Healthcare
Life Science Research Supplies

United States of America

Complete Genomics (NASDAQ: GNOM)

Survey Confirms: If You Build It, They Will Come; Initiate at Buy

Investment Summary

GNOM is the sole pure-play provider of outsourced whole human genome sequencing services in the public arena and is aptly leveraged to favorable secular growth dynamics underway in the DNA sequencing sector of the life science research supply industry.

Initiating Coverage

Rating:	BUY
Price:	$6.89
Price Target:	$13.00
Bloomberg:	NASDAQ: GNOM

Market Data

52-Week Range:	$9.00-$6.60
Total Entprs. Value (MM):	$131.0
Market Cap. (MM):	$177.8
Insider Ownership:	4.0%
Institutional Ownership:	17.8%
Shares Out. (MM):	25.8
Float (MM):	7.0
Avg. Daily Vol.:	130,000

Financial Summary

Book Value (MM):	$55.5
Book Value/Share:	$2.15
Net Debt (MM):	($46.8)

USD	2010E	2011E	2012E	2013E
Rev. (MM)	8.7	35.0	75.0	150.7
EV/Rev.	15.1x	3.7x	1.7x	0.9x
EPS				
Mar	(1.23)A	(0.56)	—	—
Jun	(1.12)A	(0.57)	—	—
Sep	(0.56)A	(0.52)	—	—
Dec	(0.59)	(0.41)	—	—
FY Dec	**(3.07)**	**(2.06)**	**(0.88)**	**0.70**
FY P/E	NM	NM	NM	9.8x

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Event

Initiating coverage of GNOM with a Buy rating and $13 price target. Jefferies & Company, Inc. acted as a Joint Bookrunner on the IPO of Complete Genomics, which priced on November 11, 2010.

Key Points

- **Early-stage growth story in sizzling sequencing market**. As the only pure-play franchise solely focused on whole human genome sequencing (WGS) services for research applications, GNOM is uniquely capable of leveraging its scale to deliver high-quality end-to-end solutions to academic and biopharmaceutical researchers. We estimate GNOM's current fully loaded cost of sequencing a complete human genome is more than 50% lower than what can be achieved utilizing commercially-available technology.
- **Highly elastic demand curve; price declines should stimulate significant incremental demand**. Based on the results of our proprietary next-generation sequencing user survey, a 50% decline in unit price is expected to stimulate greater than a 500% increase in demand. 67% of respondents indicated a willingness to outsource human WGS projects to a third-party service provider; 63% would consider using or reusing GNOM's outsourced services.
- **Revenue forecasts factor only modest market share assumptions**. We foresee substantial organic revenue growth over the next several years as price declines stimulate incremental volume demand. We forecast $35M and $75M of revenue in 2011 and 2012, respectively. Such a view implies GNOM is able to capture less than 25% share of the available outsourced market opportunity.
- **Current valuation paradigm yields substantial margin of safety**. Shares of GNOM currently imply an equity value of only 2.4 times our 2012 revenue forecast, which implies a nearly 50% discount to a blended average of other life science product manufacturers and diagnostic services providers. Multiple expansion appears likely, in our view, on evidence GNOM can effectively leverage its scale to achieve profitability amidst rapid price erosion.

Valuation/Risks

Our $13 price target represents a 10-year discount horizon in our DCF model and implies an equity value of 4.6 times our 2012 revenue forecast. Risks include: execution (turn-around time), ability to evolve technology as fast as current instrumentation vendors, threats from new competitive technologies, and litigation risks.

Please see important disclosure information on pages 25 - 28 of this report.

Investment Focus: Survey Confirms: If You Build It, They Will Come.

We are initiating coverage of Complete Genomics (GNOM) with a Buy rating and $13 price target. Complete Genomics is an emerging life sciences company that has developed and commercialized an innovative DNA sequencing technology optimized exclusively for complete human genome analysis. GNOM offers its proprietary human genome sequencing technology and advanced informatics and data management software as a turnkey, end-to-end outsourced services solution for government, academic and commercial biopharmaceutical researchers. GNOM's scale, scientific expertise, and massive back-end data management support and analysis capabilities allow it to provide research-ready genomic data at a dramatically lower cost and with greater accuracy than the vast majority of end-users would otherwise be able to achieve with an in-house capability. Whereas GNOM's primary competitors manufacture and sell DNA sequencing instruments and reagents that produce raw sequence data, we view GNOM's outsourced whole human genome services offering as a compelling alternative for researchers conducting large-scale genetic studies, which are rapidly becoming the basis for the understanding and treatment of complex diseases in therapeutic research settings.

GNOM sequenced its first human genome in 2008 and began offering outsourced complete human genome sequencing services through its centralized sequencing facility on a commercial scale in May 2010. This core facility is expected to be capable of sequencing more than 400 complete human genomes per month by the end of 2010. GNOM's firm order backlog has more than tripled since the end of 2009 (from ~200 genomes to more than 800 genomes at calendar 3Q10-end). After sequencing more than 400 complete human genomes thus far in 2010 (including more than 300 in 3Q10 alone), we believe GNOM is on-track to complete and ship more than 750 and 4,450 genomes in 2010 and 2011, respectively. We forecast GNOM to achieve breakeven profitability in 4Q12 and an operating profit margin of 16% in 2013.

Survey says…… In order to gauge the current and future roles of outsourced whole human genome sequencing (WGS) service providers, we conducted a proprietary web-based survey of next-generation sequencing technology users' perceptions of, experience with, and plans to utilize outsourced service offerings. A detailed synopsis of the structure and outcome of the survey begins on page 4 of this report. In summary, the results more than adequately address three main concerns about the viability of GNOM's business model, in our view:

- ***Is there a market for outsourced whole human genome sequencing services?*** Yes. Two-thirds of NGS users surveyed indicated a willingness to routinely use an outsourced WGS services provider at a price point of $10,000 per genome or less. Additionally, more than 50% of users are familiar with GNOM's outsourced service offering, of which more than 60% would consider using and/or re-using GNOM.

- ***If so, how big is the market opportunity?*** Based on a linear regression of the price elasticity of demand constructed from our survey results, we calculate aggregate demand could be upwards of 60,000 human genomes at a price point of $5,000 per genome, implying an aggregate outsourced service market opportunity of ~$300 million. Based on the estimated existing installed base of high-throughput NGS instruments worldwide, we estimate the theoretical annual capacity for complete human genome sequences will be nearly 108,000 genomes at the end of 2010. Importantly, our regression confirmed that market demand for whole human genomes is extremely elastic, as it suggests a 50% decline in the price per human genome drives more than a 500% increase in aggregate volume demand.

- ***Can GNOM capture a significant share of the outsourced human genome sequencing market?*** Yes. Based on the results of our survey, we believe GNOM has already captured ~10% of the outsourced WGS service market opportunity. Of those users who would consider outsourcing, 16% would choose GNOM (compared to 40% who would use either Illumina's [ILMN, $64.57, NC] Genome Network or another third-party vendor). Importantly, our survey suggests more than 40% of the available market opportunity is undecided, suggesting that a substantial opportunity exists for GNOM to capture incremental market share as it leverages its massive scale to reduce the price per genome in an economically accretive fashion.

IPO Details

Jefferies & Company acted as a Joint Bookrunner on the IPO of Complete Genomics (GNOM), which priced at $9 per share on 11/11/10. The IPO entailed 6,000,000 shares of common stock. Net proceeds of ~$47 million are intended to be used to expand its sequencing and computing capacity, fund further development of its sequencing technology and services, and for working capital and other general corporate purposes.

Current Valuation Paradigm Yields Substantial Margin of Safety

Given GNOM's unique business model as an outsourced provider of whole human genome sequencing services, defining an appropriate peer group is difficult. However, we believe GNOM is most closely comparable to two sub-sectors of the clinical diagnostics and life science research supply markets, including pure-play research product providers involved in next-generation sequencing workflows and service-based molecular diagnostics franchises. We view equity value to revenue as the most appropriate traditional valuation metric, given the magnitude of net cash outlays required to support the development of its commercial infrastructure and fund expansion of its existing sequencing capacity.

As depicted in Exhibit 1, shares of GNOM currently imply an equity value of 5.1 times and 2.4 times our 2011 and 2012 revenue forecasts, respectively, which represent discounts of 29% and 47%, respectively, relative to a blended average of other life science product manufacturers and diagnostic services providers. Our $13 price target represents a 10-year horizon in our discounted cash flow model and implies an equity value of 4.6 times our 2012 revenue forecast.

EXHIBIT 1: BLENDED PEER GROUP AVERAGE VALUATION SUMMARY (CALENDAR YEAR-END)

					Mkt cap	EV / EBITDA			EV / Revenue			Price / Revenue		
Company	Ticker	Rating	Price	YTD	($mm)	2011E	2012E	2013E	2011E	2012E	2013E	2011E	2012E	2013E
Products Suppliers														
AbCam	ABC-LN	NC	£3.56	86%	$640	18.0x	16.0x	14.1x	6.7x	6.0x	5.3x	7.2x	6.4x	5.7x
Caliper Life Sciences	CALP	BUY	$6.58	159%	$331	49.0x	27.6x	19.3x	2.1x	2.0x	1.8x	2.4x	2.2x	2.1x
Cepheid	CPHD	BUY	$22.78	83%	$1,373	-	28.7x	22.7x	5.2x	4.3x	3.4x	5.4x	4.5x	3.6x
Illumina	ILMN	NC	$64.57	110%	$8,074	23.4x	18.9x	19.4x	7.0x	6.0x	5.4x	7.4x	6.4x	5.8x
Life Technologies	LIFE	BUY	$55.23	6%	$10,313	9.1x	8.5x	8.0x	3.2x	3.0x	2.9x	2.7x	2.6x	2.5x
Luminex	LMNX	BUY	$19.08	28%	$807	22.4x	14.2x	9.2x	4.2x	3.5x	2.7x	4.8x	4.0x	3.1x
Pacific Biosciences	PACB	NC	$15.02	(6%)	$793	-	-	-	15.5x	3.6x	1.8x	23.6x	5.5x	2.8x
Qiagen	QGEN	HOLD	$19.40	(13%)	$4,517	11.2x	10.0x	9.2x	3.7x	3.4x	3.0x	3.7x	3.4x	3.0x
Average				**57%**		**22.2x**	**17.7x**	**14.6x**	**6.0x**	**4.0x**	**3.3x**	**7.2x**	**4.4x**	**3.6x**
Services Suppliers														
Genomic Health	GHDX	BUY	$23.18	19%	$669	-	-	19.4x	2.9x	2.3x	2.0x	3.2x	2.6x	2.3x
Myriad Genetics	MYGN	HOLD	$22.86	(12%)	$2,111	10.2x	9.1x	8.2x	4.1x	3.7x	3.5x	5.2x	4.7x	4.4x
Sequenom	SQNM	HOLD	$7.20	74%	$650	-	-	-	11.6x	6.7x	3.3x	12.6x	7.3x	3.6x
Average				**27%**		**10.2x**	**9.1x**	**13.8x**	**6.2x**	**4.2x**	**2.9x**	**7.0x**	**4.8x**	**3.4x**
Composite average				**48%**		**20.5x**	**16.6x**	**14.4x**	**6.0x**	**4.0x**	**3.2x**	**7.1x**	**4.5x**	**3.5x**
Complete Genomics	**GNOM**	**BUY**	**$6.89**	**(23%)**	**$178**	**-**	**-**	**5.0x**	**3.7x**	**1.7x**	**0.9x**	**5.1x**	**2.4x**	**1.2x**
GNOM Premium / (discount)						**-**	**-**	**(65%)**	**(38%)**	**(57%)**	**(73%)**	**(29%)**	**(47%)**	**(66%)**

Source: Company reports, Capital IQ, Jefferies & Company, Inc. estimates.

Risks

Risks include failure to improve sample turn-around times, inability to quickly evolve the technology of its sequencing instruments and back-end data analysis capabilities, threats from the commercialization of new competitive technologies, ongoing patent litigation with ILMN, inability to meet projected cost per genome decreases, and a weaker than expected volume expansion ramp.

Next-Generation Sequencing Technology User Survey: The Role of Outsourced Service Offerings

In order to gauge the current and future roles of outsourced whole human genome sequencing (WGS) service providers, we conducted a proprietary web-based survey of next-generation sequencing technology users' perceptions of, experience with, and plans to utilize outsourced service offerings. The survey was conducted over a 10 day period that began on December 8, 2010, and targeted 175 known users of next-generation sequencing technology platforms at a variety of institutions globally. We received 62 responses, yielding what we would characterize as an extremely robust response rate of 35%, from individuals representing 55 discrete organizations. We estimate the organizations represented in our survey account for approximately 8% of the total global population of discrete facilities currently employing next-generation sequencing technologies (~725). Exhibits 2 and 3 below depict the mix of survey responses by geographic locale and institution type, respectively; we believe such proportions are generally representative of the underlying population.

EXHIBIT 2: RESPONDENTS BY GEOGRAPHY

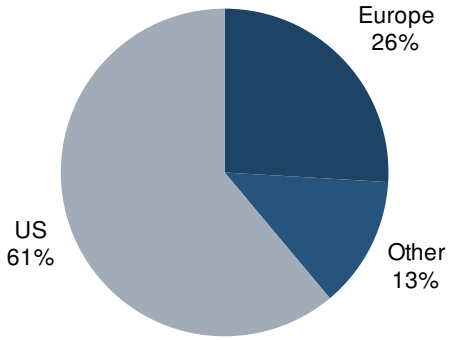
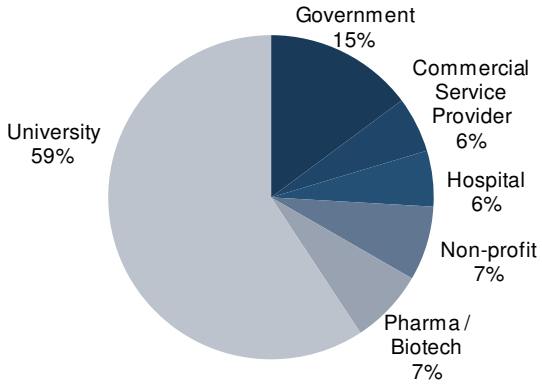


EXHIBIT 3: RESPONDENTS BY INSTITUTION TYPE



Source: Jefferies & Company, Inc.

We also believe the mix of survey respondents accurately reflects the size / throughput stratification inherent in the population of facilities utilizing next-generation sequencing technologies: 42% of survey respondents represented small laboratory facilities (annual budgets up to $1 million), while only 23% of respondents represented large laboratory facilities (annual budgets greater than $2.5 million) (see Exhibit 4). As such, the overwhelming majority of represented facilities (81%) support internal capacity to sequence less than 500 whole human genomes annually (at a minimum coverage rate of 30 times) (see Exhibit 5); for perspective, we estimate that three ILMN HiSeqs are theoretically necessary to sequence 500 whole human genomes annually at high coverage rates.

EXHIBIT 4: ANNUAL BUDGET SIZE OF RESPONDENT LABORATORIES (N=57)

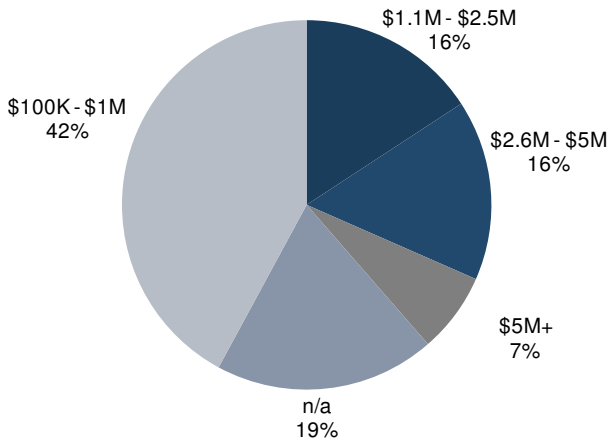
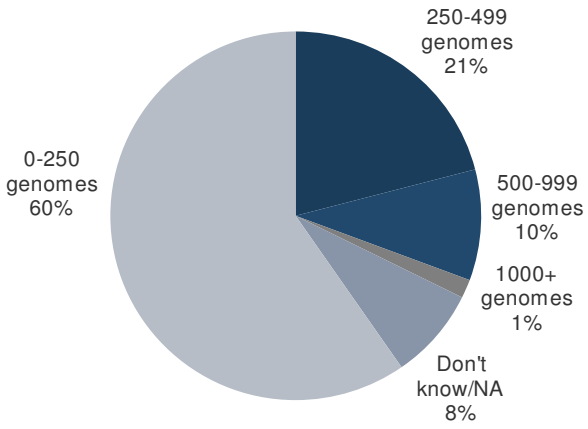


EXHIBIT 5: ANNUAL INTERNAL WHOLE HUMAN GENOME SEQUENCING CAPACITY (N=62)



Source: Jefferies & Company, Inc.

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Exhibit 6 below summarizes the outcomes of selected responses from our proprietary survey. Salient takeaways immediately follow.

EXHIBIT 6: PROPRIETARY NGS USER SURVEY: SUMMARY OF SELECTED RESPONSE OUTCOMES

	Would consider using a WHG outsourced service?	Complete Genomics		Illumina outsourced offering		2011 internal laboratory capacity	
		Familiar with outsourced offering?	If yes, would consider using / reusing offering?	Familiar with outsourced offering?	If yes, would consider using / reusing offering?	Expect to be capacity constrained?	If yes, will you be able to fund expansion?
Yes	37%	53%	63%	67%	54%	46%	80%
No	63%	47%	37%	33%	46%	54%	20%

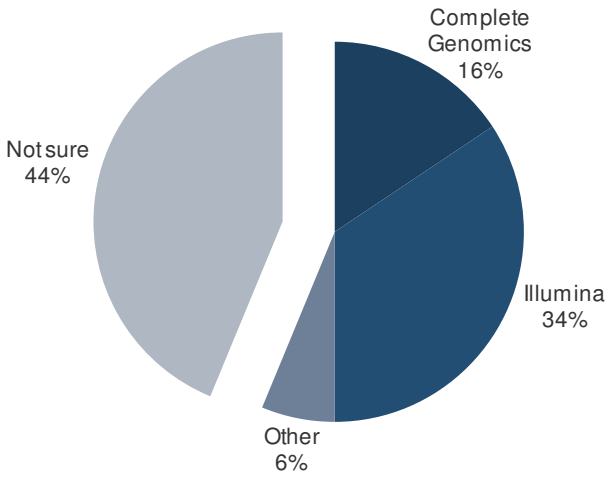
Source: Jefferies & Company, Inc.

Our perspectives on the outcomes depicted in Exhibit 6 above are as follows:

- While 63% of respondents initially indicated an unwillingness to use an outsourced whole human genome sequencing service provider to supplement internal sequencing capacity, such a proportion dropped to only 33% when respondents were given the ability to choose the price point at which they would consider routinely outsourcing.
- The majority of respondents are familiar with GNOM's outsourced sequencing offering (53%), but a greater percentage (67%) are familiar with ILMN's comparable offering.
- A greater percentage of respondents familiar with GNOM's offering would consider using / re-using the service than those familiar with ILMN's comparable offering (63% vs. 54%).
- 46% of respondents expect their laboratories to suffer capacity constraints in 2011, of which only 21% believe they will be unable to obtain funding to increase internal capacity. As contradictory as it may seem, such an outcome appears bullish for both next-generation sequencing instrument vendors as well as outsourced service providers like GNOM.

As depicted in Exhibit 7 below, 16% of respondents open to outsourcing indicated a preference for GNOM's offering, while 40% currently appear more likely to choose ILMN's Genome Network (34%) or another service provider (6%). Perhaps most encouraging to us is the high proportion of respondents that are currently undecided (44%), as it suggests a tremendous opportunity for GNOM to capture an increasingly significant share of outsourced demand as its commercial presence grows and operational infrastructure matures.

EXHIBIT 7: SURVEY RESPONDENTS' RANKING OF WHICH OUTSOURCED SERVICE PROVIDERS THEY WOULD MOST LIKELY USE



Source: Jefferies & Company, Inc.

When asked to rank several factors based on their importance in a decision to use an outsourced whole human genome sequencing service provider, respondents provided the following results:

EXHIBIT 8: SURVEY RESPONDENTS' RANKINGS OF THE IMPORTANCE OF SPECIFIC FACTORS IN THE OUTSOURCING DECISION

	Very important	Somewhat important	Somewhat unimportant	Unimportant
Maintaining full ownership of data	**75%**	21%	4%	0%
Ease of data management, analysis, and interpretation	**74%**	11%	12%	4%
Turn-around time	**56%**	39%	5%	0%
Sample size requirements	35%	**46%**	16%	4%

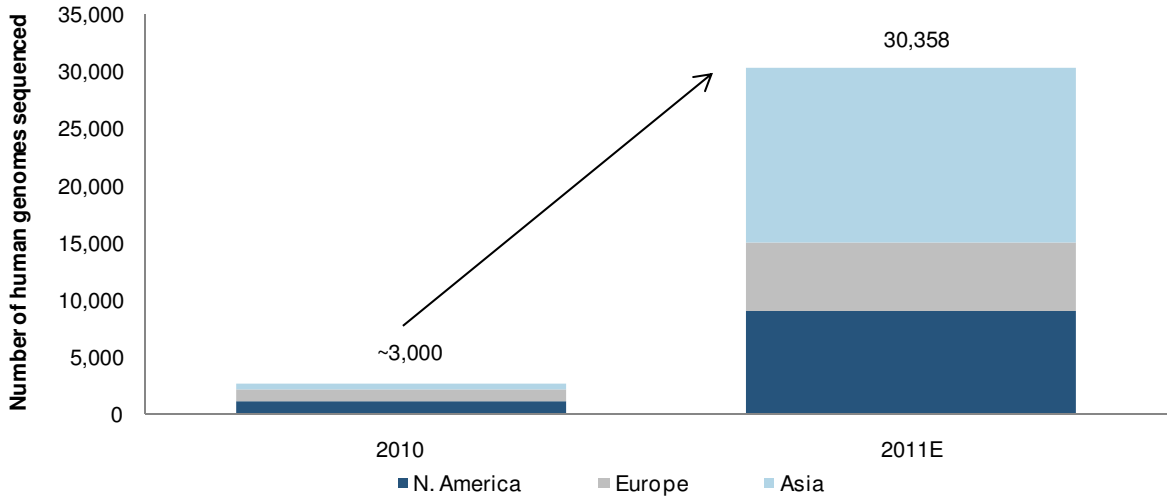
Source: Jefferies & Company, Inc.

Substantial Market Opportunity

Empirically sizing the aggregate research market opportunity for outsourced whole human genome sequencing services is challenging, owing to the offering's nascent status and the rapid evolution of commercially available sequencing technologies. Traditionally, significant amounts of capital, expertise, and time have been required to scale-up a next-generation sequencing laboratory, and commercially available technologies have been insufficient to conduct large-scale whole human genome sequencing projects. However, as the throughput capabilities of multiple next-generation sequencing technologies have advanced and contributed to dramatic declines in the cost of sequencing, demand for whole human genome sequencing has grown exponentially.

According to a recent survey targeting large, well-capitalized academic institutions conducted by ***Nature***, more than 3,000 complete human genome sequences (both at high (>30x) and low-coverages (<30x)) are expected to be completed by the end of 2010. As depicted in Exhibit 9, volume is expected to ramp significantly in 2011, owing to pervasive enhancements in sequencing instrumentation capabilities and corresponding reductions in sequencing costs. Such institutions are expected to sequence more than 30,000 complete human genomes by the end of 2011. It is important to note that such a forecast does not contemplate the plans of smaller government / academic / non-profit laboratories, biopharmaceutical companies, or service providers, which clearly suggests a high degree of conservatism in such an estimate. For perspective, we are projecting GNOM to ship less than 4,500 genomes in 2011, suggesting it will represent only 13% of known whole human genome sequencing activity.

EXHIBIT 9: ESTIMATED NUMBER OF WHOLE HUMAN GENOMES SEQUENCED AT LARGE ACADEMIC INSTITUTIONS



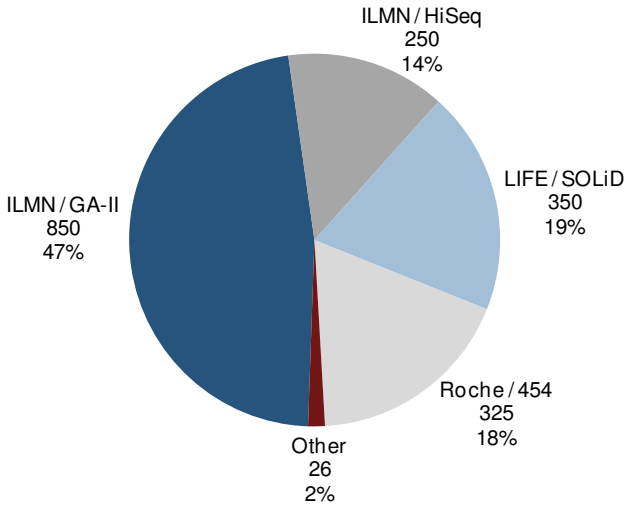
Source: Nature.com, Jefferies & Company, Inc. estimates.

Contextualizing Aggregate Capacity

The substantial majority of whole human genomes sequenced to date have been completed by government, academic and commercial researchers utilizing in-house instrumentation. In order to better gauge the potential demand for whole human genome sequences, we conducted an analysis of the aggregate theoretical capacity for high-coverage whole human genome sequence equivalents based on the existing installed base of next-generation sequencing instruments. To complete such an analysis, we incorporated data from an ongoing survey maintained by researchers associated with the University of Birmingham in the U.K., which we believe provides relatively accurate estimates of the installed

bases of several different technology vendors. As depicted in Exhibit 10, based on our analysis, we estimate more than 1,800 next-generation sequencing instruments are installed at more than 700 discrete government, academic, and commercial research laboratories worldwide.

EXHIBIT 10: ESTIMATED NGS INSTRUMENT INSTALLED BASE BY MAJOR VENDOR / PRODUCT (CY10-END)



Source: Company reports, http://pathogenomics.bham.ac.uk/hts, Jefferies & Company, Inc. estimates.

While a growing multitude of sequencing instrumentation platforms are available, only three systems (LIFE's SOLiD platform, ILMN's GA-II system, and ILMN's HiSeq system) are suited for whole human genome sequencing studies at greater than 30x coverage. We estimate ILMN's installed base of high-throughput next-generation sequencing systems will approach 1,100 units by the end of 2010, comprised of 850 GA-II and 250 HiSeq systems. We estimate LIFE's installed base of SOLiD systems will approach 350 units by the end of 2010. At greater than 30x coverage, we estimate ILMN's legacy GA-II platform is capable of sequencing one whole human genome per run, which takes ~9.5 days. We believe ILMN's HiSeq platform is capable of sequencing roughly 3.3 complete human genomes per run, which takes ~7 days. We estimate LIFE's latest 5500xl SOLiD platform is capable of completing two whole human genomes per 8-day run cycle.

Based on the installed base and throughput assumptions detailed above, we estimate the current theoretical aggregate capacity for high-coverage whole human genome sequence equivalents is almost 114,000 genomes annually (see Exhibit 11 below). Our 2011 theoretical whole human genome sequencing capacity assumptions call for ILMN's installed base of high-throughput NGS systems to reach 1,250 units, LIFE's to reach 450 units, and GNOM to add an additional 13 systems to its centralized facility at the end of the year. Importantly, our assumptions do not contemplate any further throughput enhancements, which will clearly be substantial. As such, we estimate aggregate capacity for high-coverage whole human genome sequence equivalents will reach almost 194,000 genomes (+70% year-over-year) by the end of 2011.

EXHIBIT 11: ESTIMATED THEORETICAL CAPACITY FOR WHOLE HUMAN GENOME SEQUENCE EQUIVALENTS

	Installed base		WGS capacity / year		Genomes / yr / instrument	Human Genomes / Run	Run time (days)	Throughput (Data (Gb) / Run)
	2010	2011	2010	2011				
High-throughput vendors								
ILMN								
GA-II	850	550	32,658	21,132	38.4	1.0	9.5	90
HiSeq	250	700	43,452	121,667	173.8	3.3	7	300
LIFE								
SOLiD	350	450	31,938	41,063	91.3	2.0	8	170
Sub-total	**1,450**	**1,700**	**108,048**	**183,861**				
growth		***17%***		***70%***				
Outsourced service provider								
GNOM								
In-house systems	18	31	5,749	9,901	319.4	10.5	12.0	1260
Total	**1,468**	**1,731**	**113,797**	**193,761**				
growth		***18%***		***70%***				

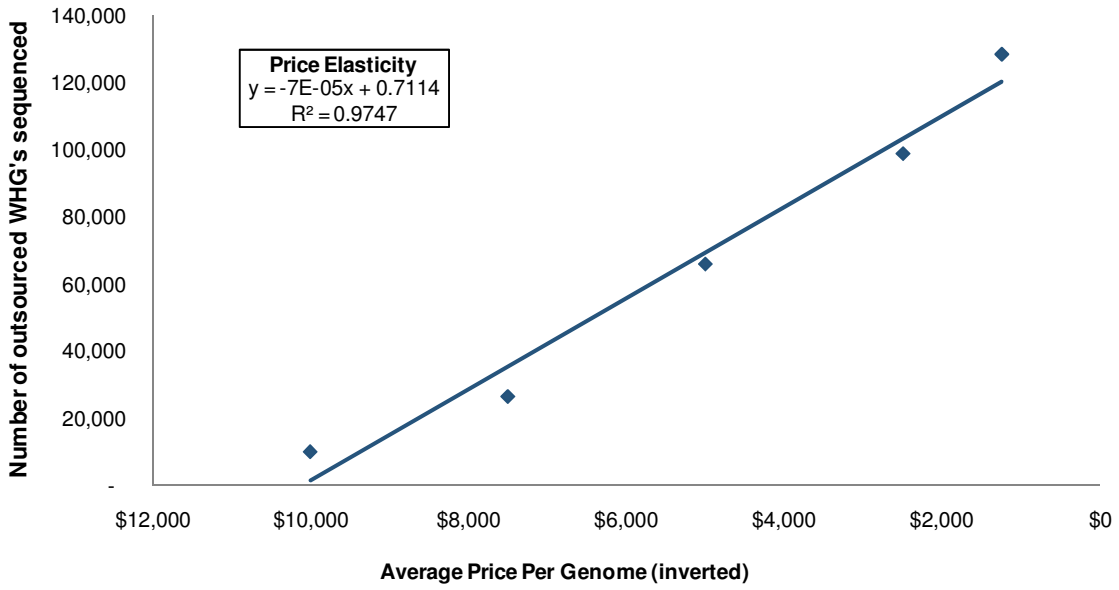
Source: Company reports, Jefferies & Company, Inc. estimates.

It is important to note that such theoretical estimates presume all systems manufactured by high-throughput instrumentation vendors (LIFE, ILMN) are used exclusively for whole human genome sequencing projects. In reality, given the significant cost (instruments, reagents and back-end data management / analysis capabilities) requirements and operational complexity of conducting large-scale whole human genome sequencing research projects in-house, we believe the true underlying available capacity to be significantly lower, as such NGS instruments are heavily utilized for more discrete applications, such as gene expression and miRNA discovery and profiling, as well as applied market applications, such as agriculture, livestock, and seed and crop analyses.

Demand is Highly Elastic; NGS User Survey Suggests Substantial Volume Opportunity… At The Right Price

In an attempt to better quantify the aggregate market demand for an outsourced WHG sequencing solution, we utilized the results of our NGS user survey to construct a linear regression of the demand elasticity at various price points for a complete human genome. As depicted in Exhibit 12 below, based on a price per genome of $7,800 (in line with our 2011 realized price per genome forecast for GNOM), we estimate an aggregate volume opportunity for outsourced service providers of ~32,000 genomes. As such, our 2011 revenue forecast of $35 million (which assumes it completes ~4,500 genomes at an average realized price of ~$7,800 per genome) implies it must only capture 15% share of the available market opportunity. At a price per genome of $4,000, our regression suggests an aggregate volume opportunity for outsourced service providers of ~82,000 genomes. As such, our 2012 revenue forecast of $75 million implies GNOM is able to capture 23% of the available outsourced market opportunity, which we view as highly conservative. Importantly, our linear regression suggests that a 50% decline in unit prices (from ~$10,000 per genome) drives more than a five-fold increase in aggregate volume demand.

EXHIBIT 12: LINEAR REGRESSION OF PRICE ELASTICITY AND AGGREGATE MARKET VOLUME DEMAND FOR OUTSOURCED WHOLE HUMAN GENOME SEQUENCING SERVICES



Source: Jefferies & Company, Inc.

Clinical Diagnostic Market Opportunity – Free Call Option

While next-generation sequencing technologies, including GNOM's outsourced human genome sequencing services offering, currently only address the research market for drug discovery and development applications, the long-term commercial opportunity of the modality in clinical diagnostics settings is clearly substantial. Implementation of NGS technologies in clinical trial settings should lay the ground-work for migration of the modality into clinical diagnostic applications over a long-term horizon, in our view, particularly as the accuracy and error rates of NGS platforms continue to improve. We believe a number of major biopharmaceutical manufacturers, including Pfizer [PFE, $17.17, Buy], Merck [MRK, $36.50, Hold], GlaxoSmithKline [GSK LN, £1265, Hold] and Johnson & Johnson [JNJ, $62.49, NC], are currently implementing sequencing for both target discovery (identifying key mutations in cancer and developing drugs that target those mutations) and patient stratification for large clinical trials.

Given genetic mutations are directly tied to the development of cancer, as well as the effectiveness of treatment responses, we believe new NGS technologies could ultimately allow for differentiation of new targeted therapies specifically tailored to particular disease characteristics. The technology has already demonstrated an ability to enhance the diagnosis of several diseases, including cancer, cardiovascular disease, infectious diseases and prenatal screening, primarily in research settings. However, many clinical laboratories already employ legacy Sanger sequencing technologies to sequence the HIV virus in patients with the disease to monitor susceptibility or resistance to HIV antiviral medications, as well as sequencing of BRCA1/2 genes in breast cancer patients.

According to AACR (American Association for Cancer Research), there are roughly 5 million new cancer patients diagnosed every year in developed markets (including ~1.5 million in the U.S.). Assuming each new cancer tumor is sequenced twice (tumor and normal) and factoring an average unit price of $1,000, we estimate the long-term market opportunity for cancer tumor sequencing could ultimately approach $10 billion annually. It is important to note that such an ASP assumption is considerably less than the current ~$3,000 price captured by ***Myriad Genetics*** [MYGN, $22.86, Hold] for its comprehensive BRCA1 / BRCA2 screening test.

Evolving Business Mix

GNOM's outsourced human genome sequencing service offering has experienced strong initial adoption from more than 35 leading institutions spanning government, academic, non-profit and commercial biopharmaceutical end-markets. Academic, government and non-profit research customers currently account for nearly 90% of GNOM's orders and pipeline. Commercial pharmaceutical and biotechnology organizations account for 12% of its customer mix, and include Eli Lilly, Genentech, and Pfizer. Given the growing importance of genetics in the discovery and development of novel personalized therapeutics, we expect such commercial customers to become increasingly

significant users of GNOM's offering over time, particularly given our belief that such entities will resist internal capacity builds to fulfill increasingly stringent clinical trial protocols. In addition, as GNOM expands its commercial infrastructure (near-term) and adds satellite sequencing centers internationally (longer-term), its business mix should become less reliant on North American customers, in our view.

EXHIBIT 13: GNOM'S ORDER AND BACKLOG MIX BY INSTITUTION TYPE

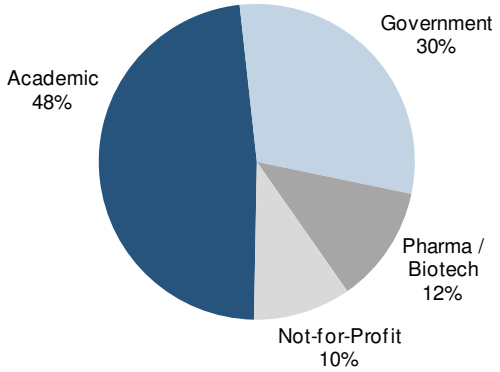
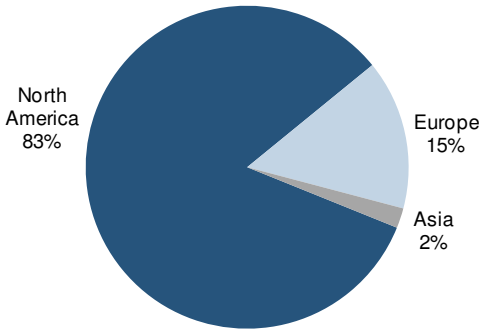


EXHIBIT 14: GNOM'S ORDER AND BACKLOG MIX BY CUSTOMER GEOGRAPHY



Source: Company reports, Jefferies & Company, Inc. estimates.

Competitive Landscape

GNOM's sequencing platform differs meaningfully from other competitive next-generation sequencing platforms currently on the market. Enabled by its proprietary combinatorial probe-anchor (cPal) chemistry technology, GNOM does not rely on chaining reads and is capable of analyzing a sample at any point of a sequencing run. Conversely, all other competitive technologies require every read be performed in the correct order, which increases reagent utilization. Exhibit 15 below depicts a summarized comparison of the performance characteristics of various multi-purpose NGS instrumentation platforms relative to those of GNOM.

EXHIBIT 15: COMPARISON OF VARIOUS NEXT-GENERATION SEQUENCING PLATFORMS

Company	Platform	Method	Data (Gb) / run	Gb / Day	Read length	Run-time	Assembled Accuracy	ASP
ILMN	HiSeq 2000	Sequencing by synthesis	200 - 300 Gb	25	2 x 100 bp	~7 days	> 99.0%	~$690,000
ILMN	GA-IIx	Sequencing by synthesis	60 Gb	~6	2 x 100 bp	~9.5 days	n/a	~$300,000
LIFE	5500xl SOLiD (aka: SOLiD 4 hq)	Ligation	Microbeads: ≤180 Gb Nanobeads: ≤ 300 Gb	24	75 bp (fragment) 75 bp x 35 bp (paired-end) Up to 60 bp x 60 bp (mate-paired)	Microbeads: 6 - 9 days Nanobeads: 7 - 10 days	99.99%	~$595,000
LIFE	5500 SOLiD (aka: SOLiD PI)	Ligation	80 - 100 Gb	12	75 bp (fragment) 75 bp x 35 bp (paired-end) Up to 60 bp x 60 bp (mate-paired)	6 - 9 days (implied)	99.99%	~$349,000
LIFE	Personal Genome Sequencer (Ion Torrent)	Sequencing by synthesis	~10 Mb	0.2	~100 - 200 bp	~2 hours	> 99.9%	~$49,000
Roche	454 GS FLX	Sequencing by synthesis	400-600 Mb	0.5	400 bp	10 hours	99%	~$500,000
HLCS	HelioScope	Sequencing by synthesis	21 - 35 Gb	3.5	22 - 55 bp	8 days	> 99.995%	~$1M
PACB	RS	Sequencing by synthesis	22.5 Mb per chip	nmf	750 bp - 1,000 bp	~ 6 hours	99.99%	~$695,000
GNOM	CGA Platform	Ligation	1,250 Gb	105	70 bp	12 days	99.999%	-

Source: Company reports, Jefferies & Company, Inc. estimates.

Competitive next-generation sequencing platforms face of number of disadvantages in addressing GNOM's core market of whole human genome sequencing, in our view, including extremely high capital outlays for instrumentation, high consumables costs, inadequate throughput characteristics and limited back-end data management and analysis capabilities. While multi-purpose platforms from other competitors, such as ILMN, LIFE and Roche, offer users the flexibility to address a diverse range of sequencing applications, such as targeted sequencing, de novo sequencing, transcriptomes, miRNA discovery and profiling, DNA methylation, and DNA-protein interaction, such platforms lack the

optimization and scale advantages to compete cost-effectively on large-scale whole human genome sequencing projects, in our view.

Data analysis, not data generation, is amongst the most commonly cited rate-limiting factor in genomics, in our view. NGS experiments generate unprecedented volumes of data (multiple terabytes for a single human genome at 30x coverage), which present end-users with substantial burdens in developing the adequate back-end data management, IT and analysis capabilities in order to make the data useful. Such enormous downstream challenges require significant investments in resource-intensive bio-informatics infrastructure, which must be taken into consideration when comparing the true all-in costs associated with sequencing a whole human genome. Conversely, GNOM's genomic data processing facility consists of roughly 5,000 core processors and 1,750 terabytes of high-speed disk storage, which allows it to accelerate the process for customers and dramatically reduce the cost and complexity of large-scale sequencing projects.

Outsourced Whole Human Genome Service Competitors

BGI

We view BGI (formally known as Beijing Genomics Institute) as GNOM's primary competitor in the outsourced market for whole human genome sequencing services. Funding support from the Chinese government and a $1.5 billion funding commitment (to be spent over the next decade) from the China Development Bank received earlier this year has allowed it to gain substantial commercial scale in short order. In January 2010, BGI announced it would purchase 128 HiSeq2000 units from ILMN (which are expected to be fully installed by the end of 1Q11). In October 2010, it also announced it would purchase 27 SOLiD 4 systems from LIFE capable of sequencing 50 whole human genomes per month. Backed by a fleet of 155 high-throughput next-generation sequencing instruments, we estimate BGI's theoretical capacity for whole human genome sequences (once all instruments are fully installed and operational) to be nearly 38,000 genomes annually. However, we believe its actual capacity for whole human genome sequencing projects is considerably smaller, given expectations that it will utilize such instruments for non-whole human genome projects, such as applied markets applications. BGI has publicly indicated its installed base of instruments will have completed 10,000 to 20,000 genomes by the end of 2011.

BGI has established a two-pronged approach to working with its research partners. A significant portion of BGI's capacity is dedicated to its collaboration efforts as a non-profit. It has purportedly set aside $100 million to fully-fund collaboration projects where it will sequence samples for its customers for free and co-author publications in conjunction with academic and other non-profit research organizations. It also provides an outsourced fee-for-service offering for any type of sequencing project, including animals, plants, bacteria and complex diseases. While the profitability of and pricing discretion for its outsourced services offering is unclear, with roughly 50% of its 3,000 employees reportedly dedicated to bioinformatics alone, BGI appears to be positioning the capabilities of its back-end data analysis infrastructure as a primary selling point for its outsourced fee-for-service customers, in our view.

Illumina Genome Network

As a means of leveraging its existing installed base and defending the competitiveness of its sequencing technology for whole human genome applications, ILMN began offering whole human genome sequencing services through its Genome Network (GN) in July 2010. The GN is designed to match customers interested in conducting large-scale whole human genome sequencing projects (at least 50 samples) with a handful of leading academic and commercial institutions with the available excess capacity to complete such projects using ILMN's instrumentation (GA-II or HiSeq 2000 systems). Customers of the GN submit project specifications and a preference list of network service providers to ILMN, who provides a quote and subcontracts the project out to one of the available GN partners. Once a GN partner accepts an order, customers send the samples directly to the partner. In the event none of the certified partners have enough excess capacity for the project, ILMN will simply do the work in-house. ILMN invoices the customer once the project is complete and the data is delivered.

The number of certified network partners currently available appears limited to only two enrolled vendors, including the Macrogen Genomic Medicine Institute (GMI) in Seoul, South Korea, and the NCGR (National Center for Genome Resources) in New Mexico. ILMN is reportedly is discussions with a number of additional institutions to join the network, including the Broad Institute, BGI, University of Washing Department of Genome Sciences and deCODE Genetics.

While turnaround times for the network are quoted at 12 to 16 weeks for a typical 50 genome project, essentially in line with GNOM's cycle time, ILMN arguably has little control over the turnaround time once samples have been shipped to network partners. ILMN negotiates pricing with network service vendors in order to stay competitive with other outsourced service vendors (i.e.: GNOM and BGI), though costs borne by various different network partners likely vary

significantly between different institutions. ILMN has reportedly booked multiple orders for the service thus far, and recent commentary suggests the offering is profitable. While the economics of the model are nebulous, we do not view the offering as cost competitive with GNOM's outsourced services offering on an all-in basis. Further, given those institutions with the technological capabilities and in-house expertise needed to complete such large-scale whole human genome sequencing projects are largely subsidized by government funding (such as the Sanger and Broad Institutes), their ability to establish nascent fee-for-service operations appears to conflict with the underlying mission (research and publishing) of such organizations, in our view. ILMN's foray into the outsourced whole human genome services market does serve to confirm the viability of and demand for GNOM's differentiated model in the current environment, in our view. We will continue to monitor future competitive developments with alacrity.

Litigation Risks Appear Manageable

ILMN filed a patent infringement suit against GNOM in August 2010 alleging its combinatorial probe anchor ligation technology infringes on various patents held by ILMN. The dispute specifically relates to three ILMN patents (7,232,656, 7,598,035 and 6,306,597), which it received through the acquisition of Solexa in early-2007. All three patents have previously been the subject of similar suits involving ILMN and LIFE, including reexamination by the U.S. Patent and Trademark Office. Based on our understanding, two of the patents (7,232,656 and 7,598,035) were rejected in the first stage of reexamination and are currently awaiting further review, which could take several years for a final decision. Additionally, ILMN has not been able to view GNOM's sequencing instruments or workflow in action, which could suggest its patent claims may be of little merit. While the ultimate outcome of the suit remains to be seen, we perceive minimal risk of an adverse litigation scenario in the intermediate-term.

EXHIBIT 16: SUMMARY OF SUBJECT PATENTS IN ILMN LITIGATION

Patent Title	Number	Description
Arrayed biomolecules and their use in sequencing	7,232,656	Provides a method for analyzing genome wide variation in an individual
Method and compositions for ordering restriction fragments	7,598,035	Provides a method for constructing a high resolution physical map
DNA sequencing by parallel oligonucleotide extensions	6,306,597	Method for determining and identifying a nucleotide sequence

Source: GenomeWeb, USPTO.gov, Jefferies & Company, Inc. estimates.

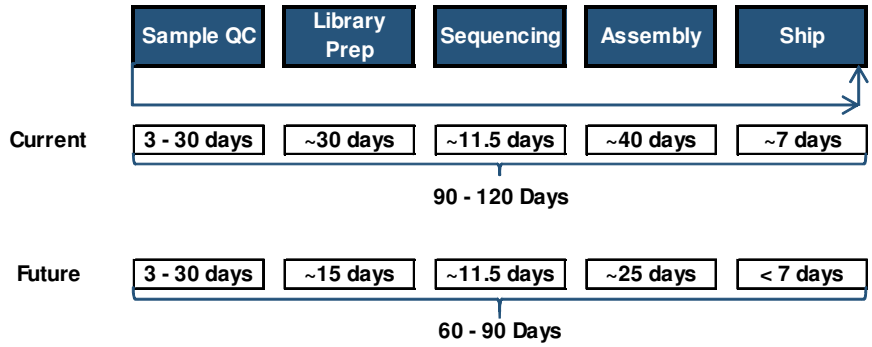
The Sequencing Process: Turn-Around Time an Area for Meaningful Improvement

GNOM's whole human genome sequencing process consists of four primary stages: sample QC, sample library preparation, sequencing, and assembly and analysis. Once a sample is received from a customer, GNOM begins the library cataloging process, which currently takes ~30 days to complete. GNOM uses a proprietary library construction process to insert four adaptors into each DNA fragment, which act as starting points for reading up to 10 bases from each adaptor-genomic DNA junction and allows its sequencing to support 70-base reads (35 bases per paired-end). After completing the library cataloging and QC steps, GNOM sequences the sample, which takes ~11.5 days to complete. GNOM's sequencing instruments consist of a fluidics robot that pipettes chemical reagents (including fluorescent molecules) onto the flow slides and an imaging system that records images of the fluorescent molecules attached to the sample DNA. The sequencing instruments process 18 flow slides at a time and are capable of generating 50 to 70 gigabases of useable data from each flow slide in a typical run. Once the sequencing process is complete, GNOM's proprietary assembly software organizes the overlapping 70-base nucleotide sequences to reconstruct the complete genome. Most of the assembly process consists of QC steps to insure the DNA has been properly sequenced. After assembling the genomic data, GNOM's analysis software identifies key variants in each genome and automatically annotates the genomic data. In total, the assembly and analysis processes currently take roughly 40 days to complete. Lastly, GNOM uploads the completed genomic data to Amazon Web Services (AWS), which copies the data to hard disks and ships the disks to customers, which generally takes seven days from the time GNOM's analysis is complete to when the customer receives the hard disk in the mail.

While GNOM's current cycle time from sample acceptance to customer delivery generally takes 90 to 120 days, we expect it to reduce its turnaround time to less than 90 days over the next year (see Exhibit 17). In particular, GNOM should be able to significantly bolster the efficiency of its library processing steps, where a meaningful amount of down time exists, given it currently only runs two shifts for library preparation. As volume expands, we expect GNOM could significantly enhance the sample throughput by adding a third shift for library preparation, which could allow it to extract upwards of 15 days from its overall cycle time. Additionally, as GNOM gains scale, it should be able to improve

the process automation and data management tools to reduce its turnaround time. Over time, as the process improves, we believe GNOM should also be able to implement less intensive QC steps (more spot checking, less full data checking). Further, as more laboratory customers add the computing capacity required to be able to accept data downloads over the internet via FTP (file transfer protocol), rather than physically receiving hard disks from AWS, it could eliminate the roughly seven days for shipping from its cycle times.

EXHIBIT 17: GNOM'S CURRENT AND FUTURE ORDER TURNAROUND TIME CYCLE



Source: Company reports, Jefferies & Company, Inc. estimates.

Highly Scalable Operating Model

Revenue Growth Outlook

Our 2011 revenue forecast of $35 million assumes GNOM completes and ships 4,470 genomes at an average realized price of $7,820 per genome (down 33% year-over-year) (see Exhibit 18). Our 2012 revenue forecast of $75 million (up 114% from our 2011 expectation) assumes it ships ~18,650 genomes (up more than 300% year-over-year) at an average realized price of ~$4,000 per genome (down 50% year-over-year). Exhibit 19 depicts our forecasts for backlog and average ASP per genome in backlog through the end of 2011. Importantly, our backlog forecasts exclude potential follow-on orders for up to 1,128 genomes (~$10.2 million value) from its NCI Pediatric Cancer study following its initial ~$1 million pilot project for 100 genomes.

EXHIBIT 18: GNOM'S REALIZED PRICE PER GENOME VERSUS NUMBER OF GENOMES SHIPPED (1Q10 – 4Q12E)

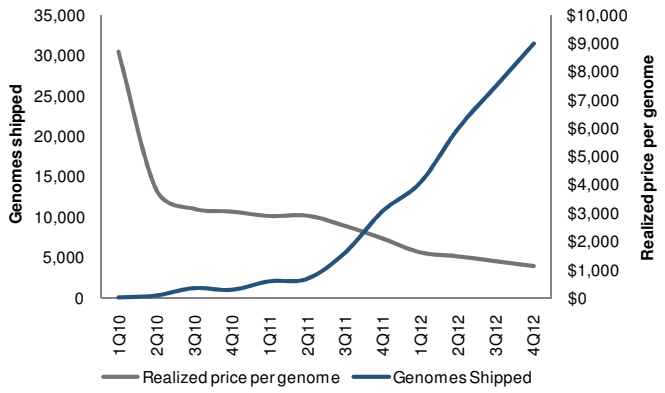
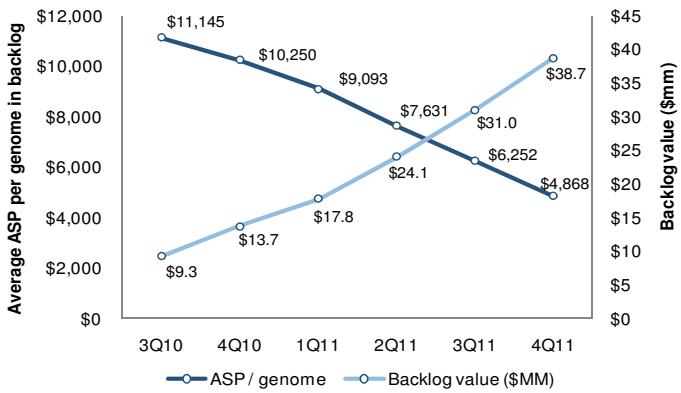


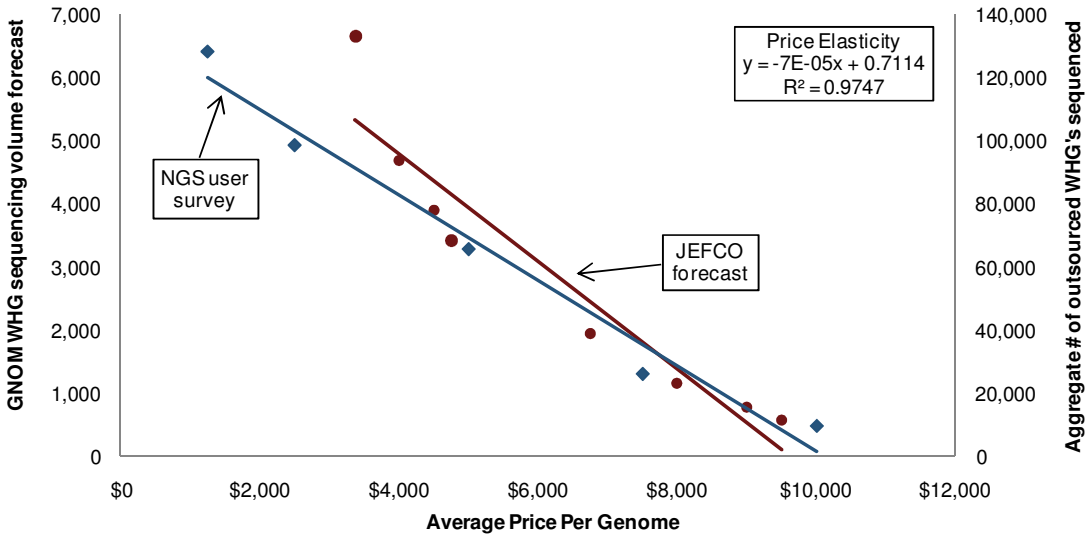
EXHIBIT 19: GNOM'S AGGREGATE BACKLOG VALUE VERSUS AVERAGE ASP / GENOME (3Q10 – 4Q11E)



Source: Company reports, Jefferies & Company, Inc. estimates

Exhibit 20 below depicts the relationship between price and volume supporting our GNOM revenue forecasts and that of our linear regression of the market demand elasticity (as constructed from the results of our NGS user survey). Our GNOM revenue forecasts contemplate price and volume assumptions empirically derived from the data of our NGS user survey. The two lines of best fit are highly correlated (r-squared: 73%) and clearly illustrate the degree to which our price and volume assumptions emulate the demand elasticity of the market, which we believe underscores the defensibility of our intermediate-term revenue forecasts.

EXHIBIT 20: GNOM'S VOLUME FORECASTS VS. AGGREGATE MARKET VOLUME DEMAND AT VARIOUS PRICE POINTS PER GENOME



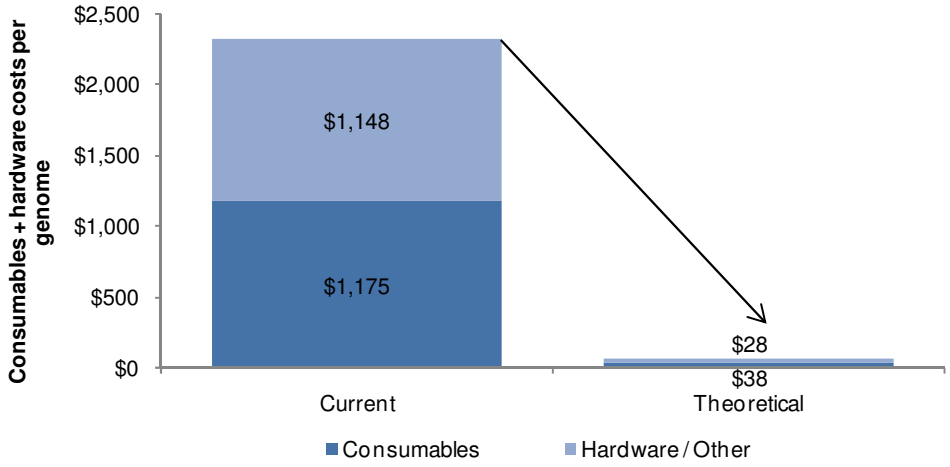
Source: Jefferies & Company, Inc. estimates.

Gross Profit Margin Outlook

We forecast GNOM's composite gross margin to turn positive in 3Q11 as it gains substantial economies of scale on dramatically higher sequencing volumes and realizes operating leverage on its direct (reagents, direct labor) and indirect costs (labor, production IT, overhead and instrumentation depreciation). We forecast GNOM's direct costs per genome to decline to $1,105 in 2011, down 55% from $2,475 per genome in 2010. More significantly, GNOM's indirect costs per genome are expected to fall from ~$11,000 in 1Q11 to $4,000 by 4Q11 as volumes ramp.

As depicted in Exhibit 21, GNOM's current direct cost per genome (excluding labor) is ~$2,300, comprised of a roughly 50/50 split between hardware and consumable costs. Based on currently available materials and technologies under its existing purchasing arrangements, GNOM believes it will be successful in reducing its direct costs per genome (excluding labor) to less than $100 within five years on greater scale and operating leverage enabled by its centralized sequencing facilities, more efficient sample prep and library construction (fewer steps, greater equipment utilization), benefits from incremental technology enhancements (adding 2 additional cameras to its sequencing instruments) and improved operating efficiencies (computing). As such, we forecast GNOM's gross margin will reach 65% (essentially in line with its long-term goal of 65% to 70%) by 2014, inspiring in the context of the dramatic erosion we expect in unit pricing (-85% from average levels in 2010).

EXHIBIT 21: GNOM'S CURRENT AND THEORETICAL CONSUMABLES AND HARDWARE COSTS PER GENOME (EX-LABOR)



Source: Company reports, Jefferies & Company, Inc. estimates.

Operating Expense Outlook

GNOM currently employs ~73 individuals specializing in research and development (~39% of total employees), most of whom are focused on software (27 individuals), hardware development (13) and biochemistry (18) to support its goal of establishing the highest-quality, lowest-cost and highest-throughput complete human genome sequencing and data analysis center in the world. Our 2011 forecast assumes 10% growth in R&D spending (to $27 million), primarily reflecting incremental headcount growth (8 additional employees). We forecast GNOM's R&D as a percent of revenue to fall to 21% by 2014 (essentially in line with its long-term goal of reducing R&D intensity to 20% to 25%).

Incremental near-term investments in GNOM's marketing, sales and customer support capabilities will be needed to drive market awareness of its value proposition (service-based model vs. the overhead and burden of instrument ownership), forge relationships with new academic and commercial biopharmaceutical customers, and capture share gains against other outsourced service vendors in the market (namely, BGI and ILMN Genome Network). GNOM's commercial organization is comprised of roughly 24 individuals, roughly half of whom are direct sales representatives. Our 2011 forecast assumes GNOM's commercial-related expenses more than double to ~$15 million as it adds incremental sales and customer support representatives. We expect general and administrative expenses to increase ~$3 million in 2011, reflecting incremental public-company costs and other HR-related investments.

We forecast GNOM to achieve breakeven profitability in 4Q12 and an operating profit margin of 16% in 2013. Over the next several years, we believe GNOM's highly-scalable operating model is capable of delivering an operating profit margin in excess of 20%, despite expectations for considerable unit pricing erosion.

Capital Expenditure Outlook

Capacity expansions are necessary for GNOM to satisfy the rapidly accelerating demand environment for high-quality, low-cost complete human genome sequencing projects, as evidenced by its robust order growth experience (up >4x) over the past year. Our model contemplates ~$27 million of capital expenditures in 2011, primarily reflecting an estimated ~$13 million of incremental investments needed to upgrade its existing fleet of sequencers, additional instruments to support higher order volumes, and support the development of new prototype equipment. We forecast ~$8 million of IT-related capital expenditures in 2011 to support ongoing enhancements to its software and corporate IT capabilities. Biochemistry-related investments, including additional library prep automation, reagent manufacturing and developmental robotics, are expected to consume an additional ~$2 million of capex in 2011. The balance is largely attributable to other corporate and facility-related outlays.

As depicted in Exhibit 22, such investments should more the double its available sequencing capacity to ~1,000 complete human genomes per month by the end of 2011 (up from ~400 genomes per month currently). We anticipate the throughput (number of genomes sequenced per instrument per day) of its sequencer installed base to rise from ~0.5 genomes in 3Q10 to ~1.3 genomes by 4Q11. Further, we estimate the capacity utilization of its installed base of sequencing instruments could exceed 50% by 2H11 (see Exhibit 23). Such investments should contribute to significant operating leverage over the next several years as the demand environment matures, in our view.

EXHIBIT 22: GNOM'S QUARTERLY SEQUENCER THROUGHPUT & TOTAL CAPACITY

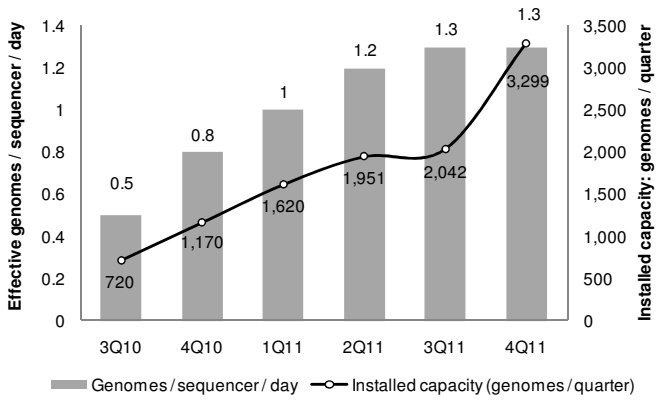
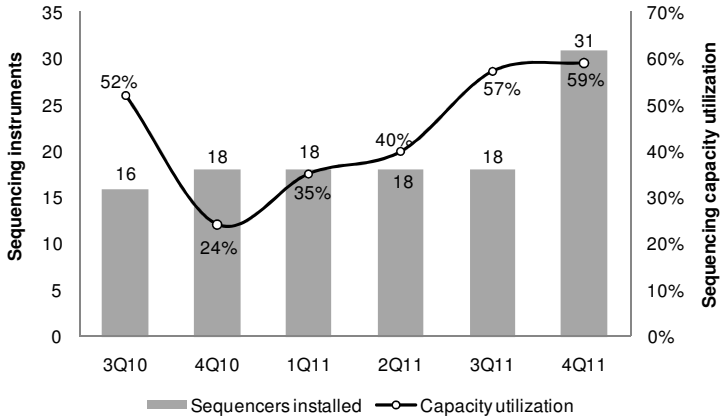


EXHIBIT 23: GNOM'S INSTALLED BASE OF SEQUENCING INSTRUMENTS & PROJECTED CAPACITY UTILIZATION



Source: Company reports, Jefferies & Company, Inc. estimates

Management

Clifford A. Reid, Ph.D. – Co-Founder, Chairman, President and Chief Executive Officer

Clifford Reid is a co-founder of GNOM and has served as a member of the board, President and CEO since July 2005. Dr. Reid previously served as Vice President of Collaborative Solutions at Open Text Corporation, a software company (March 2003 – September 2005). In 1995, Dr. Reid co-founded Eloquent, Inc., a digital video communications company, where he served as CEO until 1999 and Chairman until it was acquired by Open Text in 2003. He also co-founded an enterprise text search engine company, Verity, Inc., in 1988, where he served as its Vice President of Engineering (1988 – 1992) and as its Executive Vice President (1992 – 1993). Dr. Reid received a B.S. in Physics from M.I.T., an M.B.A from Harvard University and a Ph.D. in Management Science and Engineering from Stanford University.

Ajay Bansal – Chief Financial Officer

Mr. Bansal joined GNOM as Chief Financial Officer in May 2010. Prior to joining the company, he served as CFO and Executive Vice President of Business Development at Lexicon Pharmaceuticals (June 2009 to January 2010). Prior to that, Mr. Bansal also served as CFO at several other biopharmaceutical companies, including Tercica, Inc. (March 2006 to December 2007) and Nektar Therapeutics [NKTR, $12.30, NC] (February 2003 to January 2006). He also previously served as Director of Operations Analysis at Capital One Financial (July 2002 to February 2003). From August 1998 to July 2002, he worked at Mehta Partners LLC, a financial advisory firm, where he was named partner in January 2000. Prior to joining Mehta, he served ten years in management roles at Novartis [NOVN VX, CHF 56.45, Buy] and at various consulting firms. Mr. Bansal received a B.S. in Mechanical Engineering from the Indian Institute of Technology (Delhi) and an M.S. in Operations Management and M.B.A. from Northwestern University.

Radoje Drmanac, Ph.D. – Co-Founder, Chief Scientific Officer

Radoje Drmanac is a co-founder of GNOM and has served as Chief Scientific Officer since July 2005. Previously, Dr. Drmanac co-founded Callida Genomics, Inc., a DNA sequencing company, where he served as Chief Scientific Officer (2001 – 2004) and has served as its President since 2004. In 1994, he co-founded Hyseq, a DNA array technology company, where he served as Senior Vice President of Research (1994 – 1998) and as Chief Scientific Officer (1998 – 2001). Dr. Drmanac received a B.S., M.S. and Ph.D. in Molecular Biology from the University of Belgrade.

Bruce Martin – Senior Vice President of Product Development

Bruce Martin joined GNOM as Vice President of Product Development in May 2007 and has served as Senior Vice President of Product Development since March 2010. Prior to joining the company, Mr. Martin served as Vice President of Product Strategy at PSS Systems, Inc., an internet software company. From 2002 to 2003, he served as Chief Technical Officer of Openwave Systems [OPWV, $2.19, NC], a software company. Mr. Martin received a B.S. in Computer Science and Electrical Engineering from the University of California, Davis.

Mark J. Sutherland – Senior Vice President of Business Development

Mark Sutherland joined GNOM in March 2010 as Senior Vice President of Business Development. Prior to joining GNOM, Mr. Sutherland served as Senior Vice President of Business Development at GenVault, a DNA storage company (October 2008 – November 2009). Prior to that, he served as Chief Business Officer for Flashpoint Technology, Inc., a digital content management company (November 2005 – September 2007). Beginning in August 1988, Mr. Sutherland spent 17 years in a variety of roles at Molecular Dynamics, a manufacturer of molecular biology and genetic engineering equipment, and its successor companies, Amersham Biosciences and GE Healthcare [GE, $17.70, NC]. Mr. Sutherland received a B.S. in Chemistry with Honors from Stanford University.

Ownership

EXHIBIT 24: GNOM OWNERSHIP DETAILS

Holder	Affiliation	Shares	% of shares outstanding
Various public and other	Other	4,593,063	17.8%
Orbimed Advisors	Venture Capital	4,156,270	16.1%
Essex Woodlands Health Ventures	Venture Capital	4,156,269	16.1%
Prospect Venture Partners	Venture Capital	2,994,358	11.6%
Enterprise Partners	Venture Capital	2,820,529	10.9%
OVP Venture Partners	Venture Capital	2,701,549	10.5%
Highland Capital Management	Venture Capital	2,494,866	9.7%
SCV-CG, LLC (Charles Preston)	Venture Capital	938,957	3.6%
Radoje Drmanac, Ph.D. (Chief Scientific Officer)	Insider	428,666	1.7%
Clifford Reid, Ph.D. (Chairman, CEO and President)	Insider	319,200	1.2%
Robert John Curson (VP of Financial Operations)	Insider	116,999	0.5%
Robert T. Wall (Director)	Insider	50,000	0.2%
Bruce Martin (SVP of Product Development)	Insider	33,201	0.1%
C. Thomas Caskey, M.D. (Director)	Insider	5,151	0.0%
Total		**25,809,078**	**100%**

Source: Capital IQ, Bloomberg, Jefferies & Company, Inc. estimates.

Outlook and Valuation

Our 2011 revenue forecast of $35 million assumes GNOM completes and ships 4,470 genomes at an average realized price of $7,820 per genome (down 33% year-over-year). We forecast 10% growth in R&D spending (to $27 million), primarily reflecting incremental headcount growth (8 additional employees). Significant sales force and customer support investments are expected to contribute to considerable growth in commercial expenses, which we forecast trending up to ~$15 million in 2011 (from ~$7 million in 2010E). General and administrative expenses, which we forecast to be ~$11 million in 2011, should rise modestly from ~$8 million in 2010E, primarily reflecting incremental public-company costs.

Our 2012 revenue forecast of $75 million (up ~114%) factors 18,650 genome shipments (up 317% year-over-year) at an average price of ~$4,000 per genome (down 50% year-over-year). Our model assumes commercial expenses grow 24% in 2012 as GNOM continues to build-out its internal sales force and customer support infrastructure, though such increases should be more than offset by lower R&D and G&A spending outlays.

We prefer to focus on the economic profit generation and returns on invested capital (ROIC) that GNOM could generate over the next several years. GNOM maintains significant net operating loss carry-forwards and is unlikely to incur any significant federal income taxes for several years. Assuming GNOM's existing and future NOLs will allow it to avoid any material cash tax outlays until 2016, operating profit margin expansion is the primary driver behind a rapidly improving ROIC outlook, which we forecast trending up to ~55% by 2015.

Given GNOM's unique business model as an outsourced provider of whole human genome sequencing services, defining an appropriate peer group is difficult. However, we believe GNOM is most closely comparable to two sub-sectors of the clinical diagnostics and life science research supply markets, including pure-play research product providers involved in next-generation sequencing workflows and service-based molecular diagnostics franchises. We view equity value to revenue as the most appropriate traditional valuation metric, given the magnitude of net cash outlays required to support the development of its commercial infrastructure and fund expansion of its existing sequencing capacity.

As depicted in Exhibit 25, shares of GNOM currently imply an equity value of 5.1 times and 2.4 times our 2011 and 2012 revenue forecasts, respectively, which represent discounts of 29% and 47%, respectively, relative to a blended average of other life science product manufacturers and diagnostic services providers. Our $13 price target represents a 10-year horizon in our discounted cash flow model and implies an equity value of 4.6 times our 2012 revenue forecast.

EXHIBIT 25: GNOM VERSUS BLENDED PEER GROUP AVERAGE VALUATION SUMMARY (CALENDAR YEAR-END)

					Mkt cap	EV / EBITDA			EV / Revenue			Price / Revenue		
Company	Ticker	Rating	Price	YTD	($mm)	2011E	2012E	2013E	2011E	2012E	2013E	2011E	2012E	2013E
Products Suppliers														
AbCam	ABC-LN	NC	£3.56	86%	$640	18.0x	16.0x	14.1x	6.7x	6.0x	5.3x	7.2x	6.4x	5.7x
Caliper Life Sciences	CALP	BUY	$6.58	159%	$331	49.0x	27.6x	19.3x	2.1x	2.0x	1.8x	2.4x	2.2x	2.1x
Cepheid	CPHD	BUY	$22.78	83%	$1,373	-	28.7x	22.7x	5.2x	4.3x	3.4x	5.4x	4.5x	3.6x
Illumina	ILMN	NC	$64.57	110%	$8,074	23.4x	18.9x	19.4x	7.0x	6.0x	5.4x	7.4x	6.4x	5.8x
Life Technologies	LIFE	BUY	$55.23	6%	$10,313	9.1x	8.5x	8.0x	3.2x	3.0x	2.9x	2.7x	2.6x	2.5x
Luminex	LMNX	BUY	$19.08	28%	$807	22.4x	14.2x	9.2x	4.2x	3.5x	2.7x	4.8x	4.0x	3.1x
Pacific Biosciences	PACB	NC	$15.02	(6%)	$793	-	-	-	15.5x	3.6x	1.8x	23.6x	5.5x	2.8x
Qiagen	QGEN	HOLD	$19.40	(13%)	$4,517	11.2x	10.0x	9.2x	3.7x	3.4x	3.0x	3.7x	3.4x	3.0x
Average				**57%**		**22.2x**	**17.7x**	**14.6x**	**6.0x**	**4.0x**	**3.3x**	**7.2x**	**4.4x**	**3.6x**
Services Suppliers														
Genomic Health	GHDX	BUY	$23.18	19%	$669	-	-	19.4x	2.9x	2.3x	2.0x	3.2x	2.6x	2.3x
Myriad Genetics	MYGN	HOLD	$22.86	(12%)	$2,111	10.2x	9.1x	8.2x	4.1x	3.7x	3.5x	5.2x	4.7x	4.4x
Sequenom	SQNM	HOLD	$7.20	74%	$650	-	-	-	11.6x	6.7x	3.3x	12.6x	7.3x	3.6x
Average				**27%**		**10.2x**	**9.1x**	**13.8x**	**6.2x**	**4.2x**	**2.9x**	**7.0x**	**4.8x**	**3.4x**
Composite average				**48%**		**20.5x**	**16.6x**	**14.4x**	**6.0x**	**4.0x**	**3.2x**	**7.1x**	**4.5x**	**3.5x**
Complete Genomics	**GNOM**	**BUY**	**$6.89**	**(23%)**	**$178**	**-**	**-**	**5.0x**	**3.7x**	**1.7x**	**0.9x**	**5.1x**	**2.4x**	**1.2x**
GNOM Premium / (discount)						**-**	**-**	**(65%)**	**(38%)**	**(57%)**	**(73%)**	**(29%)**	**(47%)**	**(66%)**

Source: Company reports, Capital IQ, Jefferies & Company, Inc. estimates.

EXHIBIT 26: GNOM'S ECONOMIC PROFIT ANALYSIS SUMMARY

($ in millions)

	Projections					
	2010	2011	2012	2013	2014	2015
NOPAT						
Revenues	$8.6	$35.0	$75.0	$150.7	$252.4	$302.9
Less: Operating Expenses	$58.2	$88.1	$93.3	$126.5	$193.0	$232.8
Adjusted EBIT	($49.6)	($53.1)	($18.3)	$24.2	$59.4	$70.1
Plus: Goodwill Amortization	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Plus: Increase in LIFO/Other Reserves	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Plus: Int. Exp. of Capit. Oper. Leases	$1.0	$1.0	$1.1	$1.1	$1.2	$1.2
Plus: R&D Expense	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Less: R&D Amortization	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Less: Cash Taxes	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
NOPAT	**($48.6)**	**($52.1)**	**($17.2)**	**$25.3**	**$60.6**	**$71.3**
NOPAT growth		7.2%	(66.9%)	(246.8%)	139.6%	17.7%
NOPAT margin	(564.0%)	(149.1%)	(23.0%)	16.8%	24.0%	23.6%
Invested capital						
Current assets	$7.5	$19.7	$29.6	$50.3	$74.7	$107.0
Current liabilities	$10.0	$14.5	$19.8	$33.8	$53.9	$64.7
Net working capital	($2.5)	$5.2	$9.8	$16.5	$20.8	$42.3
Plant, property, and equipment	$27.0	$40.6	$47.5	$60.2	$72.8	$83.0
Present Value of Oper Leases	$14.8	$15.5	$16.3	$17.1	$17.9	$18.8
Goodwill, net of cumulative amortization	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Other fixed assets	$2.3	$2.3	$2.3	$2.3	$2.3	$2.3
Total fixed assets	$44.1	$58.4	$66.1	$79.6	$93.0	$104.1
Invested Capital	**$41.6**	**$63.6**	**$75.9**	**$96.1**	**$113.9**	**$146.4**
Invested Capital - FY Start		$41.6	$63.6	$75.9	$96.1	$113.9
Plus: Incremental Invested Capital		$22.0	$12.4	$20.2	$17.8	$32.6
Invested Capital - FY End	$41.6	$63.6	$75.9	$96.1	$113.9	$146.4
Average Invested Capital	**$41.6**	**$52.6**	**$69.7**	**$86.0**	**$105.0**	**$130.2**
Average Invested Capital Growth		26.5%	32.7%	23.3%	22.0%	24.0%
ROIC calculation						
NOPAT	($48.6)	($52.1)	($17.2)	$25.3	$60.6	$71.3
Divided by: Average Invested Capital	$41.6	$52.6	$69.7	$86.0	$105.0	$130.2
ROIC	**(117.0%)**	**(99.2%)**	**(24.7%)**	**29.4%**	**57.7%**	**54.8%**
WACC calculation						
Debt to total adjusted market capital	10.2%	17.9%	17.8%	17.2%	9.9%	4.4%
Cost of equity	15.6%	15.6%	15.6%	15.6%	15.6%	15.6%
Cost of debt	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
WACC	**14.7%**	**14.0%**	**14.0%**	**14.1%**	**14.7%**	**15.2%**
Economic profit calculation						
ROIC	(117.0%)	(99.2%)	(24.7%)	29.4%	57.7%	54.8%
Less: WACC	14.7%	14.0%	14.0%	14.1%	14.7%	15.2%
ROIC - WACC	(131.7%)	(113.1%)	(38.7%)	15.4%	43.0%	39.6%
Times: Average Invested Capital	$41.6	$52.6	$69.7	$86.0	$105.0	$130.2
Economic profit	**($54.7)**	**($59.5)**	**($27.0)**	**$13.2**	**$45.2**	**$51.5**
Return on incremental invested capital						
1-year ROIIC (NOPAT)	-	(16%)	282%	211%	199%	33%
3-year ROIIC (NOPAT)	-	-	-	136%	224%	126%
5-year ROIIC (NOPAT)	-	-	-	-	-	114%

Source: Company reports and Jefferies & Company, Inc. estimates.

EXHIBIT 27: GNOM'S HISTORICAL AND PROJECTED VALUATION SUMMARY

($ in millions, except per share)

	Projections				
	2010	2011	2012	2013	2014
Price	$6.89	$6.89	$6.89	$6.89	$6.89
Profitability Metrics					
Revenue	$8.6	$35.0	$75.0	$150.7	$252.4
Price/revenue	**13.4x**	**5.1x**	**2.4x**	**1.2x**	**0.8x**
Net income	($51.5)	($54.0)	($23.4)	$18.9	$55.4
Diluted earnings per share	($3.07)	($2.06)	($0.88)	$0.70	$2.00
Price/EPS	**(2.2x)**	**(3.3x)**	**(7.8x)**	**9.9x**	**3.4x**
Cash flow from operations	($40.2)	($46.0)	($6.0)	$37.6	$78.5
Capital spending	($23.8)	($26.8)	($25.0)	($35.0)	($40.0)
Free cash flow	($64.1)	($72.8)	($31.0)	$2.6	$38.5
Free cash flow yield	**-55.4%**	**-40.4%**	**-16.9%**	**1.4%**	**20.1%**
Free cash flow per share	($3.82)	($2.79)	($1.16)	$0.10	$1.39
Price/free cash flow	**(1.8x)**	**(2.5x)**	**(5.9x)**	**71.3x**	**5.0x**
Cash	$58.0	$41.6	$10.6	$10.6	$10.6
Shares outstanding	16.8	26.1	26.7	27.2	27.7
Market capitalization	$116	$180	$184	$187	$191
Enterprise value	$68.8	$206.3	$240.9	$242.0	$207.2
EBITDA	($40.2)	($39.9)	($0.2)	$46.5	$86.8
EV/EBITDA	**(1.7x)**	**(5.2x)**	**(988.1x)**	**5.2x**	**2.4x**
Operating margin	-575.2%	-151.9%	-24.4%	16.1%	23.6%
Asset turnover	0.1x	0.3x	0.9x	1.3x	1.7x
ROA	**-52.8%**	**-52.8%**	**-22.2%**	**21.4%**	**39.7%**
ROE	**-92.9%**	**-5353.6%**	**104.5%**	**-536.0%**	**106.8%**
Balance Sheet Metrics					
Receivable days outstanding	78.6	60.2	62.1	54.9	58.9
Inventory days outstanding	38.7	43.7	42.8	37.5	37.4
Payable days outstanding	102.6	50.1	71.0	66.7	66.5
Cash conversion cycle	**14.7**	**53.8**	**33.9**	**25.7**	**29.8**
Total debt	$11.1	$67.9	$67.9	$65.2	$26.8
Shareholder's equity	$55.5	$1.0	($22.4)	($3.5)	$51.9
Debt/total capital	**16.7%**	**98.5%**	**149.4%**	**105.7%**	**34.0%**
Times interest earned					
Gross debt / TTM EBITDA	(0.3x)	(1.7x)	(278.3x)	1.4x	0.3x
Net debt / TTM EBITDA	1.2x	(0.7x)	(235.0x)	1.2x	0.2x
Book value per share	$3.3	$0.0	($0.8)	($0.1)	$1.9
Price to book	**2.1x**	**178.7x**	**(8.2x)**	**(53.1x)**	**3.7x**

Source: Company reports and Jefferies & Company, Inc. estimates.

EXHIBIT 28: GNOM'S HISTORICAL AND PROJECTED INCOME STATEMENT

($ in millions, except per share)

	Historical results					Projections										
	2010					2011					2012					2013
	Mar-10	Jun-10	Sep-10	Dec-10	Total	Mar-11	Jun-11	Sep-11	Dec-11	Total	Mar-12	Jun-12	Sep-12	Dec-12	Total	Total
Net sales	$0.3	$1.1	$4.2	$3.0	$8.6	$5.4	$7.0	$9.4	$13.2	$35.0	$16.3	$17.6	$18.7	$22.4	$75.0	$150.7
Cost of revenue	$3.2	$3.6	$5.0	$6.4	$18.2	$7.3	$8.6	$9.0	$10.0	$34.9	$10.6	$10.8	$11.0	$11.2	$43.6	$60.3
Gross profit	($2.8)	($2.5)	($0.8)	($3.3)	($9.5)	($1.9)	($1.6)	$0.4	$3.1	$0.1	$5.7	$6.8	$7.7	$11.2	$31.3	$90.4
Research and Development	$6.1	$6.5	$5.7	$6.3	$24.7	$6.3	$7.0	$6.9	$6.8	$27.0	$4.9	$4.9	$4.9	$5.4	$20.0	$33.2
Commercial expenses	$1.3	$1.3	$1.6	$3.1	$7.3	$3.4	$3.6	$3.9	$4.2	$15.0	$4.4	$4.6	$4.7	$4.9	$18.6	$21.1
G&A expenses	$2.0	$1.7	$2.2	$2.3	$8.2	$2.7	$2.7	$3.1	$2.7	$11.1	$2.4	$2.6	$2.8	$3.1	$11.0	$12.0
Operating income	($12.3)	($12.0)	($10.3)	($15.1)	($49.6)	($14.3)	($14.8)	($13.5)	($10.6)	($53.1)	($6.0)	($5.4)	($4.7)	($2.2)	($18.3)	$24.2
Interest expense	$0.3	$0.8	$0.9	$0.2	$2.2	$0.4	$0.3	$0.3	$0.2	$1.1	$1.4	$1.4	$1.4	$1.4	$5.4	$5.4
Interest income	($0.2)	($0.0)	($0.0)	($0.0)	($0.3)	($0.1)	($0.1)	($0.1)	($0.0)	($0.3)	($0.1)	($0.1)	($0.1)	($0.0)	($0.3)	($0.1)
Other income, net	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Income before taxes	($12.4)	($12.8)	($11.2)	($15.2)	($51.5)	($14.5)	($15.0)	($13.7)	($10.7)	($54.0)	($7.3)	($6.6)	($6.0)	($3.6)	($23.4)	$18.9
Income tax	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Net income	($12.4)	($12.8)	($11.2)	($15.2)	($51.5)	($14.5)	($15.0)	($13.7)	($10.7)	($54.0)	($7.3)	($6.6)	($6.0)	($3.6)	($23.4)	$18.9
Basic shares outstanding	10.1	11.5	19.8	25.8	16.8	25.9	26.1	26.2	26.3	26.1	26.5	26.6	26.7	26.8	26.7	27.2
Diluted shares outstanding	10.1	11.5	19.8	25.8	16.8	25.9	26.1	26.2	26.3	26.1	26.5	26.6	26.7	26.8	26.7	27.2
Basic E.P.S.	($1.23)	($1.12)	($0.56)	($0.59)	($3.07)	($0.56)	($0.57)	($0.52)	($0.41)	($2.06)	($0.27)	($0.25)	($0.22)	($0.13)	($0.88)	$0.70
Diluted E.P.S.	($1.23)	($1.12)	($0.56)	($0.59)	($3.07)	($0.56)	($0.57)	($0.52)	($0.41)	($2.06)	($0.27)	($0.25)	($0.22)	($0.13)	($0.88)	$0.70
EBITDA	($10.9)	($10.3)	($7.5)	($12.4)	($41.1)	($11.4)	($11.6)	($10.3)	($6.5)	($39.9)	($1.8)	($0.9)	($0.1)	$2.5	($0.2)	$46.5
Margin Analysis																
Gross margin	(846.7%)	(230.3%)	(20.2%)	(110.1%)	(110.6%)	(35.0%)	(22.1%)	4.2%	23.8%	0.2%	35.0%	38.5%	41.0%	50.0%	41.8%	60.0%
Research and Development	1,817.6%	598.5%	137.2%	208.1%	285.9%	115.8%	99.7%	74.1%	51.9%	77.3%	30.0%	28.0%	26.0%	24.0%	26.7%	22.0%
Commercial expenses	386.3%	121.1%	37.4%	101.5%	84.1%	62.7%	50.6%	41.8%	31.6%	43.0%	27.0%	26.0%	25.0%	22.0%	24.8%	14.0%
G&A expenses	595.2%	154.0%	52.4%	75.7%	94.6%	50.5%	37.8%	32.6%	20.5%	31.9%	15.0%	15.0%	15.0%	14.0%	14.7%	8.0%
Operating margin	(3,645.8%)	(1,104.0%)	(247.2%)	(495.4%)	(575.2%)	(264.1%)	(210.2%)	(144.3%)	(80.2%)	(151.9%)	(37.0%)	(30.5%)	(25.0%)	(10.0%)	(24.4%)	16.1%
Income before taxes	(3,675.9%)	(1,178.2%)	(268.5%)	(499.6%)	(597.5%)	(268.1%)	(213.4%)	(146.8%)	(81.3%)	(154.3%)	(44.7%)	(37.8%)	(31.9%)	(15.9%)	(31.3%)	12.5%
Income tax	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Net margin	(3,675.9%)	(1,178.2%)	(268.5%)	(499.6%)	(597.5%)	(268.1%)	(213.4%)	(146.8%)	(81.3%)	(154.3%)	(44.7%)	(37.8%)	(31.9%)	(15.9%)	(31.3%)	12.5%
Growth Analysis																
Net sales						1,512.7%	545.2%	124.9%	333.2%	305.4%	200.0%	150.0%	100.0%	70.5%	114.4%	101.0%
Cost of revenue						130.0%	138.5%	79.4%	57.2%	92.2%	44.4%	25.9%	23.1%	11.8%	25.0%	38.2%
Gross profit						(33.3%)	(38.1%)	(146.3%)	(193.5%)	(100.7%)	(399.9%)	(535.8%)	1,873.0%	258.9%	45,818.8%	188.5%
Research and Development						2.8%	7.4%	21.4%	8.1%	9.7%	(22.3%)	(29.8%)	(29.8%)	(21.2%)	(25.9%)	65.4%
Commercial expenses						161.9%	169.7%	151.3%	34.7%	107.0%	29.1%	28.4%	19.7%	18.9%	23.7%	13.6%
G&A expenses						36.8%	58.3%	40.2%	17.0%	36.5%	(10.9%)	(0.7%)	(8.1%)	16.7%	(1.0%)	8.7%
Operating income						16.8%	22.8%	31.3%	(29.9%)	7.1%	(58.0%)	(63.7%)	(65.4%)	(78.7%)	(65.6%)	(232.2%)
Income before taxes						17.6%	16.9%	23.0%	(29.5%)	4.7%	(50.0%)	(55.8%)	(56.5%)	(66.7%)	(56.6%)	(180.7%)
Net income						17.6%	16.9%	23.0%	(29.5%)	4.7%	(50.0%)	(55.8%)	(56.5%)	(66.7%)	(56.6%)	(180.7%)
Diluted E.P.S.						(54.4%)	(48.6%)	(7.0%)	(30.9%)	(32.7%)	(50.9%)	(56.6%)	(57.4%)	(67.4%)	(57.4%)	(179.1%)

Source: Company reports and Jefferies & Company, Inc. estimates.

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EXHIBIT 29: GNOM'S HISTORICAL AND PROJECTED QUARTERLY REVENUE SUMMARY

($ in millions)

	Historical results					Projections														
	2010					2011					2012					2013				
	Mar-10	Jun-10	Sep-10	Dec-10	Total	Mar-11	Jun-11	Sep-11	Dec-11	Total	Mar-12	Jun-12	Sep-12	Dec-12	Total	Mar-13	Jun-13	Sep-13	Dec-13	Total
Revenue																				
Genomes sequenced			375	290		585	800	1,200	2,000	4,585										
growth								*220%*	*590%*											
Genomes shipped	11	83	375	283	752	570	780	1,170	1,950	4,470	3,422	3,900	4,680	6,650	18,652	10,267	11,700	14,040	19,949	55,955
growth						*5,085%*	*840%*	*212%*	*590%*	*495%*	*500%*	*400%*	*300%*	*241%*	*317%*	*200%*	*200%*	*200%*	*200%*	*200%*
Conversion (%)				97.5%		97.5%	97.5%	97.5%	97.5%	97.5%	97.5%	97.5%	97.5%	97.5%		97.5%	97.5%	97.5%	97.5%	
Realized price / genome shipped	$30,545	$13,470	$11,096	$10,745	$11,511	$9,500	$9,000	$8,000	$6,750	$7,821	$4,750	$4,500	$4,000	$3,375	$4,019	$3,183	$3,015	$2,680	$2,261	$2,693
growth						*(69%)*	*(33%)*	*(28%)*	*(37%)*	*(32%)*	*(50%)*	*(50%)*	*(50%)*	*(50%)*		*(33%)*	*(33%)*	*(33%)*	*(33%)*	
Total revenue	**$0.3**	**$1.1**	**$4.2**	**$3.0**	**$8.7**	**$5.4**	**$7.0**	**$9.4**	**$13.2**	**$35.0**	**$16.3**	**$17.6**	**$18.7**	**$22.4**	**$75.0**	**$32.7**	**$35.3**	**$37.6**	**$45.1**	**$150.7**
growth						*1,513%*	*528%*	*125%*	*333%*	*304%*	*200%*	*150%*	*100%*	*71%*	*114%*	*101%*	*101%*	*101%*	*101%*	*101%*

Source: Company reports and Jefferies & Company, Inc. estimates.

EXHIBIT 30: GNOM'S HISTORICAL AND PROJECTED BALANCE SHEET

($ in millions)

	Historical results				Projections							
	2010				2011				2012			
	Mar-10	Jun-10	Sep-10	Dec-10	Mar-11	Jun-11	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12
ASSETS												
Current Assets												
Cash and equivalents	$2.4	$8.0	$10.5	$58.0	$37.5	$21.1	$3.4	$41.6	$33.2	$24.2	$16.2	$10.6
Accounts receivable, net	$1.4	$1.2	$3.0	$2.6	$4.7	$4.6	$8.0	$9.1	$11.3	$13.1	$14.4	$15.4
Inventory	$0.7	$2.2	$3.0	$3.2	$4.0	$4.0	$4.3	$5.7	$4.7	$5.0	$5.2	$5.4
Other current assets	$0.9	$1.0	$0.8	$0.8	$1.4	$1.4	$1.4	$1.4	$1.4	$1.4	$1.4	$1.4
Total current assets	$5.4	$12.4	$17.2	$64.6	$47.5	$31.0	$17.0	$57.8	$50.5	$43.7	$37.1	$32.7
Property & equipment, net	$25.1	$26.6	$25.3	$27.0	$28.8	$31.1	$32.0	$40.6	$42.6	$44.4	$46.0	$47.5
Intangible assets, net	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Goodwill, net	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Other non-current assets	$0.3	$0.9	$2.3	$2.3	$2.3	$2.3	$2.3	$2.3	$2.3	$2.3	$2.3	$2.3
Total long-term assets	$25.4	$27.4	$27.6	$29.3	$31.1	$33.4	$34.3	$42.9	$44.9	$46.7	$48.3	$49.8
Total assets	$30.8	$39.8	$44.8	$93.9	$78.6	$64.4	$51.3	$100.7	$95.4	$90.4	$85.5	$82.5
LIABILITIES AND SHAREHOLDERS' EQUITY												
Current Liabilities												
Accounts payable	$6.1	$5.1	$4.9	$4.2	$4.4	$4.8	$5.1	$5.3	$8.3	$8.8	$9.3	$9.5
Accrued liabilities	$2.5	$2.6	$2.6	$2.6	$2.6	$2.6	$2.6	$2.6	$1.9	$2.3	$2.7	$3.1
Deferred revenue and prepayments	$2.8	$3.5	$3.4	$3.2	$3.4	$5.2	$6.5	$6.6	$6.3	$6.9	$7.2	$7.2
Income taxes payable	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Current portion of debt	$4.6	$22.0	$4.6	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Total current liabilities	$16.0	$33.2	$15.5	$10.0	$10.4	$12.6	$14.2	$14.5	$16.5	$18.1	$19.2	$19.8
Long-term debt	$2.4	$1.2	$0.2	$11.1	$9.9	$8.7	$8.0	$67.9	$67.9	$67.9	$67.9	$67.9
Convertible preferred stock warrant liabi	$1.3	$1.3	$12.8	$12.8	$12.8	$12.8	$12.8	$12.8	$12.8	$12.8	$12.8	$12.8
Other non-current liabilities	$4.9	$4.7	$4.5	$4.5	$4.5	$4.5	$4.5	$4.5	$4.5	$4.5	$4.5	$4.5
Total long-term liabilities	$8.6	$7.2	$17.5	$28.4	$27.2	$26.0	$25.3	$85.2	$85.2	$85.2	$85.2	$85.2
Total liabilities	$24.6	$40.4	$33.0	$38.4	$37.7	$38.6	$39.5	$99.7	$101.7	$103.3	$104.3	$105.0
Preferred stock	$95.9	$95.8	$126.2	$185.1	$185.1	$185.1	$185.1	$185.1	$185.1	$185.1	$185.1	$185.1
Common Stock	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Capital in excess of par value	$5.9	$11.7	$11.7	$11.7	$11.7	$11.7	$11.7	$11.7	$11.7	$11.7	$11.7	$11.7
Retained earnings	($95.5)	($108.1)	($126.1)	($141.3)	($155.9)	($171.1)	($185.0)	($195.8)	($203.1)	($209.7)	($215.7)	($219.2)
Accumulated other gain	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Unearned ESOP compensation	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Treasury stock, at cost	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Total shareholders' equity	$6.3	($0.6)	$11.8	$55.5	$40.9	$25.7	$11.9	$1.0	($6.3)	($12.9)	($18.9)	($22.4)
Total liabilities and shareholders' equity	$30.8	$39.8	$44.8	$93.9	$78.6	$64.4	$51.3	$100.7	$95.4	$90.4	$85.5	$82.5

Source: Company reports and Jefferies & Company, Inc. estimates.

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EXHIBIT 31: GNOM'S HISTORICAL AND PROJECTED CASH FLOW STATEMENT

($ in millions)

	Historical results					Projections									
	2010					2011					2012				
	Mar-10	Jun-10	Sep-10	Dec-10	Total	Mar-11	Jun-11	Sep-11	Dec-11	Total	Mar-12	Jun-12	Sep-12	Dec-12	Total
Cash Flows from Operating Activities															
Net income	($14.3)	($12.6)	($11.2)	($15.2)	($53.3)	($14.5)	($15.0)	($13.7)	($10.7)	($54.0)	($7.3)	($6.6)	($6.0)	($3.6)	($23.4)
Depreciation	$1.3	$1.7	$2.8	$2.7	$8.5	$2.9	$3.1	$3.2	$4.1	$13.2	$4.3	$4.4	$4.6	$4.8	$18.0
Amortization	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Amortization of debt issuance costs	$0.1	$0.1	$0.1	$0.1	$0.4	$0.1	$0.0	$0.1	$0.0	$0.3	$0.0	$0.0	$0.0	$0.0	$0.0
Deferred income taxes	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Restructuring costs	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Disposals, net	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Share-based compensation	$0.5	$0.3	$0.0	$0.0	$0.9	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Non-cash interest expense	$0.0	$0.6	$0.0	$0.0	$0.6	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Other non-cash costs	$1.6	($0.0)	($0.3)	($0.2)	$1.1	($0.1)	($0.2)	($0.2)	($0.2)	($0.5)	$0.0	$0.0	$0.0	$0.0	$0.0
Changes in operating accounts															
Accounts receivable	($0.1)	$0.2	($1.8)	$0.4	($1.3)	($2.1)	$0.1	($3.4)	($1.1)	($6.5)	($2.2)	($1.8)	($1.3)	($1.0)	($6.3)
Inventory	($0.4)	($1.5)	($0.7)	($0.3)	($2.9)	($0.7)	$0.0	($0.3)	($1.5)	($2.5)	$1.0	($0.3)	($0.3)	($0.1)	$0.4
Accounts payable	$0.4	$0.8	($0.2)	($0.7)	$0.3	$0.2	$0.3	$0.4	$0.2	$1.1	$3.0	$0.5	$0.5	$0.3	$4.2
Accrued liabilities	$0.5	$0.0	$0.0	$0.0	$0.6	$0.0	$0.0	$0.0	$0.0	$0.0	($0.7)	$0.4	$0.4	$0.4	$0.5
Other, net	$6.0	$0.4	($1.3)	($0.2)	$4.9	($0.4)	$1.9	$1.2	$0.1	$2.8	($0.3)	$0.7	$0.3	($0.0)	$0.6
Cash Flow from Operations	**($4.2)**	**($9.9)**	**($12.7)**	**($13.3)**	**($40.2)**	**($14.6)**	**($9.7)**	**($12.7)**	**($9.1)**	**($46.0)**	**($2.2)**	**($2.7)**	**($1.8)**	**$0.7**	**($6.0)**
Cash Flows from Investing Activities															
Acquisition of businesses	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Purchase of identifiable intangibles	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Capital expenditures	($10.2)	($5.5)	($3.7)	($4.4)	($23.8)	($4.6)	($5.4)	($4.1)	($12.6)	($26.8)	($6.3)	($6.3)	($6.3)	($6.3)	($25.0)
Disposals	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Other, net	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Net cash provided by investing activities	($10.2)	($5.5)	($3.7)	($4.4)	($23.8)	($4.6)	($5.4)	($4.1)	($12.6)	($26.8)	($6.3)	($6.3)	($6.3)	($6.3)	($25.0)
Cash Flows from Financing Activities															
Changes to debt, net	($1.1)	($1.1)	($18.4)	$6.3	($14.2)	($1.2)	($1.2)	($0.7)	$59.9	$56.7	$0.0	$0.0	$0.0	$0.0	$0.0
Proceeds from equity issuance	$10.1	$22.1	$33.4	$59.0	$124.5	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Cash paid for treasury stock	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Cash paid for dividend	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Other	$0.0	$0.1	($0.1)	($0.1)	($0.1)	($0.1)	($0.0)	($0.1)	($0.0)	($0.3)	$0.0	$0.0	$0.0	$0.0	$0.0
Net cash provided by financing activities	$9.0	$21.1	$14.8	$65.2	$110.2	($1.3)	($1.3)	($0.9)	$59.9	$56.5	$0.0	$0.0	$0.0	$0.0	$0.0
Net change in cash position	**($5.4)**	**$5.6**	**($1.6)**	**$47.5**	**$46.1**	**($20.5)**	**($16.3)**	**($17.7)**	**$38.2**	**($16.4)**	**($8.4)**	**($8.9)**	**($8.1)**	**($5.6)**	**($31.0)**
Effect of exchange rates	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Net change in cash post foreign exchange	($5.4)	$5.6	($1.6)	$47.5	$46.1	($20.5)	($16.3)	($17.7)	$38.2	($16.4)	($8.4)	($8.9)	($8.1)	($5.6)	($31.0)
Cash and equivalents beginning of period	$7.8	$2.4	$8.0	$10.5	$7.8	$58.0	$37.5	$21.1	$3.4	$53.9	$41.6	$33.2	$24.2	$16.2	$37.5
Change in cash position	($5.4)	$5.6	($1.6)	$47.5	$46.1	($20.5)	($16.3)	($17.7)	$38.2	($16.4)	($8.4)	($8.9)	($8.1)	($5.6)	($31.0)
Cash and equivalents end of period	**$2.4**	**$8.0**	**$10.5**	**$58.0**	**$53.9**	**$37.5**	**$21.1**	**$3.4**	**$41.6**	**$37.5**	**$33.2**	**$24.2**	**$16.2**	**$10.6**	**$6.5**

Source: Company reports and Jefferies & Company, Inc. estimates

Company Description
Complete Genomics offers proprietary human genome sequencing technology, advanced informatics and data management software to academic and biopharmaceutical researchers as an end-to-end outsourced service solution that is capable of delivering research-ready genomic data at a significantly lower cost.

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I, Jon Wood, certify that all of the views expressed in this research report accurately reflect my personal views about the subject security(ies) and subject company(ies). I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed in this research report.

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An individual involved in the preparation of this report owns shares of Merck & Co. common stock.

Jefferies makes a market in Complete Genomics.

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Risk which may impede the achievement of our Price Target

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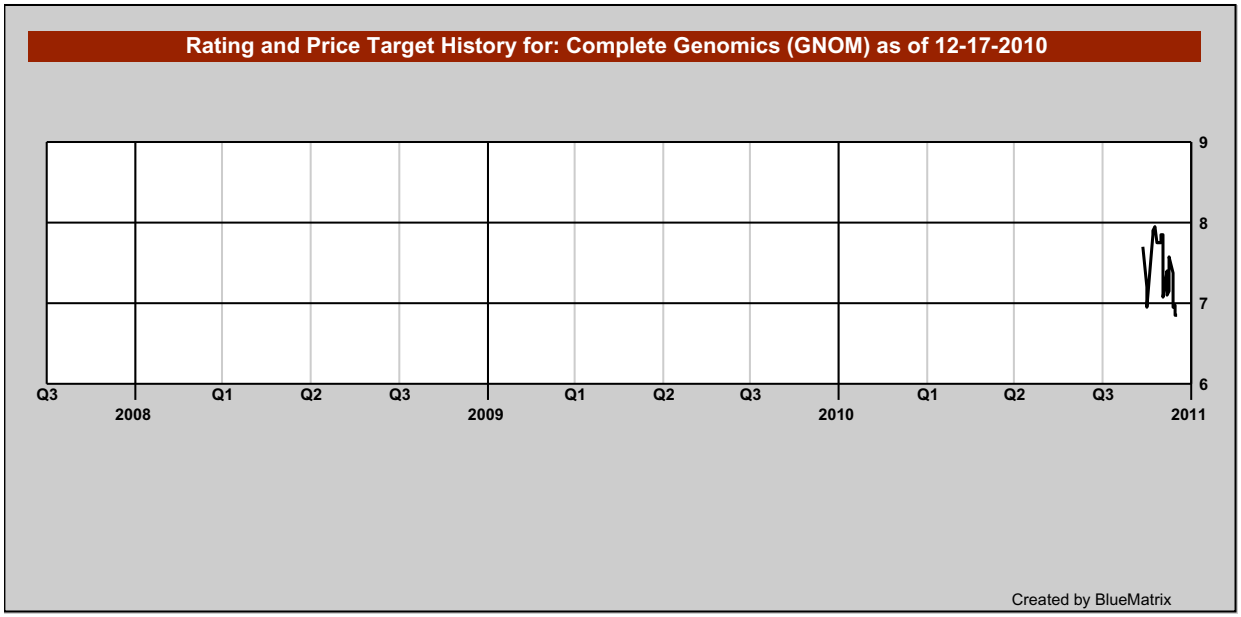

Distribution of Ratings

			IB Serv./Past 12 Mos.	
Rating	**Count**	**Percent**	**Count**	**Percent**
BUY [BUY]	564	52.30	47	8.33
HOLD [HOLD]	467	43.30	27	5.78
SELL [UNPF]	48	4.40	5	10.42

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