QC INVESTMENT MEMO

To:	Kelvin Li
From:	Danny Kim
Date:	August 18th, 2015
Re:	**Celgene Corporation (NYSE:CELG)**

COMPANY PROFILE

Industry:	Biotechnology
Main Asset(s):	Drug therapies
Market Capitalization:	$103,726.8 mm
Debt:	$7,629.9 mm
Cash:	$4,530.8 mm
Enterprise Value:	$103,864.5 mm
NTM(E) Revenue:	$10,312.2 mm
NTM(E) EBITDA:	$5,651.07 mm
NTM(E) FCF:	$3,252.8 mm

INVESTMENT PROFILE

Current (Proposed) Investment Size:	N/A
Position Cost Basis:	N/A
Current Share Price:	$130.21
Life to Date Profit (Loss):	$8,593.1 mm
Life to Date Percentage Return:	16,074.07%
Base Case Valuation:	$142.00
Downside Case Valuation:	$110.00
Upside Case Valuation:	$190.00

COMPANY DESCRIPTION

- CELG is a biotechnology company that was created in 1986 when it was spun off the Celanese Corporation as an independent organization
- The company discovers, manufactures and commercializes drug therapies for cancer and inflammatory diseases, major products include Revlimid; an FDA approved myeloma and anemia treatment, Abraxane; a treatment for advanced breast/pancreatic cancers, and Vidaza; a treatment for MDS
- Corporate strategy involves the utilization of small molecule technologies to develop potent, orally available agents to fight acute and chronic diseases. Multiple myeloma (second most commonly diagnosed blood cancer) has been a primary focal area, with an estimated 100,000 people in the US living with the disease
- R&D boasts a large, diversified pipeline of 37 products and 73 areas of research ranging from phase I to the post-approval research stage
- CELG possesses contractual partnerships with numerous, well-established pharmaceutical companies including Acceleron Pharma, Agios, Epizyme, as well as a royalty agreement with Novartis Pharma AG on sales of the Ritalin drug family that treats ADHD
- CELG made two major acquisitions in 2015: a cancer therapeutics discovery company known as Quanticel Pharmaceuticals for $485mm, and a biopharma company focused on immune disorders called Receptos Inc. for $7.32bn, the latter of which has the potential to significantly diversified CELG's immune-inflammatory portfolio

VALUATION – Comparable Analysis

Large-Cap Biotech	Market Cap (MM)	EV (MM)	EV/EBITDA LTM	EV/EBITDA 2015E	EV/EBITDA 2016E	P/E 2015E	P/E 2016E	Price/ Book	Net Debt/EBITDA LTM	PEG NTM	EV/ Unlevered FCF
Amgen Inc. (NasdaqGS:AMGN)	$127,173.70	$129,132.70	13.2x	11.64x	10.63x	17.21x	15.70x	4.6x	0.20x	1.64x	18.5x
Bristol-Myers Squibb Company (NYSE:BMY)	$107,187.10	$109,249.10	23.1x	28.49x	22.89x	35.20x	28.53x	7.1x	0.41x	2.25x	80.2x
Gilead Sciences Inc. (NasdaqGS:GILD)	$171,798.00	$175,808.00	8.7x	7.49x	8.05x	10.04x	10.14x	10.6x	0.18x	1.15x	12.5x
Biogen Inc. (NasdaqGS:BIIB)	$73,403.30	$71,614.50	13.7x	13.26x	11.95x	19.61x	17.51x	5.8x	NM	1.26x	23.1x
Regeneron Pharmaceuticals, Inc. (NasdaqGS:REGN)	$60,191.50	$59,975.30	54.2x	42.70x	30.57x	46.77x	39.05x	17.6x	NM	1.69x	298.5x
Eli Lilly and Company (NYSE:LLY)	$88,445.70	$92,251.10	18.6x	17.02x	15.63x	25.56x	23.46x	6.0x	0.76x	1.93x	29.7x
Celgene Corporation (NasdaqGS:CELG)	$102,928.30	$103,066.00	32.2x	20.25x	16.59x	27.24x	21.82x	16.3x	0.04x	1.11x	45.0x
Mean	$104,699.90	$106,338.40	21.9x	20.10x	16.62x	25.73x	22.40x	8.6x	0.39x	1.65x	77.1x
Median	$97,816.40	$100,750.10	16.1x	15.14x	13.79x	22.59x	20.48x	6.6x	0.30x	1.66x	26.4x

Source - Capital IQ

- On an EV/FCF and PEG Ratio basis CELG trades at a discount to the mean when compared with similar large-cap biotech companies
- On an EV/EBITDA basis, CELG has traded at a premium in the trailing months but is estimated to fall in line with the mean over 2015-16
- Target price of $142.00 is based on CELG trading at 29.5x a 2016 EPS of $4.80/share
- Continued diversification of the product portfolio, development of new uses and geographical expansion for Revlimid, margin expansion and management's efficient execution of their R&D plans are expected to yield the equity upside of ~9%

INVESTMENT THESIS

- CELG is a major player in the large-cap, biotech industry that offers a favorable growth outlook with increased diversification and continued execution of expansionary plans for key products. Key observations are as follows: 1) CELG possesses a solid product portfolio that yields a dominan position in the multiple myeloma market, driven by the success of Revlimid. Further expansionary opportunities are present in Otezla's accelerated launch cycles and a pipeline that is expected to deliver new uses for active products while increasing the likelihood of developing a blockbuster product. 2) The company's acquisition of Receptos falls in line with its goal of reducing revenue dependence on a few key products, while gaining access to the immune-inflammatory markets. 3) CELG's financials are solid, reflecting aggressive, strategic alliance activities while providing shareholder value through repurchases. 4) CELG's approach to therapeutic development by focusing on a number of biological domains (ex. informatics, computational medicine) has created a streamlined R&D system that yields valuable IP.

QC INVESTMENT MEMO

KEY INVESTMENT RISKS

RISK I **Reliance on key products for majority of revenue growth**

With a major portion of CELG's revenues deriving from sales of Revlimid (approx. 66% of dollar sales for 2014), CELG's capital position is heavily linked to the long-term sustainability of the product as new uses for the drug, and opportunities for geographic expansion are pursued.

Mitigating Factor to Risk I: New drugs are expected to be approved from CELG's pipeline, thereby diversifying and increasing the number of revenue streams available while offsetting reliance on Revlimid success. Outlook towards synergistic acquisitions (Receptos) are to reduce dependence as well in the long-term.

RISK II **Inherent risks associated with the biotech sector**

The industry has a number of common risks including clinical delay/failure, unanticipated adverse effects of end-products, inhibitory regulatory decisions, lack of capital or developmental partners to fund R&D, patent expirations or invalidations,

Mitigating Factor to Risk II: Core partnerships exist with other major players in the industry, a focused R&D strategy, and geographic/product diversification aims to reduce these general risks.

RISK III **CAD versus USD FOREX risk**

A Canadian dollar that has plunged to post-recession lows will adversely affect returns when exchange rates are applied in American investments. A weak commodities story and a high number of short positions in the Canadian dollar may continue to pose a major risk.

Mitigating Factor to Risk III: Rising *full-time employment and consumer spending, a cheaper Canadian dollar attracting foreign business into the country's oil exporters are among the mitigating factors that may reduce this risk.*

KEY INVESTMENT STRENGTHS AND CATALYSTS

STRENGTH I **Strong market presence, robust portfolio supplemented by growth in Otezla and Revlimid**

CELG has positioned itself to be a leader in the multiple myeloma market with its three active drugs; Revlimid, Pomalyst and Thalomid. All three are commercialized and approved in the US and Europe, and combined have made up ~78% of the company's total revenues. Revlimid continues to be a relevant growth story as its expansion into the EU will continue to be a main driver of CELG's performance. Approval for new uses, label expansion, extended treatment durations and increased margins for this drug offer even more opportunities for sustainable expansion. Otezla posted 2Q15 revenues of $90 mm that beat consensus estimates by $5 mm and its previous quarter by $30 mm, mostly driven by adoption in the US. As CELG implements its DTC campaign for the drug (which had no influence towards Otezla's 2Q results) and continues to see success in EU launches, Otezla's growth may continue to accelerate. Pomalyst was approved in Japan, with reimbursement expected to begin in June as we see more European countries' reimbursements in 2015 as well.

STRENGTH II **Upcoming synergies accompanying CELG's recent acquisition of Receptos**

The acquisition of Receptos further diversifies CELG's portfolio to include immune-inflammatory therapies. Receptos' blockbuster product is Ozanimod, a Phase III drug that focuses on treating relapsing multiple sclerosis. CELG stands to reap the future revenue benefits as Ozanimod is a safer, more tolerable and oral treatment in comparison to current drugs on market that are commonly injectable and yields significant side effects (namely, Biogen's Tecfidera and Novartis's Gilenya). Ozanimod also has the potential to yield many other uses, an example involving its Phase II clinical trials for the treatment of inflammatory bowel disease.

STRENGTH III **Financial security offering an attractive growth opportunity**

23% estimated CAGR over 2014-2020, 20.6% revenue CAGR in 2010 - 2014, a favorable comparison to other large-cap biotech stocks on an operating margin basis, as well as a 16.1% and 21.1% increase in sales within the US and in international markets respectively are all indicators of consistent financial performance. Operating income in 2014 was $2,515 mm, which represents an increase of 39% over the previous year while 2014 revenues were reported at $7,670.4 mm, which reflects an increase of 18.1% over 2013. According to a BMO report on product revenue growths, Revlimid has been experiencing 19% YoY and 9% QoQ growth driven by volume and therapy duration, Pomalyst has seen 46% YoY and 18% QoQ through share gains, geographic expansion and market share gains, and Abraxane has seen 13% YoY as it expands its market share in pancreatic cancer treatments. We see the May 2014 issuance of $2.5 bn in debt funding aggressive, strategic alliance activities and some share repurchases along with continued investment into organic growth and M&As.

STRENGTH IV **Management possesses a focused approach to R&D**

CELG's concentration on various domains such as genomics, proteomics or cell biology for identification and validation of therapeutic targets, compound libraries for product leads or technologically enhanced chemistry have yielded an extensive pipeline in the areas of hematology, oncology, inflammation and immunology. R&D spending itself was $2,430.6 mm in 2014. These efforts have allowed CELG to establish itself as a leading firm in the biotech domain with numerous advances in its portfolio of intellectual property including 504 patents with CELG as the owner and 11 patents as a third party.

CATALYST I **Conclusion of IP issues involving Revlimid**

Litigation and legal actions undertaken by Actavis over the IP rights of CELG's patent families for Revlimid have been a major overhang on the company's key product. Settlement with Actavis in 2015 after a favorable Markman hearing, along with closures in the lawsuits involving Mylan, and the damaging legal claims made by hedge fund manager Kyle Bass's coalition would present upsides to the stock price and continuously reduce the reliance risk on Revlimid.

CATALYST II **New products yielded from a robust pipeline.**

CELG's product portfolio covers a wide variety of biological areas including hematology, oncology, inflammation and immunology. The company's pipeline contains 55 drugs in active development (a status of discovery, clinical, Phase I, Phase II, Phase III, Pre-registration, Registered, Launched or Suspended) with product candidates including cellular therapies like PDA-001 for Crohn's disease, CC-486 for MDS, AML and solid tumors, or epigenetic therapeutics for cancer.

CATALYST III **Capital deployment and shareholder friendly programs**

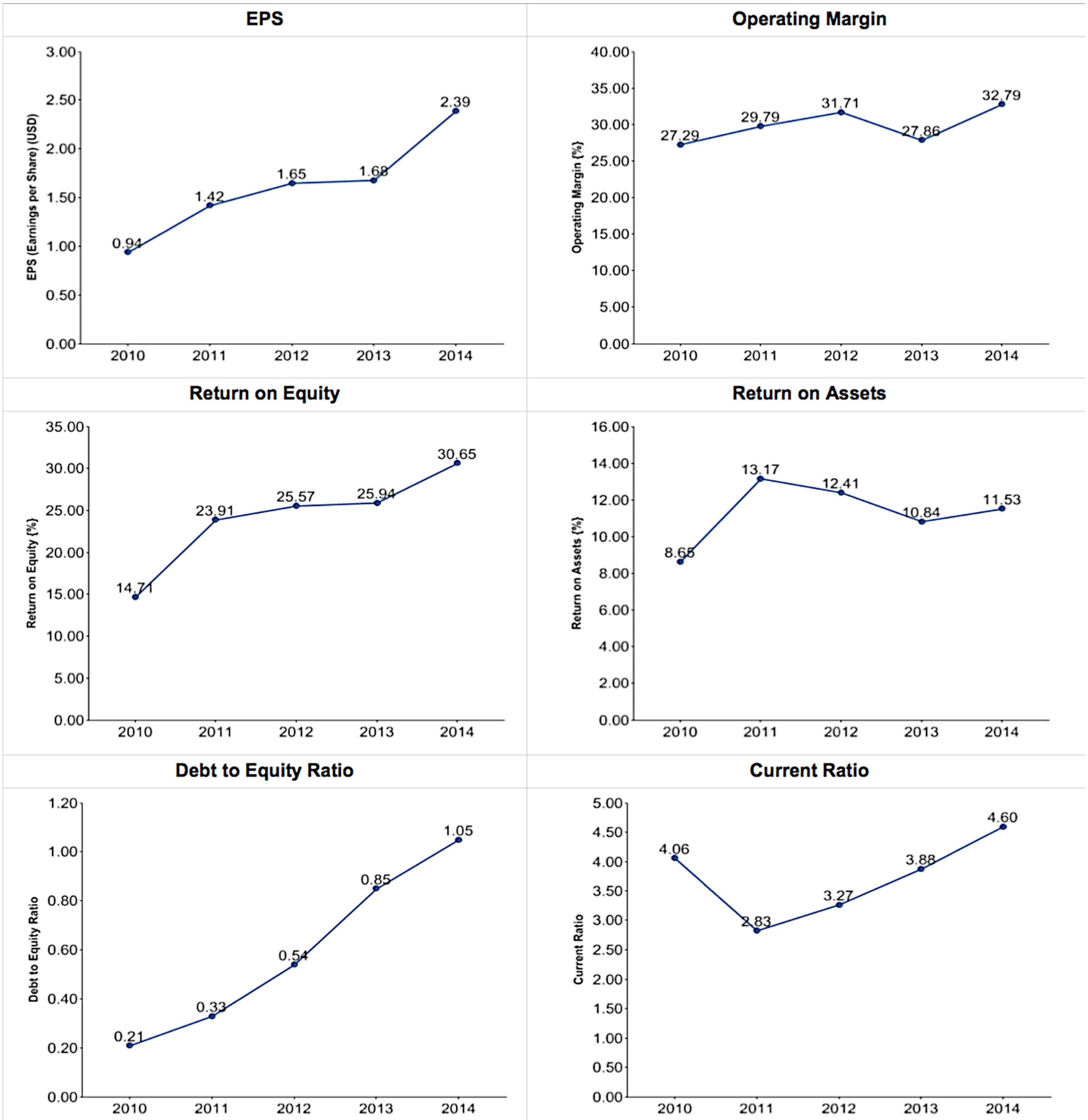
In the first half of 2015, CELG repurchased $2 bn of its shares with $5.1 bn remaining in its buyback program. This reflects and reinforces management's belief that the stock is undervalued and will continue to offer value for CELG's shareholders.

INDUSTRY DETAILS

- The biotech industry is expected to outperform the S&P 500 as it historically yielded higher returns and reflected attractive growth opportunities
- Long-term revenue and earnings growth, new product cycles through organic growth and strategic M&A activity as well as shareholder friendly programs are key drivers for outperforming stocks
- A more accommodating US FDA has led to a strong period for the reporting of late-stage clinical trials and product approvals that continue to drive a favorable outlook towards to the biotechnology industry. A major development being the "breakthrough therapy" designation, introduced in 2012 and designed to speed up development of promising programs
- M&A climate is also favorable, a desire to offset expiring drug patents and maturing products, diversify portfolios, consolidate and bolster pipelines have been yielding record quantities of deals in 2014-15
- Rising incidences of chronic disease brought upon by an aging population of baby boomers offers opportunities for exponential growth in R&D demand among major players in the healthcare and biotech industries as pharmaceuticals and medical services become more prominent consumer staples
- Increases in life expectancy are expected to rise from 72.6 in 2012 to 73.7 in 2017, bringing in a new age of accessibility issues and amplifying the sustainability of the industry as demand for novel and more efficient pharmaceuticals sharply rise
- Continued development of biotechnology infrastructure in emerging markets is creating opportunities for international penetration, while healthcare spending in the US currently covers approximately 16% of the nation's GDP, projected to increase to approximately 25% by 2040 if historical trends persist

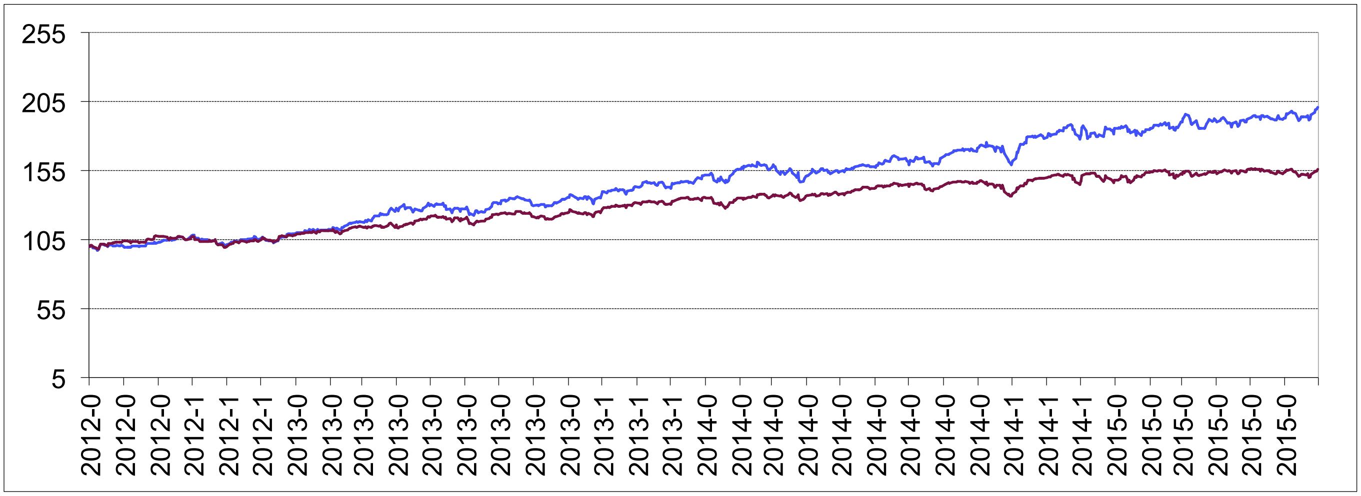
Appendix

Exhibit I – CELG's Historical Snapshot



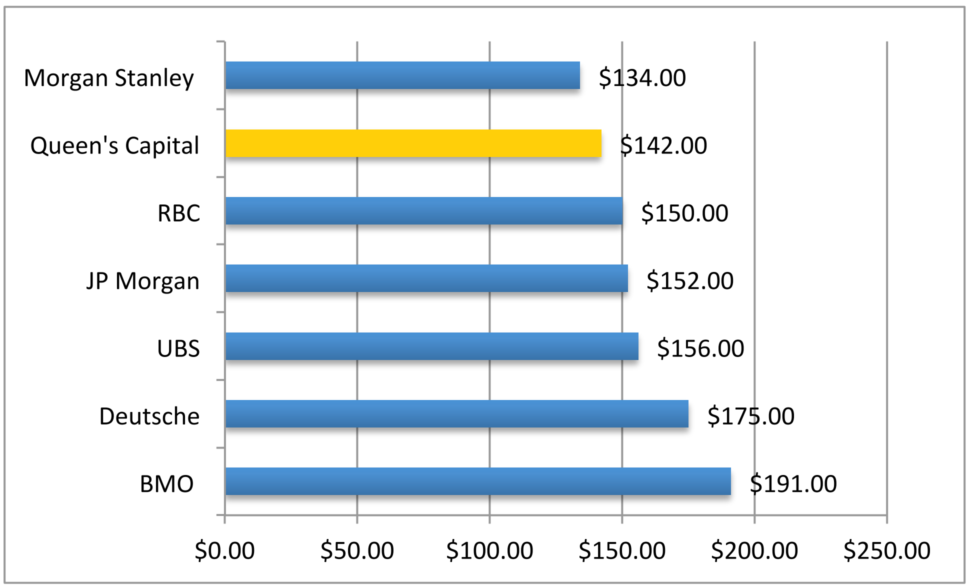
Source – Global Data

Exhibit II – Outperformance of the S&P 500 – Pharmaceuticals, Biotech, Life Sciences Industry Group vs. S&P 500



Source – Capital IQ

Exhibit III – Analyst Estimates



Source – Thomson One