered and mentioned in this document are available on the research site: [www.securities.oddo-bhf.com](http://www.securities.oddo-bhf.com)**

**Recommendation and target price changes history over the last 12 months for the company analysed in this report**

Date	Reco	Price Target (GBP)	Price (GBP)	Analyst
10/11/17	Buy	2750.00	31.89	Ahmed Ben Salem
13/12/16	Buy	2450.00	27.11	Ahmed Ben Salem

In accordance with Article 20 of European Regulation No. 596/2014 (Market Abuse Regulation), a list of all recommendations on any financial instrument or issuer that have been disseminated over the past twelve months is available by clicking on the following link [www.securities.oddo-bhf.com](http://www.securities.oddo-bhf.com)

**Recommendation split**

		Buy	Neutral	Reduce
Our whole coverage	(409)	48%	41%	11%
Liquidity providers coverage	(132)	40%	53%	7%
Research service coverage	(57)	51%	47%	2%
Investment banking services	(52)	73%	19%	8%

**Risk of conflict of interest:**
**Investment banking and/or Distribution**

Has Oddo BHF, managed or co-managed in the past 12 months a public offering of securities for the subject company/ies? No

Has Oddo BHF, received compensation for investment banking services from the subject company/ies in the past 12 months or expects to receive or intends to seek compensation for investment banking services from the subject company/ies in the last 12 months? No

**Research contract between Oddo group & the issuer**

Oddo BHF and the issuer have agreed that Oddo BHF will produce and disseminate investment recommendations on the said issuer as a service to the issuer No

**Liquidity provider agreement and market-making**

At the date of the distribution of this report, does Oddo BHF, act as a market maker or has Oddo BHF, signed a liquidity provider agreement with the subject company/ies? No

**Significant equity stake**

Does Oddo BHF, own 5% or more of any class of common equity securities of the subject company/ies? No

Does the subject company beneficially own 5% or more of any class of common equity of Oddo BHF or its affiliates? No

**Disclosure to Company**

Has a copy of this report; with the target price and/or rating removed, been presented to the subject company/ies prior to its distribution, for the sole purpose of verifying the accuracy of factual statements? No

Have the conclusions of this report been amended following disclosure to the company/ies and prior its distribution? No

**Additional material conflicts**

Is Oddo BHF, aware of any additional material conflict of interest? No

**Personal conflicts of interest**

Have those responsible for the drafting of the present document acquired securities from the issuer concerned by the present financial analysis? No

Have those responsible for the drafting of the present document received remuneration directly linked to investment firm service transactions or any other kind of transaction they carry out or any trading commissions they, or any legal person who is part of the same group, receive? No

**Statement of conflict of interests of all companies mentioned in this document may be consulted on Oddo BHF: [www.securities.oddo-bhf.com](http://www.securities.oddo-bhf.com)**

**Disclaimer:****Disclaimer for Distribution by ODDO BHF SCA to Non-United States Investors:**

This research publication is produced by ODDO BHF Corporate & Markets, a division of ODDO BHF SCA ("ODDO"), which is licensed by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the Autorité des Marchés Financiers ("AMF").

The research, when distributed outside of the U.S., is intended exclusively for non-U.S. customers of ODDO and cannot be divulged to a third-party without prior written consent of ODDO. This document is not and should not be construed as an offer to sell or the solicitation of an offer to purchase or subscribe for any investment. This research has been prepared in accordance with regulatory provisions designed to promote the independence of investment research. "Chinese walls" (information barriers) have been implemented to avert the unauthorized dissemination of confidential information and to prevent and manage situations of conflict of interest. This research has been prepared in accordance with French regulatory provisions designed to promote the independence of investment research. The recommendation presented in this document is reviewed and updated at least quarterly following each Quarterly Report published by the issuer that is the subject of this Research Report.

At the time of publication of this document, ODDO and/or one of its subsidiaries may have a conflict of interest with the issuer(s) mentioned. While all reasonable effort has been made to ensure that the information contained is not untrue or misleading at the time of publication, no representation is made as to its accuracy or completeness and it should not be relied upon as such. Past performances offer no guarantee as to future performances. All opinions expressed in the present document reflect the current context which is subject to change without notice. The views expressed in this Research Report accurately reflect the analyst's personal views about the subject securities and/or issuers and no part of his compensation was, is, or will be directly or indirectly related to the specific views contained in the Research Report. This Research Report does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. Clients should consider whether any advice or recommendation in this research is suitable for their particular circumstances and, if appropriate, seek professional advice, including tax advice.

This Research Report is for institutional investors only. It may not contain information necessary for others to make investment decisions. Consult your financial adviser or an investment professional if you are not an institutional investor.

**Disclaimer for Distribution by Oddo New York to United States Investors:**

This Research Report is produced by ODDO BHF Corporate & Markets, a division of ODDO. This research is distributed to U.S. investors exclusively by ODDO BHF New York Corporation ("ONY"), MEMBER: FINRA/SIPC, and is intended exclusively for U.S. customers of ONY and cannot be divulged to a third-party without prior written consent of ONY. This document is not and should not be construed as an offer to sell or the solicitation of an offer to purchase or subscribe for any investment. This research has been prepared in accordance with regulatory provisions designed to promote the independence of investment research. "Chinese walls" (information barriers) have been implemented to avert the unauthorized dissemination of confidential information and to prevent and manage situations of conflict of interest. This research has been prepared in accordance with French regulatory provisions designed to promote the independence of investment research. The recommendation presented in this document is reviewed and updated at least quarterly following each Quarterly Report published by the issuer that is the subject of this Research Report.

At the time of publication of this document, ODDO, and/or one of its subsidiaries may have a conflict of interest with the issuer(s) mentioned. While all reasonable effort has been made to ensure that the information contained is not untrue or misleading at the time of publication, no representation is made as to its accuracy or completeness and it should not be relied upon as such. Past performances offer no guarantee as to future performances. All opinions expressed in the present document reflect the current context which is subject to change without notice. The views expressed in this Research Report accurately reflect the analyst's personal views about the subject securities and/or issuers and no part of his compensation was, is, or will be directly or indirectly related to the specific views contained in the Research Report. This Research Report does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. Clients should consider whether any advice or recommendation in this research is suitable for their particular circumstances and, if appropriate, seek professional advice, including tax advice.

This Research Report is for institutional investors only. It may not contain information necessary for others to make investment decisions. Consult your financial adviser or an investment professional if you are not an institutional investor.

**Rule 15a-6 Disclosure:**

Under Rule 15a-6(a)(3), any transactions conducted by ODDO, and/or one of its subsidiaries with U.S. persons in the securities described in this foreign research must be effected through ONY. As a member of FINRA, ONY has reviewed this material for distribution to U.S. persons as required by FINRA Rules 2241(h) applicable to dissemination of research produced by its affiliate ODDO.

**FINRA Disclosures:**

- Neither ONY, ODDO, nor ODDO BHF Corporate & Markets beneficially owns 1% or more of any class of common equity securities of the subject company.
- The research analyst of ODDO BHF Corporate & Markets, at the time of publication of this research report, is not aware, nor does he or she know or have reason to know of any actual, material conflict of interest of himself or herself, ODDO, ODDO BHF Corporate & Markets or ONY, except those mentioned in the paragraph entitled "Risks of Conflicts of Interest."
- ODDO BHF Corporate & Markets or ODDO may receive or seek compensation for investment banking services in the next 3 months from the subject company of this Research Report, but ONY would not participate in those arrangements.
- Neither ONY, ODDO, ODDO BHF Corporate & Markets has received compensation from the subject company in the past 12 months for providing investment banking services except those mentioned in the paragraph of "Risks of Conflict of Interest."
- Neither ONY, ODDO, ODDO BHF Corporate & Markets has managed or co-managed a public offering of securities for the subject company in the past 12 months except those mentioned in the paragraph of "Risk of Conflict of Interest".
- ONY does not make (and never has made) markets and, accordingly, was not making a market in the subject company's securities at the time that this research report was published.

Regulation AC: ONY is exempt from the certification requirements of Regulation AC for its distribution to a U.S. person in the United States of this Research Report that is prepared by an ODDO BHF Corporate & Markets research analyst because ODDO has no officers or persons performing similar functions or employees in common with ONY and ONY maintains and enforces written policies and procedures reasonably designed to prevent it, any controlling persons, officers or persons performing similar functions, and employees of ONY from influencing the activities of the third party research analyst and the content of research reports prepared by the third party research analyst.

Contact Information of firm distributing research to U.S. investors: ODDO BHF New York Corporation, MEMBER: FINRA/SIPC, is a wholly owned subsidiary of ODDO BHF SCA; Philippe Bouclainville, President (pbouclainville@oddonny.com) 150 East 52nd Street New York, NY 10022 212-481-4002.