GlassHouse Research

04/11/17

Potential Sale to GE gives Varian Managers Financial Motive to Cosmetically Enhance Earnings

Who is GlassHouse Research? GlassHouse Research (GHR), a division of GlassHouse, LLC is made up of forensic accountants/analysts who have worked for prominent hedge funds on Wall Street, as well as boutique forensic accounting firms. Our purpose is to expose public companies that have been taking advantage of US GAAP as well as IFRS accounting standards for their benefit. We seek to find companies where GAAP (or even worse, non-GAAP) earnings are deviating from true economic earnings of the target firm.

Overall, we search for evidence of a "culture of fraud" within public companies.

Initiating Coverage Report: Varian Medical Systems Inc. (VAR) with a Target Price of $51.75

GlassHouse Research focuses on Varian's significant financial motive to enhance earnings in order to entice potential suitors as competitive threats loom:

- **Recent reports of General Electric possibly acquiring Varian may have led to lenient accounting:** At the end of FY2016, it appeared as though management had decided to use a plethora of accounting gimmicks, such as financing customer's Proton Centers, pulling revenue forward, extending relaxed credit terms and not impairing obsolete inventory to beautify its financials. And with VAR's failed attempt at a sale at the end of FY2016, GHR analysts believe that the impact of many of these accounting gimmicks will reverse violently over the next twelve months.

- **Cash flow metrics have deteriorated greatly over the past five years:** The bifurcation of cash flow metrics and earnings have achieved their largest divergence ever at VAR with non-GAAP income and free-cash-flow differing by $194.3 million of accruals in FY 2016.

- **VAR finances its own Proton Therapy Center in order to manufacture customers:** Currently VAR finances three of its Proton Therapy Centers in a peculiar transaction that nets VAR not only interest income, but unbilled revenue as well. The problem being that some of their Proton Therapy Centers are having trouble attaining patients. Thus, VAR now has $130.6 million in loans at risk, not including the loss of material revenue streams in its Varian Particle Therapy (VPT) segment.

- **VAR's receivable metrics have ballooned to levels not seen since the 2008 recession:** With VAR's overall receivables portfolio (including loans) constituting a current mess, the firm's risky and highly subjective unbilled receivables increased 41.1%, while deferred revenues plummeted by 74.5% in FY2016. These drastic YOY deltas have rarely ever been seen by GHR analysts in a one year time period where total sales increased only by 3.8%.

- **Inventory continues to build up dust in VAR's warehouses as customer demand falls:** In the highly adapting oncology industry, inventory is constantly improving/changing with technological advances. With a 10-year high DSI balance of 138 days, we believe the company is failing to write-off its older/obsolete inventory in this ever-adapting industry.

- **Seeing the handwriting on the wall for VAR's future, executives continue to unload a material amount of ownership:** Two highly predictive executives (one being VAR's CEO Dow Wilson) unloaded a material amount of shares over the past six-months. These divestitures give GHR analysts high confidence in our thesis of VAR's material share-price underperformance over next twelve months based on our accounting concerns.

Company Background

Varian Medical Systems, Inc. (VAR) designs, manufactures, sells, and services medical devices and software products for treating cancer and other medical conditions worldwide. As of 01/28/17, VAR operates through its "Oncology Systems" and "Other" segments. The Oncology Systems segment provides hardware and software products for treating cancer with radiotherapy, fixed field intensity-modulated radiation therapy, image-guided radiation therapy, volumetric modulated arc therapy, stereotactic radiosurgery, stereotactic body radiotherapy, and brachytherapy.

VAR's Oncology Systems' products include linear accelerators, brachytherapy afterloaders, treatment simulation, verification equipment, and accessories; as well as information management, treatment planning, image processing, clinical knowledge exchange, patient care management, decision-making support, and practice management software. This segment serves university research and community hospitals, private and governmental institutions, healthcare agencies, physicians' offices, oncology practices, radiotherapy centers, and cancer care clinics. The Other segment includes its Varian Particle Therapy (VPT) and R&D centers.

VAR spun-off its previously owned Imaging Components segment into the public company, Varex Imaging Corporation (VREX) as of 01/28/17. This prior segment accounted for 18.6% of VAR's FY2016 revenues (20.0% of operating income).

Varian was founded in 1948 and is headquartered in Palo Alto, California. Formerly known as Varian Associates, Inc., VAR changed its name to Varian Medical Systems, Inc. in April 1999.

Potential Sale to GE gives VAR Managers Financial Motive to Cosmetically Enhance Earnings

On October 20, 2016, the publication online source, Intereconomia.com, released an article stating that General Electric was negotiating a purchase price for VAR of between $11 billion and $12 billion.[1] The market took notice of the proposed acquisition chatter resulting in VAR's stock pricing jumping 10.4% to a high of $106.70, before settling at $100.29 at the close of the day. While there is no way to fully confirm the validity of the purchase price (inasmuch as no acquisition ever occurred), we note that several earnings quality metrics trended significantly into the "red flag" area during that same timeframe. Specifically, we noticed many of the following accounting metrics trending abnormally for VAR at a time when negotiations were allegedly underway:

- While VAR's free-cash-flow and cash-from-operating activities metrics have trended negatively for the past 4 years, the divergence was significantly apparent at the end of FY2016 (09/30/16).

- The firm's highly subjectively recognized revenue of costs in excess of billings (unbilled receivables) and billings in excess of costs (deferred revenues) materially benefited revenues cosmetically at the end of FY2016.

- VAR's use of financing its Proton Therapy Centers drastically accelerated near the end of FY2015 and into FY2016. These circular transactions consisting of firms lending money to their customers to buy their own products are rarely seen in the U.S. and most often attributable to suspect Chinese companies.

- The firm choose not to impair its failing California Proton Treatment Center (CPTC) in San Diego until a quarter after the alleged negotiations of its sale to GE occurred. Based on filings, this center was not keeping up to date with its payments prior to Q1 FY2017, so why the impairments now and not before?

- Curiously, VAR chooses to account for its CPTC loan balance in available-for-sale securities under "short-term investments" and "other assets". We believe this loan is misclassified and should therefore should be included in VAR's own DSO calculations (in which the loans are not currently included).

[1] https://intereconomia.com/mercados/bolsa/general-electric-negocia-la-compra-varian-medical-20161020-1915/

- In the Q4 conference call, VAR's previous CFO admitted to using lenient credit terms to customers in order to entice sales. This is extremely apparent when viewing VAR's unfavorable AR metrics and DSO levels that have spiked.

- VAR's inventory levels continue to skyrocket relative to sales at levels not seen in company history. It is entirely possible that the firm is unwilling to write-off excess inventory that would hurt earnings at a time of negotiating a sale.

- VAR's Chief Financial Officer Elisha Finney (who we note has no CPA license or even a BA in accounting), announced her resignation on October 26, 2016. She will remain in her position until a successor is name in FY2017, although we do find it convenient that she planned to retire at a time when many of our red flags brought up in this report are coming to fruition. GHR does question her apparent lack of an accounting education or professional certification; for example, can she fully comprehend VAR's complex accounting as regards its VPT centers and inventory that rapidly depreciates in the oncology industry?

- As of 04/05/17, VAR finally named a new successor to Elisha Finney. Gary E. Bischoping, Jr. of Dell Technologies will assume the position as of 05/08/17. Unlike Ms. Finney, Mr. Bischoping possesses extensive accounting experience with an accounting degree and CPA license along with extensive CFO experience. Based on our experience and research, we believe it is highly likely the new CFO will shore up the books quickly as this is in his best interests at the firm. This would result in what we call a "big bath" period, where many balance sheet assets are written down and impaired along with heightened liabilities taken. These unexpected impairments and liabilities could result in a ferocious negative reaction in the firm's share price after earnings are reported.

A reasonable conclusion from the foregoing exhaustive list is the possibility that management aesthetically enhanced VAR's financials in order to gain a favorable multiple in its buyout offer. While GHR recognizes that the presumed buyout offer may have been pure conjecture at the time, what is not typical in our experience is the abnormal amalgamation of accounting gimmicks being used by VAR at the end of FY2016. As the reader will see in perusing this report, each item listed above will be discussed and explained as to how they will tend to eventually bring down the firm's revenues/earnings in future periods, regardless if they were management's premeditations or not.

As the reader will come to see in our fraud section below, GlassHouse Research believes that managers commit accounting "liberties" when there is a high financial motivation such as an acquisition. *The point of this table is to show that while managers can "pretty up" the numbers for a short period of time before a sale, however the accounting accruals will always reverse negatively in future periods as these aesthetic accounting changes reverse.*

Recent Completed Acquisitions	Accounting Red Flags prior to Acquisition	End Outcome
After much deliberation about who was planning to buy who, The Men's Wearhouse (MW) acquired Jos. A. Bank (JOSB) for an all cash deal of $65 per share or $1.8 billion in early 2014. The price represented a 56% premium over JOSB closing share price on 10/08/13. The new company was later renamed Tailored Brands, Inc. under the new ticker TLRD.	While both MW and JOSB had their inventory issues, it was JOSB that drew the most ire from short sellers prior to acquisition. Short-sellers argued that the firm failed to write-down its out-of-style inventory suits on the balance sheet. This caused margins to stay at unsustainably high levels. JOSB's prior CEO Neal Black also had a questionable past working at the now defunct Venture Stores.	Subsequent to the acquisition, JOSB's comparable store sales plummeted in Q3 and Q4 of 2015 by 35.1% and 31.9%, respectively. Once the parent company realized JOSB's prior "buy 1 suit get 3 free" promotions were unsustainable, sales fell off a cliff. The stock price of TLRD has languished ever since with a minuscule market cap currently of $615 million.
On 12/07/15, the private-equity firm JAB Holding acquired Keurig Green Mountain (GMCR) for $13.9 billion. The selling price at $92 per share represented a 77.9% premium over the stock price on 12/05/15.	Many notable short-sellers, including David Einhorn, had GMCR in their sights as the company was under scrutiny for its revenue recognition practices from the SEC on 03/20/13. This was on top channel-stuffing accusations and questionable Keurig "Kold" guidance given by management.	While GMCR was taken private with no updated financials afterwards, the firm ended up firing 108 employees and axed its previously touted Keurig Kold product line as it failed miserably with customers. The company also reported subsequent to the sale that its holiday K-Cups sales were declining at a material rate.

According to the Hollinger and Clark study that focused on why managers and employees commit fraud, the researchers concluded that the most common reason employees (including top executives) commit fraud has little to do with opportunity, but rather with financial motivation. GHR's talented team of CPAs understand that under GAAP, especially in complex industries, the opportunity arises to use accounting to one's advantage in many circumstances, including the ability of managers to subjectively estimate revenues and earnings based on milestones within a given project.

According to a 2010 Forbes[2] article that detailed which balance sheet accounts managers use to commit corporate fraud, Inventory and Accounts Receivable were misstated 51% and 43% of the time when fraud occurs, respectively and included the fraud techniques listed below. As the reader will see, many of the red flags detailed in this report coincide with the listed methods. Overall, GHR believes that too many salient metrics have triggered red flags over the past twelve months, and investors will see that many of these accounting gimmicks will cause a violent reversal of VAR's financial performance going forward.

Common Financial Statement Fraud Techniques

347 Fraud Companies 1998-2007

Methods Used to Misstate Financial Statements	
Improper revenue recognition	**61%**
Recording fictitious revenues – 48%	
Recording revenues prematurely – 35%	
No description/"overstated" – 2%	
Overstatement of assets (excluding accounts receivable overstatements due to revenue fraud):	**51%**
Overstating existing assets or capitalizing expenses – 46%	
Recording fictitious assets or assets not owned – 11%	
Understatement of expenses/liabilities	**31%**
Misappropriation of assets 14%	
Inappropriate disclosure (with no financial statement line item effects)	**1%**
Other miscellaneous techniques (acquisitions, joint ventures, netting of amounts, etc.)	**20%**
Disguised through use of related party transactions	**18%**
Insider trading also cited	**24%**

The subcategories such as premature revenues or fictitious revenues and assets do not sum to the category totals due to multiple types of fraud employed at a single company. Also, because the financial statement frauds at the sample companies often involved more than one fraud technique, the sum of the percentages reported exceeds 100 percent.

To avoid double-counting, the information about the overstatement of assets does not include overstatements of accounts receivable due to the revenue recognition frauds.

[2] https://www.forbes.com/2010/06/10/corporate-fraud-executive-compensation-personal-finance-risk-list-2-10-kaplan.html

Free-Cash-Flow Declines for Four Consecutive Fiscal Years

As evident in our earnings Annual Profitability Figures for VAR Chart (page 10), we find that VAR's free-cash-flow[3] (FCF) has persistently diverged from the firm's earnings metrics reported over the past five years. These metrics have diverged in the last two years by a material amount. In our experience, when a firm's accruals have increased to the levels of VAR's, often there is a violent reversion to the mean with regards to both non-GAAP and GAAP earnings metrics.

- To illustrate this trend, we find that cash-from-operating activities (CFOA) have fallen by 24.1% to $356.4 million at the end of FY2016. While this number is positive, this pales in comparison to the $492.8 million figure reported at the end of FY2012. From a margin perspective, CFOA declined 408 bps to a five-year low of 11.1% reported at the end of FY2016.

- Looking at more recent Q1 figures, we find a similar story with TTM CFOA falling 22.8% YOY to $361.3 million. This represents a CFOA margin of only 11.2%, again near the five-year low achieved in the previous quarter.

- Turning to FCF, we find correlating trends to CFOA, with FCF falling 9.9% to $254.9 million at the end of FY 2016. This metric has fallen for the past four years to a level not seen in the past five fiscal years. As we would expect, FCF fell by 121 bps to 7.9%, again a five-year low for VAR.

- This dwindling cash issue was finally brought up by an analyst in the Q4 FY2016 conference call:

> Analyst
> So 2 questions here. One, I guess, just on cash flow. So cash flow was down, I think, on the year, down about 25%. It looks like it's kind of the lowest level we've seen since fiscal 2009, in fact, as I was going back. And if I add back some of the non-GAAP cash charges, even if I add those back, it's still down below $400 million. And it looks like receivables were up, I think about $120 million year-on-year, and even $50 million up sequentially. So just trying to figure out if it's a receivables issue, what's going on there? Or what's going on basically with your cash flow at this point?

[3] GlassHouse's FCF calculation includes cash acquisitions

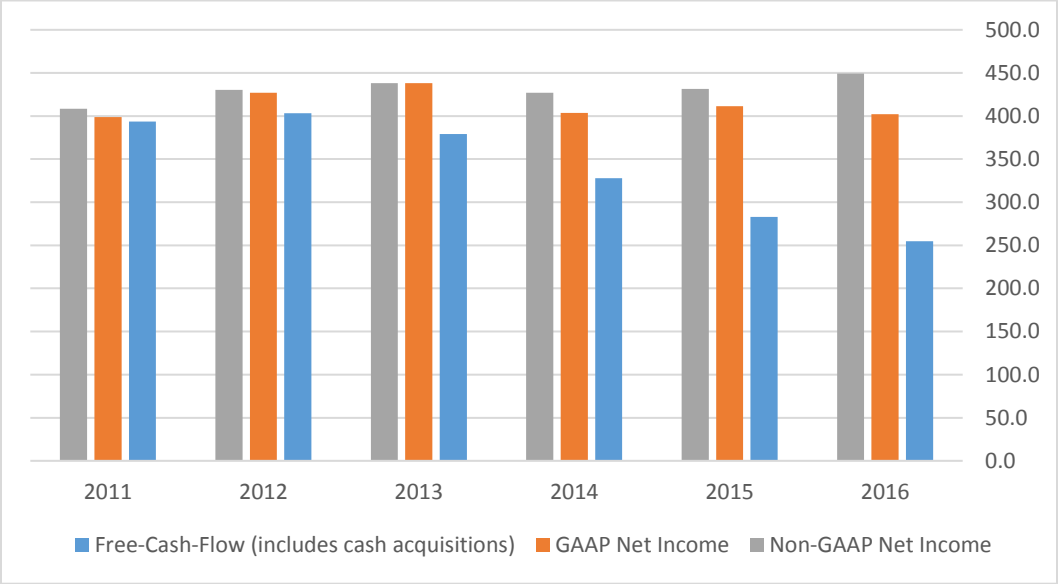
Elisha W. Finney

Sure. So Jeff, the Oncology AR increased about 8%, and that compares to their year-to-date sales up 5%. And as we've been talking all through this fiscal year, early in the year, we moved our collections staff. We had a Salesforce IT implementation. And I think that slowed down collections in the first half, and we are continuing to feel that effect. Although we're making good progress, collections in Q3 and Q4 were very strong, but as we move into FY '17, absolutely, AR collections is going to be a big focus for the entire team. Little bit of it has to do with more extended terms. In a 0 interest-rate environment, we can continue to win high-margin business by offering terms. And then some of it also, both inventory and AR, up in the proton business as we continue to grow that business. And with percentage of completion accounting, it gets a little funky in proton because a lot of times we're taking revenue and creating an AR under the percentage of completion long before the bills are actually due by the customer. But it will be a big focus as we move into this year.

- According to the firm's statement of cash flows, we find that both accounts receivable and inventories have consumed a material amount of CFOA in each of the last five fiscal years (AR and inventory consumed $168.4 million and $27.7 million, respectively in FY2016). Again, the analysts at GHR have seen this before with similar companies and we know that this trend is not sustainable. And once we go down the rabbit hole of digging in to both AR and inventory metrics, we will reveal how serious VAR's earnings quality issues are in the next sections.

- Pay attention to the CFO's quote regarding the reasoning behind depressed cash flow in the quote above; notice the percentage-of-completion accounting. This type of accounting is *highly* subjective to management when it comes to revenue recognition. Our analyst team at GHR find it highly peculiar at a time when a company is potentially gearing itself up for a sale, the divergence between earnings and CFOA is at its highest point going back over 10 years at $194.8 million. Again, we know that companies cannot fake cash in the bank (for the most part), but also that management does have major discretion over revenue/earnings, especially in *highly* subjective areas such as the aforementioned percentage-of-completion accounting.

Annual Profitability Figures for VAR



Circular Transactions with VPT Clients End up with Impairments and Faux Revenues

Dating back to FY2013 and accelerating into FY2016, VAR management turned to providing financing to their Proton Therapy Centers customers. The three centers that the company has provided financing for the construction and start-up operations are the Scripps Therapy Center (CPTC), Maryland Proton Therapy Center (MPTC), and New York Proton Center (NYPC). In our experience, we find these types of transactions where the target firm lends money to customers in order to produce revenue as extremely risky. This is especially true in a business where loaning money is not a normal part of business operations (such as a car dealership). In fact, we now see that some of these centers have issues with making loan payments, as management currently discloses that 3 of the 15 centers (20%) are not making their loan payments.

- While VAR's management touts the efficacy of its new revenue stream from its Proton Therapy business,[4] our GHR analysts find that these types of circular transactions likely end up being disastrous for similar firms. While in the short run, a firm can continue to show revenue generated in each quarter from these transactions, there can also be situations where no cash payments are coming in, as in VAR's case.

- Let's walk through this transaction step by step where a company lends money to its customers to purchase its products and what can eventually go wrong. In our experience, GHR sees this type of transaction rarely being used by U.S. firms, but rather Chinese companies, for the most part, using fraudulent methods:

    1) VAR wants to sell its VPT products to customers to treat cancer, but the costs to open these centers are extremely expensive with no definite revenue stream in place. So VAR, being the reputable firm that they are, lends money to customers in order for them to construct and start up Proton Therapy Centers. Why don't banks make the loans to the Centers instead? Well, inasmuch as the

[4] In the 10/28/15 Conference Call, CEO Dow Wilson stated, "Let me now turn to proton therapy, which drew a lot of customer attention at ASTRO. We have real momentum in this business. In the fourth quarter, we booked more than $135 million in orders for 3 multi-room systems, including 2 in the U.K. and 1 in New York. This brought the number of proton orders booked in the year to 6 systems, totaling more than $300 million. At this point, we have 11 projects in backlog and we are currently working on more than 6 installations. Treatments are expected to commence at the University of Maryland early next year, which will bring the total number of centers treating patients with Varian proton technology to 4. The key to making the proton therapy business profitable are continued success in the market, reducing product costs and scaling up the service business. We feel like we have momentum in these areas."

loans are risky with no set payment dates, most banks decline this 'generous' offer. So VAR fills the gap by making these loans to their customers with rates of interest anywhere between 10% and 15%.

2) VAR now gets interest income from their customers who then proceed to build their Proton Therapy Centers. And as part of the deal, the Proton Therapy Centers can get their products from VAR which gladly provides them with Varian Particle Therapy (VPT) products.

3) So VAR's customers take the loan money given to them by VAR and use it to purchase VPT products, correct? Not so much. VAR's customers need the loans to construct the centers and for initial start-up operations.

4) So how can the Proton Therapy Centers afford to buy the VPT products? Well our old friend Varian will sell their VPT products on credit of course! From an accounting standpoint, the VAR will accrue interest revenue from the initial loan and, in addition, VAR will be able to recognize revenue on its VPT products as well! A win/win for everybody!

5) But how can VAR recognize revenue without cash? Ah, that's an easy one, VAR will now credit revenue on their income statement and debit CFOs' favorite balance sheet account – unbilled receivables!

6) Does GHR even need to explain how this win/win situation could ever go wrong? Well don't take our word for it, let's instead take a look at VAR's own Risk Factor disclosures in the firm's FY2016 10-K:

AS A STRATEGY TO ASSIST OUR VPT SALES EFFORTS, WE MAY PARTICIPATE IN PROJECT FINANCING OR OFFER EXTENDED PAYMENT TERMS, WHICH MAY ADVERSELY AFFECT OUR FINANCIAL RESULTS

We have provided financing for the construction and start-up operations of the Scripps Proton Therapy Center, MPTC and the New York Proton Center, and we may provide or be requested to provide financing to other potential VPT customers in the future. As of September 30, 2016, we had loaned $95.3 million, $40.7 million and $18.5 million to CPTC, MPTC and MM Proton I, LLC, respectively. Providing such financing could adversely affect our financial results, since we cannot provide assurance that a center will be completed on time or within budget, that the center can or will generate sufficient patient volumes and revenues to support scheduled loan payments or to facilitate a refinancing, or that the borrower will have the financial means to pay off any financing at maturity. In addition, in connection with our financing of the Scripps Proton Therapy

> Center, we cannot provide any assurance that any additional portion of our loan can be syndicated to third parties, or that the loan facility can be successfully refinanced upon the maturity of the loan. In November 2015, we and the other lenders of the CPTC loan for the Scripps Proton Therapy Center agreed to forbear principal and interest payments until April 2017, subject to certain extensions. At the end of fiscal year 2016, even though patient volumes continued to increase, CPTC was not in compliance with a patient volume covenant under the forbearance agreement, which would allow the lenders to call the loan or cease further funding under the loan agreement. If a borrower does not have the financial means to pay off its debts, and if we cannot recover the amounts due us from the sale of any collateral, we may be required to write-off all, or a portion of the loan, which would adversely affect our financial results.

- We know, a lot to read there. But an interesting note to take from this "circular transaction" Risk Factor is that the CPTC loan for the Scripps Proton Therapy Center was already having issues with VAR already agreeing to forbear principal and interest payments until April 2017. Adhering to GAAP accounting principles, specifically conservatism, a company must take a loss on the income statement as soon as possible when there is uncertainty about the outcome. So why wasn't this loan impaired prior to Q4 FY2016? *In fact, the opposite occurred in Q4 FY2016, here VAR continued to recognize revenue and interest from the Scripps Center on the income statement!* Specifically, we find that the company recorded $32.6 million and $25.2 million of revenue (classified as unbilled receivables) in FY 2016 and FY2015, respectively.

- So how bad are things relating to the firm's Proton Therapy Centers? Pretty bad. At the end of FY2016 (per the firm's 10-K) we find that VAR accounts for its Proton Therapy Centers under the percentage-of-completion method, which is based on contract costs incurred to dated compared with estimated contract costs. As noted above and in some of our previous reports, this method of accounting depends on elevated subjectivity with management; basically, it is up to management's discretion when to recognize revenue and expenses with regard to the specific project. Also, detailed in this footnote is that unbilled receivables (the riskiest form of receivable) increased 41.1% to $111.6 million at the end of FY2016. Furthermore, GHR finds that deferred revenues related to the Proton Therapy Centers declined an astonishing 74.5% to only $13.7 million. *Make no mistake about it, the drastic move in these accounts are highly abnormal and material to the firm's earnings.*

- To show the materiality here, we note that the firm's "Other" segment revenue (which consists of VPT revenue), only increased 13.3% ($19.2 million) YOY to $163.1

million. We would expect the firm's unbilleds and deferred revenues to trend similarly (+13.3%), obviously though this was not the case. The net AR impact (unbilled receivables delta net of deferred revenue delta) of $72.6 million over FY2016 absolutely dwarfs the additional $19.2 million of VPT revenue. This means that the majority if not all of the increase of VPT revenue came from either previous deferred revenue or from increasing the riskiest type of receivable, which usually has no price or scope agreed upon with the customer.

- To top it all off, management chose to classify these unbilled receivables under both accounts receivable and other assets. Therefore, this would obfuscate many analysts' AR metrics or DSO calculations inasmuch as a material portion of the unbilled receivables would be hidden in other assets. Even if the expected payment date is over one year, virtually all other companies classify their unbilled receivables only under AR on the balance sheet.

- And let's not confuse ourselves with what is going on here, this is *revenue* that the company has recognized on the income statement, not just loan interest payments (which the company recognized $29.0 million as interest income from these loans as well).

Variable Interest Entity, CPTC, was Established to Finance and Operate Scripps Proton Therapy Center

In September 2011, VAR and ORIX (as loan agent), through a Swiss subsidiary, committed $165.3 million to CPTC (Variable Interest Entity called California Proton Therapy Center) for the development, construction and initial operations of the Scripps Proton Therapy Center in San Diego. As of FY2016, VAR had loaned $80.5 million under a Tranche A loan, $11.4 million under the Tranche B loan, and $3.4 million under the Tranche C loan. The total $95.3 million in loans was up 13.6% from the prior year, *because when you aren't getting paid on your loan, we guess that you just throw more money at it!*

To make matters worse, VAR reclassified this CPTC loan from an already curiously classified short-term investment (as an available-for-sale security) to LT other assets. This reclassification basically concedes that VAR does not plan to get paid anytime soon. Under accounting rules, an AFS security should be reported at fair value every period, and with all the known problems at Scripps, we believe this loan should have been impaired well before Q1 of this fiscal year.

To clarify, the company choose not to impair or stop recognizing revenue from the Scripps Center until Q1 FY2017, even with all the prior issues listed dating back to FY2015. CEO Dow Wilson explained that the San Diego Center was not getting enough patients as there was a lack demand with currently only 70 patients and 100 needed to break even. Drilling into the numbers, we find that the firm impaired $38 million of the total $98 million loan to CPTC ($29 million which was accrued interest) in Q1. The firm also expensed $38.0 million of allowance for doubtful accounts reserve that the firm thankfully did not exclude from non-GAAP earnings, however it is obvious from the Q1 Conference Call that they wanted to as they made sure to give analysts those figures over and over again:

> Elisha W. Finney
> Including the proton AR reserve, first quarter SG&A expenses were $167 million, up significantly in dollars and as a percentage of revenue from the year-ago quarter. The accounts receivable reserve of $38 million is considered in the ordinary course of business for accounting purposes and, therefore, is not adjusted out of earnings as a non-GAAP number. *Excluding the AR reserve, SG&A would have been $129 million or 17% of revenue.*
>
> For the balance of the year, we believe Varian's tax rate from continuing operations will be in the range of 25% to 26%. Fully diluted shares outstanding decreased 3.6 million from the year-ago quarter to 94.2 million shares due to our ongoing share repurchase program. Diluted GAAP EPS was $0.22 for the quarter. *Non-GAAP EPS for the quarter was $0.75, including a $0.34 impact from the proton AR reserve.*

And even worse this exchange with an analyst from Robert W. Baird:

> Analyst (Baird)
> Okay. And then Elisha, maybe not a technical accounting explanation because I really don't want to hear that. But out of the $76 million write-off, you guys excluded $38 million. But there's another $38 million that we essentially have to take out of your SG&A and to non-GAAP earnings and things like that to get it apples to apples.
>
> Elisha W. Finney
> That is correct... And it's because -- *and I won't give you any technical accounting,* but it's because from an SEC guidance standpoint, accounts receivable is deemed in the ordinary course of business. It's not deemed unusual and something you can adjust into a non-GAAP number.

Analyst (Baird)
Okay. And so the one -- the question where I want to step through a couple of things is just -- so if I look at your disclosures, you did $70.3 million in non-GAAP net earnings. I need to add back about $35 million to that. So *your non-GAAP net earnings ex all of the noise of the write-off would have been closer to $102 million to $105 million or so. Is that correct*?

No offense to our analyst brethren over at Baird, but maybe you should understand the "*technical*" accounting explanation because unlike what most managers want you to believe, understanding the accounting is important. As we can see in the last statement, the analyst here is already updating his models to exclude the "noise" caused by the $38 million charge to AFDA.

Herein lies the problem, there is a reason that $38 million charge to AFDA is not excluded from non-GAAP as management would like you to believe. If that was the case, managers could book as much suspect revenue from risky clients and pull forward sales non-stop to bolster the top line. Then when it came to payment time and it never comes, managers can write-down its AR and just exclude it from non-GAAP and everyone's a winner! Instead of the analyst updating his models to exclude this charge, maybe he should rather exclude the extra millions in revenue and accrued interest the firm has benefited from over the last few years? We can almost guarantee you that no sell-side analyst will, and believe us there will be a rude awakening of top line earnings misses over the next year when this lost revenue/interest annualizes.

NYPC and MPTC may be the next Loans to be Impaired in FY2017

Notwithstanding CPTC's loan and receivables problems that may continue to be impaired in FY2017, GHR questions whether the firm's NYPC and MPTC loans are next to be impaired with future receivables and interest payments being written off.

- With regards to the NYPC loan, VAR has already recorded a $2.2 million loss associated with sale of a portion of its loan to Deutche Bank as the total loan amount now has declined to $18.5 million from the high amount of $24.9 million in Q2 FY2016. If this loan was doing fine, why would they take such a material loss on their books to get rid of a portion of it? No material payments have been paid yet by NYPC to bring down this loan amount as of Q1 FY2017. The loan also carries a senior loan rate of 9.5% and a subordinate loan with an unbelievable 13.5% interest rate, which portends the risk level of this loan. VAR also benefitted from recognizing revenue of $17.4 million in FY2016 where it's now being reported as, you guessed it, an unbilled receivable on the balance sheet.

- Turning to the MPTC loan, VAR committed a loan up to $35 million dating back to May 2015, however as of the latest quarter this amount has ballooned up to $52.1 million. The interest rate on these loans varies from 12% to 15%, again both reflecting the risk factor involved in this otherwise low interest rate environment. Another factor of concern is that during FY2016, VAR converted $17.1 million in unbilled MPTC loan receivables into a long-term note receivable due September 30th, 2018. So instead of writing off receivables that the firm already recognized as revenue, but was not getting paid on, they then chose to turn the receivable into a long-term note not due for another two years with an interest rate of 15%. *Wow!*

Proton Centers are not the only Problems with Regard to Receivables

So now that we have seen how VAR is essentially "double-dipping" with regard to interest income and revenue with its customers, what other levers has management pulled in order to increase sales revenues? Well, we look to comments made by management to the effect that VAR has artificially increased sales revenues by extending payment terms to its customers. While management can entice customers to buy its products with extended credit terms for a short period of time, this is not a sustainable form of revenue in the long-term and is a harbinger for a decreased demand for its products. So what happens next year when these periods with one-time revenue gains from extended credit annualize? In GHR's view, most investors can expect a large drop off in revenue growth (if not declines) as those non-recurring revenue gains disappear.

Even worse, after digging into the footnotes and as explained above, we find that $17.1 million in unbilled AR was reclassified into a long-term note, thus obfuscating the firm's true DSO value even further. We also note that our own and VAR's DSO calculations do not include its loan receivables. However, as analysts, we need to understand that these are customers that owe VAR money either through a credit channel or a note. While one is longer-term in nature that should not discount the repayment risk that is already rearing its ugly head in the TTM.

- Currently, GHR calculates VAR's days-sales-outstanding (DSO)[5] at 101 days as of Q1 FY2017, representing a 9.1% increase YOY. This amount is also the highest value reported in the last five years at the firm. For the last five years, this ratio has been on a consistent uptick dating back to FY2012 where we calculated a DSO of 78 days. We also note that if we add back the $17.1 million that was reclassified as a note, this jumps up our DSO value to 103 days. Using the company's given DSO metric, VAR discloses a DSO of 85 days as of FY2012, which increased to 100 days currently (see the Chart on page 20).

- And dating back to FY2012, VAR's management has basically provided the same explanation for the increase in DSOs attributable to "longer payment cycles" and "timing of collections." Both these explanations scare us at GHR and are clearly unsustainable long-term.

[5] We calculate 3M DSO as (average AR / 3M sales) *91.25

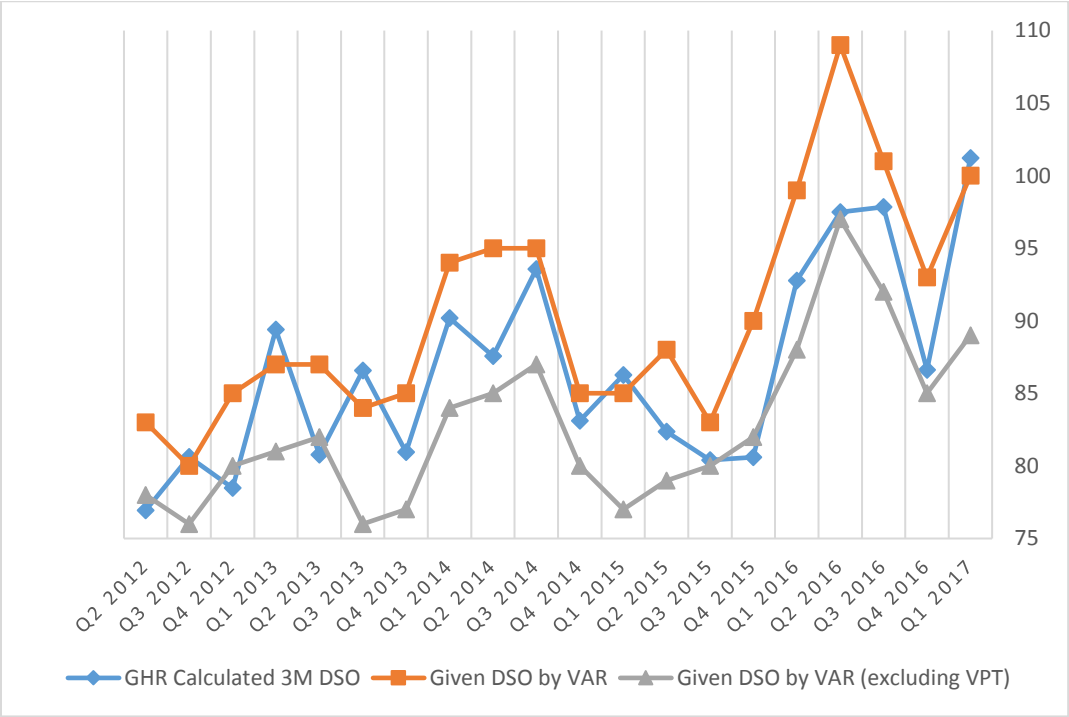
- **According to the Q4 Conference Call, CFO Elisha Finney discussed the extending of credit in the Q&A section:**

  Analyst
  And it looks like receivables were up, I think about $120 million year-on-year, and even $50 million up sequentially. So just trying to figure out if it's a receivables issue, what's going on there? Or what's going on basically with your cash flow at this point?

  Elisha W. Finney
  Sure. So Jeff, the Oncology AR increased about 8%, and that compares to their year-to-date sales up 5%. And as we've been talking all through this fiscal year, early in the year, we moved our collections staff. We had a Salesforce IT implementation. And I think that slowed down collections in the first half, and we are continuing to feel that effect. Although we're making good progress, collections in Q3 and Q4 were very strong, but as we move into FY '17, absolutely, AR collections is going to be a big focus for the entire team. *Little bit of it has to do with more extended terms. In a 0 interest-rate environment, we can continue to win high-margin business by offering terms.* And then some of it also, both inventory and AR, up in the proton business as we continue to grow that business. *And with percentage of completion accounting, it gets a little funky in proton because a lot of times we're taking revenue and creating an AR under the percentage of completion long before the bills are actually due by the customer*. But it will be a big focus as we move into this year.

- **While the firm may be able to entice customers in the short term with extended credit, with the recent CPTC debacle, we believe VAR will start to feel the vastly negative side-effects of extending credit to boost sales. And while the firm recently took a $38 million charge to AFDA, we believe this is just the beginning innings of a period of slowing sales and nonpayment of credit. We can obviously see that sell-side analysts are already adding back the impairment and AFDA expense to get their "true" non-GAAP figures, GHR has a much lower "true" earnings figure in mind.**

Varian DSO Trends



Highly Specialized Inventory Gathering Dust on the Balance Sheet

Adding to VAR's balance sheet woes, the firm continues to carry an inventory balance that dwarfs historical values at the firm. Described in the firm's own FY2016 10-K, VAR's inventory is highly susceptible to obsolescence as described in this excerpt:

> Our inventories include high technology parts and components that are highly specialized in nature and that are subject to rapid technological obsolescence. We have programs to minimize the required inventories on hand and we regularly review inventory quantities on hand and on order and adjust for excess and obsolete inventory based primarily on historical usage rates and our estimates of product demand and production. Actual demand may differ from our estimates, in which case we may have understated or overstated the provision required for obsolete and excess inventory, which would have an impact on our operating results.

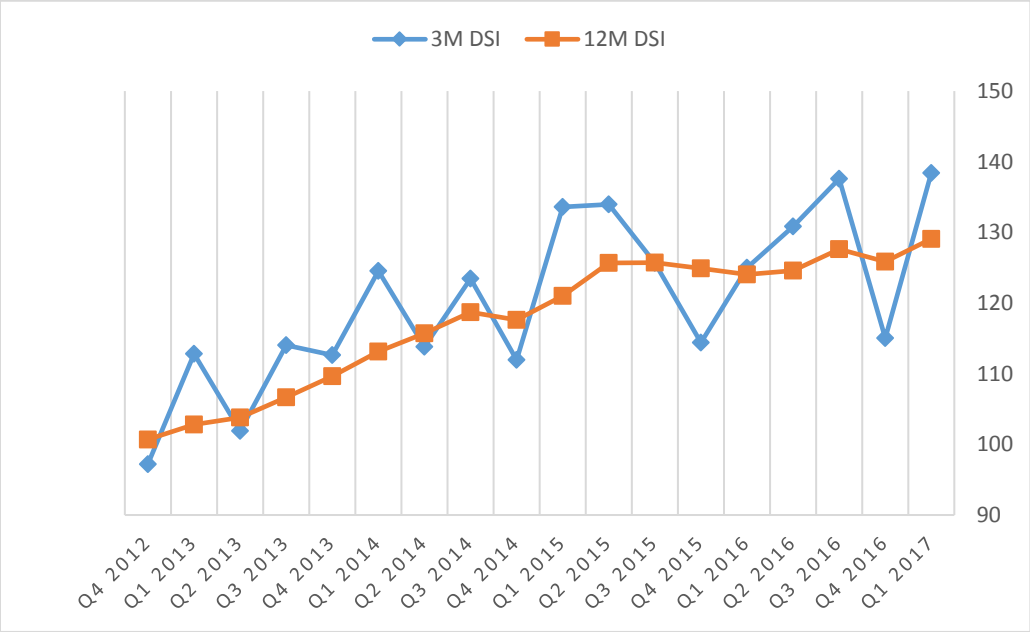
As aforementioned, in conjunction with VAR management using relaxed credit terms in order to entice sales, the firm's spiking inventory balance implies an extremely weak demand environment for VAR's products.

With regards to "managing earnings" is that CEOs/CFOs do not (for the most part) fudge the numbers when things are going great, rather it is when fundamental factors deteriorate do managers turn to stretching on the numbers to hit sales/earnings goals. – GHR

- Illustrating these negative trends, VAR's inventory grew by 7.9%YOY to $661.6 million at the end of Q1FY2017; all while sales stayed relatively flat. As a result, inventory-to-3M sales increased 570 bps YOY to 86.7%. For reference, this is the highest percentage ever recorded by the company going back over 10 years!

- As to be expected, the firm's 3M DSI level also stands at a 10 year high at 138 days. Not good. In fact, we note that inventory growth has surpassed sales growth in 16 of the last 18 periods.

Varian DSI Trends



- VAR's accounts payables-to-inventory metrics reflects the dire situation at the firm. This metric now stands at near a 10-year minimum of 26.4% (the fourth lowest ratio in the last 10 years). What this tells us is that management sees the handwriting on the wall and is drastically trying to halt the purchase of slow-moving inventory on its books.

- Given the rapid rate of obsolescence and thus, write-off and discount risk, we believe VAR's inventory impairment risk is at a much higher level than other industries. But don't just take our word for it. See for example close peer Accuray Incorporated (ARAY). This firm's DSI values have bloated from an average of 70 to 80 days dating back to 2009 to current levels of 192 days! ARAY's stock price has been annihilated during this timeframe as the firm faced similar inventory (and other fundamental) issues.

- We believe that VAR is likely on the same path as Accuray and will start to face material gross margin compression as outdated inventory continues to build on the balance sheet. We already have seen management resort to lenient credit terms to artificially grow sales, what other levers do they have left?

- With VAR's increasingly negative inventory metrics reported over the last five years, it appears that management is suggesting to analysts that gross margins will *increase* over the next fiscal year rather than compress. Specifically, CFO Elisha Finney stated in the Q1 FY2017 conference call that:

  > Yes. So at this point, Brandon, I'm preferring to stick to the 44% to 45%. I feel quite confident in those numbers given the performance that Oncology has had the last several quarters. They really started to improve gross margin in the second half of last year… If the software mix were to increase, then clearly, that could be some upward bias on the margin, but we're sticking to 44% to 45%.

- By "maintaining stable pricing", GHR believes that the firm chose to defend its ASPs rather than to markdown their inventory to a price that the market is dictating. In our experience, especially in an industry that is rapidly changing with new technology, this option leads to massive write-offs and impairments in future periods.

- Even with VAR's recent spin-off of Varex Imaging Corporation, based on GHR's calculations and previous statements from management, GHR believes that the majority of the inventory issues lie within VAR, not Varex, and thus VAR will continue to face these problems going forward.

- So what explanations does VAR's management give for such a drastic rise of inventory metrics over the years? The same one over and over again! From the 2013 10-K, "Inventories increased $76.4 million due to anticipated customer demands for products in fiscal year 2014, mainly in Oncology Systems and X-Ray Products."

- And in every 10-K and 10-Q since FY2013, VAR's management regurgitates the same tired reasoning behind inventories continued rise, i.e., that "the increase was mainly due to anticipation of future demand." So with all due respect to management, when is this *future* demand coming??? Management does not bring up the rapid expansion of its DSI balance over the last five years in its conference calls, but we believe this will be a significant headwind to the bottom line in future periods. Overall, we believe that VAR is keeping up with the newest technology inventory to appease clients. However, we observe that VAR is also harboring (and not writing down) a material amount of dust-gathering and outdated inventory in its warehouses that should be impaired.

Anomalous Insider Selling in 2016 Provides Stronger Support for GHR's Thesis

Focusing in on insider buying and selling at VAR, GHR finds two very concerning trends that suggest management may not have the brightest outlook of the firm's future based on the recent buying and selling of their VAR shares. Specifically, GHR found that insiders divested a material amount of their VAR shares in CY2016 and Q1 CY2017 with no prior material insider buying activity dating back to 2000!

- During CY2016, seven directors and executives combined to sell 220,668 shares for a total market value of $19.8 million. The majority of these sales were attributable to two highly predictive insiders CEO, Dow Wilson (52.4% of shares sold) and Corporate Secretary John Kuo (12.1% of shares sold).

- These two executives have a high predictive history of six-month share-price underperformance of VAR's shares after a sale. According to Thomson Reuters, these two executives (Wilson and Kuo) have a proven insider score of 97 and 89, respectively (on a 0-100 scale, 100 being the most predictive of share-price underperformance.

- Furthermore, GHR notes that between 02/08/06 and 06/27/16, Mr. Wilson sold shares in 31 separate transactions, of which 21 (67.7%) where followed by share-price declines at the end of six-months. From 03/26/16 to today, Mr. Wilson sold 120,984 shares for total proceeds of $10.4 million over nine transactions. The volume of Wilson's sales over the TTM was the second largest during a 12M period during his entire tenure with the firm.

- The materiality of divestitures as a percentage of total holdings appear to be highly significant. Specifically, four executives who were active sellers of shares since 2016 have reduced their beneficial ownership by more than 20%. Based on our experience, this is highly anomalous and could lead to negative earnings surprises and substantial share price reductions.

- After researching VAR's previous insider purchasing and selling activity, we at GHR were dumbfounded to find that the last insider *buying* of VAR's stock dated back to 02/07/05 where a previous board member, Dr. Allen Lichter only purchased $7,780 worth of shares! And prior to Dr. Lichter's other two significant purchases of $8,345 and $6,470 in 2004, the last time an insider purchased shares was before the year

2000! Again, let this sink in, there have been no material purchases of shares by any directors or officers of the firm in the last 17 years.

Overall, GHR finds that the persistent lack of insider buying and substantial amount of divestitures made over the last year to be a harbinger for operational weakness at the firm.

New Competitive Threats Emerge in the Oncology Marketplace

VAR's primary product of medical radiation delivery devices have been used in the treatment of cancer at a relatively low cost of care to other oncology options. However, the inherent danger of introducing radioactive materials into the human body poses risks in itself. When targeted accurately, radiation therapy prevents cancerous cells from multiplying but will damage some non-cancerous cells as well. There have been past instances where patients were unintentionally exposed to lethal doses of radiation due to human error as well as software and hardware malfunctions. Furthermore, immunotherapy and surgery advances provide additional courses of care that may affect demand for VAR's products. As we will outline, there are several fundamental headwinds that we believe will impact VAR's operations and current demand environment.

According to the National Institutes of Health, National Cancer Institute, currently the most common types of cancer in the U.S. are breast cancer, lung and prostate cancer. Of the estimated new cancer cases in 2016, breast (male and female) accounts for 19.0%, lung 17.1% and prostate contributes 13.8% of the total estimated new cases. Furthermore, estimated deaths in 2016 are disproportionately attributable to lung cancer comprising 38.2% of the total estimate. With the rise of robotic assisted surgery and biologic options, it would appear that these revenue drivers may come under pressure in the near-term. We discuss both of these potential headwinds below:

- The cost-effectiveness of biologics will likely increase, eroding the advantage of radiation therapy over the next few years. Included in immunotherapy, biologics are complex drugs that are derived from living organisms (bacterial and eukaryotic cells). These drugs are useful in provoking an immune response to cancerous cells that are overlooked by the patient's own autoimmune system. Of most importance, several oncological biologics lose U.S. exclusivity between now and 2019. When these products lose market exclusivity, firms only need to show that the generic drug works in a similar fashion to be approved. Biosimilars are essentially the generic version of biologics and can significantly reduce the cost of treatment, which is a new competitive threat to VAR's products. Amgen, Allergan and Pfizer all have plans to produce biosimilars for oncology purposes in the next three years.

- New surgical methods are increasing the effectiveness of non-radiation options. The advent of robotic assisted surgery is increasing the efficacy of surgery and reducing the physical toll of invasive measures. In fact, surgery as compared to or in

conjunction with radiotherapy is gaining acceptance as the benefits are realized from greater accessibility and accuracy.

- Intuitive Surgical (ISRG) sells the da Vinci Surgical System to address this oncological need as well as other surgical procedure that benefit from reduced patient impact and improved outcomes. ISRG's TTM revenue has increased 14.7% YOY to $2.6 billion based on Q3 2016 system shipments that increased 14.5% YOY to 134 da Vinci Surgical Systems. Furthermore, the company announced in its 8-K filed 10/18/16, that it has entered a joint venture with a Chinese pharmaceutical company to develop and manufacture robotic-assisted medical devices focusing on the "cost-effective treatment of lung cancer."

- Attractive substitutes for these treatments will likely have an influence on patient preference for care. In so doing, the healthcare provider's investment and offering decisions will be affected accordingly, which will ultimately impact VAR's top-line performance. Furthermore, VAR's latest treatment option, Varian Proton Therapy (VPT) will also likely experience market resistance at an important time in the product lifecycle. The American Cancer Society notes that proton therapy is used for certain types of cancer but still needs more study for others, and that its highly-specialized equipment is not yet widely available. Moreover, the firm's own product offerings will likely have a cannibalizing effect as and if VPT begins to gain significant traction in the market.

- As alternatives to care become more attractive from an effectiveness and cost-reducing standpoint, GHR believes that Varian's top-line performance will likely come under pressure. As discussed above, breast cancer is being targeted by an increasing range of biosimilars, prostate cancer is being served by robotic-assisted surgery, and new surgical options are now available for lung cancer. These factors collectively target the three largest types of estimated new cancer cases and thus, GHR believes, VAR will have increased competitive headwinds as may already be starting to show with VAR's accounting gimmicks employed over the last year.

VAR's Share Price is at Risk for Severe Deterioration Due to Misunderstood Accounting Concerns

While the sell-side community continues believe that VAR's current impairments and AFDA expenses are only one-time items, GHR has a different take. GHR firmly believes that VAR is at risk of severe top and bottom line declines, as unsustainable forms of revenues subside over the next few years. *The bottom line is the sell-side analysts covering this firm do not know how to account for the accounting issues VAR faces in their models.* No company needs to extend payment terms when demand is strong. GHR believes that VAR's accounting techniques have and will continue to catch up with them in future periods.

Exacerbating the issue, even with the plethora of accounting irregularities detailed throughout this report, GHR finds that the current multiples of VAR to trade well above historical norms. And after reviewing close peers such as Accuray, ViewRay and Elekta AB, GHR finds that others in this space have experienced either continued losses or highly erratic earnings over the last five years. We obviously can see that VAR's peers are struggling in the space and believe VAR will start (and already has been) feeling the demand pressure. And if not for using some accounting gimmicks to boost sales and earnings, this pressure might have already have been apparent in FY2016 earnings.

Curiously enough, the firm is trading back to pre-spin-off levels near $90 even when factoring the missed revenues and earnings estimates in Q1 FY2017. We believe that the apparent enthusiasm with VAR investors subsequent to the VAREX spin-off is overly-optimistic and is at high risk to share price degradation.

	Current Value	Three Year Average	Current Value vs. Three Year Average	Five Year Average	Current Value vs. Five Year Average
TTM P/E	25.75	21.65	18.9%	20.31	26.8%
FWD P/E	22.94	18.84	21.8%	17.92	28.0%
PEG	2.46	1.76	39.3%	1.61	52.3%
TEV/FCF	28.39	23.68	19.9%	21.43	32.5%
TTM TEV/EBITDA	13.04	12.54	3.9%	11.74	11.1%
TEV/FWD Sales	3.03	2.52	20.2%	2.43	24.8%
Median			**20.0%**		**27.4%**

Basing a valuation on GHR's sustainable earnings estimates and using an amalgamation of the previous historical valuation comps in our models, we believe a fair share-price for VAR stands currently at $51.75, which represents a 43% downside to the share-price.

In light of concerns regarding lackluster free-cash-flow generation, a plethora of receivables issues regarding its Proton Therapy Centers, obsolete inventory building on the balance sheet, and material divestitures made by management over the last two quarters, GHR finds the current share price to be trading at an extraordinary premium. Accordingly, GHR is initiating coverage on Varian Medical Systems Inc., (VAR) with a target price of $51.75.

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