

Deal Terms

1 CELG = \$50 + 1 BMY + 1 CVR (\$9/share)

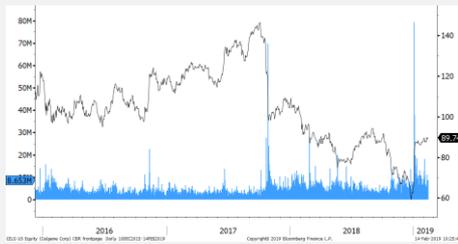
Target: Celgene

Country	US
Bloomberg	CELG
Sector	Biotech
Share price (USD)	89.74
Market cap (USDm)	62,839.4
Free float (%)	100

Acquirer: Bristol-Myers Squibb

Country	US
Bloomberg	BMY
Sector	Pharma
Share price (USD)	50.98
Market cap (USDm)	83,223.0
Free float	100

CELG Price Chart (Last 12 months)



Status

HSR initial wp expires on February 15.

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Celgene (CELG) / Bristol-Myers Squibb (BMJ)

Announced merger

The spread >10% (ex-CVR) is attractive in our view. We would start building a position long spread as we approach the shareholder vote.

CBR View:

- We expect significant spread tightening on BMJ shareholder approval as remaining risks (regulatory approvals, MAC, IP issues, timing) do not warrant a huge spread in our view.

Drug price reform

- Proposed changes announced so far do not affect CELG or BMJ in an extent that would threaten shareholder approval or deal close.
- Risk remains that further measures/proposals are announced before the votes or deal close
 - We believe that there are a number of factors which make it unlikely that CELG would be affected so negatively that bidder shareholders would vote against the deal:
 - Outright price regulation in the US does not have broad support as it limits free competition and would put innovation and jobs in danger
 - HHS' proposal on international price benchmarking would affect Medicare Part B (CELG has ~6% exposure).
 - Other measures like facilitation of generic entry (pay for delay agreements, supply of information to generic manufacturers, Medicare direct negotiation with manufacturers etc.) are more likely in our view.
 - Political consensus is required to introduce new measures. Democrats might not have an incentive to help Trump achieve big reduction in prices and thus increase popularity.
 - The pharma industry is the most powerful lobbying group, and has historically provided more supported to Republicans
- We don't see a MAC triggered after the shareholder vote given CELG's low exposure to Part B and that any measure is likely to affect revenues starting 2020.
- Even in case of regulation there could be an argument that both companies would be affected and BMJ would need pipeline enhancement even more in such scenario.

Counter-bid

- We believe that Starboard has slim chances in case it elects to oppose the merger and push for the sale of BMJ.
- We don't see a bid likely based on potential bidders' recent comments, current portfolio or finances.
- Activists have approached BMJ in the past without any success in terms of M&A.
- Only a few companies are large enough to acquire BMJ.
 - Pfizer and Novartis ruled themselves out in recent weeks. Roche and Merck have their own IO drugs. Sanofi does not appear to have room on its balance sheet (~3x leverage) to offer a significant cash element. JNJ is in crisis due to their asbestos scandal. JNJ was rumored to show interest in BSX and Nestle's skincare unit recently. Novartis just bought Endocyte, may make complementary takeovers in a volume of as much as \$15b, its CEO said.
- Based on its size, portfolio and balance sheet we believe that Amgen might be a potential bidder. The co did not rule out large acquisitions in its earnings call, however noted that there are more small opportunities than large ones. They recently struck an IO deal with Molecular Partners.

IP issues

- Final decisions are not expected before deal-close, a potential settlement might come earlier (companies have started mediation process earlier this year), which would probably lead to a phased entry on terms acceptable to CELG.
- February IPR rulings were favorable for CELG, two more decisions are upcoming in February – March. Even in case of an IPR initiated, the process takes about a year and historically have a low success rate.
- Altogether we don't see potential IP related events before the vote that might make BMJ shareholders vote against the merger.

CBR View:

- We expect significant spread tightening on BMY shareholder approval as remaining risks (regulatory approvals, MAC, IP issues, timing) and do not warrant a huge spread in our view.

Drug price reform

- Proposed changes announced so far do not affect CELG or BMY in an extent that would threaten shareholder approval or deal close.
- Risk remains that further measures/proposals are announced before the votes or deal close
 - We believe that there are a number of factors which make it unlikely that CELG would be affected so negatively that bidder shareholders would vote against the deal:
 - Outright price regulation in the US does not have broad support as it limits free competition, would put jobs and innovation in danger. Also drug companies might increase prices overseas as a counter-measure.
 - HHS' proposal on international price benchmarking would affect Medicare Part B (CELG has ~6% exposure, BMY >10%).
 - HHS proposed a plan to fix drug prices to an international standard (including 16 countries with government-run socialized health care)
 - 60-day public comment period on HHS proposals expires early April
 - Other measures are more likely in our view
 - facilitation of generic entry
 - pay for delay agreements
 - force timely generic
 - supply of samples / information to generic manufacturers
 - Medicare to directly negotiate prices with manufacturers (Democrats support this, Republicans don't)
 - Changing requirements for plans to cover certain drugs
 - Drug imports (does not really have support)
 - Moving drugs from Part B to Part D or merging the two (discounts achieved by private plans in Part D are higher)
 - Political consensus is required to introduce new measures. Democrats might not have an incentive to help Trump achieve big reduction in prices and thus increase popularity.
 - The pharma industry is the most powerful lobbying group, and has historically provided more support to Republicans
- We don't see a MAC triggered after the shareholder vote given CELG's low exposure to Part B and that any measure is likely to affect revenues starting 2020.
- Even in case of regulation there could be an argument that both companies would be affected and BMY would need pipeline enhancement even more in such scenario.

Counter-bid

- We believe that Starboard has slim chances in case it elects to oppose the merger and push for the sale of BMY.
- We don't see a bid likely based on potential bidders' recent comments, current portfolio or finances.
- Activists have approached BMY in the past without any success in terms of M&A.
- Only a few companies are large enough to acquire BMY.
 - Pfizer and Novartis ruled themselves out in recent weeks.
 - Roche and Merck have their own IO drugs.
 - Sanofi does not appear to have room on its balance sheet (~3x leverage) to offer a significant cash element
 - JNJ is in crisis due to their asbestos scandal. JNJ was rumored to show interest in BSX and Nestle's skincare unit recently. Later they acquired Ci:z, a ~Japanese cosmetics firm for ~\$2b.
 - Novartis just bought Endocyte, may make complementary takeovers in a volume of as much as \$15b, its CEO said.
 - **Based on its size, portfolio and balance sheet we believe that Amgen might be a potential bidder.** The co did not rule out large acquisitions in its earnings call, however noted that there are more small opportunities than large ones.
 - Amgen recently struck an Immuno-Oncology deal with Molecular Partners.
 - 2018 December comment on M&A:
 - "From a M&A strategy standpoint we have been also very clear that inasmuch as we have a lot of capacity to engage in small- to medium- to large-scale M&A, this is something that has to be borne out of the strategy of the company, to the extent that we can add to our existing portfolio of products, to the extent that we can add to the pipeline of the company. The six therapeutic areas of focus, I mean, that's always a very good starting point, but we will remain disciplined in how we execute on M&A. To the extent that we can derive or create value for our shareholders is really important, not just the selling company."
 - Gilead – Deal might be too large for GILD. Co might be looking for acquisitions in NASH
 - "First and foremost, we're focused on M&A," Gilead Sciences Inc. Chief Financial Officer Robin Washington said Monday at the J.P. Morgan Healthcare Conference in San Francisco. Washington noted the company may also pay down some of its debt and weigh share buybacks. But mergers will be the biotech's "primary focus," she said.
 - GILD historically has not been a leader in oncology, though new CEO has oncology background
 - Gilead "had previously emphasized a focus on ensuring its leadership position in cell therapy as well as an interest in cancer more broadly and NASH.

- The company recently struck an IO deal with Agenus
 - EPS accretion at \$70/BMY (50-50% cash and stock) looks acceptable (single digit) assuming \$2.5b synergies.
- We note that BMY share price recovered from the initial fall after the announcement therefore its valuation is more in line with past couple of months`.

IP issues

- Final decisions are not expected before deal close, a potential settlement might come earlier (companies have started mediation process earlier this year), which would probably lead to a phased entry on terms acceptable to CELG.
- February IPR rulings were favorable for CELG, two more decisions are upcoming in February – March. Even in case of an IPR initiated, the process takes about a year and historically have a low success rate (~10%)
- Altogether we don`t see potential IP related events before the vote that might make BMY shareholders vote against the merger.

Downside

- We estimate downside to \$71-72/CELG
 - Positives since deal announcement: Pharma index up, CELG reported results that beat estimates, method of use IPRs not initiated.

CELG exposure to Medicare Part B and Medicare Part D

- Based on 2018 data, Abraxane revenues are ~\$1b or 7% of total.

Large Biotech's Exposure to Medicare Part B						
LARGE BIOTECH	2011	2012	2013	2014	2015	CAGR
Amgen	13%	15%	15%	15%	15%	
Part-B Spend	1,943,932,747	2,390,641,668	2,546,216,674	2,925,162,464	3,243,850,922	14%
U.S. Gross Sales	14,928,543,263	15,949,809,050	16,747,942,547	19,386,148,615	21,545,820,247	10%
Biogen	1%	1%	7%	5%	5%	
Part-B Spend	18,959,643	17,498,415	242,003,941	261,592,397	351,321,199	107%
U.S. Gross Sales	3,631,920,025	2,785,515,008	3,711,064,296	5,703,688,593	6,724,347,695	17%
Celgene	12%	14%	15%	9%	6%	
Part-B Spend	330,113,338	364,432,722	460,545,613	305,938,630	308,607,289	-2%
U.S. Gross Sales	2,745,531,894	2,683,999,871	2,997,582,180	3,493,911,544	4,927,502,791	16%
Gilead	0%	0%	0%	0%	0%	
Part-B Spend	675,942	543,726	657,416	662,513	589,537	-3%
U.S. Gross Sales	5,836,340,041	6,760,266,169	8,008,361,432	18,606,243,247	28,426,601,288	49%
Total Large Biotech	8%	10%	10%	7%	6%	
Part-B Spend	2,293,681,670	2,773,116,531	3,249,423,644	3,493,356,004	3,904,368,947	14%
U.S. Gross Sales	27,142,335,223	28,179,590,098	31,464,950,455	47,189,991,998	61,624,272,021	23%

Large Biotech's Exposure to Medicare Part-D						
LARGE BIOTECH	2011	2012	2013	2014	2015	CAGR
Amgen	8%	9%	11%	12%	13%	
Part-D Spend	1,138,390,133	1,432,788,709	1,858,407,594	2,276,104,797	2,708,334,121	24%
U.S. Gross Sales	14,928,543,263	15,949,809,050	16,747,942,547	19,386,148,615	21,545,820,247	10%
Biogen	10%	17%	21%	25%	27%	
Part-D Spend	349,108,226	475,493,405	776,529,880	1,287,405,789	1,643,004,844	47%
U.S. Gross Sales	3,631,920,025	2,785,515,008	3,622,640,388	5,216,653,384	6,107,841,892	14%
Celgene	34%	42%	53%	58%	53%	
Part-D Spend	941,642,451	1,133,649,116	1,585,280,318	2,036,019,629	2,593,833,484	29%
U.S. Gross Sales	2,742,657,964	2,681,878,025	2,995,831,175	3,492,518,241	4,926,161,852	16%
Gilead	25%	27%	28%	35%	40%	
Part-D Spend	1,448,821,823	1,828,824,558	2,276,106,331	6,471,338,426	11,387,715,361	67%
U.S. Gross Sales	5,836,340,041	6,760,266,169	8,008,361,432	18,606,243,247	28,426,601,288	49%
Total Large Biotech	14%	17%	21%	26%	30%	
Part-D Spend	3,877,962,633	4,870,755,788	6,496,324,123	12,070,868,641	18,332,887,810	47%
U.S. Gross Sales	27,139,461,293	28,177,468,253	31,374,775,543	46,701,563,487	61,006,425,279	22%

Sources: CMS Data, Symphony Health, Bloomberg Intelligence Data in USD unless stated

Source: Bloomberg

Key catalysts

- | | |
|-------------------|---|
| February 15, 2019 | Initial HSR wp expires |
| Feb 26, 2019 | Senate hearing on drug prices |
| Feb – Mar, 2019 | IPR decisions on method of use patents (DRL, Lotus) |
| March 1, 2019 | EGM record date |
| March, 2019 | Re-filing NDA for Ozanimod |
| Early April 2019 | HHS proposal public comment period ends |
| April 12, 2019 | Shareholder votes |

Appendix

Key terms of the merger

Transaction Details

Announcement Date	January 3, 2019
Offer terms	1 CELG = \$50 + 1 BMY + 1 CVR Celgene shareholders will also receive one tradeable contingent value right for each share held, which will entitle them to receive a one-time potential payment of \$9 in cash upon regulatory approval of ozanimod and liso-cel by Dec. 31, 2020 and bb2121 by March 31, 2021. CVRs are separate from CELG shares and are expected to be publicly traded on the NYSE.
Deal size	\$74b
% owned by CELG unitholders	31%
Offer structure	Cash and share merger
Voting agreement	No
Target's Board Recommendation	Yes
Target Incorporation	US (DE)
Merger agreement	Click here for the merger agreement.
Synergies	\$2.5b by the third full year

Indicated Closing Date

The transaction is expected to complete in the third quarter of 2019

Dividends

CELG does not pay any dividends.

BMY pays dvd quarterly (\$0.41/share)

We expect 2 BMY dividends before deal close.

CELGENE capitalization

- **Celgene Equity**
 - As of December 31, 2018, there were outstanding (A) 700,238,758 shares of Company Common Stock (of which 17,065 shares of Company Common Stock were subject to Company RSAs), (B) no shares of Company Preferred Stock, (C) Company Stock Options to purchase an aggregate of 71,139,116 shares of Company Common Stock, (D) 11,676,491 shares of Company Common Stock were subject to outstanding Company RSU Awards, (E) 652,837 shares of Company Common Stock were subject to outstanding Company PSU Awards, determined assuming target performance levels were achieved, (F) 27,623,841 additional shares of Company Common Stock were reserved for issuance pursuant to the Company Stock Plans and (G) 43,273,855 Abraxis CVRs subject to, and having the terms set forth in, the Abraxis CVR Agreement.
- **Celgene Debt**
 - \$17.8b
- **Celgene Net Leverage**
 - 2.6x
- **Celgene Credit Rating**
 - BBB+ / Baa2
- **BMY rating**
 - A+ / A2

Deal close definition

The closing of the Merger shall take place on the third (3rd) Business Day after the date the conditions set forth in Article IX (other than conditions that by their nature are to be satisfied at the Closing, but subject to the satisfaction or, to the extent permitted by Applicable Law, waiver of such conditions by the party or parties entitled to the benefit thereof at the Closing) have been satisfied or, to the extent permitted by Applicable Law, waived by the party or parties entitled to the benefit thereof, or at such other place, at such other time or on such other date as Parent and the Company may mutually agree.

Timetable (CBR est.)

■ Confidentiality Agreement	November 23, 2018
■ Date of the Merger Agreement	January 2, 2019
■ Deal Announcement	January 3, 2019
■ HSR filing deadline (10 BD)	By January 17, 2019
■ Proxy filing	By February 2019
■ Proxy effective	By April 2019
■ Shareholder votes	By May 2019
■ Regulatory approval	By September 2019
■ Deal close	By September 2019

■ End Date	January 2, 2020
■ Extended End Date I	March 2, 2020
■ Extended End Date II	May 1 2020

Solicitation Clause

There is a non-solicitation clause with a 4BD matching period.

Key conditions

■ Shareholder approval	■ CELG vote: majority of outstanding shares
	■ BMY vote: majority of votes cast
■ Regulatory	■ US, EC, others (potentially Japan, Canada)
■ No injunction	■ Yes
■ Listing	■ Yes
■ S-4 effectiveness	■ Yes
■ Reps and warranties	■ Yes
■ Performance of obligations	■ Yes
■ Certificate	■ Yes

Company MAC Definition

means any event, change, effect, development or occurrence that, individually or together with any other event, change, effect, development or occurrence, has had or would reasonably be expected to have a material adverse effect on the financial condition, business or results of operations of the Company and its Subsidiaries, taken as a whole;

Company MAC Carve-outs

- (i) any changes in general United States or global economic conditions,
- (ii) any changes in conditions generally affecting the industries in which the Company or any of its Subsidiaries operates,
- (iii) any decline, in and of itself, in the market price or trading volume of the Company Common Stock (it being understood and agreed that the foregoing shall not preclude Parent from asserting that any facts, events, developments or occurrences giving rise to or contributing to such decline that are not otherwise excluded from the definition of Company Material Adverse Effect should be deemed to constitute a Company Material Adverse Effect or should be taken into account in determining whether there has been, or would reasonably be expected to be, a Company Material Adverse Effect),
- (iv) any changes in regulatory, legislative or political conditions or in securities, credit, financial, debt or other capital markets, in each case in the United States or any foreign jurisdiction,
- (v) any failure, in and of itself, by the Company or any of its Subsidiaries to meet any internal or published projections, forecasts, estimates or predictions, revenues, earnings or other financial or operating metrics for any period (it being understood and agreed that the foregoing shall not preclude Parent from asserting that any facts, events, developments or occurrences giving rise to or contributing to such failure that are not otherwise excluded from the definition of Company Material Adverse Effect should be deemed to constitute a Company Material Adverse Effect or should be taken into account in determining whether there has been, or would reasonably be expected to be, a Company Material Adverse Effect),
- (vi) the execution and delivery of this Agreement, the public announcement or the pendency of this Agreement or the pendency or consummation of the transactions contemplated by this Agreement (including the Merger), the taking of any action required or expressly contemplated by this Agreement or the identity of, or any facts or circumstances relating to Parent or any of its Subsidiaries, including the impact of any of the foregoing on the relationships, contractual or otherwise, of the Company or any of its Subsidiaries with Governmental Authorities, customers, suppliers, partners, officers, employees or other material business relations (it being understood and agreed that the foregoing shall not apply with respect to any representation or warranty that is expressly intended to address the consequences of the execution, delivery or performance of this Agreement or the consummation of the transactions contemplated hereby (including Section 4.04(c)) or with respect to the condition to Closing contained in Section 9.02(b), to the extent it relates to such representations and warranties),
- (vii) any adoption, implementation, promulgation, repeal, modification, amendment, authoritative interpretation, change or proposal of any Applicable Law of or by any Governmental Authority,
- (viii) any changes or prospective changes in GAAP (or authoritative interpretations thereof),
- (ix) any changes in geopolitical conditions, the outbreak or escalation of hostilities, any acts of war, sabotage, cyberattack or terrorism, or any escalation or worsening of any such acts of war, sabotage, cyberattack or terrorism threatened or underway as of the date of this Agreement,
- (x) the taking of any action at the written request of or with the written consent of Parent,
- (xi) any reduction in the credit rating of the Company or any of its Subsidiaries (it being understood and agreed that the foregoing shall not preclude Parent from asserting that any facts, events, developments or occurrences giving rise to or contributing to such reduction that are not otherwise excluded from the definition of Company Material Adverse Effect should be deemed to constitute a Company Material Adverse Effect or should be taken into account in determining whether there has been, or would reasonably be expected to be, a Company Material Adverse Effect),
- (xii) any epidemic, plague, pandemic or other outbreak of illness or public health event, hurricane, earthquake, flood or other natural disasters, acts of God or any change resulting from weather conditions,
- (xiii) any claims, actions, suits or proceedings arising from allegations of a breach of fiduciary duty or violation of Applicable Law relating to this Agreement or the transactions contemplated hereby (including the Merger), or

- (xiv) any regulatory or clinical changes, effects, developments or occurrences relating to any Company Pipeline Product (including (A) any suspension, rejection, refusal of, request to refile or any delay in obtaining or making any regulatory application or filing relating to any Company Pipeline Product, (B) any negative regulatory actions, requests, recommendations or decisions of any Governmental Authority relating to any Company Pipeline Product or any other regulatory or clinical development relating to any Company Pipeline Product, (C) any clinical studies, tests or results or announcements thereof with respect to any Company Pipeline Product, and (D) any delay, hold or termination of any clinical trial or any delay, hold or termination of any planned application for marketing approval with respect to any Company Pipeline Product)
- except in the case of each of clauses (i), (ii), (iv), (vii), (viii), (ix) or (xii), to the extent that any such event, change, effect, development or occurrence has a disproportionate adverse effect on the Company and its Subsidiaries, taken as a whole, relative to the adverse effect such event, change, effect, development or occurrence has on other companies operating in the industries in which the Company and its Subsidiaries operate.

Break fees

- | | |
|---|---|
| <ul style="list-style-type: none"> ■ Break fee | <ul style="list-style-type: none"> ■ In the event of a termination of the Merger Agreement under certain specified circumstances, including termination by Celgene to enter into an agreement providing for a Company Superior Proposal, or a termination by BMS following a change in recommendation by Celgene's board of directors, Celgene may be required to pay BMS a termination fee equal to \$2.2 billion. |
| <ul style="list-style-type: none"> ■ Reverse Break fee | <ul style="list-style-type: none"> ■ In the event of a termination of the Merger Agreement under certain specified circumstances, including termination by BMS to enter into an agreement providing for a Parent Superior Proposal, or a termination by Celgene following a change in recommendation by BMS's board of directors, BMS may be required to pay Celgene a termination fee equal to \$2.2 billion. ■ BMS has to pay \$40m cost reimbursemen in case the vote is not successful. |

Antitrust related clauses

- | | |
|--|--|
| <ul style="list-style-type: none"> ■ Jurisdictions | <ul style="list-style-type: none"> ■ US, EC, others (potentially Japan, Canada) |
| <ul style="list-style-type: none"> ■ Divestiture obligation | <ul style="list-style-type: none"> ■ Yes, limited by MAC |
| <ul style="list-style-type: none"> ■ Litigation obligation | <ul style="list-style-type: none"> ■ Yes |
| <ul style="list-style-type: none"> ■ Reverse break fee (regulatory) | <ul style="list-style-type: none"> ■ No |

Specific Performance

Yes

Governing Law

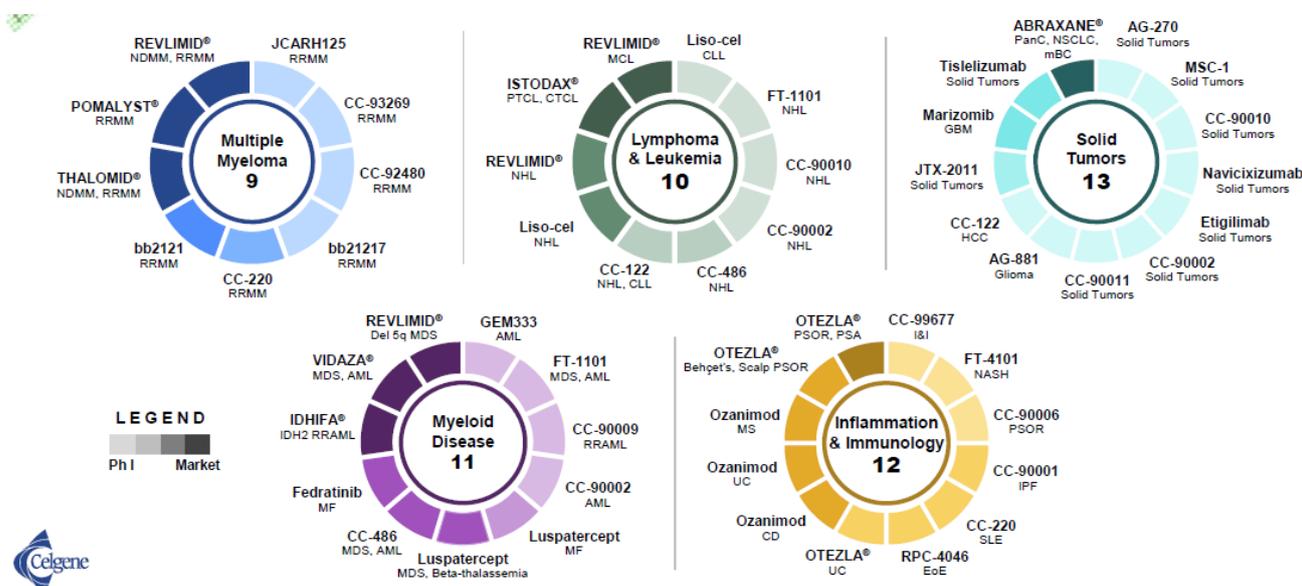
Delaware

Key CELG shareholders	%	Key BMY shareholders	%
■ Blackrock	7.5	Wellington	8.7
■ Vanguard	7.4	Vanguard	7.9
■ State Street	4.2	Blackrock	7.0
■ Edgewood Management LLC	2.3	State Street	4.0
■ Invesco	1.7	Dodge & Cox	2.0
■ Janus Henderson	1.5	Ameriprise	1.5
■ Orbis Allan Gray Ltd	1.5	Northern Trust	1.3
■ FMR	1.5	Jennison Associates	1.3
■ T Rowe Price	1.4	Geode CM	1.3
■ Geode CM	1.3	Capital Group Cos	1.2

Celgene description

- Celgene is an integrated global biopharma company engaged primarily in the discovery, development and commercialization of innovative therapies for the treatment of hematologic malignancies and other inflammatory diseases.
- Primary commercial stage products include REVLIMID[®], POMALYST[®]/IMNOVID[®], OTEZLA[®], ABRAXANE[®], VIDAZA[®], azacitidine for injection (generic version of VIDAZA[®]), THALOMID[®] (sold as THALOMID[®] or Thalidomide Celgene[®] outside of the U.S.) and IDHIFA[®].
 - The blockbuster cancer drug Revlimid is estimated to reach \$10.85 billion in 2019 sales.
- Clinical trial activity includes trials across the disease areas of hematology, solid tumors, and inflammation and immunology.
 - REVLIMID[®] is in several phase III trials covering a range of hematological malignancies that include multiple myeloma and lymphomas.

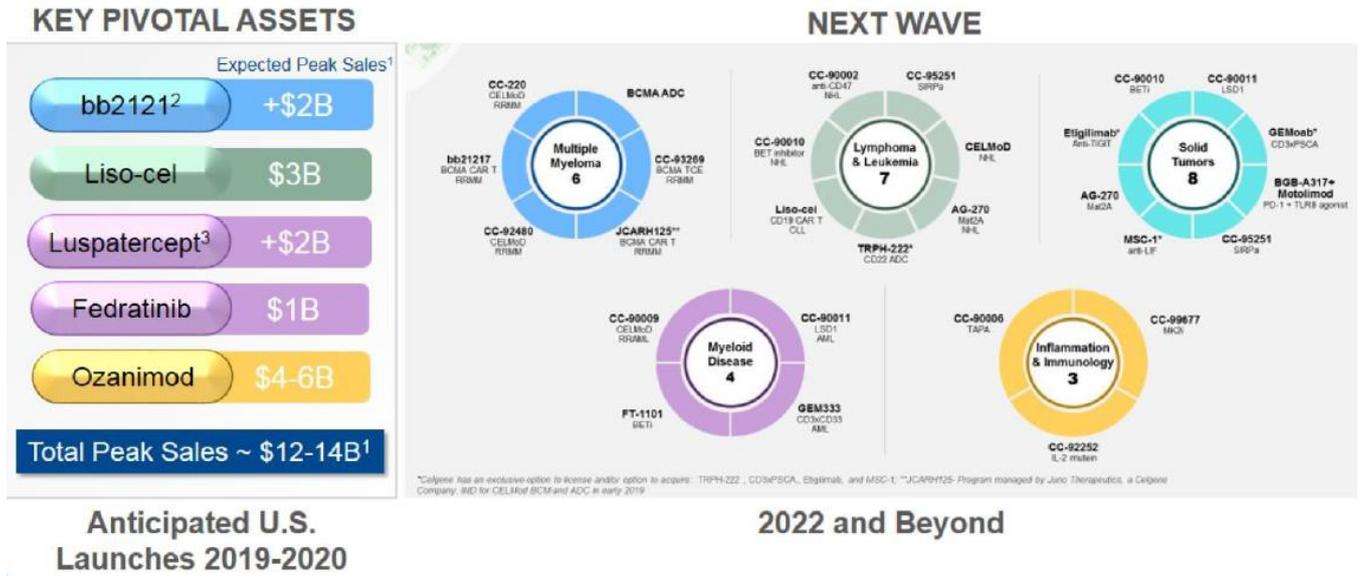
- Also, within hematological malignancies, POMALYST® is in several phase III and post-approval trials for relapsed/refractory multiple myeloma (RRMM).
- In solid tumors, ABRAXANE® is currently in various stages of investigation for pancreatic and non-small cell lung cancers.
- In inflammation and immunology, OTEZLA® is being evaluated in phase III trials for Behçet's disease and scalp psoriasis, and is continuing to be studied in ulcerative colitis (UC), psoriatic arthritis and plaque psoriasis.
- In the inflammation and immunology therapeutic area, we have phase III trials underway for ozanimod in relapsing multiple sclerosis (RMS), UC and a phase III trial in Crohn's Disease (CD) that is initiating.
- In hematology, phase III trials are underway for CC-486 and luspatercept in myelodysplastic syndromes (MDS), for CC-486 in AML and for luspatercept in beta-thalassemia.
- In July 2017, Celgene Corporation entered into global strategic immuno-oncology collaboration with **BeiGene, Ltd. (BeiGene) to advance a PD-1 Inhibitor (BGB-A317) program for solid tumor cancers.**
- In **collaboration with bluebird bio**, bb2121, a BCMA **CAR T cell therapy**, has shown impressive efficacy in RRMM with a manageable safety profile. Breakthrough Therapy designation has been granted by the FDA and bb2121 has been given access to the Priority Medicines scheme by the European Medicines Agency (EMA) Committee for Medicinal Products for Human Use (CHMP). A pivotal study in RRMM was initiated in December 2017.
- Beyond phase III programs, CELG has access to a growing early-to-mid-stage pipeline of novel potential therapies to address significant unmet medical needs that consists of new drug candidates and cell therapies developed in-house, licensed from other companies or able to be optioned from collaboration partners.



- Recent events:
 - US Food and Drug Administration refused to review an approval application for its experimental multiple sclerosis drug, ozanimod, Celgene had said ozanimod could generate roughly \$5bn in peak annual sales
 - Celgene Plans To File Second NDA for Ozanimod in 2019 Following FDA Rejection in February 2019
 - Celgene confirmed that the FDA will not require any additional human studies, which would likely set the potential approval back years.
 - Celgene said there will be some necessary non-clinical bridging studies, which would allow a delay of only a year
- Catalysts
 - [Key Catalysts](#) in the next 12 months

Deal rationale

- Diversification (marketed drugs & pipeline)
 - Bristol has been under pressure to diversify its portfolio. It currently gets roughly a quarter of its sales from immune-harnessing cancer drug Opdivo, which faces competition from Merck & Co.'s rival immunotherapy drug Keytruda
 - Opdivo, which has suffered several trial setbacks, is more important. Merck's lead in the lung-cancer setting, threatening sales in second-line lung cancer and a potential threat from Merck and Pfizer in first-line kidney cancer
 - Near-term launch opportunities representing greater than \$15 billion in revenue potential. The combined company will have six expected near-term product launches:
 - Two in immunology and inflammation, TYK2 and ozanimod; and
 - Four in hematology, luspatercept, liso-cel (JCAR017), bb2121 and fedratinib
 - The early-stage pipeline includes 50 high potential assets, many with important data readouts in the near-term.



Source: CELG

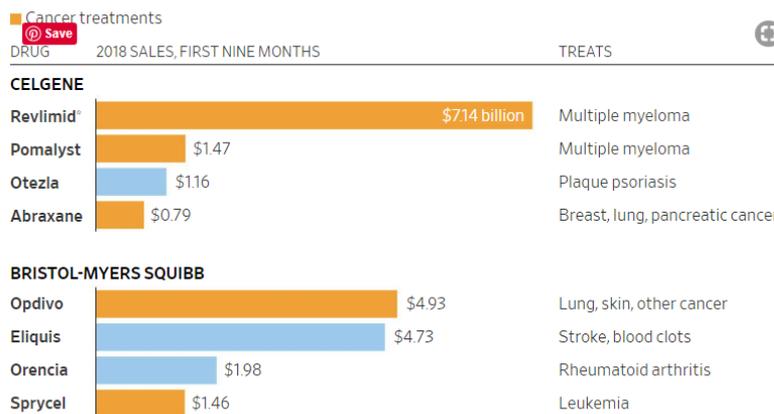
- 40% EPS boost and massive cash flow
- Companies with multiple drugs for the same types of cancer can bundle the treatments in their contracts with pharmacy-benefit managers, insurers and hospitals. That has become more important as health insurers look to so-called outcome-based contracting, where costs are tied to whether patients respond to drugs.

Key deal risks

REGULATORY

- Deal requires approval in US, EC (potentially Japan)
- Deal doesn't appear to need to China approval: CNBC
 - Celgene 2017 AR: On August 31, 2017, CELG completed the sale of our Celgene commercial operations in China to BeiGene, Ltd. (BeiGene). In conjunction with the sale, they contemporaneously entered into both a product supply agreement and strategic collaboration arrangement with BeiGene.
- Merger call: The companies said they did not anticipate any antitrust issues impeding approval for the merger, given the complementary nature of their assets.

Top-selling drugs that Celgene and Bristol-Myers Squibb are bringing to the merger table.



*Revlimid accounts for roughly two-thirds of Celgene sales

Source: WSJ

- BMY has strong position in solid tumors and immunotherapy while CELG is a leader in hematologic malignancies
- Key overlaps include:
 - Immuno-oncology:
 - PD-1 inhibitor for solid tumors
 - CELG – On July 5, 2017, CELG entered into a strategic collaboration to develop and commercialize BeiGene's investigational anti-programmed cell death protein-1 (PD-1) inhibitor, BGB-A317, for patients with solid tumor

- cancers in the United States, Europe, Japan and the rest of the world outside of Asia. BeiGene will retain exclusive rights for the development and commercialization of BGB-A317 for hematological malignancies globally and for solid tumors in Asia (with the exception of Japan).
- BMY's key drug, Opdivo is a PD-1 inhibitor
- **NSCLC – very competitive field**
- CELG has **chemotherapy drug** Abraxane, which is approved for the following uses: breast cancer, NSCLC, pancreatic cancer, gastric cancer
 - ABRAXANE net sales was \$992 million for 2017. The company experienced increases in unit sales in international markets. The increase was partially offset by decreased unit sales in the U.S. The decrease in U.S. unit sales reflects the continuing competition in breast cancer and lung cancer indications.
 - BMY: Opdivo – **IO product**
 - “IO products, particularly Opdivo, operate in a highly competitive marketplace. In addition to competing for market share with other IO products in approved indications such as lung cancer and melanoma, BMY face increased competition from existing competing IO products that receive FDA approval for additional indications and for new IO agents that receive FDA approval and enter the market. Furthermore, as therapies combining different IO products or IO products with existing chemotherapy or targeted therapy treatments are investigated for potential expanded approvals, we anticipate that our IO products will continue to experience intense competition”
- **Multiple myeloma (MM)**
- MM is CELG's key field of expertise
 - BMS – Empliciti (\$231m revenue in 2017)
 - Empliciti is a biological product, is a humanized monoclonal antibody for the treatment of multiple myeloma.
 - Empliciti was launched in the U.S. in December 2015, in the EU in May 2016 and in Japan in September 2016.
 - BMS was granted exclusive global rights to co-develop and commercialize Empliciti from PDL Biopharma (AbbVie). AbbVie currently participates in joint development and U.S. commercialization committees in which BMS has final decision-making authority. Both parties jointly develop the product and AbbVie funds 20% of global development costs. BMS is solely responsible for supply, distribution and sales and marketing activities and is the principal in the end customer product sales. AbbVie shares 30% of all profits and losses in the U.S. and is paid tiered royalties outside of the U.S. BMS paid AbbVie \$140 million for certain regulatory milestone events including \$52 million for approval milestones through December 31, 2017. AbbVie is also entitled to receive an additional \$120 million if certain regulatory events occur and \$200 million if certain sales thresholds are achieved. The agreement may be terminated immediately by BMS or by either party for material breaches (subsequent to a notice period).
 - Opdivo
 - In December 2017 the FDA lifted partial clinical holds placed on CheckMate-039 and CA204142, two clinical studies investigating Opdivo based combinations in patients with relapsed or refractory multiple myeloma.
- **AML / CML**
- CELG: IDH1FA approved for **Acute Myeloid Leukemia (AML)**
 - BMY: Sprycel is a multi-targeted tyrosine kinase inhibitor approved for the first-line treatment of adults with Philadelphia chromosome-positive **CML** in chronic phase, the treatment of adults with chronic, accelerated, or myeloid or lymphoid blast phase **chronic myeloid leukemia** with resistance or intolerance to prior therapy, including Gleevec* (imatinib mesylate) and the treatment of children with Philadelphia chromosome-positive CML in chronic phase
- **Psoriasis**
- CELG: OTEZLA is approved for psoriasis
 - BMY: “We have 17 new IO compounds in clinical development and studies across more than 35 different tumor types. In addition, we advanced certain other non-IO R&D programs in our pipeline, including FGF21 for the treatment of NASH and TYK-2 inhibitor for the treatment of immune diseases such as psoriasis.”
- **Gastric cancer**
- CELG: ABRAXANE (approved only in Japan for gastric cancer) – chemotherapy drug
 - BMY: As of February 5, 2018, the following potential registrational study readouts for Opdivo(IO) are anticipated through 2019:
 - Gastric Cancer CM-649 - Opdivo + Yervoy or Chemo (1st line treatment)
 - Approval in Japan for the treatment of unresectable advanced or recurrent gastric cancer which has progressed after chemotherapy in 2017
- **NASH**
- CELG: In collaboration with FORMA Therapeutics Holdings LLC (FORMA), a phase Ib in healthy volunteers is in progress for FT-4101, targeted for development in nonalcoholic steatohepatitis (NASH).
 - BMS: “We advanced certain other non-IO R&D programs in our pipeline, including FGF21 for the treatment of NASH”
- **Systemic lupus erythematosus (SLE)**
- CELG CC-220 for systemic lupus erythematosus (SLE) - Phase IIb entered in Q3 2017
 - BMS: In 2016, BMS acquired all of the outstanding shares of Padlock, a private biotechnology company. The acquisition provided BMS with full rights to Padlock's PAD inhibitor discovery program focused on the development of potentially transformational treatment approaches for patients with rheumatoid arthritis. Padlock's PAD discovery program may have additional utility in treating systemic lupus erythematosus and other autoimmune diseases. Contingent consideration includes development and regulatory milestone payments.
- **IPF**
- CELG: Pipeline product CC-90001 for idiopathic pulmonary fibrosis
 - BMY:
 - We concentrate our R&D efforts in the following disease areas with significant unmet medical needs fibrotic disease with priorities in lung (IPF) and liver (NASH).

- BMS acquired a warrant providing BMS exclusive rights to acquire Promedior, whose lead asset, PRM-151, is being developed for the treatment of IPF and MF. The warrant is exercisable upon being provided data following completion of either of the IPF or MF Phase II clinical studies being directed by Promedior.

BUSINESS RISK

■ **Revlimid patent risk**

- Celgene is defending its three top-selling drugs -- Revlimid, Pomalyst and Otezla, the combined U.S. sales of which accounted for 88% of Celgene's 2018 revenue -- in infringement lawsuits against generic-drug makers in the U.S.
 - U.S. exclusivity on flagship drug, Revlimid, will start being phased out in 2022.
 - Copycat versions of Revlimid could hit the market as early as 2020 if generic drugmakers are successful in their legal efforts to overturn its patents.
- Celgene's Revlimid, with \$5.4 billion in 2017 U.S. sales, remains at risk of an earlier-than-expected generic, given Dr. Reddy's suit persists as the parties fight in discovery. If Dr. Reddy's can skirt Celgene's polymorph patents, generic competition could come before 2022
- Celgene's earlier settlement with Natco preserves exclusivity for Revlimid until 2022 as Natco's copy is set to debut on a limited-volume basis in 2022
- A Dr. Reddy's generic launch earlier than 2022 gives Natco free the option to also enter the market with no volume control in place,
- **Litigation timeline:**
 - No decision is expected in the case before the BMY shareholder vote



Source: CELG ASH presentation December 2018

- A procedural settlement conference is scheduled for January 10
- **Potential settlement:**
 - A settlement cannot be ruled out before deal close or BMY shareholder vote
 - Dr Reddy might also be interested in a settlement (with controlled volumes) as a launch without settlement opens up the market to all generics without volume control, which would hurt pricing.
 - In addition, by choosing to settle, a generic wouldn't have to set up a REMS

■ **Celgene vs Gilead**

- Celgene's Juno is likely to win royalties from Gilead's Kite over the latter's CAR-T immunotherapy Yescarta, barring the patent being invalidated in court. Juno's patent has already been upheld once in the inter partes review appeal

■ **Celgene vs Mylan**

- Celgene has pared down an antitrust lawsuit by Mylan over its refusal to sell samples of Revlimid and Thalomid, both under FDA distribution restrictions, but still faces monetary damages claims of \$250 million. The case is likely to settle as it's otherwise headed to trial in 2019.
 - Celgene's partial win on summary judgment blocks most of Mylan's \$3.75 billion damages claim. Other claims survived and are enroute to trial.
 - A partial court win allowed Celgene to escape Mylan's \$3 billion Revlimid damages claim, representing \$1 billion in lost future profit tripled under antitrust law. A \$250 million Thalomid claim survived, also subject to tripling. Mylan's original demands for samples remain
 - the FDA has approved the generic developer's testing protocols is reasonable, in-line with the logic of similar cases by Natco against Gilead and Lannett against Celgene. That substantially reduces the period of time for which Celgene could be held liable, if the parties reach trial.

■ **Politics**

- US President Donald Trump and his administration's drive to crack down on what it sees as excessive price rises has also created an increasingly tricky political climate for pharma.
- Celgene topped [FDA blacklist in 2018](#) that highlighted companies being targets of complaints by generic competitors saying they are trying to block competition.
- The company has also been criticized for raising the prices of Revlimid

SHAREHOLDER VOTE

- The negative share price reaction might have two reasons: concerns around the deal itself (CELG patent litigation, pipeline risks, leverage) and the less likely acquisition of BMY by a third party (BMY has been mentioned as a potential target in 2017-18).
- We believe that the deal has risks (especially the CELG patent cliff) but also has strategic (diversification, adds to pipeline, adds cash flow) and financial rationale (reasonable valuation, highly accretive, repurchase post-close), thus we expect BMY shareholders to approve it if there is no superior offer for BMY or some seriously negative newsflow with regard to CELG's patent litigation cases or pipeline.
 - The transaction's internal rate of return is expected to be well in excess of Celgene's and Bristol-Myers Squibb's cost of capital. The combination is expected to be more than 40 percent accretive to Bristol-Myers Squibb's EPS on a standalone basis in the first full year following close of the transaction.
 - Bristol-Myers said it expects to speed up a share repurchase program of up to about \$5 billion, subject to the closing of the transaction, market conditions and board approval.
 - With more than \$45 billion of expected free cash flow generation over the first three full years post-closing, the Company is committed to maintaining strong investment grade credit ratings while continuing its dividend policy for the benefit of Bristol-Myers Squibb and Celgene shareholders.
- We expect the BMY shareholder vote to be held (April-May 2019) before a potential decision on the CELG lawsuit (earliest expected trial decision in 2019Q4). A potential settlement can't be ruled out.
- The 50% of votes requirement at the BMY meeting does not appear to be a high hurdle

COUNTER-BID

- Bristol-Myers and Celgene have been talking on and off for the last two or three years, with latest talks initiated by BMY in September, CNBC's David Faber said, citing people familiar.
 - Talks quickly "picked up steam"; leadership issues became less important after Bob Hugin left CELG; price range was outlined in Sept
 - BMY increased cash component from original range in part due to BMY stock being down and desire not to dilute the stock as much
- BMY:
 - CNBC said "absolutely no talks about BMY taken out"
 - We believe that BMY would not have made move for CELG if they would have been approached by a third party recently.
 - Pfizer said in 2018 they are not interested in BMY. CEO said BMY "not worth the money"
 - During the company's fourth-quarter earnings call, CEO Ian Read said he didn't feel under pressure to make big purchases, but he did say the company "would be at the forefront" of M&A if such opportunities emerge.
 - Roche and Merck have their own IO drugs.
 - There are other potential suitors, including Sanofi, Johnson & Johnson, Gilead Sciences Inc., and Novartis AG, Amgen
 - Sanofi does not appear to have room on its balance sheet (~3x leverage) to offer a significant cash element
 - JNJ is in crisis due to their asbestos scandal
 - The new tax law won't change Johnson & Johnson's approach to mergers and acquisitions, CEO Alex Gorsky said. Gorsky reiterated what he and a number of other companies' executives have already said, which is the windfall won't make them lose their discipline.
 - J&J said at its May 2017 analyst day that it might use acquisitions to shore up areas within its pharmaceuticals operations.
 - JNJ was rumored to show interest in BSX and Nestle's skincare unit recently. Later they acquired Ciz, a ~Japanese cosmetics firm for ~\$2b.
 - Novartis just bought Endocyte
 - Novartis may make complementary takeovers in a volume of as much as \$15b, CEO Vas Narasimhan told German newspaper Handelsblatt in an interview.
 - "I see only a very limited number of potential takeover candidates in the medium to large range"
 - "In the future, we will probably have to look more closely at companies with a valuation of less than \$ 2 billion"

FINANCING

- Deal to be financed in part by a \$33.5-billion bridge loan, the second largest ever U.S. healthcare bridge loan
- Bristol-Myers projects \$45 billion in free cash flow generation over the first three years after the deal closes
- Leverage to be just under 3x at the close (2.8x using \$17 billion of pro forma adjusted Ebitda, which includes \$2.5 billion of synergies)
- Moody's Investors Service said it may cut Bristol-Myers' A2 rating, the sixth-highest investment-grade ranking by one notch following the announcement.

Valuation

PREMIUM

- The acquisition price represents a 54 percent premium to the stock's closing price on Jan 2.

ROIC

Deal value	2019	2020	2021	2022
Bid price (\$/sh.)	\$94.30	\$94.30	\$94.30	\$94.30
O/S (m)	700.0	700.0	700.0	700.0
Market value (\$m)	\$66,010	\$66,010	\$66,010	\$66,010
Net Debt (\$m)	\$17,764	\$17,764	\$17,764	\$17,764
Deal value (\$m)	\$83,774	\$83,774	\$83,774	\$83,774
ROIC calculation				
BEST Operating Profit	\$9,404.0	\$10,788.6	\$12,612.3	\$13,439.7
Synergies	\$0.0	\$850.0	\$1,700.0	\$2,500.0
Adj. Operating Profit	\$9,404	\$11,639	\$14,312	\$15,940
Tax (20%)	\$1,881	\$2,328	\$2,862	\$3,187.93
NOPAT	\$7,523	\$9,311	\$11,450	\$12,752
ROIC	9.0%	11.1%	13.7%	15.2%
WACC	9.0%	9.0%	9.0%	9.0%

EPS ACCRETION

	2019	2020	2021	2022
# of shares (m)				
Target shares acquired (O/S)	720	720	720	720
Bidder (O/S)	1,632	1,632	1,632	1,632
Bidder shares issued to target shareholders	720	720	720	720
Total Bidder shares post-merger	2,352	2,352	2,352	2,352
EPS (USD)				
Target EPS	10.375	12.449	15.063	16.051
Bidder EPS	4.12	4.46	5.86	5.39
MergedCo	6.035	6.91	8.67	8.65
Annual synergies (\$ m)	-	2,500.0	2,500.0	2,500.0
% of synergies realised	0%	30%	60.0%	100.0%
Syn/share (post tax)	-	0.26	0.51	0.85
Cost of synergies	-	- 0.26	- 0.26	- 0.26
Interest payment on debt/share (post tax)	- 0.4	- 0.4	- 0.4	- 0.4
Adjusted MergedCo EPS	5.61	6.48	8.50	8.82
Earnings accretion/dilution				
Bidder accretion	36.1%	45.2%	45.2%	63.7%

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